

INFORMATION FOLDER / DOCUMENT:  
MOBIFRAME/05/2022-00

PURSUANT TO UN/ECE REGULATIONS

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 SEAT **MOBIFRAME**  
TYPE **RAM03**

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*J. Goliński*

.....  
Damian Goliński  
Vice President

Total number of pages: 69  
Date of issue: 20.01.2023



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## 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: 20<sup>th</sup> January 2023



.....  
Damian Goliński  
Vice President

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0.	GENERAL	
0.1	Make (trade name of manufacturer):	MOBIFRAME
0.2	Type:	RAM03
0.2.1	Commercial name(s) (if available):	RAM03
0.2.2	Dedicated for vehicle(s):	See Enclosure 1
0.3	Means of identification of type:	N/A
0.3.1	Location of that marking:	N/A
0.4	Category of vehicle:	M1, N1, M2, N2
0.5	Name and address of manufacturer:	OKB SP. Z O.O. ul. Szkolna 9 95-006 Bukowiec Poland

1. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE

1.1	Photographs and/or drawings of a representative vehicle:	See Enclosure 1
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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, CA, SA, SG, SH
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9.10 Interior arrangement

9.10.3 Seats

9.10.3.1	Number of seating positions:	2
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9.10.3.1.1	Location and arrangement:	In case of fixation by means of Fixation Plate - any position in the vehicle behind pillar B (see Enclosure 2) In case of fixation by means of dedicated underfloor reinforcements – pre-defined position (see Enclosure 2)
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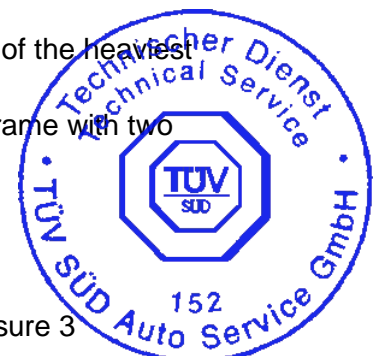
9.10.3.2	Seat(s) designated for use only when the vehicle is stationary:	N/A
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9.10.3.3	Mass:	RAM03 – 62 kg – mass of the heaviest configuration RAM03 is double seat frame with two single seats S1NGR03
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9.10.3.4 Characteristics: for seats not type-approved as components, description and drawings of

9.10.3.4.1	The seats and their anchorages:	See Enclosure 2, Enclosure 3
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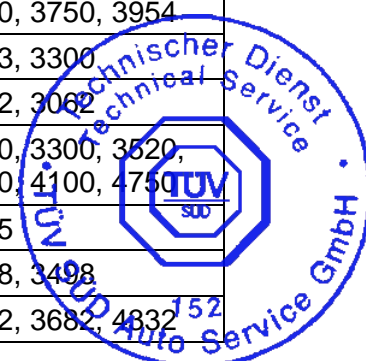
9.10.3.4.2	The adjustment system:	See Enclosures
9.10.3.4.3	The displacement and locking systems:	See Enclosures
9.10.3.4.4	The seat-belt anchorages (if incorporated in the seat structure):	see Enclosure 3
9.10.3.4.5	The parts of the vehicle used as anchorages:	See Enclosure 2
9.10.3.5	Coordinates or drawing of the R-point	
9.10.3.5.1	Driver's seat:	N/A
9.10.3.5.2	All other seating positions:	See Enclosure 3
9.10.3.6	Design torso angle	
9.10.3.6.1	Driver's seat:	N/A
9.10.3.6.2	All other seating positions:	See Enclosures
9.10.3.7	Range of seat adjustment	
9.10.3.7.1	Driver's seat:	N/A
9.10.3.7.2	All other seating positions:	See Enclosures
9.10.4.	Head restraints	
9.10.4.1.	Type(s) of head restraints:	integrated
9.10.4.2.	Type-approval number(s), if available:	N/A
9.10.4.3.	For head restraints not yet approved	see Enclosure 3

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### Enclosure 1: TABLE OF VEHICLES TYPES

Manufacturer	Commercial description / Type	Wheelbase
Daimler / Mercedes-Benz	Sprinter (906, 907)	3250, 3665, 4325
	Sprinter, e-Sprinter (910)	3259, 3924
	Vito/Viano/V-klasse, e-Vito (639, 639/2, 639/4)	3200, 3430
VW	Crafter (2E__)	3250, 3665, 4325
	Crafter, e-Crafter (SYN__ e.g. SYN1E, SYN2E, SYN2Z)	3640, 4490
	T5 (7H_, 7E_, 7J_)	3000, 3400
	T6, T6.1, e-Transporter (7H_, 7E_, 7J_)	3000, 3400
Citroen	Jumper, e-Jumper (Y)	3000, 3450, 4035
	Jumpy (X)	3000, 3122
	Jumpy, e-Jumpy (2016)	2925, 3275
	SpaceTourer, E-SpaceTourer	2925, 3275
	Berlingo, E-Berlingo	2785, 2975
Peugeot	Boxer, e-Boxer (Y)	3000, 3450, 4035
	Expert (VF3__)	3000, 3122
	Expert, e-Expert (2016-...)	2925, 3275
	Traveller, e-Traveller	2925, 3275
	Rifter, e-Rifter	2785, 2975
Fiat	Ducato, e-Ducato (250)	3000, 3450, 4035
	Scudo (270)	3000, 3122
	Scudo (2022-...)	2925, 3275
	Talento (FJL, FFL)	3098, 3498
Opel	Movano (MR, MS, MW)	3182, 3682, 4332
	Movano, Movano-e (Y)	3000, 3450, 4035
	Vivaro (F7)	3098, 3498
	Vivaro, Vivaro-e, Vivaro e-Kombi, Zafira Life	2925, 3275
	Combo Life, Combo-e Life	2785, 2975
Renault	Master, Master E-Tech (FV, MA, VA)	3182, 3682, 4332
	Trafic (FL, L)	3098, 3498
	Trafic 2014 (JL, L)	3098, 3498
Renault Trucks	Master (MF, VF)	3182, 3682, 4332
Ford	Transit, (FA_, FD_)	2933, 3300, 3750
	Transit, e-Transit (FC_)	3300, 3750, 3954
	Transit Custom (FA_, FC_), Turneo Custom	2933, 3300
	Transit Connect (PU2)	2662, 3062
Iveco	Daily, Daily Electric (IS_)	3000, 3300, 3520, 3950, 4100, 4750
Nissan	NV200	2725
	NV300, Primastar	3098, 3498
	NV400	3182, 3682, 4332, 4520



Toyota	Pro Ace (2013-2016)	3000, 3122
	Pro Ace, Pro Ace Verso, Pro Ace Electric (2016)	2925, 3275
MAN	TGE, eTGE (SYN__ e.g. SYN1E, SYN2E, SYN2Z)	3640, 4490
MAXUS (LDV)	V80, Maxus (SV6C)	3100, 3850
	V90, Deliver 9, E-Deliver 9	3000, 3366, 3760
	Deliver 3, E Deliver 3	2910, 3285
Hyundai	H350 (EU(V))	3435, 3670
RAM	ProMaster	3000, 3450, 4035
Freightliner/Dodge	Sprinter	3250, 3665, 4325

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## Enclosure 2: METHODS OF SEATS FIXATION TO THE VEHICLE

2.1 Fixation of double bench frame by means of underfloor reinforcements – dedicated for Fiat Ducato/Peugeot Boxer/Citroen Jumper/Opel Movano/RAM ProMaster

RAM03:

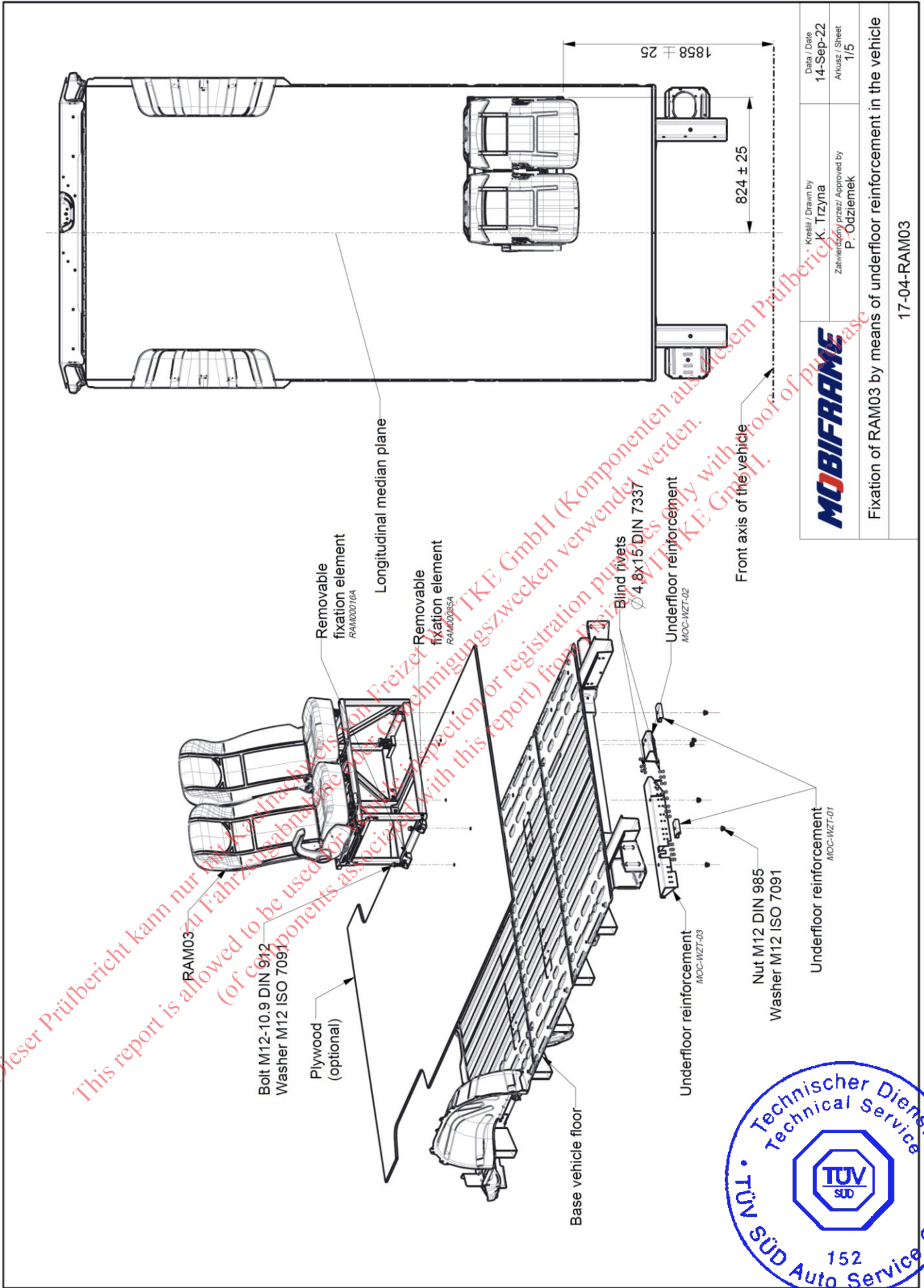
(see next pages)

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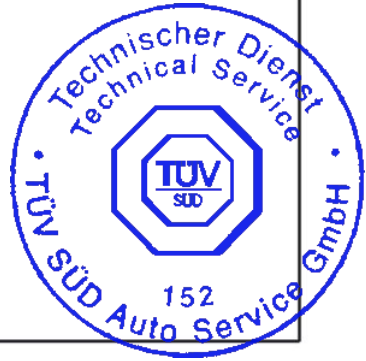


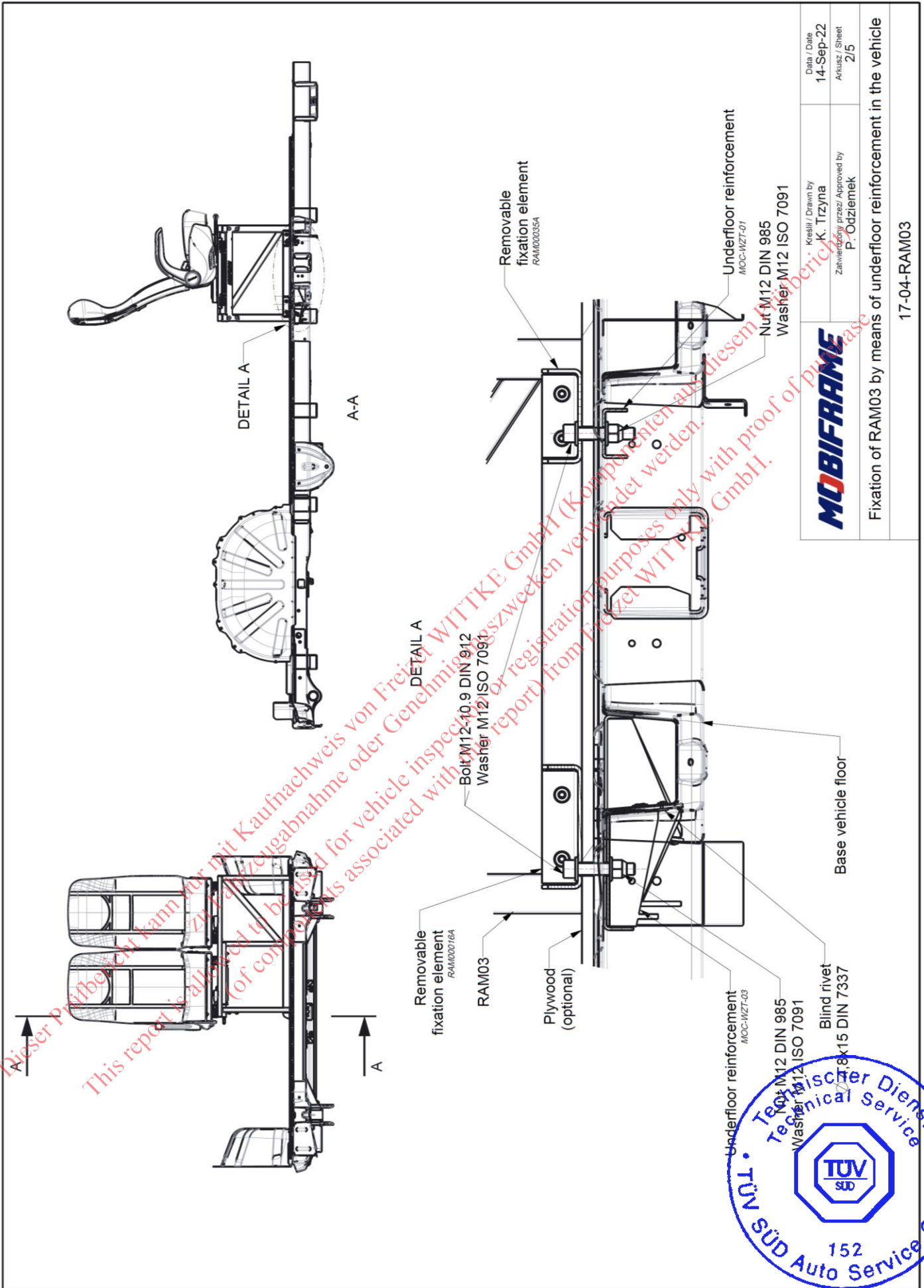
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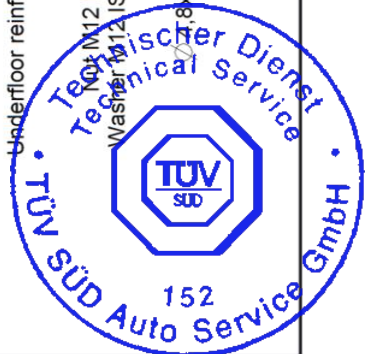
	Kresli / Drawn by <b>K. Trzyna</b> Zakleciony przez / Approved by <b>P. Odziemek</b>	Data / Date <b>14-Sep-22</b> Arkusz / Sheet <b>1/5</b>
	Fixation of RAM03 by means of underfloor reinforcement in the vehicle <b>17-04-RAM03</b>	

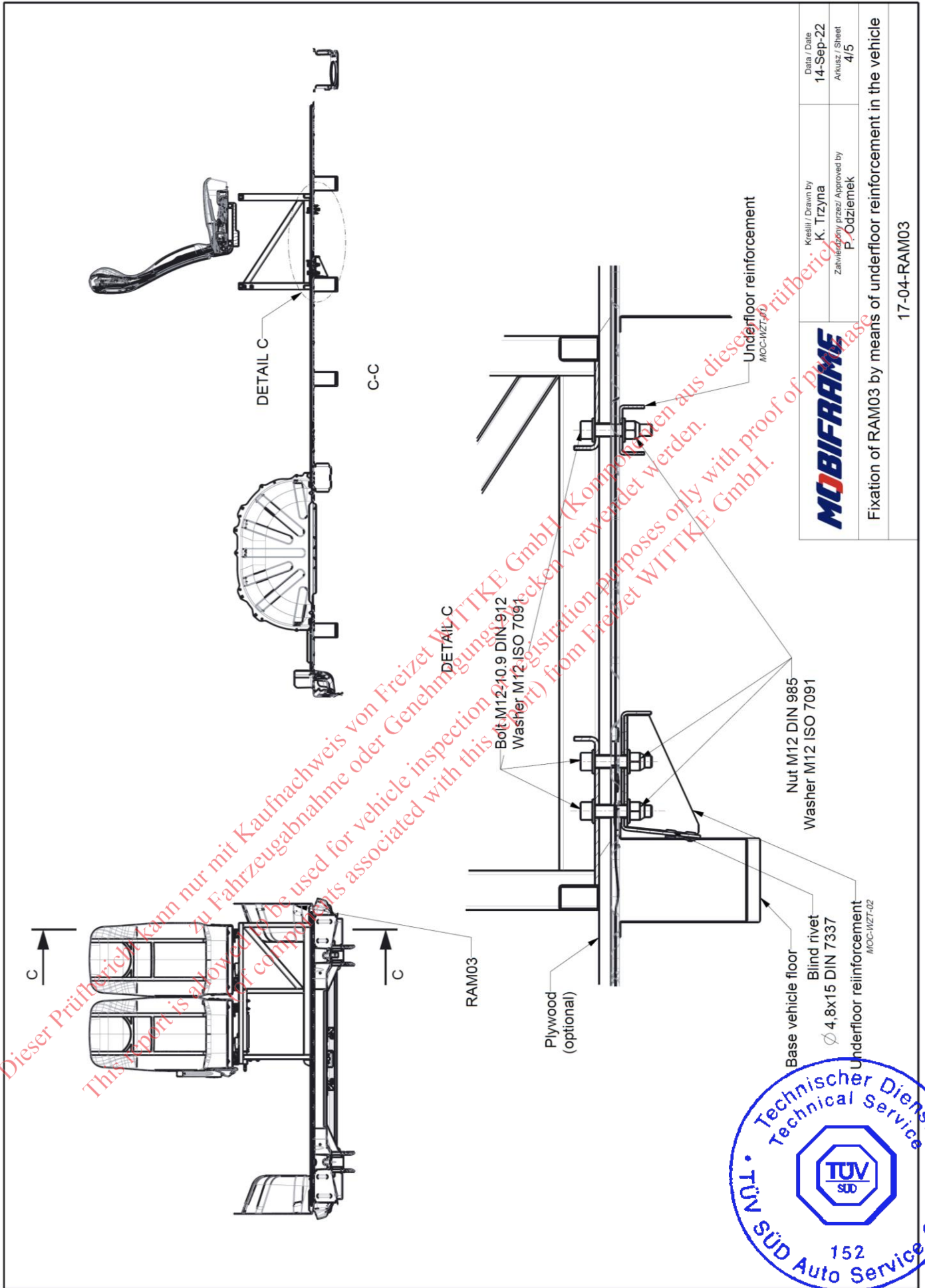





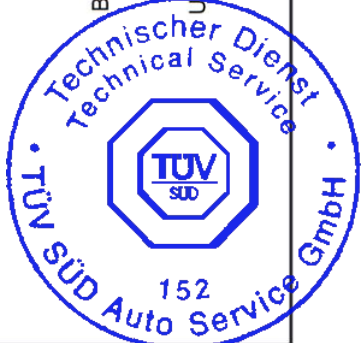
	Kreslil / Drawn by <b>K. Trzyna</b>	Date / Date <b>14-Sep-22</b>
	Zatwierdzone przez / Approved by <b>P. Odziemek</b>	Arkusz / Sheet <b>2/5</b>
Fixation of RAM03 by means of underfloor reinforcement in the vehicle		
17-04-RAM03		

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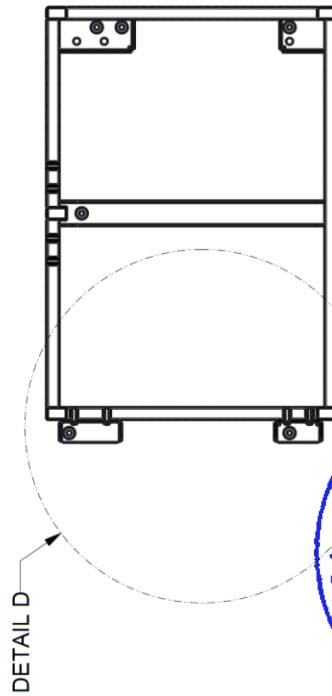
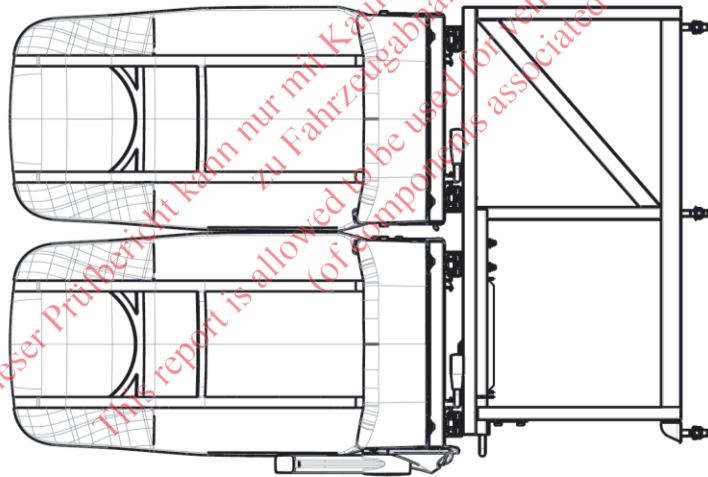
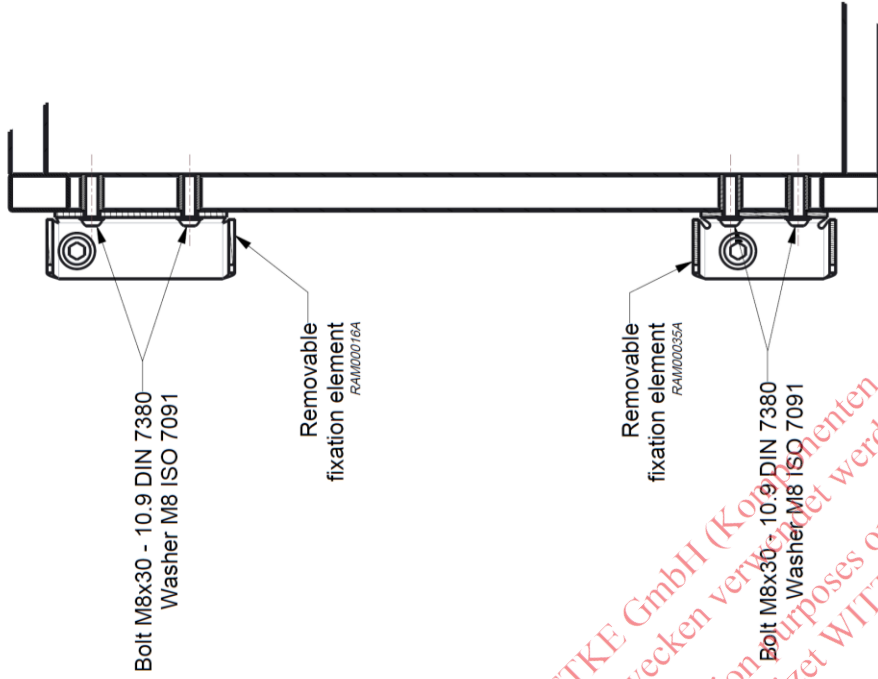




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	Zatwierdzony przez / Approved by P. Odziemek	Arkusz / Sheet 4/5
Fixation of RAM03 by means of underfloor reinforcement in the vehicle		
17-04-RAM03		



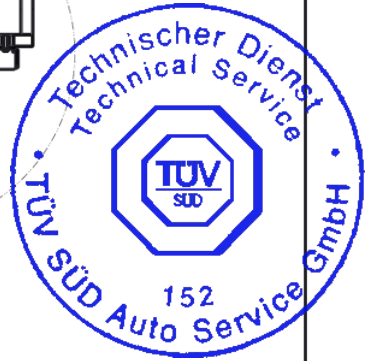
DETAIL D



D-D

	Kreiert / Drawn by <b>K. Trzyna</b>	Date / Date <b>14-Sep-22</b>
	Zatwierdzonej / przez / Approved by <b>P. Odziemek</b>	Arkusz / Sheet <b>5/5</b>
Fixation of RAM03 by means of underfloor reinforcement in the vehicle		
17-04-RAM03		

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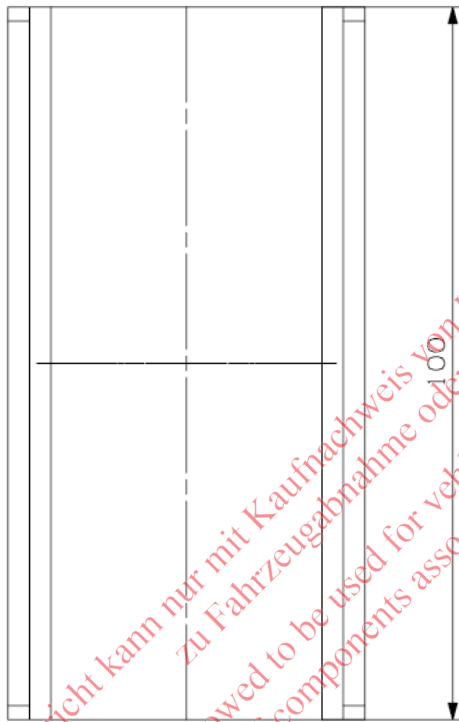
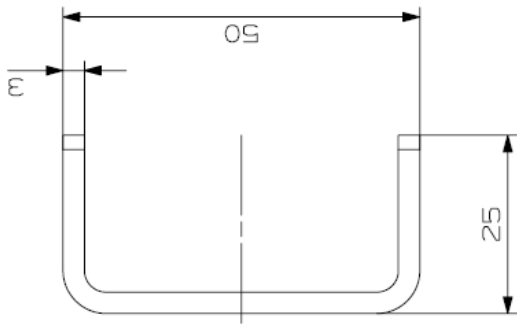
RAM03 fixation components (underfloor reinforcements):

(see next pages)

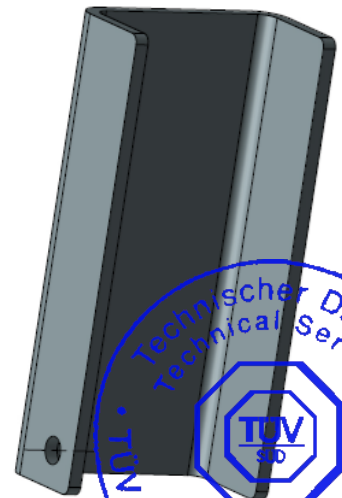
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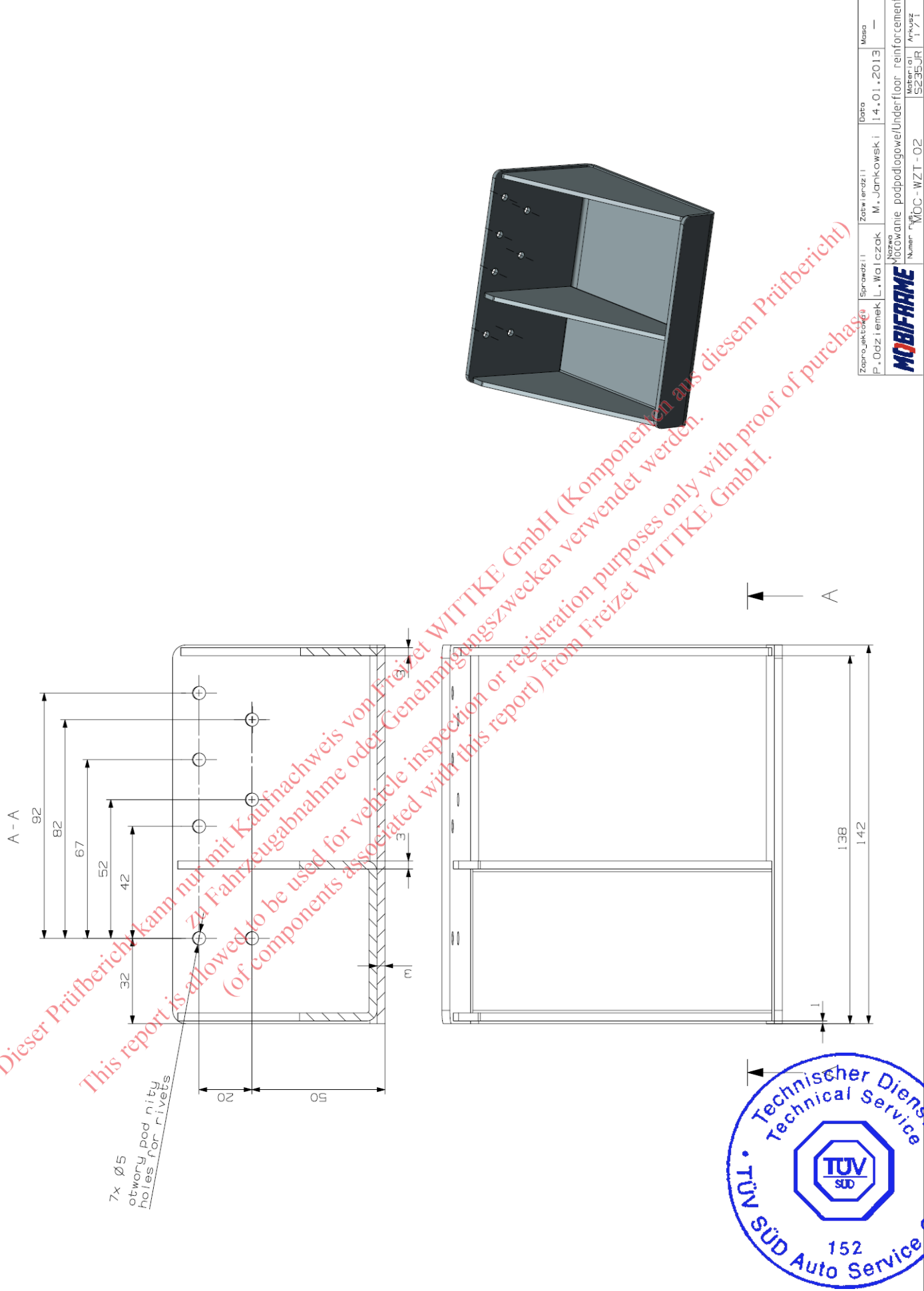


Ø 6  
 otwor technologiczny  
 technological hole

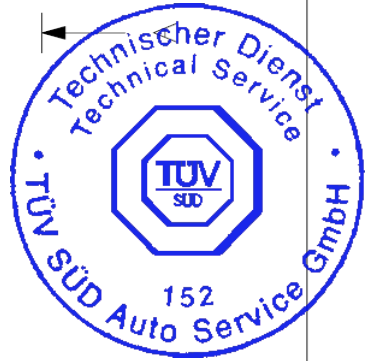


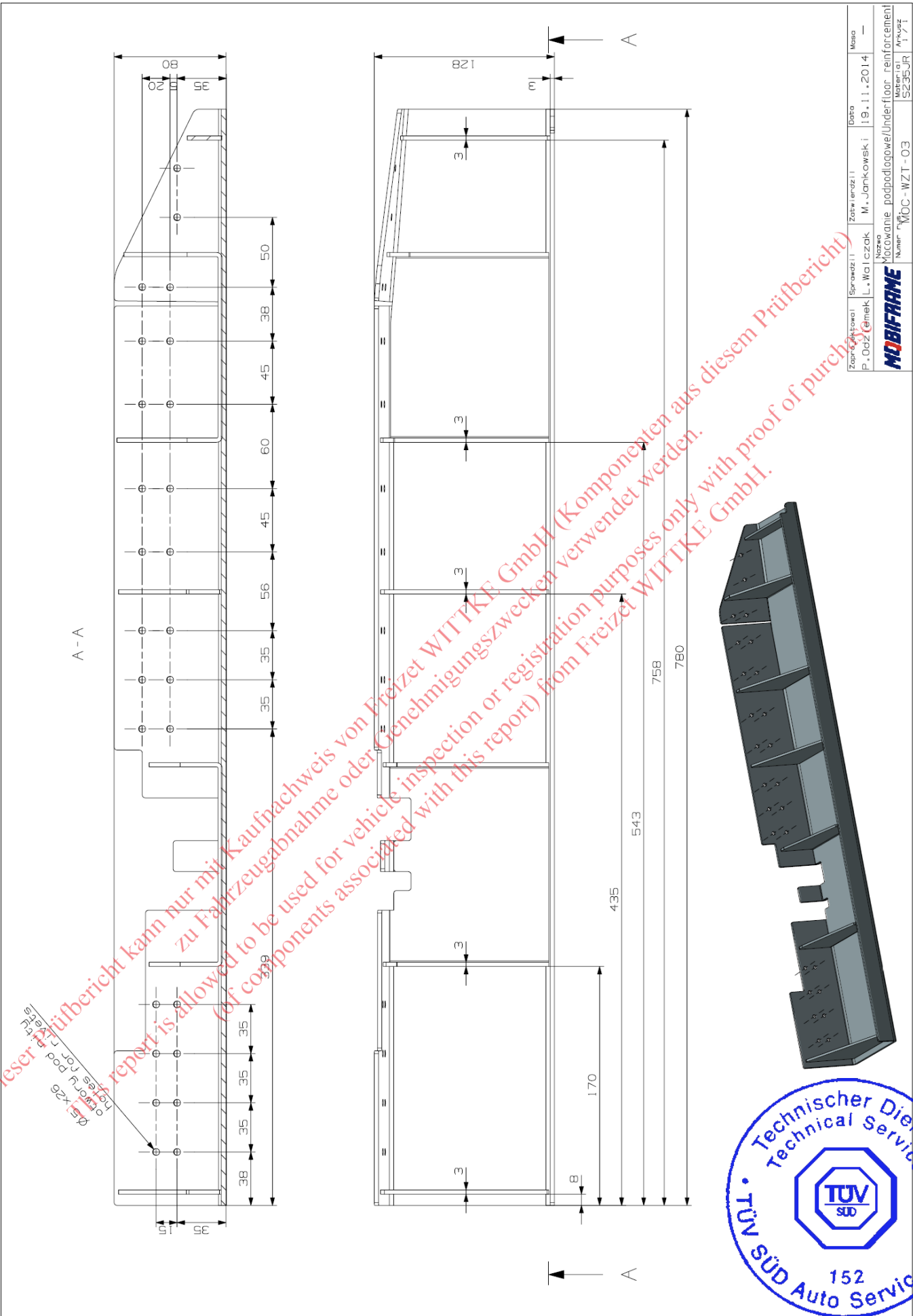
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Zaprojektował	Sprawdził	Zatwierdził	Data	Masa
P. Odziejmek	L. Walczak	M. Jankowski	19.11.2014	-
Nazwa			Mocowanie podprogowe/Underfloor reinforcement	
Numer rys.			MOC-WZT-01	Materiał
				S235JR
				Arkusze
				1/1



Zaproszenie do Sprawozdania	Sprawozdanie	Zatwierdzenie	Data	Masa
P.Odz. Temek L. Walczak	M. Jankowski	14.01.2013	—	—
Nazwa: Mocowanie podpodłogowe/Underfloor reinforcement				
Numer rys. MOC-WZT-02				
Artykuł: 5235JR 171				





Zaunerkategorie	Sprache	Zustand	Datum	Modell
P.002	de	M. Jankowski	19.11.2014	—
Name: Mobiframe Nummer: MOC-WZT-03				Name: Unterboden-Verstärkung Nummer: 5235UR





2.2 Fixation of double bench frame by means of underfloor reinforcements – dedicated for Mercedes Sprinter (906, 907)/Volkswagen Crafter (2006-2016)

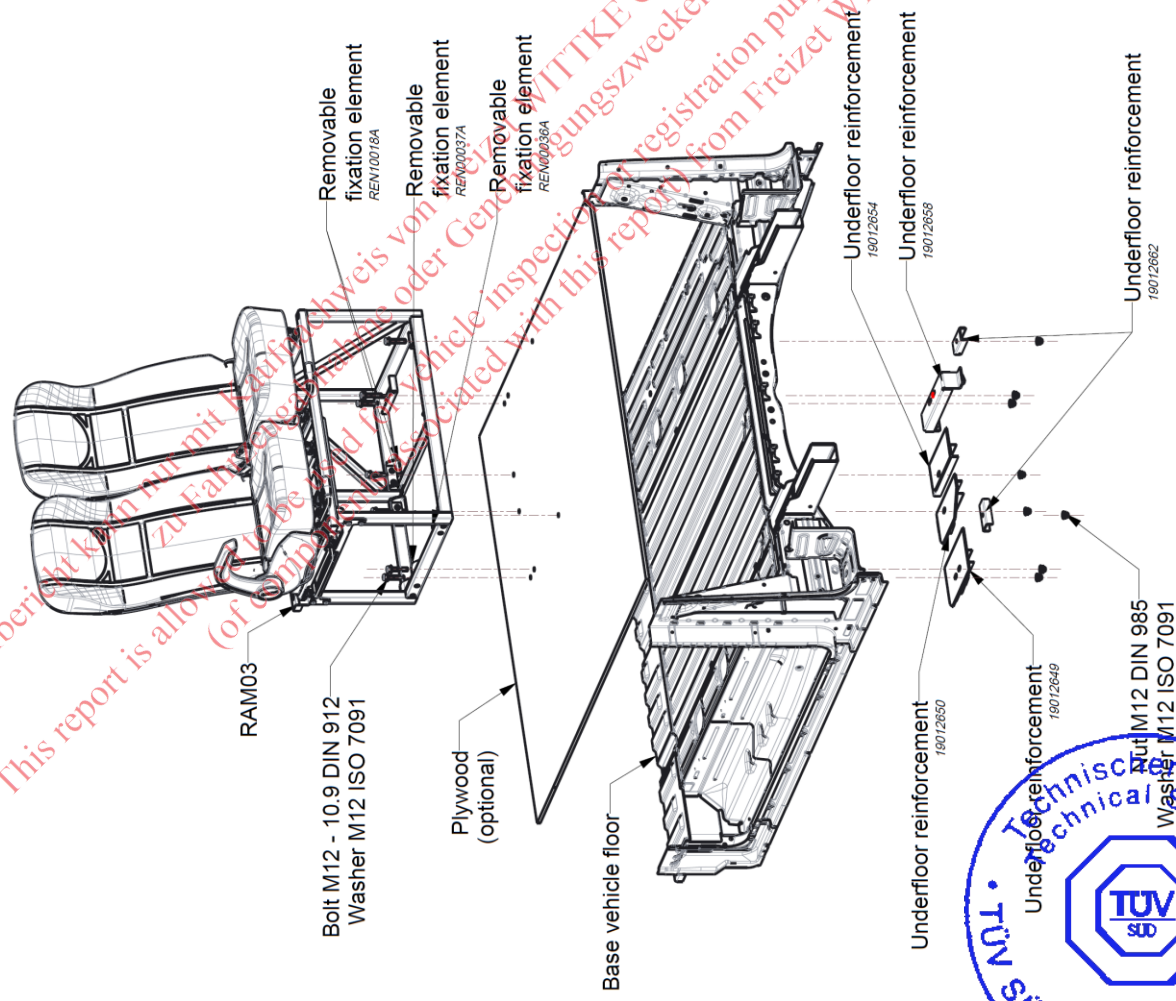
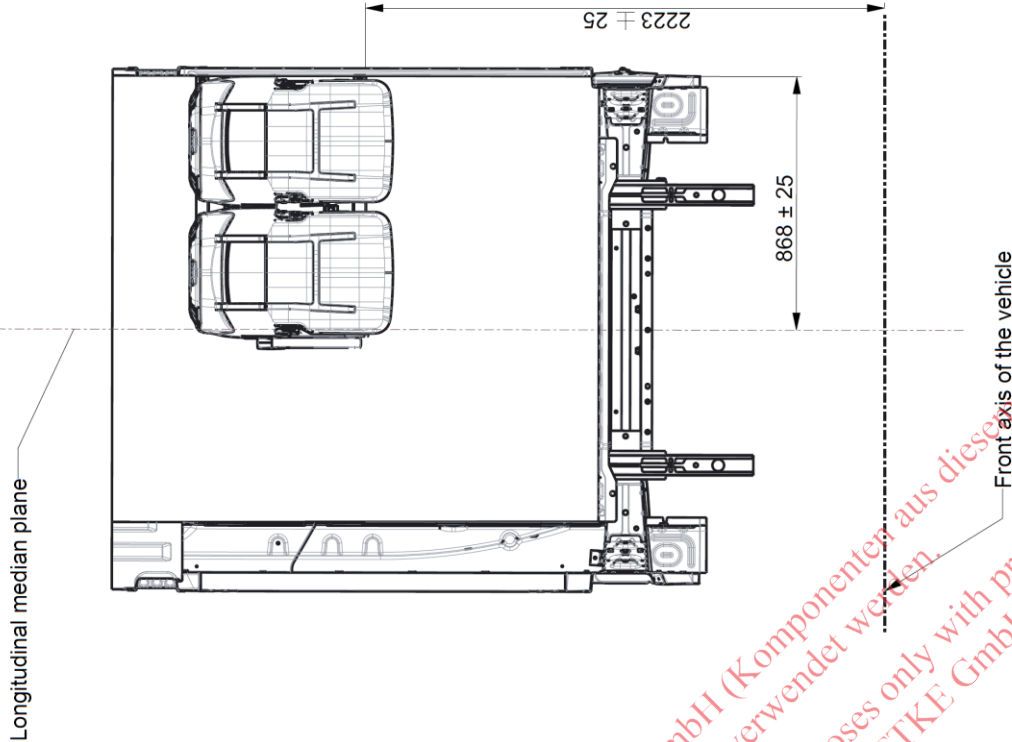
RAM03:

(see next pages)

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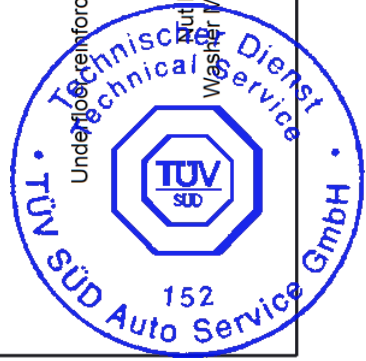


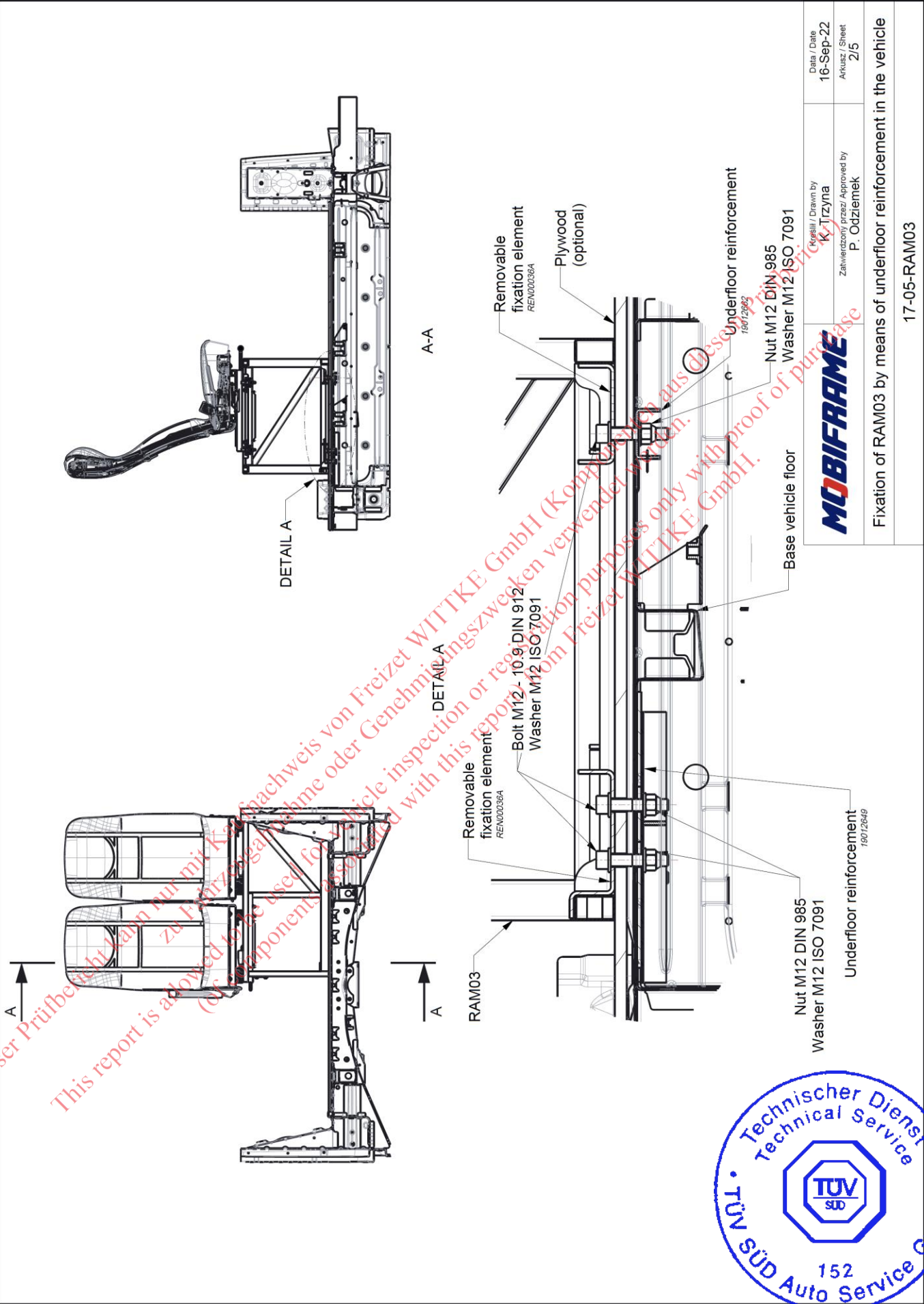
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Fixation of RAM03 by means of underfloor reinforcement in the vehicle		
17-05-RAM03		

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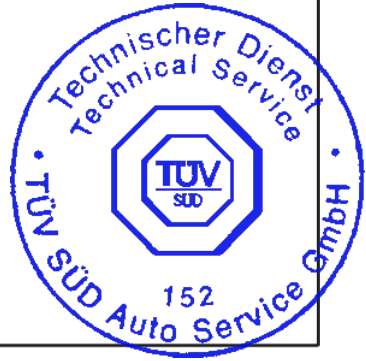




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	Zakwalifikowany inżynier / Approved by P. Odziemek	Arkusz / Sheet 2/5

Fixation of RAM03 by means of underfloor reinforcement in the vehicle

17-05-RAM03



DETAIL D

Bolt M8x30 - 10.9 ISO 7380  
Washer M8 ISO 7091

Removable  
fixing element  
REN10016A

Removable  
fixation element  
REN00037A

Removable  
fixation element  
REN00036A

Bolt M8x30 - 10.9 ISO 7380  
Washer M8 ISO 7091

DETAIL D

D-D

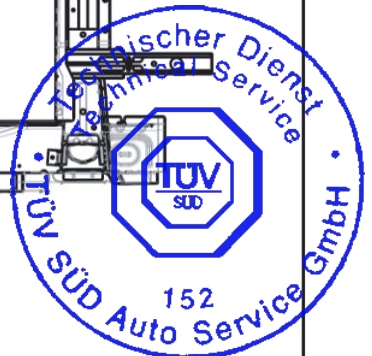
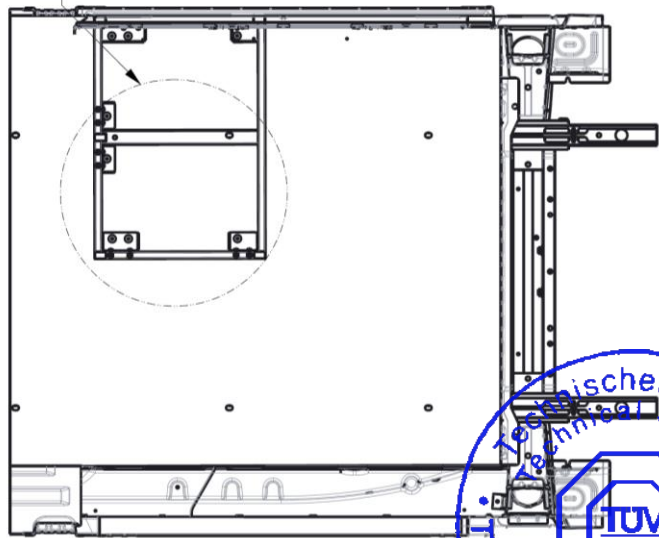
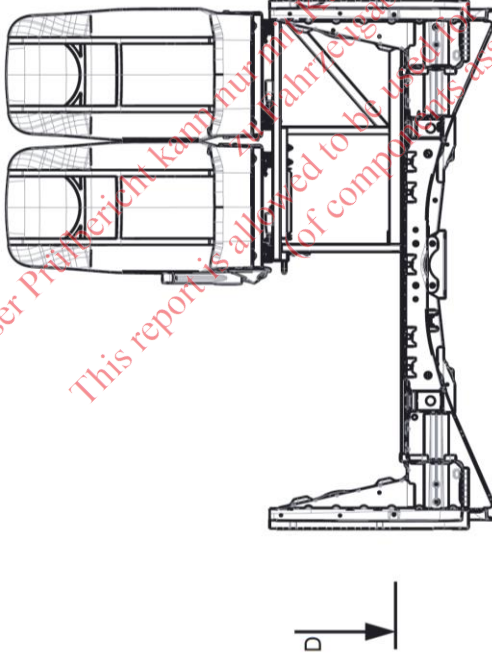
Date / Date  
16-Sep-22

Kreiert / Drawn by  
K. Trzyna  
Zatwierdzone / przez / Approved by  
P. Odziemek



Fixation of RAM03 by means of underfloor reinforcement in the vehicle

17-05-RAM03



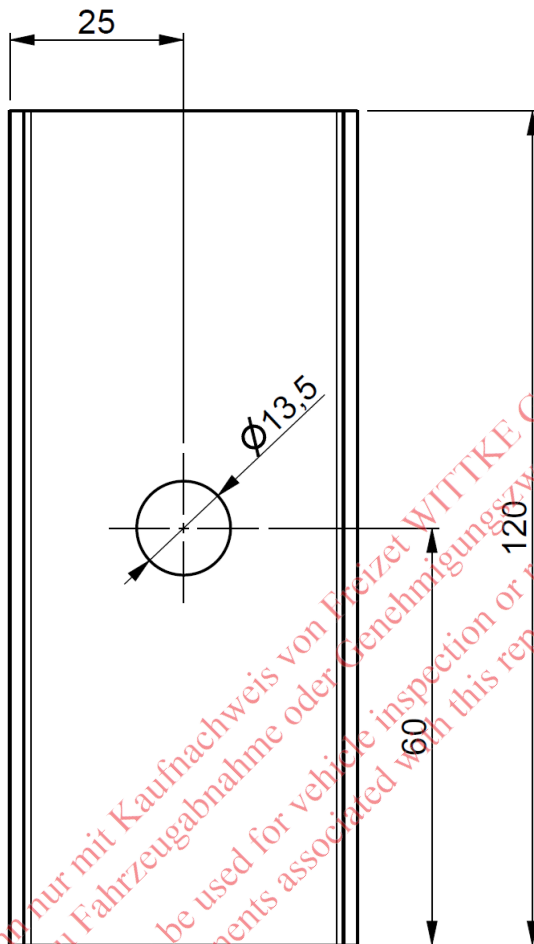
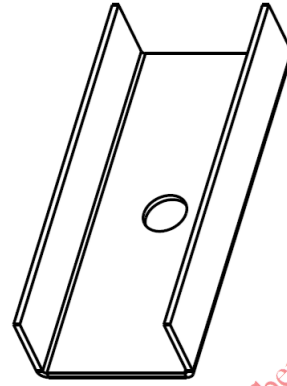
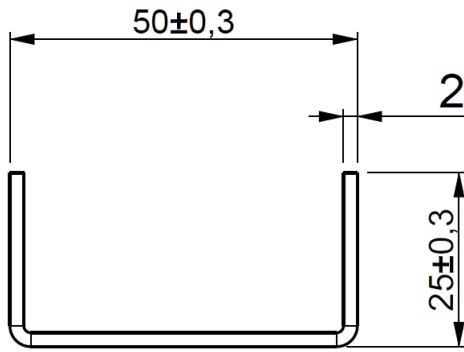
RAM03 fixation components (underfloor reinforcements):

(see next pages)

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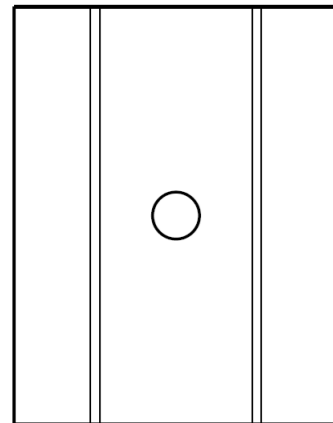


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Płaski wzór / Flat pattern:

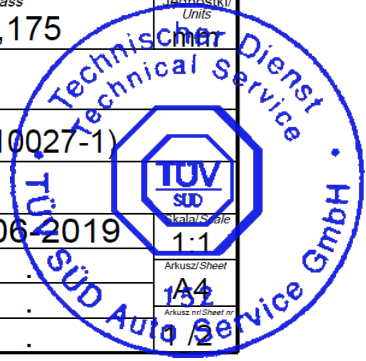


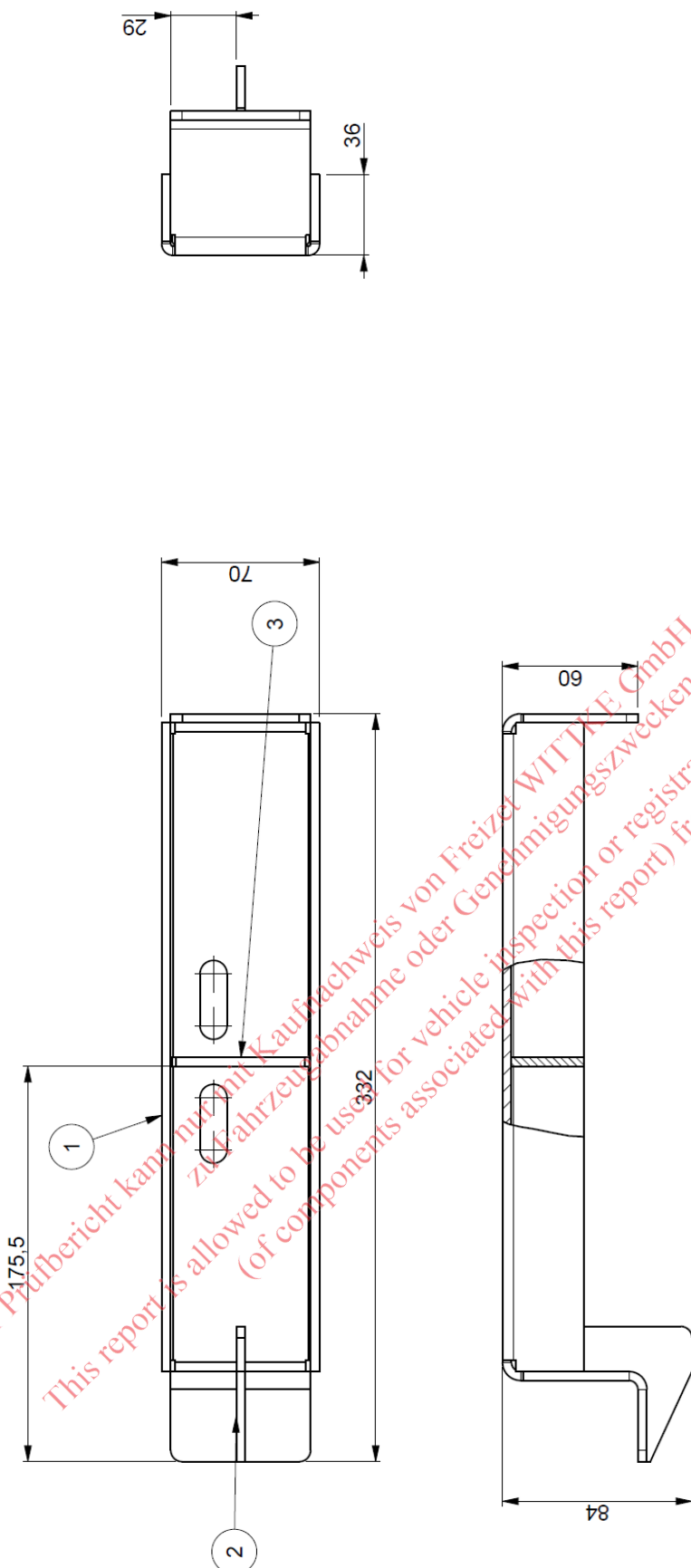
UWAGI:

Laser: 19012662A.dxf

Powierzchnia  
Surface  
0,023 m<sup>2</sup>

Tolerancje wg ISO 2768-1 i ISO2768-2, klasa: Tolerances according to ISO 2768-1; ISO2768-2, class: <small>Obrobka wykańczająca / TREATMENT</small>		mK	Masa [kg]/Mass 0,175	Jednostki/ Units mm
Nazwa/Part Name <b>WZP01</b>		Materiał/Material S355JR (EN 10027-1)		
Konstruktor/ Designer S.Chrzanowski		Nr. Części/Part Number A		18-06-2019
		<h1>19012662</h1>		1:1
				Arkusz/Sheet 1/4

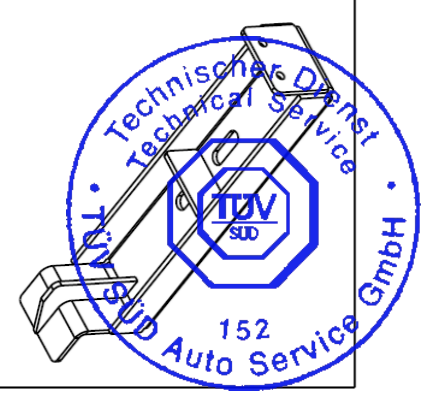


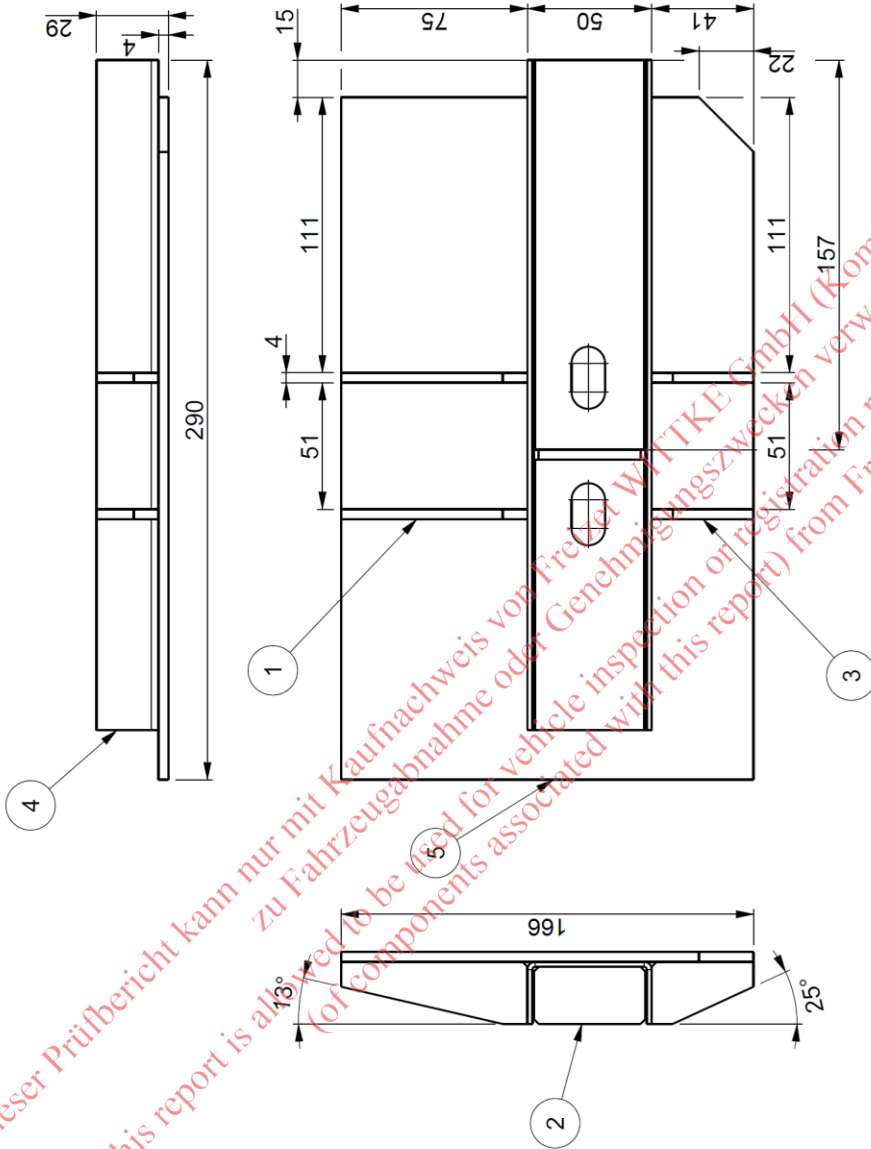


3	1	ZASTRZALG	19012661	A	0,061
2	1	ZASTRZAL_F	19012660	A	0,064
1	1	WZ_KABE_MID1	19012659	A	1,452
Pozycja Ilość		Nazwa	Kod	Wersja	Masa
					Masa [kg]/Masa
					± 0,5mm i 50
					1,577
Tolerancja dla zleceń, wymiary linijowe i kątowe: Tolerances for assemblies linear and angular dimensions: OBRÓTA WYKONAWCZĄCEJ PRACOWNI					
Nazwa/Part Name					
Material/Material					
Zakres/Assembly					
Wzmocnienia					
Kontakt/ Designer					
W. Grzegorek					
Nr. części/Part Number					
A					
Data/Date					
03.07.2019					
Klasa/Class					
A3					
Wersja/Version					
1/2					

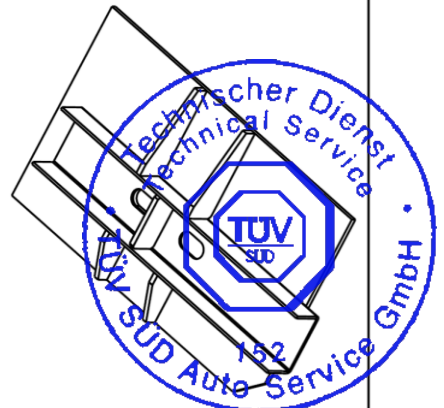
**WD\_MOCOWANIE\_SLUPKA**  
**19012658**

Powierzchnia  
Surface  
0,108 m<sup>2</sup>

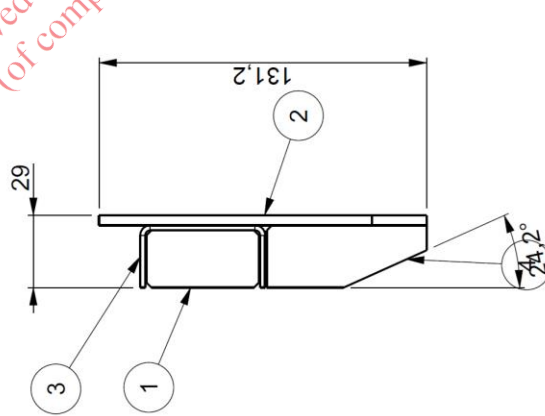
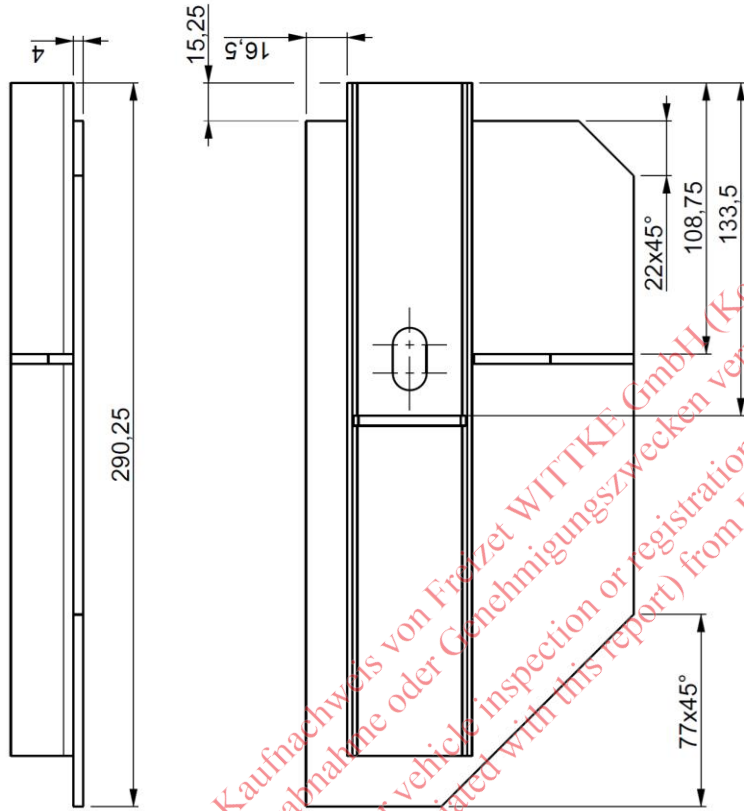




5	1	BLACHA_MOCUJACA	19012648	A	1,416
4	1	CEOWNIK_WZMACNIAJACY	19012647	A	0,390
3	2	ZASTRZAL_C	19012646	A	0,024
2	1	ZASTRZAL_A	19012645	A	0,032
1	2	ZASTRZAL_B	19012644	A	0,044
Pozycja Ilość		Nazwa	Kod	Wersja	Masa
		Tolerancja dla złożeń, wymiarów kątów	± 0,5mm i 50		Masa kg/m <sup>2</sup>
		Tolerances for assemblies, linear and angular dimensions:			1,975
		DOBRA WYKONANIA/TREATMENT			mm
Malować RAL 9005 / Paint RAL 9005					
Nazwa/Part Name					
WD_WZMOC_TYLNE_1					
Zacznik/Assembly Wzmocnienia					
Konstruktor/Designer	W. Grzegorek		Nr części/Part Number	A	
Powierzchnia Surface			03.07.2019		
0,159 m <sup>2</sup>			1:2		
MOBIFRAME			A3		
19012649			1/2		

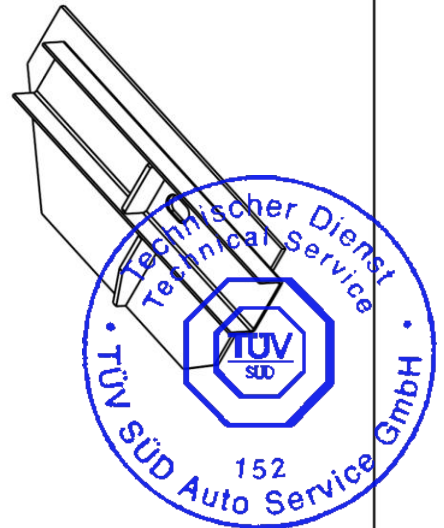


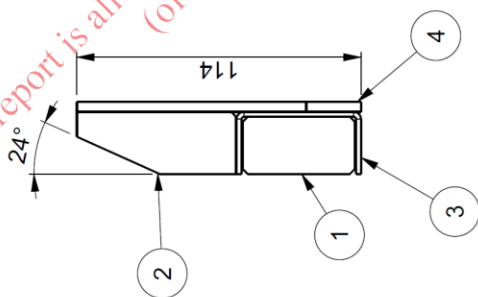
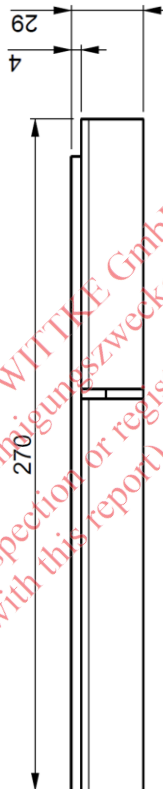
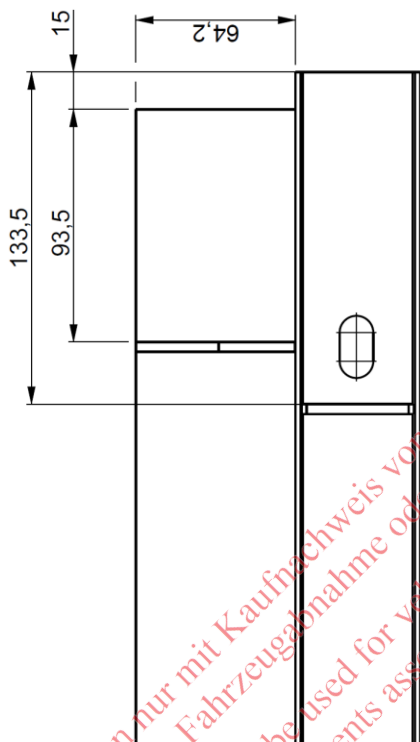




4	1	ZASTRZAL D	19012653	A	0,042
3	1	CEOWNIK_WZMAC 2	19012652	A	0,391
2	1	BLACHA MOCUJACA_2	19012651	A	1,023
1	1	ZASTRZAL A	19012645	A	0,032
Pozycja / Ilość		Nazwa	Kod	Wersja	Masa
					Masa [kg]/Masa
					1,489
Tolerancja dla złożeń, wymiary jłlowe i kłłowe: Tolerances for assemblies, linear and angular dimensions: Dobry wypracowany przyrzãdzenie					
Malowãc RAL 9005 / Paint RAL 9005					
Nazwa / Part Name					
WD_WZMOC_TYLNE_2					
Zobojgnienie / Assembly					
Wzmocnienie					
Konstruktor / Designer		Nr. Części / Part Number		Data / Date	
W. Grzegorek		WD_WZMOC_TYLNE_2		03.07.2019	
Eksportowa Europejska		MOBIFRAME		A3	
		19012650		1/2	

Powierzchnia  
Surface  
0,126 m<sup>2</sup>

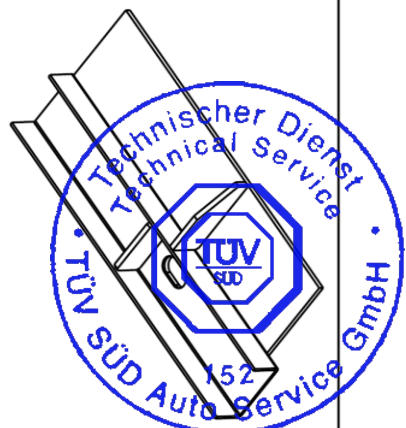




4	1	BLACHA_MOCUJACA_3	19012656	A	0.897
3	1	CEOWNIK_WZMAC_3	19012655	A	0.395
2	1	ZASTRZAL_D	19012653	A	0.042
1	1	ZASTRZAL_A	19012645	A	0.032
Pozycje Ilosci		Nazwa	Kod	Wersja	Masa
					Masa kg/Massa
					1,367
Tolerancja dla zlozen, wymiary i linowe i ktowe: Tolerance for assemblies, linear and angular dimensions: DOKONANIE PRZYBRANIE					
Malowac RAL 9005 / Paint RAL 9005					
Nazwa/Part Name					
Wzmocnienia					
Zacznik/Assembly					
Konstruktor/ Designer					
Nr. Czysci/Part Number					
03.07.2019					
1:2					
A3					
1/2					

Powierzchnia  
Surface  
0,118 m<sup>2</sup>

**WD\_MOCOWANIE\_TYLNE**  
**19012654**



2.3. Fixation of double seat bench by means of Fixation Plate – dedicated for all vehicles presented in Enclosure 1

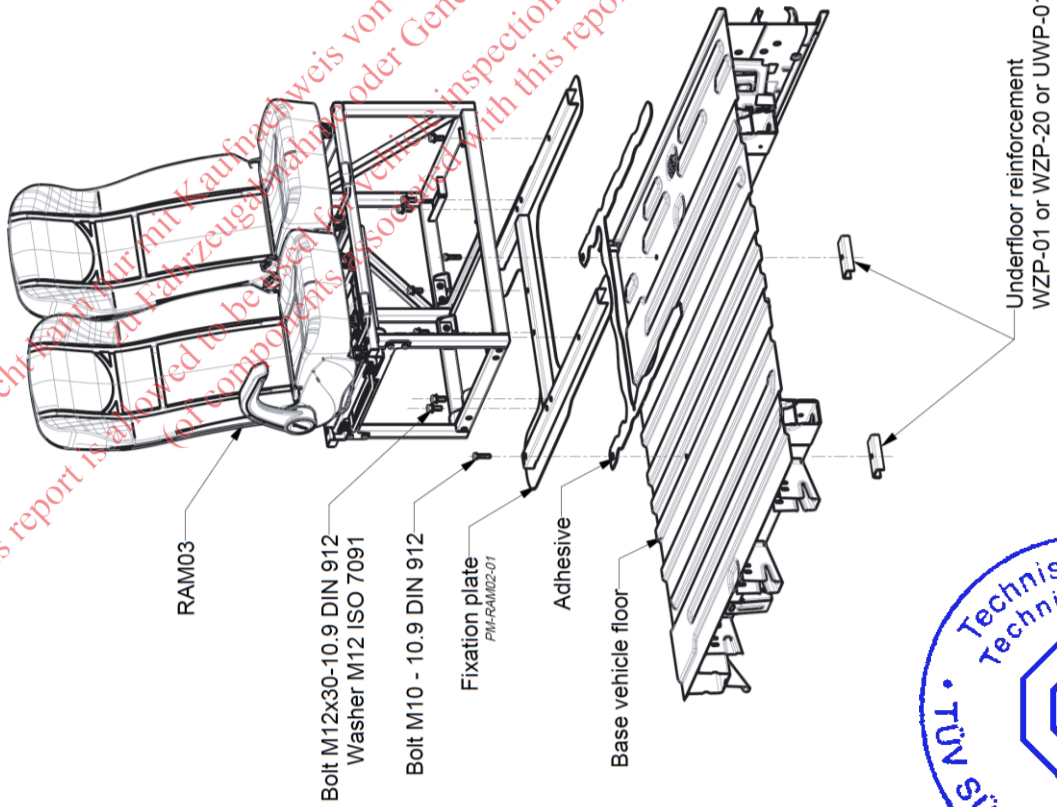
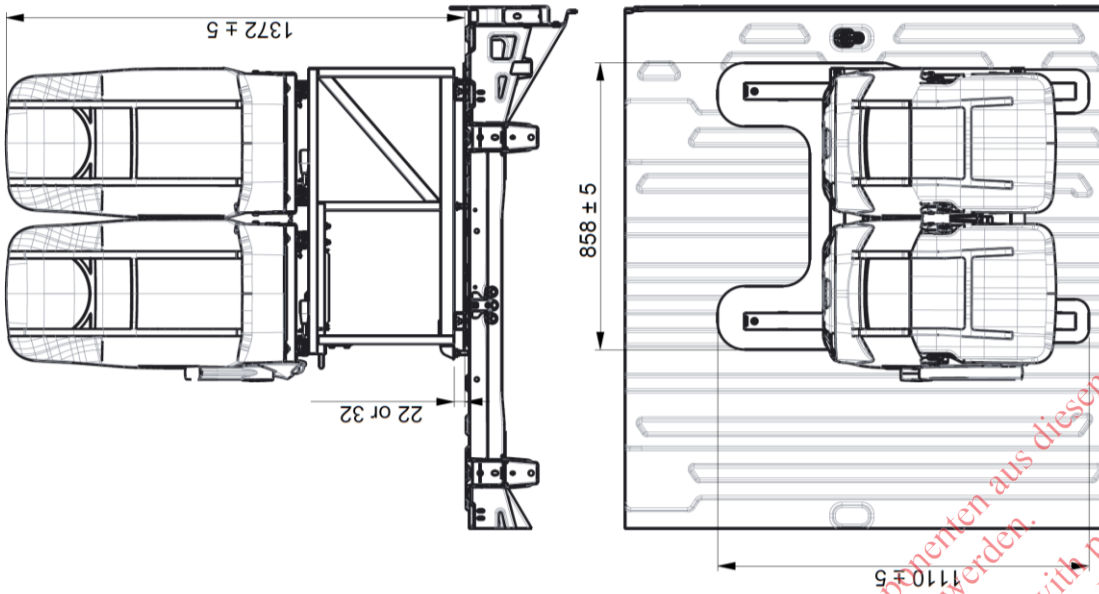
RAM03:

(see next pages)

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<b>MOBIFRAME</b>		Date: 20.01.2023
	MOBIFRAME/05/2022-00	Page / pages: 27/69



Date / Date  
13-Sep-22  
Arbeits / Sheet  
1/3

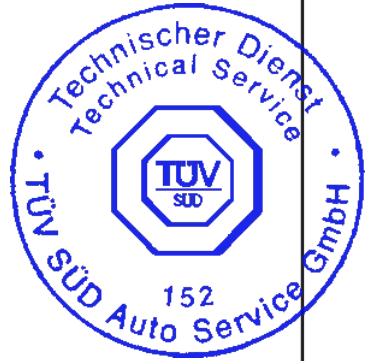
Kreiert / Drawn by  
K. Trzyna  
Zahlverord / Order / Approved by  
P. Odziemek

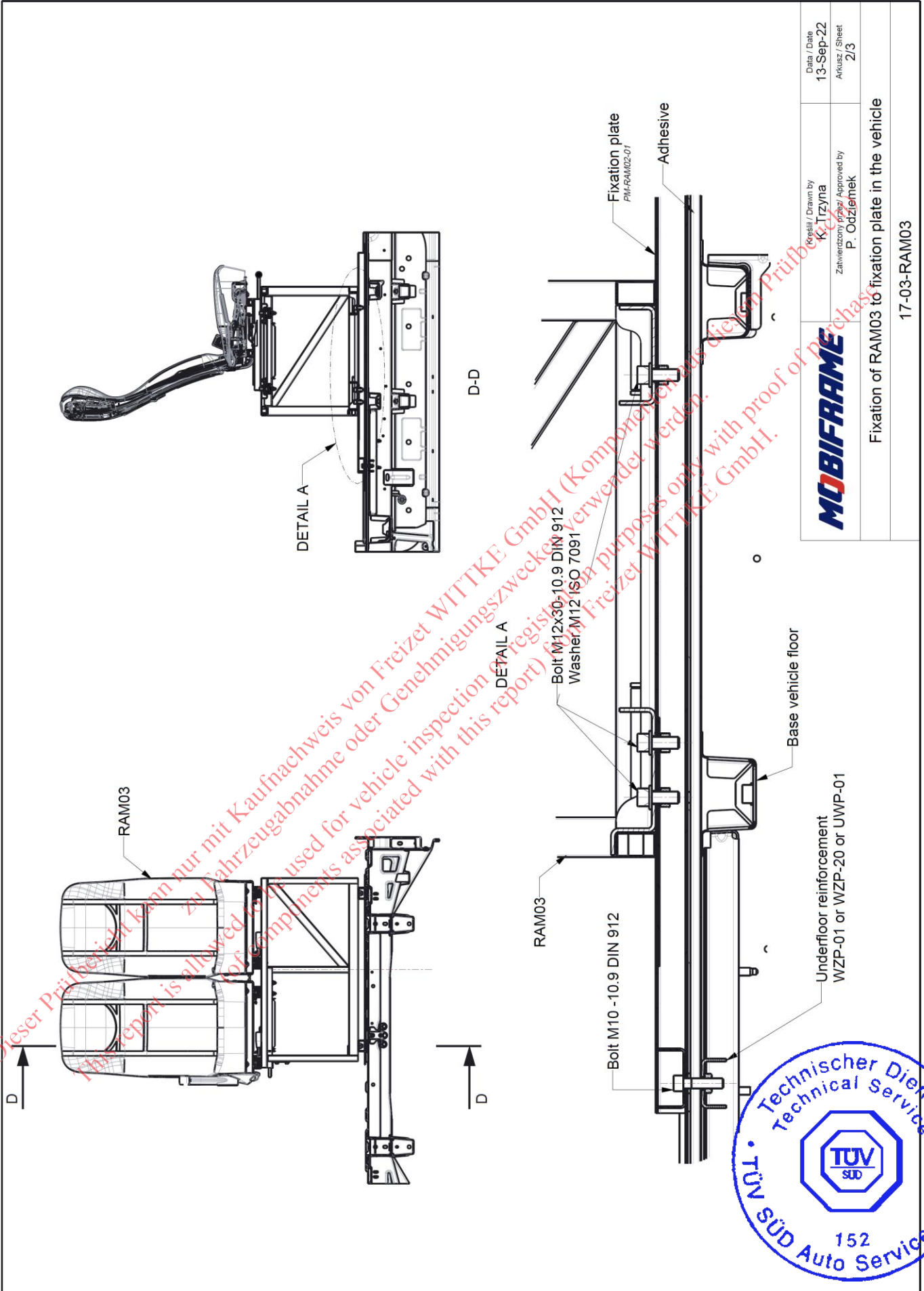


Fixation of RAM03 to fixation plate in the vehicle

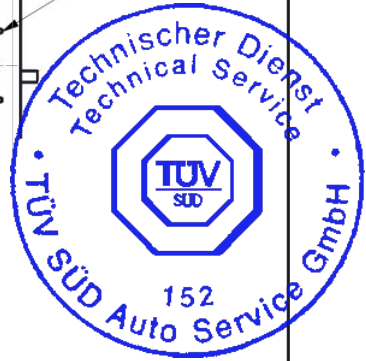
17-03-RAM03

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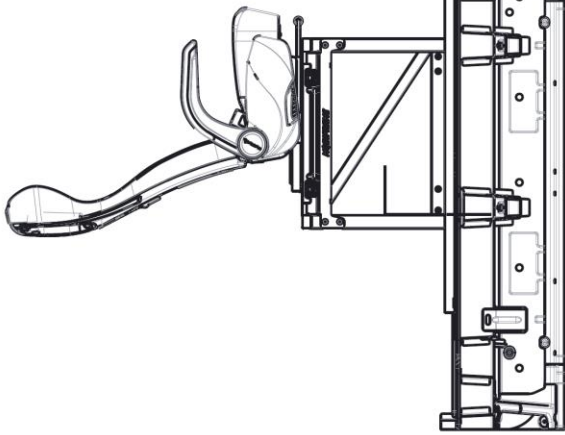




<b>MOBIFRAME</b>	Kreslil / Drawn by K. Trzyna	Data / Date 13-Sep-22
	Zatwierdzony przez / Approved by P. Odziemek	Arkusz / Sheet 2/3
Fixation of RAM03 to fixation plate in the vehicle		
17-03-RAM03		

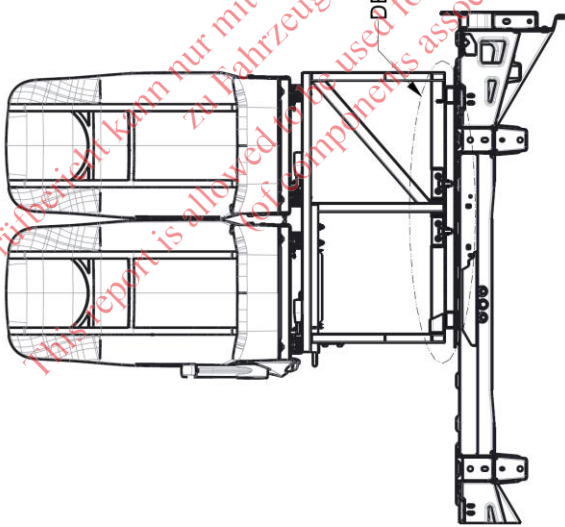


E



E

Bolt M12x30 - 10.9 DIN 912  
Washer M12 ISO 7091



E-E

DETAIL B

RAM03

Fixation plate  
PIM-RMA02-01

Adhesive

Base vehicle floor

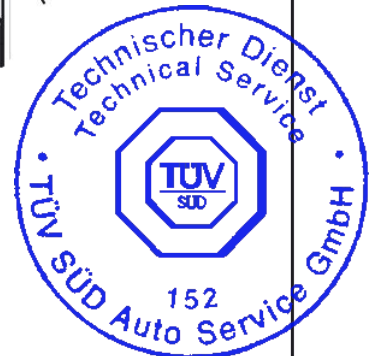
Date / Date  
13-Sep-22  
Arkusz / Sheet  
3/3

Kreslili / Drawn by  
K. Trzyna  
Zatwierdzony przez / Approved by  
P. Odziemek

**MOBIFRAME**

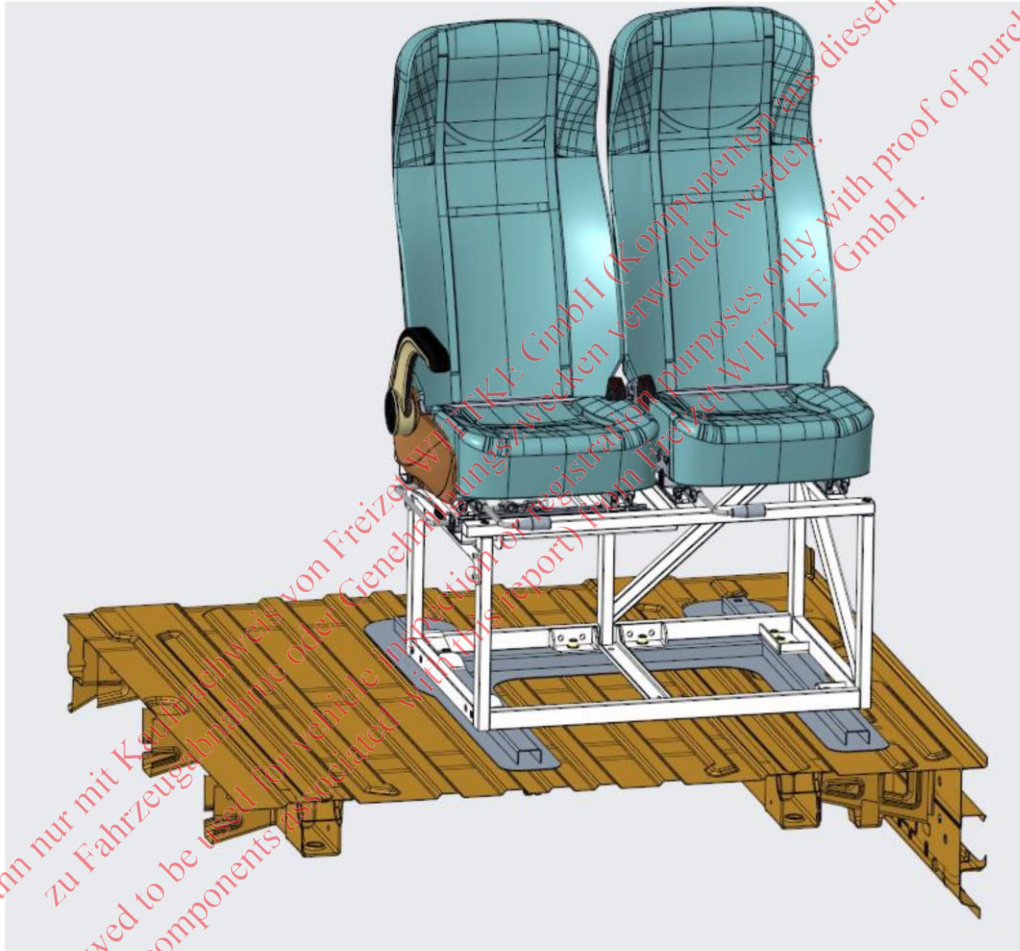
Fixation of RAM03 to fixation plate in the vehicle

17-03-RAM03



## Installation guide:

### Fixation of RAM03 to the vehicle floor



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## Step 1. Preparation of the vehicle body and fixation plate

Clean vehicle floor before installation. Surface must be clean, dry and free from all traces of grease, oil and dust. Use Betaclean (cleaner) to degrease the vehicle's floor and the bottom side of the fixation plate.



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## Step 2. Primmering

Apply Betaprime on the vehicle's floor and also on bottom side of the fixation plate. Primer can be applied with a brush or roller. Contact surfaces (of vehicle floor and fixation plate) must be covered by Betaprime.



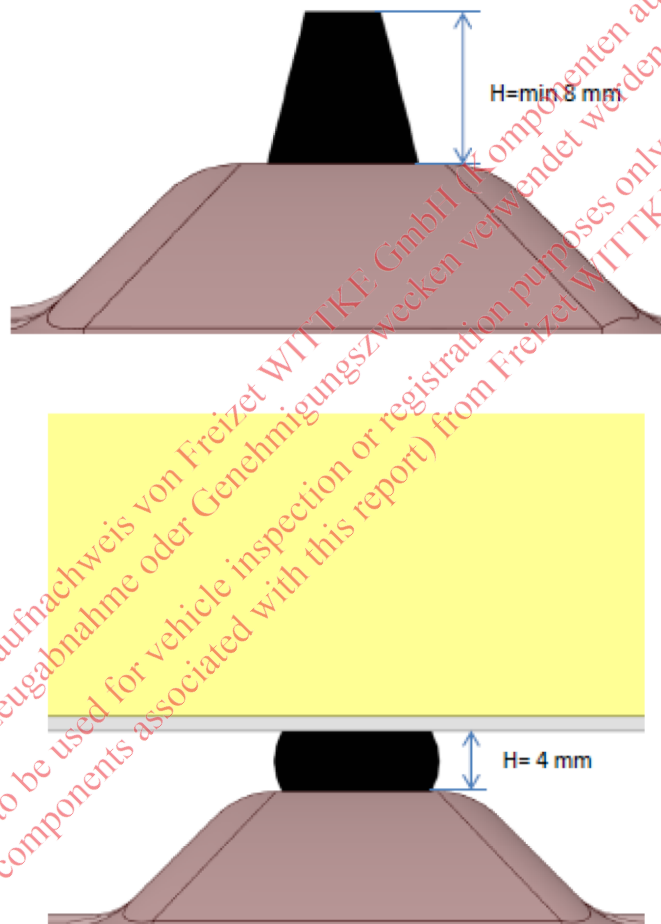
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## Step 3. Gluing

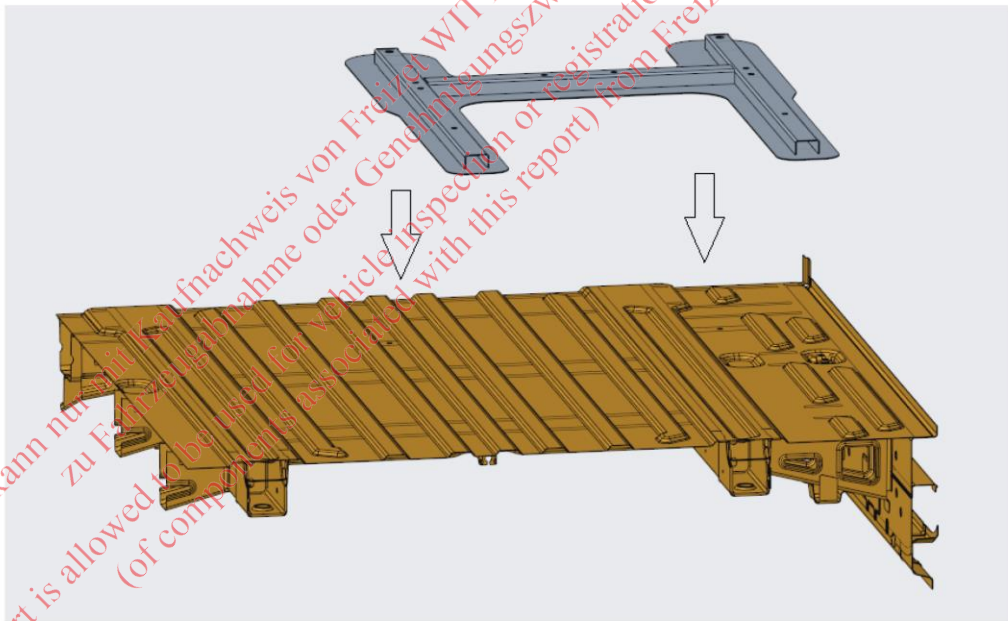
Don't walk on the primered surfaces. Use a piece of carton for protection. Apply Betamate glue on raised floor ribs of vehicle floor in the place where the bench is attached. Primer should be dry. The adhesive must be applied on the surfaces coated previously by Betaprime.

Recommended glue bead





Place and glue the fixation plate to the desired location on the vehicle floor. Leave the floor for at least 24 h. Don't walk on the fixation plate and don't move the vehicle.

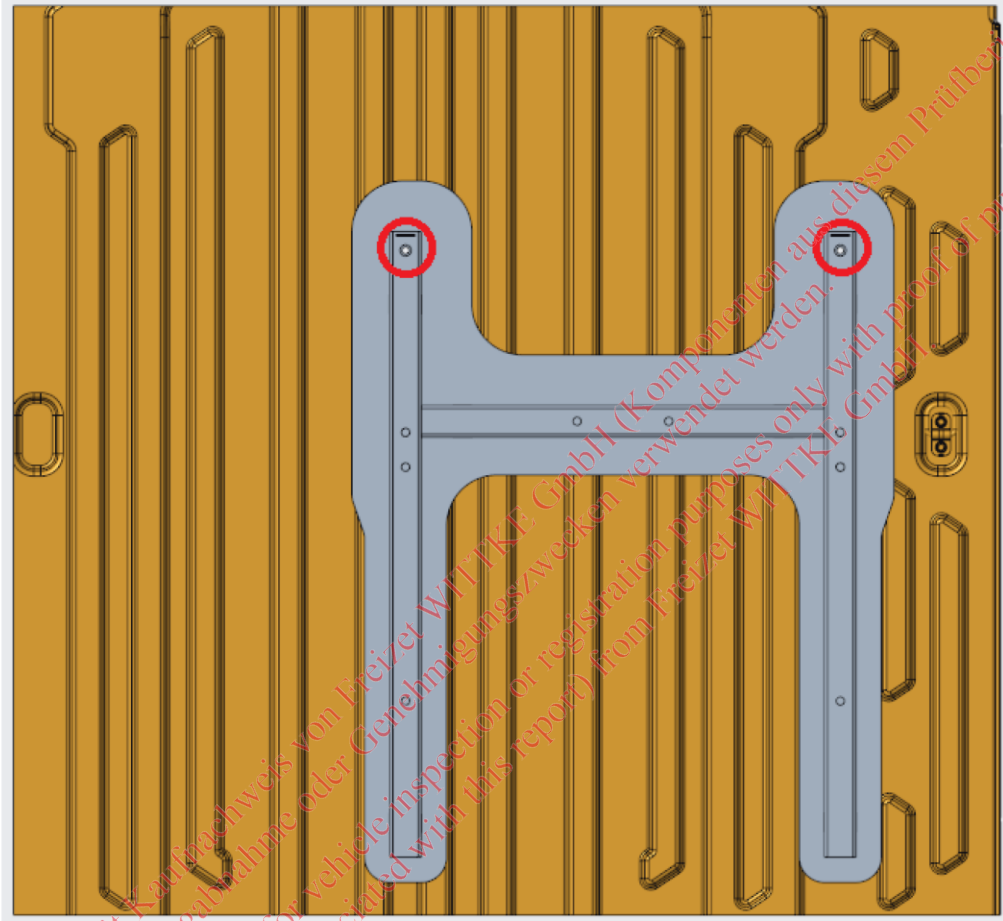


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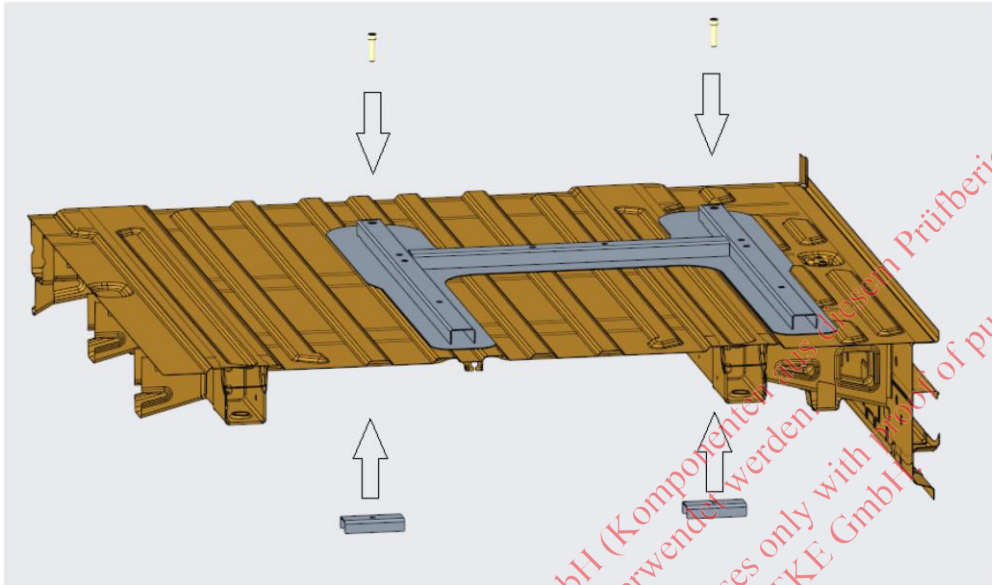
## Step 4. Underfloor reinforcements

Drill holes  $\phi 11$  in the vehicle floor according existing holes in fixation plate.



# MOBIFRAME

Devices for comfort and safetiness



Screw the underfloor reinforcements. Tightening torque 30 Nm. Use liquid anaerobic glue to secure the bolts.

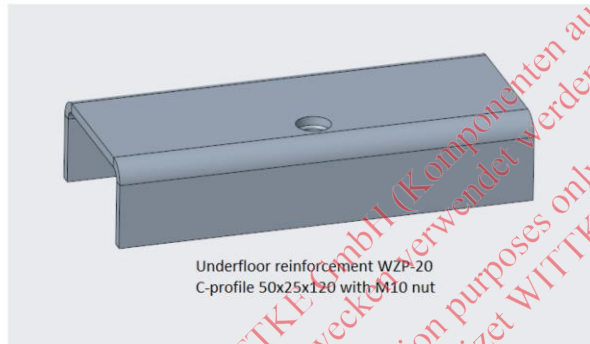
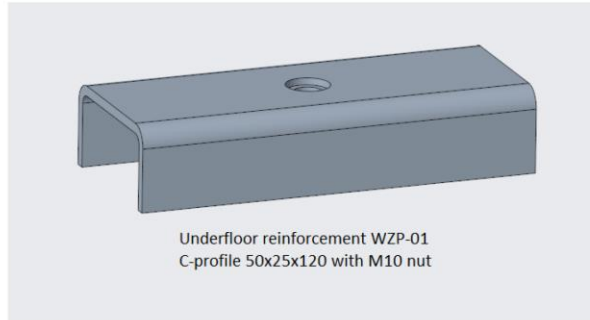
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<b>MOBIFRAME</b>		Date: 20.01.2023
	MOBIFRAME/05/2022-00	Page / pages: 37/69

# MOBIFRAME

Devices for comfort and safetiness



Underfloor reinforcement can be rotated by 90 degrees. Put the rubber blank plugs into the installation holes.

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<b>MOBIFRAME</b>		Date: 20.01.2023
	MOBIFRAME/05/2022-00	Page / pages: 38/69

RAM03 fixation components:

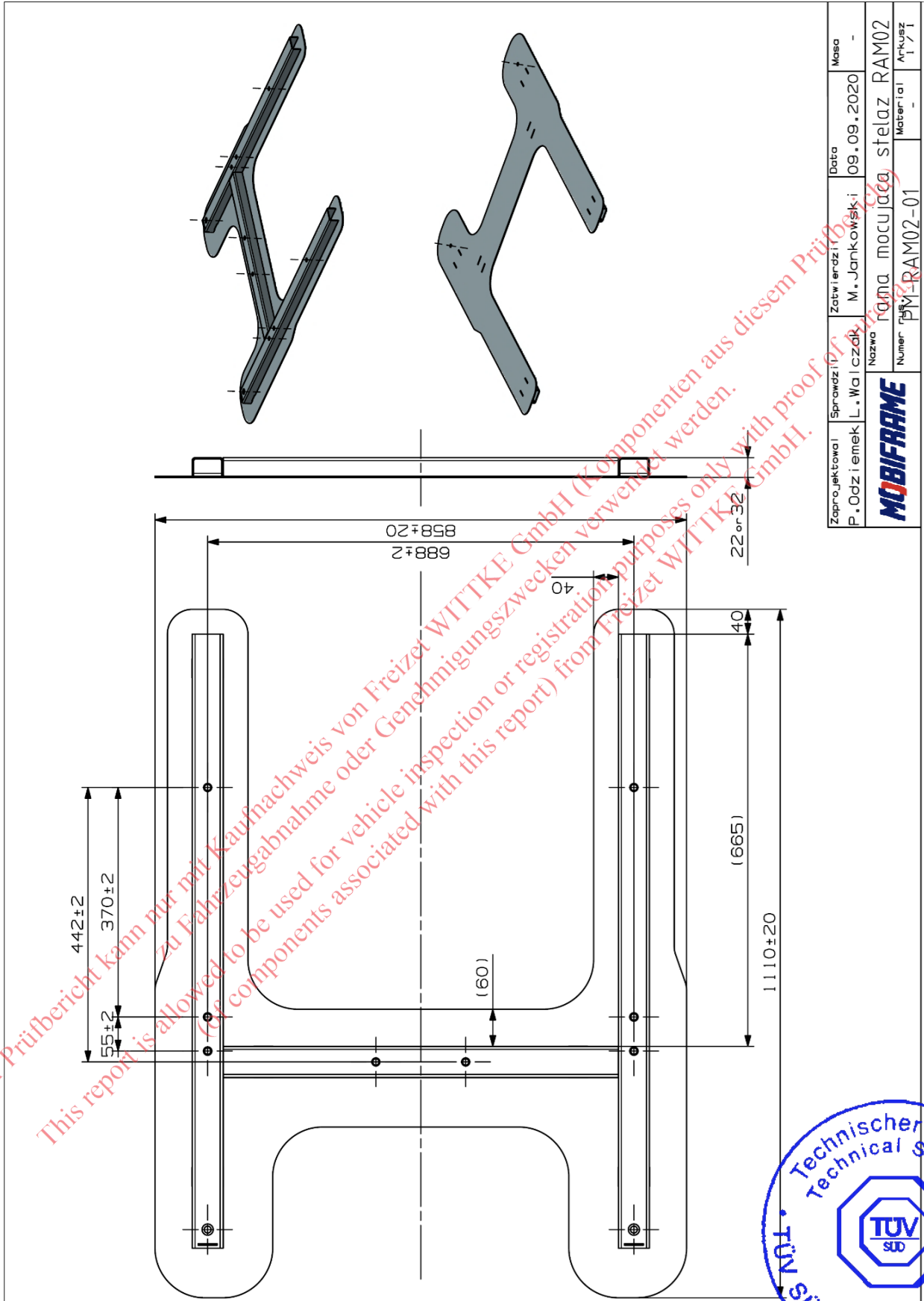
(see next pages)

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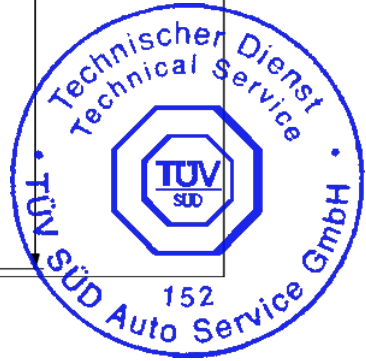


<b>MOBIFRAME</b>		Date: 20.01.2023
	MOBIFRAME/05/2022-00	Page / pages: 39/69

Fixation Plate:



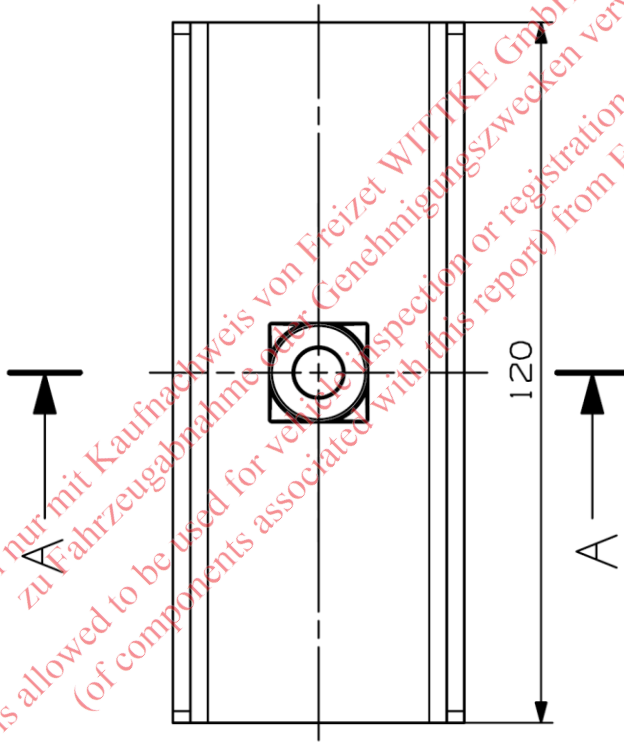
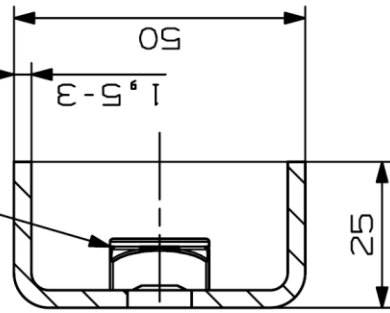
Zaprojektował	Sprawdził	Zatwierdził	Data	Masa
P. Odziejewski	L. Walczak	M. Jankowski	09.09.2020	-
Nazwa			Materiał	
rama mocująca stelaz RAM02			-	
Numer			Arkusze	
PM-RAM02-01			1/1	





Nakretka  
do zgrzewania M10  
lub  
nakretka  
spawalnica M10 /  
Welding nut M10

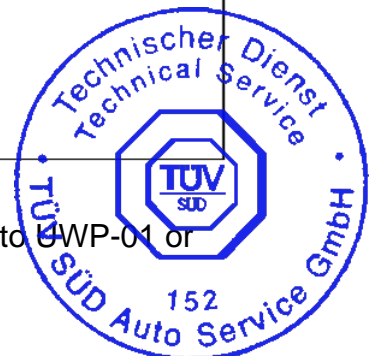
A - A



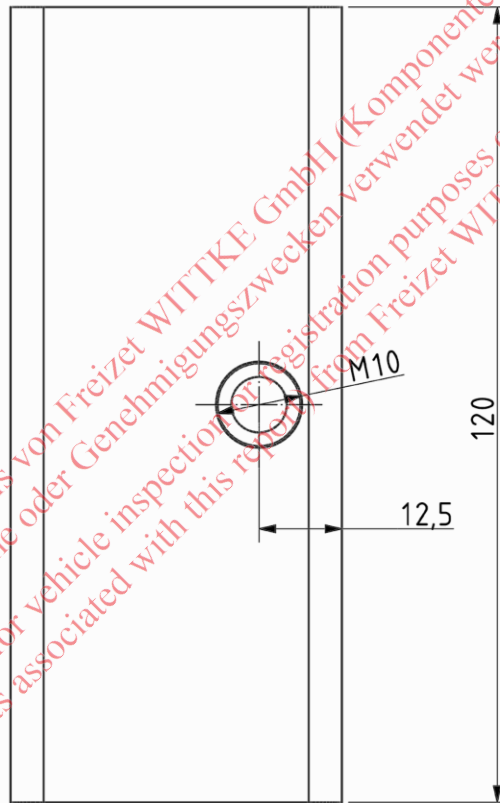
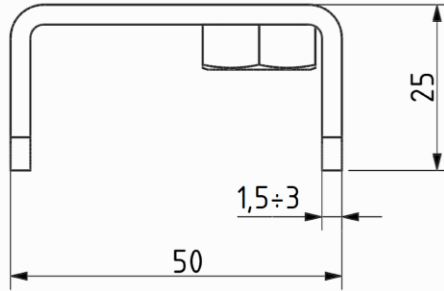
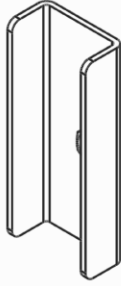
Zaprojektował	Sprawdził	Zatwierdził	Data	Masa
P. Odziejmek	L. Walczak	M. Jankowski	18.05.2020	—
Nazwa Wzmocnienie podpodłogowe 01		Undefloor reinforcement 01		
Numer rys. WZR-01		Material S235 or stronger		
<b>MOBIFRAME</b>				

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Underfloor reinforcement WZR-01 can be mounted interchangeably to WWP-01 or WZR-20

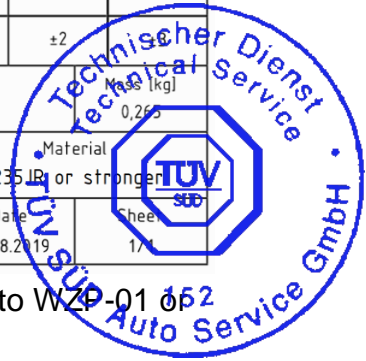


<b>MOBIFRAME</b>	MOBIFRAME/05/2022-00	Date: 20.01.2023
		Page / pages: 41/69



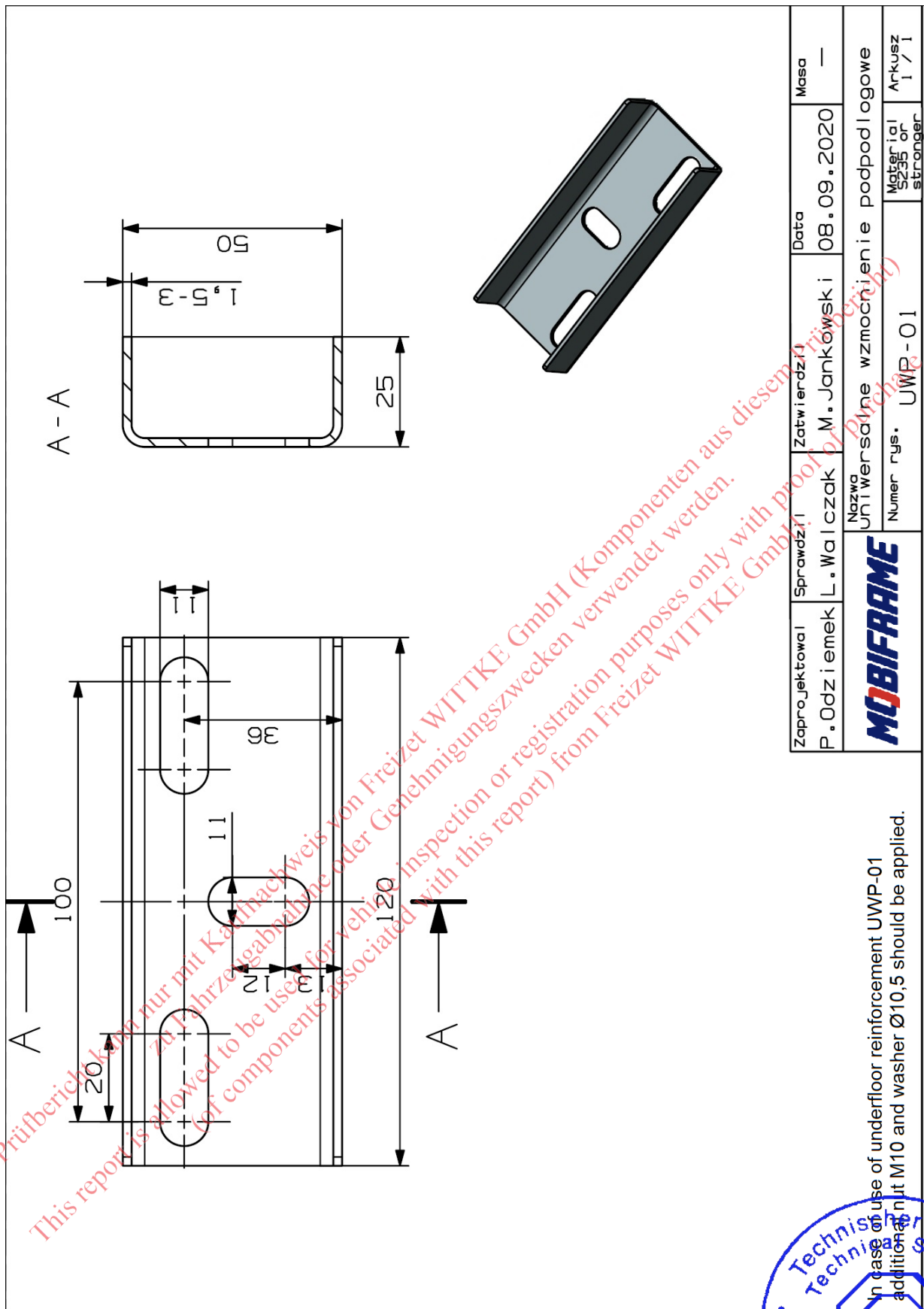
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Tolerance class according to DIN 7168	0,5 - 3	3 - 6	6 - 30	30 - 120	120 - 400	400 - 1000	1000 - 2000	2000 - 4000	>4000
Medium	±0,1	±0,1	±0,2	±0,3	±0,5	±0,8	±1,2	±2	±3
Designed by P.D	Checked by		Approved by						
<b>MOBIFRAME</b>	Underfloor reinforcement						Material	Mass [kg]	
	WZP-20						S235LR or stronger	0,265	
						Date	Sheet		
						13.08.2019	1/1		



Underfloor reinforcement WZP-20 can be mounted interchangeably to WZP-01 or UWP-01

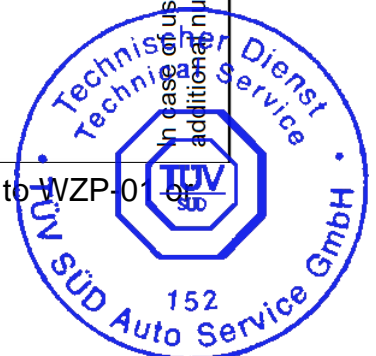
<b>MOBIFRAME</b>		Date: 20.01.2023
	MOBIFRAME/05/2022-00	Page / pages: 42/69



Underfloor reinforcement UWP-01 can be mounted interchangeably to WZP-01 or WZP-20

Zaprojektował	Sprawdził	Zatwierdził	Data	Masa
P. Odziemek	L. Walczak	M. Jankowski	08.09.2020	—
<b>MOBIFRAME</b>			Nazwa: UNIwersalne wzmocnienie podpodłogowe	
			Numer rys.	UWP-01
			Material	Arkusz 1 / 1
			stronger	

In case of use of underfloor reinforcement UWP-01 in addition to M10 and washer Ø10,5 should be applied.



### Enclosure 3: DRAWINGS OF SEATS AND COMPONENTS

RAM03 – dedicated for all fixation solutions:

RAM03 is equipped with additional removable fixation elements used for different fixation solutions:

- fixation details of these elements - see Enclosure 2
- drawings of removable fixation elements – see drawings below

(see next pages)

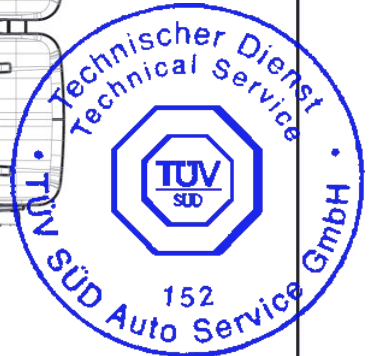
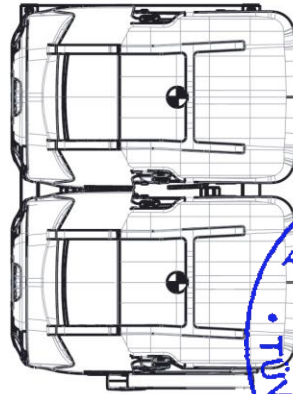
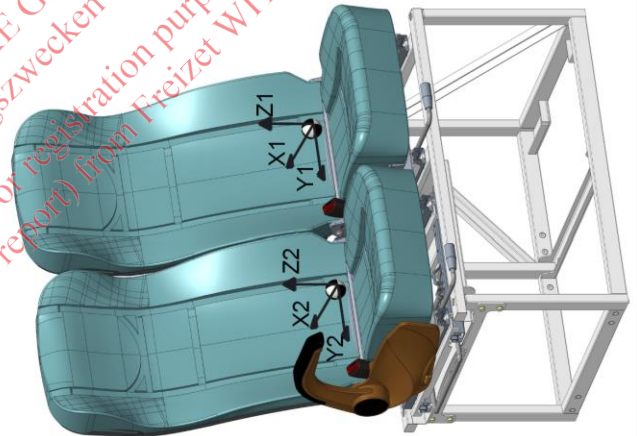
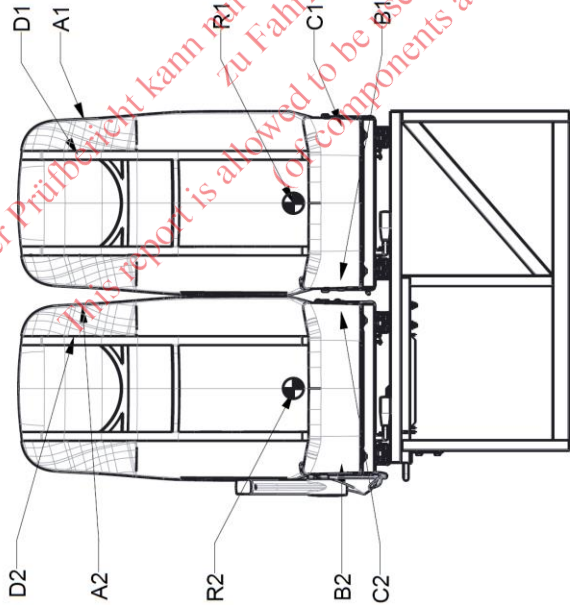
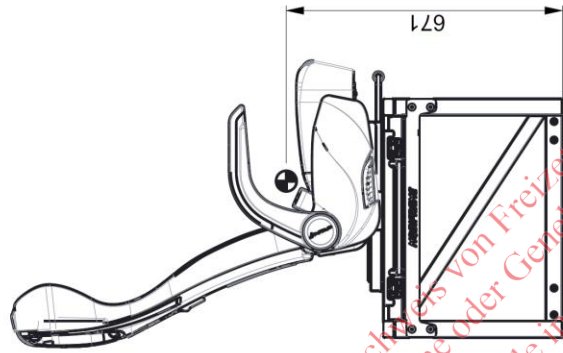
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<b>MOBIFRAME</b>		Date: 20.01.2023
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RAM03

LEFT SEAT		RIGHT SEAT	
R POINT 1		R POINT 2	
Rx1	0 mm	Rx2	0 mm
Ry1	0 mm	Ry2	0 mm
Rz1	0 mm	Rz2	0 mm
Pillar loop 1		Pillar loop 2	
Ax1	358 mm	Ax2	358 mm
Ay1	±208 mm	Ay2	±208 mm
Az1	525 mm	Az2	525 mm
Buckle 1		Buckle 2	
Bx1	80 mm	Bx2	80 mm
By1	±189 mm	By2	±189 mm
Bz1	-120 mm	Bz2	-120 mm
$\alpha 1$	56°	$\alpha 2$	56°
End bracket 1		End bracket 2	
Cx1	80 mm	Cx2	80 mm
Cy1	±189 mm	Cy2	±189 mm
Cz1	-120 mm	Cz2	-120 mm
$\alpha 1$	56°	$\alpha 2$	56°
Retractor 1		Retractor 2	
Dx1	327 mm	Dx2	327 mm
Dy1	±121 mm	Dy2	±121 mm
Dz1	517 mm	Dz2	517 mm

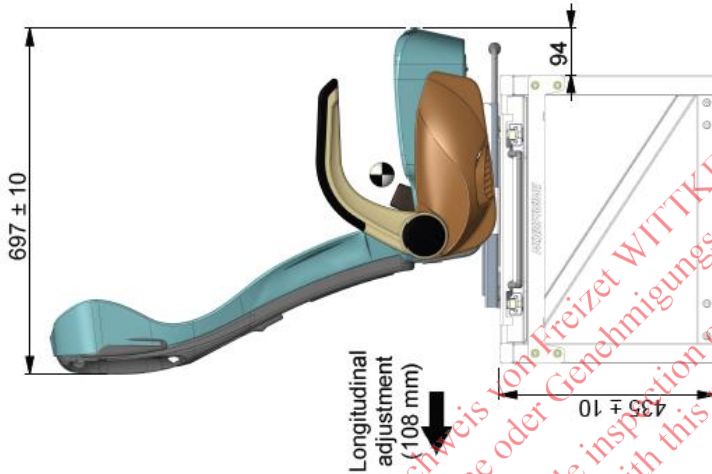



	Kestli / Drawn by K. Trzyna Zatwierdzony/przez/ Approved by P. Odziemek	Data / Date 19-Sep-22 Arkusz / Sheet 1/1
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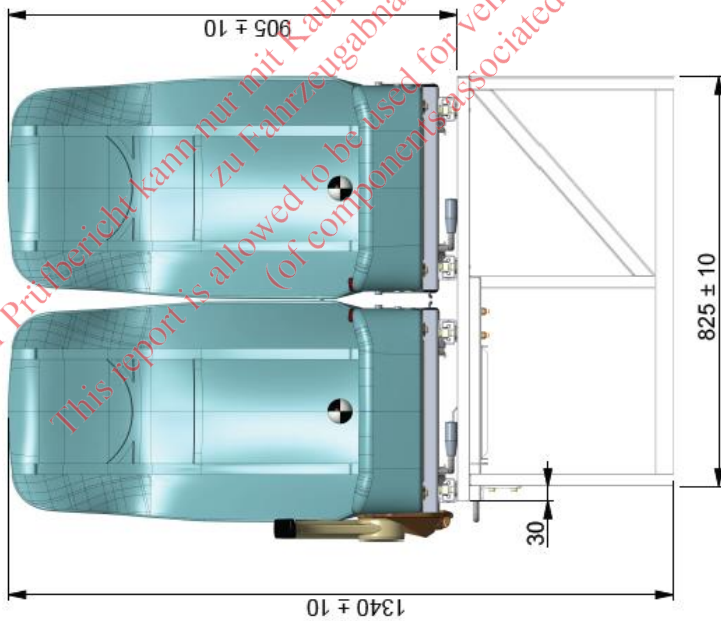
R point and seatbelt anchorage points

14-01-RAM03

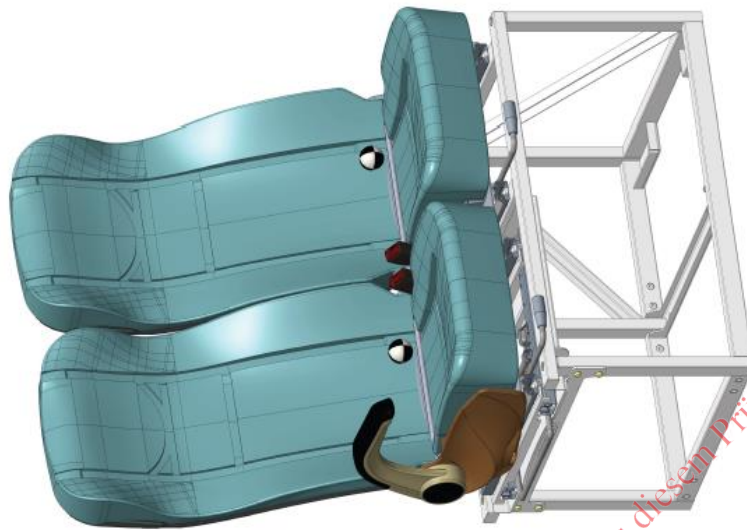
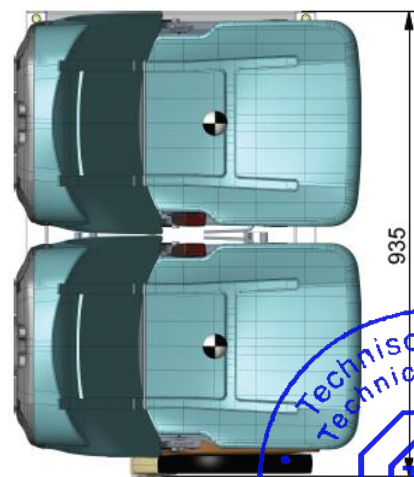
Longitudinal adjustment (108 mm) 




Longitudinal adjustment (108 mm) 

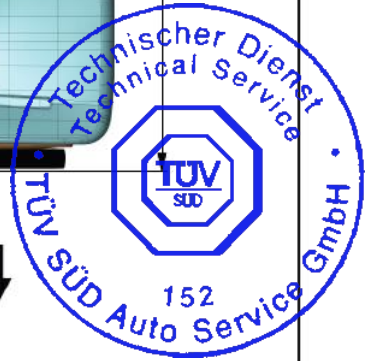


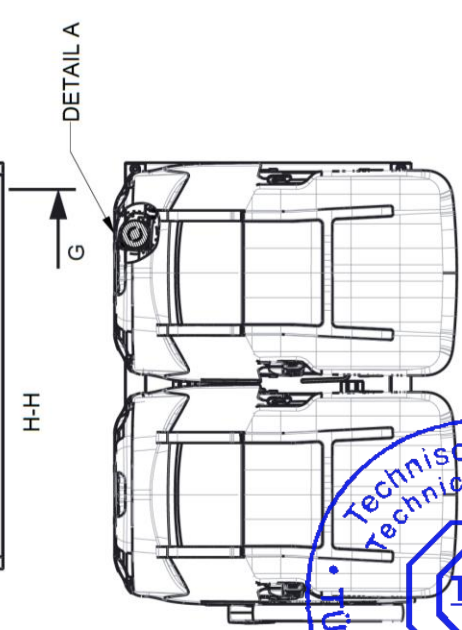
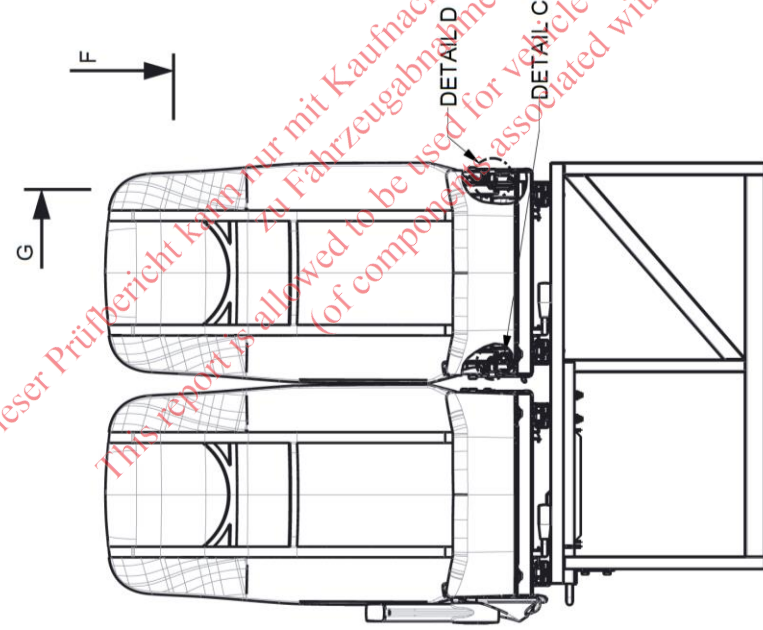
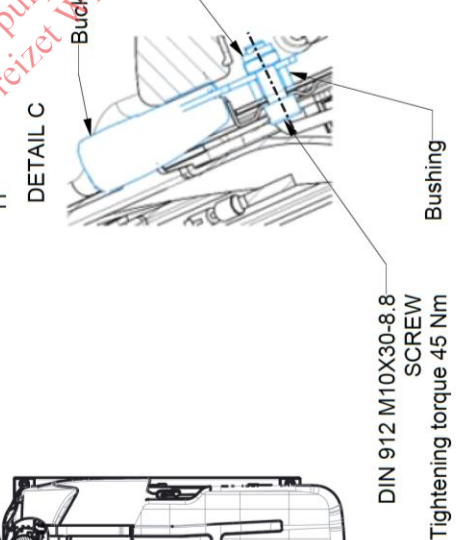
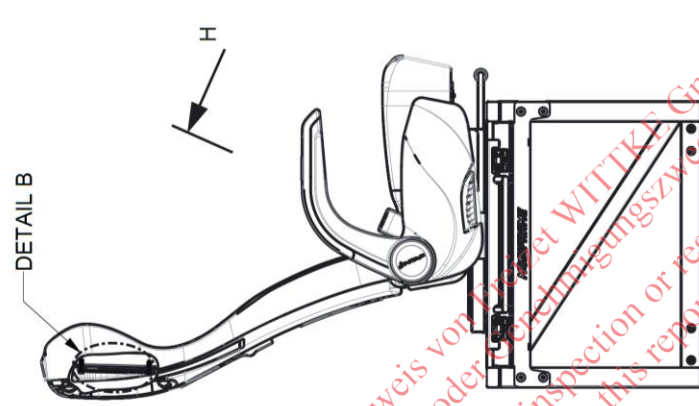
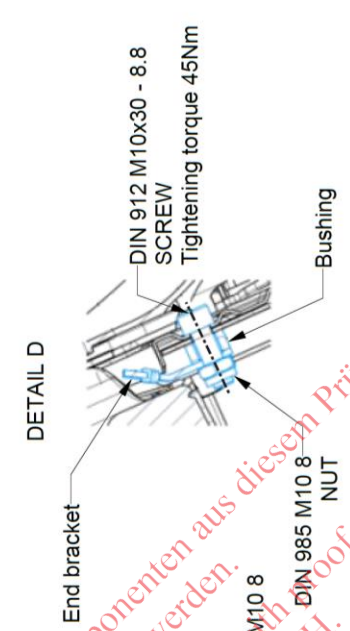
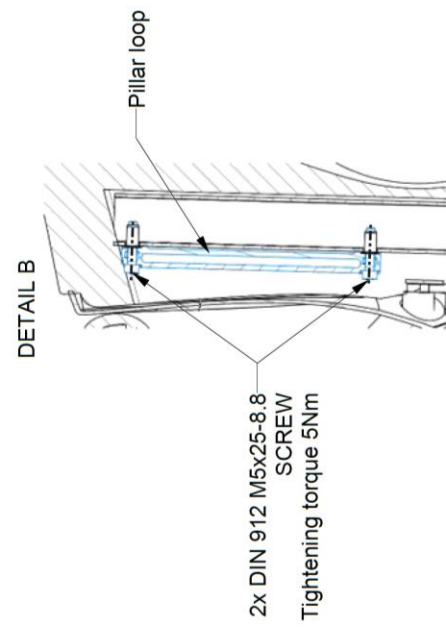
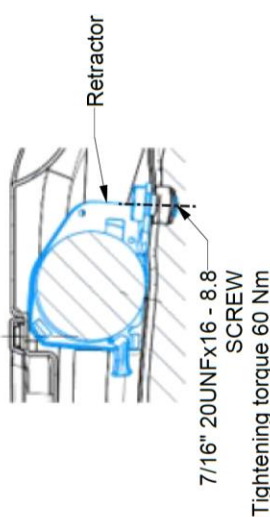
Lateral adjustment (108 mm) 



	Kreiert / Drawn by K. Trzyna	Date / Date 13-Sep-22
	Zawierający / Issued / Approved by P. Oździemek	Arkusz / Sheet 1/1
General view		
17-01-RAM03		

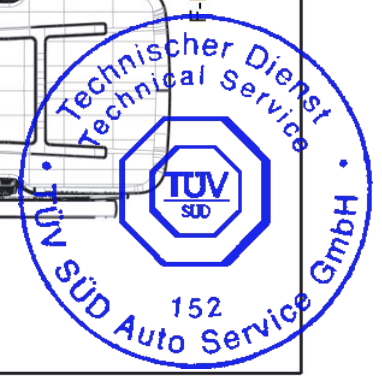
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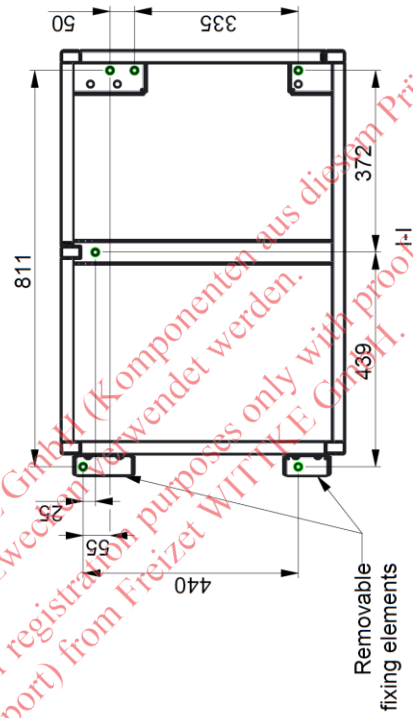
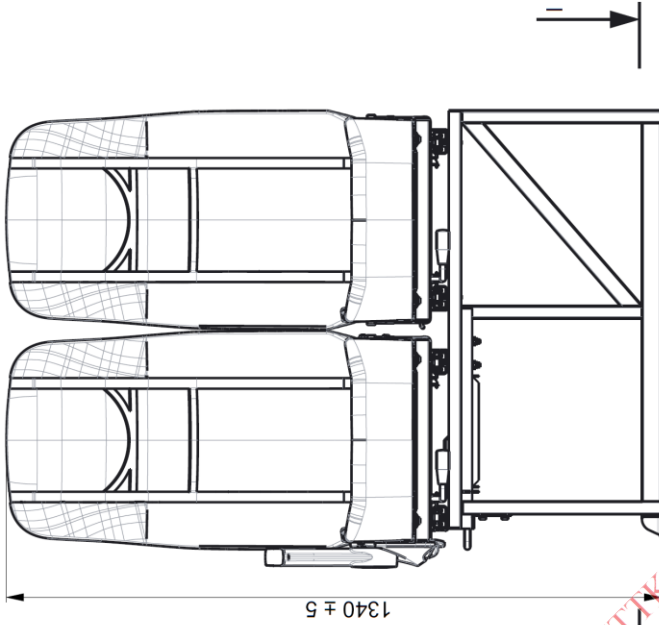


		Data / Date 20-Sep-22 Kreslil / Drawn by K. Trzyna Zatwierdzony przez / Approved by P. Odziemek
Seatbelt anchorage points 14-02-RAM03		Arkusz / Sheet 1/1

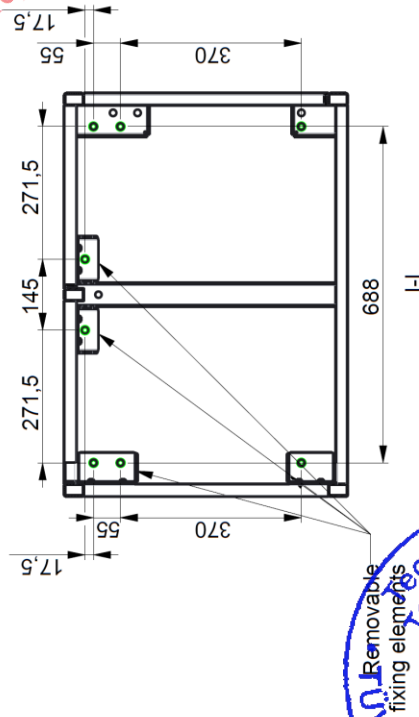
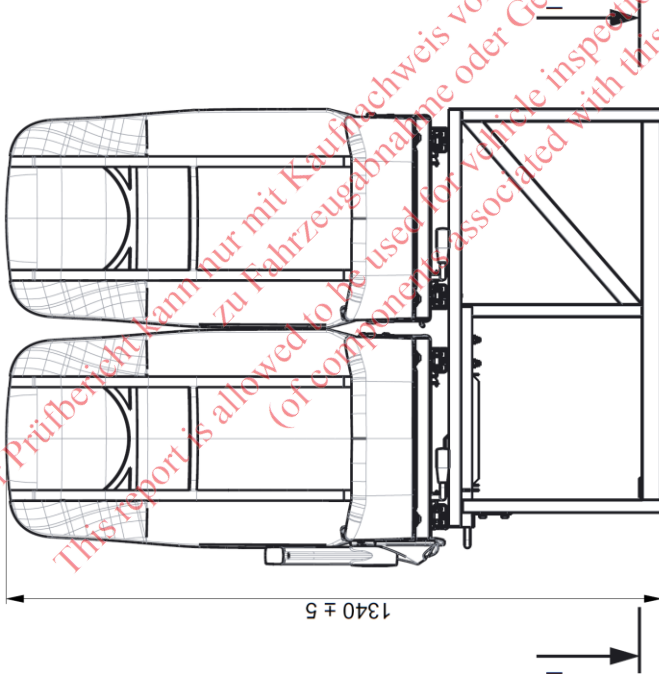
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 (of components associated with this report) from Freizeit Hilfen GmbH.



Version 2



Version 1



Date / Date  
20-Sep-22  
Arkusz / Sheet  
1/1

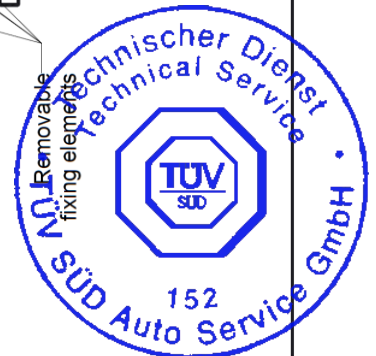
Kreslil / Drawn by  
K. Trzyna  
Zatwierdzony przez / Approved by  
P. Odziemek

**MOBIFRAME**

Grid of mounting holes

14-03-RAM03

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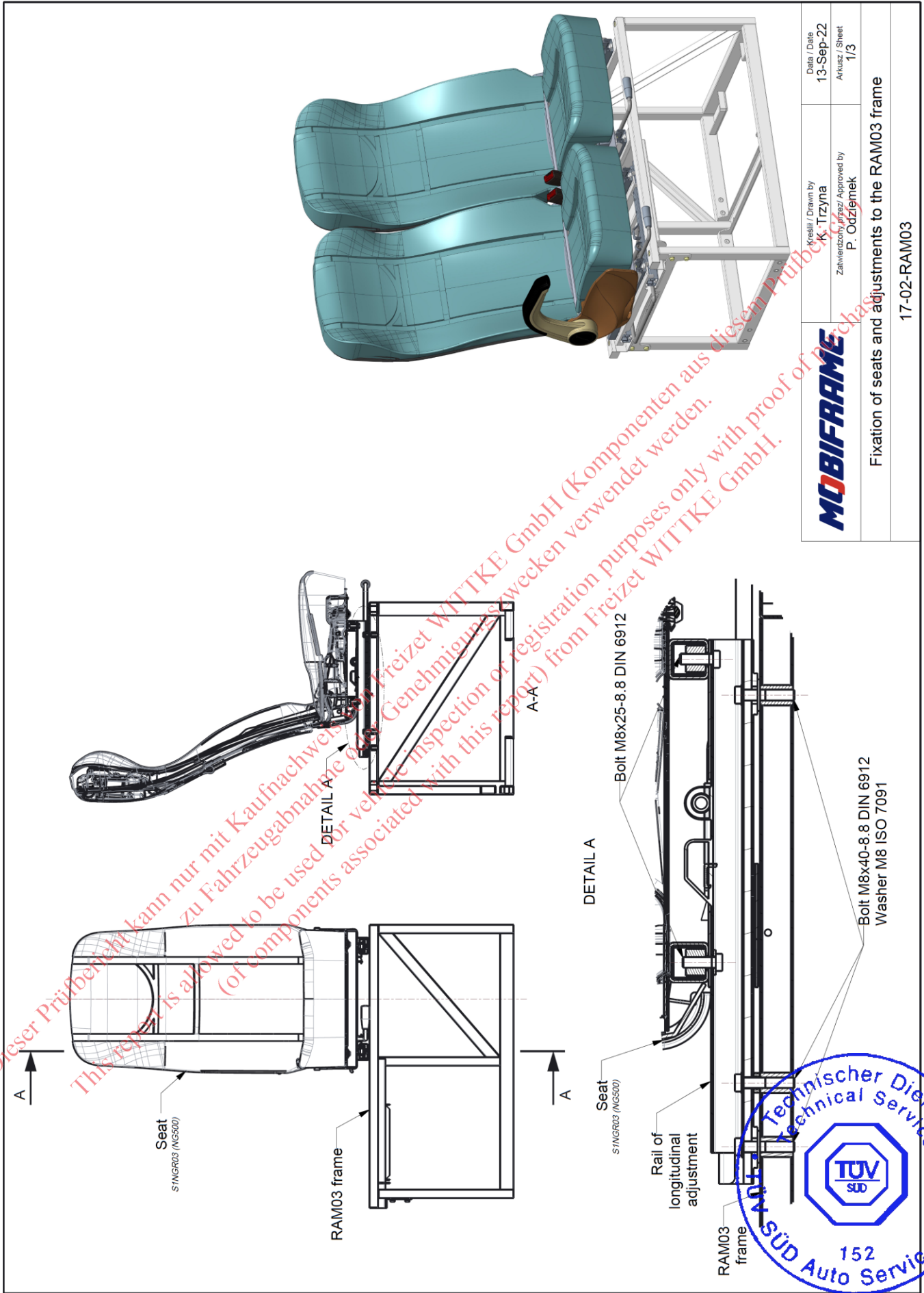
Fixation of seats to RAM03 frame:

(see next pages)

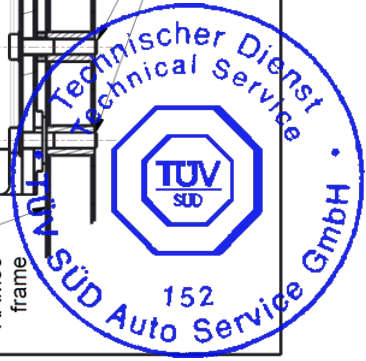
*Dieser Prüfbericht kann nur mit Kaufnachweis von Freizet WITTIKE GmbH (Komponenten aus diesem Prüfbericht)  
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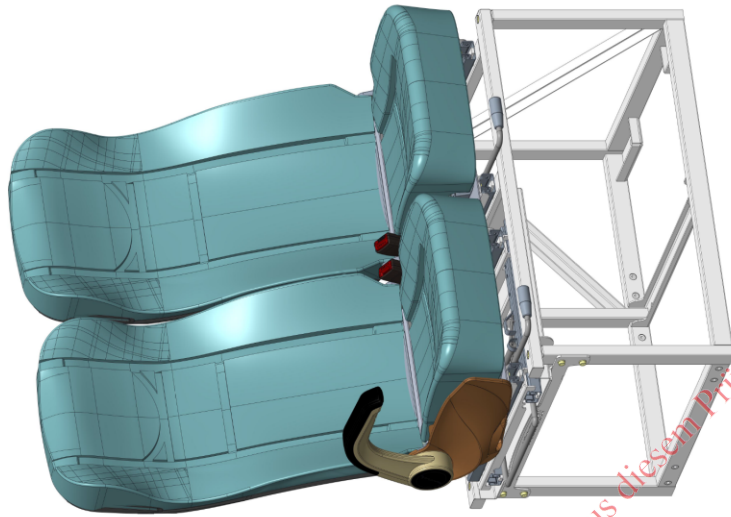


<b>MOBIFRAME</b>		Date: 20.01.2023
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	Kresli / Drawn by <b>K. Trzyna</b>	Data / Date <b>13-Sep-22</b>
	Zatwierdzone / Approved by <b>P. Odziejmek</b>	Arkusze / Sheet <b>1/3</b>
Fixation of seats and adjustments to the RAM03 frame		
17-02-RAM03		





Date / Date  
13-Sep-22

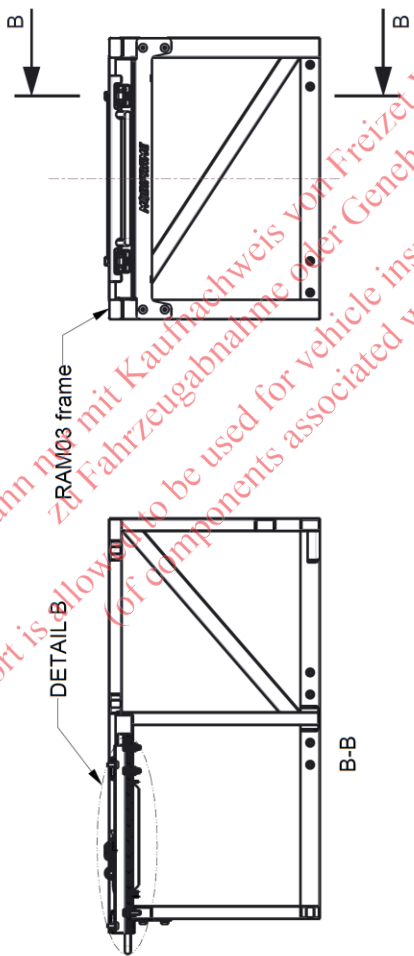
Kreili / Drawn by  
K. Trzyna

Zatwierdzone / Approved by  
P. Odziejmek

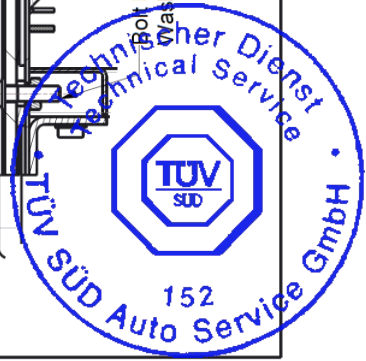
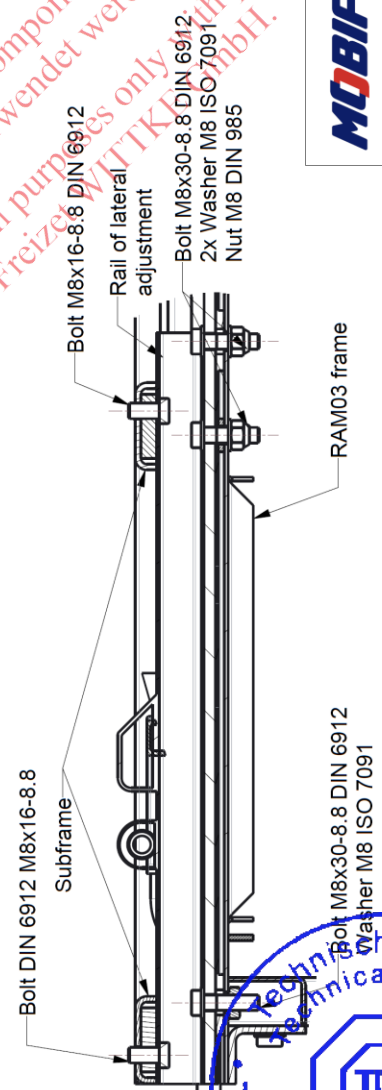


Fixation of seats and adjustments to the RAM03 frame

17-02-RAM03



DETAIL B



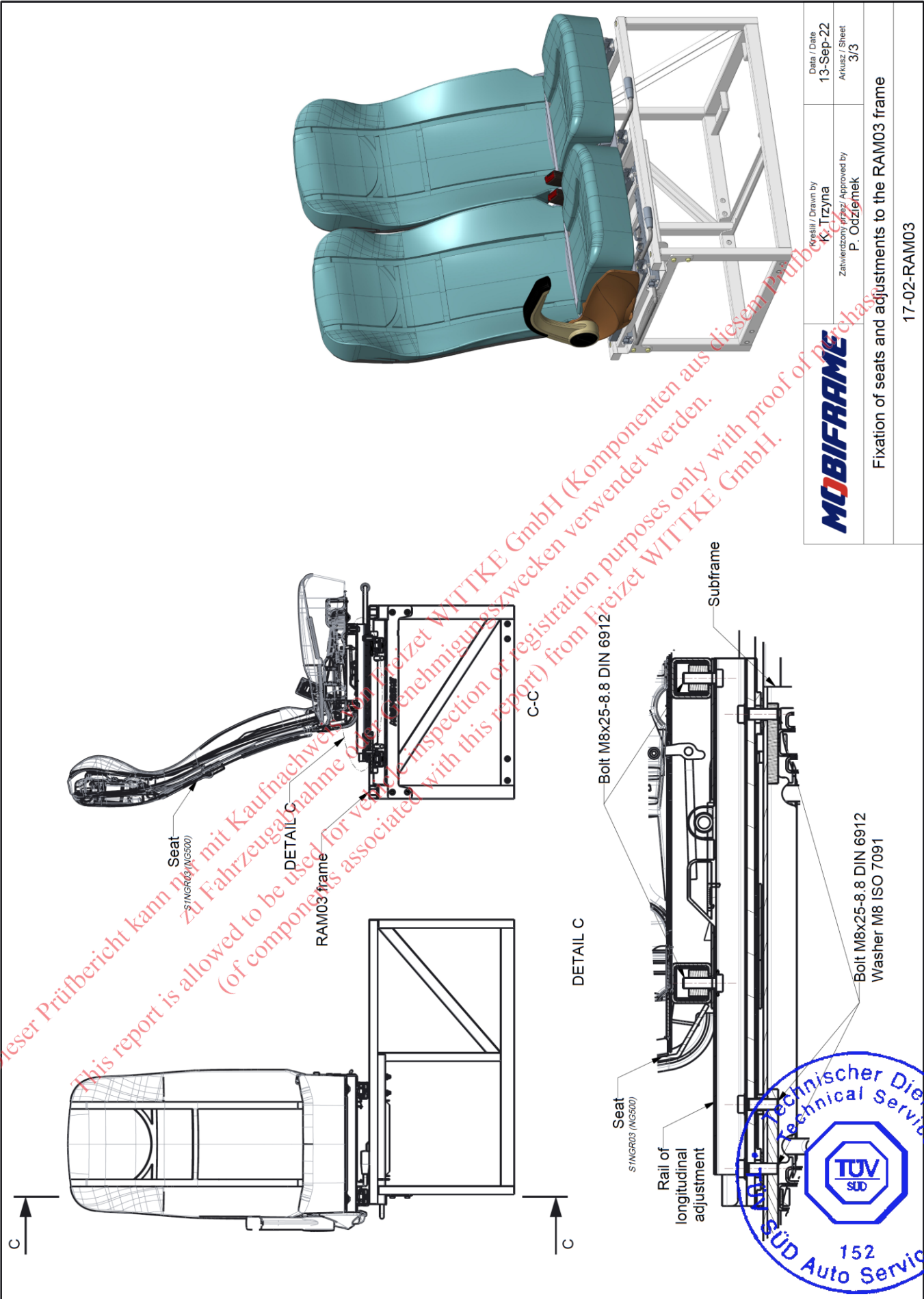
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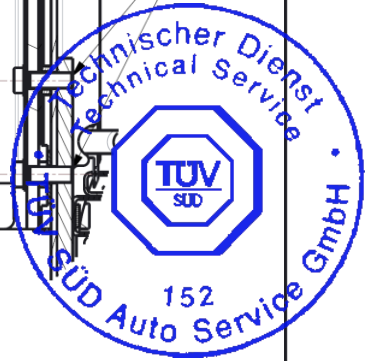
MOBIFRAME/05/2022-00

Date: 20.01.2023

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	Kresili / Drawn by <b>K. Trzyna</b>	Date / Date <b>13-Sep-22</b>
	Zatwierdzony przez / Approved by <b>P. Oczerniak</b>	Arkusz / Sheet <b>3/3</b>
Fixation of seats and adjustments to the RAM03 frame		
17-02-RAM03		



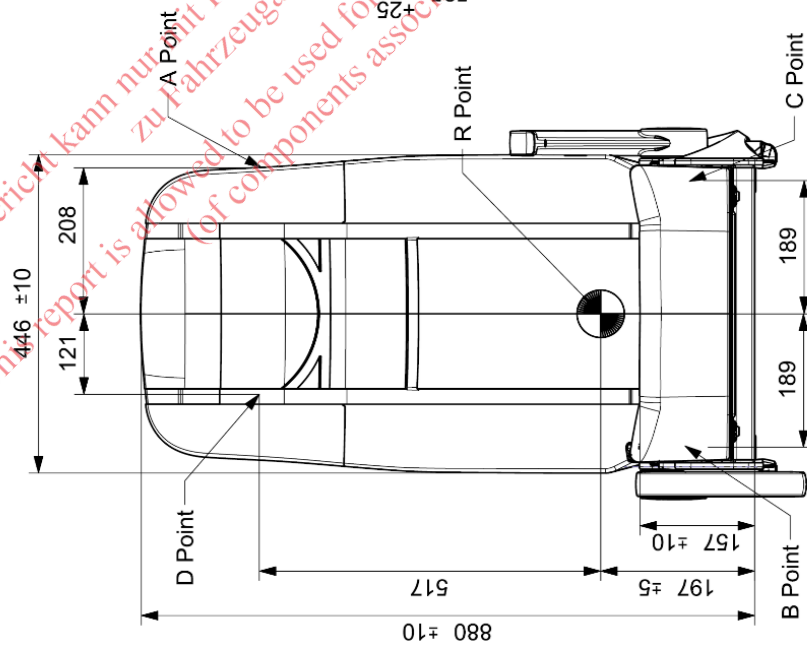
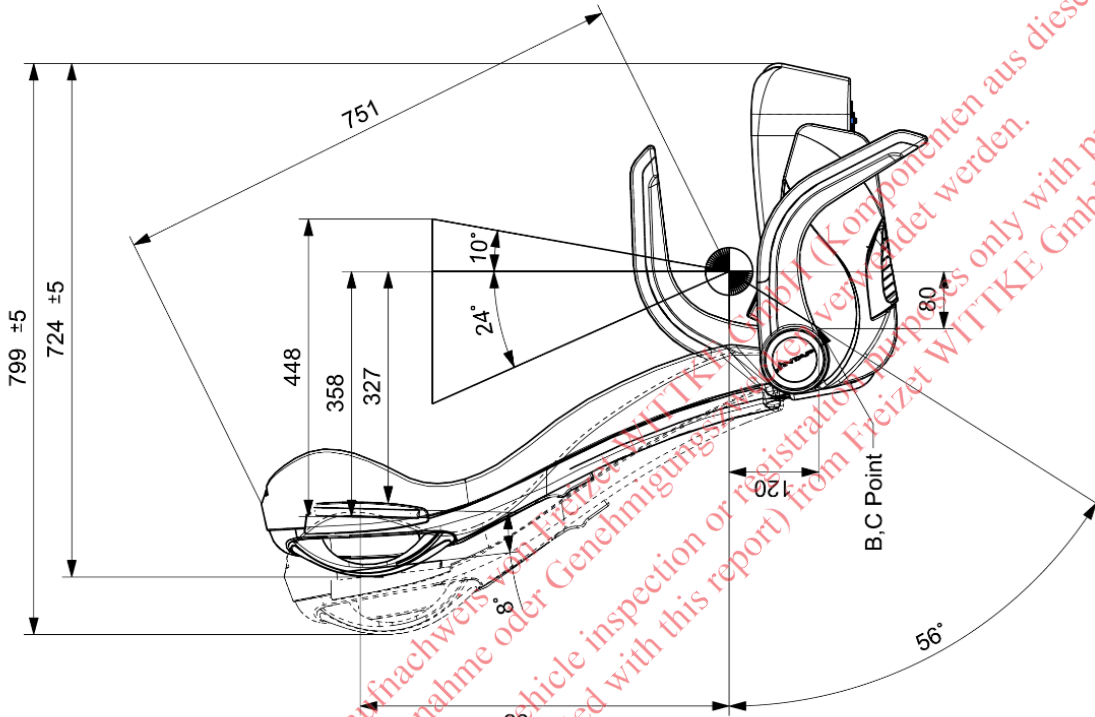
PILLAR LOOP	
Ax	-358 mm
Ay	±208 mm
Az	525 mm

BUCKLE	
Bx	-80 mm
By	±189 mm
Bz	-120 mm
αB	56°

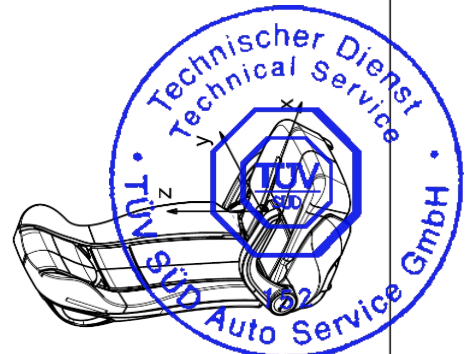
END BRACKET	
Cx	-80 mm
Cy	±189 mm
Cz	-120 mm
αC	56°

RETRACTOR	
Dx	-327 mm
Dy	±121 mm
Dz	517 mm

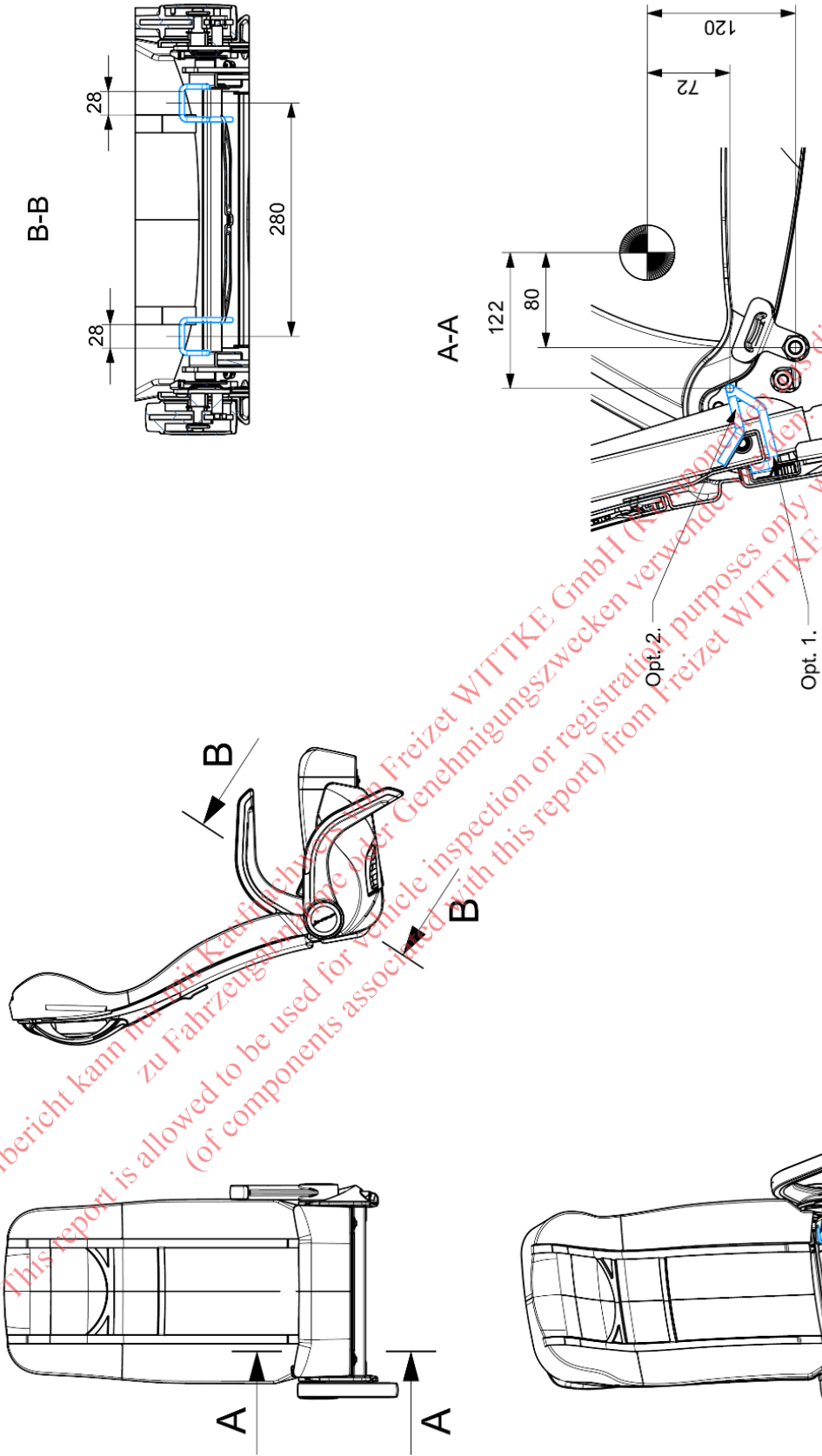
R POINT	
Rx	0 mm
Ry	0 mm
Rz	0 mm




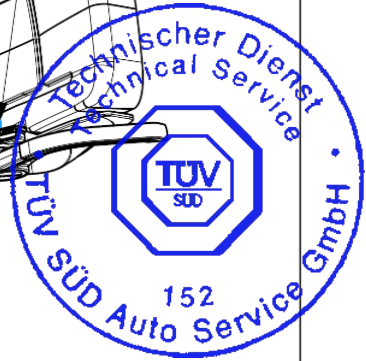
Zaprojektowany przez - data L. Dumka - 09-07-2020	Sprawdzony przez S. Chruściński	Zatwierdzony przez - data A. Szadkowski - 2020-07-16	Masa -
NG500 R-point			Material
			Arkusz 1 z 3
H015-S1NGR03			



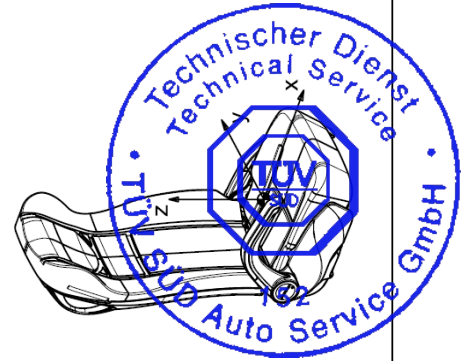
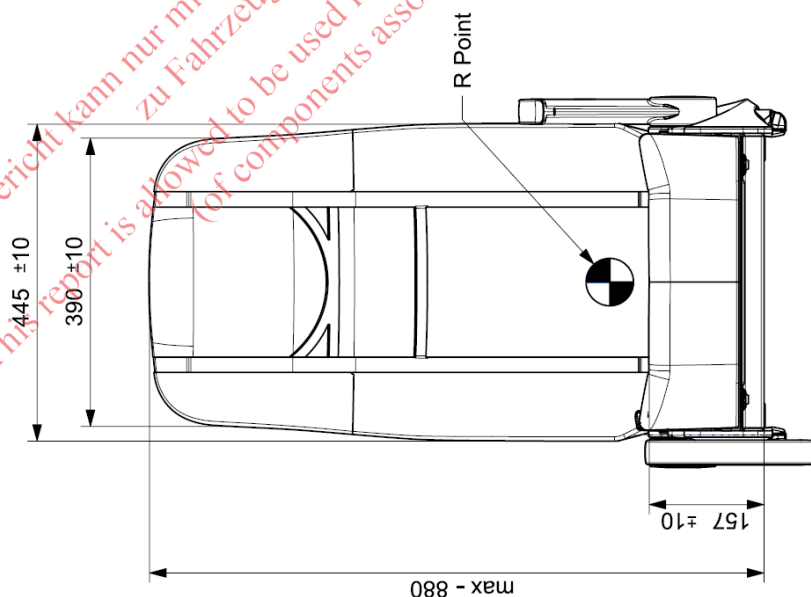
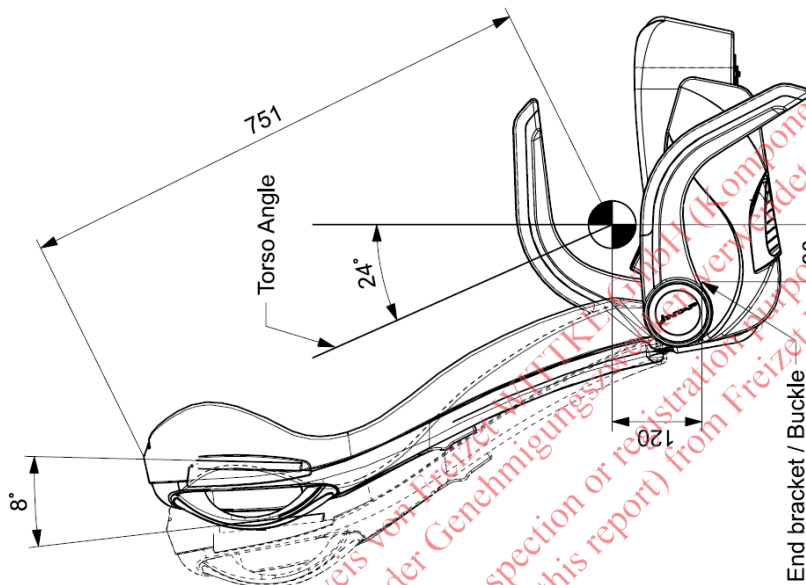
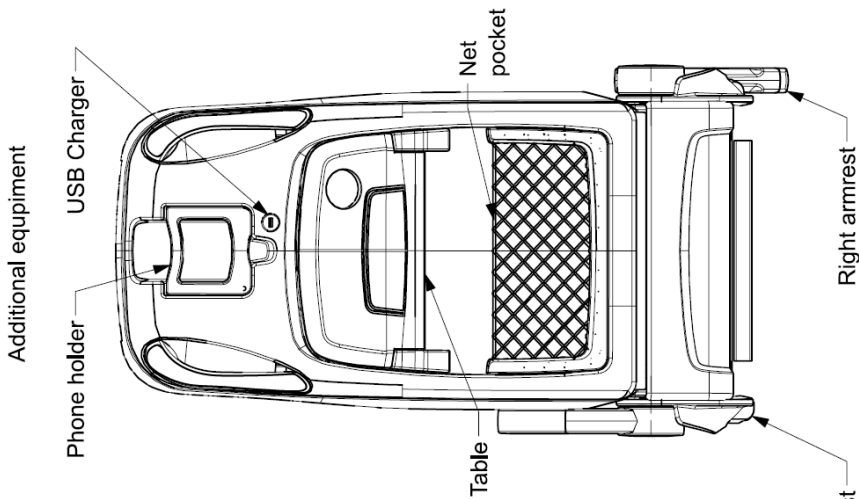
ISOFIX points locations



Zaprojektowany przez - data Ł. Dumka - 09-07-2020	Sprawdzony przez S. Chrusciński	Zatwierdzony przez - data A. Szadkowski - 2020-07-16	Masa -
NG500 - ISOFIX points location			Material -
			Arkusz 3 z 3
H001-S1NGR05			

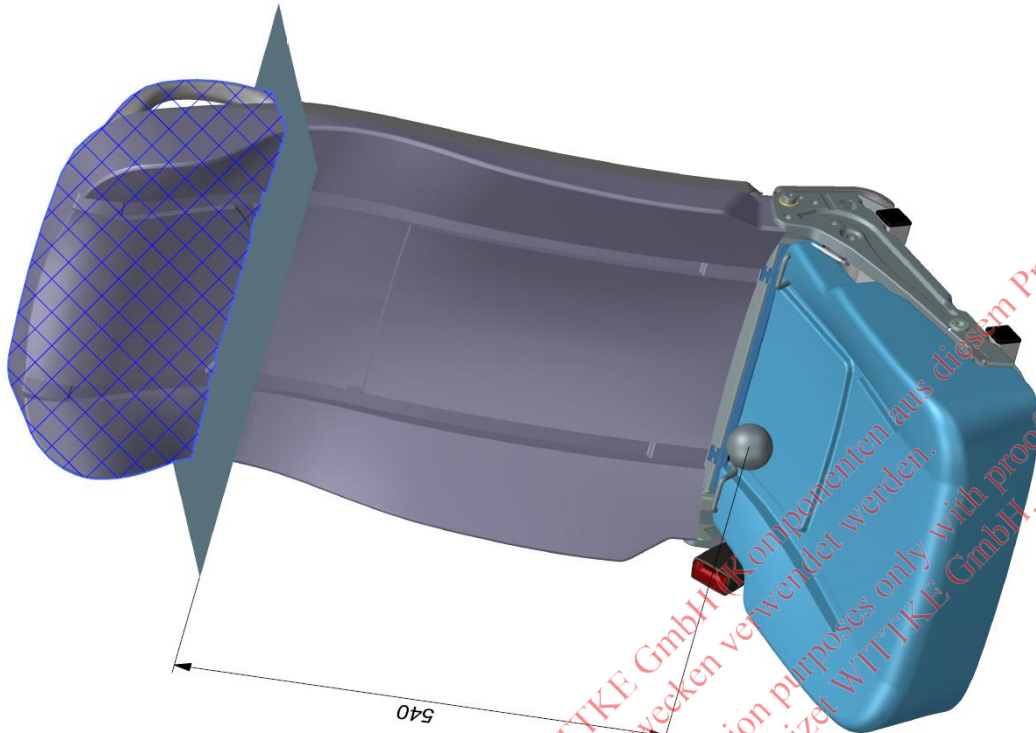


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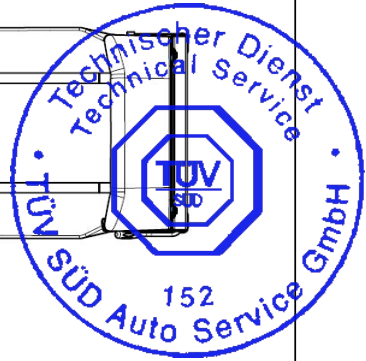
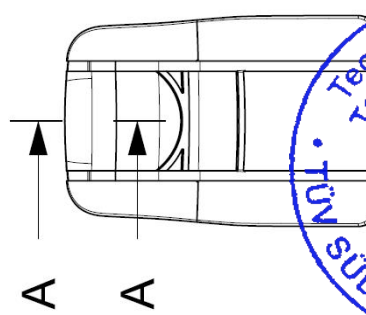
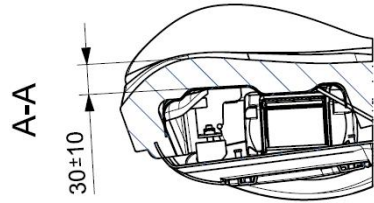
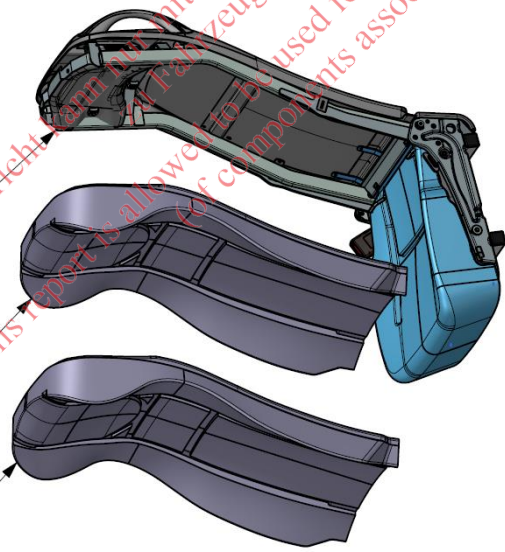


Zaprojektowany przez - data Ł.Dumka - 16-07-2020	Sprawdzony przez S. Chriściński	Zatwierdzony przez - data A. Szadkowski - 16-07-2020	Masa -
NG500 R-points			Materiał -
			Arkusz 1 z 2
H001-S1NGR03 ver A			

Head restraint area



Polyurethane flexible foam  
Backrest frame  
Upholstery



Zaprojektowany przez - data Ł. Dumka - 16-07-2020	Sprawdzony przez S. Chruściński	Zatwierdzony przez - data A. Szadkowski - 16-07-2020	Masa -
NG500 - Head restraint			Materiał -
			Arkusz 1 z 1
			H016-S1NGR03

A3



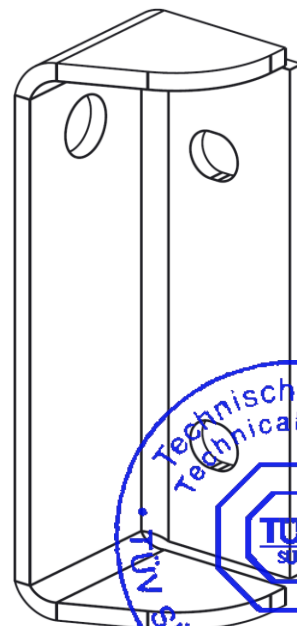
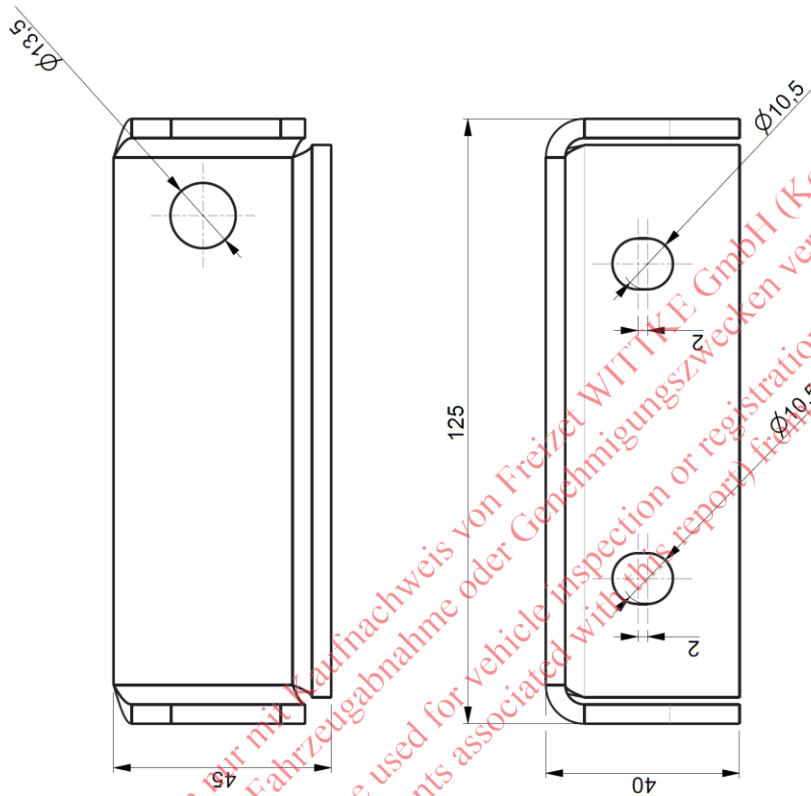
RAM03 – removable fixation elements (fixation details and applicability – see Enclosure 2):

(see next pages)

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<b>MOBIFRAME</b>		Date: 20.01.2023
	MOBIFRAME/05/2022-00	Page / pages: 57/69



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27-Sep-22  
Arkusz / Sheet  
1/1

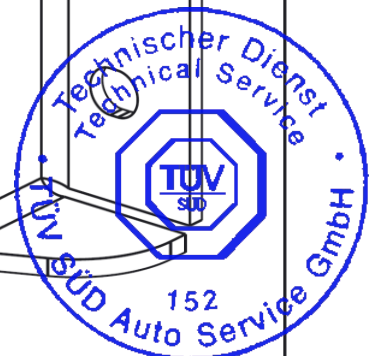
Kreślił / Drawn by  
K. Trzyna  
Zatwierdził / Checked / Approved by  
P. Odziejmek

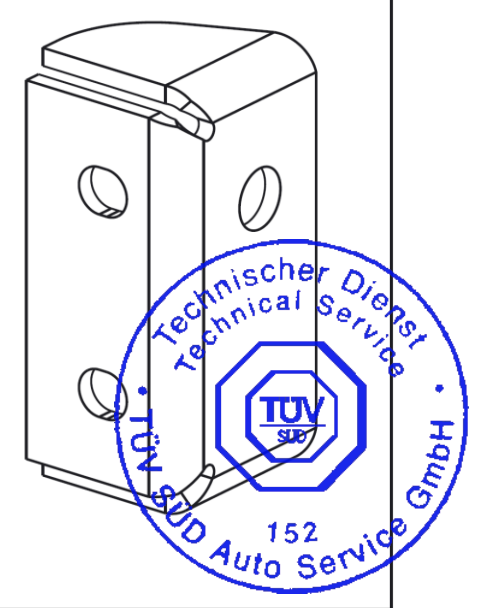
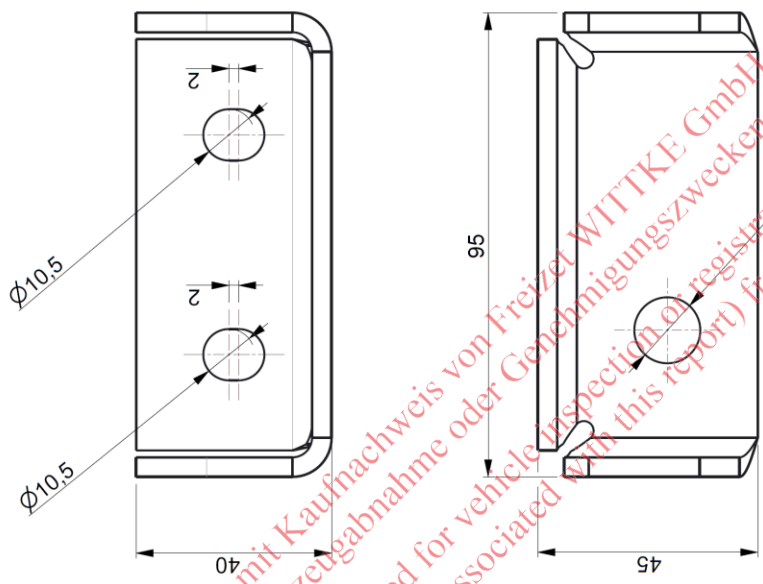
**MOBIFRAME**

Fixation element

REN00016A

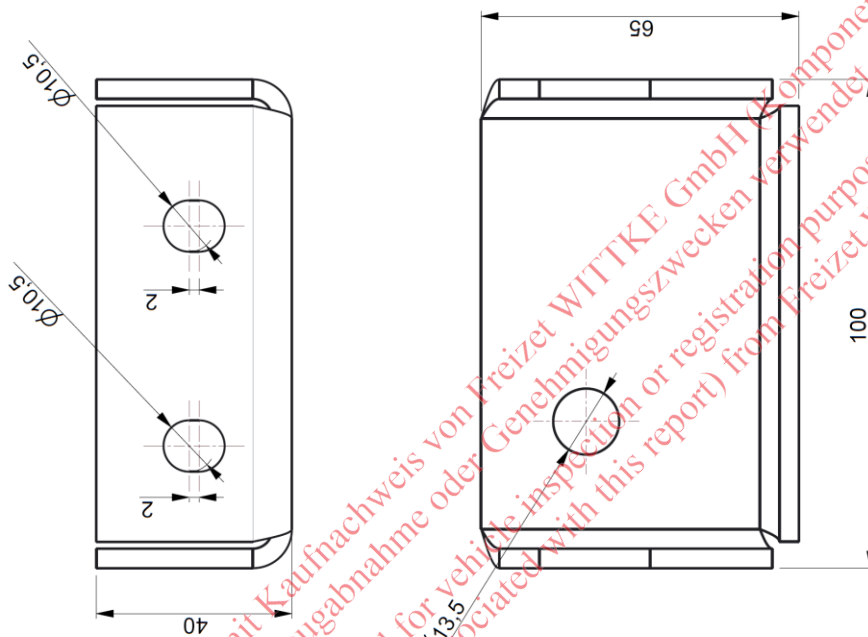
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	Zatwierdzony przez / Approved by P. Odziemek	Arkusz / Sheet 1/1
Fixation element		
REN00035A		

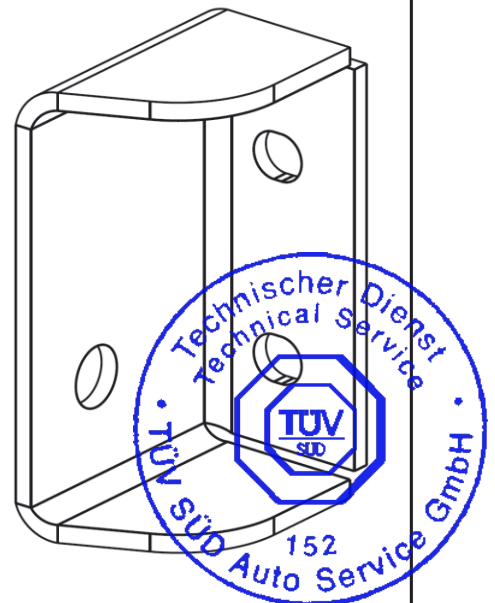
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<b>MOBIFRAME</b>	Kreslí / Drawn by K. Trzyna	Data / Date 27-Sep-22
	Zatvrdzovací prágar / Approved by P. Odziemek	Arkusz / Sheet 1/1

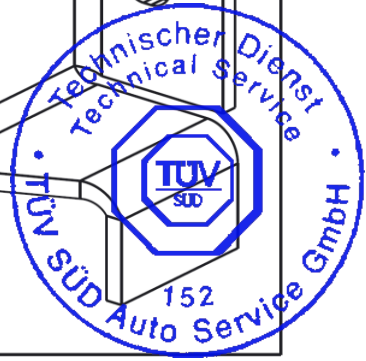
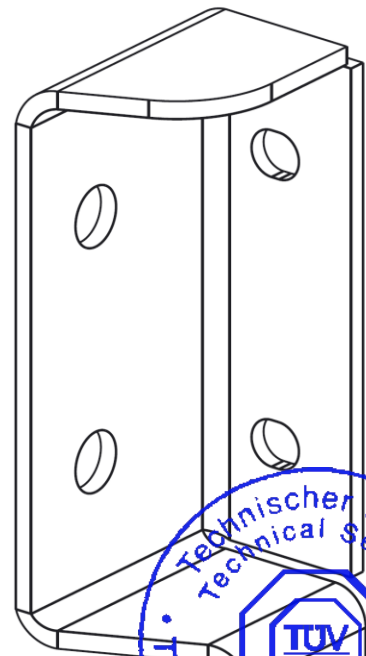
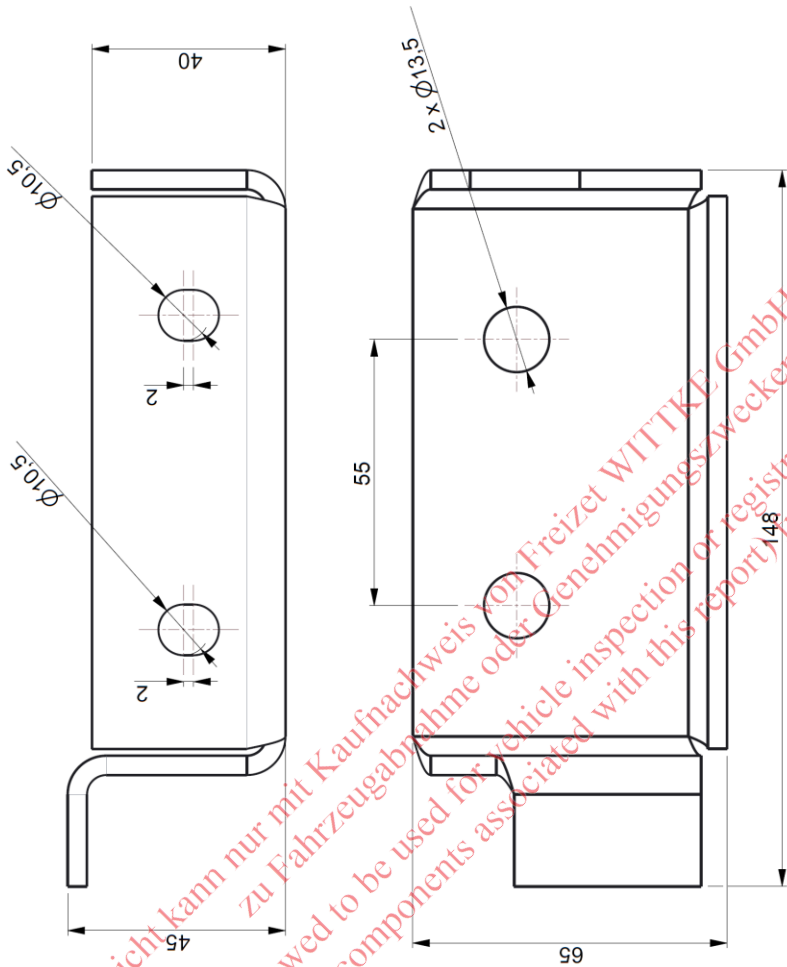
Fixation element

REN00036A

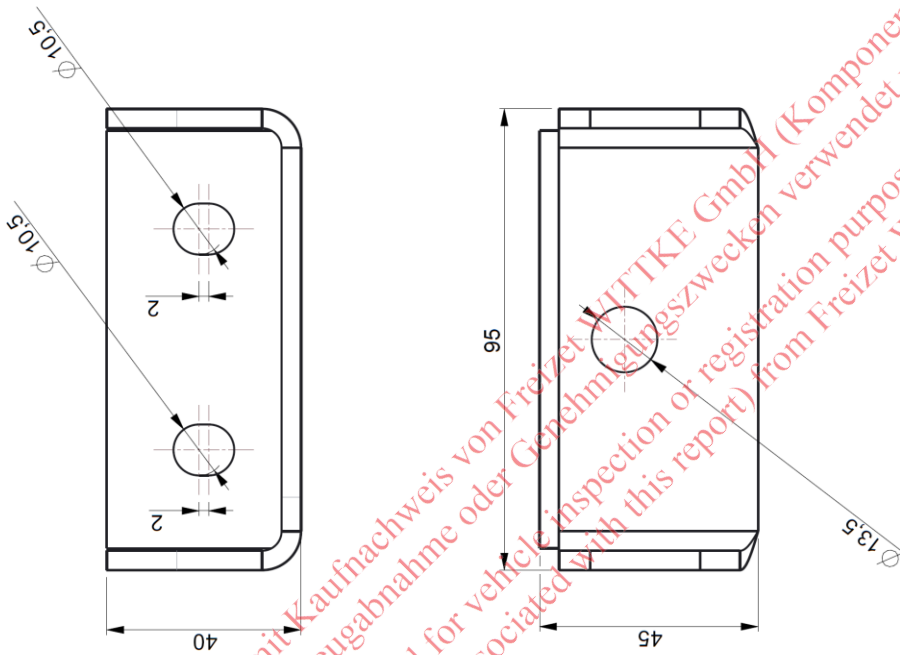


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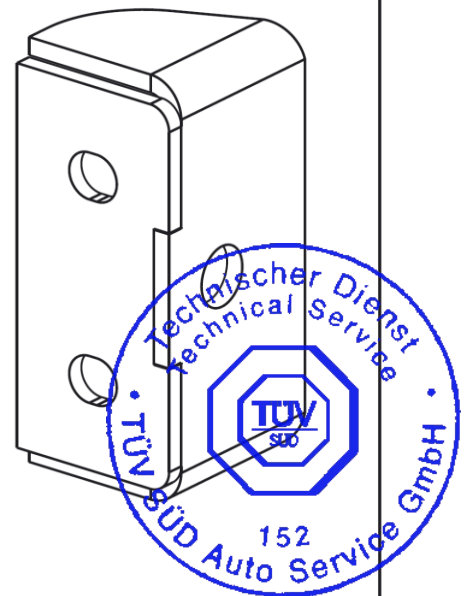
	Kreiert / Drawn by K. Trzyna	Date / Date 27-Sep-22
	Zatwierdzony przez / Approved by P. Odziejmek	Arkusz / Sheet 1/1
Fixation element		
REN00037A		



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	Zahrgesetz/ Issued / Approved by P. Odziemek	Arbeitsz. / Sheet 1/1
Fixation element		
REN10018A		

# Enclosure 4: ADHESIVES FOR FIXATION PLATE



## Technical Data Sheet

**Dow Automotive**

# BETACLEAN 3350

### Description / Application:

BETACLEAN 3350 is a cleaner for removing dirt and grease from plastics, paints and glass

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The use of the product other than approved application have to be released in writing by the Technical Service of Dow Automotive.

### Technical Data:

Basis	Heptane
Colour	Colourless, transparent
Density	0,68 g/cm <sup>3</sup> at 23°C
Flash point	34°C
Instructions for use	Wipe contaminated surface with BETACLEAN 3350 saturated, binder-free tissues or cloths. Preliminary trials carried out by our technical service department are recommended.
Shelf life	12 months in unopened containers
Containers	100, 250, 1000ml aluminium containers
Protection measures	See health and safety data sheet.

### DOW AUTOMOTIVE Quality Management

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# BETAPRIME 5061

## Description / Application:

One-Step adhesion promoter for glass, ceramic serigraphy in combination with BETASEAL and BETAMATE PUR Adhesives. A prior cleaning of the bonding surface with BETACLEAN 3300 is necessary.

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## Technical Data:

<b>Basis</b>	Silane modified polymers
<b>Colour</b>	black
<b>Pigments</b>	carbon black
<b>Density</b>	approx. 0.97 g/cm <sup>3</sup> bei 23°C
<b>Viscosity (DIN-cup 4)</b>	< 14 s bei 23°C
<b>Flash Point</b>	See health and safety data sheet.
<b>Processing temperature</b>	ideal 10 - 40°C
<b>Tack free time</b>	50 - 150 sec @ 23°C / 50 % r.h.
<b>Evaporation time</b>	min. 10 min @ 23°C / 50 % r.h., max. 8h Reactivation with BP 5061 or BW 4001, 4002 possible.
<b>Instruction for use</b>	Shake container well before opening. Continue to shake for at least 60s after steel balls inside the container are released. Caution! The product is extremely hygroscopic! Close container immediately after use to preserve remaining contents. Use up remainder within a few days.
<b>Bonding surface preparation</b>	Clean bonding areas with the BETACLEAN 3300. Verify compatibility or consult our technical service department.
<b>Cleaning</b>	Clean Equipment with BETACLEAN 3000
<b>Shelf life</b>	9 months in unopened containers (see "use before" date printed on the container)



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**Storage once opened**

- applicator: single use, do not store  
 - 100 ml bottle: 5 days in original container

**Storage**

Temperature: 5°C to 25°C  
 Short term up to 40°C

**Containers**

Single use applicator,  
 100 ml aluminium bottle

**Protection measures**

See health and safety data sheet

**Dow Automotive quality assurance**

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Automotive Systems

# BETAPRIME™ 5500

## Short Description

Adhesion promoting primer for laminated glass with enamel layer inside and enamel substrates. To be used in combination with Dow Automotive Systems PUR-Adhesive/sealants.

## Properties

One-step primer which can be used without silane wipe pretreatment. Primer with short open time.

## Application

All Dow Automotive products are primarily developed in co-operation with the automobile manufacturers, according to their needs and their specifications, they are approved for the specific applications as defined by the customer. The use of the product other than approved application have to be released in written form by the Technical Service of Dow Automotive.

## Technical Data

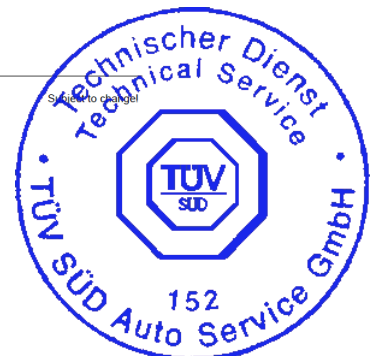
Unless specified otherwise test are conducted at 23°C/50% relative humidity.

Basis	Polyisocyanates
Colour	black
Pigments	Carbon black
Density	0.901 - 1.001 g/cm <sup>3</sup>
Solid contents	35 - 40%
Viscosity DIN-cup 4mm after 3d 40°C	10.5 - 13 s
Minimum open time	3 minutes / felt application
Maximum open time	3 days / felt application
Reactivation:	One time reactivation possible with: BETAWIPE™ VP04604 (wipe-on / wipe off) maximum open time 15 minutes
Processing temperature	10 - 40°C
Processing instructions	Primer bottle needs to be shaken for at least one minute before opening, to release the steel balls within the container. In case steel balls are not dislodged, then it is recommended to strike the top of the container against a hard surface so that the steel balls are audible within the container. This is essential in order to disperse any possible sediment within the primer.
Caution	The product is extremely sensitive to humidity. It is imperative that container should be closed immediately after use, in order to extend durability of the remaining primer contents.
Shelf life	6 months at + 5°C - +25°C in unopened containers.
Shelf life after opening	Depending on ambient conditions and working method: Use following test method to monitor if primer can be further used for one day or if it is non-conformous and has to be disposed of. Daily measurement of viscosity DIN 4 cup: must not exceed 17 seconds.
Bonding Surface Preparation	All bonding surfaces must be free of impurities (dirt, dust, water, oil, grease, release agent and similar contaminants). Verify compatibility before use, or consult our Technical Service for more information.
Processing equipment	Primer applicator, primer application device (flask with primer applicator head and felt) or automatic primer application system.
Cleaning	Clean equipment with BETACLEAN™ 3000
Containers	Aluminium bottles

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## Health and Safety

The use of bonding agent (primer) is generally harmless and as long as the basic rules for safe handling of chemicals are applied. However, the direct contact of uncured primer to food and food containers shall be avoided. Mandatory are protective measures in order to prevent direct skin contact as well as to avoid solvent inhalation. Proper ventilation should apply when using primers with high volatile content. If any primer is applied in the means of spraying technique, special care should apply in relation to respiration and personal protection in order to prevent aerosol inhalation. Suitable solvent resistant rubber gloves, conventional eye protection as well as appropriate type of respirator mask are essential. In case of direct contact with any primers the skin must be rinsed first with warm water and then cleaned thoroughly with conventional soap. Solvents shall be avoided. For detailed protective measures refer to the material safety data sheets.

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**Dow Automotive**

# BETAMATE 7120

## Description / Application:

Single-component, high-viscosity, atmospheric humidity-curing polyurethane bonding/sealing compound for high-strength, permanently elastic adhesive joints.

This material is used in the direct glazing process of the automotive industry in combination with glass-primer and wipe and paint primer. It is also suitable for bonding certain plastic parts in conjunction with the plastic primer BETAPRIME 5404 and/or a specific pretreatment according to prior test results.

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## Technical Data:

Basis	polyurethane prepolymers
Colour	black
Density	ca. 1.23 g/cm <sup>3</sup> at 23°C
Solid contents	> 98%
Viscosity (Extrusion, Ballan 4 mm nozzle, 4 bar)	pasty, pumpable 12 - 18 g/min at 23°C
Flash point	> 100°C
Processing temperature	10 - 40°C
Open time	max. 15 min at 23°C/50% rh primerless
Sagging behavior	very good, non-sagging
Tack-free time	approx. 30 min at 23°C/50% rh
Cure rate	> 4 mm in 48 h at 23°C/50%rh
Tensile strength (DIN 53 504)	9 ± 1 MPa
Elongation at break (DIN 53 504)	> 500%
Lap shear resistance (EN 1465)	min. 5 MPa (height of adhesive layer: 2mm) 23°C/50% rh,
Resistance to tear propagation (DIN 53 515)	approx. 15 N/mm
Shore A hardness (DIN 53 505)	60 +/-5
Abrasion resistance	Extremely high

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<b>Temperature stability</b>	-40°C to 100°C, for short periods up to 120°C
<b>Resistance to chemicals</b>	Highly resistant to aqueous chemicals, petrol, alcohol and mineral oils. Conditionally resistant to esters, ketones, aromatics and chlorinated hydrocarbons
<b>Bonding surface preparation</b>	All bonding surfaces must be free of dirt, dust, water, oil and grease. In general surfaces should be primed. Verify compatibility or consult our technical service department.
<b>Processing equipment</b>	Cartridges: hand-operated or pneumatic gun with mechanical piston Drums, pails: commercial pumping system with connection to automatic applicator, if required.
<b>Cleaning</b>	Uncured BETAMATE 7120 residues can easily be removed with BETACLEAN 3000 or BETACLEAN 3500. Hardened BETAMATE 7120 residues can only be removed mechanically. Immerse equipment in BETACLEAN 3000.
<b>Shelf life</b>	6 months at +5°C to +25°C in unopened containers. (See "use before" date printed on container).
<b>Containers</b>	300 ml cartridges, cardboard packs of 12 Pails: 22 litres Drums: 200 litres
<b>Protection measures</b>	See health and safety data sheet

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