



Nutzfahrzeuge

Body assembly guidelines Volkswagen Nutzfahrzeuge

The Transporter T5

The following pages contain technical guidelines for custom body manufacturers/ coachwork specialists for construction and assembly of custom body-related parts and conversions.

The body assembly guidelines should be strictly adhered to if modifications are made with the intention of doing so.

Included in the Volkswagen body assembly guidelines are also the body dimension plans for our commercial vehicles Crafter, Transporter T4 and T5, Caddy and LT. These can be installed in 3 formats (TIF, DXF, IGES) for CAD programs and as PDF files.

Advice: If further technical queries about the series production vehicle arise over and beyond these guidelines, please contact your local conversion expert at your importer.

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Note: Subject to errors and technical amendments. The electronic version of the body guidelines is the decisive source of up-to-date data on body guidelines

<http://www.vwn-aufbaurichtlinien.de>

Data status Oktober 2009

5.1 Supply of vehicle chasses

For the supply of vehicle chasses on customer axles, a wide range of regulations must be met:

- Wheel covers
- Balance weight for braking
- Side impact protection
- Lighting equipment

These parts were not developed and are not available and would make supply of vehicle chasses on customer axles unnecessarily expensive.

For this reason, customer collection of chassis cabs is no longer permitted. Supply of these vehicles should be per rail/road freight transport.

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5.2 Aperture in rear cab panel

The max. aperture is limited by the B-pillars, the B-bracing elements and the cab floor.

The box body should be flush fitted to the cab with flexible mountings. That is, the connection should not be flush bonded, but carried out in such a way that the twisting movement between box body and cab is not transmitted directly into the cab. It should be absorbed within the connection.

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5.3 Drilling in vehicle chassis frame

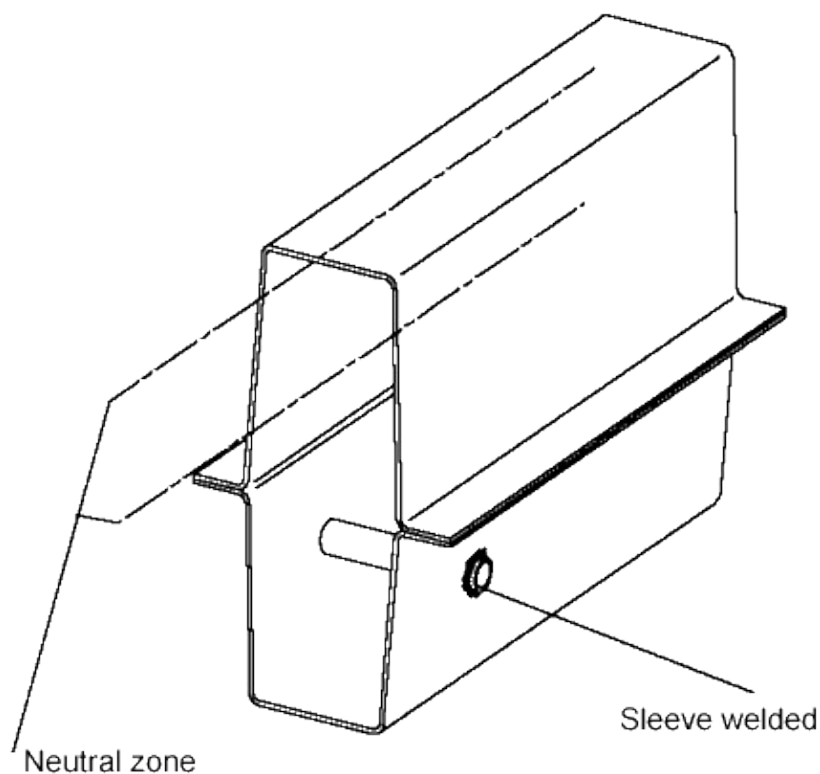
- **Additional securing points for custom bodies.**

The longitudinal members are hollow profile beams. If holes have to be drilled in them, this should only be carried out in the neutral zone (centre of longitudinal member but with sufficient distance from flange). In addition, spacer sleeves should be welded in place.

- Drillings that were made in the factory in the upper and lower strap of the longitudinal members should not be made larger. Likewise, these drillings should not be used as fixture points for any type of auxiliary equipment

- **Drillings to allow passage of pipes, wiring, cables, etc., and for fixture of attachments (clamps, etc.).**

In exceptional circumstances, we will agree to drillings being made in the web plate of the longitudinal members or in the cross members. If this becomes necessary, it is essential that you contact us first.



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5.4 Welding on vehicle

Welding work on the vehicle frame should be limited to the absolute minimum and only be carried out if necessary.

Before carrying out welding work on the vehicle, the vehicle battery should be disconnected. If, with the battery disconnected, concealed cables are damaged, short circuits could result in serious damage.

If using electrical welding equipment, the earth clamp of the equipment should be attached directly to the vehicle part that is to be welded. The high current and resulting voltage peaks could otherwise lead to damage in the mechanical and electronic components of the vehicle.

The work should only be carried out using shielded arc welding.

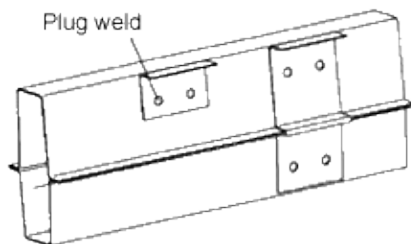
In exceptional circumstances, well-dried electrode rods - 2.5 mm - can be used with lime based casing.

If welding-in additional consoles, etc., weld only in the so-called neutral zone. A plug weld should always be chosen as a preference. Avoid welding seams across the frame.

Note:

The heat stress caused by welding causes the anti-corrosion layer in the area of the weld to be diminished. Therefore, it should be reapplied using appropriate measures.

Example of plug weld



Consoles for box body as fitted in factory

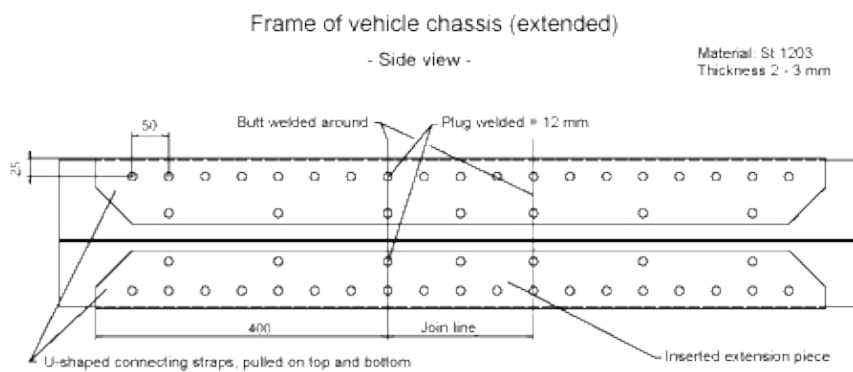
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5.5 Wheelbase extensions and overhang extension

If a wheelbase extension becomes necessary,

- Use the long wheelbase as a basis.

The max. perm. weight, axle loads, rear overhang (depending on wheelbase), etc., should be adhered to. Please refer to paragraphs dimensions and weights .



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5.6 Subframe, assembly frame

Subframe

The subframe should be made of steel. It is required for custom bodies, on which loads are focused on specific areas of the chassis, e.g. tippers and fifth wheel tractor units.

The subframe serves as a means of distributing the loads, focused in isolated areas, equally across the vehicle frame. To do this, it should be positioned above the longitudinal members, lead up to the cab and taper out in the front end area.

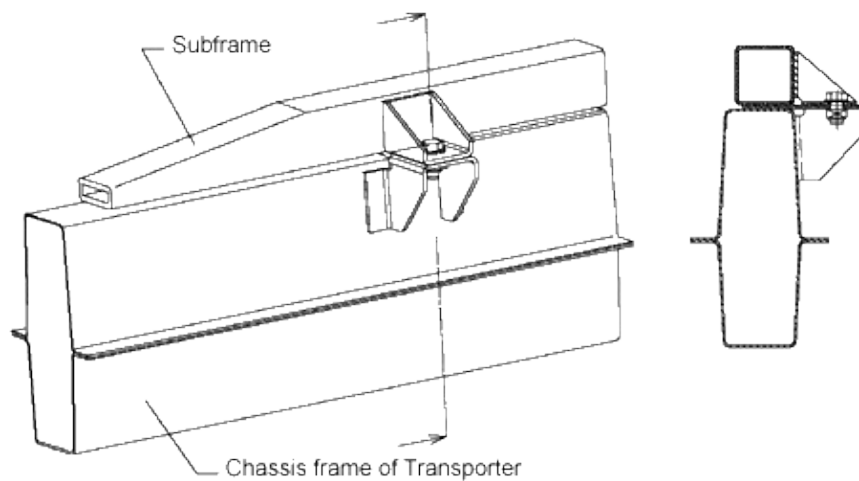
The various gaps between chassis and subframe should not be filled. Self-supporting custom bodies can be secured above the platform frame directly on the standard consoles fitted to the frame.

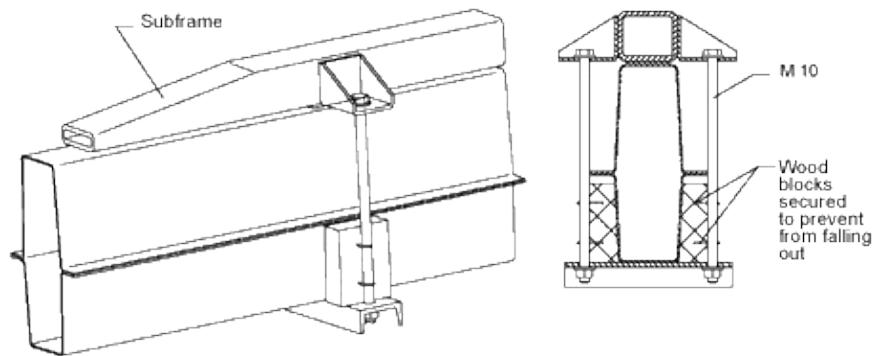
Subframe and self-supporting custom bodies should be secured to the chassis at all available console points.

Assembly frame

The assembly frame serves exclusively as a means of mounting custom body parts directly. Attachment of the assembly frame to the chassis frame is permissible only by means of bolted connections. Unlike the subframe, the assembly frame should not cover the entire chassis frame.

To protect the chassis frame, no demands are placed on rigidity of the assembly frame.





Between longitudinal member and subframe there is a cavity of 3.5 mm in size that does not require filling.

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5.7 Custom bodies with raised centre of gravity

On vehicles with high bodies and with raised centre of gravity, a reduction in vehicle performance is to be expected.

Note:

Changing the steering and braking forces for vehicle conversions for disabled persons is not possible.

The following table shows at which **height the centre of gravity** is permissible on vehicles with standard equipment. **These heights should not be exceeded.**

Version	Max. perm. weight	Anti-roll bars		Centre of gravity on chassis Measurement mm X	Gross centre of gravity of vehicle Measurement mm Y1	Gross centre of gravity of vehicle Measurement mm Y2	Max. perm. height of centre of gravity for body and load capacity on road surface Measurement mm Z
		Front axle	Rear axle				
Panel van/Kombi	2,8 t	Sv	Sh	730	890		1325
Drop-side/dble cab	2,8 t	Sv	Sh	680	890		1275
Chassis cab	2,8 t	Sv	Sh	620	890		1300
Panel van/Kombi	3,0 t	Sv	Sh	730	920		1375
Drop-side/dble cab	3,0 t	Sv	Sh	680	920		1325
Chassis cab	3,0 t	Sv	Sh	620	920		1350
Panel van/Kombi	3,0 t	2MG	2MG	730	950	990	1550
Drop-side/dble cab	3,0 t	2MG	2MG	680	950	990	1500
Chassis cab	3,0 t	2MG	2MG	620	950	990	1525

2MG = 28 mm rear anti-roll bar, 25 mm front anti-roll bar

The centre of gravity height Y2 can be used on reduction of perm. front axle load to 1535 kg.

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