



**Commercial  
Vehicles**

# Body builder guidelines Amarok



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# 1 General

## 1.1 Body builder guidelines, inquiries

The body builder guidelines define the technical requirements for custom body builders and equipment fitters designing and mounting bodies or performing conversions to base vehicles of the Volkswagen Commercial Vehicles brand.

The body builder guidelines shall be strictly adhered to when performing any modifications to the vehicle.

In all modifications, it is necessary to ensure that the functional safety of all parts is guaranteed. Modifications shall only be performed by qualified specialists and in accordance with the generally acknowledged rules of the automotive industry. Furthermore, the guidelines for repairs in VW customer service shall be complied with, e.g. installation sequences and torques, etc.

Prerequisites for modifications to used vehicles: The vehicle shall be in a good overall condition, i.e. structural parts such as longitudinal and cross members, pillars etc. shall not be corroded to such an extent that structural stability might be adversely affected.

Vehicles whose modifications might affect the validity of general certificate of roadworthiness shall be presented to an authorised testing centre for approval. It is recommended to clarify in advance with the relevant authority whether approval is required.

When **inquiring** about planned modifications, please enclose two sets of design drawings of the complete scope of the modification, including weights, centre of gravity and dimensions, which also clearly show how the body is attached to the chassis. Please use the online contact form:

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

Please also provide information about the intended operating conditions of the vehicle. If bodies, installations or conversions comply with the present guidelines, no additional approval by Volkswagen AG is required for the presentation of the vehicle at the relevant authority examining roadworthiness.

The work safety regulations of the trade association and the EU Machine Directive apply.

When making modifications to vehicles, all corresponding and applicable legal regulations, rules, laws and directives shall be observed.

## 1.2 Warranty and product liability of the body builder

The body builder's or fitter's warranty conditions apply to the body builder's or fitter's scope of supply. Therefore, warranty claims associated with complaints to this scope of supply cannot be made under the warranty conditions applicable to Volkswagen Commercial Vehicles.

Volkswagen vehicles delivered after 1 January 2005 are covered by a 2-year warranty without mileage limitation for the flawless condition of the product (Volkswagen warranty).

Defects of bodies, installations and conversions provided by third parties as well as defects of the vehicle caused by the said bodies, installations or conversions are excluded from the Volkswagen warranty and also from the Volkswagen paint and body warranty. This also applies to accessories which were not installed and/or supplied by the vehicle manufacturer.

The body builder or fitter is solely responsible for the design and assembly of bodies and the execution of conversions.

All conversions shall be documented by the body builder or fitter in the service schedule provided with every Volkswagen vehicle.

Due to the multitude of conversions and diversity of operating conditions, the information provided by Volkswagen AG is subject to the reservation that modified vehicles are not tested by Volkswagen AG. Modifications may affect the properties of the vehicle.

**For reasons of liability, the body builders or fitters shall provide the following information in writing to their customers:**

"Due to the modifications\* to your Volkswagen Commercial Vehicles base vehicle, the properties of your base vehicle may have changed.

Please understand that Volkswagen AG does not assume any liability for any negative effects resulting from the modifications\* to the vehicle."

In individual cases, Volkswagen AG reserves the right to demand proof of the information being passed on to the customer.

No general legal entitlement for the approval of a body modification exists, even if such approval was previously granted.

If bodies, installations or conversions comply with the present guidelines, no additional approval by Volkswagen AG is required for the presentation of the vehicle at the relevant authority examining roadworthiness.

\* At this point, the term "modification" may be substituted by a more precise description of the work performed, e.g. by "camping equipment installation", "wheelbase extension", "box body".

## 1.3 Recommendations for vehicle storage

Extended storage times cannot always be avoided. The following measures are recommended to ensure that vehicle quality is not affected by long-term storage:

At vehicle delivery:

- Fill tank
- Do not park the vehicle under trees, poles; etc.
- Open all ventilation flaps, set blower to maximum speed
- Disconnect battery(ies)
- Remove dirt, snow and moisture from vehicle (footwell)
- Close windows, doors, bonnet, rear lid and sunroof
- Put manual gearbox into 1st gear or lever of automatic gearbox into park position. Do not engage reverse gear. Do not apply the parking brake.
- Remove the windscreen wiper bags and prop up the wiper arm using a foam pad, remove any loose protective film. ("Aero wipers": remove and store in suitable location inside vehicle.)
- Check tyre pressures; increase to 4.5 bar for commercial vehicles, if required.

Check vehicles weekly for contamination by aggressive media (e.g. bird droppings, industrial dusts) and clean, if required. Check battery open-circuit voltage every three months. Open-circuit voltage means the voltage of the disconnected battery after a minimum storage period of 12 hours. Recharge battery in due time before it reaches an open-circuit voltage of 12.4 volt ('magic eye' changes from green to black). Batteries with an open-circuit voltage of less than 11.6 volt are in state of exhaustive discharge and should be disposed of without delay.

Batteries shall be recharged only with current-controlled and voltage-limited chargers. A maximum charging voltage of 14.4 volt shall not be exceeded.

It is recommended to check the tyre inflation pressure every three months and to increase it to 4.5 bars for commercial vehicles, if required.

Reconnect battery negative lead(s) before recommissioning the vehicle.

## 1.4 Compliance with environmental rules and regulations

Fitters of accessories and body builders shall ensure that they comply with all applicable environmental rules and regulations, especially EU directive 2000/53/EC concerning end-of-life vehicles and EU directive 2003/11/EC relating to restrictions on the marketing and use of certain dangerous substances and preparations.

The vehicle owner shall keep all assembly documentation concerning the modification and hand them over together with the vehicle to the dismantler. This ensures that modified vehicles are processed in compliance with environmental rules and regulations at the end of their lifecycle.



## 1.5 Recommendations for inspection, maintenance and repair

Maintenance instructions or service schedules outlining inspection and servicing work should be provided for the modifications performed by the body builder or accessories fitter. These instructions or schedules shall include the maintenance and inspection intervals as well as the required operating fluids and materials and the spare parts. Parts and components with a limited service life which have to be checked at regular intervals to ensure service reliability and timely replacement shall be explicitly stated.

This should be supported by a repair manual including tightening torques, settings and tolerances as well as other relevant technical specifications. Special tools, including their source of supply, shall also be stated.

The manual shall also state which type of work has to be performed only by the body builders and accessories fitters or their authorised workshops.

If the body builder's or accessory fitter's scope of supply includes electric, electronic or mechatronic, hydraulic or pneumatic systems, circuit diagrams and diagnosis routines or similar documentation facilitating a systematic search for faults shall be provided.

## 1.6 Accident prevention

Body builders shall ensure that the fitted components, conversions, bodies and modifications comply with applicable legal rules and regulations as well as all regulations regarding work safety and accident prevention. All safety rules and the information material provided by accident insurance providers shall be observed.

All technically feasible measures shall be taken to prevent unsafe operation.

Country-specific laws, directives and approval regulations shall be observed.

The body builder or device or equipment manufacturer is responsible for the compliance with these laws, rules and regulations.

For further information about commercial freight traffic in the Federal Republic of Germany please contact:

Berufsgenossenschaft für Fahrzeughaltung  
Fachausschuss "Verkehr"  
Sachgebiet "Fahrzeuge"

Ottenser Hauptstraße 54

22765 Hamburg, Germany

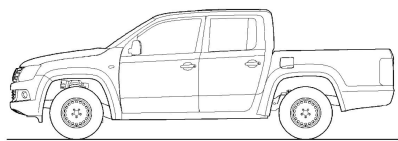
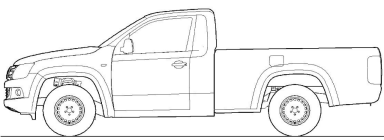
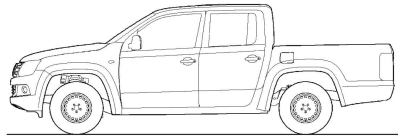
Homepage: [www.bg-verkehr.de](http://www.bg-verkehr.de)

E-Mail: [info@bg-verkehr.de](mailto:info@bg-verkehr.de)

## 1.7 Advantages of the concept

- One wheelbase
- Two weight classes, 2820 kg and 3040 kg for Double Cab.
- Frame with cab body and cargo box
- Large load bed with the largest dimensions in its class.
- Through-load width of 1222 millimetres between the wheel houses. This means Euro pallets can be loaded crossways to save space, which is a first in a mid-size pickup. Thanks to these impressive dimensions and a payload up to 1.15 metric tonnes, it is also possible to transport sports equipment such as quad bikes or large implements.
- Four load securing points in the corners of the load bed for securing the cargo whilst driving.
- Low, flat load bed
- Max. trailer weight (12% uphill gradient) up to 2800 kg (optional tow hitch)
- Drawbar load 120 kg
- Independent suspension at front and rigid axle at rear
- Top-grade cw value: 0.42
- Powerful and economical engine range
- 3 powertrain variants:  
Permanent four-wheel drive, non-permanent four-wheel drive or rear-wheel drive. The Amarok has rear wheel drive in its basic version.
- 4x4 drive is available for all models
- Upshift recommendation, **standard feature** in all Amaroks
- High level of vehicle security
- ABS and TCS are standard features in the Amarok.
- **Electronic differential locks** (EDL).
- Offroad-ABS activated at the push of a button to significantly shorten braking distances off-road and on dirt roads.
- The optionally available ESP also activates the hill descent assistant when Offroad-ABS is active at speeds below 30 km/h.
- All vehicles with ESP are equipped with a **hill-hold assist** that holds the vehicle stationary when performing a hill start until the driver accelerates sufficiently to prevent it's rolling back.
- Low maintenance requirements
- **Heavy-duty suspension package**
- **80 litre tank**
- Extensive **range of accessories** – ranging from the styling bar, running boards, load space cover and multiconnect attachment system (standard from Trendline onwards) through to a range of alloy wheels

## 1.8 Delivery range

Weight class [kg]	Wheelbase [mm]	AMAROK (Single Cab) 2-seater	AMAROK DC (Double Cab) 5-seater
2820	3095		
3040	3095		

## 1.9 Quality system

It is highly recommended for body builders to establish a quality management system, because national and international product liability legislation, new forms of organization and increasing pressure on costs all demand an effective quality assurance system in all areas of the automotive industry.

For this purpose, the VDA has developed a guideline on quality assurance for trailer, body and container manufacturers based on DIN EN ISO 9000ff, and published as VDA Volume 8.

## 2 Technical data for planning

### 2.1 Basic vehicle

#### 2.1.1 Vehicle dimensions

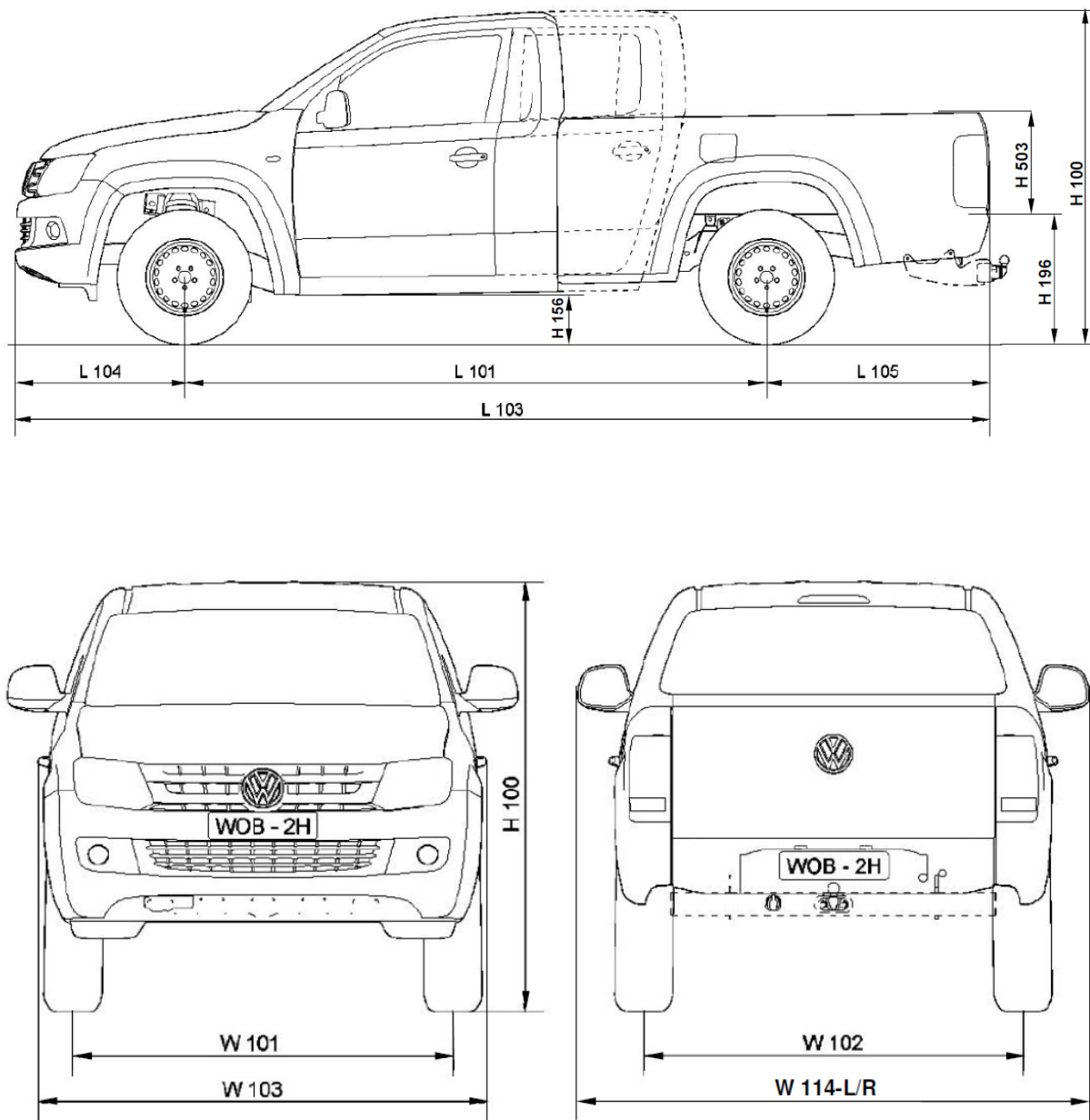


Fig. 2.1.1.1 Vehicle dimensions of AMAROK (views: side, front and rear)

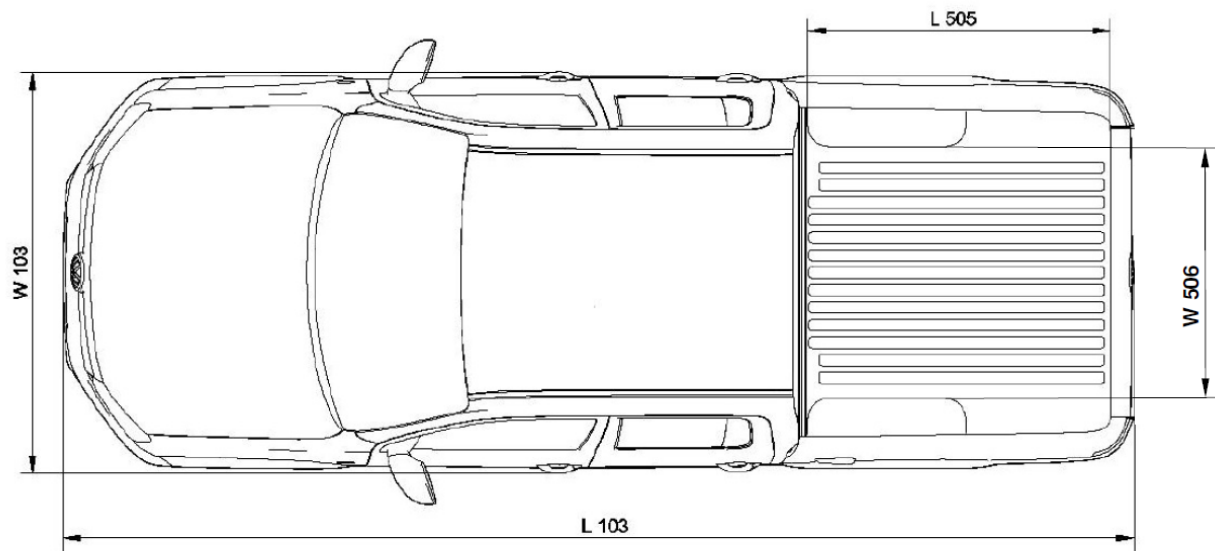


Fig. 2.1.1.2 Plan view of AMAROK DC (Double Cab)/Amarok SC (Single Cab)

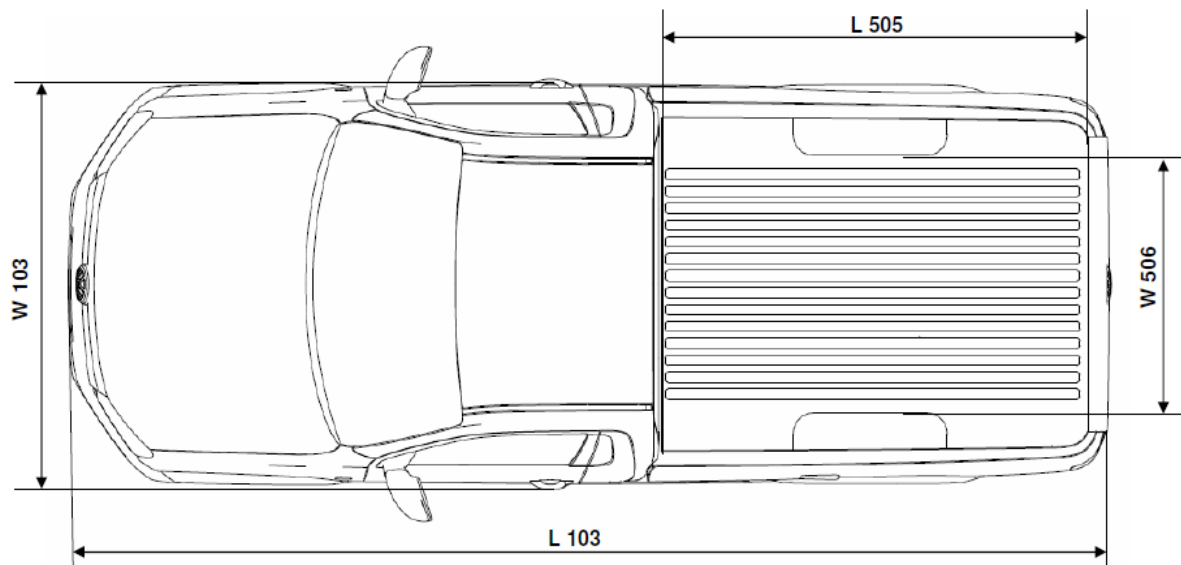


Fig. 2.1.1.3 Plan view of AMAROK SC (Single Cab)

## 2.1.1.1 Basic data Single Cab and Double Cab

Basic data AMAROK (all engines)		Single Cab	Double Cab
Garage dimensions	Max. width with doors opened [mm]	3668	3 668
	Width incl. left/right exterior mirrors (W114-L+W114-R) [mm]	2228	2228
Interior dimensions	Driver headroom (H61), [mm]	1026	1026
	2nd seat row headroom (H61)	--	1008
	Driver entry height (H115/1)	520	520 <del>505</del>
	2nd seat row entry height (H115/2)	--	529 <del>524</del>
	Leg room 1st seat row (L34-1)	1019	1019
	Leg room 2nd seat row (L34-2)	--	865
Dimensions  (Positioning see chap. 2.1.3.1)	Length (L103)	5181 (5192 with rear bar) (5254 with bumper)	5181 (5192 with rear bar) (5254 with bumper)
	Width (W103)	1944 1954 (with wheel cover)	1944 1954 (with wheel cover)
	Height of body with measuring load 1* (H100)	1820	1834
	Wheelbase with measuring load 1* (L101)	3095	3095
	Front overhang with measuring load 1* (L104)	898	898
	Rear overhang with measuring load 1* (L105)	1188 1261 (with bumper)	1188 1261 (with bumper)
	Ground clearance measuring load 1* (H 156)	250	250
	Front track width with measuring load 1* (W101)	1648	1648
	Rear track width with measuring load 1* (W102)	1644	1644
	Length of load bed (L505)	2205	1555
	Front entry angle to gradients with ML1 (A117)	28°	28°
	Front entry angle to gradients ML3 (A117) limited by bumper	29.8°	30.6°
	Rear entry angle to gradients ML1 (A116) limited by bumper	23.6°	23.6°
	Rear entry angle to gradients ML1 (A116) without bumper	28°	28°



Basic data AMAROK (all engines)		Single Cab	Double Cab
Dimensions of load bed	Rear entry angle to gradients ML3 (A116) without bumper	15.4°	15.4°
	Rear entry angle to gradients ML3 (A116-2) limited by bumper with step	18°	17.6°
	Rear entry angle to gradients ML3 (A116-2) limited by exhaust system (petrol engine)	15.6°	15.4°
	Ramp angle ML1 with skid plate Without skid plate	21.4° 23°	21.4° 23°
	Ramp angle ML3 with skid plate Without skid plate	16.4° 18°	16.7° 18.6°
	Minimum turning circle (D102)	12.95 m	12.95 m
	Width of load bed max.	1620	1620*
	Through-load width (W506)	1222	1222
	Tailgate height (H503)	508	508
	Rear load sill height (H502/1, H196), measuring load 1*	780	780
	Tyre size, max.	Small tyre diameter: 205/65 R16 C 110/108T large tyre diameter: 245/65 R17 111T	Small tyre diameter: 205/65 R16 C 110/108T large tyre diameter: 245/65 R17 111T

\* Meas. loads ML1 and ML3 acc. to DIN 70020

Info from Volkswagen Commercial Vehicles intranet\Project AMAROK\Basic data, status: 07.12.2009

\* The vehicle dimensions concerning ground clearance and load bed differ from one another depending on the engine and equipment variant.

\*\* The permitted tyre size varies depending on the engine and the permitted gross vehicle weight.

For additional technical data, especially dimensional drawings and weight information on the Amarok according to the engine and equipment variant, please refer to the website of Volkswagen Commercial Vehicles at: <http://www.volkswagen-nutzfahrzeuge.de/de/downloads.htx> from where this information can be downloaded.

### 2.1.2 Overhang angle and ramp angle

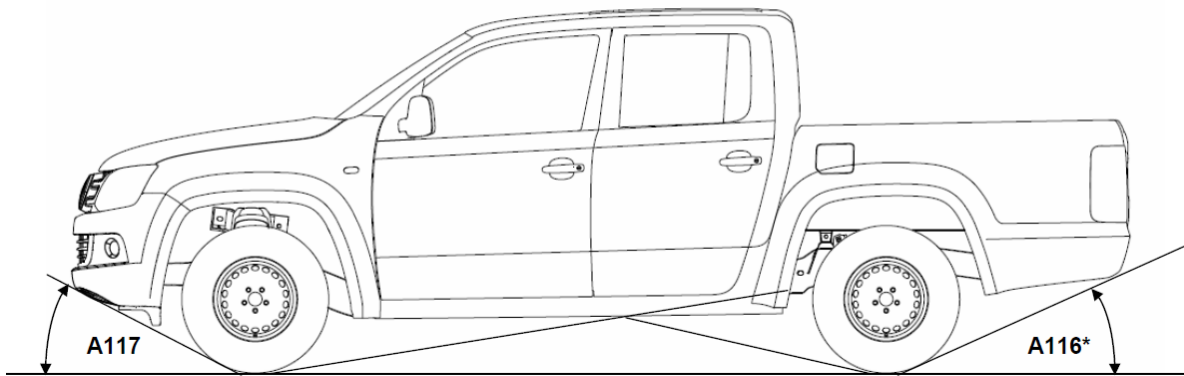


Fig. 2.1.2.1 Entry angles to gradients of AMAROK DC (Double Cab)

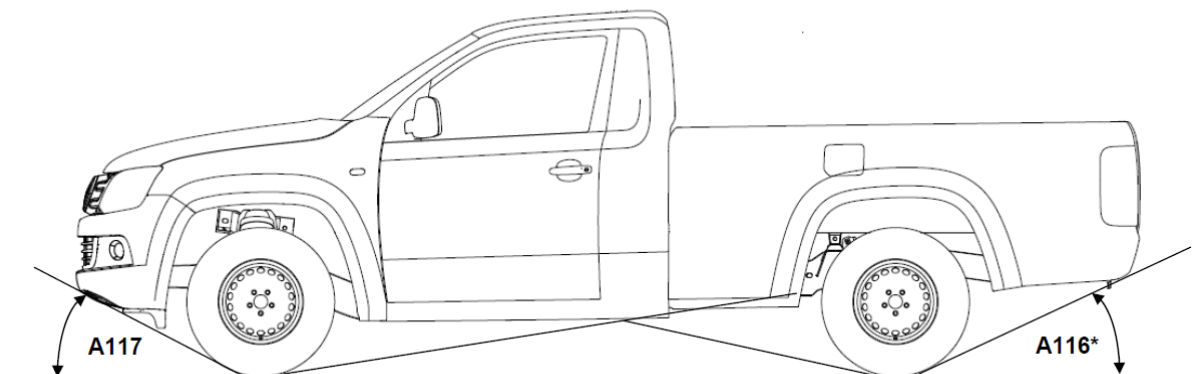
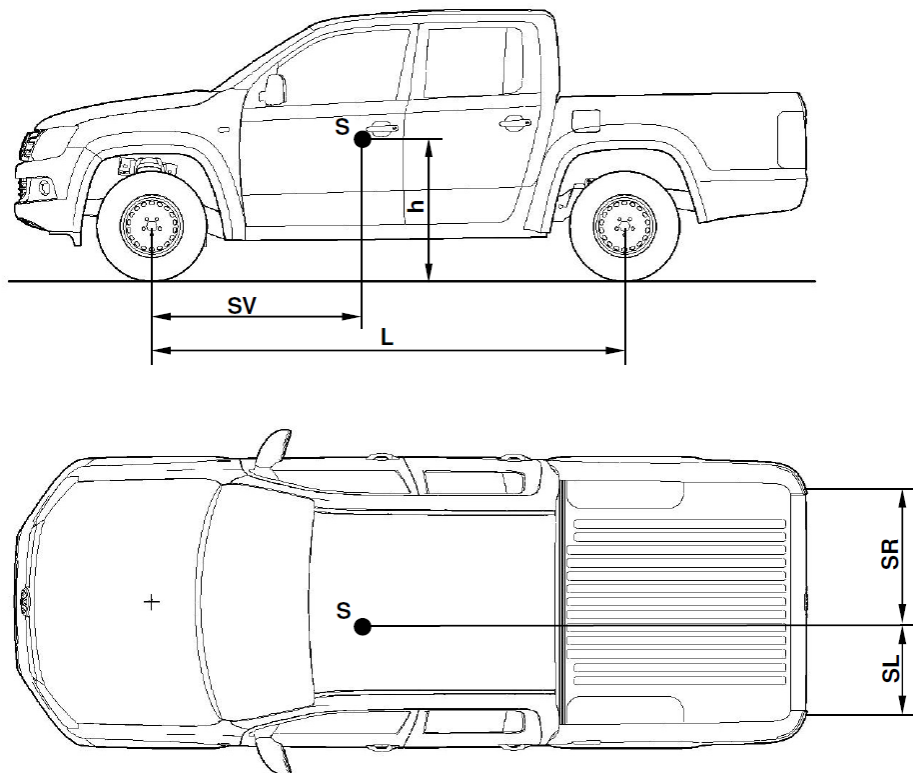


Fig. 2.1.2.2 Entry angles to gradients of AMAROK SC (Single Cab)

The values for the entry angle to gradients A116 can be found in the basic data table for the Amarok Single Cab and Double Cab in chap. 2.1.1.1.

\* The values for the entry angle to gradients A116 differ for petrol and diesel engines due to different exhaust systems.

### 2.1.3 Vehicle centre of gravity



Model	L [mm]	h* [mm]	SV* [mm]	SR* [mm]	SL* [mm]
Double Cab	3095	680	1444	~840	~796
Single Cab	3095	657	1350	~853	~805

### 2.1.4 Bodies with a high centre of gravity

The driving properties of vehicles with a high body or with an elevated overall centre of gravity can be expected to be restricted.

A centre of gravity height up to 800 mm above the carriageway is not problematical.

Higher centre of gravity heights are only permitted following consultation with Volkswagen AG.

If necessary, the chassis and ESP shall be modified according to the specifications of Volkswagen AG.

Please use the online contact form:

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

\* Position of centre of gravity measured on the vehicle without payload and without driver (status: 11.11.2010)

### 2.1.5 Maximum dimensions

The ride height of the frame may change if reinforced springs or comfort springs are installed. The exact heights shall be measured prior to the start of conversion work.

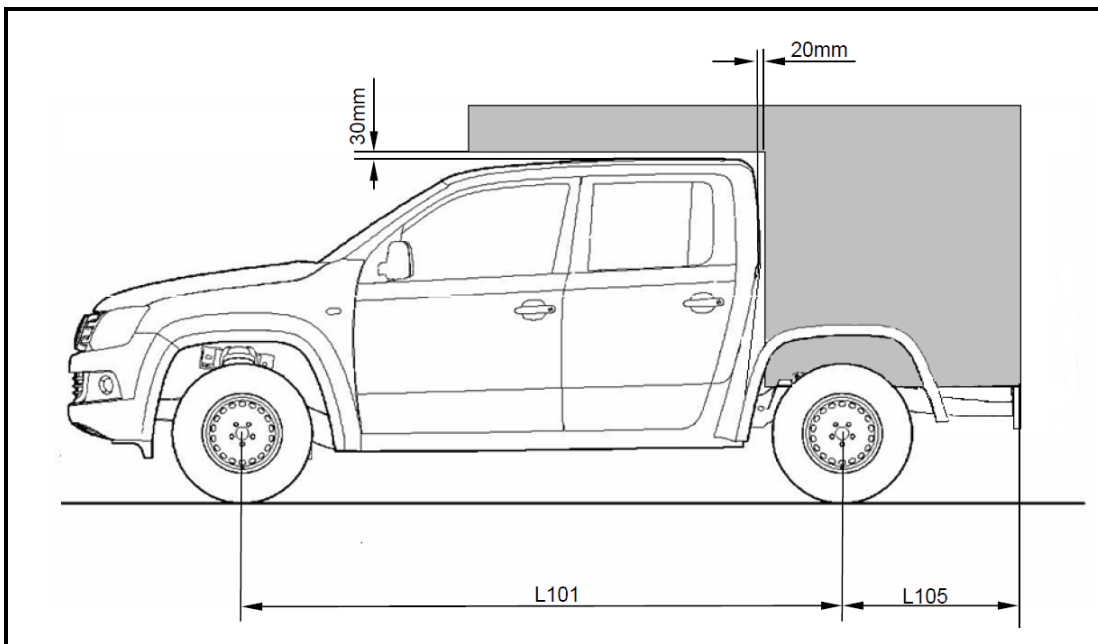


Fig. 2.1.7.1 Max. dimensions of AMAROK

Please note that the following minimum dimensions shall be complied with between the cab and body:

Between cab and body: **20 mm**

Between cab roof and superstructure: **30 mm**.

The max. permitted overhang is still under consultation and is currently not allowed to exceed the dimension of **1188 mm (L105)**.

The vehicle width is **1944-1954 mm (W103)** without mirrors!

The aforementioned body width is not allowed to be exceeded when standard exterior mirrors are used.

Please also comply with the following chapters:

Chap. 2.2.1 "Permitted weights and unladen weights"

Chap. 2.2.1.1 "One-sided weight distribution"

Chap. 2.3.2.3 "Wheelbase extensions and overhang extensions"

## 2.2 Running gear

### 2.2.1 Permitted weights and unladen weights

Volkswagen AG offers vehicles with rear-wheel drive (4x2) and four-wheel drive (4x4), with Single and Double Cabs, in the weight classes 2820 kg and 3040 kg.

The Amarok SC is only offered with a GVWR of 3040 kg.

Amarok DC vehicles are available with a GVWR of 2820 kg and 3040 kg.

The weight values in the technical data refer to the standard, basic vehicle equipment. Weight tolerances of +5% in production are permitted according to DIN 70020, and should be taken into account if necessary.

The payload is reduced if special equipment is installed.

**The definitive unladen weight of the entire vehicle shall be measured by weighing.**

#### **Petrol engines:**

2.0 l/118 kW R4 4V TFSI ML 390-6H

#### **Diesel engines:**

2.0 l/90 kW R4 4V TDI CR ML390-6H

2.0 l/120 kW R4 4V TDI CR ML390-6H

2.0 l/90 kW R4 4V TDI CR ML390-6A

2.0 l/120 kW R4 4V TDI CR ML390-6A

## Weights of Double Cab:

Engine		Gear-box	PR no.	Perm. weights [kg]			Unl. weight incl. driver [kg]			Pay-load max. [kg]
				Total weight	Front axle load (FA)	Rear axle load (RA)	Total weight (min.)	FA	RA	
Petrol	2.0 l TFSI 118 kW petrol <sup>2)</sup>	MG**	0WA	2820	1300	1600	1857	1048	809	963
	2.0 l TFSI 118 kW petrol <sup>3)</sup>		0WL	3040	1310	1860	1978	1093	830	1162
Diesel	2.0 l TDI 90 kW <sup>2)</sup>	MG**	0WA	2820	1315	1600	1872	1058	814	948
	2.0 l TDI 90 kW <sup>3)</sup>		0WL	3040	1325	1860	1893	1058	835	1147
Diesel	2.0 TDI 120 kW <sup>2)</sup>	MG**	0WA	2820	1325	1600	1882	1058	824	938
	2.0 TDI 120 kW <sup>3)</sup>		0WL	3040	1335	1860	1903	1058	845	1137
Diesel	2.0 l TDI 90 kW <sup>2)</sup>	A**	0WA	2820	1375	1600	1948	1120	828	872
	2.0 l TDI 90 kW <sup>1) 3)</sup>		0WL	3040	1375	1860	1983	1130	853	1057
Diesel	2.0 l TDI 120 kW <sup>2)</sup>	A**	0WA	2820	1385	1600	1958	1120	838	862
	2.0 l TDI 120 kW <sup>1) 3)</sup>		0WL	3040	1385	1860	1993	1130	863	1047

Status: 19.11.09

\* 1) Non-permanent 4-wheel drive; 2) 2+1 leaf springs (comfort); 3) 3+2 leaf springs (heavy duty)

\*\* Gearbox abbreviations: MG = manual gearbox, A = 4-wheel drive gearbox

## Single Cab weights:

Engine		Gear-box	PR no.	Perm. weights [kg]			Unl. weight incl. driver [kg]			Pay-load max. [kg]
				Total weight	Front axle load (FA)	Rear axle load (RA)	Total weight (min.)	FA	RA	
Petrol	2.0 l TFSI 118 kW petrol	MG**	0WL	3040	1255	1860	1761	1033	728	1279
	2.0 l TFSI 118 kW									
Diesel	2.0 l TDI 90 kW	MG**	0WL	3040	1270	1860	1776	1043	733	1264
	2.0 l TDI 90 kW <sup>3)</sup>									
	2.0 l TDI 90 kW									
Diesel	2.0 l TDI 120 kW	MG**	0WL	3040	1280	1860	1786	1043	743	1254
	2.0 l TDI 120 kW									
Diesel	2.0 l TDI 90 kW <sup>1)</sup>	A**	0WL	3040	1335	1860	1880	1128	752	1160
Diesel	2.0 l TDI 120 kW <sup>1)</sup>	A**	0WL	3040	1345	1860	1890	1128	762	1150

Status: 19.11.09

\* 1) Non-permanent 4-wheel drive; 2) 2+1 leaf springs (comfort); 3) 3+2 leaf springs (heavy duty)

\*\* Gearbox abbreviations: MG = manual gearbox, A = 4-wheel drive gearbox

### 2.2.1.1 One-sided weight distribution

The following weights shall not be exceeded under any circumstances:

- Gross vehicle weight rating
- Permitted front axle load
- Permitted rear axle load

(See chapter 2.2.1.)

When planning add-ons/additions, make sure that a one-sided weight distribution is avoided – in particular involving permanently secured add-ons. If this is unavoidable, the maximum wheel load on one side is not allowed to deviate from the theoretical max. wheel load by more than 4%. The permitted axle load shall be complied with.

AMAROK example

Perm. axle load (rear)	1860 kg
Theor. wheel load left/right	930 kg/930 kg
4% of this wheel load	37.2 kg
Perm. wheel load distribution left/right	892.8 kg/967.2 kg

#### Important note:

Please also comply with chap. 2.2.1 "Permitted weights and unladen weights" and chap. 2.1.5 "Max. dimensions".

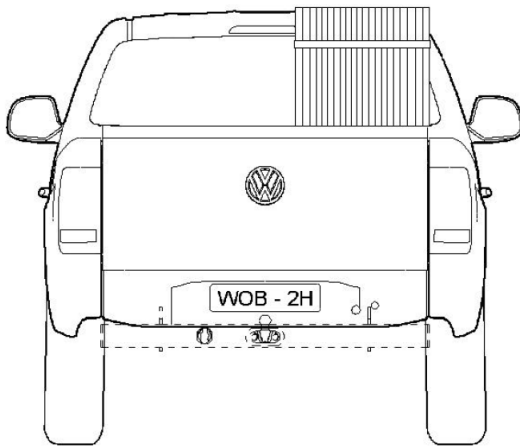


Fig. 1: One-sided weight distribution (rear view)

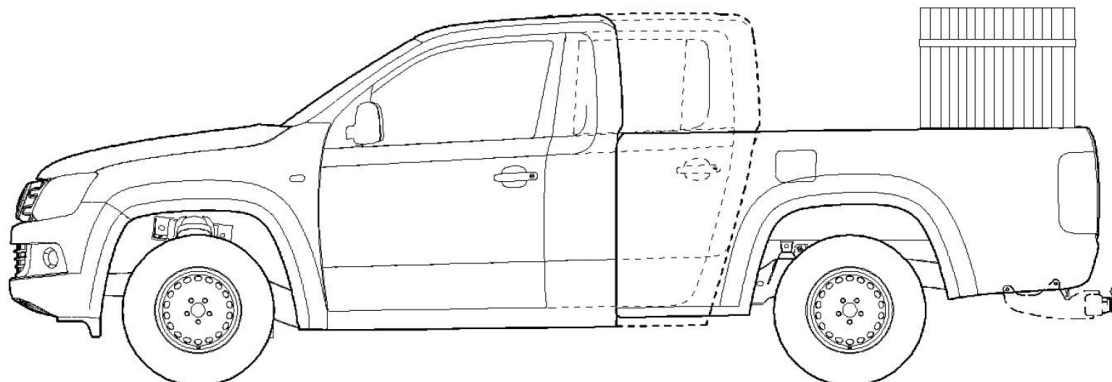


Fig. 2: One-sided weight distribution (side view)



### 2.2.2 Turning circle

See chapter 2.1.1 Vehicle dimensions.

### 2.2.3 Authorised tyre sizes

See chapter 2.1.1 Vehicle dimensions.

### 2.2.4 Modifications to axles

#### Important safety note:

Modifications to the suspension and the axles can lead to an impairment in the driving properties and unstable driving behaviour. Therefore, do not make modifications to chassis components.

### 2.2.5 Modifications to the steering system

Modifications to the steering system are not permitted.

Exceptions, e.g. conversions for people with disabilities, shall be approved by Volkswagen AG prior to the conversion.

Please use the contact form on the Volkswagen Commercial Vehicles website for your enquiries.

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

### 2.2.6 Modifications to the brake system

Changes to the brake system are not allowed under any circumstances:

- If the modification to the brake system goes beyond the scope of the operating permit.
- If the air inflow and outflow to and from disc brakes are modified.

Exceptions shall be approved by Volkswagen AG prior to the conversion, and shall be documented with an independent brake approval report.

To do this, please use the online form:

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

to contact us.

#### Important note:

Work performed improperly on brake hoses, lines and cables can impair their function.

This can lead to a failure of components or safety-relevant parts. Therefore, work on brake hoses, lines and cables should only be performed by a qualified specialist workshop.

Since 01.01.1991, all commercial vehicles have had to comply with the "EC Brake Systems Directive 71/320 EEC". When this EC Directive was adopted into national legislation (e.g. the Road Traffic Regulations (StVZO) in Germany), the effect was that these technical regulations also had to be complied with for individual acceptance.

### **2.2.7 Modification of springs, suspension mounting, dampers**

The spring rates are not allowed to be modified. Exceptions shall be approved by Volkswagen AG prior to the conversion.

To do this, please use the online form:

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

to contact us.

### **2.2.8 Wheel alignment settings**

Changes to wheel alignment parameters are not permitted!

### **2.2.9 Wings and wheel houses**

In some bodies, it is necessary to ensure there is sufficient clearance for the wheel/tyre combination acc. to 92/23/EEC as well as for adequate wheel coverage based on EC Directive 78/549/EEC

## 2.3 Body-in-white

### 2.3.1 Roof loads/vehicle roof

Vehicle model	Max. roof load
AMAROK Double Cab (DC)	100 kg
AMAROK Single Cab (SC)	50 kg

**Important safety note:**

Roof loads raise the centre of gravity of the vehicle and lead to a high dynamic axle load shift. Also, there is greater body lean when driving on rough roads and when cornering. The driving characteristics are significantly impaired. For this reason, we recommend that you avoid roof loads as far as possible.

Please also comply with chapter: 2.1.4 Bodies with a high centre of gravity.

### 2.3.2 Modifications to the body-in-white

Changes to the body are not allowed to impair the function and strength of units and operating devices of the vehicle, neither may they reduce the strength of weight-bearing parts.

During vehicle conversions and installation of bodies, it is not permitted to make any modifications which impair the function and freedom of movement of the chassis components (e.g. for maintenance and inspection work) or the accessibility to the same.

#### 2.3.2.1 Screw connections

When standard bolts are replaced by longer ones, it is only permitted for bolts to be used which have the same properties as the standard bolt (diameter, strength, type and thread pitch).

**Important safety note:**

No safety-relevant screw connections, e.g. wheel guidance, steering and brake functions, are allowed to be modified, because otherwise the designated function may be impaired. This may result in the driver losing control of the vehicle and causing an accident.

The new installation is to be carried out according to the instructions of VW Customer Service, using suitable standard parts. We recommend using genuine VW parts.

Comply with VDI guideline 2862 during installations.

- Shortening the free clamping length, changing over to waisted shank and use of bolts with a shorter free thread proportion are not permitted.
- Furthermore, take the settling behaviour of screw connections into account.

Components that are additionally clamped as well shall have the same or a higher strength than the previous clamped combination.

### 2.3.2.2 Welded connections

Welding work should only be undertaken by people with appropriate qualifications.

#### Important note:

Disconnect the battery prior to starting welding work. Airbags, seatbelts, the airbag control unit, airbag sensors and fuel tanks shall be protected against weld spatter, and removed if necessary.

### 2.3.2.3 Wheelbase and overhang extensions

No wheelbase and overhang extensions are permitted!

Exceptions shall be approved by Volkswagen AG prior to the conversion.

Please use the online contact form for this:

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

### 2.3.3 Tailgate

The tailgate in the Amarok Double Cab and Single Cab has the following properties:

- Cannot be removed
- Exterior sheet metal
- Interior sheet metal
- Reinforcement parts  
(hinge/lock reinforcement left and right; lateral reinforcement)
- Closing plate for installation opening
- Hinges
- Lock
- No step in the liftgate
- 180° opening (no rear bumper)
- Can be locked in 90° position

150 kg static load in 90° position

## 2.4 Interior

### 2.4.1 Modifications in the area of airbags

Modifications to the airbag system and the belt tensioner system are not permitted

Furthermore, modifications to and in the area of airbag components, the airbag sensors and the airbag control units are not permitted.

Modifications or incorrectly performed work on seatbelts and seatbelt anchor points, belt tensioners or airbags or their cabling could impair the correct function of these components. They might be activated inadvertently or fail in the event of an accident.

The interior fittings shall be designed so that the airbag deployment areas are left unobstructed.

### 2.4.2 Modifications in the area of seats

Modifications to the seat system or attachment of seats on the wheel house are not permitted, because the seats might be torn out of the anchoring points in the event of an accident.

The strength data for seats available ex-works is only valid in conjunction with the original attachment elements.

It is essential not to exceed the height of the centre of gravity (H-point) if retrofitting seats.

If reattaching seatbelts, make sure that the specified bolts are tightened with the original torque.

### 2.4.3 Forced ventilation

Outlet vents may be closed through modifications only if new outlets are created, e.g. in the cab doors.

Air inlets and outlets are not allowed to be fitted in the immediate vicinity of sources of noise or exhaust gases.

### 2.4.4 Acoustic insulation

Pay attention to minimising interior noise levels as part of conversions, in order to avoid modifying the noise level of the vehicle.

The converted vehicle shall comply with the values for external noise given in EC directive 70/157/EEC.

Specialists such as the manufacturer and suppliers of acoustic material should be contacted for advice on achieving the optimum acoustic protection for bodies.

## 2.5 Electrics/electronics

Incorrect interventions in electronic components and their software may result in these no longer functioning correctly. Due to the networking of electronics, systems that were not modified may be affected.

Malfunctions to the electronics can significantly impair the operational safety of your vehicle.

Work on or modifications to electronic components, in particular work on safety-relevant systems, is only allowed to be performed by a qualified specialist workshop, and by qualified specialist personnel who have the necessary specialist knowledge and tools for performing the necessary work.

Interventions in the vehicle electrical system/vehicle electronics can result in invalidation of the warranty/operating permit.

### 2.5.1 Lighting

#### 2.5.1.1 Vehicle lighting devices

Comply with the registration provisions of the country in question with regard to the complete lighting devices (lighting and turn indicator devices).

Comply with the basic headlight setting (see type plate).

#### 2.5.1.2 Mounting special lights

Comply with the registration provisions of the country in question when installing special lights.

Comply with the following chapters during the conversion:

- 3.1 Body-in-white/bodywork
- 3.1.4 Modifications to the roof
- 2.5.2.4 Retrofitting electrical devices

### 2.5.2 Vehicle electrical system

#### 2.5.2.1 Electrical cables/fuses

The following points shall be complied with if routing modifications are required:

- Avoid routing over sharp edges
- Avoid routing inside excessively narrow cavities and close to moving parts.
- Only lead-free PVC jacketed cables with an insulation limit temperature > 105 °C are allowed to be used.
- Connections shall be made professionally and water-tight.
- The cable shall be dimensioned according to the current drawn and protected by fuses.

#### 2.5.2.2 Additional circuits

Additional circuits shall be safeguarded against the main circuit by means of suitable fuses.

Cables shall be dimensioned according to the load, and protected against pulling off and the effects of impacts and heat.

#### 2.5.2.3 Electrical interface for special vehicles

Basic requirements for using the interface

The special vehicles interface provides selected vehicle electrical system potentials.

These interfaces are only allowed to be used by authorised specialist personnel. Inappropriate interventions can result in damage to the vehicle and breakdowns, and may also invalidate the operating permit.

**Subject to technical modifications.**

The following points shall be adhered to:

- Various VDE guidelines for configuration and fitting of electrical cables and components (cable cross sections, fuses, etc.)
- Only components (cables, housings, contacts) approved by Volkswagen are allowed to be used for adapting to the vehicle electrical system. The part numbers of these components can be found in this description.
- Only the potential names normally used in VW are used in this description.
- It is not known what additional units will be connected, therefore the company fitting out the vehicle with the interface shall ensure a balanced current distribution.
- EMC safety for connections after the interface is the responsibility of the company fitting out the vehicle.
- The cable cross sections of the interfaces shall be maintained throughout the entire circuit, i.e. no cross-section reductions are permitted after the interface.
- Energy supply to the vehicle electrical system is only allowed to be done at potentials expressly provided for this purpose (see description) and shall be fused externally in accordance with VDE.
- For additional information, refer to AMAROK customer service documents.
- All electrical cables connected to the vehicle electrical system shall be reliably and durably protected against overload to battery "+" and the body earth.
- Earth potential: The specified potentials always refer to the vehicle body earth.

### 2.5.2.3.1 Position of the interface

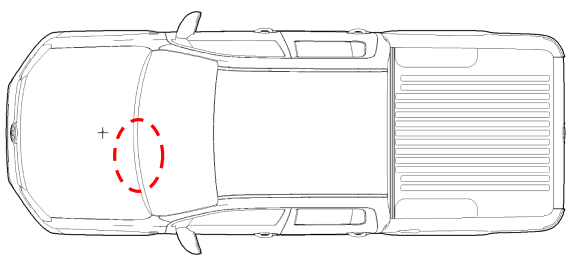


Fig. 1: Electrical interface for special vehicles

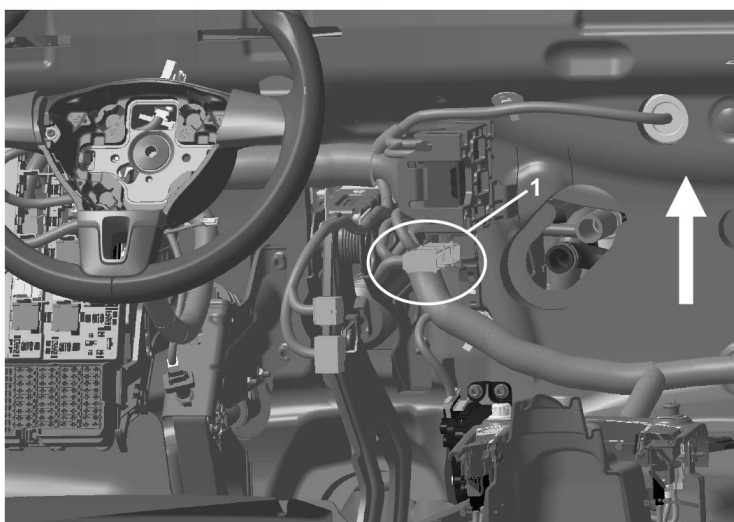


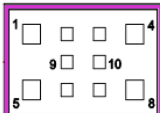
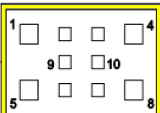
Fig. 2: Position of the electrical interface in the vehicle

\* 1 => UF1 interface for special vehicles

\*\* "Arrow" => Direction of travel

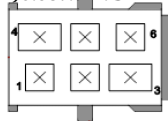


## 2.5.2.3.2 Interface assignment

	Pin	Poten- tial	Colour	Cross- section [mm²]	Max. current draw [A]	Max. current supply [A]	Fusing	Mating plug contact	Use
<b>Plug 1</b> 1J0.937.743.K  	A1	75 A	Black/ white	2.5	12	-	F69/15 A	1J0.937.733.K	Output terminal of relay X-contact
	A2	55	Black/ violet	1.5	SENSE*	16	F53/20 A	1J0.937.733.K	Fog light terminal
	A3	RFL	Black/ blue	1.0	SENSE*	12	F3/10 A	1J0.937.733.K	Reversing light
	A4	56bL	Yellow/ black	1.5	SENSE*	16	F29/10 A	1J0.937.733.K	Dipped beam (left)
	A5	56bR	Yellow/r ed	1.5	SENSE*	16	F55/15 A	1J0.937.733.K	Dipped beam (right)
	A6	86S	Black/ green	0.5	4	-	F7/5 A	1J0.937.733.K	S-contact ignition lock
	A7	58d	Green/ yellow	0.5	6	-	F28/15 A	1J0.937.733.K	Terminal 58d
	A8	56aL	White/ black	1.5	SENSE*	16	F30/10 A	1J0.937.733.K	High beam (left)
	A9	15 A	Black/ blue	1	4	-	F70/5 A	1J0.937.733.K	Terminal 15
	A10	58LA	Green/ black	1	SENSE*	12	F18/5 A	1J0.937.733.K	Side lights
<b>Plug 2</b> 1J0.937.743.C  	A1	56aR	White/ red	1.5	SENSE*	16	F32/10 A	1J0.937.733.C	High beam (right)
	A2	V	White/ violet	0.5	SENSE*	-	-	1J0.937.733.C	Speed signal
	A3	L	Black/ white	1	SENSE*	12	-	1J0.937.733.C	Turn signal left
	A4	50	Red/ black	2.5	SENSE*	-	HSB F2/175 A	1J0.937.733.C	Starter
	A5	n.c.						1J0.937.733.C	n.c.
	A6	R	Black/ green	1	SENSE*	12	-	1J0.937.733.C	Turn signal right
	A7	HB Sig	Brown/ violet	0.35	SENSE*	-	-	1J0.937.733.C	Parking brake
	A8	50b	Red/ black	2.5	SENSE*	-	HSB F2/175 A	1J0.937.733.C	Starter
	A9	n.c.						1J0.937.733.C	n.c.
	A10	71a	Brown/ green	1	SENSE*	-	-	1J0.937.733.C	Horn connection
	A1	54	Black/ green	0,5	SENSE*	-	-	1J0.937.731.G	Brake

**Plug 3**

1J0.937.741.G



Pin	Poten- tial	Colour	Cross- section [mm <sup>2</sup> ]	Max. current draw [A]	Max. current supply [A]	Fusing	Mating plug contact	Use
A2	54	Black/ green	0,5	SENSE*	-	-	1J0.937.731.G	Brake lights
A3	15a	Black/ violet	4	20	-	F71/25 A	1J0.937.731.G	Continued engine running tl 15
A4	30 A	Red/ brown	4	32	-	HSB F3/40 A	1J0.937.731.G	Terminal 30
A5	75 A	Black/ yellow	1	8	-	F72/10 A	1J0.937.731.G	Continued engine running tl 75
A6	n.c.						1J0.937.731.G	-

**2.5.2.3.3 Connector pin assignment and circuit diagrams for interface for special vehicles**

Detailed information about the special interface can be found in the workshop manuals and circuit diagrams (no. 21/1) of Volkswagen AG.

Volkswagen AG workshop manuals can be downloaded from the Internet at **erWin** (Electronic Repair and Workshop Information of Volkswagen AG):

<https://erwin.volkswagen.de/erwin/showHome.do>

\*SENSE = digital, high-impedance import of a signal with a controller; < 20 mA

#### 2.5.2.4 Retrofitting electrical devices

Note the following for retrofitting additional electrical consumers:

- No further consumers are allowed to be connected to occupied fuses
- No additional cables are allowed to be connected to existing cables (e.g. with insulation-piercing terminals).
- Fuse consumers adequately by means of additional fuses.
- All installed electrical devices shall be checked acc. to EU Directive 72/245/EEC and shall bear the "e" mark.

##### Important note:

Please note that in vehicles with tow hitches, the socket for supplying the trailer electrical system influences the control functions of the brake system (ABS/TCS/ESP), and it is exclusively provided for supplying power to the trailer.

When the trailer socket is occupied:

- The offroad button has no effect (no offroad ABS and no hill descent assist possible (ESP vehicles only))
- ESP functions respond more sensitively
- Hill-hold assist responds more robustly

We recommend using the interface for special vehicles to provide electrical power to special vehicle conversions.

##### 2.5.2.4.1 Electromagnetic compatibility

Electromagnetic compatibility refers to the property of an electrical system to remain neutral whilst maintaining full functions in the presence of other systems.

Active systems in the surrounding area are not disrupted by the system, nor is the system itself impaired.

Electrical interference in motor vehicle electrical systems is caused by the individual consumers. At Volkswagen AG, the factory-fitted electronic components have been checked for their electromagnetic compatibility in the vehicle.

When electrical or electronic systems are retrofitted, it is also necessary to check and demonstrate their electromagnetic compatibility.

The devices shall possess a type approval acc. to EU Directive 72/245/EEC in the current version, and shall bear the "e" mark.

### 2.5.2.5 Mobile communication systems

In order to avoid subsequent disruptions to operation, it is necessary to take account of the following points when retrofitting mobile communication systems (e.g. telephone, CB radio):

- The devices shall possess a type approval acc. to EU Directive 72/245/EEC in the current version, and shall bear the "e" mark.
- All devices to be fitted shall possess a type approval acc. to EU Directive 72/245/EEC in the current version, and shall bear the "e" mark.
- The maximum transmission power is not allowed to be exceeded.
- The devices and holders shall be located outside the deployment range of the airbags.
- They shall be permanently installed.
- Mobile devices within the cab are only allowed to be operated via an external aerial installed in such a way as to eliminate reflections.
- The transmitter shall be installed in a separate location from the vehicle electronics.
- The device shall be protected against moisture and severe mechanical shocks; comply with the permitted operating temperature.

### 2.5.2.6 CAN bus

Interventions in the CAN bus and connected components are not permitted.

### 2.5.3 Vehicle battery/protection for the vehicle's battery if the vehicle is not used for some time

If a vehicle is not operated for a long time, its battery gradually loses charge due to the electrical loads (clock, tachograph, cigarette lighter or radio) and can suffer permanent damage.

To avoid this damage, the wiring harness is disconnected in the production facility using a connector and shall be reconnected during transfers or vehicle delivery services.

The connector shall be disconnected again if the vehicles are to be left unused at the body manufacturer for some time.

## 2.6 Engine peripherals/powertrain

In the event of modifications to noise-relevant components such as the engine, exhaust system, tyres, air intake system, etc., noise measurements shall be carried out acc. to EC directives. The permitted values are not allowed to be exceeded.

The national regulations and directives apply.

Components for sound insulation that are installed as standard are not allowed to be modified or removed (see also chap. 2.6).

### 2.6.1 Engine/powertrain components

- No modifications to the engine air intake system are permitted.
- Subsequent solutions regarding engine speed control are not possible.
- Modifications to the cooling system (radiator, radiator grille, air ducts, etc.) are not permitted.
- Keep cooling air intake areas clear.

### 2.6.2 Drive shafts

The correct configuration and implementation of a modified powertrain prevents noise and vibration, and should only be performed by a company which is qualified to build drive shafts.

Only genuine Volkswagen parts should be used.

### 2.6.3 Fuel system

Modifications to the fuel system are not permitted.

Modifications to the body in the area of the fuel tank require the fuel tank to be removed first.

Comply with the workshop manuals of Volkswagen AG.

Note the following when working on the fuel system:

- Vehicles with a petrol engine have their activated charcoal canister located at the rear end of the fuel tank. The position and attachment of the activated charcoal canister are not allowed to be modified.
- Do not attach heat-conducting components or components that restrict the installation space.
- Modifications to the fuel pump, fuel line length and fuel line routing are not permitted. Modifications to these mutually matched components can impair the function of the engine.

Please also comply with chapter 4.1.4 Removal of the filler neck.

### 2.6.4 Exhaust system

Modifications to the exhaust system up to the main silencer and in the area of the components for exhaust post-treatment (diesel particulate filter, catalytic converter, lambda probe, etc.) are not permitted.

Exceptions require the approval of Volkswagen AG before the conversion, and shall be documented in a registration report detailing the modifications and adjustments made.

Please use the online contact form for this:

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

We recommend using genuine VW parts if making modifications to the exhaust system. Country-related regulations and guidelines shall be complied with.

**Important note:**

The lengths and routings of the exhaust system have been configured optimally with regard to their temperature properties. Modifications may result in relatively high to extreme heating of the exhaust system and the surrounding components (drive shafts, tank, floor pan, etc.).

## 2.7 Ancillary drives, engine/gearbox

### 2.7.1 Ancillaries

If ancillaries (e.g. additional air-conditioning compressors, pumps, etc.) are retrofitted, make sure that:

- The function of vehicle components is not impaired
- The unrestricted movement of vehicle components remains assured in any driving situation and
- The installation positions specified by the supplier are complied with.

### 2.7.2 Ancillary drives

An ancillary or cooling compressor can only be operated at the position of the series production air-conditioning compressor (7E0.820.803/803A, see Figs. 2.7.2.2 – 2.7.2.5).

If the standard compressor is used, it is necessary to optimise the fill volume and conduct oil circulation and oil return measurements. Measurements for ensuring the oil circulation in the refrigeration circuit shall be carried out by the body builder at its own cost, and be conducted at the corresponding compressor manufacturers.

If an alternative compressor is fitted, the body builder is responsible for the compressor and air-conditioning system.

Please use Genuine air-conditioning compressors from Volkswagen AG appropriate for the engines.

The following points shall be observed without fail in conversions:

1. The weight of the ancillary is not allowed to exceed the weight of the series production air-conditioning compressor (5.2 kg).
2. The diameter of the drive pulley of the ancillary shall be the same as the original diameter of the drive pulley (100 mm) of the series production air-conditioning compressor DENSO-7SEU17 (7E0.820.803/2H0.820.803) (see Figs. 2.7.2.2 to 2.7.2.5).
3. There shall be adequate space for operating the ancillary.
4. The position of the ancillary drive pulley shall match the original pulley of the compressor.
5. The alignment of the grooves on the poly-V-belt shall be the same as the original.
6. The maximum torque that can be taken off the drive pulley of the cooling compressor is 20 Nm.
7. The specification of the poly-V-belt shall be adhered to: 6PK1555 PES-Standard Cord SILENT GRIP

The characteristics of the standard air-conditioning compressor DENSO 7SEU17 are summarised in the following table:

Crankshaft	Air-conditioning compressor (pulley diameter: 100 mm)		
Rotation speed [rpm]	Rotation speed [rpm]	Power [kW]	Torque [Nm]
700	963	1.56	15.5
800	1101	1.82	15.8
1000	1376	2.36	16.4
1400	1927	3.45	17.1
2100	2890	5.19	17.2
2800	3853	6.76	16.7
3500	4817	8.05	16
4200	5780	9.31	15.4

Tab.: 2.7.2.1: Stationary belt calculation, standard air-conditioning compressor Denso 7SEU17

**Important note:**

In vehicles without air conditioning, it is necessary to recode the engine control unit when an ancillary is retrofitted.



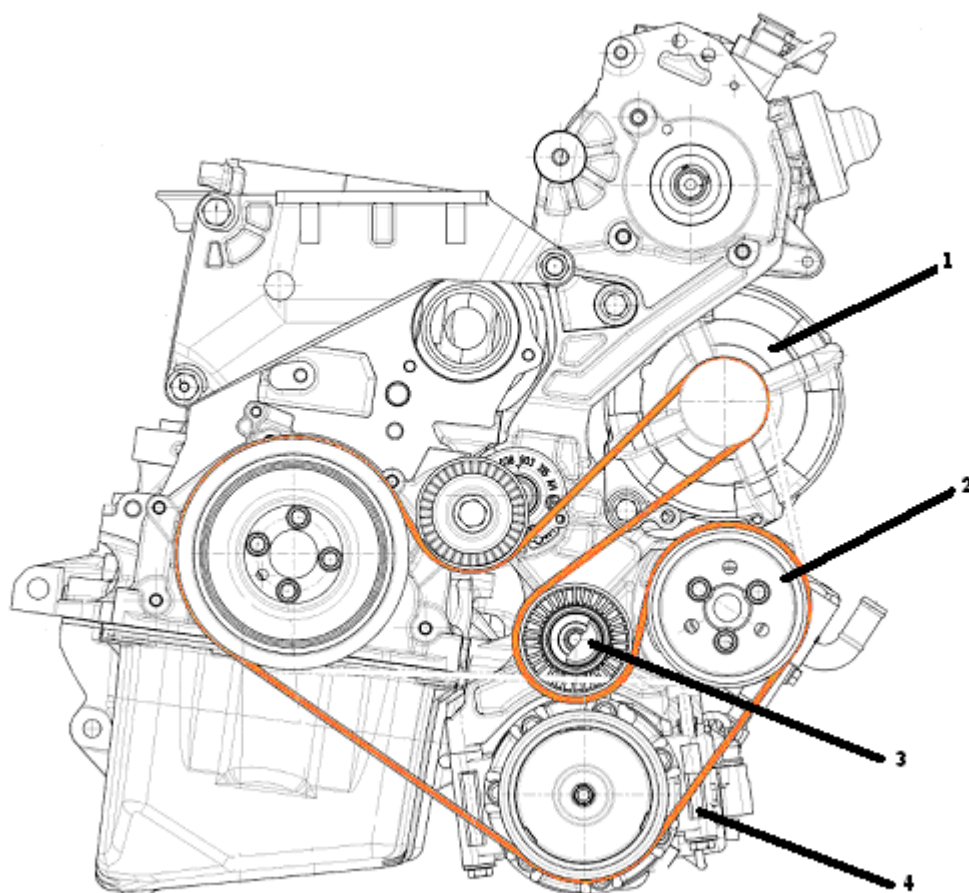


Fig. 2.7.2.1 Poly-V-belt drive

- 1 - Alternator
- 2 - Poly-V-belt pulley (03L.145.255)
- 3 - Reversing pulley (03G.145.276)
- 4 - Air-conditioning compressor assembly (7E0.820.803/803A)

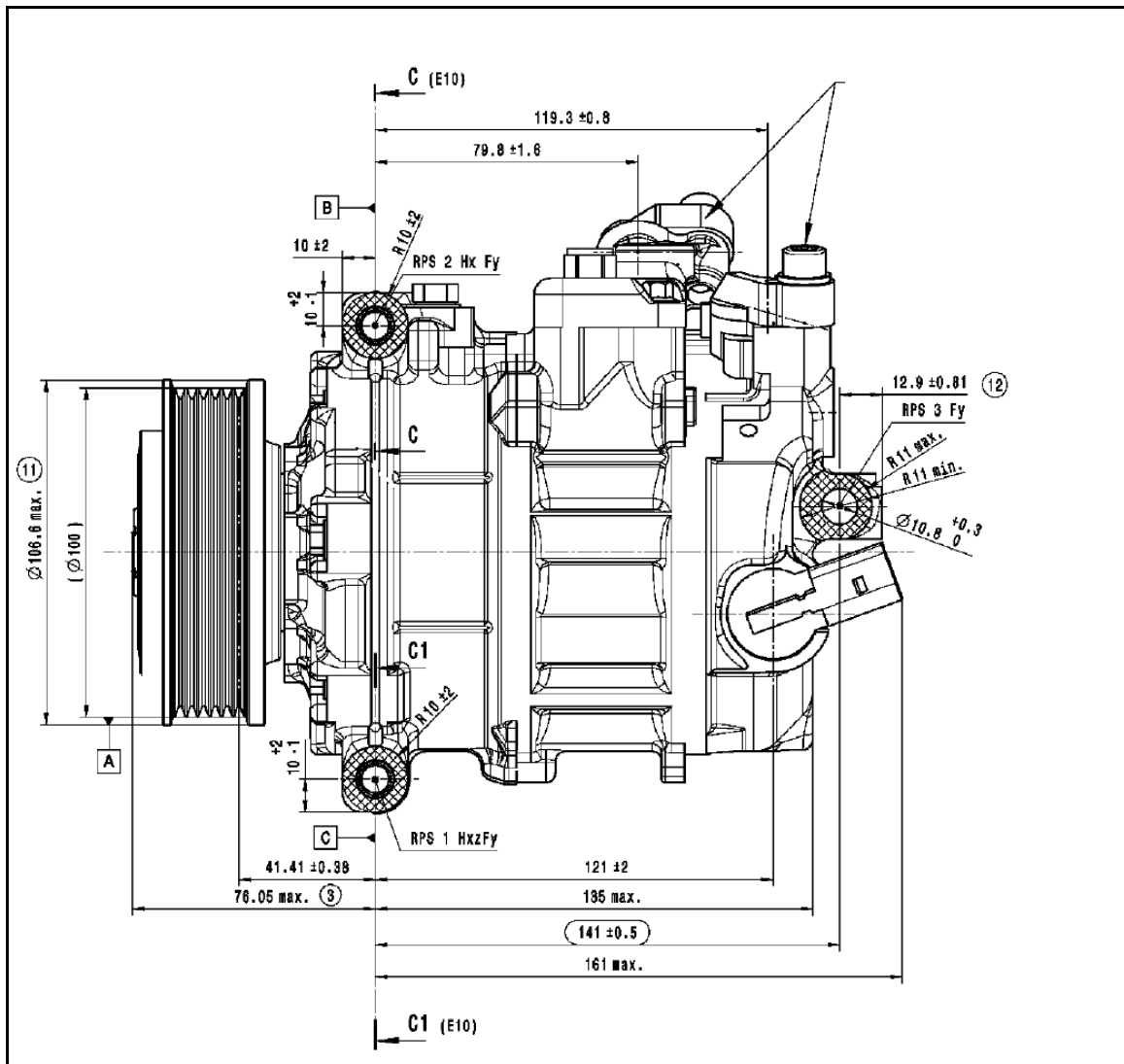


Fig. 2.7.2.2: Dimensions of air-conditioning compressor Denso 7SU17 (7E0.820.803), pulley diameter 100 mm, (side view)

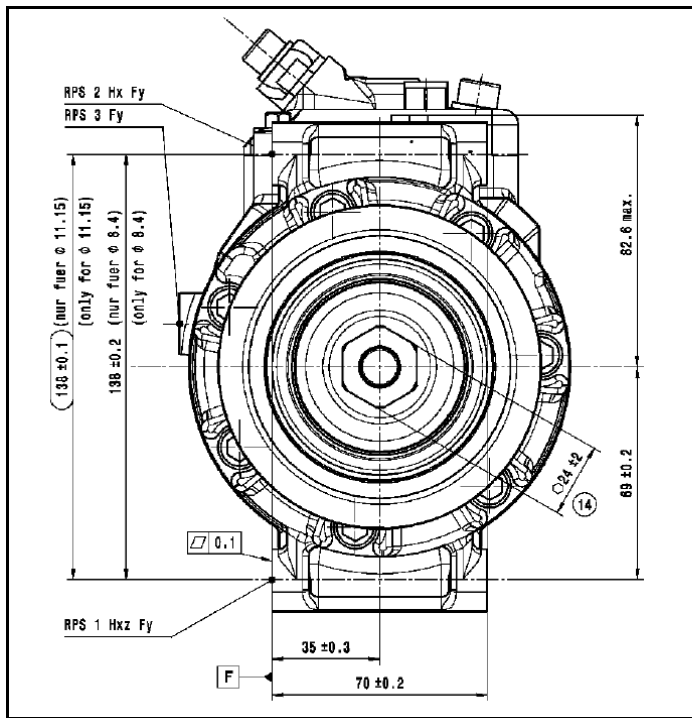


Fig. 2.7.2.3: Dimensions of air-conditioning compressor Denso 7SU17 (7E0.820.803) (front view)

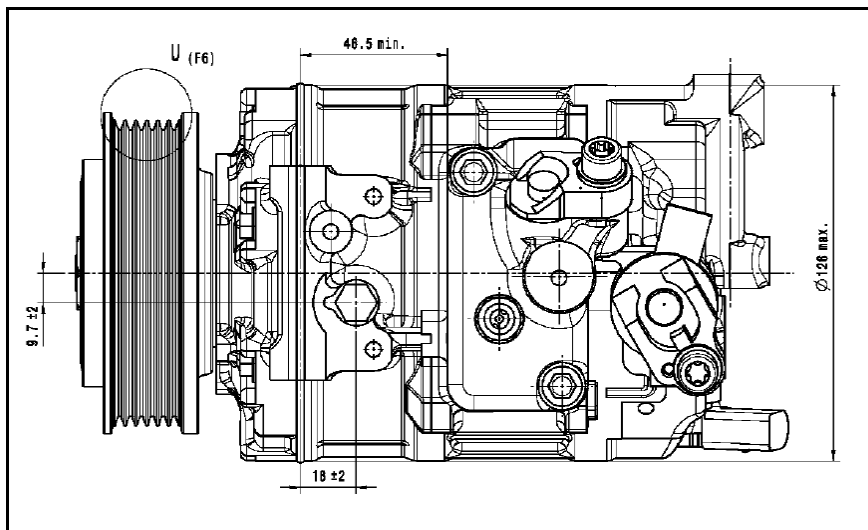


Fig. 2.7.2.4: Dimensions of air-conditioning compressor Denso 7SU17 (7E0.820.803) (plan view)

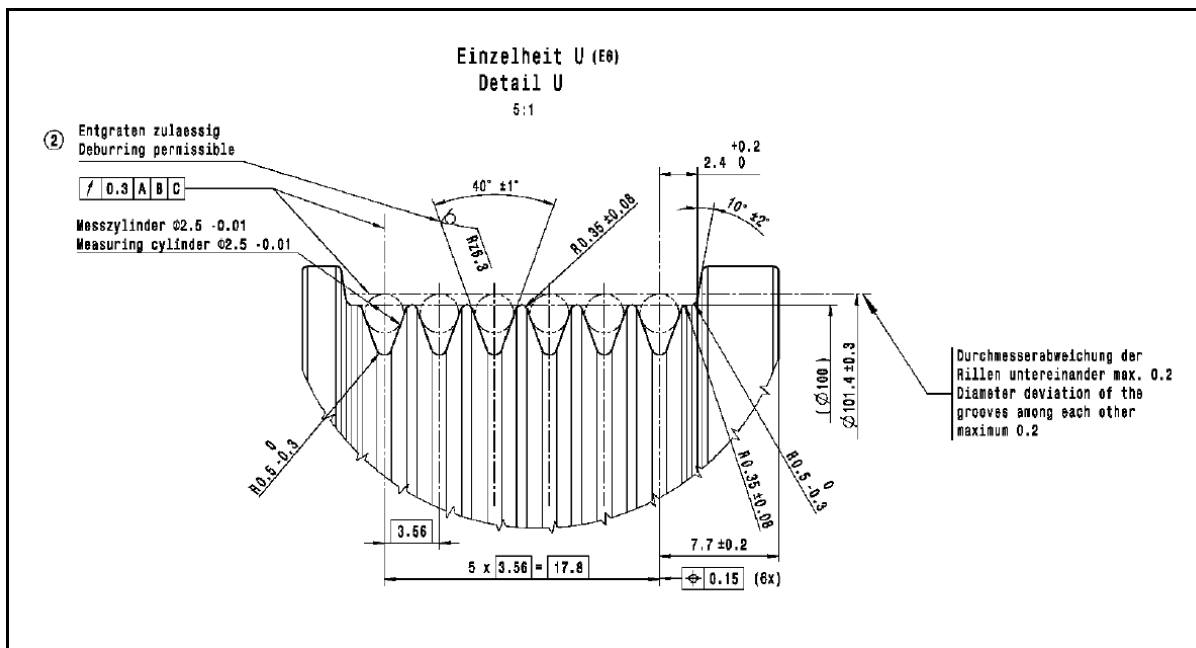


Fig. 2.7.2.5: Drive pulley air-conditioning compressor Denso 7SU17 (7E0.820.803) (detail U)

## 2.8 Add-ons/units

### 2.8.1 Roof rack

Roof loads raise the centre of gravity of the vehicle and lead to a high dynamic axle load shift. Also, there is greater body lean when driving on rough roads and when cornering. The driving characteristics are significantly impaired. For this reason, roof loads should be avoided if at all possible.

Where possible, the fixed points on the roof should be used for attaching racks (see the manufacturer's installation instructions).

The AMAROK DC (Double Cab) has 2 bolt-on points on each side of the roof and the AMAROK SC (Single Cab) has 1 bolt-on point on each side (see Fig. 2.8.1.1).

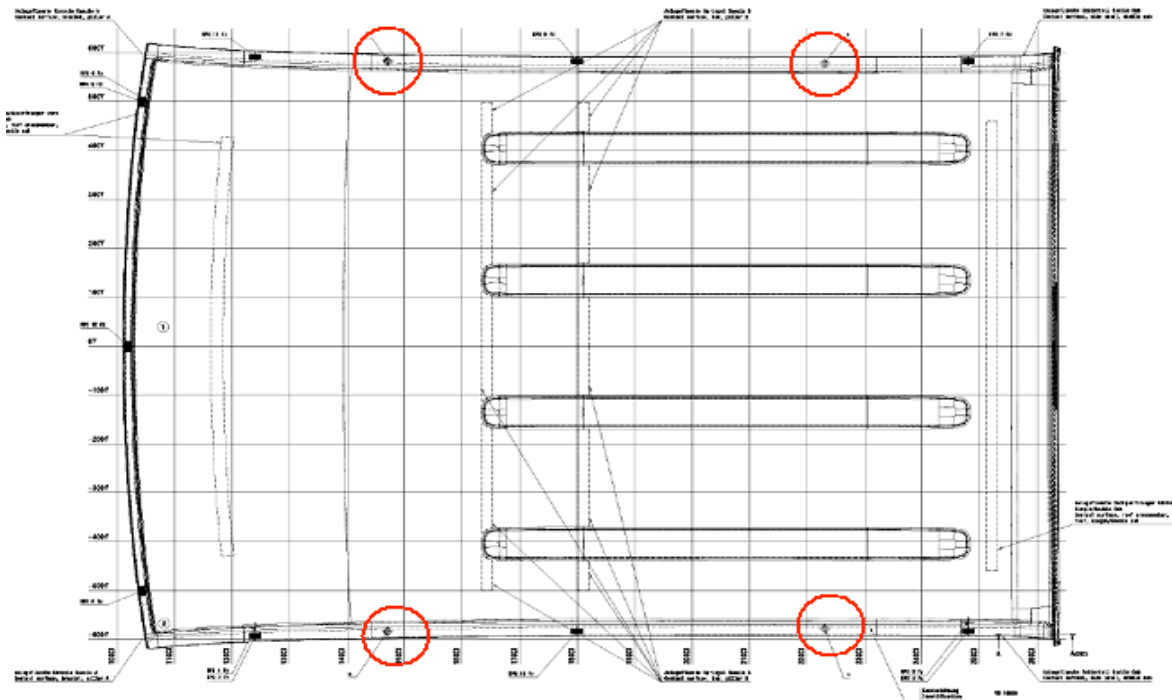


Fig. 2.8.1.1 Roof rack bolt attachment points on AMAROK DC (marked in red)

### 2.8.2 Tow hitch/clearance acc. to DIN 74058

We recommend using hitches approved by Volkswagen as tow hitches.

It is recommended that vehicles be ordered with a factory-fitted tow hitch preparation (1D7), because retrofitting a tow hitch to a vehicle without preparation (1D0) is a much more complicated procedure.

See also chapter 3.3.1 "Accessories".

## 2.9 Lifting the vehicle

- **With lifting platforms**

The vehicle is only allowed to be raised at the hard points provided (see owner's manual).

- **Using a jack**

Refer to the owner's manual (for all chassis without standard bodies) for the procedure and hard points for the jack on all vehicle variants.

The jack shall be selected by the body builder according to the weight of the body. The hard points for lifting platforms on the ladder frame can be used (with large pads) and shall remain accessible even after the conversion. Alternative hard points should be created if this is not possible.

## 3 Modifications to closed bodies

### 3.1 Body-in-white/bodywork

Comply with the following instructions with regard to mounting bodies and making conversions on the vehicle:

- Changes to the body are not allowed to impair the function and strength of units and operating devices of the vehicle, neither may they reduce the strength of weight-bearing parts.
- During vehicle conversions and installation of bodies, it is not permitted to make any modifications which impair the function and freedom of movement of the suspension components (e.g. for maintenance and inspection work) or the accessibility to the same.
- Interventions in the cross-member structure from the front end to the rear of the B-pillar are not allowed.
- Modifications in the roof area and on the rear gate are not allowed.
- The clearance for the fuel filler neck as well as for the tank and fuel lines shall be maintained.
- Avoid corners with sharp edges.
- Neither drilling nor welding is permitted on the A and B-pillars.
- If cutting is performed on the C and D-pillars (rear gate), including the corresponding roof bows, then rigidity shall be restored by means of additional components.
- The permitted axle loads are not allowed to be exceeded.
- Holes in the frame longitudinal member are the result of the production process and are not suitable for attaching additions, bodies, installations and conversions; otherwise, the frame may be damaged.
- The standard tank cap is not allowed to be removed or covered with a part which creates a block.

Please also refer to chapter 4.1 "Cargo box removal".

#### 3.1.1 Side wall and rear wall cut-outs

The body and underbody form a self-supporting unit. Weight-bearing parts of this self-supporting unit are not allowed to be removed without replacement.

Windows, roof hatches, air inlets and outlets shall be surrounded by a stable frame. This frame shall be connected to other body elements by means of a force-locking connection.

For further information about body assembly work, refer to the Internet under **erWin** (Electronic Repair and Workshop Information of Volkswagen AG):

<https://erwin.volkswagen.de/erwin/showHome.do>

#### 3.1.2 Installation of windows

For detailed instructions about the installation and removal of windows, refer to the workshop manuals of Volkswagen AG on the Internet under **erWin** (Electronic Repair and Workshop Information of Volkswagen AG):

<https://erwin.volkswagen.de/erwin/showHome.do>

### 3.1.3 Roof cut-outs

The roof cut-out shall be provided with an all-round frame having a force-locking connection with the adjacent, weight-bearing parts (bows and roof frame).

For further information about body assembly work, refer to the Internet under **erWin** (Electronic Repair and Workshop Information of Volkswagen AG):

<https://erwin.volkswagen.de/erwin/showHome.do>

### 3.1.4 Modifications to the roof

The following points shall be observed if modifications are made to the roof structure:

- The all-round concept shall be retained, and adequate replacement rigidity shall be guaranteed.
- Impairments to the function of the rain/light sensor shall be avoided.
- The vehicle constraints (strength, overall vehicle dimensions, registration, etc.) shall be considered with regard to attachments on the roof panel. (This does not apply to area illumination and spotlights.)
- The replacement rigidity of the new roof structure shall correspond to that of the standard roof.
- Following all conversion and installation work on the vehicle, surface and corrosion protection shall be applied to the affected points.

For further information about body assembly work, refer to the Internet under **erWin** (Electronic Repair and Workshop Information of Volkswagen AG):

<https://erwin.volkswagen.de/erwin/showHome.do>



## 3.2 Interior

The following points shall be observed without fail for conversions:

- The driver and front passenger airbag units, the airbags and belt tensioners are pyrotechnical objects.
- Their handling, transport and storage are subject to legislation on potentially explosive substances, and the responsible public authority or government agency shall therefore be notified. Purchase, transport, storage, installation and removal as well as disposal are only allowed to be performed by trained personnel in accordance with the corresponding safety regulations.
- Modifications in the cockpit area and above the shoulder line shall be conducted in accordance with the criteria of the head impact tests acc. to ECE-R21 or 74/60/EEC as amended by 2000/4/EC. This applies in particular to the deployment areas of airbags (wood décor, additional installations, mobile phone holders, bottle holders, etc.).
- Painting or surface treatment of the instrument panel, steering wheel impact absorber and the tear seams of the airbags is not permitted.
- The permitted centre of gravity position and axle loads are not allowed to be exceeded.
- The interior fitting-out shall be configured with soft edges and surfaces.
- Installations shall be manufactured from flame-retardant materials, and be firmly installed.
- Unhindered access to the seats shall be guaranteed.
- No projecting parts, corners or edges that could cause injuries are allowed to be located in the area of the seats.

### 3.2.1 Safety equipment

In case of interventions by the body builder in the structure of the vehicle, such as

- modifications to the seats and consequently altered kinematics of the occupants in case of a crash
- modifications to the front body
- installations of parts in the vicinity of the exit openings and the deployment range of the airbags
- installation of third-party seats
- modifications to the doors

the safe function of the front airbag, side airbag and belt tensioners is no longer guaranteed. This could result in personal injuries.

No vehicle components that give rise to vibration are allowed to be attached in the vicinity of the airbag control unit or the sensor installation locations.

Modifications to the floor structure in the area of the airbag control unit or the satellite sensors are not allowed.

## 3.3 Add-ons

### 3.3.1 Accessories

#### 3.3.1.1 Tow hitch/tow hitch preparation (EU variants)

We recommend using hitches approved by Volkswagen. It is recommended that vehicles with a factory-fitted tow hitch preparation (ID7) should be ordered, because retrofitting a tow hitch to a vehicle without preparation (ID0) is a much more complicated procedure. The following trailer tow hitches can be retrofitted for both variants (with/without rear bumper ID1) via VW Accessories:

#### 3.3.1.2 Vehicles without rear bumper (without step)

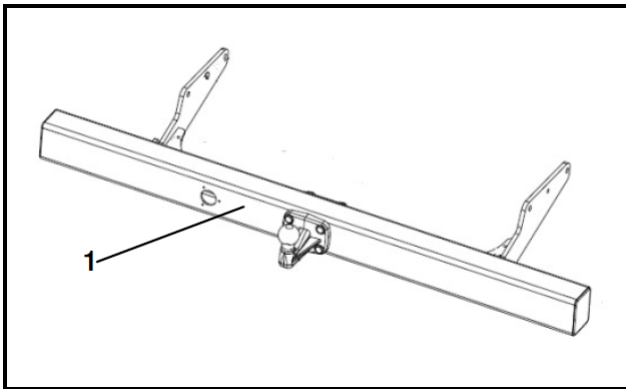


Fig. 3.3.1.2.1: Tow hitch with ball head

##### a) With tow hitch preparation

Items required:

- 13-pin electrical kit for vehicles with preparation, part no.: 2H5.055.201
- Tow hitch with ball head (1), part no.: 2H5.092.101

##### b) Without tow hitch preparation

Items required:

- 13-pin electrical kit for vehicles without preparation (incl. control unit for ESP trailer stabilisation) part no.: 2H5.055.204
- Tow hitch with ball head (1), part no.: 2H5.092.101

#### 3.3.1.3 Vehicles with rear bumper (with rear step)

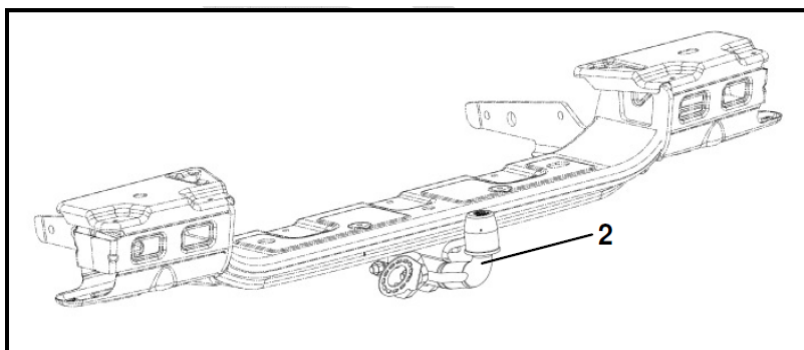


Fig. 3.3.1.3.1: Ball head

## a) With tow hitch preparation

Items required:

- 13-pin electrical kit for vehicles with preparation, part no.: 2H5.055.201
- Ball head (2) in dim. 50 mm, part no.: 2H5.092.155

The max. trailer load is 750 kg unbraked and 2800 kg braked (depending on the engine) with a 12% hill climbing ability.

The permitted drawbar load of the AMAROK is: 120 kg

The max. permitted gross combination weight and max. permitted trailer load specified in the documents are not allowed to be exceeded.

#### For retrofitting a trailer tow hitch

- The regulations of the country in question shall be adhered to
- The necessary clearance for the trailer tow hitch shall be guaranteed (DIN 74058)
- The vehicle shall be presented to a motor vehicle test centre with responsibility for this matter.

#### Important:

1. There are attachment points in the vehicle's chassis rails, or if the tow hitch preparation and step have been ordered, then they are below the step.
2. Operation with the factory-fitted hitch may be excluded at a very low ride height or if there is a long body overhang, as well as after an extension of the overhang.

#### Clearance acc. to DIN 74058

Unspecified details shall be selected in a reasonable manner.

#### Test

The test of dimensions and angles shall be undertaken with suitable length and/or angle measuring instruments.

#### Note:

The trailer tow hitches listed here are only valid for EU countries. There are different variants for countries outside the EU.

#### 3.3.1.4 Other accessories

Additional extensive accessories for the Amarok can be obtained from Volkswagen Accessories.

For more information, refer to:

<http://www.volkswagen-zubehoer.de>

## 4 Modifications to open bodies

### 4.1 Removal of the cargo box

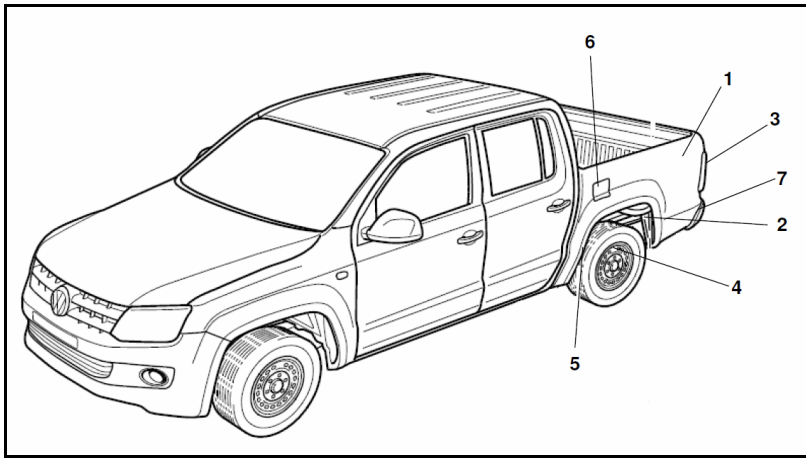


Fig. 4: Cargo box removal

The following work is required in order to remove the cargo box (1):

- Removal of the tail lights (3)
- Disconnecting of the cable routing for the number plate light and the earth cable
- Releasing the parking brake cable from underneath (4)
- Removing the left wheel housing liner (5)
- Unscrewing the filler neck (6)
- Removing the electrical cables from the load bed
- Unscrewing the bolts (2) on the left and right
- Removing the complete rear bumper (7) or at least the cover and the plastic trim (only applies to vehicles with rear bumpers)
- Lifting the cargo box, e.g. with a crane (attaching the cargo box at the 4 standard load securing points).

To do this, the vehicle should be lifted on a lifting platform so its suspension is fully extended.

To avoid damage to the metal panels during removal, carefully pull the cargo box towards the rear out of the overlapping area with the driver's cab prior to lifting.

Important notes:

- The spare wheel is secured to the cargo box using a support bracket. A replacement attachment of the spare wheel shall be provided if the cargo box is dispensed with/removed.
- A suitable holder shall be created for the filler neck of the fuel tank (a new type approval may be required).
- Provide suitable tail lights with the same performance figures as the standard ones.

Furthermore, comply with the data for special bodies listed in chapter 3.2.

#### 4.1.1 Removal of tail lights

The following work is required to remove the tail light:

- Switch off the ignition and all electrical consumers, and pull out the ignition key.
- Open the tailgate.
- Unscrew and remove the fastening screws -arrows- from the tail light (Fig. 1).
- Guide the tail light sideways out of the ball head in the direction of the arrow. (Fig. 2)
- Disconnect the plug connection -arrow- at the tail light. (Fig. 3)

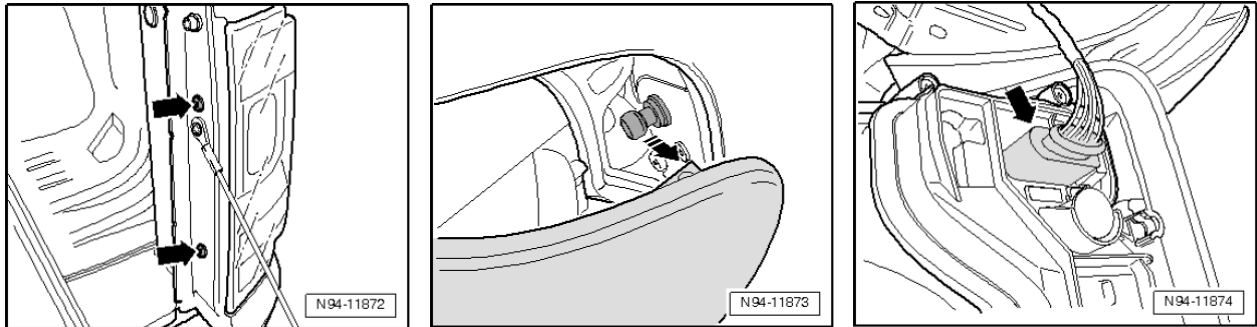


Fig. 4.1.1.1: Removal of the tail light (Figs. 1, 2 and 3)

#### 4.1.2 Releasing the parking brake cable at the rear

The following steps are required to release the parking brake cable:

- Raise the vehicle (see also chap. 2.9)
- Remove rear wheels.
- Following this, pull the parking brake cable (A) out of the holders on the body (bottom arrow).

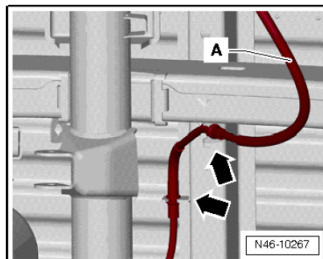


Fig. 4.1.2.1: Releasing the parking brake cable

#### 4.1.3 Removal of the wheel housing liner

The following work shall be performed in order to remove the wheel housing liner:

- Remove the wheel.
- Unscrew and remove the bolts (3).
- Unscrew the hexagon nut (2).
- Pull the rear wheel housing liner (1) out of the wheel housing.

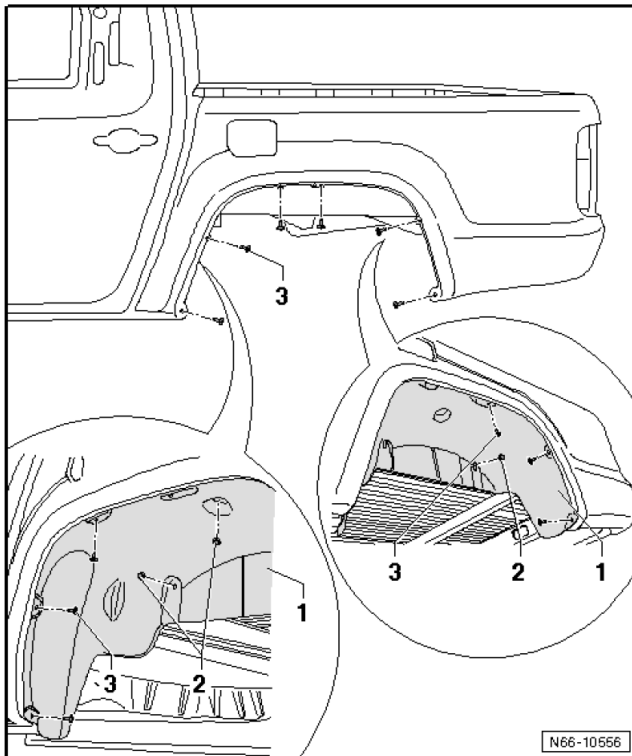


Fig. 4.1.3.1: Removal of the wheel housing liner

#### 4.1.4 Removal of the filler neck

Important safety note:

Work on the filler neck is only allowed to be performed when the tank is empty or has been removed!

The following work shall be performed in order to remove the filler neck:

Unscrew the bolt (2) for the filler neck (1) on the underbody.

- Open the tank flap and clean the inside of the tank flap unit thoroughly.
- Unscrew the cover.

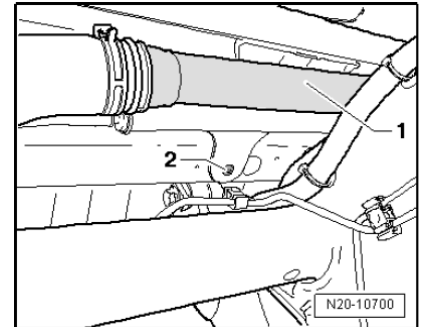


Fig. 4.1.4.1: Unscrew the filler neck on the ground

- Unscrew and remove the bolt (2) on the tank flap unit.
- Unclip the tank flap unit and remove it completely.

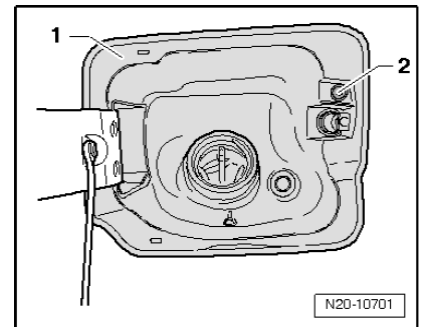


Fig. 4.1.4.2: Unfastening the tank flap unit

- Unscrew and remove nuts (2) from the filler neck (1) on the top of the cut-out for the tank flap unit.
- Remove the filler neck (1) from below; this requires turning the filler neck.
- In vehicles with central locking, the plug for the filler flap element shall be disconnected.

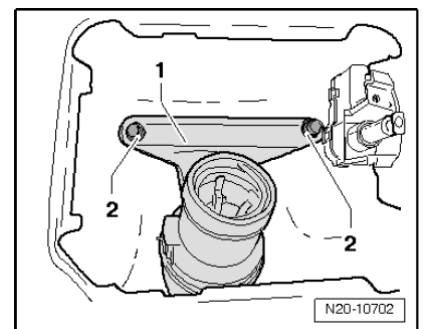


Fig. 4.1.4.3: Unfastening the filler neck

Please also comply with chap. 4.3 "Standard attachment points for special bodies".

#### 4.1.5 Unscrewing securing bolts

The following work shall be performed:

- Unscrew and remove the bolts (2) on the left and right.

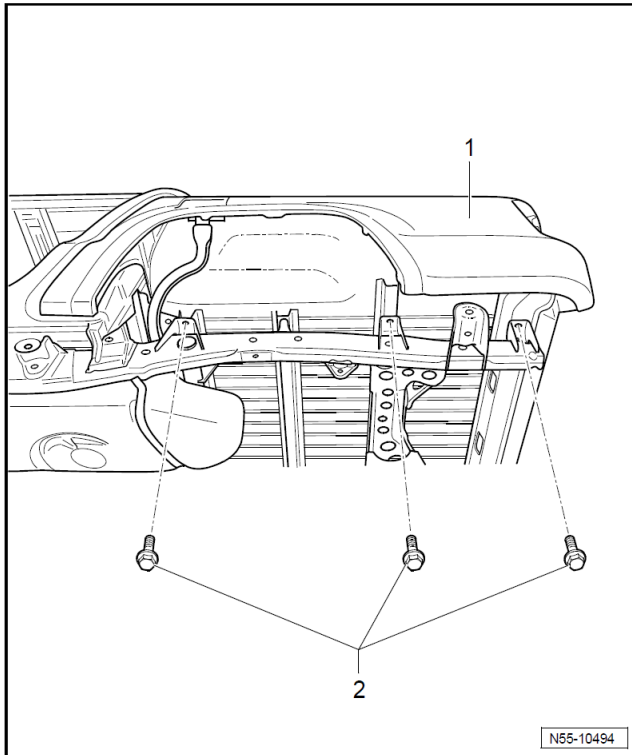


Fig. 4.4.5.1: Unscrewing securing bolts

#### 4.1.6 Recommendations for attaching the filler neck

Important safety note:

Work on the filler neck is only allowed to be performed when the tank is empty or has been removed!

After the cargo box has been removed it is necessary to ensure that the filler neck of the fuel tank has a suitable mounting. The attachment shall meet the requirements of Directive ECE R34.

This shall be configured in accordance with the following points:

- No damage to the entire system of the "fuel filler pipe with filler neck and cover"
- No leakage from the entire system of "fuel filler pipe with filler neck, cover and ventilation line"
- No reduction in the "pull-out force of the hose/clip connection"

In addition, and depending on the fuel, the following requirements and recommendations shall be complied with routing the filler neck for diesel and petrol "filler pipes".



#### 4.1.6.2 Diesel filler pipe

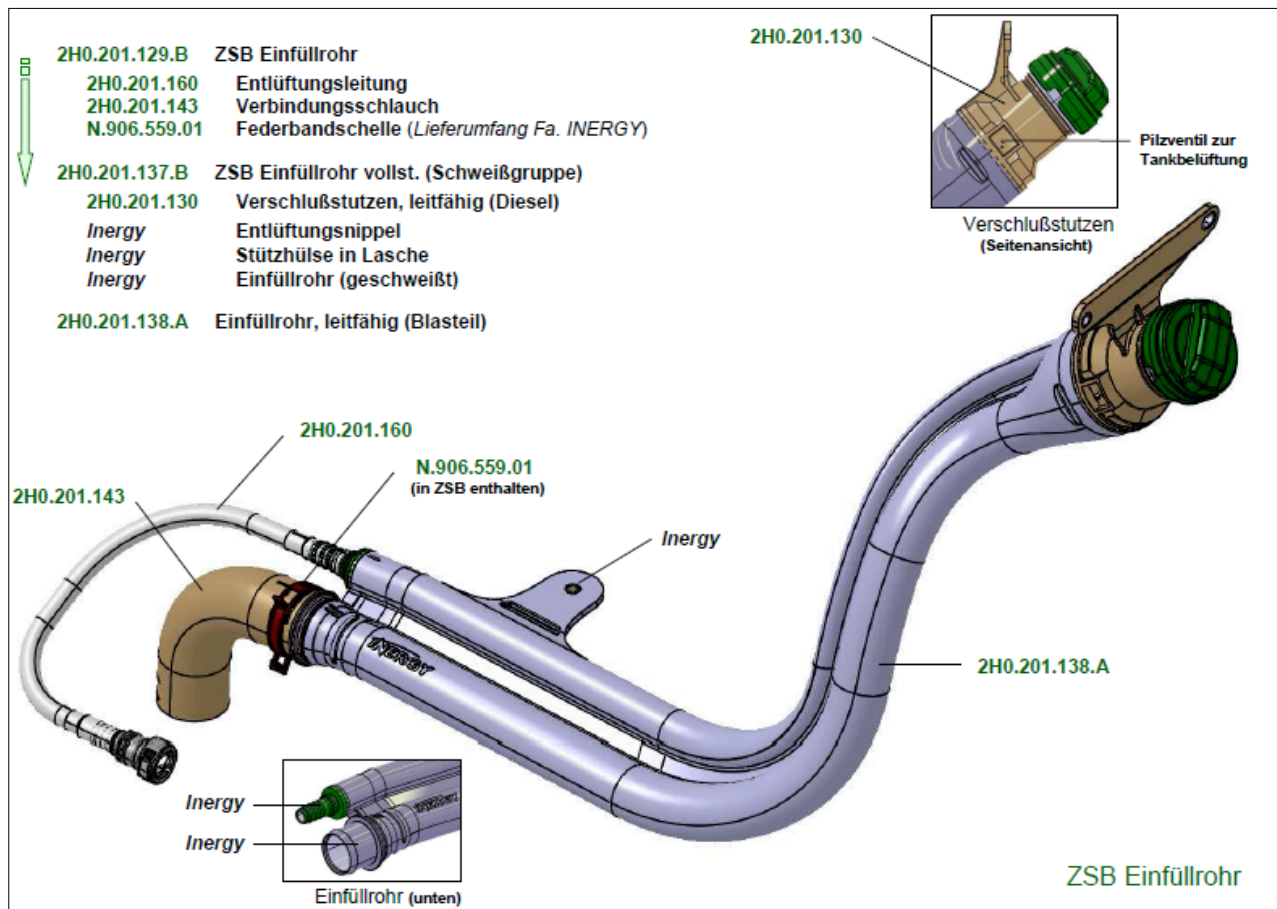


Fig. 1: Filler pipe assembly (ASSY)

1. Ventilation valve
2. Fastening lug for closure neck
3. Closure cap (tank cap):
  - Opening pressure at 0.025 to 0.045 bar negative pressure (rel.)
  - Opening pressure at 0.150 to 0.250 bar positive pressure (rel.)

Requirements on the Amarok diesel filler pipe:

- An earthing path from the filler pipe via the closure neck and fastening lug to the vehicle body work (screw connection) shall be guaranteed.
- A ventilation function for the fuel tank via the filler pipe shall be provided.
- The connecting hose and vent line are not allowed to be kinked.
- The filler pipe, connecting hose and vent line are not allowed to be in contact with adjacent components, in order to prevent any chafing or leaks.

Recommendations for the conversion:

- The positive pressure and negative pressure protection functions integrated in the closure cap (tank cap) shall be retained if at all possible.
- The filler pipe shall be fixed to the ladder frame if possible, or else to components attached to that.

#### 4.1.6.2 Petrol filler pipe

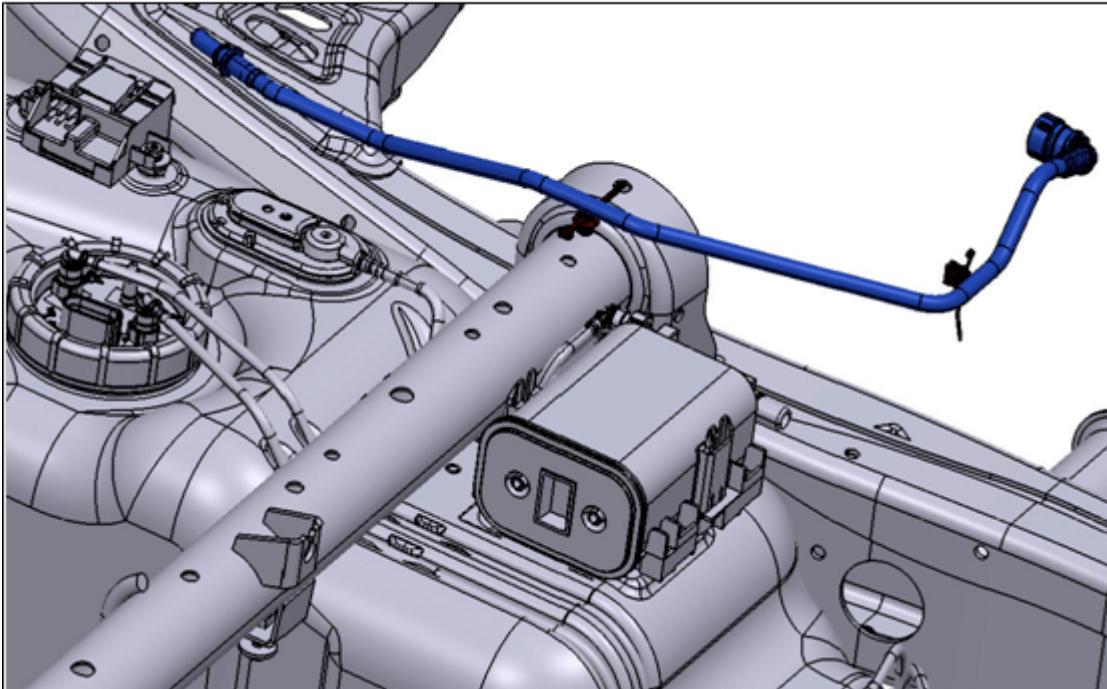


Fig. 2: Petrol filler pipe

1. Ventilation line
2. Activated charcoal canister

Requirements on the Amarok petrol filler pipe:

- An earthing path from the filler pipe via the closure neck and fastening lug to the vehicle body work (screw connection) shall be guaranteed (same as diesel).
- The positive pressure protection function for the fuel tank shall be ensured in the filler pipe (Amarok petrol standard solution: protection valve in the tank cap).
- The connecting hose and vent line are not allowed to be kinked.
- The filler pipe, connecting hose and vent line are not allowed to be in contact with adjacent components, in order to prevent any chafing or leaks.
- The air intake for the activated charcoal canister (ACC) shall be routed in an area where no water can be sucked in even when driving through water.  
(Amarok petrol standard solution: ACC ventilation line for air intake routed in the area of the fuel filler pipe in the wheel housing).

Recommendations for the conversion:

- The positive pressure and negative pressure protection functions integrated in the closure cap (tank cap) shall be retained if at all possible. Working points same as diesel.
- The filler pipe shall be fixed to the ladder frame if possible, or else to components attached to that.

#### 4.1.7 Weight of cargo box

Component	Amarok DC	Amarok SC
Cargo box*	121 kg	151 kg

\* incl. the add-on parts for the tailgate, hinge, tail light combination unit, wheel housing liner and tailgate lock

# 4.2 Chassis frame

## 4.2.1 Ladder frame AMAROK DC (Double Cab)

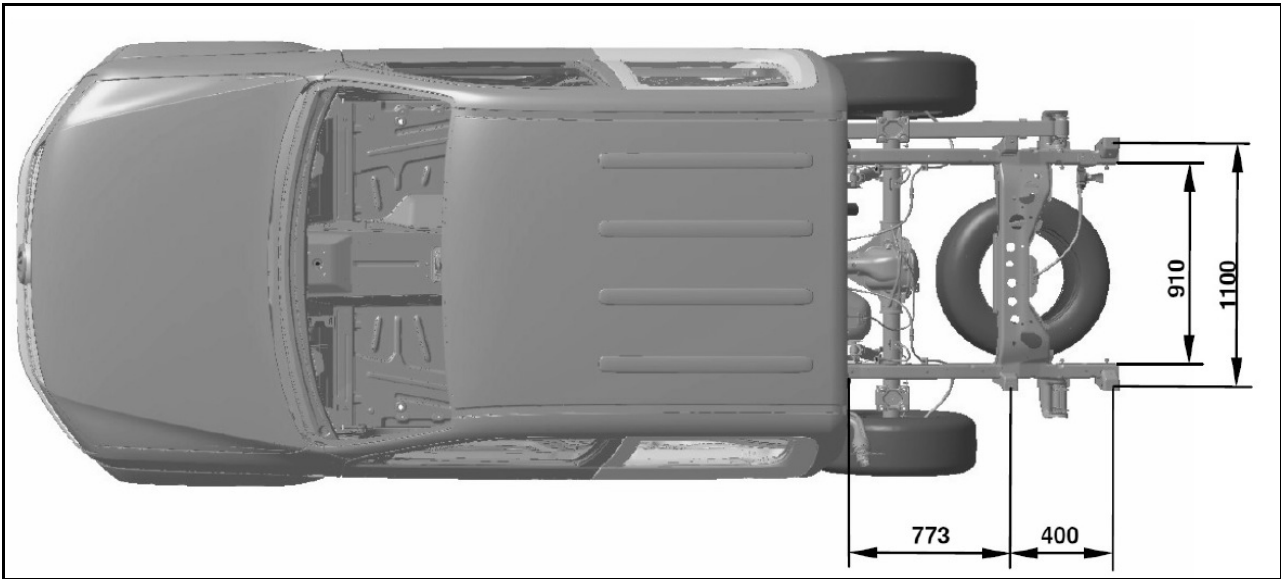


Fig. 4.2.1.1: Plan view of AMAROK DC without cargo box

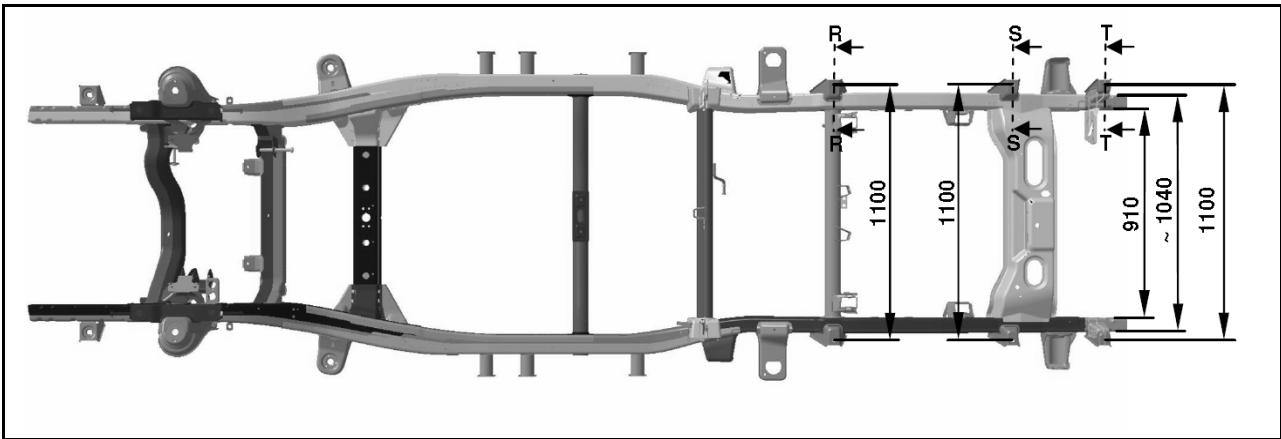


Fig. 4.2.1.2: Plan view of ladder frame AMAROK DC

4.2.2 Ladder frame AMAROK SC (Single Cab)

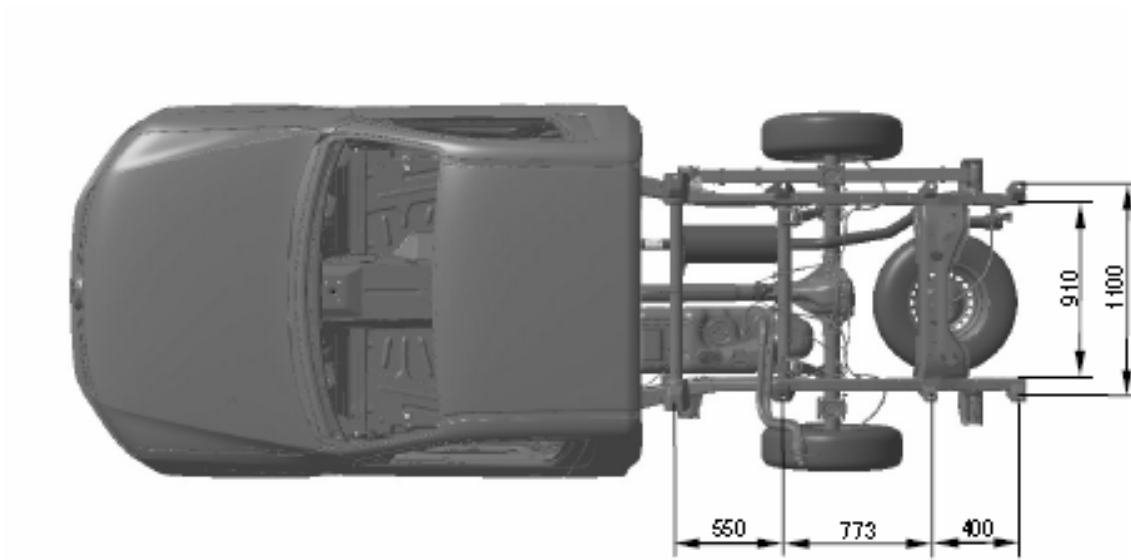


Fig. 4.2.2.1: Plan view of AMAROK SC (Single Cab) without cargo box

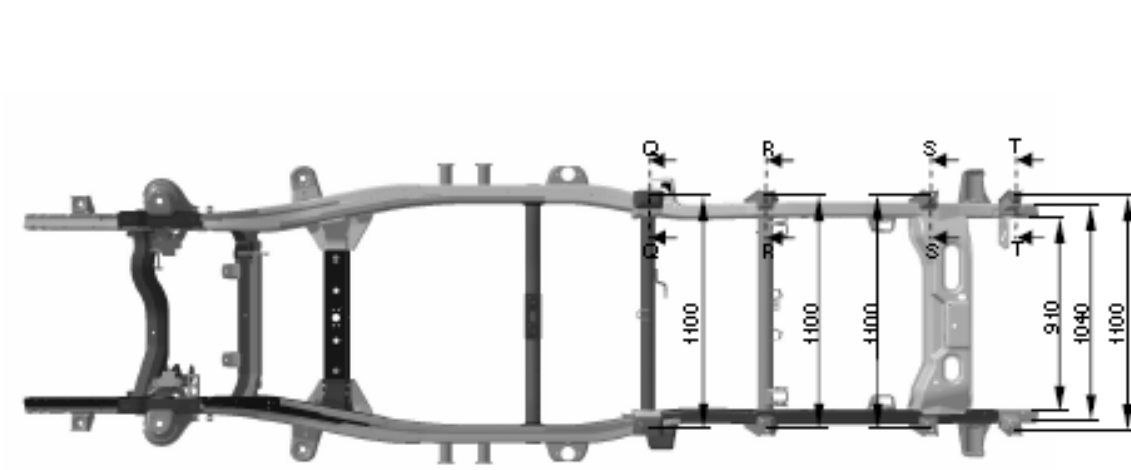


Fig. 4.2.2.2: Plan view of ladder frame AMAROK SC

### 4.2.3 Sections, AMAROK-SC (Single Cab)/AMAROK DC (Double Cab)

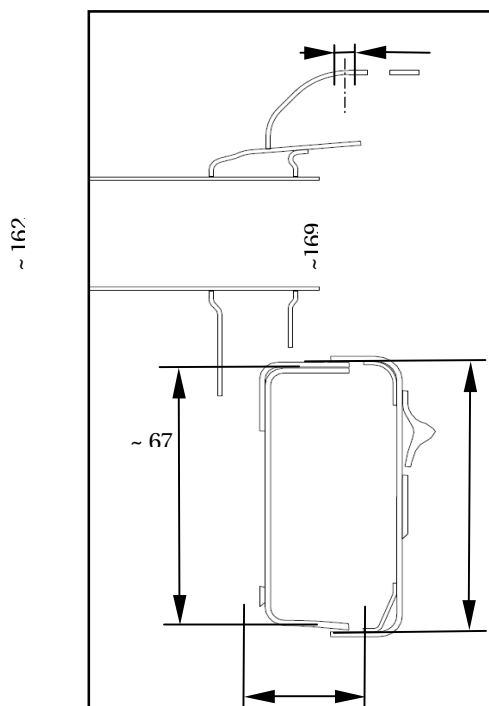


Fig. 4.2.2.1: Section Q-Q (Amarok SC)

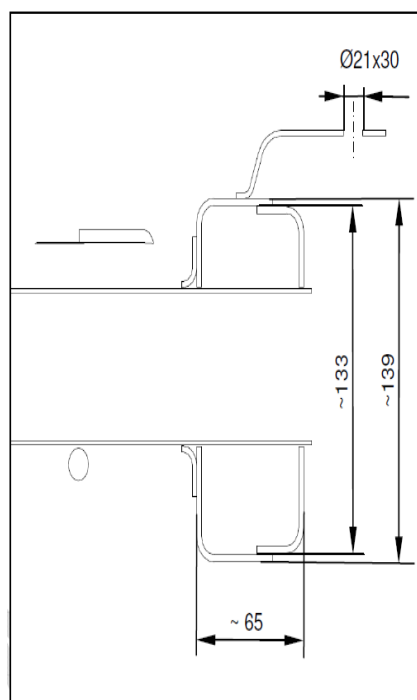


Fig. 4.2.2.2 Section R-R (Amarok SC/DC)

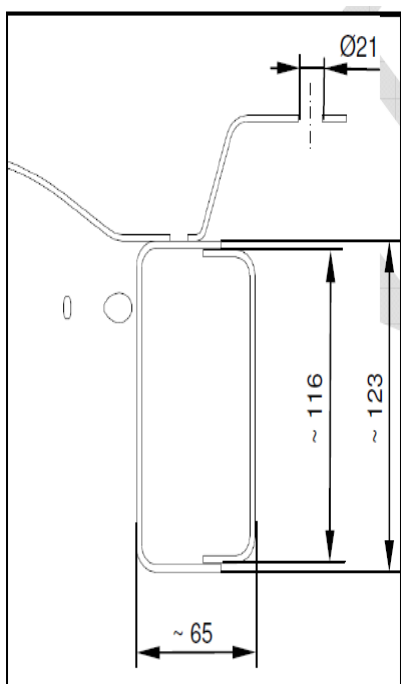


Fig. 4.2.2.3: Section S-S (Amarok SC/DC)

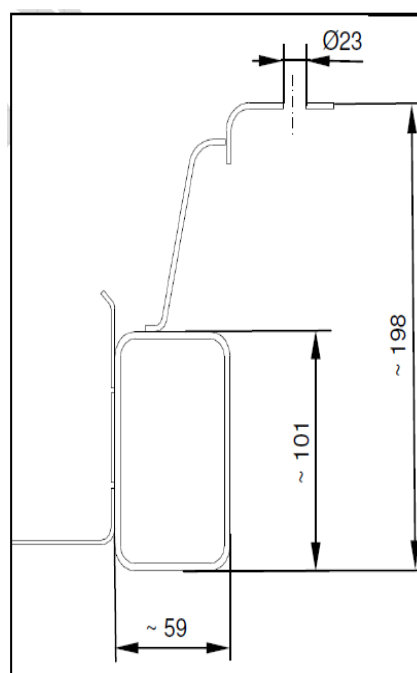


Fig. 4.2.2.4: Section T-T (Amarok SC/DC)

For further connection dimensions, please refer to the build dimension drawings of Amarok Double Cab and Single Cab which are available for download from chapter 6.1 Technical data.

## 4.3 Standard attachment points for special bodies

Special bodies are possible after the cargo box has been removed (see chap. 4.1).

Comply with the following points when mounting special bodies:

- Use standard attachment points.
- If the cargo box is replaced by other bodies, the new body shall have a max. static torsional rigidity of  $C_T = 1400 \text{ Nm/}^\circ$  (see Fig. 4.3.3).
- The wheel clearance on the rear axle shall be maintained.
- A suitable holder shall be created for the filler neck of the fuel tank (a new type approval may be required).
- Suitable tail lights with the same performance data as the standard ones shall be used.

The frame is a **hollow section construction consisting of pressed sheet metal parts**.

Brackets are welded onto the longitudinal members for attachment of the cargo box. Holes or slots with the dimension **21 mm, 23 mm or 21x30 mm** are provided for attachment of the cargo box (Fig. 4.3.1/4.3.2). For more information, refer to chap. 4.2 Chassis frame.

The attachment between the body and vehicle frame shall always use all brackets.

The screw connection onto the brackets shall be force-locking.

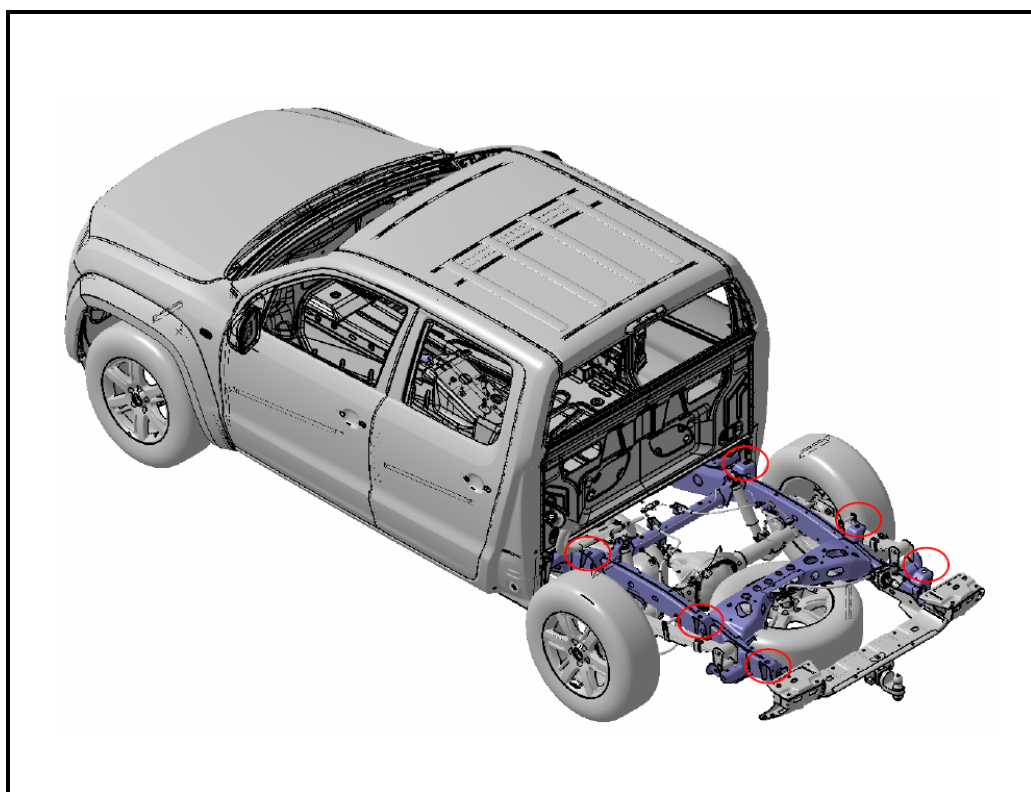


Fig. 4.3.1: Amarok Double Cab – mounting brackets for cargo box (see red mark!)

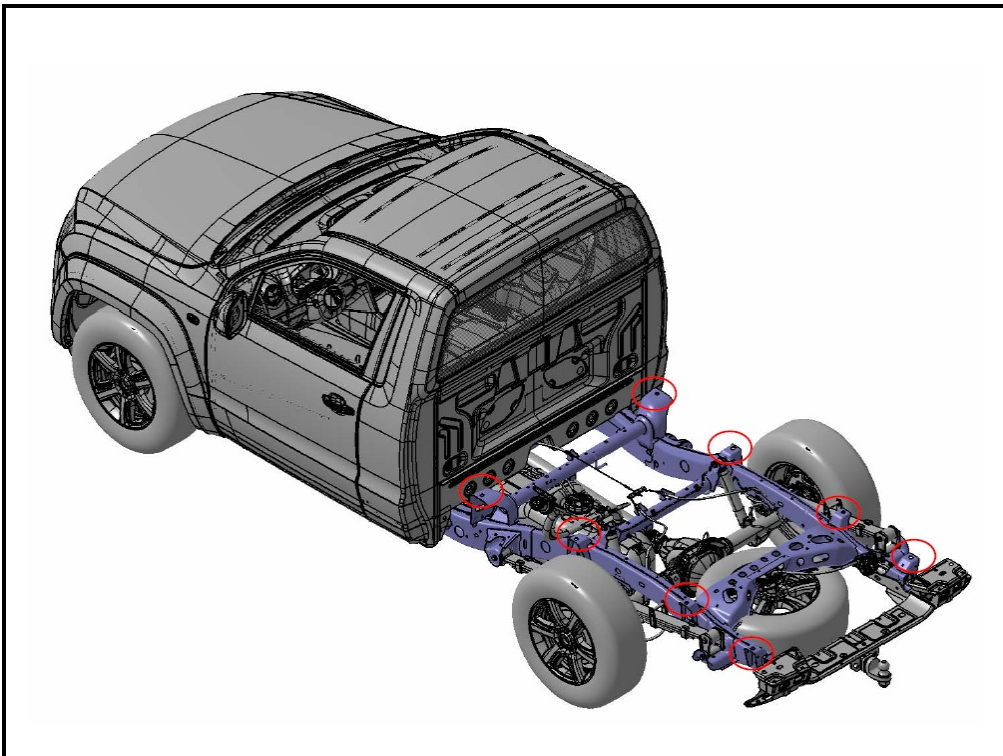


Fig. 4.3.2: Amarok Single Cab – mounting brackets for cargo box (see red mark!)

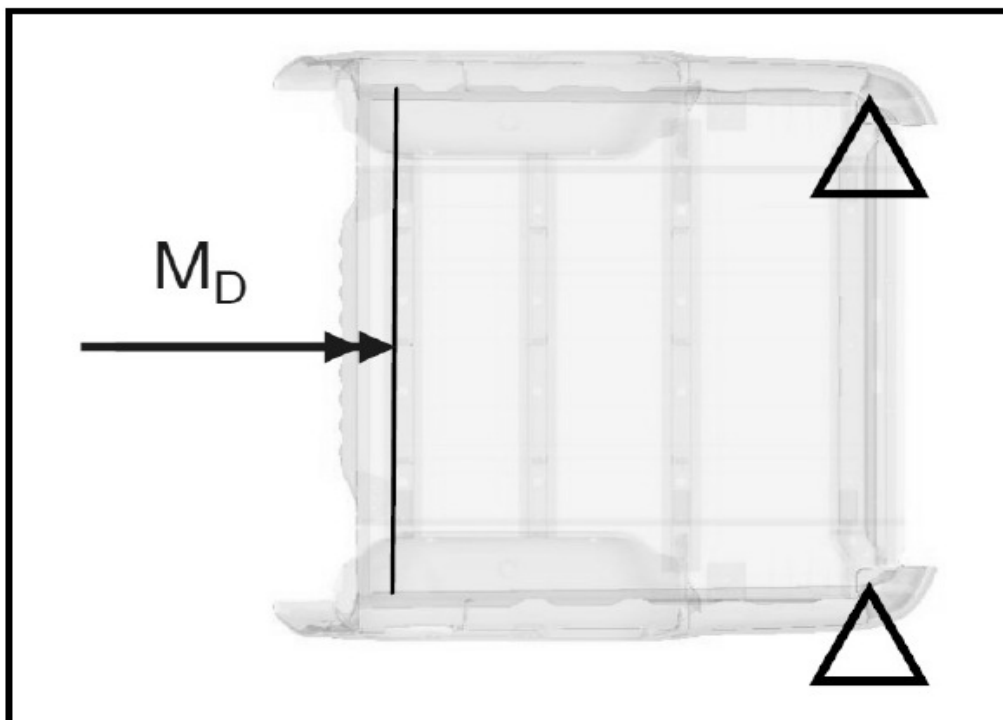


Fig. 4.3.3: Static rigidity "cargo box" between the bolting points at front/rear on body-in-white,  $CT = 1,400 \text{ Nm/}^\circ$



## 4.4 Subframe (mounting frame)

The subframe shall be designed according to the load and be self-supporting.

The preferred material is steel. If alternative materials are used, the strength of the subframe shall at least correspond to that of a steel frame.

Crossmembers shall be provided at least in the front and rear areas to ensure the structure is torsionally rigid.

The subframe is required for bodies in which point loads are applied to the chassis, e.g. for tippers and semitrailer tractors.

The purpose of the subframe is to distribute the applied point loads evenly over the vehicle frame. For this purpose, it should lie on top of the longitudinal members, be continued up to the cab and be tapering in the front area.

The various air gaps between the cab and subframe shall not be filled in. Self-supporting bodies can be attached directly to the standard brackets on the frame by means of a base frame.

The subframe and self-supporting bodies shall be attached to the chassis using all available brackets.

Bolts with strength class 10.9 shall be used for securing.

For more information, see:

- Chap. 4.1 "Removal of the cargo box"
- Chap. 4.3 "Standard attachment points for special bodies"

## 5 Implementation of special bodies

### 5.1 Conversions for people with disabilities

Please also comply with the following chapters as part of the conversion:

- 2.5.2.1 Electrical cables and fuses
- 2.5.2.4 Retrofitting electrical devices
- 3.2.1 Safety equipment

For more information about this topic, refer to:

<https://umbauportal.de>

[http://www.volkswagen-nutzfahrzeuge.de/de/kunden/menschen\\_mit\\_behinderung.html](http://www.volkswagen-nutzfahrzeuge.de/de/kunden/menschen_mit_behinderung.html)

## 5.2 Refrigerated vehicles

Comply with the following chapters during the conversion:

- 2.2.1 Permitted weights and unladen weights
- 2.3.2 Modifications to the body-in-white
- 2.5.2.1 Electrical cables and fuses
- 2.5.2.4 Retrofitting electrical devices
- 2.7.2 Ancillary drives
- 3.1 Body-in-white/bodywork
- 3.1.4 Modifications to the roof of panel van/window van
- 2.5.2.4. Retrofitting electrical devices

For more information about this topic, refer to:

<https://umbauportal.de>

## 5.3 Shelf installation/workshop vehicles

Please also comply with the following chapters as part of the conversion:

- 2.2.1 Permitted weights and unladen weights
- 2.3.2 Modifications to the body-in-white
- 2.5.2.1 Electrical cables and fuses
- 2.5.2.4 Retrofitting electrical devices
- 2.6.3 Fuel system
- 2.6.4 Exhaust system
- 3.2.1 Safety equipment
- 2.5.2.4 Retrofitting electrical devices

For more information about this topic, refer to:

<https://umbauportal.de>

## 5.4 Conversions for caravans

Please also comply with the following chapters as part of the conversion:

- 2.2.1 Permitted weights and unladen weights
- 2.3.2 Modifications to the body-in-white
- 2.5.2.1 Electrical cables and fuses
- 2.5.2.4 Retrofitting electrical devices
- 2.6.3 Fuel system
- 2.6.4 Exhaust system
- 3.2.1 Safety equipment

## 5.5 Conversions for municipal vehicles

Please also comply with the following chapters as part of the conversion:

- 2.2.1 Permitted weights and unladen weights
- 2.3.2 Modifications to the body-in-white
- 2.5.2.1 Electrical cables and fuses
- 2.5.2.4 Retrofitting electrical devices
- 2.7.2 Ancillary drives
- 2.6.3 Fuel system
- 2.6.4 Exhaust system
- 3.2.1 Safety equipment

For more information about this topic, refer to:

<https://umbauportal.de>

## 6 Technical data

### 6.1 Build dimension drawings

#### 6.1.1 Amarok Double Cab

The individual dimension drawings are available in the formats DXF, TIF and PDF. All files (except PDFs) are packed as Zip archives. The files can be unpacked using Winzip (PC) or ZipIt (MAC).

Click the corresponding link to save the selected file directly onto your computer. You can then view the dimension drawing using the corresponding software (such as a CAD system) and print it out.

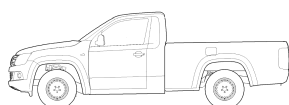


File format	Build dimension drawing
Wheelbase	3095 mm
TIF	<a href="#">2H0_000_011.tif</a> , 270 kB
DXF	<a href="#">2H0_000_011.dxf</a> , 8.1 MB
PDF	<a href="#">2H0_000_011.pdf</a> , 4.6 MB

#### 6.1.2 Amarok Single Cab

The individual dimension drawings are available in the formats DXF, TIF and PDF. All files (except PDFs) are packed as Zip archives. The files can be unpacked using Winzip (PC) or ZipIt (MAC).

Click the corresponding link to save the selected file directly onto your computer. You can then view the dimension drawing using the corresponding software (such as a CAD system) and print it out.



File format	Build dimension drawing
Wheelbase	3095 mm
TIF	<a href="#">2H0_000_011.tif</a> , 249 kB
DXF	<a href="#">2H0_000_011.dxf</a> , 5 MB
PDF	<a href="#">2H0_000_011.pdf</a> , 2.1 MB

## 6.2 Diagrams

Vehicle views in the scale 1:10 are available for downloading in the formats TIF, DXF, EPS in order to create illustrations. All files are packed as Zip archives. The files can be unpacked using Winzip (PC) or ZipIt (MAC).

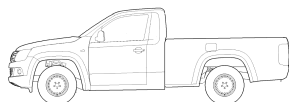
Click the corresponding link to save the selected file directly onto your computer. You can then view the dimension drawing using the corresponding software (such as a CAD system) and print it out.

### 6.2.1 Amarok Double Cab (all views)



File format	Download
TIF	<a href="#"><u>Ansichten_Amarok_DC_1_zu_10.tif</u></a>
DXF	<a href="#"><u>Ansichten_Amarok_DC_1_zu_10.dxf</u></a>
EPS	<a href="#"><u>Ansichten_Amarok_DC_1_zu_10.eps</u></a>

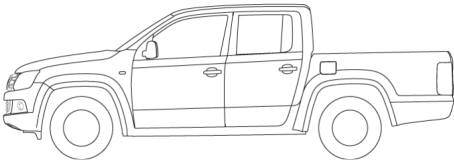
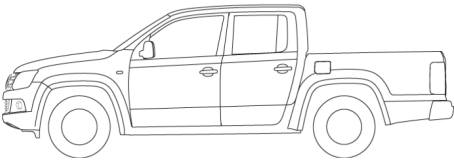
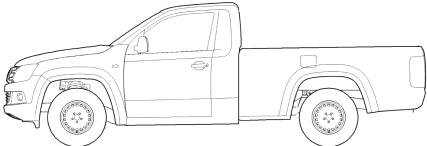
### 6.2.2 Amarok Single Cab (all views)



File format	Download
TIF	<a href="#"><u>Ansichten_Amarok_SC_1_zu_10.tif</u></a>
DXF	<a href="#"><u>Ansichten_Amarok_SC_1_zu_10.dxf</u></a>
EPS	<a href="#"><u>Ansichten_Amarok_sC_1_zu_10.eps</u></a>



## 6.2.3 Side view all derivatives

Designation	Picture	Download (Format jpg/gif)
Amarok Double Cab basic		<a href="#"><u>Vig_Amarok_BASIS_DK_Welt.gif</u></a> <a href="#"><u>Vig_Amarok_BASIS_DK_Welt.jpg</u></a>
Amarok Double Cab		<a href="#"><u>Vig_Amarok_DK.gif</u></a> <a href="#"><u>Vig_Amarok_DK.jpg</u></a>
Amarok Single Cab		---*

## 6.3 Circuit diagrams

For detailed information about this topic, refer to the workshop manuals and circuit diagrams of Volkswagen AG.

The workshop manuals and circuit diagrams of Volkswagen AG are available on the Internet from **erWin** (**E**lectronic **R**epair and **W**orkshop **I**nformation of Volkswagen AG):

<https://erwin.volkswagen.de/erwin/showHome.do>

## 6.4 CAD models

On request, body builders can receive 3D data models in the formats CATIA V.5/STEP for design purposes.

Please use the contact form on the Volkswagen Commercial Vehicles website for your enquiries.

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

\* Data was not available at the copy deadline!

# 7 Listings

## 7.1 List of modifications

Modifications to the body builder guidelines compared to the data status of April 2010.

Chapter No.	Chapter heading	Scope of modification
1.	General	
1.8	Delivery range	Single Cab added!
1.9	Quality system	New chapter added!
2.	Technical data for planning	New chapter heading added!
2.1	Basic vehicle	New chapter heading added!
2.1.1	Vehicle dimensions	New chapter heading added and contents reassigned!
2.1.1.1	Basic data Single Cab and Double Cab	Single Cab added! (was chap. 2.4 in the online version!)
2.1.2	Overhang angle and ramp angle	New chapter added!
2.1.3	Vehicle centre of gravity	New chapter added!
2.1.4	Bodies with a high centre of gravity	New chapter added!
2.1.5	Maximum dimensions	Chapter no. and contents revised Dimension for roof superstructure added. (was chap. 2.6 in the online version)
2.2	Chassis	New chapter heading added!
2.2.1	Permitted weights and unladen weights	New chapter heading added! (was chap. 2.1 in the online version!)
2.2.1.1	One-sided weight distribution	Chapter reassigned! (was chap. 2.2 in the online version)
2.2.2	Turning circle	New chapter added!
2.2.3	Authorised tyre sizes	New chapter added!
2.2.4	Modifications to axles	New chapter added!
2.2.5	Modifications to the steering system	New chapter added!
2.2.6	Modifications to the brake system	Chapter heading and no. and contents adapted! (was chap. 3.10 in the online version)
2.2.7	Modification of springs, suspension mounting, dampers	New chapter added!
2.2.8	Wheel settings	New chapter added!
2.2.9	Wings and wheel houses	Chapter no. and contents revised (was chap. 3.5 in the online version)
2.3	Body-in-white	New chapter heading added!
2.3.1	Roof loads/vehicle roof	New chapter added!
2.3.2	Modifications to the body-in-white	New chapter added!
2.3.2.1	Screw connections	New chapter added!
2.3.2.2	Welded connections	New chapter added!
2.3.2.3	Wheelbase and overhang extensions	New chapter added!
2.3.2	Tailgate	New chapter heading added! (was chap. 3.1.2 in the online version!)

Chapter No.	Chapter heading	Scope of modification
2.4	Interior	New chapter heading added!
2.4.1	Modifications in the area of airbags	New chapter added!
2.4.2	Modifications in the area of seats	New chapter added!
2.4.3	Forced ventilation	New chapter added!
2.4.4	Acoustic insulation	New chapter added!
2.5	Electrics/electronics	New chapter heading added!
2.5.1	Lighting	New chapter added!
2.5.1.1	Vehicle lighting devices	New chapter added!
2.5.1.2	Mounting special lights	New chapter added!
2.5.2	Vehicle electrical system	New chapter added!
2.5.2.1	Electrical cables/fuses	New chapter added!
2.5.2.2	Additional circuits	New chapter added!
2.5.2.3	Electrical interface for special vehicles	Chapter no. and content revised (was chap. 3.11 in the online version!)
2.5.2.3.1	Position of the interface	Chapter no. and content revised (was chap. 3.11 in the online version!)
2.5.2.3.2	Interface assignment	Chapter no. and content revised (was chap. 3.11 in the online version!)
2.5.2.3.3	Connector pin assignment and circuit diagrams for interface for special vehicles	New chapter added!
2.5.2.4	Retrofitting electrical devices	New chapter added!
2.5.2.4.1	Electromagnetic compatibility	Chapter no. adapted and content completely revised. (was chap. 3.7 in the online version)
2.5.2.5	Mobile communication systems	New chapter added!
2.5.2.6	CAN bus	New chapter added!
2.5.3	Vehicle battery	Chapter no. adapted! (was chap. 3.11 in the online version)
2.6	Engine peripherals/powertrain	New chapter added!
2.6.1	Engine/powertrain components	New chapter added!
2.6.2	Drive shafts	New chapter added!
2.6.3	Fuel system	New chapter added!
2.6.4	Exhaust system	New chapter added!
2.7	Ancillary drives, engine/gearbox	New chapter heading added!
2.7.1	Ancillaries	New chapter added!
2.7.2	Ancillary drives	Chapter no. adapted and chapter content, figures completely revised. (was chap. 3.9 in the online version)
2.8	Add-ons/units	New chapter heading added!
2.8.1	Roof rack	Chapter supplemented and reassigned! (was chap. 3.1 in the online version)
2.8.2	Tow hitch/clearance acc. to DIN 74058	New chapter added!
2.9	Raising the vehicle	Chapter no. adapted! (was chap. 3.6 in the online version)

Chapter No.	Chapter heading	Scope of modification
3.	Modifications to closed bodies	New chapter heading added!
3.1	Body-in-white/bodywork	New chapter heading added!
3.1.1	Side wall and rear wall cut-outs	New chapter added!
3.1.2	Installation of windows	New chapter added!
3.1.3	Roof cut-outs	New chapter added!
3.1.4	Modifications to the roof	New chapter added!
3.2	Interior	New chapter heading added!
3.2.1	Safety equipment	New chapter added!
3.3	Add-ons	New chapter heading added!
3.3.1	Accessories	Chapter reassigned! (was chap. 3.6 in the online version!)
3.3.1.1	Tow hitch/tow hitch preparation (EU variants)	Chapter supplemented and reassigned! (was chap. 3.6.1 in the online version)
3.3.1.2	Vehicles without rear bumper (without step)	Chapter supplemented and reassigned! (was chap. 3.6.1.1 in the online version)
3.3.1.3	Vehicles with rear bumper (with rear step)	Chapter supplemented and reassigned! (was chap. 3.6.1.2 in the online version)
3.3.1.4	Other accessories	Chapter heading and no. modified! (was chap. 3.6.2 in the online version)
4.	Modifications to open bodies	Chapter heading modified as part of standardisation of the body builder guidelines and removed again because not applicable to the Caddy/Caddy Maxi!
4.1	Cargo box removal	Chapter heading and chapter no. as well as content modified! (was chap. 3.3 in the online version)
4.1.1	Removal of tail lights	Chapter no. and Fig. no. modified! (was chap. 3.3.1 in the online version)
4.1.2	Releasing the parking brake cable at the rear	Chapter no. and Fig. no. modified, chapter reference adapted. (was chap. 3.3.2 in the online version)
4.1.3	Removal of the wheel housing liner	Chapter no., Fig. no. and figure captions modified. (was chap. 3.3.3 in the online version)
4.1.4	Removal of the filler neck	Chapter no., Fig. no. and chapter reference adapted. Safety note and figure captions added. (was chap. 3.3.4 in the online version)
4.1.5	Unscrewing securing bolts	Chapter no. and Fig. no. adapted. Safety note and figure captions added. (was chap. 3.3.5 in the online version)
4.1.6	Recommendations for attaching the filler neck	New chapter added!
4.1.6.1	Diesel filler pipe	New chapter added!

Chapter No.	Chapter heading	Scope of modification
4.1.6.2	Petrol filler pipe	New chapter added!
4.2	Chassis frame	Chapter heading and chapter no. as well as content modified! (was chap. 3.4 in the online version)
4.2.1	Ladder frame AMAROK DC (Double Cab)	Chapter no. and Fig. no. modified! (was chap. 3.4.1 in the online version)
4.2.2	Ladder frame Amarok SC (Single Cab)	New chapter no. added!
4.2.3	Sections, Amarok SC/Amarok DC	Chapter no., Fig. no. adapted, sections for Single Cab and reference to chap. 6.1 added. (was chap. 3.4.3 in the online version)
4.3	Standard attachment points	Chapter no. and references as well as figure revised, figure for Single Cab added (was chap. 3.2 in the online version)
4.4	Subframe	Chapter no. as well as references to chapters adapted! (was chap. 3.12 in the online version)
5.	Implementation of special bodies	New chapter heading added!
5.1	Conversions for people with disabilities	New chapter added!
5.2	Refrigerated vehicles	New chapter added!
5.3	Shelf installation/workshop vehicles	New chapter added!
5.4	Conversions for caravans	New chapter added!
5.5	Conversions for municipal vehicles	New chapter added!
6.	Technical data	Chapter no. and heading adapted!
6.1	Build dimension drawings	New chapter heading added!
6.1.1	Amarok Double Cab	New chapter added!
6.1.2	Amarok Single Cab	New chapter added!
6.2	Diagrams	Chapter heading and chapter no. as well as content modified! (was chap. 5.1 in the online version)
6.2.1	Amarok Double Cab (all views)	New chapter added!
6.2.2	Amarok Single Cab (all views)	New chapter added!
6.2.3	Side view all derivatives	New chapter added!
6.3	Circuit diagrams	New chapter added!
6.4	CAD models	New chapter added!
7.	Listings	New chapter added!
7.1	List of modifications	New chapter added!

# Body builder guidelines Amarok

**Body builder guidelines**

**Subject to modifications**

**Edition March 2011**

**Internet: [www.volkswagen-nutzfahrzeuge.de](http://www.volkswagen-nutzfahrzeuge.de)**

**Consulting for body builders in Germany is available from the listed address.**

**Volkswagen Commercial Vehicles**

**Brieffach 2963**

**Postfach 21 05 80**

**D-30405 Hannover**

**Fax. +49 511 798 8500**