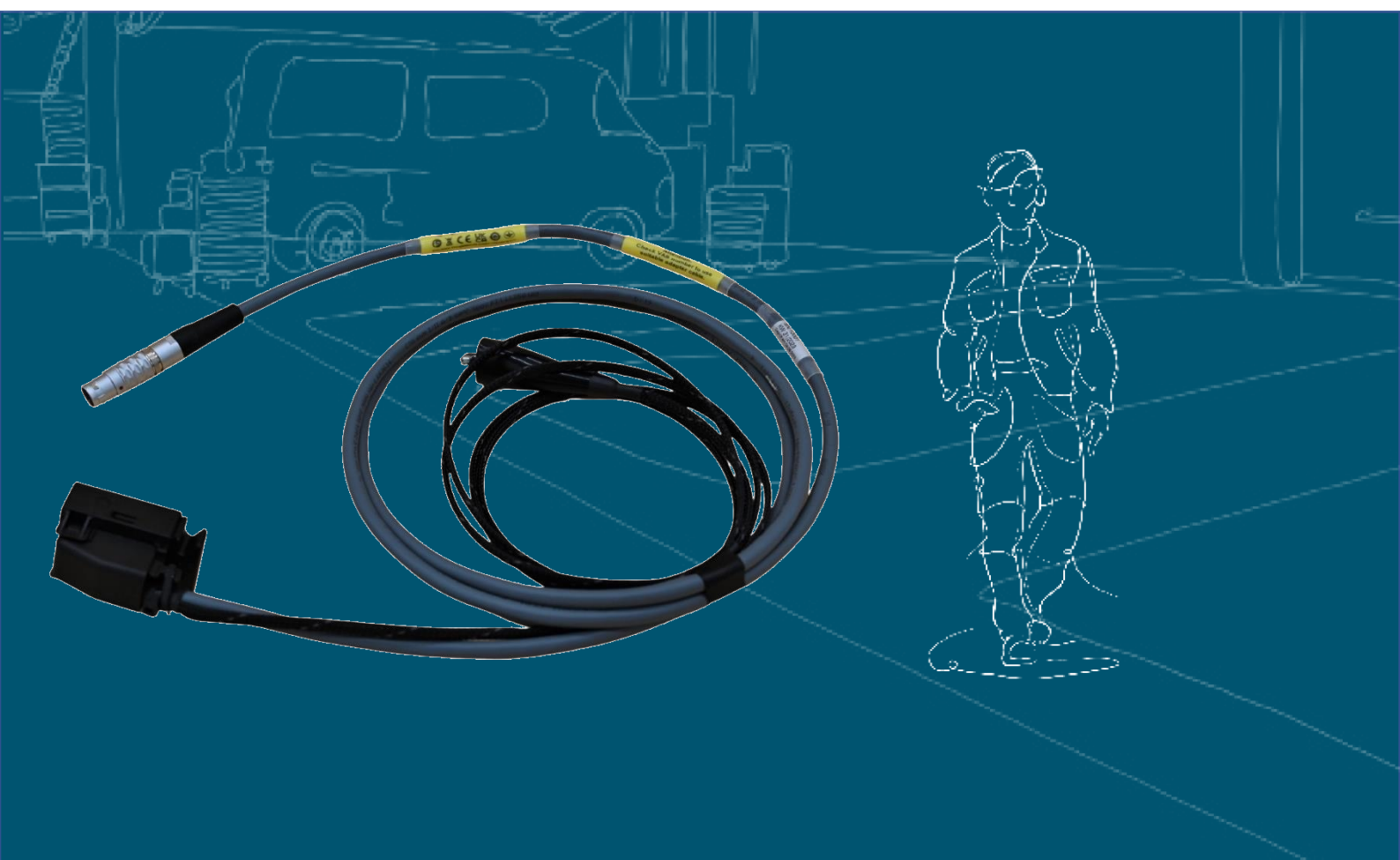


# VOLKSWAGEN

AKTIENGESELLSCHAFT



## operation manual

Diagnostic cable VAS 5581A/18



Revision	Date	Reason
<b>V00</b>	08/27/2023	first edition
<b>V01</b>	09/12/2023	Adjustments

## imprint

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### duplication

Duplication or reprinting, even in part, always requires the written approval of the manufacturer.

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### image sources

Warning signs, prohibition, mandatory and standard symbols come from public sources such as the generally accessible areas of the Internet. CAD product images and product photos are from the manufacturer. Photographic material showing the product in use is accompanied by a reference to the source.

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## preliminary remarks

Read this user manual carefully before using the product.

The product comes with a USB stick on which the operating instructions are stored in different national languages. The currently valid version and other national languages can be found on our homepage.

The user manual is an integral part of the product and must be kept with the product. In the event of sale or transfer, the operating instructions must be handed over to the new operator.

In addition to these operating instructions, all relevant regulations for diagnosis or troubleshooting on intrinsically safe high-voltage systems in road vehicles are binding. These include, among other things, the instructions for the respective diagnostic systems of the vehicle manufacturer as well as operational safety specifications and the state of the art in dealing with high-voltage systems.

## validity of the Declaration of Conformity

The issued declaration of conformity applies to the product described in the operating instructions. In the event of changes, conversions or extensions, the declaration of conformity and the risk assessment lose their validity.

## manufacturer information

### **Akkuteam Energietechnik GmbH**

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akkuteam is a specialist provider of battery and backup power technology. We ensure grid-independent electrical energy supply in mobile and stationary areas.

We are an owner-managed, medium-sized family company. Our GmbH can now look back on 25 years of company history, which has always been characterized by strong growth. With currently more than 70 employees, we work at 2 locations in southern Lower Saxony and from there we offer a nationwide service, for the automotive sector even a worldwide service.

Our core competencies are formed from project planning, sales and maintenance of stationary and mobile battery systems as well as energy storage devices, static uninterruptible power supply systems, safety light systems and power generators. With our products, we serve an electrical power range from a few watts to several megawatts. We round off our product portfolio with a qualified range of services. With around 25 technical employees and fitters, we handle all assembly, maintenance and repair work required for our product areas.

This safety chapter informs you about the following:

- Warning levels contained in this manual,
- Important safety information about the product,
- intended use of the product,
- Target group requirements.

These operating instructions are only valid for the following product:

Item number: 22104143

Designation: Diagnostic cable VAS 5581A/18

## warning levels

This chapter informs you about the warning levels that you will find in this manual.

### **DANGER**

Disregarding the safety instructions WILL result in death or serious injury!

### **WARNING**

Disregarding the safety instructions CAN result in death or severe physical injury!

### **CAUTION**

Disregarding the safety instructions MAY result in minor physical injury!

### **DANGER**

Disregarding the safety instructions can result in damage to the product!

## important safety instructions

This chapter informs you about the safety instructions that must be observed when handling the product.



### **DANGER**

#### **Danger to life from electrical voltage!**

The electrical voltage in other systems is life-threatening and will lead to death from electric shock!

- Do not use the product for measurements on mains circuits!
- Never try to power other devices through the product!



### **WARNING**

#### **Danger to life from electrical voltage!**

The electrical voltage in high-voltage systems is life-threatening and can lead to death from electric shock!

Liquids, condensates and high humidity can cause short circuits!

- Prevent the product from coming into contact with liquids!
- Only use the product in closed and dry rooms!

## intended Use

Only use the product in accordance with these operating instructions, otherwise the protection provided in the product against electrical hazards can no longer be guaranteed.

The product is used to adapt the high-voltage diagnosis box VAS 5581A to the vehicle connector specified by the vehicle manufacturer in the guided troubleshooting. To do this, the product is connected to the battery management system of the high-voltage battery.

The product may only be used on certified voltage-free switched high-voltage systems.

The product is suitable for testing the high-voltage battery in the following vehicles:

- First use PPE41 HV battery

Vehicle manufacturers within the meaning of these operating instructions are exclusively vehicle manufacturers of the Volkswagen Group.

Any use beyond this is prohibited.

## requirements of the target group

Work on the product may only be carried out by qualified specialist personnel!

Qualified personnel within the meaning of these operating instructions fulfills all the requirements applicable in the country of use for work on high-voltage systems, in accordance with:

- Regulations valid in the country of use,
- Qualification according to DGUV 200-005 at least level 2 or equivalent,
- Vehicle manufacturer and operational specifications.

When using the product, the personal protective equipment prescribed by the vehicle manufacturer for working on high-voltage systems must be worn at all times.

## Obligations of the operator

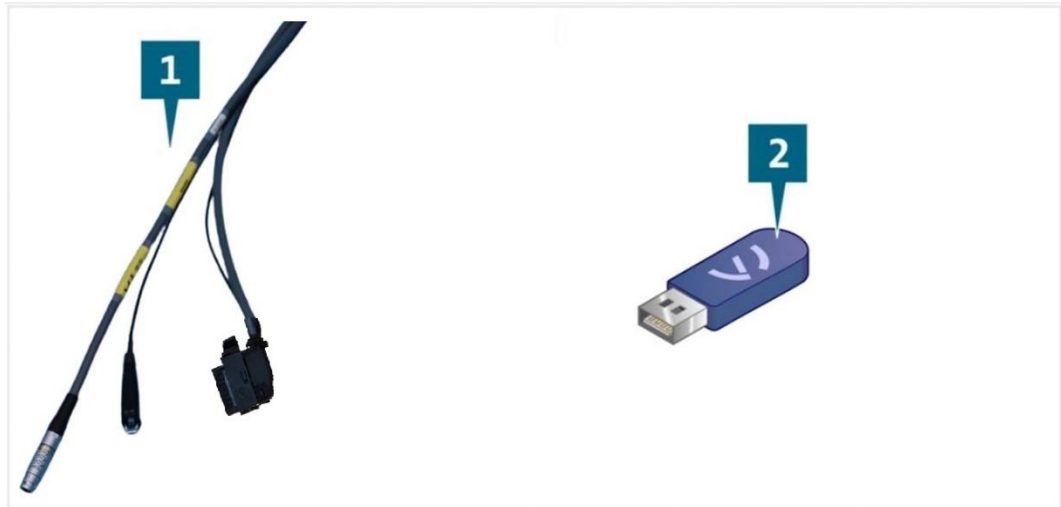
The operator must ensure that personnel working on the diagnostic cable meet the requirements of the target group.

The operator is also responsible for compliance with the following points:

- The diagnostic cable is always in perfect and defect-free condition.
- The regular test intervals for the diagnostic cable are observed and recorded.

## scope of delivery

Immediately check the condition and completeness of the scope of delivery. In the event of defects, contact the manufacturer immediately.



- (1) diagnostic cable
- (2) USB stick with user manuals

## construction

Structure of the product:

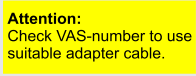









- (1) Diagnosis box connector
- (2) ground clamp
- (3) Battery management system connector



## symbols and connectors

The following symbols are shown on the product:

symbol	Meaning
	<p><b>Danger:</b> Check the VAS number so that you use a suitable adapter cable.</p>
	<p>Observe the operating instructions!</p>
	<p>The serial number, along with the manufacturer part number, is used to identify the product.</p>
	<p>The manufacturer part number, along with the serial number, is used to identify the product.</p>
	<p>The product corresponds to protection class II and therefore has reinforced or double insulation between active and touchable parts in accordance with VDE 0100, part 410/412.1.</p>
	<p>The disposal notice prohibits the disposal of the product with household waste. Always dispose of the product in accordance with all current local disposal regulations.</p>
	<p>The CE marking certifies that the product complies with all applicable European regulations and has been subjected to the prescribed conformity assessment procedure.</p>
	<p>The seal of approval marks the product as approved for use in the vehicle manufacturer's workshops and production facilities.</p>

## technical data

design data	Values
manufacturer number	22104143
Maximum rated voltage	14 V/DC
Maximum rated current	5 A
Weight	~ 340g
cable length	~ 2000mm/2000mm

Environmental conditions	Operation	storage	Transport
temperature	5°C to 40°C	-20°C to 60°C	-20°C to 60°C
height above sea level	max. 2000 m	No restriction.	
humidity	max. 80% to 31°C, decreasing linearly to 50% at 40°C	max. 85 %	
	No condensation allowed. Maximum allowable relative humidity 60% if corrosive gas/air is present.		

This chapter informs you about the following activities:

- Installation,
- loosening the connector,
- Cleaning,
- Storage,
- Disposal,
- Maintenance.



### **WARNING**

#### **Danger to life from electrical voltage!**

The electrical voltage in high-voltage systems is life-threatening and can lead to death from electric shock!

- Only use the product for the area of application intended by the vehicle manufacturer!



### **DANGER**

#### **Risk of damage!**

Plug connections snap into place when connected.

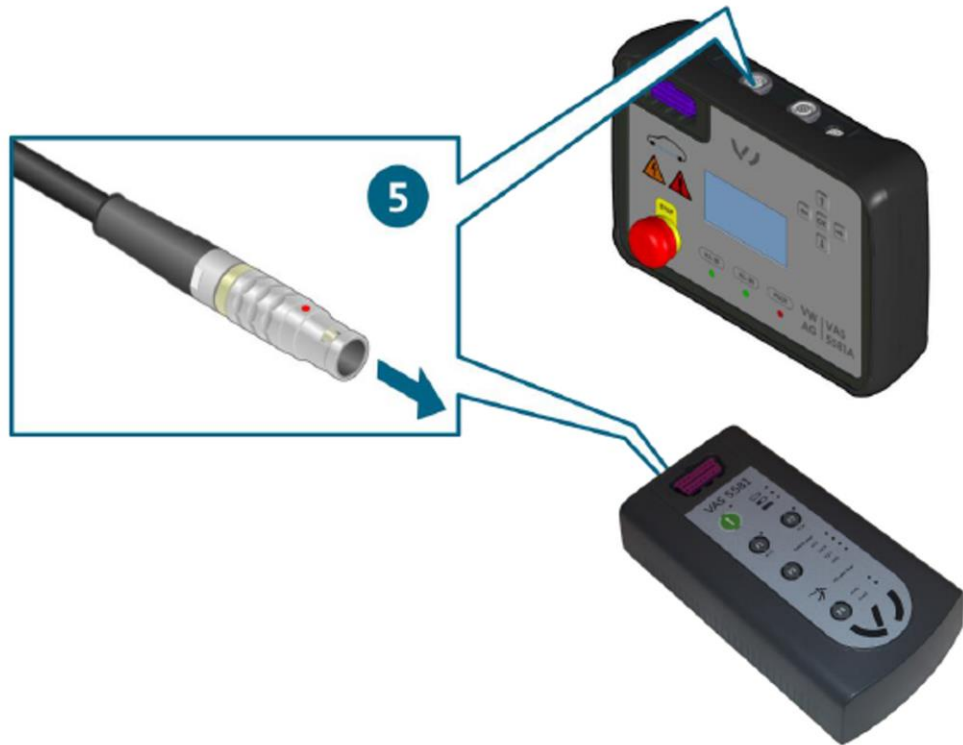
- Unlock the plug connections before you loosen them! (see chapter “ Disconnecting the plug connections ”)

# installation

1. Observe the safety instructions.



2. Connect the ground clip to a conductive area of the vehicle body.
3. Connect the connector plug to the removed socket on the battery management system.
4. Lock the connection.
5. Connect the connector to the diagnostic box.



- ✓ You can now carry out the measurements according to the guided troubleshooting.

## loosen the plug connections



### WARNING

#### Danger of explosion!

Components of the product can cause sparks and arcing.

- Do not use the product in potentially explosive areas!

### Disconnect diagnostic line plug connection (18-pin).

The plug connections have a lock. To release the respective plug connection:

1. Unlock the connection by pulling the latch.
2. Pull apart the connector.



- ✓ The plug connection is released.

## cleaning



### **DANGER**

#### **Danger to life from electrical voltage!**

The electrical voltage in high-voltage systems is life-threatening and will lead to death from electric shock!

- Disconnect the product from all power sources before cleaning the product!

Observe the safety instructions!

The product may only be cleaned with a dry cloth.

## storage

When the product is not in use, store it in a dry and dust-free place.

## disposal

Observe the safety instructions!

Always dispose of the product in accordance with all current local disposal regulations.

## maintenance

Observe the safety instructions!

The national and local requirements for regular testing must be observed!

Check the product for damage at intervals of no more than 24 months.

If damage is visible, the product must not be used.

## warranty

A warranty period of 24 months is granted for the product.

The warranty refers to a production defect or a clearly detectable defect in the product that is not due to user error.

All inquiries in this regard must be reported to the wholesaler with appropriate photo documentation, detailed description of the defect and serial number.

## customer service

For general questions regarding use and functionality, please contact the support below:

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Status 08 / 2023