VOLKSWAGEN

GROUP OF AMERICA

Vehicle diagnostic and initialization

Operating Manual A01.01   03/09

Contents

Applicable Software Versions

The software version from V16.05.00 is being described.

Associated Documents

Please also see the following information and documents:

/1/ The enclosed documents to the diagnostics interface in compliance with standard SAE J2534-1 should be observed.

/2/ Additional information for the diagnostics software may also be found on the internet portal erWin, see section 1.4.

/3/ When installing on a VAS 505x vehicle diagnostics tester, its accompanying technical documents must be observed.

/4/ When installing on a PC or laptop, its accompanying technical documents must be observed.

About this Manual

This Operating Manual contains important information, tips, instructions, and WAR-NINGS about installing and using the diagnostics software and tester on applicable vehicles. For the proper use of the software and the tester as well as for own safety and for the safety of others, you must also read and heed the information and Warnings in this Operating Manual. And in the applicable service literature for the vehicle(s) being diagnosed, serviced or repaired.

Legend

Icons with the following definitions are used in the Safety Instructions, in the Operating Manual and in diagnostics program screen displays.

WARNING!

Texts with this symbol contain information regarding your safety and how you can reduce the risk of serious and fatal injuries.

CAUTION!

Text with this symbol contains information about how you can help prevent damage to the vehicle or tester.

Note:

Text with this symbol contains additional useful information about the product and its use, etc..

IMPORTANT SAFETY INFORMATION

The general safety instructions and WARNINGS are appear below. Please read the entire Operating Manual prior to using the software.

These instructions also contain special instructions, because the diagnostics software can also be downloaded to the entire Volkswagen Group tester family VAS 505x (VAS 5051B, VAS 5052, VAS 5052A). These instructions also include those for a Bluetooth® wireless operation. Safety information may also be shown on screen displays of the diagnostics software. Follow all the instructions displayed.

⚠ *WARNING!*

Improper use of tester can cause serious personal injury. Use the tester only as described in this manual. Use only manufacturer's recommended accessories.

- Never use tester if the power cable or the unit itself is damaged.
- Never use the tester if a diagnostic or measuring lead or cable, or any accessory carrying current is damaged. Have the damage repaired by a qualified technician.
- Never let cables or wires hang over the edges of desks, benches or consoles.
- Never let cables or leads be damaged, especially through contact with hot components or rotating fan blades.
- Use measurement leads only within the measurement ranges specified in the technical specifications and the descriptions in the instruction manual for the tester. Never make measurements with damaged leads. Use measurement probes only on cables that are undamaged.
- Never use an extension cord with the tester. Use only specified cables and leads.
- Always unplug equipment from electrical outlets when not in use. Never yank the power cable to pull the plug out of the outlet. Grasp the plug itself and pull to disconnect from the power supply.
- Never use tester near open containers of flammable liquids, especially gasoline, fuel and solvebts, to help reduce the risk of fire or explosion. Tester contains components that can cause sparks that can ignite fumes.
- Always use tester at least 18 inches (460 mm) above the floor, because fumes from fuels and other flammable liquids accumulate at floor level.
- Never use a wireless transmitter, for example WLAN or Bluetooth, near unshielded detonators or in an explosive environment, unless the device has been properly adjusted to make it suitable for use under these conditions.
- Never use the tester, connect or disconnect data transmission cables during a thunderstorm.
- Never open the tester or its accessories or make unauthorized or unapproved modifications to them.

⚠️ **WARNING!**

- Always connect the tester and its accessories to a protected, grounded power outlet, preferably a TN system outlet. When connected to an electrical power supply, the tester and its accessories correspond to protection class 1 and are equipped with safety-rated power cable.

- Always turn the tester and its accessories off with the on/off switch and disconnect all power cables from power outlets if the unit is not being used for a longer period of time. Make sure that the battery is fully charged before disconnecting if from the power outlet. Turning the tester off with the on/off switch is not sufficient if the unit is not being used for a longer period of time.

- Never replace the fuse in the tester with an improper fuse. Use only a replacement fuse of the same type and same amperage to reduce the risk of fire hazards and to protect the unit from damage Always refer to the technical information in the instruction manual for the tester.

- Never replace the tester battery unless you have the technical training to do so properly.

- Never short-circuit the battery.

- Never throw the battery into a fire.

- Always dispose of or recycle the battery in accordance with local regulations and only when it is completely discharged.

- Always follow appropriate safety precautions when working on electronic vehicle ignition systems. They can carry high voltage of up to 30 kV.

- Always make sure that the workspace is properly ventilated when working on an engine that is running. Engine exhaust contains carbon monoxide, an odorless and colorless gas that is poisonous.

- During test drives, always use a strap to secure the tester on the vehicle's back seat. A second person will be needed to operate the tester from the back seat. Operating the tester from the front seat can cause injury in a crash, especially in the event of airbag deployment.

- FCC and FAA regulations prohibit the operation of wireless HF devices in the air, because their signals might disturb important instruments aboard aircraft.

- On devices with radio authorization, no changes may be made to the antenna, for example, by rerouting it or using other antennas or transmitters.

⚠️ ***CAUTION!***

When working with the VAS 5051B workshop trolley, always make sure that there is sufficient ventilation for the desktop power unit for both the tester and the printer. Even when the tester is switched off, the battery-charging circuit is working and the printer is on-line (although in energy-saving mode).

- During the operation, always open the lid of the printer or the roll-up door (depending on the workshop trolley) completely.
- Heat-dissipation of the desktop power unit must not be impaired by objects placed on top (cable, cloths, etc.).

Pull the power cable from the workshop trolley to switch off the entire unit.

Fluctuations and deviations in the of the voltage outside the approved tolerances can cause tester damage and malfunction.

The VAS 505x diagnostic units were developed for vehicles of the Volkswagen Group. If the tester is connected directly to vehicles of other manufacturers, serious vehicle damage could result. If vehicles of other makes are to be tested using the general OBD functions in the self-diagnostics application, the VAS 5052/16 OBD adapter cable must be connected between the diagnostic cable and the diagnostic link of that vehicle (with fewer cable connections).

The following three references apply for the following countries that require FCC authorization:

Bermuda, Canada, USA, Barbados, Cayman Islands (UK), Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Dutch Antilles, Nicaragua, Panama, Puerto Rico (US), Trinidad & Tobago, Argentina, Brazil, Bolivia, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela, Australia, Guam, New Zealand, Lebanon, Qatar, Brunei, Hong Kong, India, Indonesia, Malaysia, Philippines, Singapore, Sri Lanka, Taiwan, Vietnam.

Note:

FCC 15.19: This device meets part 15 of the FCC regulations and the RSS-210 of Industry Canada. The following two conditions must be met for the operation:

1. The unit may not cause harmful interference and
2. The unit must be able to tolerate outside interferences, even those that may result in undesirable operating conditions.

WARNING!

FCC 15.21: Changes or modifications to the equipment that are not expressly authorized by the manufacturer may result in the withdrawal of the FCC authorization for operating the device. FCC 15.105: This device has been tested and meets the requirements of Class B for digital systems regarding Part 15 of the FCC regulations. These regulations were designed to avoid unwanted interference when the device is operated in a commercial environment. This equipment generates, uses and receives radio signals and can produce harmful radio interference if it is not operated in accordance with the provisions of the device manual. Operating this device in a residential area may trigger harmful effects. The user must correct these effects at his/her expense.

The following two references only apply to Canada:

⚠️ *WARNING!*

When using a wireless LAN in accordance to IEEE 802.11a, this product may only be used in enclosed areas, as it is operated in a frequency range between 5.15 and 5.25 GHz.

Industry Canada requires that this product is operated at a frequency range of 5.15 GHz - 5.25 GHz in enclosed areas. This will reduce the potential risk of dangerous common channel interference with mobile satellite systems. The frequency bands of 5.25 to 5.35 GHz and 5.65 to 5.85 GHz are primarily intended for large radar installations. These radar installations may interfere with or damage this device.

ℹ️ **Note:**

Dieses digitale Gerät entspricht dem kanadischem Standard ICES-003.

This Class B digital apparatus complies with Canadian standard ICES-003.

Cet appareil numrique de la classe B est conforme à la norme NMB-003 du Canada.

KEEP THESE INSTRUCTIONS AVAILABLE FOR FUTURE REFERENCE

Issue: 2009-07-20

1 General information

The vehicle diagnostics and start-up software described in this Operating Manual, provides functions for the start-up and diagnostics of automotive electronic control units. The diagnostic software consists of the basic software and brand data. The basic software includes the program flow system and the administrative functions. Brand data includes brand-specific diagnostic data / programs, for example, for certain Audi and Volkswagen vehicles. Data for several vehicle models can be uploaded into the system.

A communications interface must be established via a diagnostics interface for communications between the vehicle and the software; refer to Section 1.3.1.1.

1.1 Safety Instructions

Always follow the instructions in this Operating Manual and heed the Important Safety Information, WARNINGS and Notes. Generally applicable Safety Information, WARNINGS and Notes follow the table of contents and in this Operating Manual. Please also heed the additional safety precautions for accessories and the applicable instructions and precautions when working on vehicles and the applicable instructions for workshop operations contained in the applicable repair literature for individual vehicle makes and models being serviced.

1.2 Using this Operating Manual

This documentation is intended to be used by technically qualified personnel with the necessary training, knowledge and expertise in the field of vehicle diagnostics.

This Operating Manual does not contain all of the details for all possible versions of diagnostics/test programs. Furthermore, only the use of the software is described in this Manual and not the execution of individual diagnostics routines associated with the processing of vehicle brand-related data.

This Operating Manual is intended to provide support for trained personnel and and includes information required for general safety and software use.

Location of the Operation Manual:

You can download the Operating Manual from the erWin server, see Section 1.4. You must thoroughly read and understand its contents before starting to use the diagnostics software.

1.3   Prerequisites

1.3.1   Hardware requirements

PC

A conventional PC, a laptop and also a VAS 505x diagnostics tester (VAS 5051B, V5052, VAS 5052A) can be used as platform for installing the diagnostics software.

The minimum requirements for a PC with Microsoft® Windows XP™ Professional or Microsoft® Windows 2000 are:

Properties	Minimum
CPU	>= 1,7 GHz
RAM	>= 1,024 MB
Graphics	>= 1024x768
Hard drive capacity	>= 10 GB for the diagnostics software and data
USB	Min. 1 USB for connecting the diagnostics interface (refer to the requirements of the installed diagnostics interface)
LAN	Standard network engineering
However, a higher PC standard is recommended.	

1.3.1.1   Diagnostics Interface

A communications interface must be established via a diagnostics interface in accordance with the SAE Standard J2534-1 for communications between the vehicle and the software. The diagnostics interface is generally linked to the PC via a USB port; see /1/.

Refer to the internet portal erWin for the recommended diagnostics interfaces, see Section 1.4.

1.3.2   Software requirements

Microsoft® Windows XP™ Professional with Service Pack 2 or Windows 2000 Service Pack 4 is a requirement for using the diagnostics software. Administrator rights are required for installing the software and standard user (power user-) rights are required for the process. Software installation and use under Windows Vista is currently not supported.

In addition to the Windows operating system, the following software will be required on the PC. The user is responsible for the availability and reliability of the required programs. The user is also responsible for network security and virus protection.

1.3.2.1   Microsoft XML Parser MSXML 4.0 Service Pack 2

Microsoft XML Parser 4.0 Service Pack 2 will be required. It is used to process XML files. The XML parser can be obtained from Microsoft free of charge via the internet.

1.3.2.2   Adobe Acrobat Reader 5.05 or higher

An installed Acrobat Reader version 5.05 or higher is required to view and display PDF documents, such as this Operating Manual. The Acrobat Reader can be obtained from Adobe free of charge via the internet.

1.3.2.3   Internet Explorer (IE) 6

The Internet Explorer 6 (IE) included in Microsoft ® Windows ™ XP Professional Service Pack 2 is needed to display diagnostics protocols.

1.3.2.4   Java Virtual Machine 1.4.2_15

An installed version of Java Virtual Machine 1.4.2_15 is required. Java can be obtained from Sun Microsystems free of charge via the internet. Java is required in the base system for the D-PDU communications interface.

A reference to the required Java version is also listed under erWin (see Section 1.4).

1.3.3   Network connection

A normal standard Internet access is required.

1.3.4   Certificates

Certificates for the online connection to the Volkswagen network are required for certain safety-related functions. Refer to the internet portal erWin, Section 1.4, for more detailed information regarding the certificates and their installation.

1.4   User interface erWin

You must register with erWin and obtain the proper licenses (user rights), in order to use the diagnostics software, which is subject to a usage fee. The diagnostics software (base and brand data, certificates and Operation Manual) can be downloaded here and additional information can be obtained.

The following portals are currently available for Audi (including Bentley and Lamborghini) and Volkswagen:

https://www.erwin.audiusa.com

https://www.erwin.vw.com

1.4.1   Obtain user ID and password

A user account is established for the user at the first registration on the erWin server. A user ID and a password will be defined at this point.

1.4.2   Downloading Adaptation Functions

The installation packages of the current diagnostics software as well as specific brand data are provided on the erWin portal for downloading. Data are downloaded here in a cpmpressed format. The diagnostics softare are delivered in a self extracting form, see Chapter 3. Brand data must be unzipped prior to their installation first, see Section 5.6.

1.4.3   Requesting licenses / user authorization

The registration and the payment for the user rights of the diagnostics software is also carried out with erWin.

1.5 Version identification of diagnostics software

You must observe the correspondence of language and compatibility between the diagnostics software and the brand data during the installation process. The information will be displayed in the version status of the start-up screen (see Image 5-5). Brand data in the incorrect language and compatibility will be rejected during the installation.

The following conditions apply for the use of data:

1. The first version block corresponds to the compatibility number, which is defined by the base downloaded software. All brand data that you want to download on the PC must have the same compatibility number.
2. Version block 2 indicates the continuing version of the software (base, brand data). This block can vary between the downloaded software and the additional brand data to be downloaded.
3. Version block 3 shows the "increment" updates (is of no significance for this diagnostics software).
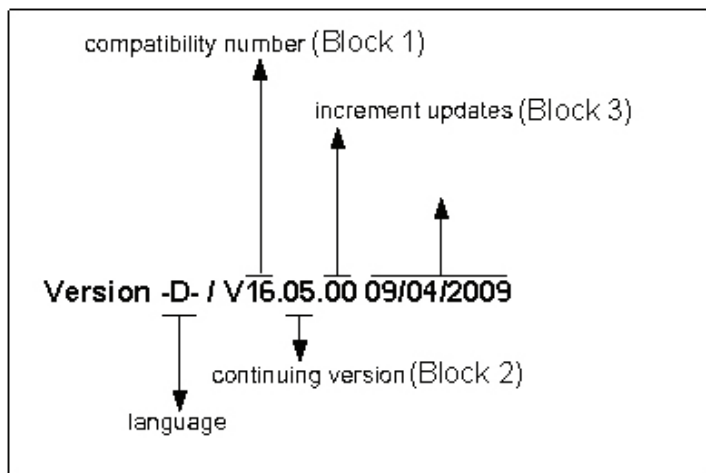

Image 1-1 Decoding the version code

2   Checklist

The following prerequisites must be fulfilled for the successful installation and use of the diagnostics software:

○   Laptop with recommended system-requirements

○   Windows 2000 or Windows XP

○   recommended diagnostics interface-device

☐   Generate erWin-User and password

☐   Apply for an Network Security-User and password

☐   Apply a certificate for the F5-server and install

☐   Install the diagnostics interface-device driver-software

☐   Check the JAVA Version (will be done automatically during start of the software; see Section 1.3.2)

☐   Check the XML Parser (will be done automatically during start of the software; see Section 1.3.2)

☐   Buy erWin-license

☐   Install base data

☐   Install vehicle brand data

☐   Select the correct passthru-device for the diagnostics interface-Software via DTS-Configurator (diagnostics interface and JAVA-Version)

3   Installing and uninstalling

Installing and uninstalling is illustrated here under Windows XP. Installing and uninstalling is also possible under Windows 2000. Slight deviations may be possible.

Note:

- Administration rights are required when installing the diagnostics software on a PC.
- Check the hardware and software requirements (Section 1.3).
- Prior to another installation, an already existing installation of the diagnostics software must be completely uninstalled (Section 3.3).
- Close all open programs on your PC.
- Verify that your diagnostics interface is connected to your vehicle (for the power supply) and your PC.

3.1   Downloading the diagnostics software

You will have the data (.exe file) in a compressed format after downloading the diagnostics software from the erWin server (see Section 1.4).
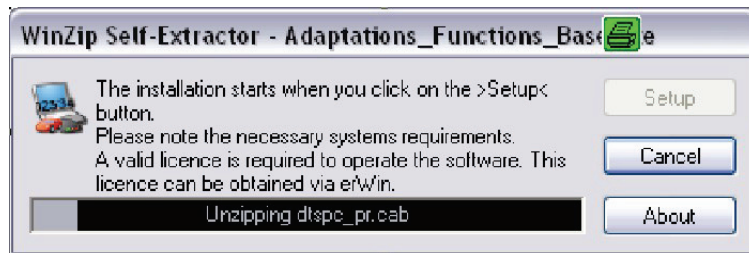
Note:

You must also download vehicle brand data, store it in a directory and unzip it.
The actual installation will occur later, see Section 5.6.

1. Store the **.exe file** in a separate folder.
2. Double click the respective **.exe file** to extract the file.
- The following message appears:
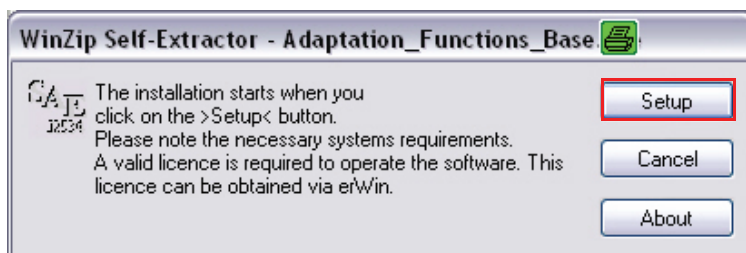
3. Press **Setup** to start the file extraction.

- The unzip process is now displayed as follows:

- The installation of base data starts immediately after unzipping with the following menu, see Image 3-1.

3.2   Installation of the diagnostics software

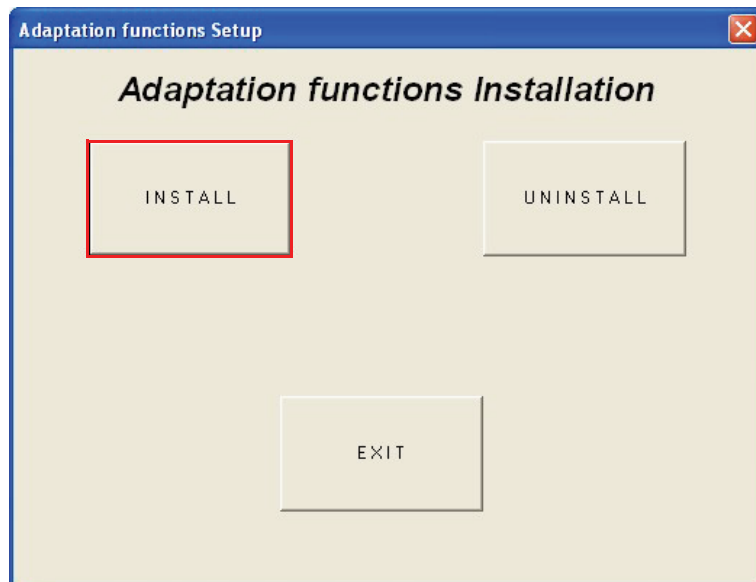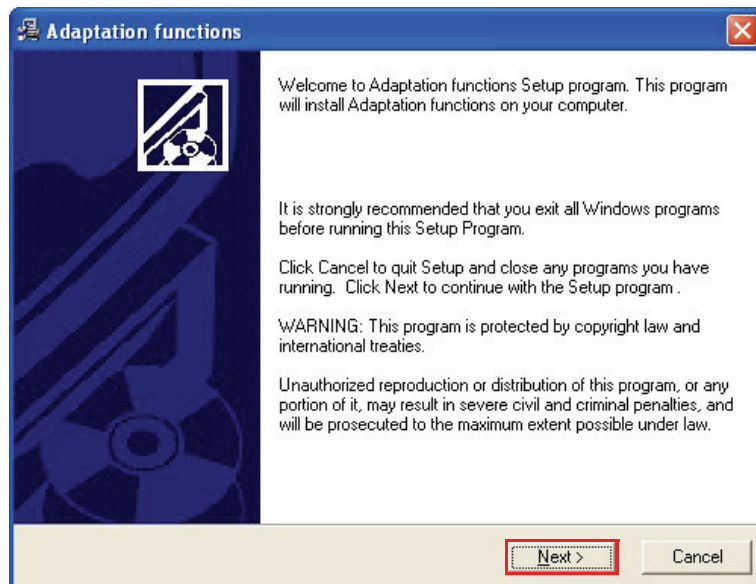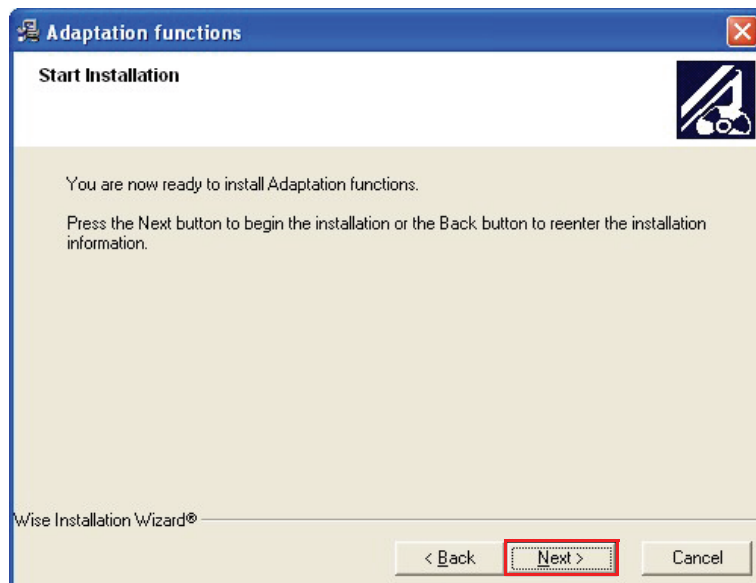Proceed as follows for the installation:

Image 3-1 Help menu for the installation

1. Click on the **INSTALL** button.

- Another help menu for the installation follows.

2. Click on the "**Next**" button.
3. Another help menu for the installation follows.

4. Click on the "**Next**" button.
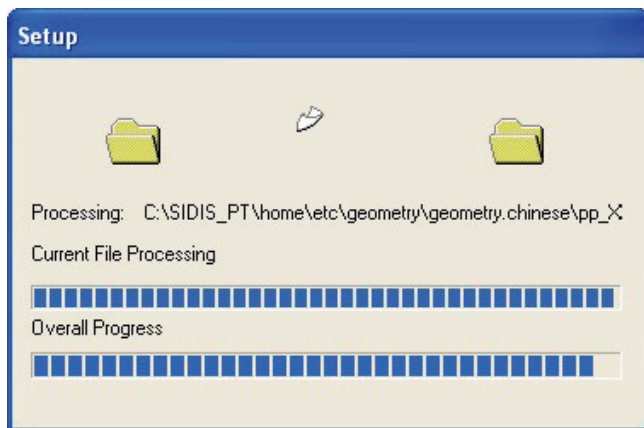- The software will be installed now.

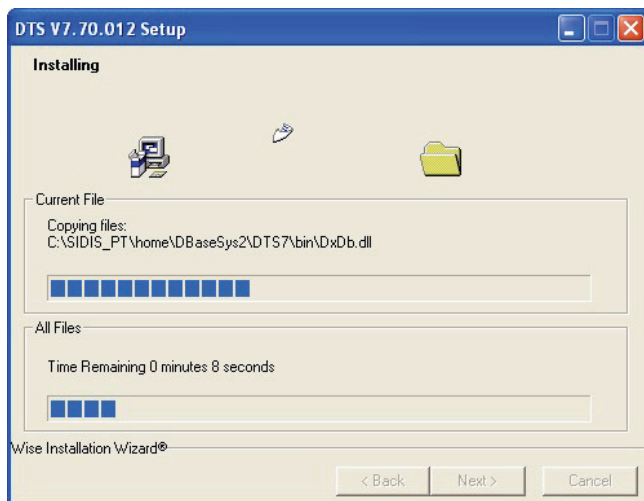Image 3-2 Installation of the diagnostics software
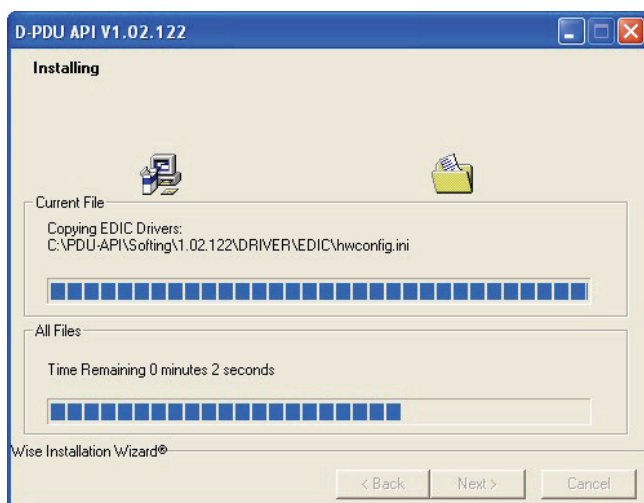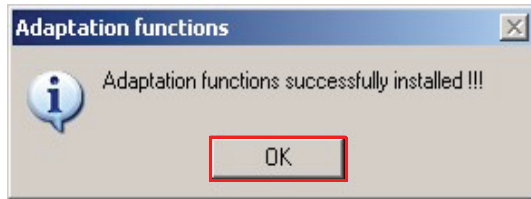

Image 3-3 Installation of the DTS software

Image 3-4 Installation of the D-PDU software

- The ready message appears:

5. Click on the "**OK**" button with the left mouse key.

The software was successfully installed. The program icon **Adaptation Functions** and **VC Configurator** were installed on the desktop.

Image 3-5 Program icons

Depending on the process or configuration of the installation, the PC may have to be restarted (rebooted) at the end of the installation process. This will be displayed by a relevant message.

The following programs have been installed after the installation:

- – VC Configurator (Vehicle Communication Configurator)
- – Adaptation Functions

The **VC Configurator** serves for the setting/parameterization of the interface for the diagnostics interface used.

Adaptation Functions represents the actual vehicle diagnostics and initialization software. It is also called "diagnostics software" and also "base software".

Information for the initial start-up and the vehicle brand data installation may be found in Chapter 5.
Prior to this, the general operation of the screen menus / windows will be described in Chapter 4.

3.3   Uninstalling the diagnostics software

For uninstalling, it is sufficient to uninstall the program "adaptation functions". The VC configurator and the other installed programs are automatically uninstalled.

Proceed as follows to uninstall:

1.   Click on the "**Start**" in Windows XP.
2.   Select **Settings** and open the **Control Panel**.
3.   Double click on the program **Add or Remove Programs**.
4.   Click the **Change or Remove Programs** button.
•   All of the installed programs will now be displayed.
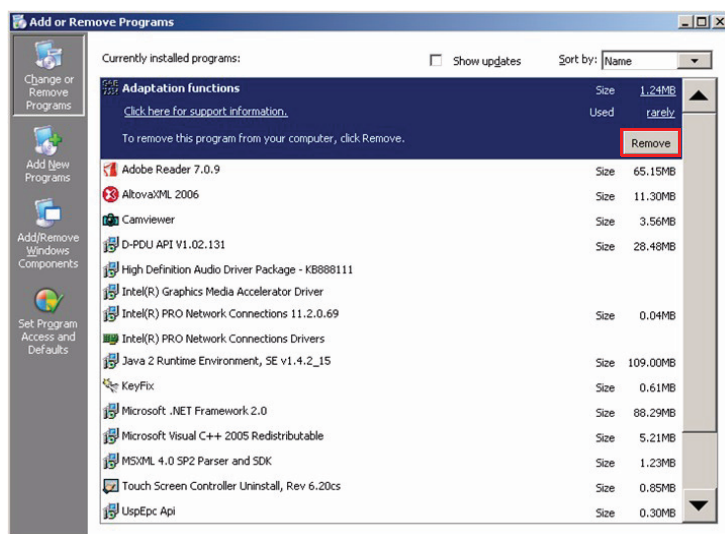5.   Select the **Adaptation Functions** software.

Image 3-6 Uninstall diagnostics software

6.   Click on the "**Remove**" button.
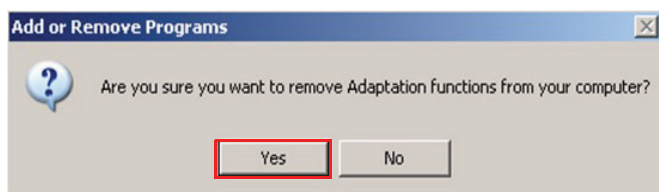•   A security query will appear:

Image 3-7 Input command "Delete software"

7.   Acknowledge this with **Yes**.

The complete diagnostics software will now be automatically uninstalled from the PC; this will take about 5 minutes.
The uninstall routine can now be closed.

4 Menu Navigation

4.1 Menus

The graphic displays on the screen are called "menus". They display all of the information and control functions.

The menus displayed by the software usually have the same structure:
A bar with control elements is located in the lower part (the navigation bar), the center and largest part is taken up by the working window, in which you make your selection or enter values. The two information windows are located above the working window.
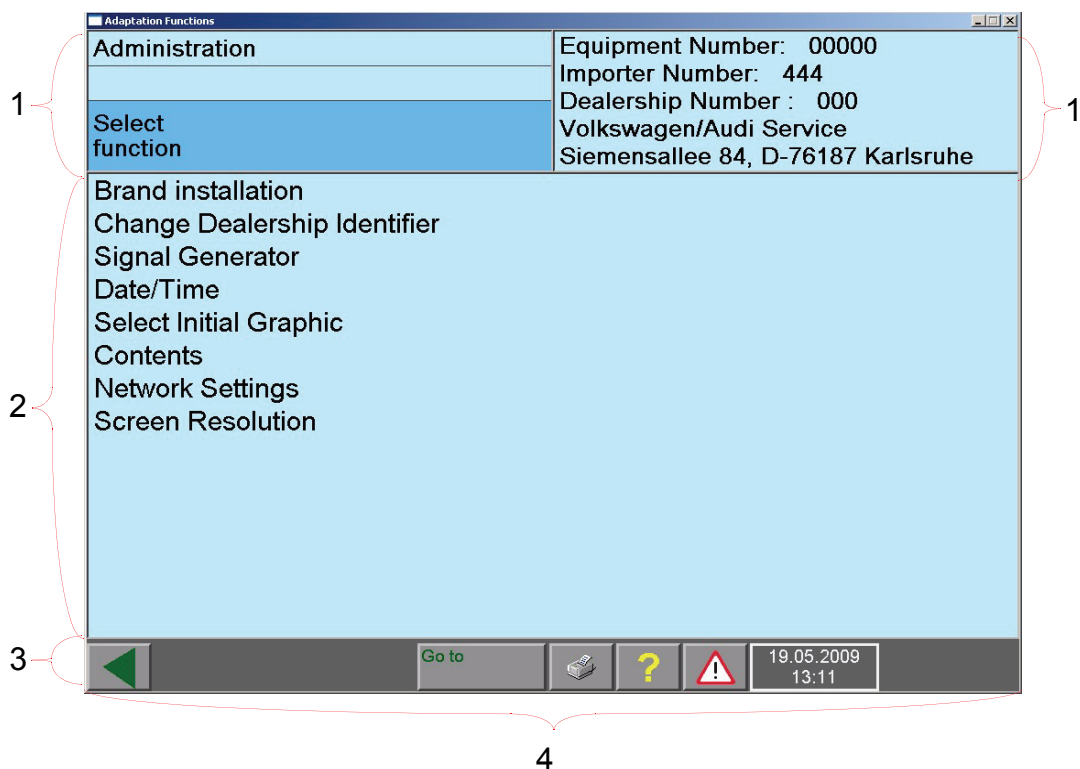

Image 4-1   General menu structure

1. Left and right information windows
2. Work window
3. Navigation bar
4. Menu (screen display)

4.2   Left and right information windows

Most menus have two information windows located above the work window.

ℹ	**Note:**

The contents of the work and information window illustrated in this operating manual are merely examples and do not necessarily have to correspond with the contents of your software.

4.2.1   Left information window

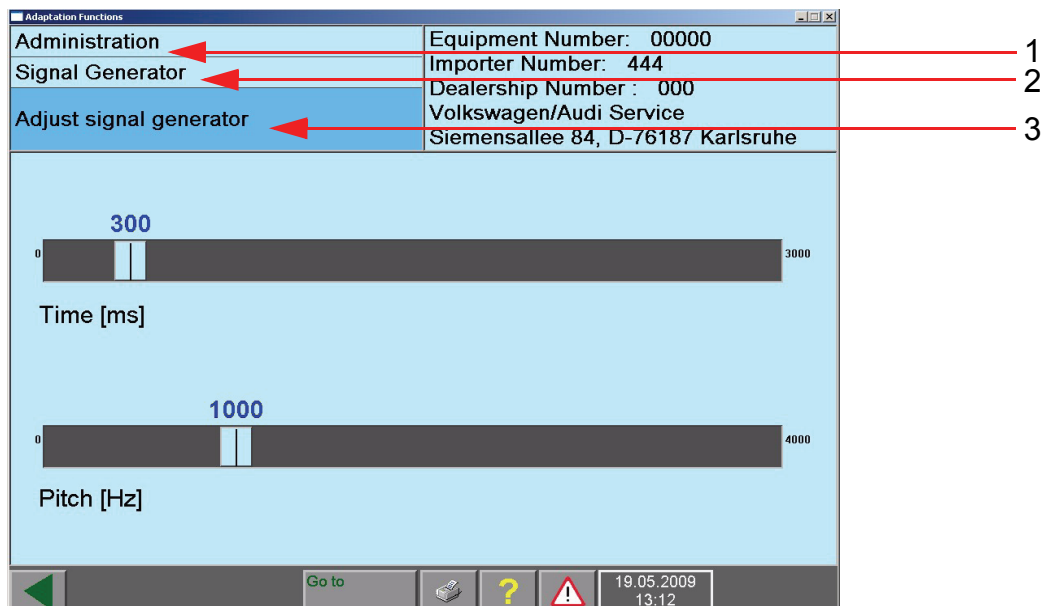The left information window displays the following information:

Image 4-2   Display in the left information window

1. Name of operating mode (Example: Adaptation functions, administration).
2. Name of the function currently activated in this operating mode (example: signal generator).
3. Operating instructions (e.g.: set signal generator) or detailed information on the function.
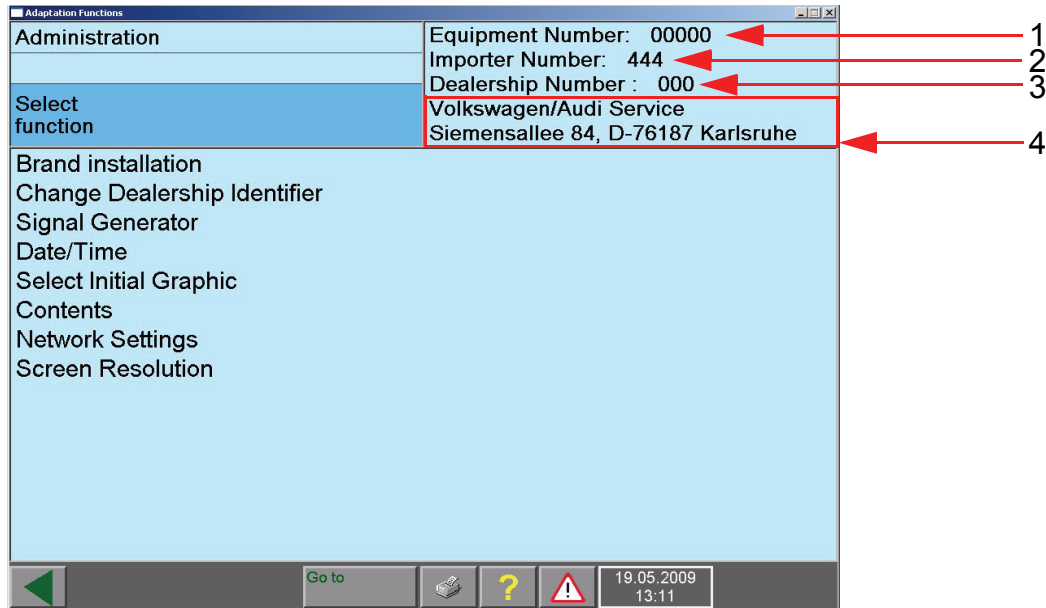
4.2.2   Right information window

Image 4-3 "Administration" menu in the right information window

The following is displayed within the administration:

1. Unit number: This number is issued under the Adaptation Functions at the selection and licensing check of a vehicle brand. The number also depends on the PC used. If a vehicle brand selection has not been made, the number still has not been defined.

2. Importer number: This number is permanently assigned (444).

3. Dealership Number: This number is issued under the Adaptation Functions at the selection and licensing check of a brand. If a brand selection has not been made, the number still has not been defined.

4. Dealership identifier: The dealership identifier of your shop (name and address) that can be changed at any time is located here, Section 5.4.

The following is displayed within the **Adaptation Functions**.

−   The right information window shows results or the previous selection (example Image 6-3).

4.3   Work window

The work window takes up the largest part of the menu. The display changes according to the operating mode and current progress. Here is an example of the work window with a view of the functions of the administration.

Furthermore, functions are listed or the progress control of function programs is shown.
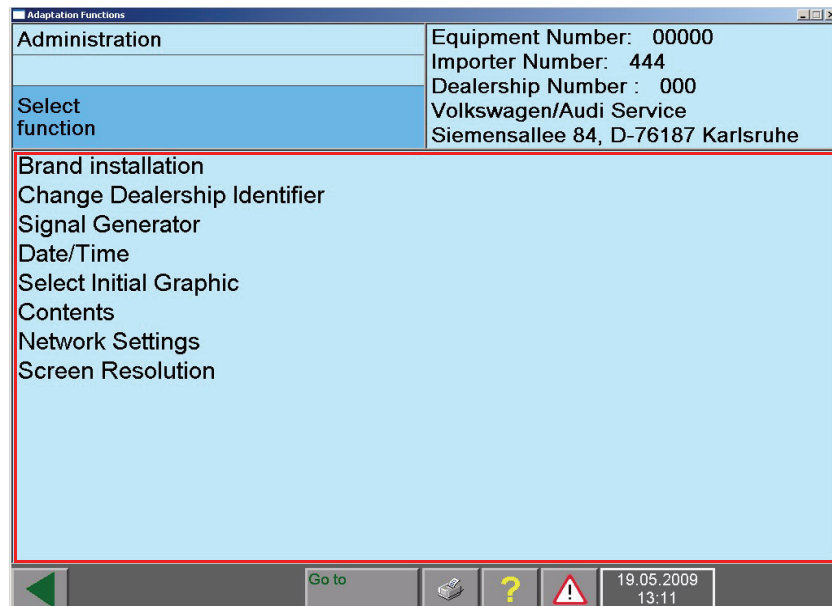

Image 4-4 "Administration" menu

4.4   Navigation bar

The navigation bar is located in the lower part of the menu. You can call up help and service functions with the buttons in this line. The navigation bar contains a various operating buttons as well as a date and time display. The number of buttons depends on the menu and its current status.

Image 4-5   Overview of control buttons in the navigation bar (example)

You can activate the desired button so that the software performs the relevant command. The buttons in the navigation bar, if available, have the following function:

Schedule 4-1 Buttons of the navigation bar

Button	Designation
	You can interrupt any current function or return to the previous menu by using the "**Back**" button.
	You can start any current function or return to the next menu by using the "**Next**" button.

Go to	This button opens the "**Go to**" destination menu. The menu items offered depend on the current operating mode and function of the software.
	
	• If you press "Cancel", you will go to the first menu of your operating mode.
	• If you press "Exit", you will return to the starting menu.
	• If you press "Administration", you will go to a limited number of administration functions. You can also use these functions in other active operating modes, such as "Adaptation Functions". Afterwards, press the appropriate button on the navigation bar to return to the original operating mode. The following functions are currently available
	   – Change Dealership Identifier
	   – Contents
	   – Network settings

Schedule 4-1 Buttons of the navigation bar

Button	Designation
	For the print options, see Section 4.11.
	You are calling up the help function of the software, see Chapter 8.
	You are calling up general warnings ("Caution", "Warning") and references.

4.5   Control buttons

Only the control buttons, which are currently needed, appear in each menu. You can select various functions with these buttons. You can see, if the button was activated or not by its color. If the button is dark, it is pressed e.g. activated.

Button is pressed,
Function is active

Button is not pressed,
Function can be activated

You have selected this button.
The desired command will be executed
as soon as you release this button.

You can see this button on the screen,
however, you have not selected it.

4.6 Selection bar

After selecting a line in the work window or in a dialog box, it will be highlighted by a grey selection bar. The text segment you selected will change to white.
In most cases, the next menu will be called up as soon as you have selected the selected line.
If this is not the case, the software will give you the opportunity to select more texts.
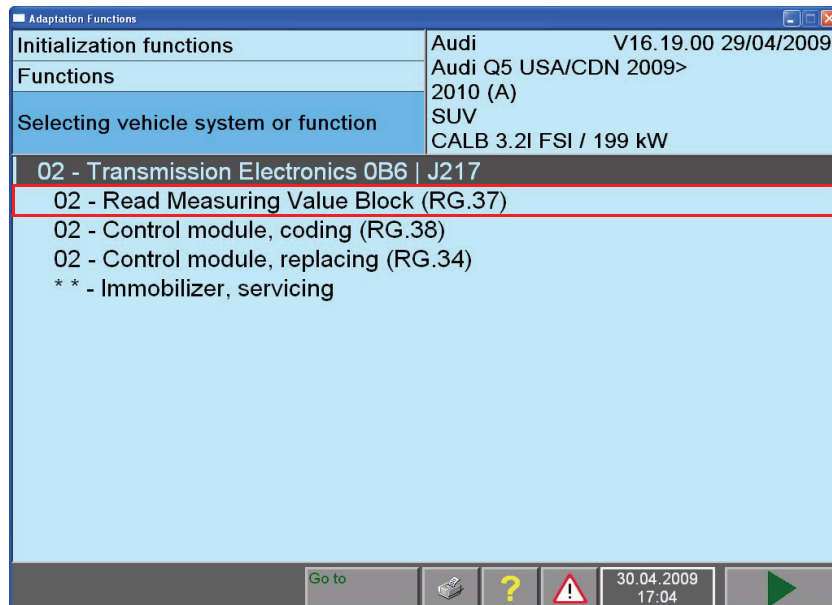Select all texts that you would like to mark. Activate the "Next" button to reach the next menu.

Image 4-6 "Function selection bar" menu

4.7   Dialogue box

A dialogue box is a small menu that is inserted above the main menu. Additional information, control options and error messages are displayed in the dialogue box, in order to perform additional steps within the selected program.

Exit operating mode

The work can be ended ("Exit") or it can be continued ("do not Exit").

Note:
If exiting, all diagnostic data is erased.
The diagnostic protocol can be subsequently printed as needed.

Do not exit   Exit
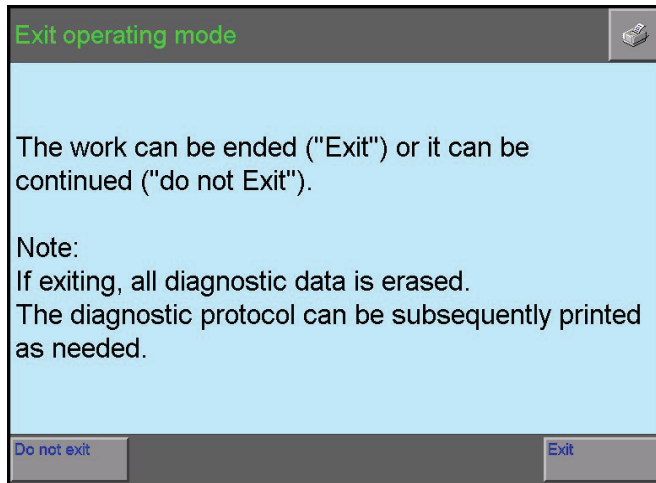
Image 4-7   Example of a dialogue box

Note:

The control buttons of the main menu cannot be selected as long as a dialogue box is open. You must first press a button in the dialogue box, in order to close it.

The following buttons may appear in the dialogue boxes:

Schedule 4-2 Buttons of the dialogue boxes (selection)

Button	Designation
Cancel	You cancel a process and return to a previous menu.
Display	Allows you to display image or text documents.
Exit	You are ending an operating mode and are returning to the system start menu.
OK	You confirm the work process or dialog with "OK".
Pause	Work is briefly interrupted and then continued.
Close	The dialogue box will be closed.
Overview	You will be shown a selection list. You can select the desired text or procedure there.

Schedule 4-2 Buttons of the dialogue boxes (selection)

Button	Designation
	Printer icon: Starts a screen printout which sends what you see on screen to the selected output medium, see Section 4.11.

Help also appears in a dialogue box. See Chapter 8 for operating instructions.

4.8   Scroll bar

If the complete text cannot be shown in a dialogue box or menu, a scroll bar will appear on the right-hand side. It consists of a scroll bar and two arrows. The length of the scroll bar shows you, if it is a large or small document. The smaller the scroll bar is, the larger the amount of text that is not displayed. In order to read the text, select the scroll bar and move it up or down. The desired text becomes visible. However, you can also move it line by line. If you select "move arrow down" (▽), the text moves up by one line. If you select "move arrow up" (△), the text moves down by one line.

4.9   Slide control

You can change the settings directly with the slide control.

Image 4-8   Slide control

Select the lighter colored control button and pull it slowly to the left or right, depending on whether you want to set the value higher or lower.

If you touch the track to the right or left of the controller, the value is reduced or increased.

4.10   Using the Virtual Keyboard

The diagnostics software has a so-called "virtual keyboard" for entering numbers and letters, which you can operate by selecting individual buttons. The structure of the virtual keyboard is adjusted to the current application.
A virtual keyboard consists of an entry field, which provides various keys and a display field alongside or above, which displays the text that you have entered.

Note:

You can also enter characters via a keyboard connected to the PC.

You can enter numbers, special characters and letters, when the virtual keyboard appears on the screen. You can read your entry in the field above the keyboard. In order to enter text or a number sequence, sequentially press the desired buttons.

Note:

An acoustic signal may sound, if the text or the number sequence of your entry is too long.
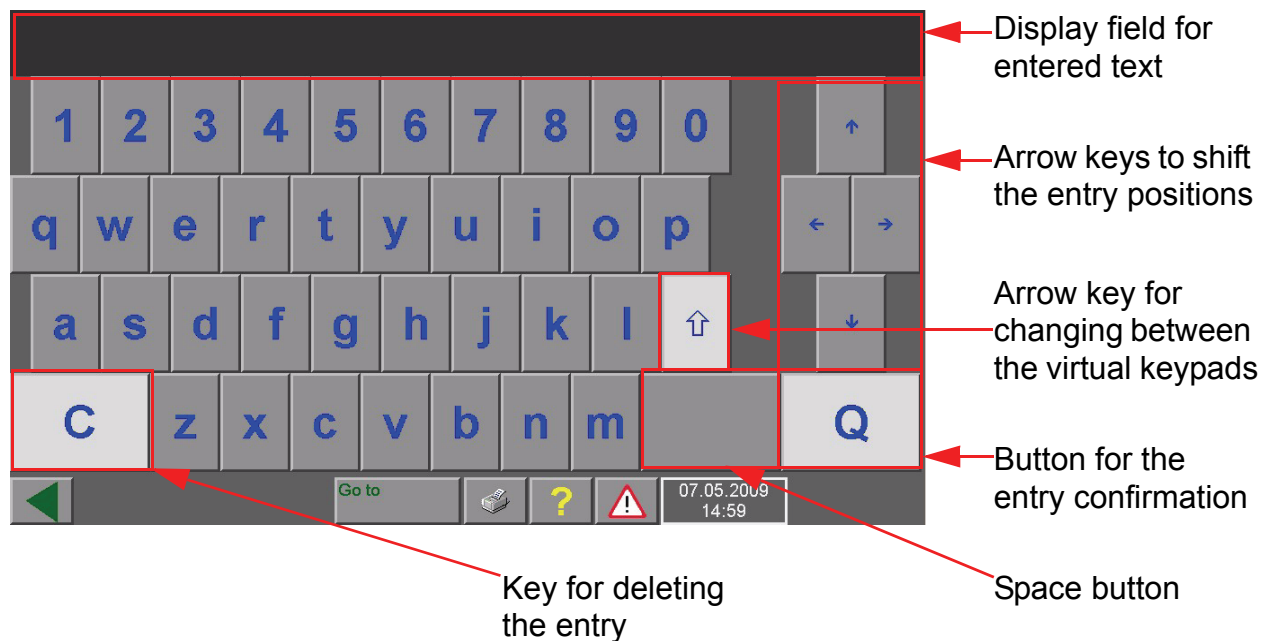

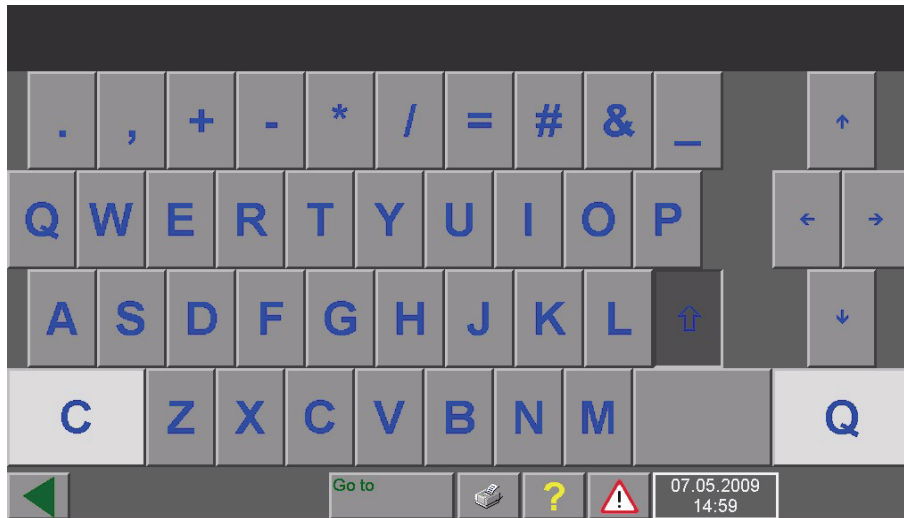Image 4-9   Virtual keyboard (lowercase letters) with display field

Image 4-10 Virtual keyboard (capital letters) with display field

Another virtual keyboard with special characters can be displayed in the log-in menu to the erWin server by using the shift key. Keypads without lettering do not have any function.
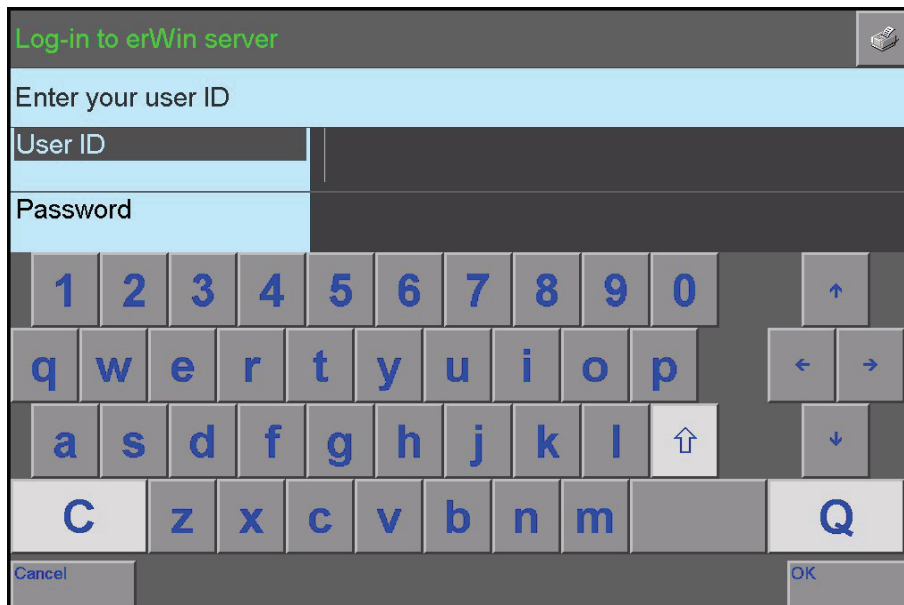
Image 4-11 Virtual keyboard (special characters) with display field

4.11   Printing

If you select the "Print" button in the navigation bar, various options to send the results to a printer/ memory are available via a sub-menu. Before using a printer, verify that it has been set correctly. Printing is always sent to the set default printer.

- **Screen**
  Prints the area of the screen that is currently visible. This option is always possible.

- **Enter vehicle identification number (VIN)/license plate number**
  The vehicle identification number and license plate number of the currently diagnosed vehicle can be entered in the "Adaptation Functions" via the inserted alphanumeric keyboard prior to issuing the log, so that these are included in the log and a clear assignment will be able in the future. The vehicle identification number also appears in the file name and when saving logs on removable disks and their entries are required for the storing process. This data is deleted after you quit the operating mode.

- Additional printing functions (diagnostics protocol, ...) may be found in the appropriate sections of the corresponding operating modes.

- A dialogue window appears when starting a print job (screen, report, ...) to define the order in more detail. See Chapter 4.11.1.

4.11.1 Print/Save" dialogue window

A dialogue window appears when assigning a print job, the control buttons of which depend on the current situation:
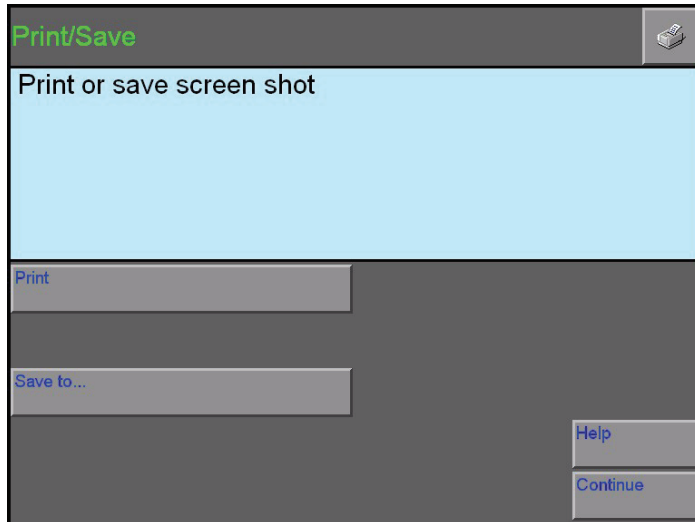

Image 4-12 Example of the dialog box for a print job

You can specify several printouts in succession, for example, one to the printer (paper) and one to data media. The dialogue remains open until to activate the "Next" button. The selected print job is displayed under the title bar.
If you press the printer icon in the title bar, another dialogue box appears, in which you can define the output of the desired screen content.

Functions of possible control buttons:

- **Printing**
  Printout via the configured default printer.
- **Save under ..**
  Output to a selectable directory on the hard drive or another data medium.
- **Enter vehicle identification number (VIN)/license plate number**
  If the vehicle identification number and the license plate number are required for issuing a report, these values are requested here, if they have not been entered previously.
  If the vehicle identification number has already been entered, you must only enter the vehicle's license plate number. Repeating the entry is no longer possible. You will have to restart the printout after such a data request and the corresponding input.
- **Help**
  Help for the dialogue.
- **Next**
  Closes the dialogue box.

5 Initial start-up of the diagnostics software

Proceed according to the following sequence for the initial start-up of the diagnostics software:

5.1 Diagnostics Interface

Connect the diagnostics interface for the power supply to the vehicle and connect it to the PC via the USB port (usually).
Download the USB driver for the diagnostics interface, if necessary, and perform any other required actions.
See the diagnostics interface /1/ for the actions to be performed.

5.2 VC Configurator

The VC configurator serves to configure the vehicle's communications interface between the diagnostics interface and the diagnostics software.
The VC configurator detects the diagnostics interface used and automatically configures the communications interface. The configuration must only be checked and possibly changed in the event of communications failures.
Start the VC configurator by double clicking on its icon on the screen platform or the start menu, in order to change the configuration.
Additional details regarding the VC configurator may be found on the erWin portal, Section 1.4.
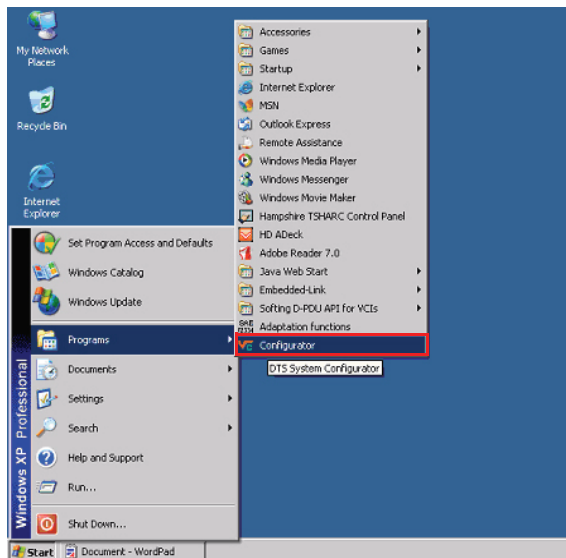The VC configurator can be reached as follows via the start menu:

Image 5-1 Start menu with VC configurator

5.3   Initial start-up of the software

1.   Click on the desktop icon **Adaptation Functions** to start the software.

•   An information window opens when starting the program for the first time with the notice that the application has to be restarted.
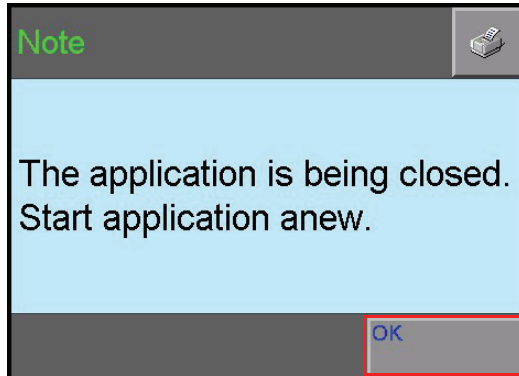
Image 5-2 Confirm the information window

2.   Click on the "**OK**" button and restart the program.

•   The consistency check appears at the start-up. See Section 5.7 for information and for errors.
     The registration window and virtual keyboard appear.

3.   Click on the first **display field** with the mouse.
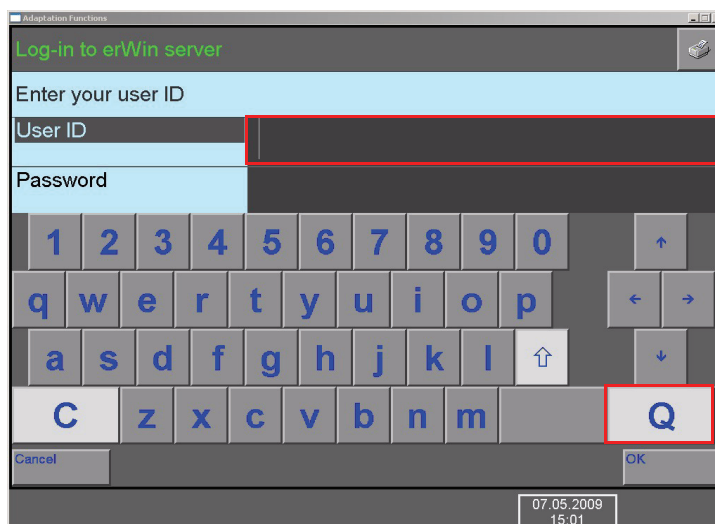
Image 5-3 Registration window for the erWin server

4.   Enter your **erWin user ID** and the **password** (see Section 1.4) via the keyboard (see Section 4.10). The "Q" button is used for storing the entries.

- The menu of general warnings and information follows.
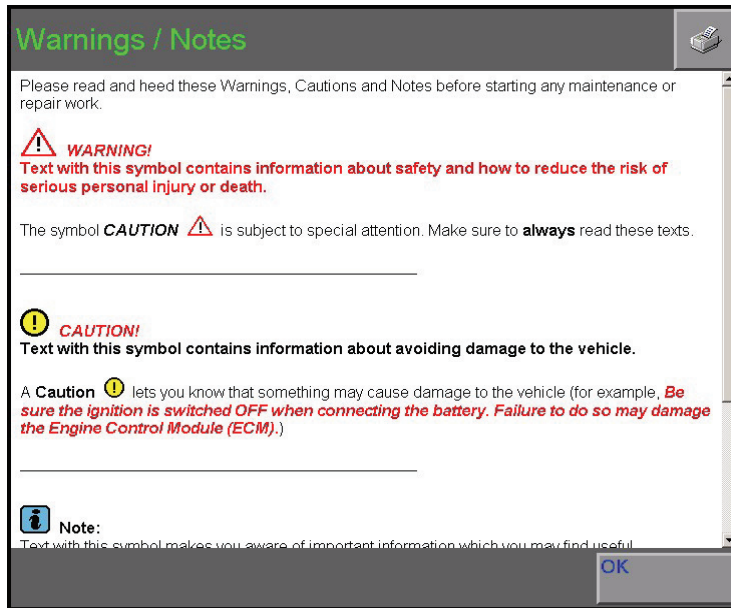
Image 5-4 "Warnings/information" menu

5. Read the information and then close the window by using the "**OK**" button.

- The start menu appears.

Image 5-5 Start menu as at the initial start-up

The following settings must be performed during the initial start-up:

1. Change Dealership Identifier
2. If necessary, adjust the date/time
3. Install vehicle brand data

5.4   Changing the dealership identifier

You are hereby entering your dealership identification (name and address of your shop) in two lines. The information remains stores and can be updated at any time.

The entry of the dealership identifier is important to identify your shop, see Section 4.2.2. The entry is also issued on a diagnostics report.

1. In the start mask, click on the "**Administration**" button.
•   The "**Administration**" menu opens.
2. Click on the "**Change dealership identifier**" line.
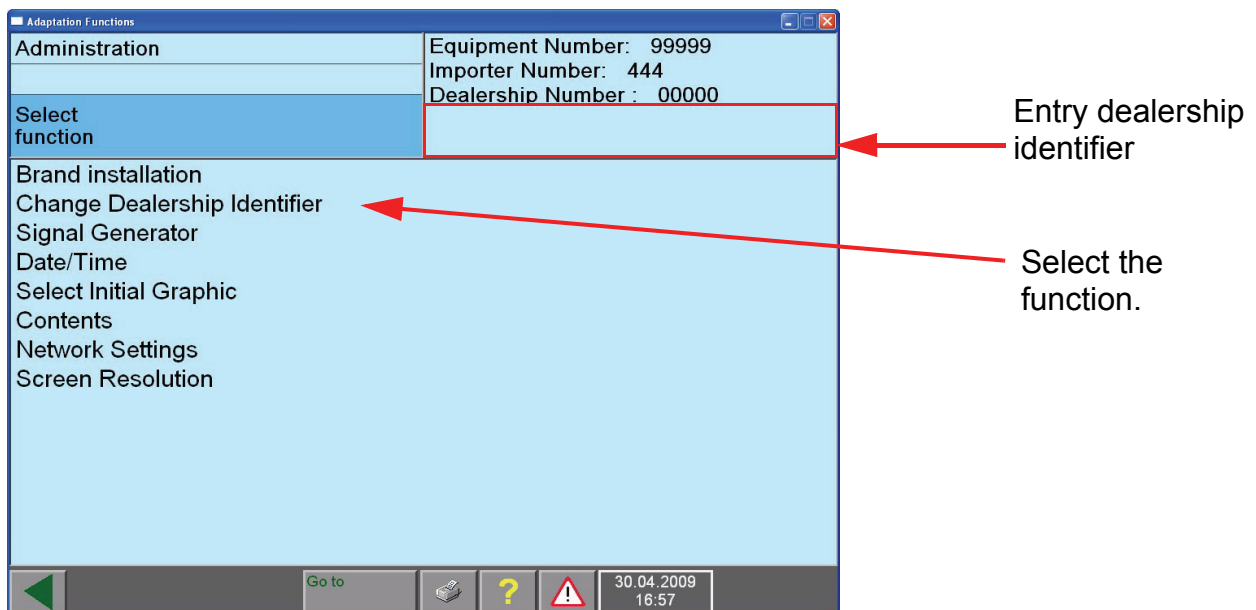
Image 5-6 Maske "Administration", Funktion auswählen

•   The virtual keyboard for entering the information opens.
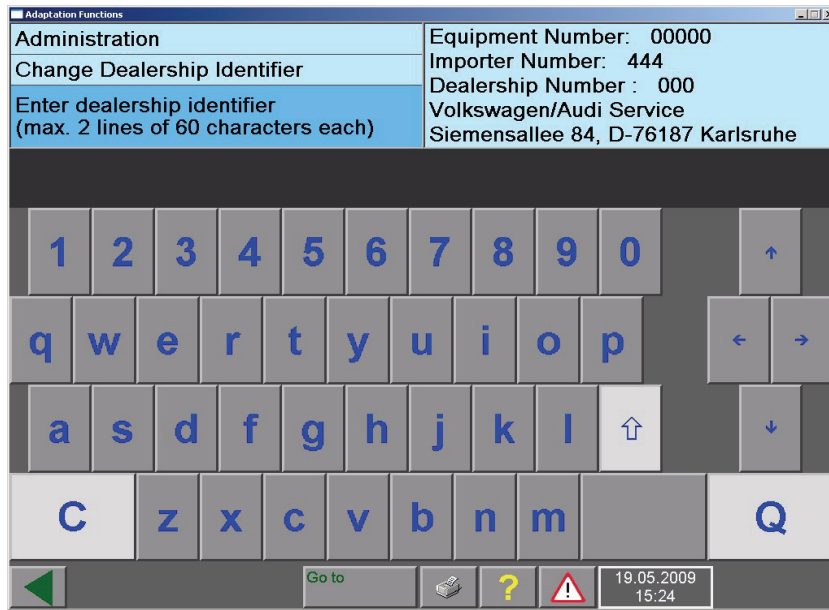
Image 5-7 "Enter dealership identifier" menu

3. Enter your **dealership identifier,** name and address in two lines.

4. Switch to the second line by using "Q" after entering the first line. After this entry, the dealership identifier is accepted with "Q" and displayed in the upper right-hand information window.
    See Section 4.10 for operating the virtual keyboard.
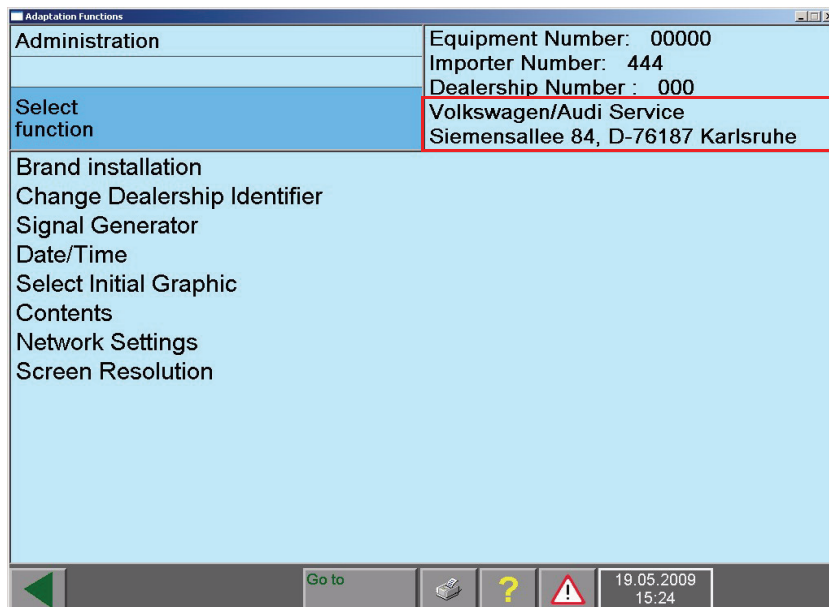
Image 5-8 "Administration" menu with a display of the dealership identifier (example)

5.5   Change date/time

If necessary, change the system date and the system time in the "Administration" operating mode. See Section 5.5.1 for setting the date.

Note:

A once set date can only be overwritten under certain conditions.

1. First, click on the "**Administration**" button.
2. Click on the "**date/time**" line.
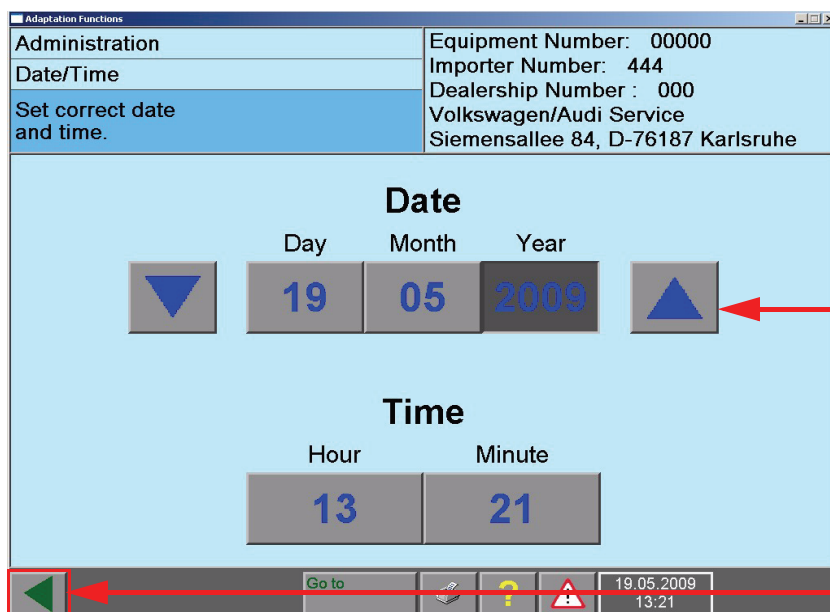
The arrows appear after contacting a key.

Accept the entry.

Image 5-9 "Date/time" menu, setting the date

3. Click the **Back** button to accept the entry.

4. Click on the "**OK**" button to accept the warning.

Accept the warning
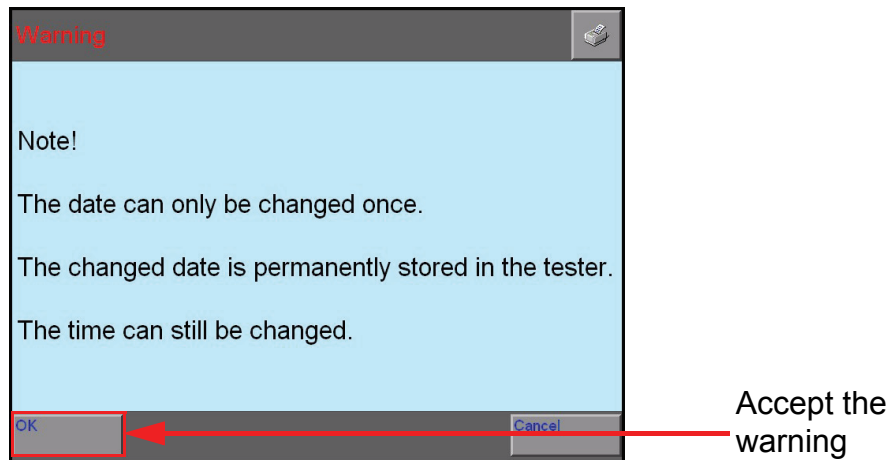
Image 5-10 Warning

-   You will see the set date in the navigation bar of the menu.
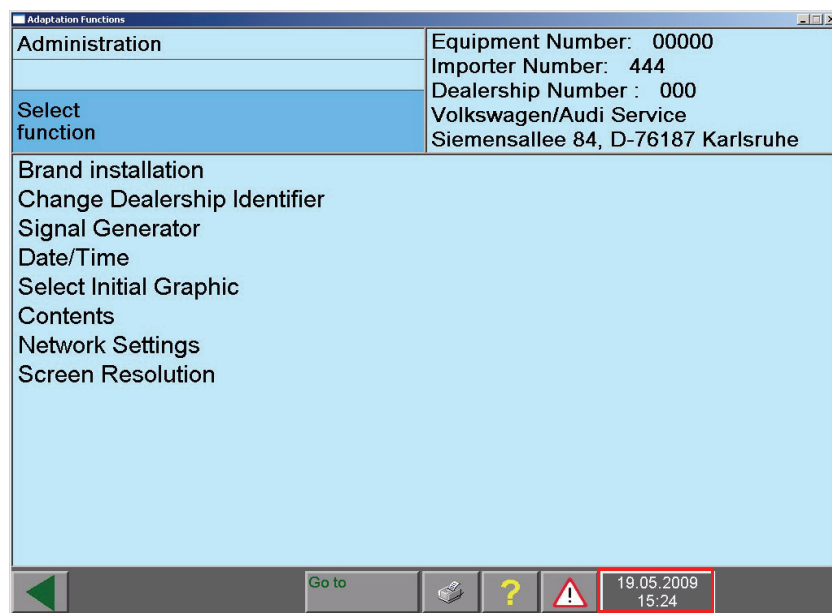
Image 5-11 "Date/time set" menu

5.5.1   Setting the date

The date is displayed in the sequence according to the European standard: day - month - year. If you would like to change the date sequence, select the display field for the day, month or year. The respective value can be set via the two arrows that appear on the left and right of the display.

The left button sets the selection back by one.

The right button sets the selection forward by one.

5.5.2   Setting the time

In order to change the time, select the display field for the hour or minute. The respective value can be individually set via the two arrow keys that appear on the left and right of the time display.

The left button sets the selection back by one.

The right button sets the selection forward by one.

5.5.3   Accepting the date/time

Note:

A set date/time is stored on the PC and is continuously updated from that time on. Values that are from before the last stored date cannot be incorporated. If you attempt to store a previous date, an appropriate message will appear.

You will return to the previous screen menu by using the "**Back**" button. Set values will be applied as system date/time. The current time values are always displayed in the navigation bar at the lower edge of the work window.

By pressing the "Go to" button, you can "Cancel" or "Exit" the time input and exit the menu without changing the system time.

5.6   Vehicle brand data

In order to use the "Adaptation Functions", you must install the information of one or several ~~e~~ vehicle brands. Vehicle brand data includes brand-specific diagnostics data / programs for the respective vehicle brand.
Only brand information of equal compatibility and language for the base system can be downloaded, see Section 1.5.
If vehicle brand data is not available on CD, it can be downloaded from the internet via erWin, see Section 3.2. vehicle brand data must then be unzipped in a selected directory.

5.6.1   Unzipping vehicle brand data

The zipped files (.exe files) must first be unzipped after downloading the vehicle brand data from the erWin server.

1.   Store each of the **.exe file** in a separate directory.

2.   Double click the respective **.exe file** to automatically extract the files.

•   The following message appears:
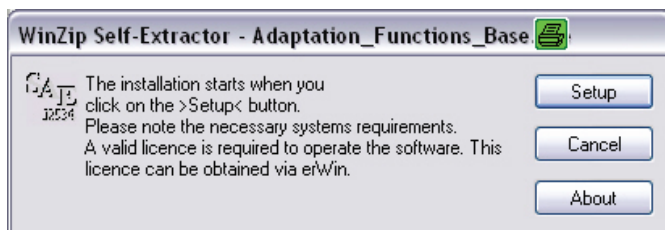
3.   Press **setup** to start the file extraction.
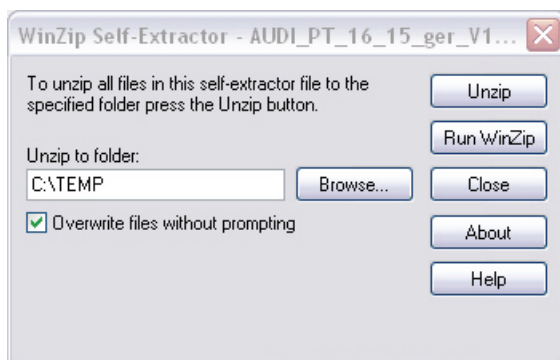
4.   Select your target directory in which the files will be saved by using the "**browser**" button.

5.   Click on the "**Unzip**" button.

6.   The unzipped vehicle brand data can now be stored directly from this directory with the diagnostics software.

5.6.2   Install vehicle brand data

1. In the start menu, click on the "**Administration**" button.
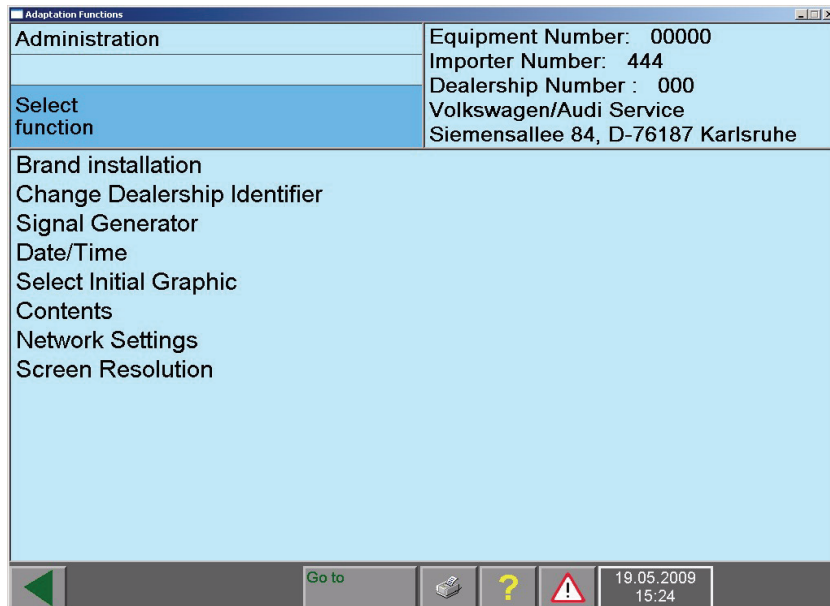
Image 5-12 "Administration" menu

2. Click on the "**Brand Installation**" function.

*   The search folder menu opens.
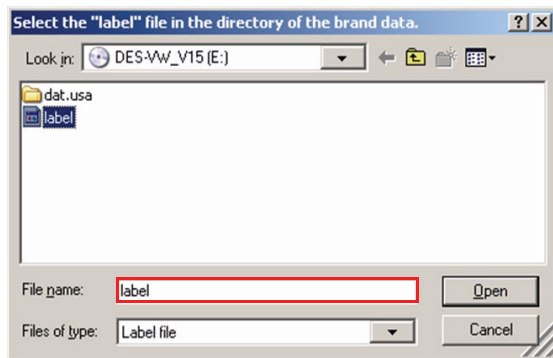
Image 5-13 Select the vehicle brand data file path

3. Select the **Label file** on the file path of the extracted **vehicle brand data**.

4. Click on the "**OK**" button.
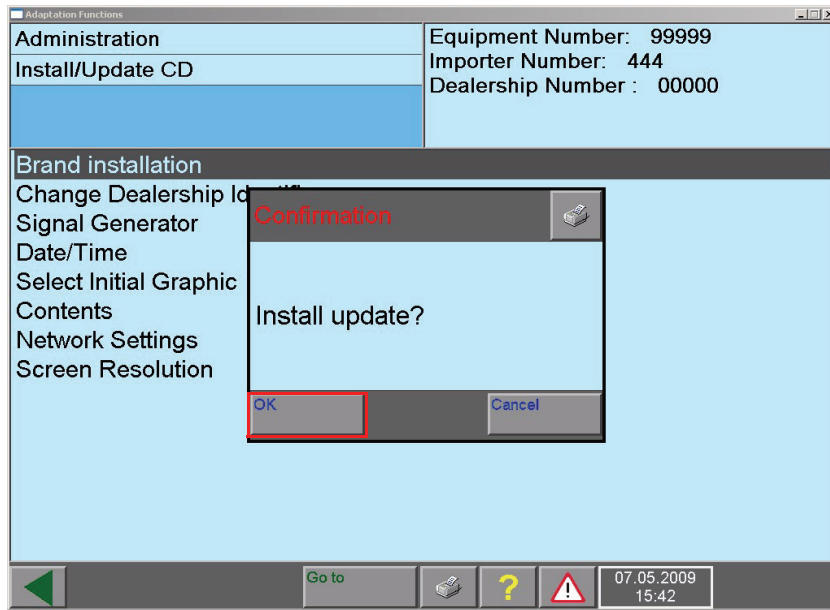
Image 5-14 Installation of vehicle brand data

5. Click on the "**OK**" button in the dialogue box confirmation.

• The contents of the brand folder are now being installed. A complete installation can last several minutes. As soon as installation is complete, the PC will end the operating mode "Administration" and return to the start menu.

loaded vehicle brand data

Image 5-15 Start menu with installed vehicle brand

6. Install additional vehicle brand data, if necessary, by repeating steps 1 through 5.

• The brand installation is now completed.

5.7   Consistency check

The consistency check is performed automatically at each start of the diagnostics software. The diagnostics software is checked for the proper content/destroyed files here. Defective files can develop when abruptly closing the software, if the data could no longer be properly saved.

Consistency test. Please wait...

c:IDIS_PT\home\bin\tx_bmp32.flt
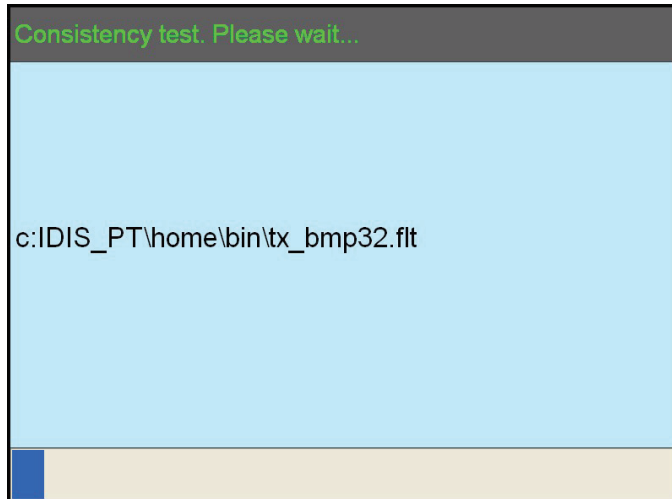
Image 5-16 "Consistency check" menu

If an error should occur during the consistency check, it will be displayed by an error message. Press the "display protocol" button in the message to view the log file. All checked files and their status are listed in the log file.

Consistency test

Consistency errors were found. Press <Display log> to display the consistency test log.

Display log   End program
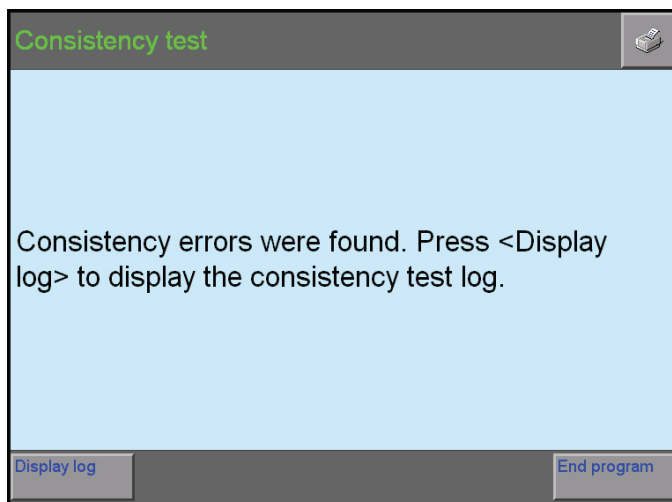
Image 5-17 "Consistency check error message" menu

When the error is repeated, you must reinstall the diagnostics software, see Section 3.2. However, first completely uninstall the software, see Section 3.3.

5.8   Problems during start-up

5.8.1   Incorrect user ID and/or password entry

The user ID and password are requested when starting the software. You have three chances to enter these correctly. If you enter these incorrectly three times, the software closes automatically.
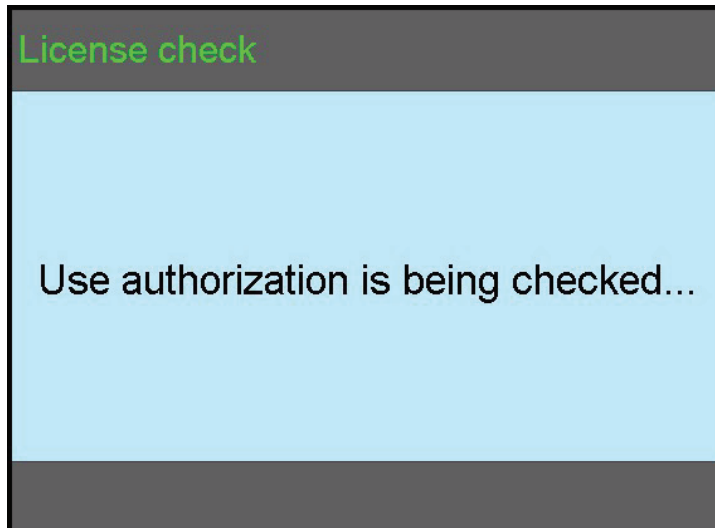
Image 5-18 "License check" menu

5.8.2   Missing license (user authorization)

If the license server is available, however, no valid license is available or the license has expired, the following message will appear:
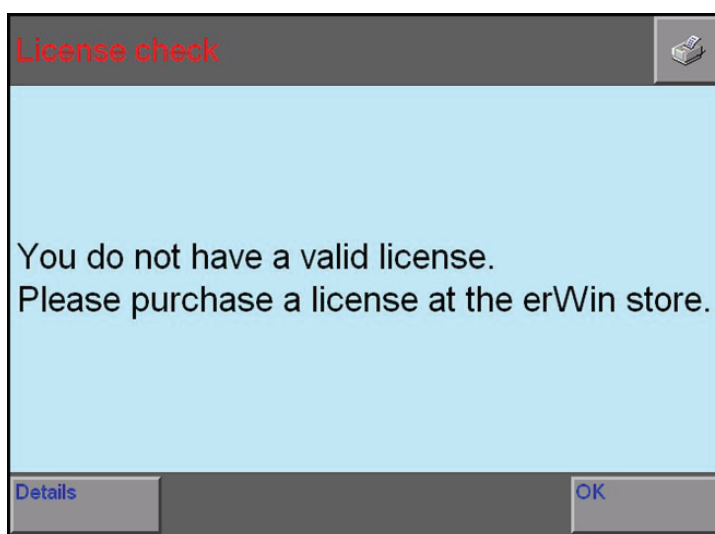
Image 5-19 "License check" menu missing license

5.8.3   Outdated diagnostics software or vehicle brand data

An automatic check will be made at the end of the license check to determine, if you are using the current diagnostics software and vehicle brand data. If a newer version is available, you must download it from the erWin server, see Section 1.4

Version check

Your base data are not up-to-date.
The software function can't be guaranteed.
Please update your data in the near future.

Details   OK
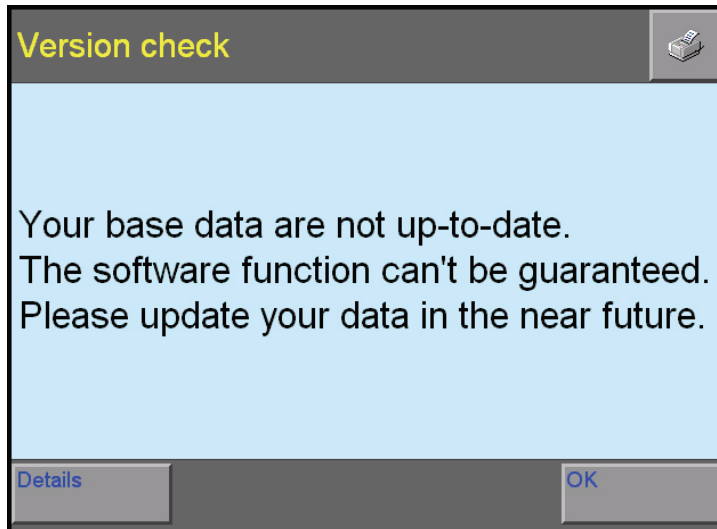
Image 5-20 "License check" menu, outdated base system or vehicle brand data

5.8.4   Incorrect network connection

You must verify that the PC has a functioning standard connection to the internet. If this is not the case, a registration to the erWin server will not be possible.

Malfunction online-connection

The license server is not available.
Please check the connection infrastructure.

Malfunction code: 12007

OK
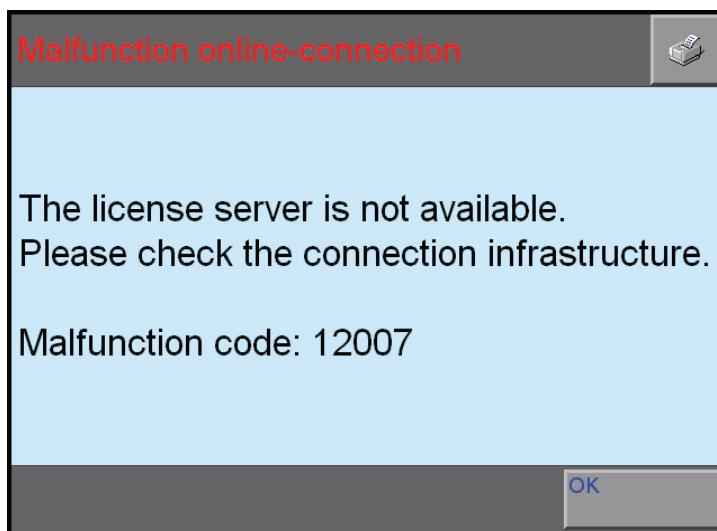
Image 5-21 "Online-connection error" menu

6   Adaptation Functions

6.1   Overview

The operation mode "Adaptation Functions" allow you to directly access the vehicle diagnostics and start-up functions that match the vehicle according to the vehicle identification (VIN) and selection of the vehicle system (engine, transmission, ...).

Note:

You can only use the operating mode "Adapt Functions", if the data of at least one brand was installed, Section 5.6.

---

(1) Start menu

The "Adaptation Functions" are launched from the start menu.

(2) License check

A license check and a check for the current software will be performed first after selecting the brand.

(3) Vehicle identification, base features

After completing the license check, you will reach the brand of the vehicle identification and you must select and confirm the model, model year, version and engine specifications (base features).

(4) Display vehicle systems

The vehicle systems, which are available for the selected vehicle, are displayed for selection.

(5) Display functions for the vehicle test

The functions stored for the vehicle system are displayed for selection.

(6) Select the function

Select the function.

(7) Enter the function in the test plan

You can now enter additional functions in the test plan or immediately start the function test in the test plan.

(8) Perform function test

Perform the function test. The status of the function will be located in the test plan after the test.
Additional functions can now be selected and set in the test plan. However, additional function test located in the test plan can now be started or already completed tests can be repeated.
Services for printing and documents for the function tests are now also available to you.

Print functions

The following print functions are available:

- Screen
- Diagnostics protocol
- Function test protocol
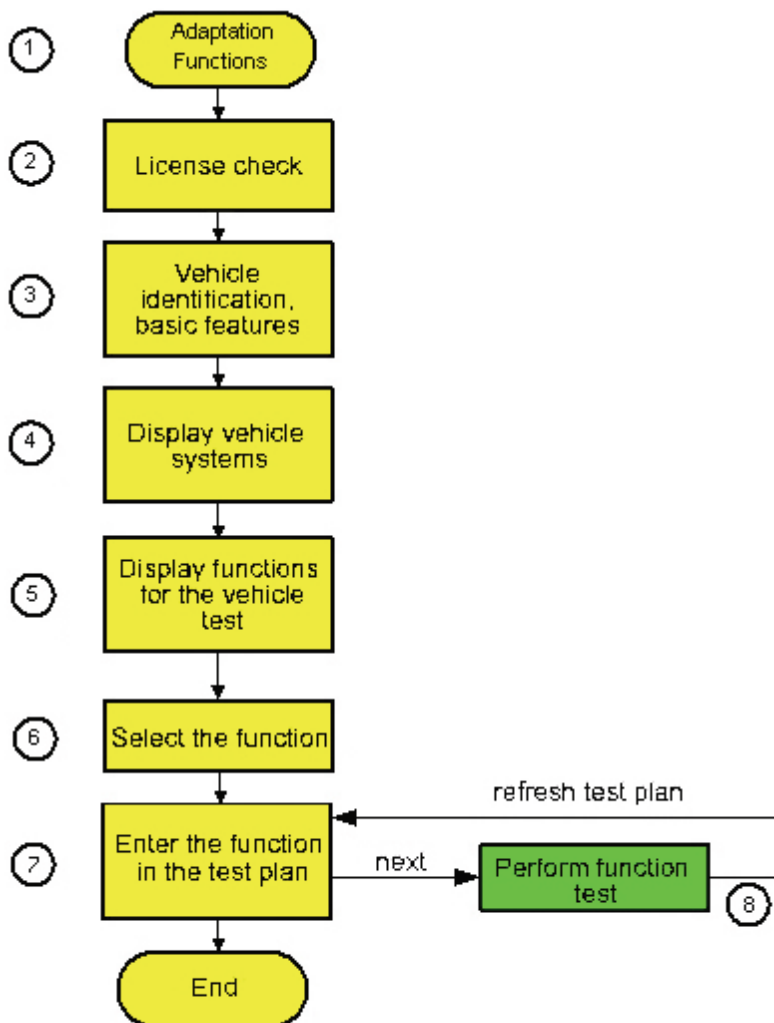
Image 6-1   Sequence of the Operating mode "Adaptation Functions"

6.2   Vehicle identification

1. Select the "**Adaptation Functions"** button in the start menu.
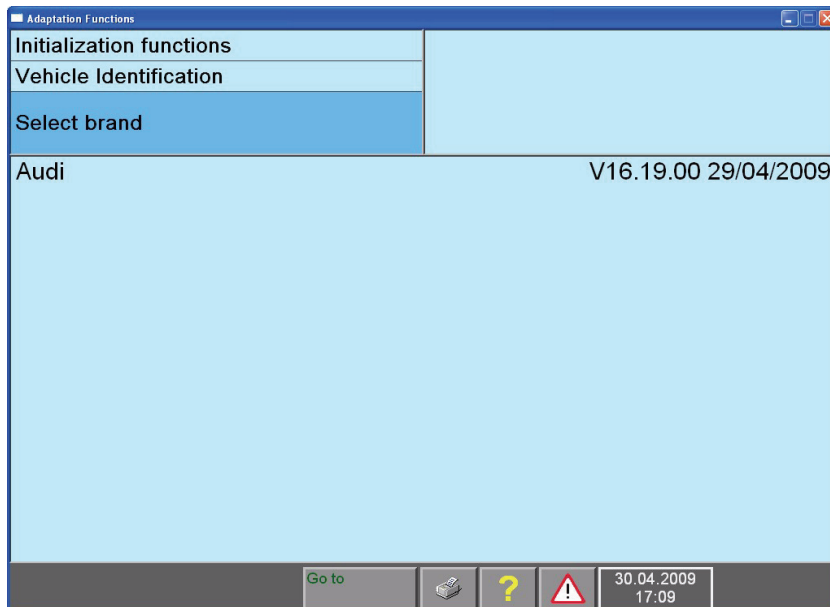
Image 6-2 Select base features" menu - selection of the brand

2. Select the **brand**.
*   A license check is performed when selecting the **brand**.
3. Following this, enter the **base features** of the vehicle.

> ### Note:

The vehicle identification serves the clear designation of the vehicle concerning its base features (model, model year, version, engine code)
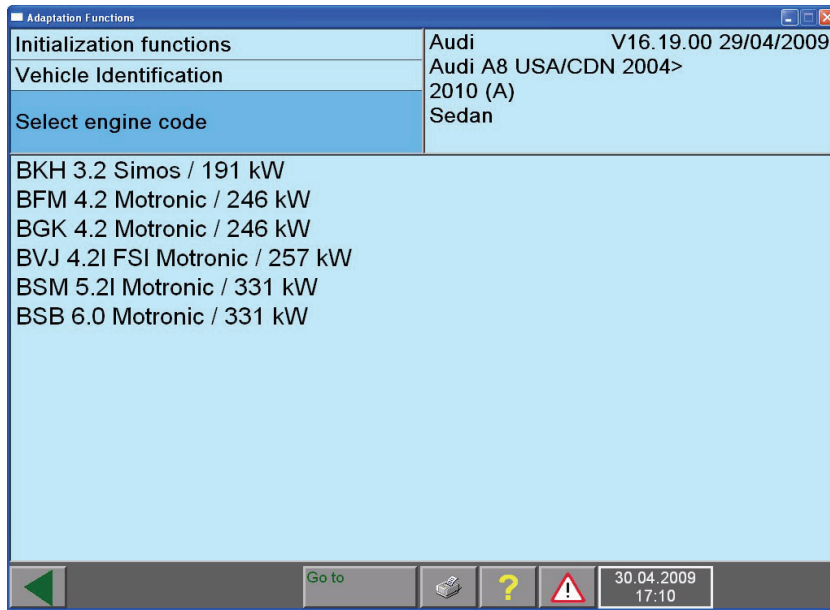
Image 6-3   Select the engine code in the "Select base features" menu.

The following confirmation menu concludes vehicle identification.
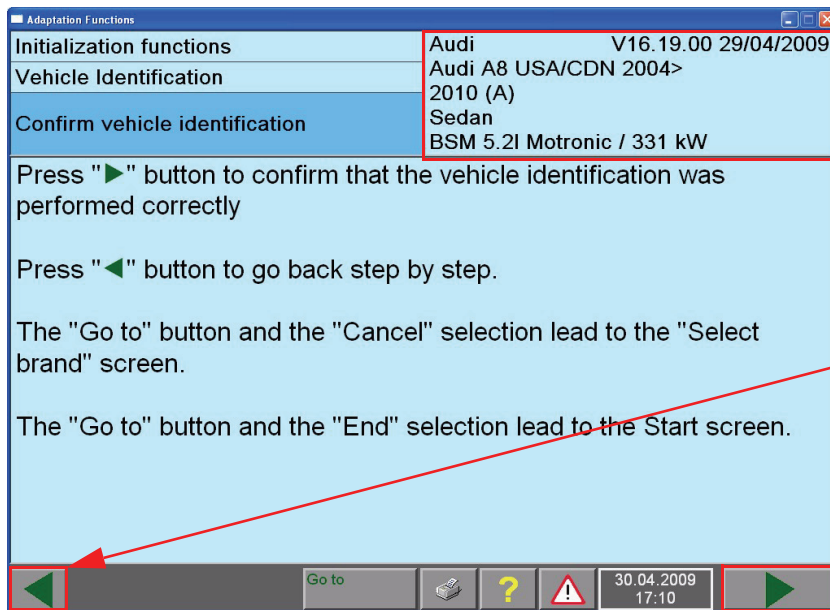
Carefully check, if the vehicle to be diagnosed corresponds with the detailed data.

You can change to the previous menus by using the "Back" button.

"Next" to confirm the selection.

Image 6-4   Confirm the vehicle identification" menu

4.   Check the entered base **features**.

•   If it is invalid, you can change to the previous menu by pressing the "**Back**" button to make any necessary changes.

5.   Press "**Next**", if the entries are correct.

•   The next function selection will be displayed.

The diagnostics data belonging to the specified vehicle are loaded from the hard drive to the working memory and communications will be established with the vehicle.

6.2.1   Diagnostics interface is not connected

If you have not connected the diagnostics cable with the vehicle at this point, you will be prompted to connect it after the confirmation of the vehicle identification. To do so, you will be shown a document displaying the installation location of the diagnostics connection.

6. Press "Next" after connecting the **Diagnostics interface** between the vehicle and the PC.

The software will again attempt to establish communications with the vehicle. Another message will appear if communications are still not available, which will be repeated until successful or until you abort due to continued failures. In either case, the software switches to the function selection.

6.3   Selection of functions

The function selection starts with the file of the vehicle systems. The related function tests that can be selected are listed after selecting a system.

Documents that can be queried can also be stored for individual function tests. See Section 6.3.1.
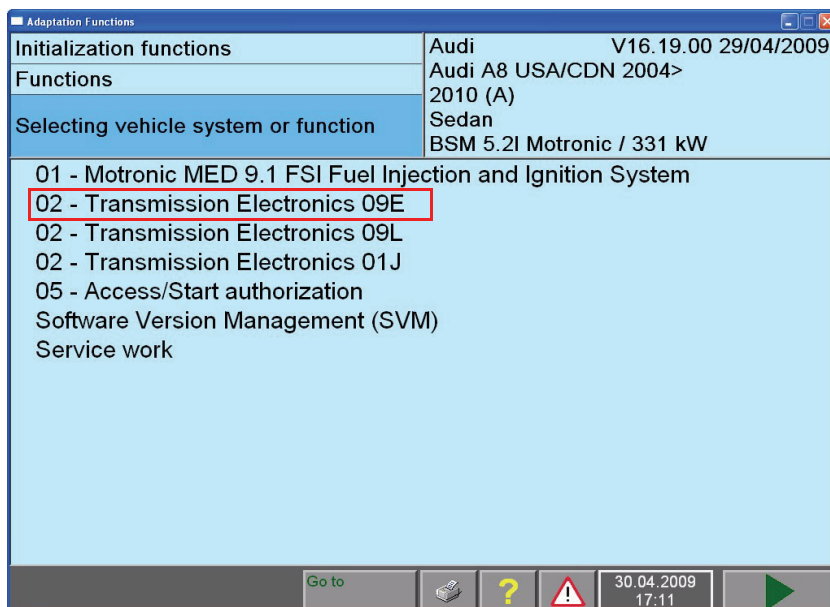
Image 6-5   Select the "Select vehicle system" menu (example)

1. Select the required **vehicle system**.

When selecting functions, the screen layout evolves into levels, which are marked by indents to the right from the previous selection.
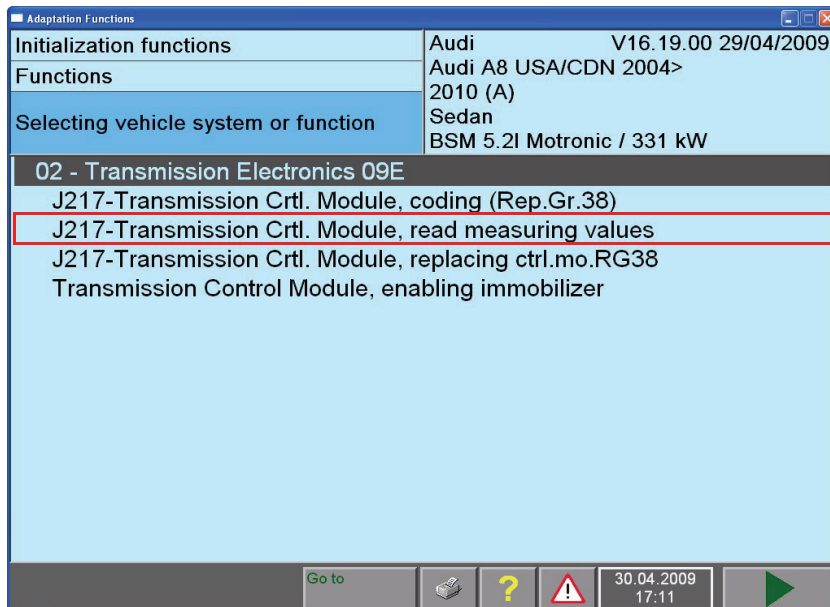
Image 6-6 Select the "Select function - 2nd level" menu (example of a function selection)

Each indent signifies a selection in a menu. Select a higher level, if you would like to go back.

2. Press the "**Next**" button to enter the test plan.

- The selected function is displayed in the test plan.
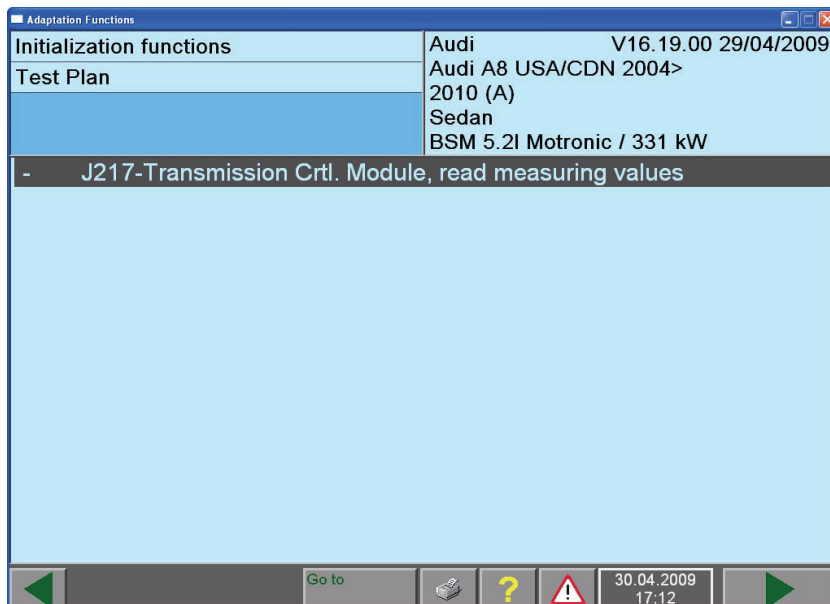
Image 6-7 "Test plan" menu (example)

6.3.1   Documents

One or several available documents, such as the installation location, installation instructions, etc. can be selected for certain functions in the "function selection" menu. For this purpose, select the relevant function and then go to "Documents". After the first selection, Go to "Documents" is permanently available for selection in the go to menu.

Documents (graphics, text) are displayed in the work window. If they are larger than the work window, they will be provided with a vertical scroll bar.

Documents are also found in the function test menus. There, they are directly made available via a row of up to six numbered and labeled buttons (see Section 6.5.1).

Note:

If you have reviewed the documents in the function selection, you can also reach these directly from the current function test via the Go to menu, "document" selection. The documents offered are not part of the current function test, but always a part of the last-selected document selection within the function selection.

Example for a document view in the "function selection":
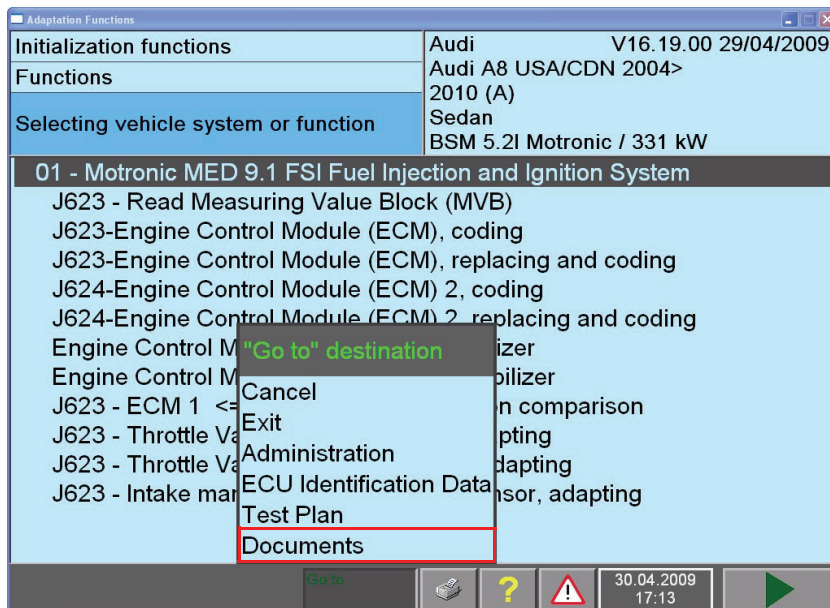
Image 6-8   "Documents" menu selected as "Go to" destination

This is followed by the display of available documents for the selected function.
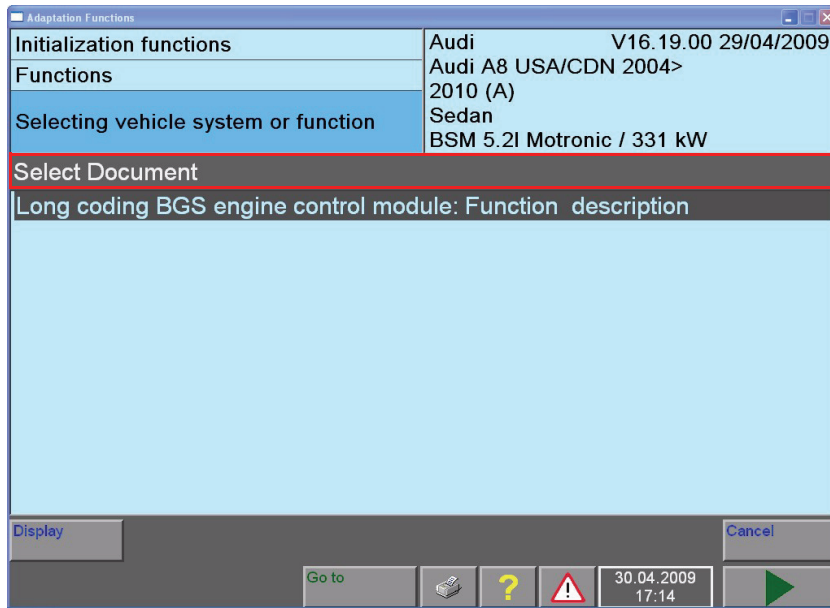
Image 6-9 Select document" dialogue box

The documents that can be displayed are listed in the "Select document" dialogue box. Select the desired document and press the "**Display**" " button. The document will then be displayed.
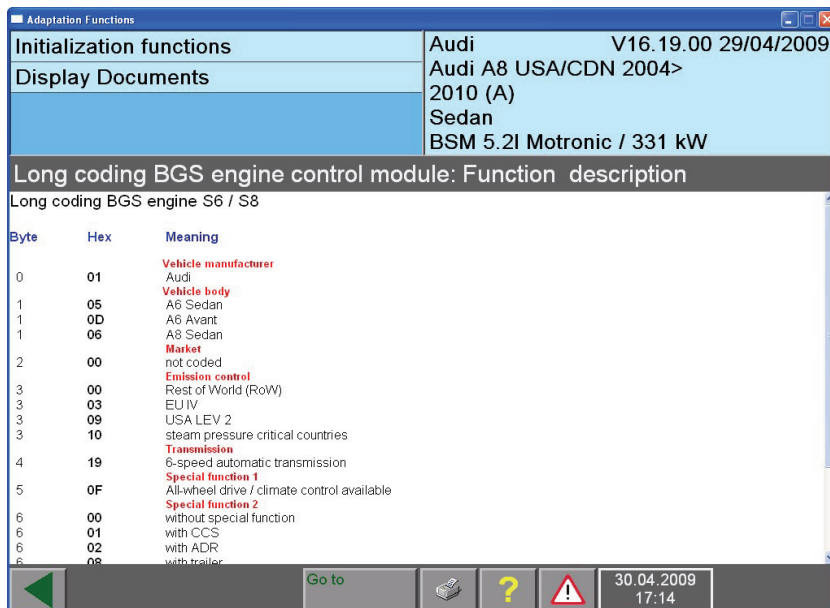
Image 6-10 Document display

The displayed document can contain hotspots (sensitive rectangular red areas). If you touch a hotspot on the screen, you will be shown the detailed document.

6.4   Test plan

The selected functions are shown in the "test plan" menu (see Test plan with several functions to be tested). The sequence and selection of the tests will be determined manually. Their status is shown to the left of the functions.

1.   Select a **function**.
2.   Press the "**Next**" button to start the highlighted function.

- A new license check will be performed every time a function is started.
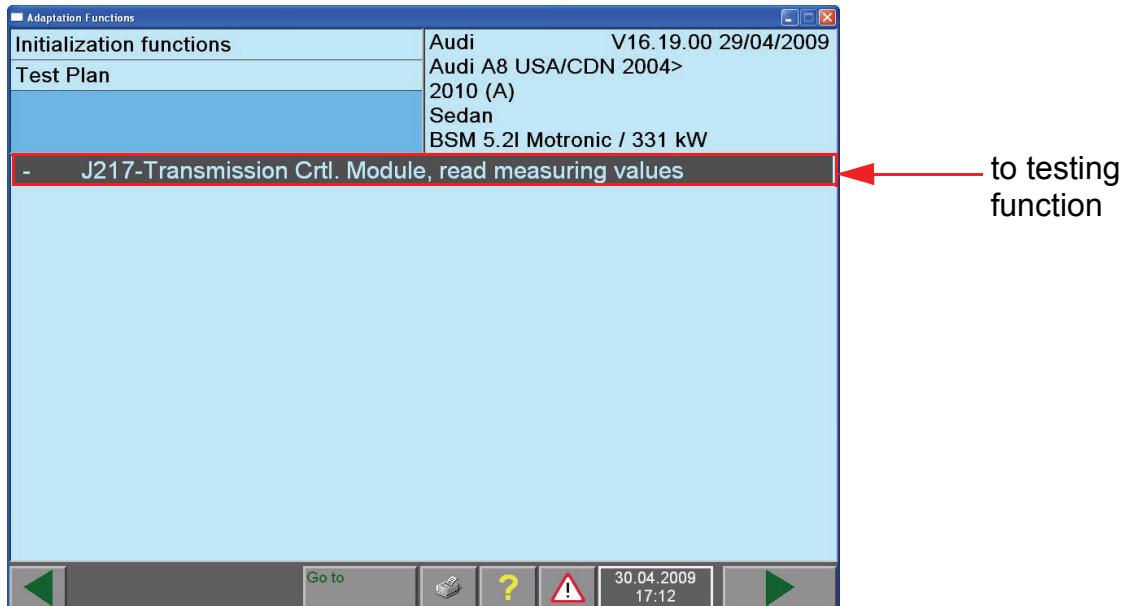
Image 6-11 Test plan with several functions to be tested

If all function tests in the test plan were completed, it is considered to be processed. You can also repeat function test by selecting the function test again and activating the "Next" button. You will return to the function selection to the selection of additional functions via the "Back" button.

Tabelle 6-1 Designation of icons for the status of the function test

Icon	Designation: Function test
-	Not yet carried out
OK	OK
OK!	This status is a special case: A function test may end with the status "Diagnostics established". In this case, the diagnostics software will not return to the test plan after completing the function test, but present the question: ***Repeat test after repair is completed?*** If you answer with "No", the status becomes "OK"! (already repaired, result not checked) in the test plan entered prior to the function. If you answer with "Yes" instead, the function test is repeated in verification mode (review of the repair). However, this concept requires appropriate program components in the function test, e.g. a short test. If these program components are not available, the entire function test is repeated and the reaction is the same as during the initial activation. You can also start the verification of a function test from the test plan by the repeated selection and the "Test" selection.
OK?	Probably OK. It is impossible to make a statement with a 100% certainty about the result of a function test, since all the results cannot be checked, for example.
X	Not OK.
?	Result unknown or cancelled
$\Rightarrow$	Currently being carried out

6.5   Function Test

> **ⓘ**   **Note:**
>
> The function tests may contain measuring instructions (volts, resistance, ...) for the VAS 5051B diagnostics tester. External measuring devices must be used and the measured results must be reported to the function test via the replacement value entry, since the partially used PCs or other testers do not include internal measuring devices (multimeter, oscilloscope).

Each function test consists of requirements defined in the test. It delivers "OK", "Not OK" or "Test result unknown" as a result.

A menu from a function test is shown in Image 6-12. Each function test consists of self-contained test segments, which can be repeated via the Go to menu after processing. The title of the function test is located in the left information window. The description of the currently running test segment is displayed in the work window as header.

A function test can include the software's communications via the diagnostics bus, as well as measuring instructions. You will be actively involved in the process at this point, e.g. to connect measuring leads, to make decisions or to enter values. For this purpose, the software will provide you with up to two rows of appropriately labeled buttons in the work window, for example. The left row contains the buttons for further processing the test dialogues (see Section 6.5.1); the right row contains up to six numbered buttons for displaying documents.

The diagnostics software will return to the "test plan" menu after completing the function test. There you can select the next function and start this function test or return to the function selection via the Go to menu as an alternative.

A question that has to be answered via the control buttons inserted to the right appears in this example of a function test after the start:
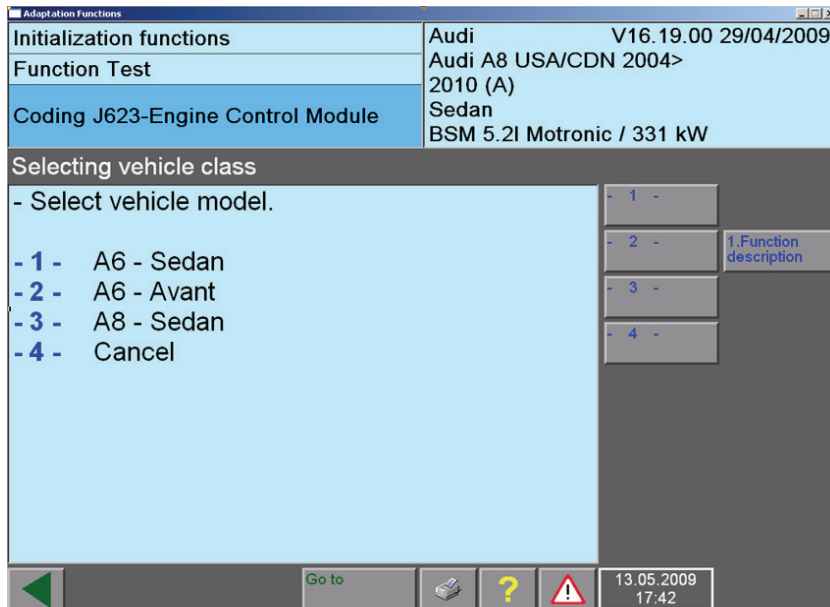
Image 6-12 Function test" menu, question to the user

Different masks appear later in the course of the function test depending on the actual test, e.g. a message with the "Done" button for acknowledgement. On the right, one of six possible document buttons are inserted; here is a "function description":
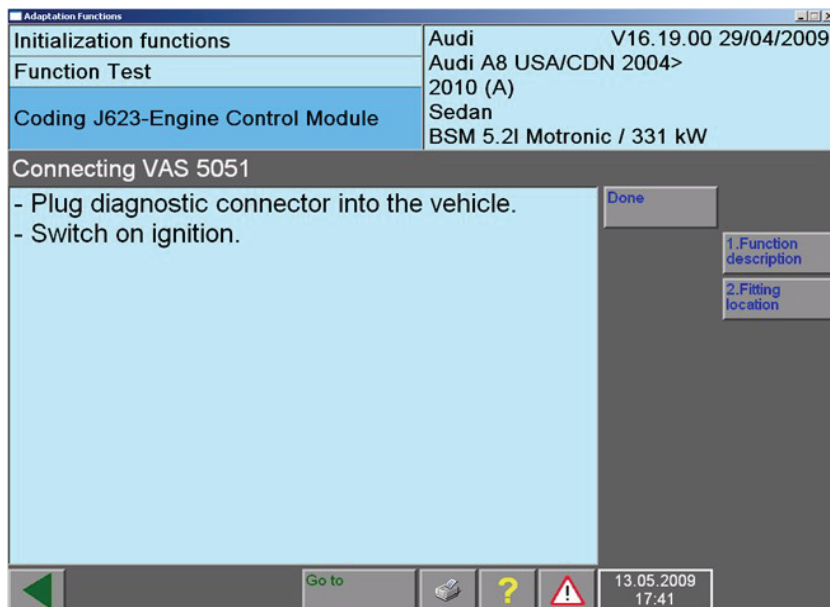
Image 6-13 "Function test" menu ready

At the end of the function test, the "Adaptation Functions" return to the "test plan" menu (see Test plan with several functions to be tested) and there offers to perform additional tests.

6.5.1 Test dialogues

The following types of user/test dialogues are available in the function test:

- Messages to the user with the "Ready" button for continuing with the program.
- Questions to be answered by using the "Yes", "No" buttons or the additional "Unknown" button.
- Decisions with up to eight buttons for branching off on separate program paths.
- Displays of results from a control unit with the "Read" button for starting and/or stopping the cyclical output of those results.
- Displays without a special button for cyclical program sequences (loops) and for any cyclical output of texts or values. A cyclical loop is interrupted by the test program or by pressing a button. Displays without a special button for cyclical program sequences (loops) and for any cyclical output of texts or values. A cyclical loop is interrupted by the test program or by pressing a button.
- Input instructions for entering a numerical value or text via a keyboard that appears on the screen.

All test dialogue steps are only concluded by activating a button that matches the activity, e.g. "Ready", "Yes", "No" etc..

All test dialogue steps can include buttons for displayable image documents. They are displayed by pressing the corresponding button, switching to the document display and then return to the test dialogue step.

6.5.2 Measuring instructions (multimeter)

The bar display contains a numbered scale. A rectangle indicates the tolerance range for the measured value. The measured value appears as a coloured horizontal bar in the numbered scale. If the value is OK (green), the bar will move into the tolerance window. A red bar indicates an incorrect measured value; the display "+++++" indicates an overload (VAS 5051B).

The numeric display also includes the physical unit of measurement.

Measurements are triggered by pressing the "measure" button after creating the specified links and/or the replacement value entry is called up in case of a PC or a tester without any measuring technology.

6.5.3 Measuring instructions for vehicle systems

The vehicle systems supply a wide variety of measured values relevant to diagnostics, which can be interrogated and evaluated in a function test by so-called "measuring instructions". In some cases, measuring results are displayed in a message or directly from the measuring instructions.

Measuring instructions to vehicle systems require functioning communication with the vehicle system in question.

6.5.3.1 Measuring instruction results in a message

As a rule, the measurement results are displayed in messages. The actual measuring instructions are invisible in the background.
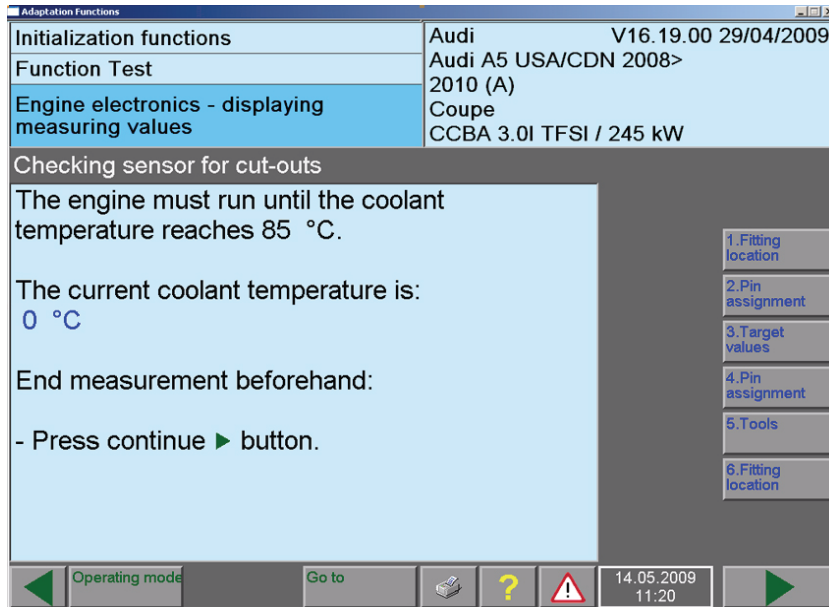
Image 6-14 Message output" menu with a measurement from a vehicle system

Image 6-14 shows a message, which is incorporated in a loop in the function test. The measured value is read from the vehicle system at every pass of the loop and updated in the menu. It is not possible to enter a replacement value.

6.5.3.2 Measuring instructions with direct output

In some special cases, measuring instructions for vehicle systems are also programed as direct output. The display is similar to the measuring instructions for multimeter applications, but with the following differences:

- Instead of the "**Measure**" button, a "**Read**" button is displayed. If vehicle communications are possible, the selected measured value is cyclically displayed in the result field during its activation.

If vehicle communications are not working, a replacement value can be entered manually. Activate the result field to access the virtual numerical keyboard and enter the replacement value. Then press the "**Next**" "button. The "**Read**" button is not used when entering the replacement value.

6.5.3.3   Measured values table

This provides another option of displaying measurements from vehicle systems. The function test can present you with a measured value list for selecting measured values or a preselected selection of measured values for displaying the results.

Select measured values from a measured values table

This display provides you with the option of selecting the desired measured values from a measured values table. Each entry consists of a group number, the number of the display field (not with ASAM-ODX) and the name of the measured value.

The measured values of various control units are offset in color for differentiation.

After selecting one or several measured value, press the "**Ready**" button to change to the next menu to perform the measuring process.
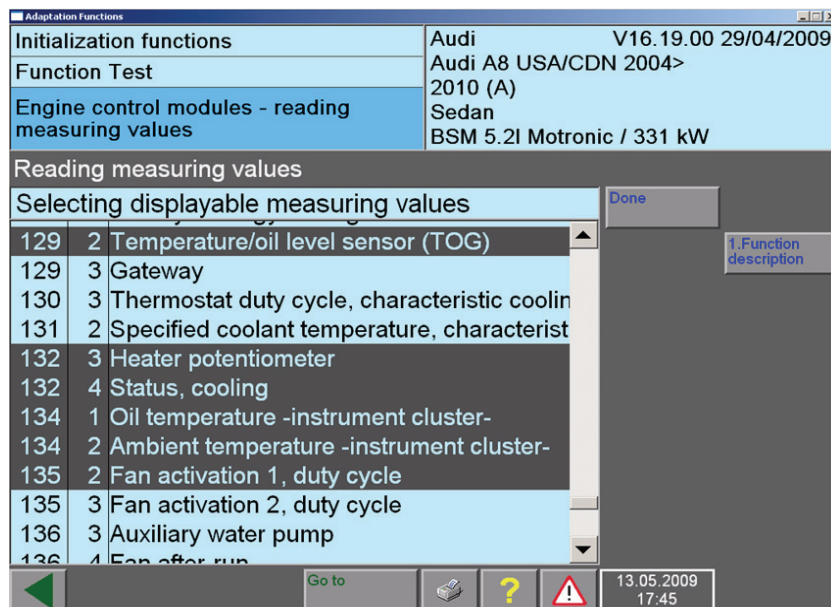

Image 6-15 Select the "Function test" measured values menu

Perform measurement process

You can go to this menu directly from the function test or via the selection list of the measured values table. There can be any number of measured values. The "Result" column is initially empty. Press the "Read" button to read the measured values cyclically from the vehicle system(s).

Information regarding a measured value

You can select a single line. With this, the name of the measured value and the result are displayed again in the long information bar in the lower part of the work window. At the same time a "Message text" button and / or a "Test program" button can appear on the right.

- **Message text**: Information regarding the measured value is provided here.
- **Test program**: If a result is outside the target value and you select the relevant measured value, a function test for an error search can be offered when you press the "Test program" button. If you press this button, the function test is entered in the test plan; you will receive an appropriate message. You can activate this test after the current test.

By pressing the "Go to" button, you can return to the selection list "measured values: read measured values", in order to perform another measured values selection. Press the "Next" button to continue with the function test. In some cases, the measured values table is exited automatically - e. g., if all values are OK. The target values are displayed depending on the measurement process.
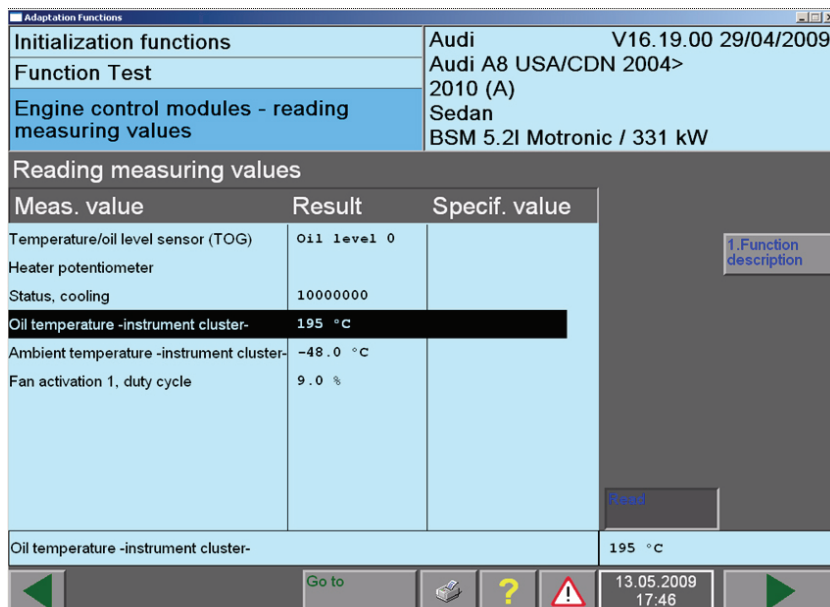

Image 6-16 Select the "Function test" measurement process in progress menu

6.6   Exiting the operating mode "Adaptation Functions"

Exiting the operating mode "Adaptation Functions" is accomplished via the functions that are contained in the "Go to" menu:

- Cancel
- Exit

The "Cancel" function is offered from the "Select type" menu onwards.
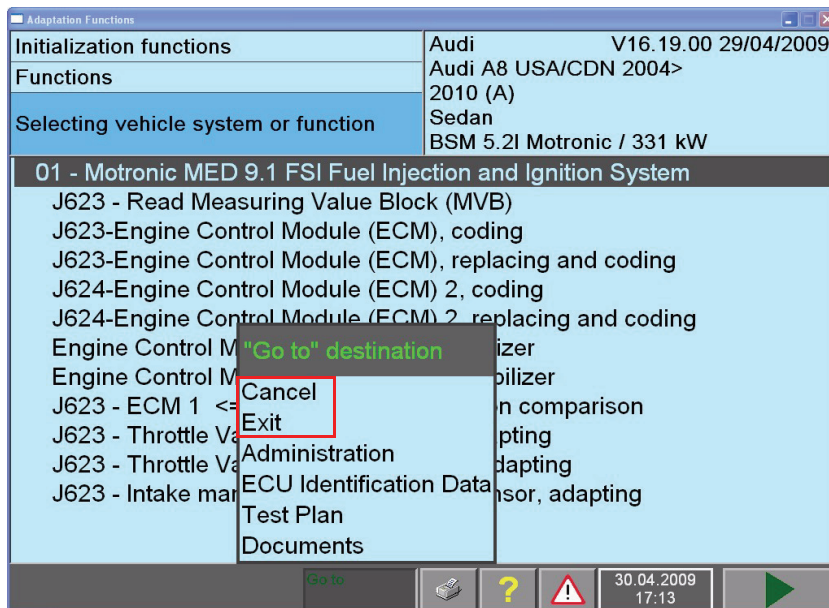
Image 6-17 Exiting the operating mode "Adaptation Functions" via the "Go to" destination

6.6.1   Cancel

The "Cancel" function corresponds with the "Exit" function with the difference of jumping to the "Adaptations Functions" in the base "enter brand" menu. In other words, you remain in the "Adaptation Functions" operating mode. The operating mode "Adaptation Functions" is completed by pressing "Exit" and returning to the start menu.

6.6.2   Exit

Exiting the operating mode "Adaptation Functions" is possible via the "Go to" menu with the target "Exit": A question appears with information for exiting and the answer options "Do not exit" and "Exit".

Select "Do not exit" if you want to continue working. Select "Exit" to initiate the return to the start mask.

6.7 Diagnostics protocol

If you have accessed the "Test plan" menu at least once, you can use the "Print/diagnostics protocol" function to print out a report of the "Adaptation Functions" or save it to an external drive. In the latter case, you must enter the vehicle ID number and the license plate number in the print menu, provided the data is not already known from the diagnostics procedure. For printing, refer to chapter 4.11.

Prior to the actual printing output, you are asked whether you would like to output a short version or the complete diagnostics protocol.

The "Diagnostics protocol" function is also offered after cancelling/exiting the stop module via a dialogue. The complete diagnostics protocol contains the following information:

- Shop code (defined by the log-in process), dealership identifier.
- Version of the currently installed software system (software version, vehicle brand data and vehicle project name / version of the ODX run-time data for ASAM-ODX control units)
- License plate number and vehicle ID number, if available.
- Vehicle brand and identification characteristics (base features).
- Event memory: List of the detected vehicle systems and their identification data.
- Continuous operation sequences (list of main actions in a continuous sequence), such as:
  Start of diagnostics, vehicle identification, test plan and function tests.
- Test plans numbered according to operation sequence.
- Continuous function tests, numbered according to the listed operation sequence. All completed test steps will be logged with message output, results and dialogue decisions. Communications orders with control units and their results are listed under "diagnostics". The sections "Begin sub-function: …" and "End sub-function: …" show sub-programs loaded during the function test. The overall test result will be shown according to the test plan at the end of a function test, such as: "Function test OK".
- Malfunction messages of the process system are listed at the end of the protocol in a summary. Messages that were generated during the processing of the test plan are listed under "Diagnostics order".

Short form

The short diagnostic protocol does not contain any listing of the test plans and function tests.

6.8 Function test protocol

The "Print/function test protocol" function corresponds with another short version of the "diagnostic protocol". The list of operation sequences and test plans is omitted and only the last performed function test is recorded.

7   Administration

7.1   Start Administration

You can call up the "Administration" from the start menu by pressing the button with the same name.
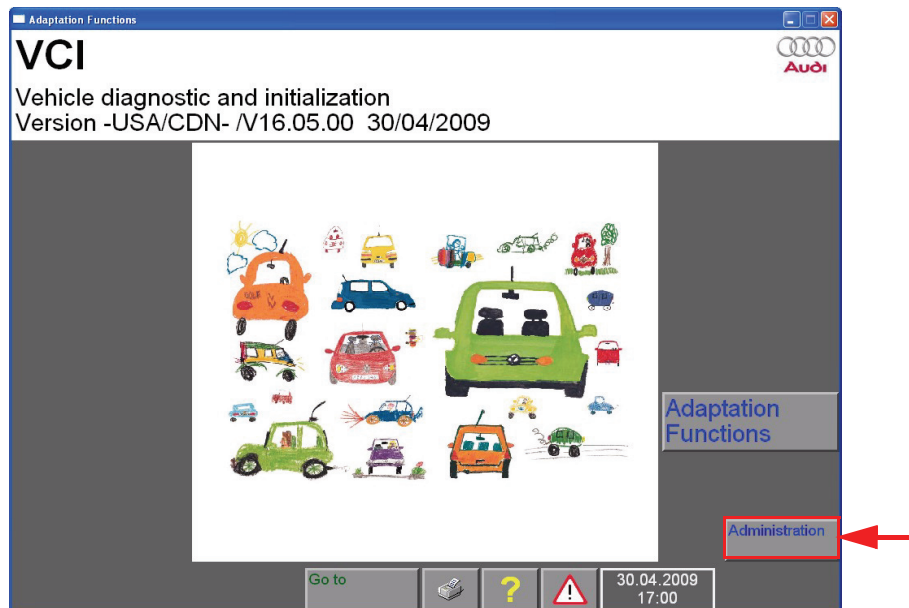

Image 7-1 "Start menu"

7.2   Select function

The "Administration" menu contains a list of all functions that can be activated in the "Administration" operating mode.
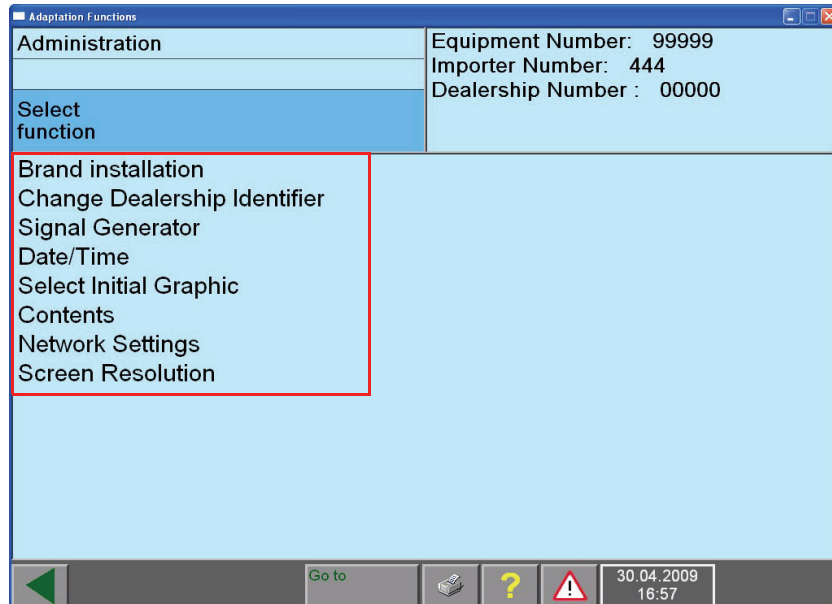
Image 7-2   "Administration" menu

You can select the desired function by selecting the appropriate line. Generally, another menu will then be activated, in which you can edit and process the respective function.

7.3   Brand installation

You can install new or additional vehicle brand data on the PC. See Section 5.6 for downloading and installing vehicle brand data.

Note:

You can only always download vehicle brand data with software of the matching compatibility number and language, see Section 1.5..
You can install several vehicle brand data of various brands on the PC (Volkswagen, Audi, ...)
Installing new vehicle brand data overwrites a previous installation of the same brand. .

7.4   Signal generator

When certain events occur, e.g. incorrect entries on a virtual keyboard, the PC will emit an acoustic signal. You can set the duration and sound volume of this signal in the "signal generator" function.
If you select the "signal generator" function in the function list, the following menu will appear:
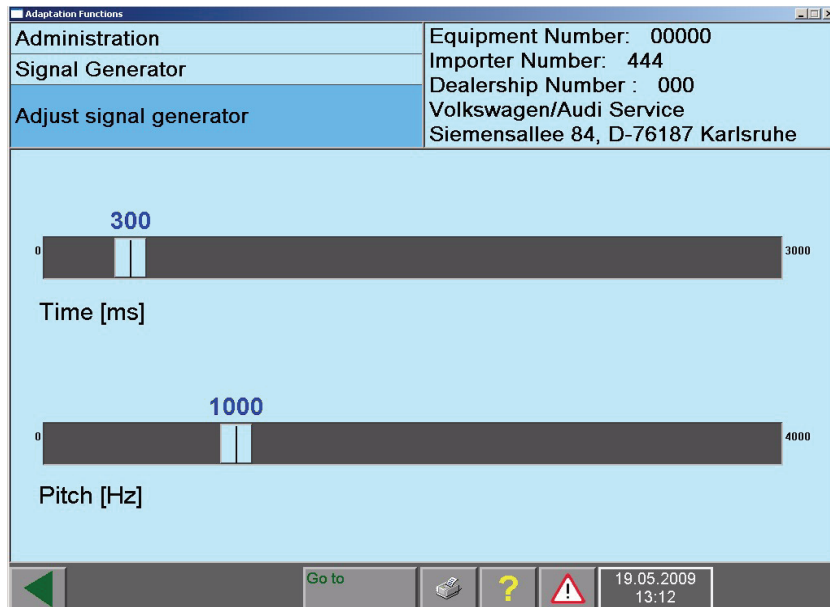

Image 7-3   "Signal generator" menu

You can change the acoustic signal directly with the slide control. The numeric values above these indicate the currently set values.

- You can change the time that holds the signal with the top slide control, designated as "duration". You can directly set values between 0 (extreme left position) and 3000 ms (extreme right position).

- The lower slide control, marked "Pitch", controls the frequency of the signal. It is variably adjustable between 0 (extreme left position) and 4000 Hz (extreme right position).

The software generates a signal at the last set pitch and duration while you move a slide control. A low setting is recommended, e.g. duration of 300 ms and a pitch of 1000 Hz. The volume of the signal cannot be adjusted.

Verify that the signal generator (speaker, beeper) to your PC is switched on.

7.5   Date/Time

You can adjust the date and time of the system to valid values, when selecting the "date/time" function in Administration. The setting options are described in Section 5.5.

Image 7-4 "Date and time" menu
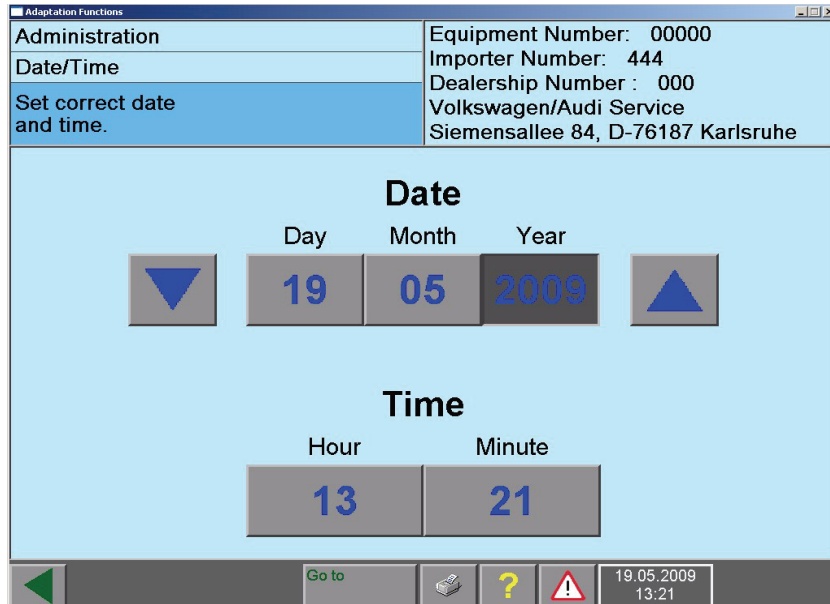
7.6   Select function

You can define the graphics that should appear in the start menu of the software, if you call up the "start graphics" function in Administration. You can select more graphics with the "Next" button. The selected graphics are shown as soon as you switch over to the start mask by pressing the "Back" button.
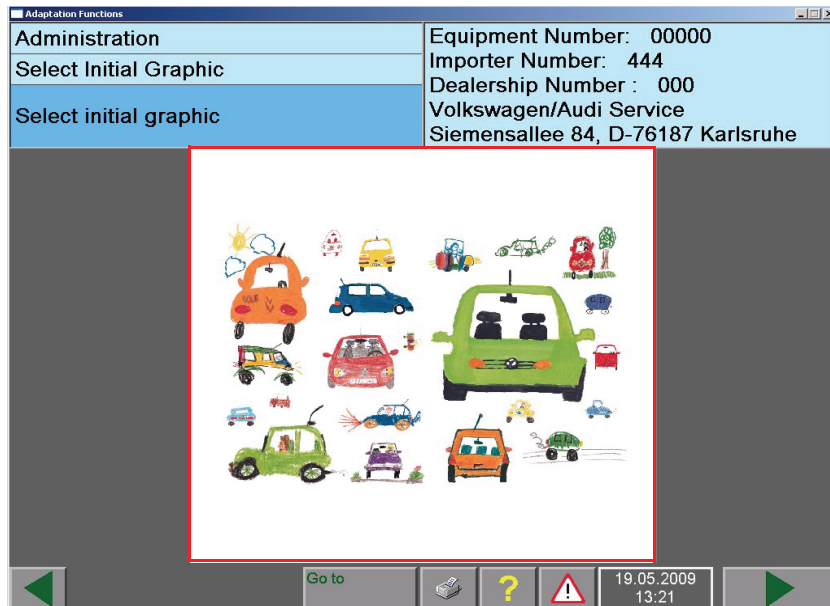
Image 7-5   "Start menu" with set start graphics

7.7   Contents

If you select the "Contents" function in the function list, the installed base and vehicle brand data will be displayed in a subsequent menu in their respective version. Select the data for which you would like to see more information. The proper contents file will then be shown.
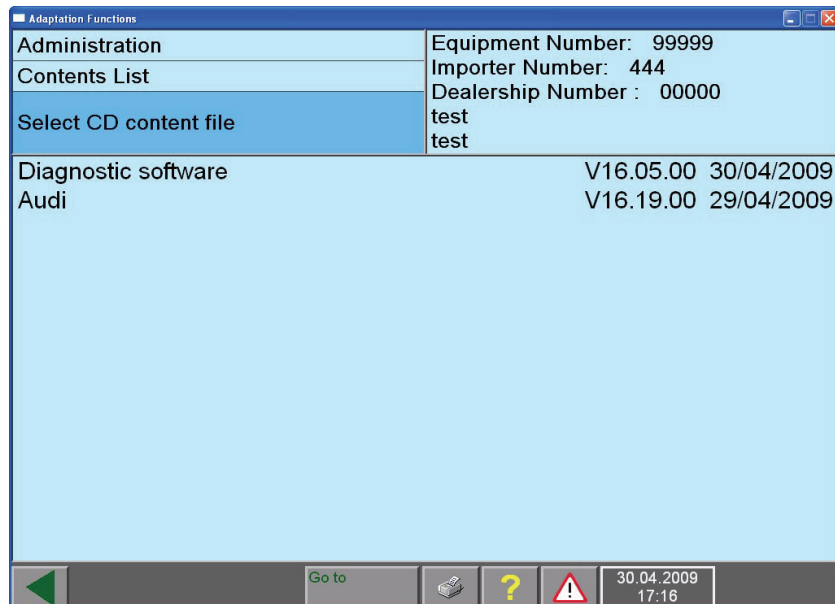
Image 7-6 "Contents" menu

The contents displayed can also be issued via the print menu, "contents" function. Information regarding the downloaded software will be displayed.

7.8 Network settings

The following menu will appear when selecting "Network settings" in the "Administration" menu.
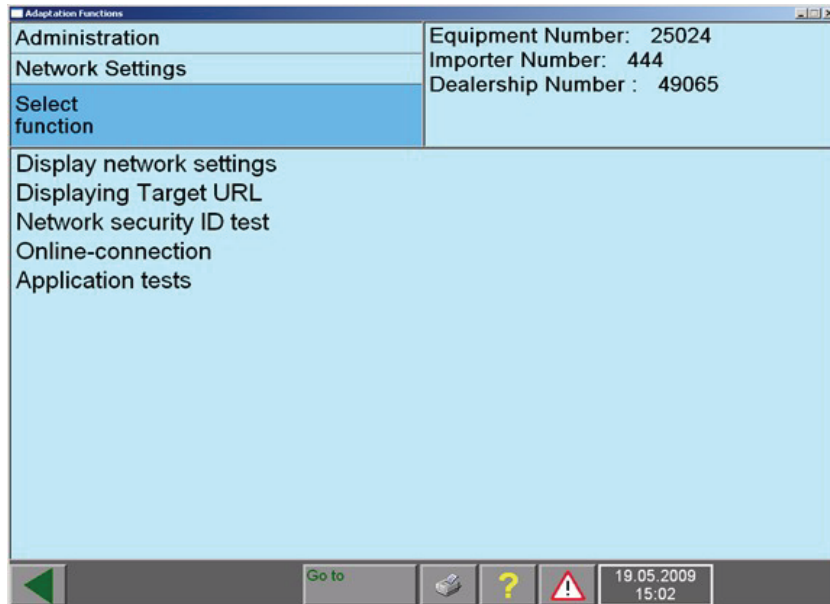
Image 7-7 "Network settings" menu

Note:

Functions described in the following are used for the online verification or display of the network connections to the VW database server.

7.8.1 Display network settings

All network settings will be listed when you select this function. The information is designated for a network administrator. The settings can be printed by pressing the "Print" button and by selecting the "Network settings" menu item.

7.8.2 Displaying the target URL

In the "Display target URL" menu, you can select between "General URLs" (URLs of the base software) and brand-specific URLs, if vehicle brand data have been installed. The URL addresses available for selection are displayed below. These addresses are permanently set by the downloaded base and vehicle brand data and cannot be changed at a later time in the software.

7.8.3 Network Security test (confidentiality and component protection)

The Network Security test checks the data transmission of the Audi brand from the software to the company database and back, including the user ID verification. The test represents a more thorough test than the "Online connection self-test". The self-test essentially only checks the online connection, but with any random target address.

The Network Security test requires the user ID and the password issued to authorized persons. Vehicle brand data must be installed for the test, but a vehicle connection is not required.

7.8.4 Online-connection self-test

Prior to the self-test of the online connection, verify that the software or the PC has a LAN network connection and access to the Volkswagen database is therefore available.

7.8.5 Application tests

You can use these to activate specifically stored function tests via vehicle brand data. They test the network access including the user application, such as in the Network Security text.
Prior to the application test, verify that the software is connected via a LAN network connection and therefore has access to the Volkswagen database server.

7.9   Screen resolution

You can define the screen resolution, e.g. the window size of the diagnostics software, if you activate the "**screen resolution**" function in Administration. There are four options available. "Automatic" selects the largest possible selection. As soon as you have made a selection of the resolution, press "**Next**" and confirm the subsequent message. The program closes automatically. After you started the program again on the desktop, the program appears in the resolution that you have selected.

■ Adaptation Functions	_□×_
Screen Resolution	Equipment Number: 00000
Current resolution:Automatic	Importer Number: 444
	Dealership Number : 000
Select screen resolution	Volkswagen/Audi Service
	Siemensallee 84, D-76187 Karlsruhe
Small: 640 x 480	
Medium: 800 x 600	
Regular: 1024 x 768	
Automatic:	

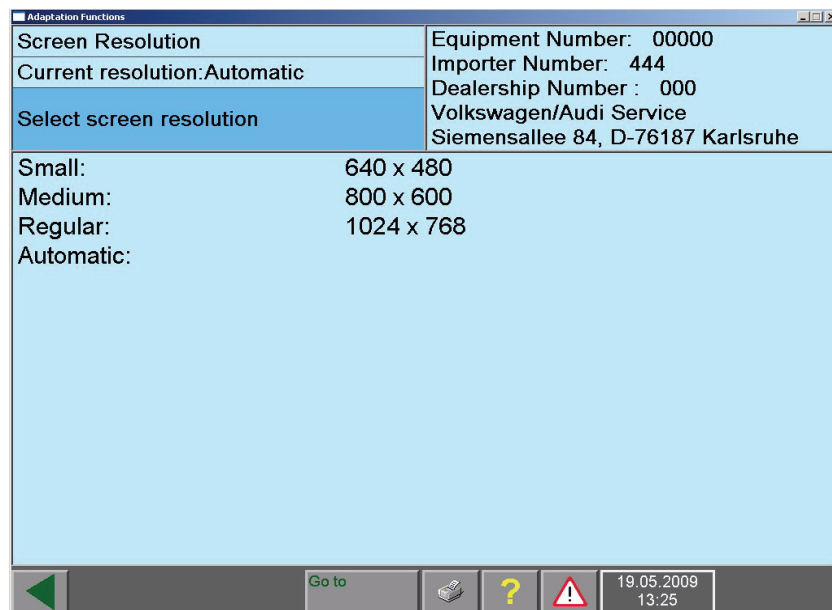Go to · ? · ⚠ · 19.05.2009 13:25

Image 7-8 "Screen resolution" menu

8   Help

8.1   Overview

You can activate context-related or general operating references and function explanations by using the "Help" function. The "Help" function does not replace the operating manual, but it can still be useful in the workshop in the event of uncertainty in using menus and buttons without having to access the operating manual.

8.2   Starting and closing Help

The "Help" button appears in every menu of the software. It is always in the same position on the navigation bar. Press this button to open the help overview. When you close the help overview, the "Help" function stays active until you press the "Help" button a second time. In this mode, you will receive the "help for the button pressed" by touching a button.

Help is activated - the
button is locked

Help is not activated

8.3 Help overview

The dialogue "Help Overview" appears after starting the "help" function. It offers a list containing one or several topics, for which short information is available.
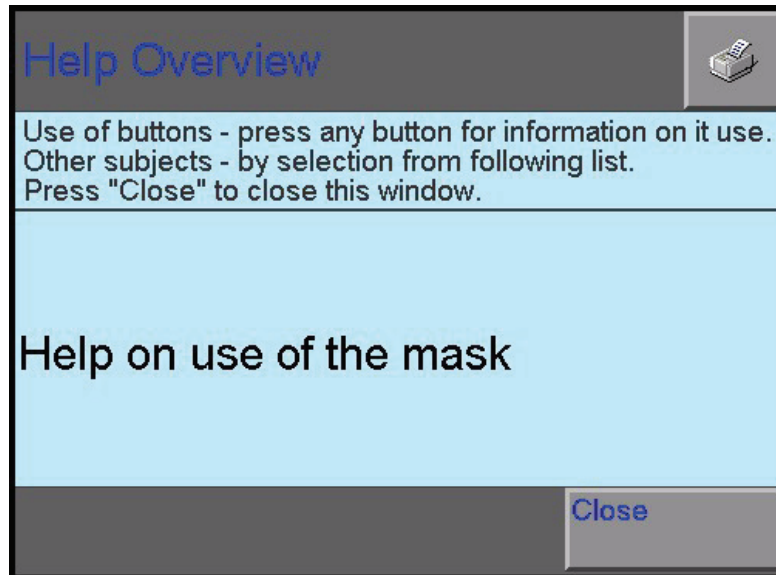Select the desired topic and the relevant help text will be displayed.

Image 8-1   Help overview in the "Administration" menu

The "close" button closes the "help overview" to reveal any possible buttons located below. However, the software will remain in the "Help" function.

Help for using the menu

Help for using the menu explains the purpose of the menu, any existing icons and the functions of the available buttons.
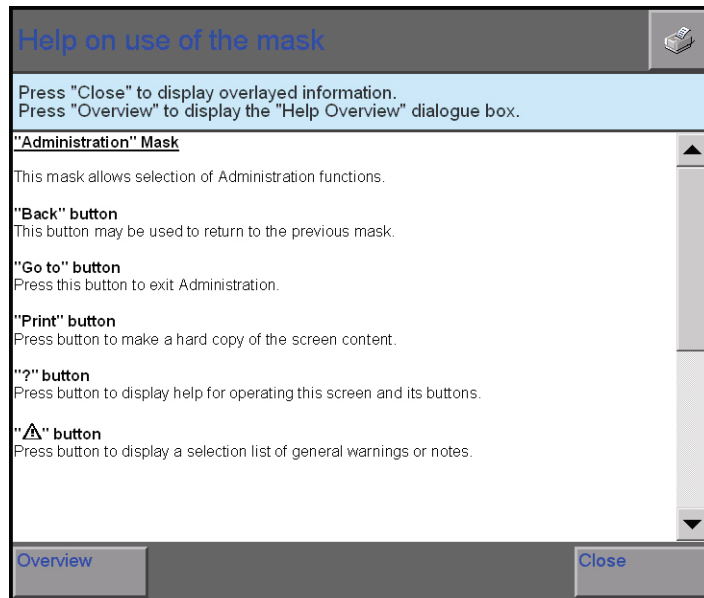

Image 8-2 Help for using the menu

- If the help text of this menu cannot be completely displayed, you can move it up and down by using a scroll bar that is inserted on the right, in order to read the invisible parts.
- The "Overview" button activates the "Help Overview".
- The "close" button closes the help dialogue to reveal any possible buttons located below. However, the software will remain in the "Help" function.

Help for the function test

The help for the function test opens a help text for the selected function test. It includes more explanatory material for the function test, provided a help text is available in the program. The following cases are distinguished:

- **"Help for the function test" in the test plan**: If you select a function test in the test plan and open the corresponding help, you can obtain general information for the selected function test (if available).
- **"Help for the function test" during the function test:** Help text can be stored at any point of the function test. Observe the appropriate messages or check, if a required help text is offered, if needed. As a rule, help texts are displayed via the document display.

8.4 Help for a pressed button

You can obtain help for the available buttons in any menu.

Press any random visible button, while the software is in the "help" function and a short message concerning its significance and use in the current menu will be issued in a dialogue box.
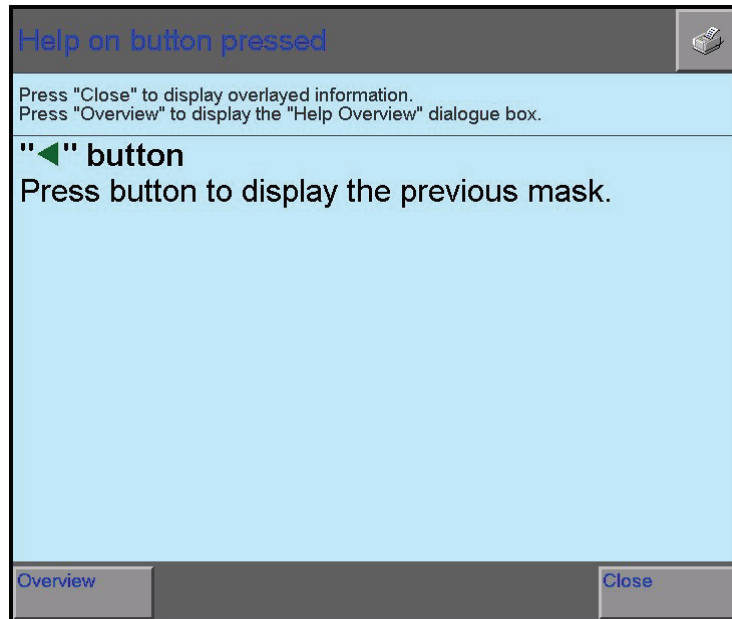

Image 8-3 Help when pressing the "Back" button

- The "Overview" button activates the "Help Overview".
- The "close" button closes the dialogue box "help for the pressed button", in order to reveal any possible buttons located below. However, the software will remain in the "Help" function.

Note:

You cannot open help for the "Overview", "Close" and "Help" buttons themselves.

9 Abbreviations and Terms

Tabelle 9-1 Abbreviations and Terms

Term	Legend
Acoustic signal	A beeping or whistling tone created by the tester when, for example, the voltage of the battery reaches a threshold value in buffer mode.
Adaptation Functions	Vehicle Diagnostics and Start-Up Functions
Administration	It is used to manage the software.
Alphanumeric keyboard	Keyboard that can be used to enter numbers and text.
Base features	The vehicle is identified by the base features of the model, model year, variant and engine code. Its options, however, are determined in the vehicle system test.
Base software	The base system and vehicle brand data form the diagnostics software. The base system represents the control system (frame) for the vehicle brand data.
Bluetooth	Wireless communications link for the immediate vicinity.
Confirming, confirmation	Answering a question from the software, whereby a function or a dialogue is completed.
Control unit	Electronic device for controlling and monitoring vehicle functions, such as the engine control unit ECU, vehicle system.
Deselection, deselect	The cancellation of a selection of program functions or list entries. Selection.
Diagnostics	The entire process of the allocation between error characteristics and potential defective functions.
Diagnostics socket	Connector socket for the diagnostics cable on the PC or the vehicle.
Diagnostics Interface	Hardware interface; produces the connection between the diagnostics connection of the vehicle and the PC (usually via USB).
Diagnostics software	See base software.
Dialogue box	Information field on the screen; issues messages and waits for entries from the user.
DSO	Digital storage oscilloscope (**D**igital **S**torage **O**scilloscope).

Term	Legend
DTS	**D**iagnostics **T**ool **S**et; program for setting/configuring the interface for the diagnostics interface used.
D-PDU API	**D**iagnostic **P**rotocol **D**ata **U**nit **A**pplication **P**rogramming **I**nterface; communications interface between the diagnostics interface and the diagnostics software.
ECU	**E**lectronic **C**ontrol **U**nit. English description for control unit.
External memory drive	This designates a data medium for transferring data/printouts between various PCs. A USB memory (USB memory stick), for example, can serve as data medium.
Function	Any activity the test can perform in various operating modes. Individual functions are generally selected from a list and displayed on the screen.
Function test	The function contains all of the actions to perform a function test (test program). This includes: Dialogue with the tester, producing measuring connections, installing adapters, performing measurements, performing actions on the vehicle, etc.
Network Security test	Test option for enabling the code and user registration for online access (Privacy and component protection).
Hardware	Hardware primarily refers to the device itself with its mechanical structure and its display and control elements, and also information for the base operation.
Information window (left and right)	The information windows are located in a menu above the work window. The left-hand information window generally contains the following information: operating mode, active function, work instructions. The right-hand window shows the currently selected components or status reports.
Initial graphics	Exchangeable image that appears in the start menu.
IP-address	Abbreviation for "**I**nternet **P**rotocol address". Every computer that is connected to a computer network (TCP/IP) has a unique IP address. It consists of four groups of numbers which are separated by points (e.g. 194.0.0.135). IP addresses can be allocated automatically by DHCP servers.

Term	Legend
ISDN	Abbreviation for "**I**ntegrated **S**ervices **D**igital **N**etwork". Designation for a digital telephone network which is designed for telephone calls, remote data transmission, faxes and other services.
LAN	**L**ocal **A**rea **N**etwork.
Menu	Screen display with a defined distribution into various graphic elements, such as windows, buttons, scroll bars, etc.
Navigation bar	Functions in the lower part of the menu, in order to change from the current menu to another menu, as well as for opening help, memory and printing functions.
Online protocol	A protocol that is sent to the vehicle manufacturer via an online connection.
Online connection	External connection, e.g. to the Internet or to the VW server.
Operating mode	Every basic function of the program that can be opened from the start menu: "Adaptation Functions". This operating mode is divided into a series of individual functions and application operating modes.
Proxy server	Proxy servers receive the requests made by a client and forward their data (sometimes modified) to the original target. Proxies can also save data locally on a temporary basis, for future access (cache).
Sequence system	The software installed in the PC.
Selection bar	Emphasises a selected line by inverting the presentation.
Screen printout (hard copy)	Paper print of the screen content (menus, etc.)
Scroll bar	If the complete text cannot be shown in a dialog box or a mask, a scroll bar will appear on the right-hand side.
Selection, selecting	Selection of a programj function or a text entry from a list. The selected element is highlighted on the screen by a black horizontal bar. Deselection.
Server	In computer engineering, the server designates a central network computer. It provides clients with the appropriate services and/or data.

Term	Legend
Start menu	The display that the software shows on the screen after start of operation. Its operating modes can be called up from here. Recognizable by the start graphics.
Station name	A PC connected to the LAN requires a unique name for the network. You can display the currently set station name by selecting network settings that display the function "show network settings" in the administration function.
Subnet menu	All computers connected to a network (TCP/IP) have a subnet menu. It consists of 4 groups of numbers, which are separated by full stops (for example, 255.255.0.0).
Test plan	The functions are entered and managed in the test plan during the diagnostics session in the "Adaptation Functions". The user maintains an overview by the test plan, especially in case of several functions. A status icon precedes every function. The functions enter into the test plan via read fault memory entries, selected perceptions or the function selection.
Test sequence	A single, complete unit in a function test.
URL	Abbreviation for "**U**niform **R**esource **L**ocator". A URL corresponds to the address of an internet resource (web site, file, etc.). Example: http://www.siemens.com
USB	**U**niversal **S**erial **B**us. USB is a standardized interface for connecting, the keyboard, USB memory, etc.
USB storage device	Other descriptions: USB memory stick. A mobile, easy to handle memory unit with a USB interface. It is plugged into the USB port on the PC and is detected automatically by the tester. The allocation takes place with the function "Set output medium to exchangeable data medium" (navigation bar, printing). For example, now you can send logs or screen shots to the USB memory.
VAS	**V**olkswagen **A**udi **S**ervice
VAS 505x	The model designation "VAS 505x" stands for the diagnostics testers VAS 5051B, V5052, VAS 5052A by Siemens.
VCI	Vehicle communications interface (**V**ehicle **C**ommunications **I**nterface).
Vehicle system	A control unit known by name including the related sensors, actuators and cables.

Term	Legend
Vehicle brand data	Vehicle diagnostics data (VW, Audi, ...) including function testing programs for a particular vehicle brand. The data is separated specific to the brand..
Work window	The work window takes up the largest part of the menu. The display changes according to the operating mode and current progress. Here you can make a selection or results are displayed.

10   Index

VOLKSWAGEN

GROUP OF AMERICA

We have reviewed the contents of the documentation to verify that they correspond to the status described. However, deviations cannot be excluded, so that we cannot assume any responsibility for the complete concurrence. However, the information in this documentation is routinely reviewed and any required corrections are contained in the following editions. We are grateful for any improvement suggestions.

Modifications of the delivery scope in format, options and technology are possible. No claims may be derived from the information, illustrations and descriptions contained in this Operating Manual. Reprints, copies or translations of this document, even in excerpts, are only permitted in such a manner without the written consent of the Volkswagen Group/the manufacturer that user documentation will be provided for each device. Forwarding this to third parties is not permitted. All rights provided under copyright law are expressly reserved by the Volkswagen Group and the manufacturer. Subject to modifications. All rights reserved.