

## Position

You can switch between the individual faults with the UP and DOWN buttons. The order of the faults can change depending on the sort criterion.

## Sort method

**Standard**  
Fault display in ascending address word order.

**Static/sporadic**  
Faults are separated according to their status. Static (higher priority) are displayed at the top with a dark blue background, sporadic below them with a light blue background. Inside the status (colour), the fault frequency is taken as the second sort criterion (high counter figures first).

**Kilometres**  
Sort method according to the km reading when the fault first occurred. The low readings first.

**Time**  
Faults are listed chronologically according to when they first occurred. To allow better assignment, the fault that happened within the same minute are combined in coloured groups (alternately light and dark blue).



## Ambient conditions

In the “Guided Fault Finding”, ambient conditions can be displayed using the “Fault Memory Contents” mask from basic CD 7.0. The vehicle system does need to support this function, however. After selecting the ambient conditions, the mask background colour changes depending on the type of fault, the sort method and the type of ambient conditions (standard or specific).

Guided Fault Finding	VW	V6.55.00.14/01/2004
Fault memory content	IT - Touran 2003 > 2004 (4)	
	Saloon	
	BKC 1.9l TDI-PD / 77kW	
01 - Engine electronics		
16622	P0239	00
Charge air pressure signal too large		
Measured values		
Value 1		1020 rpm
Value 2		28 Nm
Value 3		15 km/h
Value 4		0.0 %
Value 5		13.9 V
Value 6		0001100
Value 7		355 mg/H
Value 8		0 mg/H

Position of the fault in the complete fault memory print out

“UP and DOWN” buttons

“Sort” buttons

A violet background means that no standard, but only specific ambient conditions are stored. Mask with standard conditions see page 27.

S295\_140

# Guided Fault Finding

## Test plan

If you continue, you can access the system test plan that is created by the VAS 5051 or by the VAS 5052.

You can select a function check from the system test plans.

The selected function test has a black background.

The function check is started with the “Continue” button. The order is freely selectable if there are several function checks.

Fault memory entries that are processed with this test plan

Selected function test

Guided Fault Finding	VW	V6.55.00.14/01/2004
Test plan	1T - Touran 2003 > 2004 (4) Saloon BKC 1.9l TDI-PD / 77 kW	
System test plan		
17 - Dash panel insert - Ambient temperature sensor - G17		
- Ambient temperature sensor - G17		
Own test plan		
OK read measured values		
- G - Ambient temperature sensor - G17		

Own test plan

“Continue” button  
Start function test

## System test plan

The “System Test Plan” is created automatically using the fault memory entries and/or complaint.

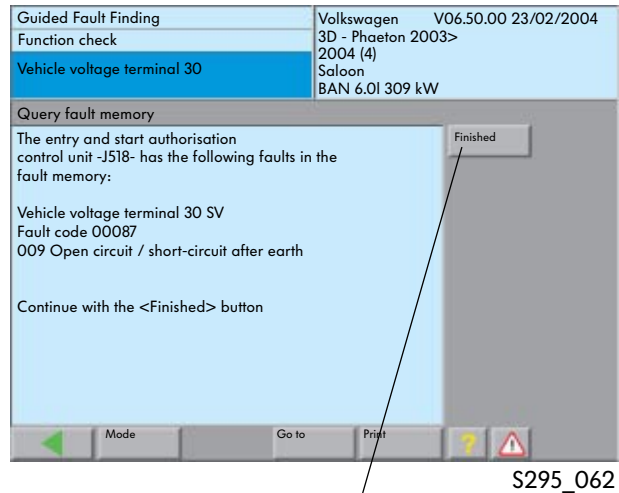
## User-defined test plan

The “User-Defined Test Plan” can be created by the user via the function and component selection dialog.

## Function test procedure

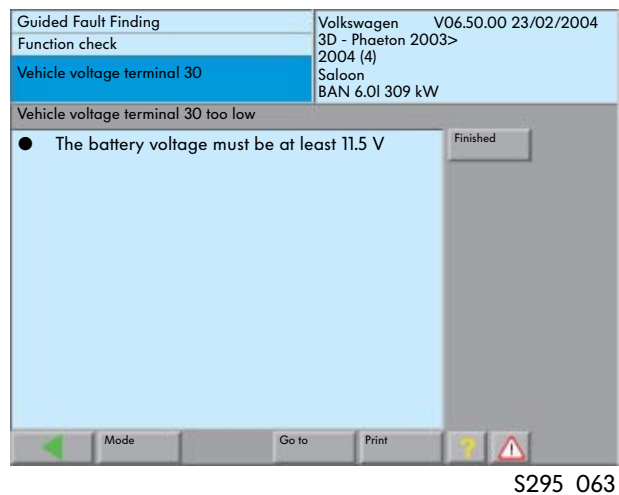
The information and instructions required to rectify the fault are displayed to the operator in the form of message windows.

The operator will be informed if he needs to continue manually.

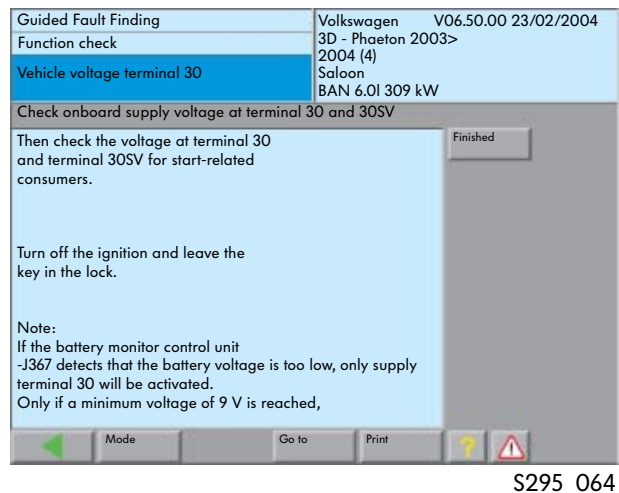


“Finished” button

The remaining test procedure is function-guided.



It contains instructions and information on the activities to be performed.



# Guided Fault Finding

In the function checks, the necessary control unit information is incorporated in the “Guided Fault Finding”.

This can be depicted on the display or also in the background by incorporating the basic conditions (e.g. measured values, state terminal 15 etc.).

Guided Fault Finding	Volkswagen	V06.50.00 23/02/2004
Function check	3D - Phaeton 2003>	2004 (4)
Vehicle voltage terminal 30	Saloon	BAN 6.0l 309 kW

Test conditions

Voltage terminal 30 : 6.5 V (9.....14V9)

The voltage at terminal 30 is too low

- Check the battery charge level  
Charge the battery if necessary
- Check the connector and the cable for terminal 30 between the control unit for access and start authorisation and battery. Also, using circuit diagram, check for loose contacts, moisture and corrosion.

Finished

1. Fuse Assignment

Mode Go to Print

S295\_065

Additional button

## Supporting literature

Using an additional button that is only displayed when required, supporting information is displayed.

The title of the documentation type is the same as the button label (e.g. Fuse Assignment).



Guided Fault Finding	Volkswagen	V06.50.00 23/02/2004
Function check	3D - Phaeton 2003>	2004 (4)
Vehicle voltage terminal 30	Saloon	BAN 6.0l 309 kW

Voltage terminal 30 1. Fuse assignment

Mode Go to Print

S295\_066



For further information on “Guided Fault Finding”, use the CD “Guided Fault Finding with the Vehicle Diagnosis, Testing and Information System VAS 5051” and the operating manuals.

## Diagnosis protocol

A diagnosis protocol is created during each fault memory query or fault search in “Guided Fault Finding” mode.

This protocol can be stored on the diagnosis system or sent online to the manufacturer database.

Stored diagnosis protocols are sent automatically if the diagnosis system is connected to the network.

Protocols that are older than forty days are deleted.

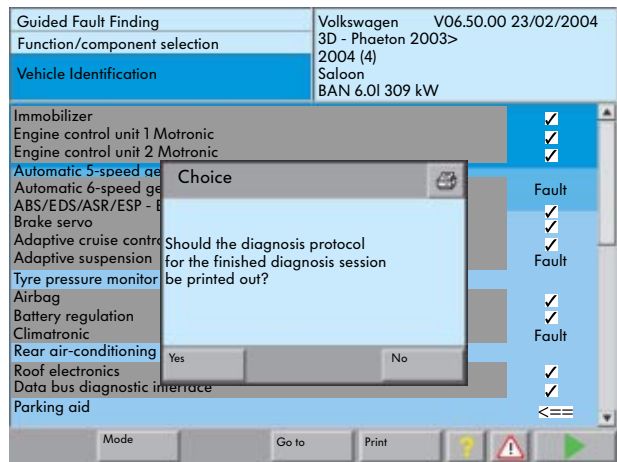
The sent protocols are evaluated and frequently occurring fault memory entries can thus be recognised.

This process provides feedback information for the research and development department as well as for quality assurance

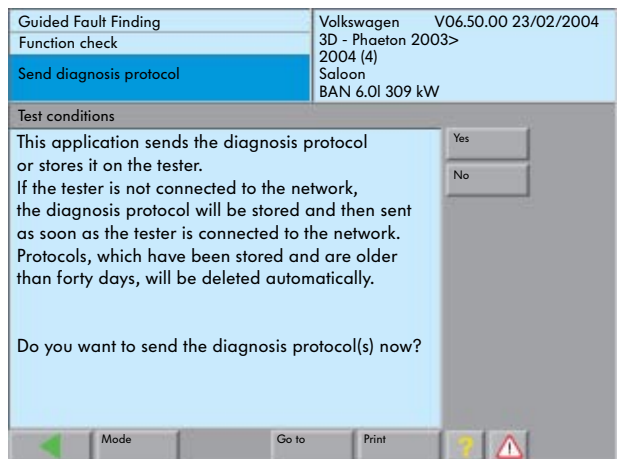
To send the protocol, the diagnosis system needs to be connected to the network.

Various vehicle and operating data as well as information on the repair then need to be entered.

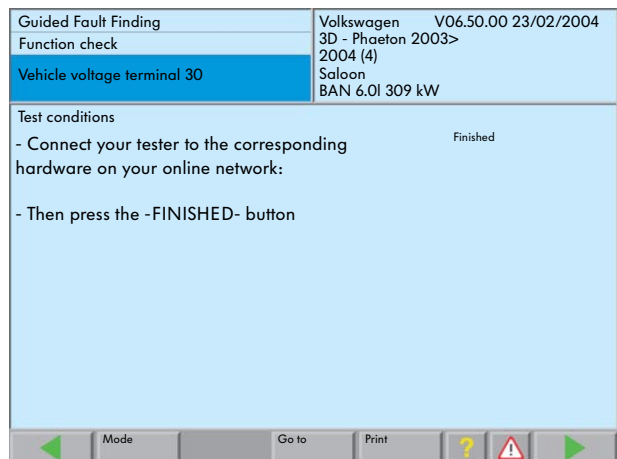
Menus guide you through these entries.



S295\_177/S295\_179



S295\_160



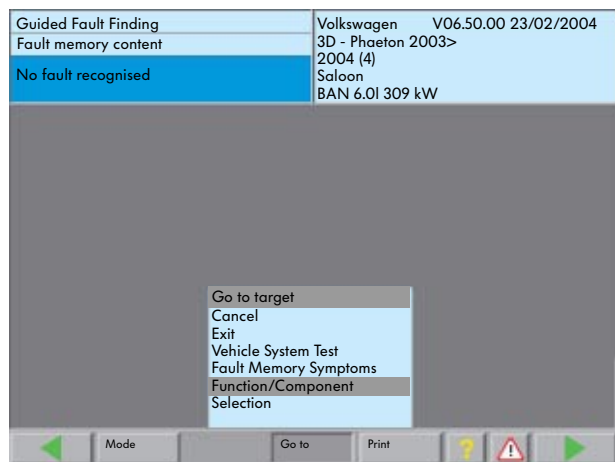
S295\_161



# Guided Fault Finding

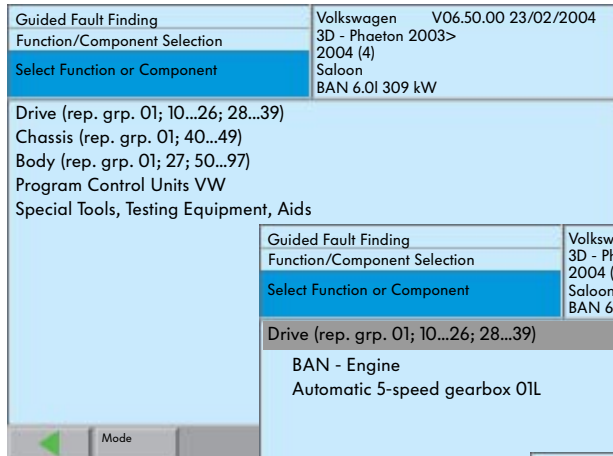
## Function/component selection

In “Guided Fault Finding” mode, user-defined function or component checks can be selected via the “Go to” button and “Function/Component Selection”.

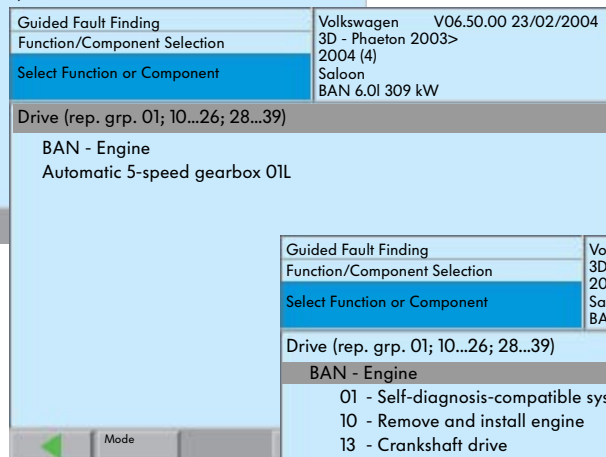


S295\_067

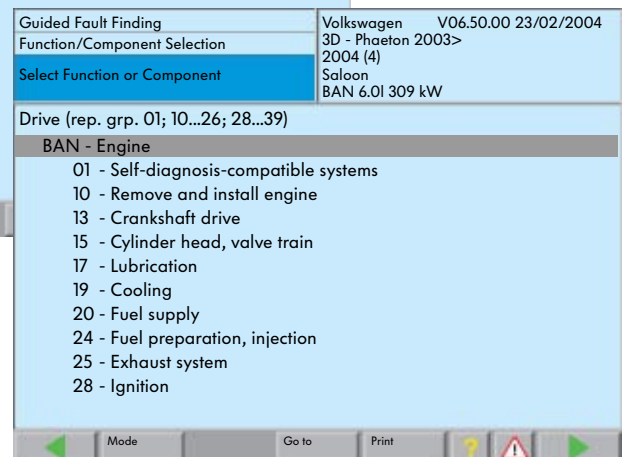
The selected functions or components are sorted according to repair group. After selecting the repair group, the individual systems for which function and component checks can be carried out are displayed.



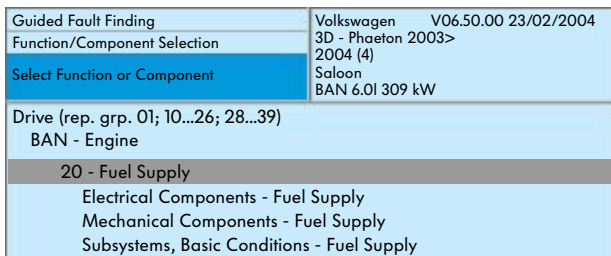
S295\_068



S295\_069

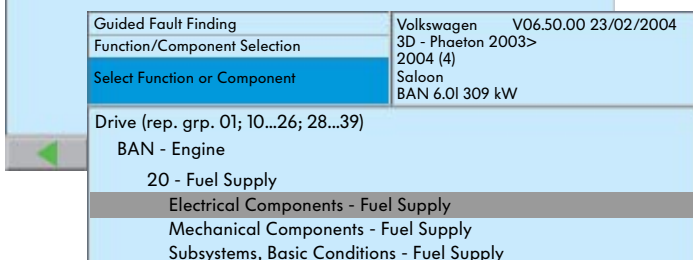


S295\_070



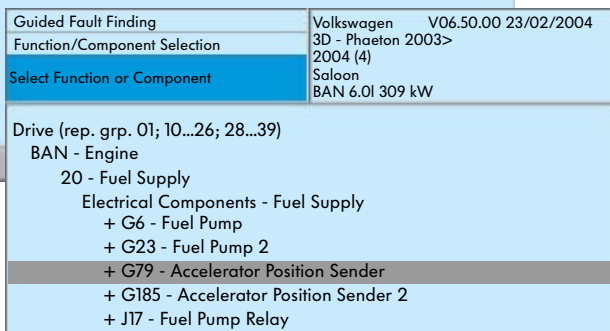
S295\_071

After selecting a component or a function, the corresponding check is entered in the user-defined test plan once you press the “Continue” button. If you press the “Continue” button again, the test will be started.

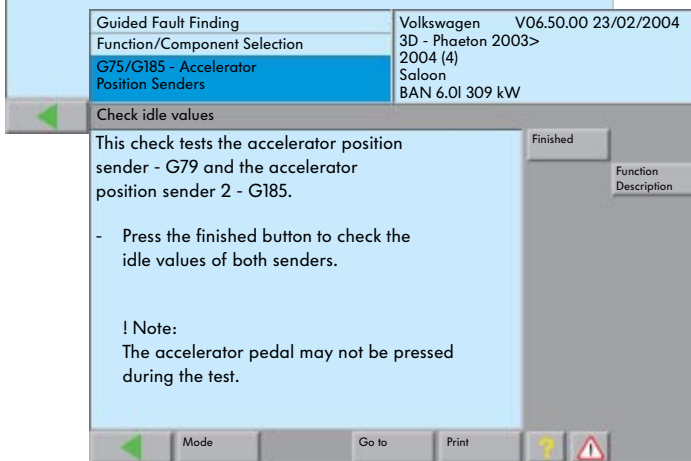


S295\_072

The system is then opened. The remaining procedure is menu-guided. All necessary instructions appear as a mask on the diagnosis system.



S295\_073



S295\_074

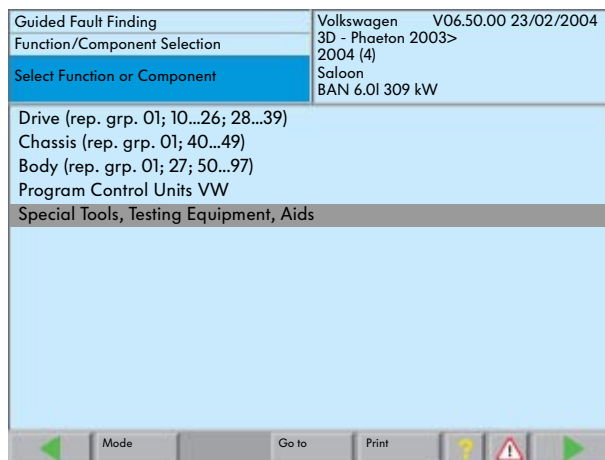
Components marked with a “+” have further submenu items that can be selected.



# Guided Fault Finding

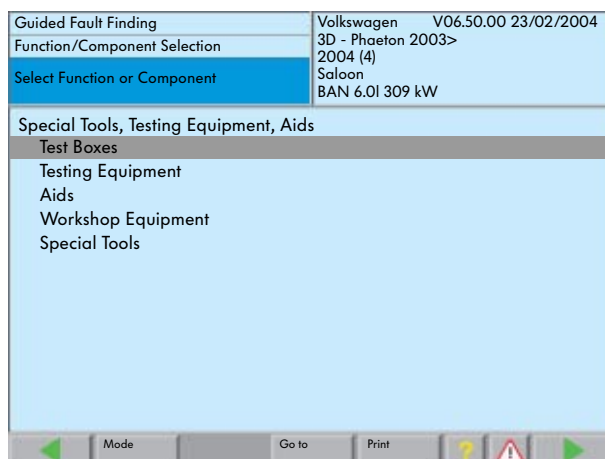
## Access to tools

You select tools using “Special Tools, Testing Equipment, Aids” and then selecting the required tool group.



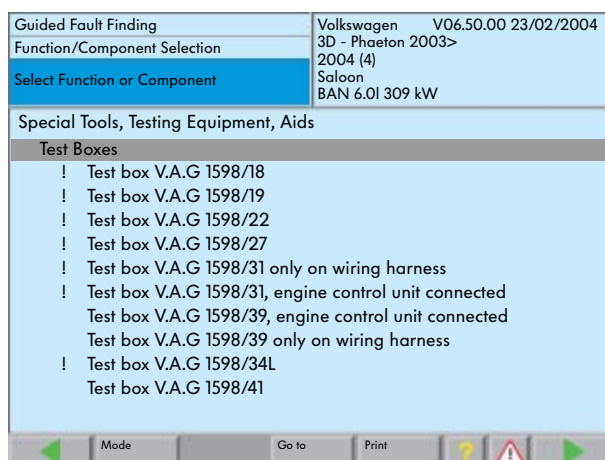
S295\_081

The required tool group is selected by touching the mask.



S295\_082

The required special tool, testing equipment or aids can then be selected.



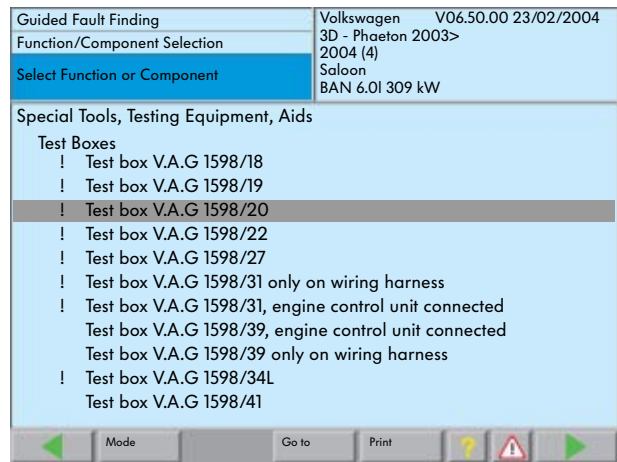
S295\_083



In the function checks of the “Guided Fault Finding”, this information is provided whenever necessary.

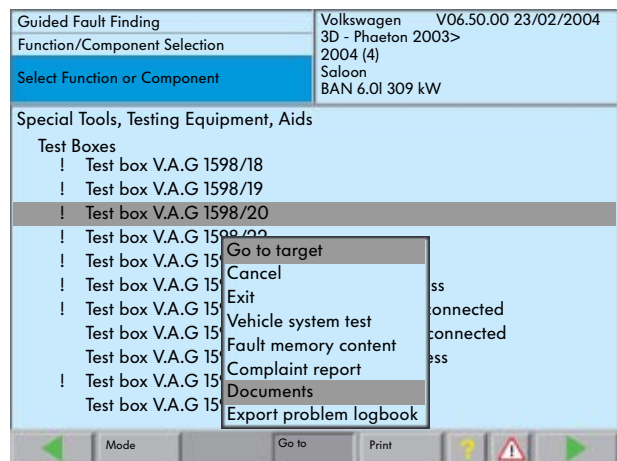


The selected object has a black background.



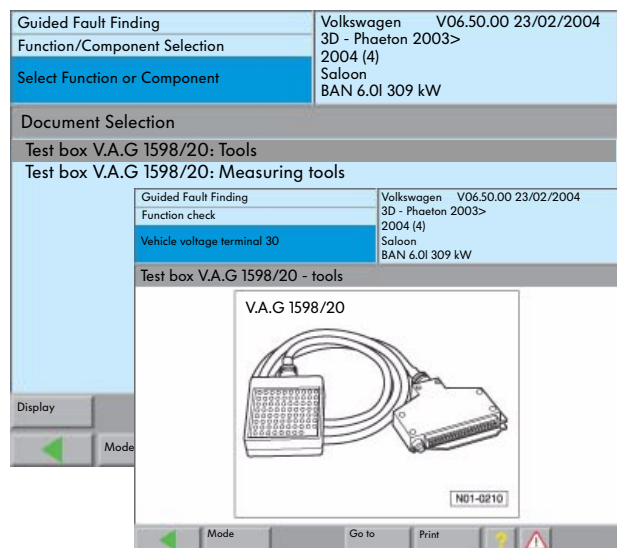
S295\_084

If you press the “Go to” button and then select “Documents”, the document selection dialog will appear.



S295\_085/S295\_110

After selecting the document and pressing the “Display” button, the graphic for the selected special tool, testing equipment or aid is displayed on the screen.



S295\_087/S295\_088



# Guided Fault Finding

## Accessing documents for Audi vehicles

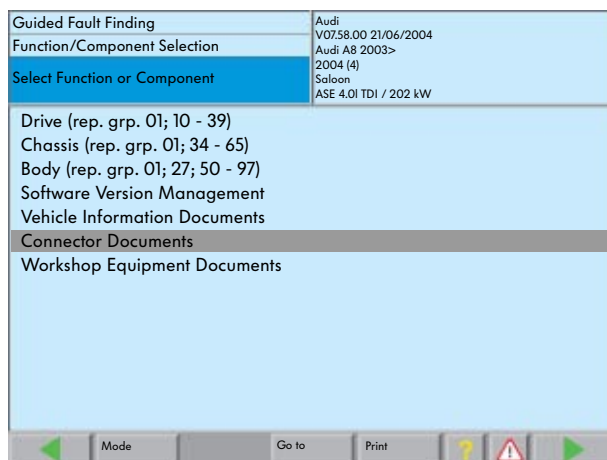
A range of documents are stored in the VAS 5051 and VAS 5052 as user information.

All documents are accessed in the same way. Access to the documents for the connectors is used as an example here.

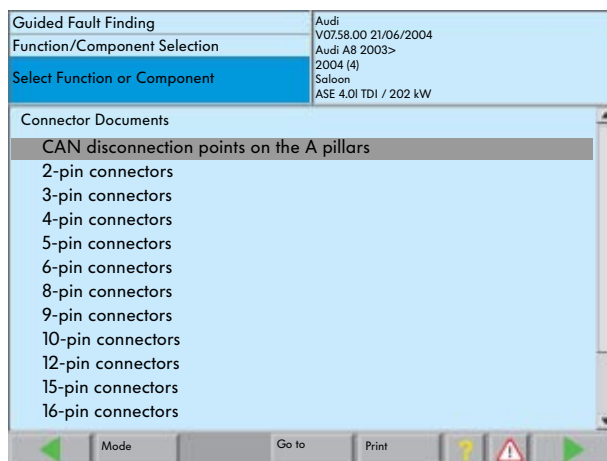


This is opened by touching the selected document group.

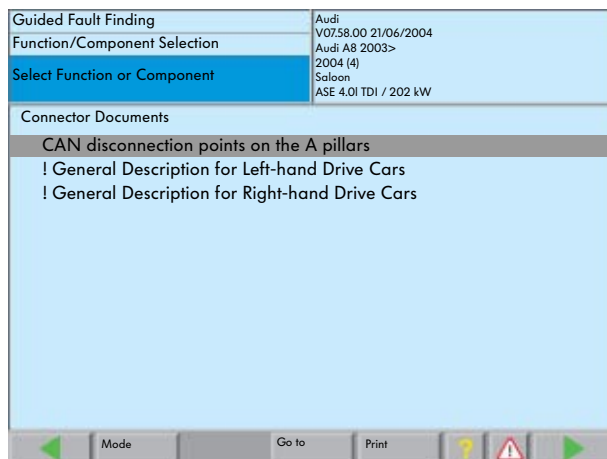
The subgroups are displayed after you select the document group.



S295\_103

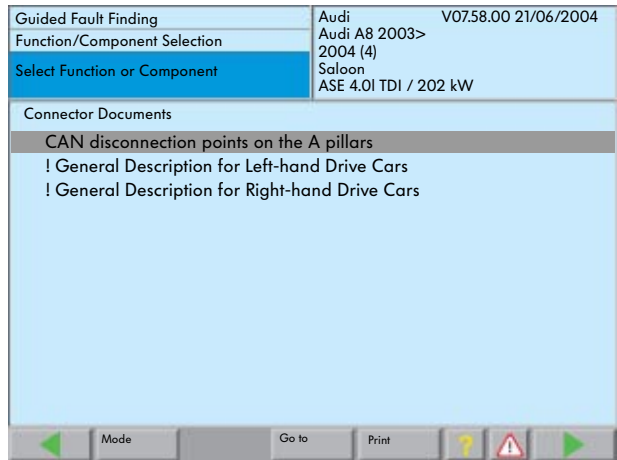


S295\_104



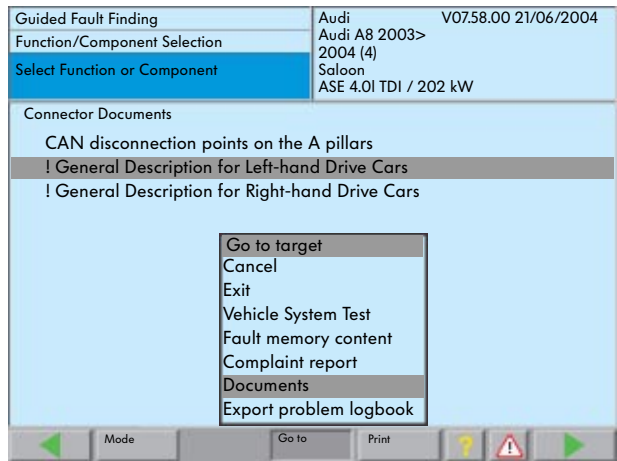
S295\_105

The required subgroup can then be selected.



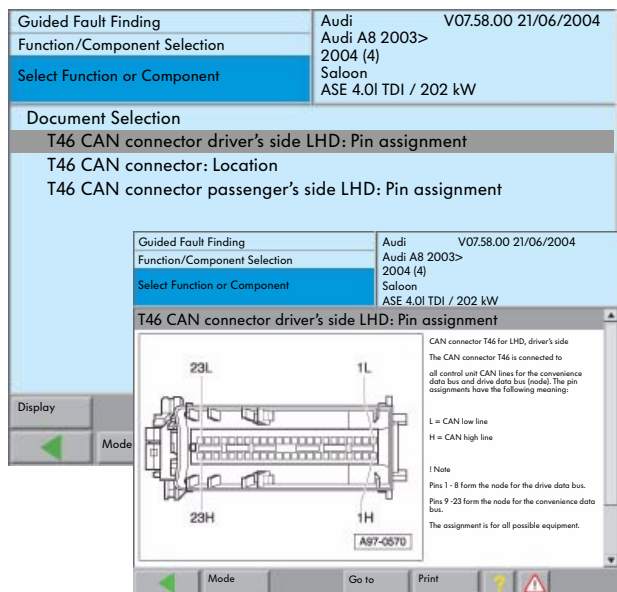
S295\_106

After selection, a further subgroup is displayed with the “Go to” and “Documents” button.



S295\_107/S295\_110

The document will appear after you touch the component for which you require information and press the “Display” button.

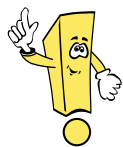


S295\_107/S295\_110



# Guided Fault Finding

## Read Measured Values



### New procedure

Measured values can be read in the “Guided Fault Finding” and “Guided Functions” modes at Volkswagen and Audi using the basic CD 7.0. The measured values can be compiled from different display groups and the target and actual values are then displayed. The selection can be made by the user or, if necessary, by the function check.

## Selection by the user

The selection is made from the function “Function/Component Selection” or “Guided Functions”.



Guided Fault Finding	Volkswagen V06.50.00 23/02/2004
Function/Component Selection	IT - Touran 2003> 2004 (4)
Select Function or Component	Saloon AXW 2.0l Motronic / 110kW
Drive (rep. grp. 01; 10...26; 28...39)	
Chassis (rep. grp. 01; 40...49)	
Body (rep. grp. 01; 27; 50.97)	
Program Control Units	
Special Tools, Testing Equipment, Aids	

S295\_141

First the corresponding repair group containing the vehicle system from which the measured values should be read should be selected.

Guided Fault Finding	Volkswagen V06.50.00 23/02/2004
Function/Component Selection	IT - Touran 2003> 2004 (4)
Select Function or Component	Saloon AXW 2.0l Motronic / 110kW
Body (rep. grp. 01; 27; 50.97)	
Body assembly work (rep. grp. 01; 27; 50.77)	
Heating, Ventilation, Air Conditioning	
Electrical System (rep. grp. 01; 27; 90...97)	

S295\_142

Guided Fault Finding	Volkswagen V06.50.00 23/02/2004
Function/Component Selection	IT - Touran 2003> 2004 (4)
Select Function or Component	Saloon AXW 2.0l Motronic / 110kW
Body (rep. grp. 01; 27; 50.97)	
Electrical System (rep. grp. 01; 27; 90...97)	
01 - Self-diagnosis-compatible systems	
27 - Starter, power supply	
94 - Lights, lamps, switches - exterior	
96 - Lights, lamps, switches - interior, theft protection	
97 - Cables	

S295\_143

After opening the mask, the vehicle system, from which the measured values should be read, can be selected.

Guided Fault Finding	Volkswagen V06.50.00 23/02/2004
Function/Component Selection	IT - Touran 2003> 2004 (4)
Select Function or Component	Saloon AXW 2.0l Motronic / 110kW
Body (rep. grp. 01; 27; 50.97)	
Electrical System (rep. grp. 01; 27; 90...97)	
01 - Self-diagnosis-compatible systems	
Dash panel insert	
Electrical components	
Dash panel insert functions	
+ Voltage supply	

S295\_144

The available vehicle system functions can then be selected.



The available functions depend on the vehicle system and may therefore differ.

Next select the “01 - Self-diagnosis-compatible systems” function.

Guided Fault Finding	Volkswagen V06.50.00 23/02/2004
Function/Component Selection	IT - Touran 2003> 2004 (4)
Select Function or Component	Saloon AXW 2.0l Motronic / 110kW
Body (rep. grp. 01; 27; 50...97)	
Electrical System (rep. grp. 01; 27; 90...97)	
01 - Self-diagnosis-compatible systems	
Automatic headlight range control	
Car phone	
Data bus diagnostic interface	
Steering wheel electronics	
Radio system	
Dash panel insert	
Onboard supply control unit	
Multifunction control unit	
Immobilizer	
Wiper electronics	

S295\_145

The “Read Measured Value” function is a submenu of the “Functions” selection dialog for the respective system.

Guided Fault Finding	Volkswagen V06.50.00 23/02/2004
Function/Component Selection	IT - Touran 2003> 2004 (4)
Select Function or Component	Saloon AXW 2.0l Motronic / 110kW
Body (rep. grp. 01; 27; 50...97)	
Electrical System (rep. grp. 01; 27; 90...97)	
01 - Self-diagnosis-compatible systems	
Dash panel insert	
Dash panel insert functions	
- Adjust fuel gauge	
- Adjust/replace dash panel insert	
- Encode dash panel insert	
Read Measured Values	
- Reset service interval display	
- Adapt language versions	
- Dash panel insert control element diagnosis	
- Adjust consumption indicator	
- Adjust maintenance interval extension	

S295\_146



# Guided Fault Finding

After selecting the “Read Measured Values” function, an overview of the available measured values (data blocks) is displayed.

Instrument group

Display field

“Finished” button

Name of measured value

Instrument group	Display field	Name of measured value
1	1	Speed
1	2	RPM
1	3	Oil pressure
1	4	Time
2	1	Coolant level
2	2	Total tank content
2	3	G - Fuel gauge sender
2	4	G17 - Ambient temperature sensor
3	1	Coolant temperature
3	2	G266 - Oil level and oil temperature sender
3	3	G266 - Oil level and oil temperature sender
4	1	Battery voltage

S295\_147

Press the individual display fields to select the measured values that are to be read.

“Finished” button

Selected display fields

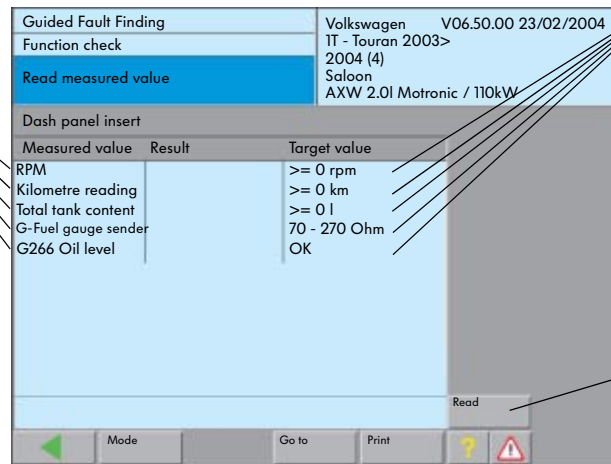
Instrument group	Display field	Name of measured value
1	1	Speed
1	2	RPM
1	3	Oil pressure
1	4	Time
2	1	Coolant level
2	2	Total tank content
2	3	G - Fuel gauge sender
2	4	G17 - Ambient temperature sensor
3	1	Coolant temperature
3	2	G266 - Oil level and oil temperature sender
3	3	G266 - Oil level and oil temperature sender
4	1	Battery voltage

S295\_148

The next mask shows the selected display fields with the measured value names as well as the accompanying target values, if available.

Selected display fields with measured value name

Target values



"Read" button

S295\_149

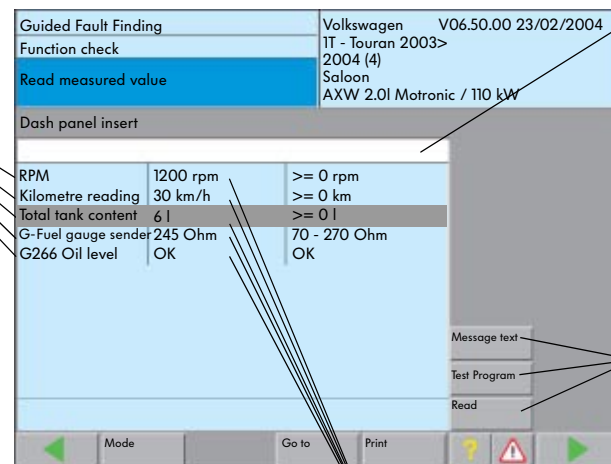


The current measured values are only displayed parallel when the "Read" button is pressed.

Selected display fields with measured value name

Message window

The message window only appear when basic conditions need to be observed (e.g. battery voltage has to be greater than 11.7 V).



Operating buttons

- Message text
- Test program
- Read

Actual values

S295\_150



If a display field/measured value is selected, message texts can, if possible, be displayed using the "Message Text" button and stored test programs using the "Test Programs" button.

# Guided Fault Finding

## Software Version Management VW (SVM-VW)

The SVM-VW manages information and data about the control units that are in the field. It compares the vehicle data with the current software and hardware versions and, if necessary, sends an update instruction or requests a hardware exchange. The guided fault finding procedure automatically takes you through the control unit programming. Next the current equipment state is returned to the SVM-VW.

## Control unit update process

If a software update is required for a control unit, the problem is indicated in the “Technical Problem Solution” section of the ELSA along with a note about the fault search and the necessary update as a customer service solution.



Software version management may only be carried out as a customer service solution if an instruction is available in the ELSA, in the HST, in the TPL or from the TSC. This is very important as control unit programming cannot be reversed. Old software cannot be reloaded.



Technical product information: Interior light extinguishes after a short period (2005044/3)

CSNO: 9710 - Onboard supply control unit Change: 2004-07-09

**Problem Description**  
When the door is opened, the interior lights go out after a brief time. The software versions 0302, 0401 and 0501 are affected.

**Cause**  
Software error in onboard supply control unit. The light should be on for approx. 10 minutes.

**Series Solution**  
Modified onboard supply control unit from software 0601. From 11.2003

**Customer Service Solution**  
From online update 49.01 or brand CD V.06.50, the software versions 0302 and 0401 can be updated via the “Guided Fault Finding”. The basic CD 6.20 is required for this.

**Before update programming, please read the long coding from the onboard supply control unit as this is deleted by the update.**  
Encode the onboard supply control unit with this code again after successful update programming.

Please procedure as follows:

S295\_075



## Start the control unit update process

The complete update programming is carried out in the "Guided Fault Finding" procedure. It starts with vehicle identification.

The screenshot shows the 'Guided Fault Finding' menu with 'Vehicle Identification' selected. The vehicle is identified as a Volkswagen V06.50.00 23/02/2004. A list of vehicle types is shown, including '1T- Touran 2003 >'. The 'Control units have been queried' screen lists various components like 'Motronic engine control unit', 'Direct shift gearbox 02E', etc. The 'Fault memory content' screen shows two faults: '16497 P0113 000 Intake air temperature sender G42 Signal too large Fault not stored' and '16622 P0239 Charge air pressure sensor 09 - Electronic central 3 Fault / notices recognized'. A 'Go to target' menu is open, showing options like 'Cancel', 'Exit', 'Vehicle system test', 'Fault memory content', 'Complaint report', and 'Function/Component Selection'.

S295\_076



It is important that this process is run through completely. It may not be cancelled.

S295\_077

Use the "Go to" button to select the "Function/Component Selection" go-to target.

S295\_078/S295\_079

The screenshot shows the 'Function/Component Selection' screen. The vehicle information is the same. The 'Select Function or Component' screen lists various systems: 'Drive (rep. grp. 01; 10...26; 28...39)', 'Chassis (rep. grp. 01; 40...49)', 'Body (rep. grp. 01; 27; 50...97)', 'Software Version Management', and 'Special Tools, Testing Equipment, Aids'. The 'Software Version Management' option is highlighted.

S295\_080

The software version management is started in the "Function/Component Selection" mask.

The screenshot shows the 'Software Version Management' screen. The vehicle information is the same. The 'Program Control Units' section is visible, indicating the start of the update process.

S295\_151

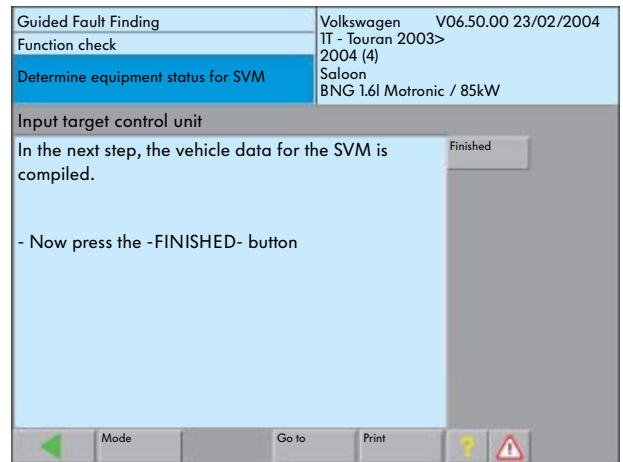


You will find the latest information on the SVM-VW in the VW-ServiceNet®.



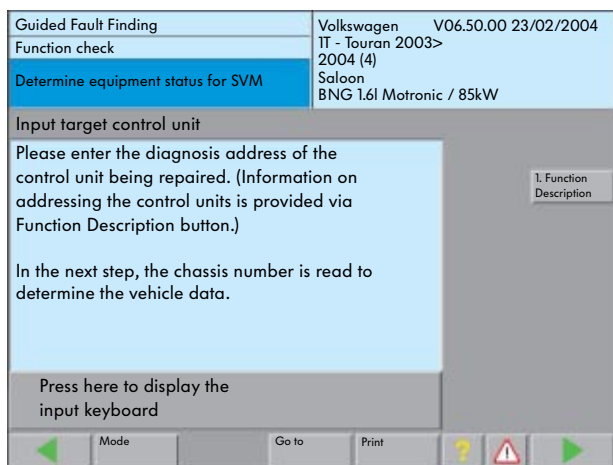
# Guided Fault Finding

The vehicle data for the SVM is compiled first.



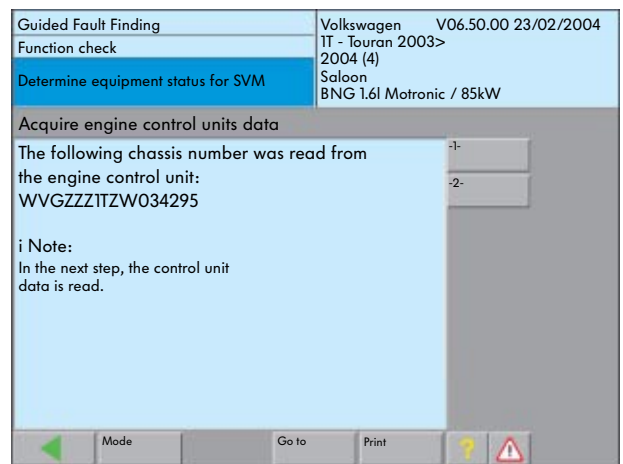
S295\_152

Next the diagnostic address of the control unit to be repaired needs to be entered.



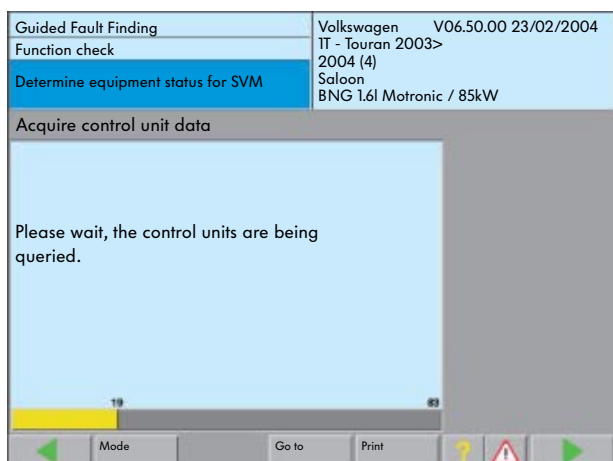
S295\_153

The diagnosis system then records the vehicle system data (control unit) and reads the chassis number.



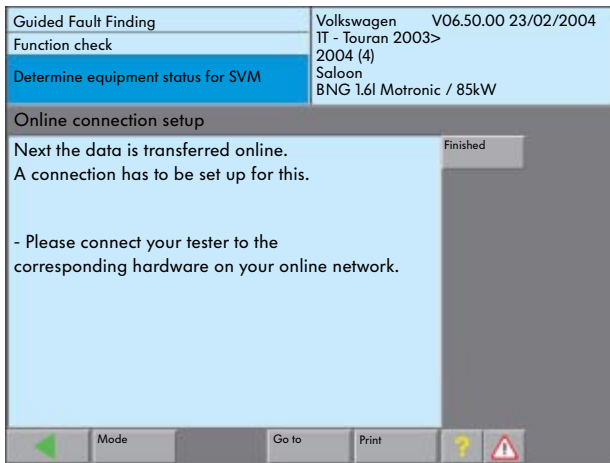
S295\_154

Once the chassis number has been confirmed, the data of the systems installed in the vehicle is queried and sent to the manufacturer.



S295\_155





S295\_157

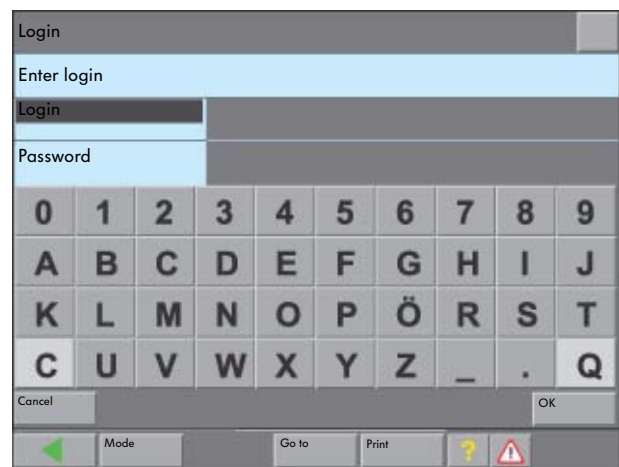
A login and a password is required to send the extracted data to the SVM.



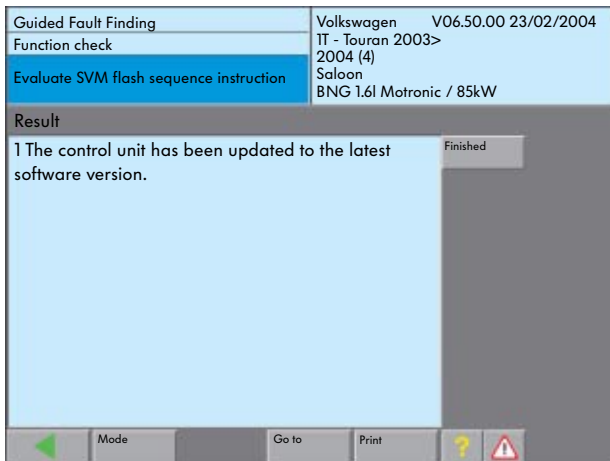
The password and login are issued by the system administrator at the respective dealership and can only be used there.

The diagnosis system then sends the data via an online connection to the vehicle manufacturer database.

The diagnostic system needs to have a connection to the dealership network.



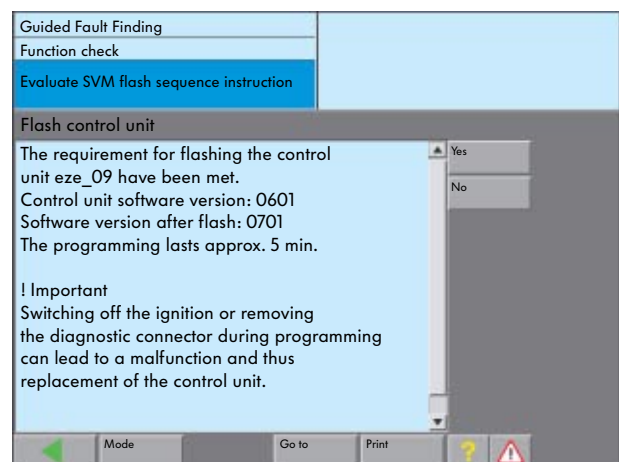
S295\_156



S295\_158

The final message indicates whether the process was successful. After a update, the updated equipment status is sent to and confirmed by the SVM.

The manufacturer database checks the incoming data and sends the latest control unit software to the vehicle system via the online connection.

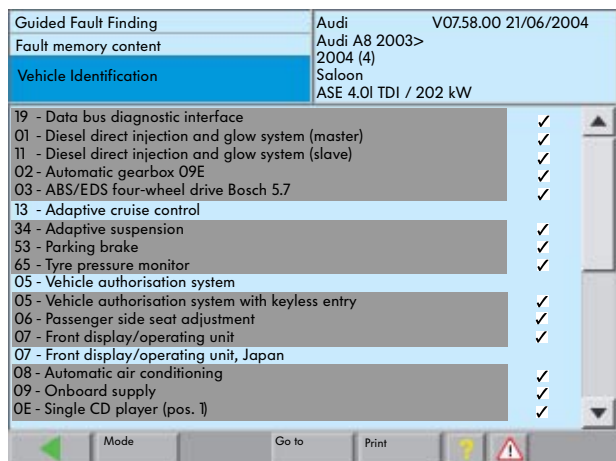


S295\_159

# Guided Fault Finding

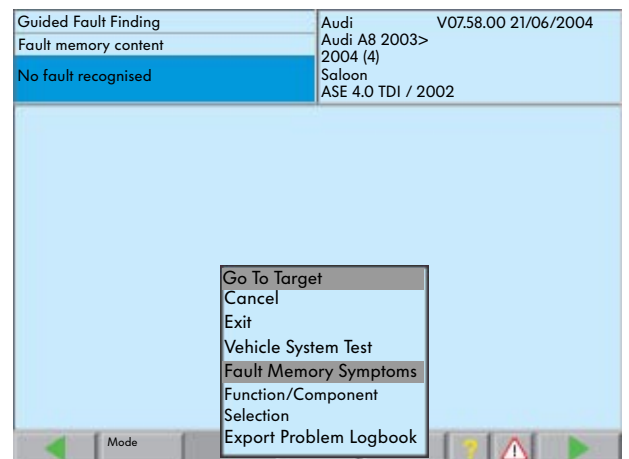
## Audi software version management

Audi software version management is possible via an online connection to the diagnosis with Audi vehicles from model year 2003.



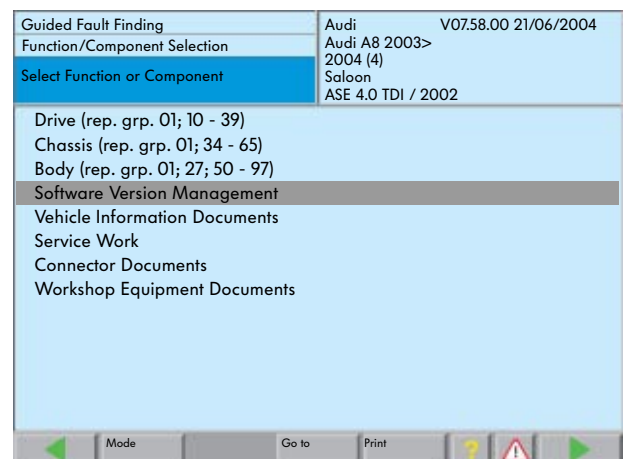
S295\_089

From the “Fault Memory Content” mask, you can select the “Function/Component Selection” mask with the “Go to” button.



S295\_090/S295\_079

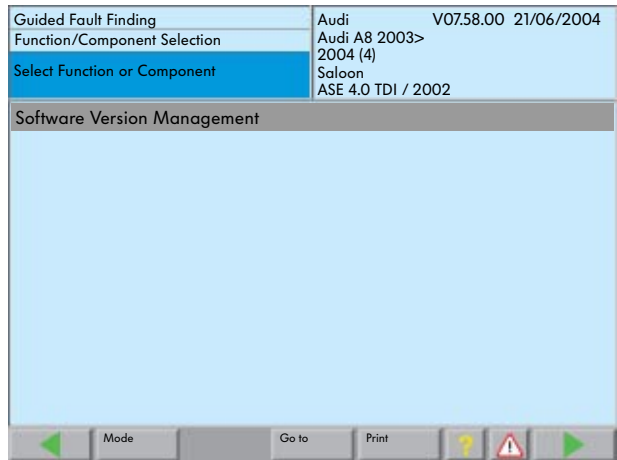
The “Software Version Management” function can be selected in the “Function/Component Selection” mask.



S295\_091

**The Audi software version management comprises:**

- Target/actual comparison
- Problem-related hardware and software update
- Vehicle modification

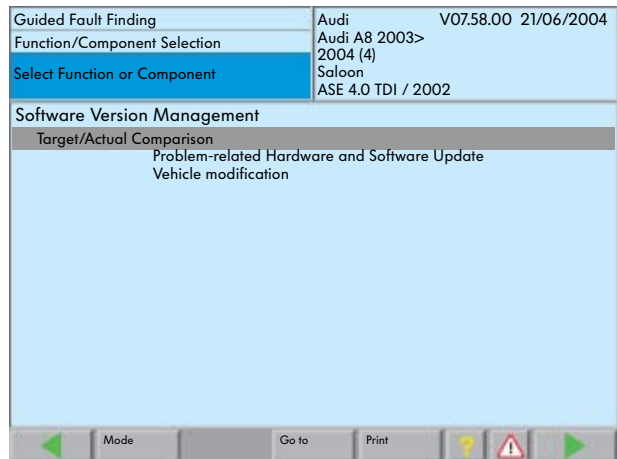


S295\_094

**Target/Actual Comparison**

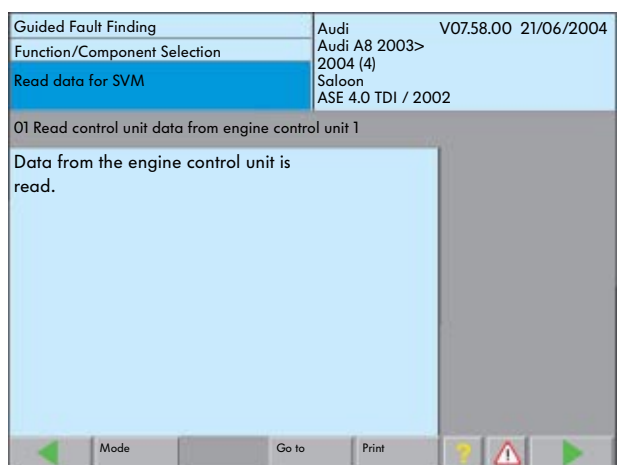
The target actual comparison is used to check the control unit configuration before a repair is started.

The current control unit configuration is documented in the SVM database at Audi in Ingolstadt.



S295\_095

The VAS 5051/VAS 5052 reads the software versions, the hardware and software parts numbers, the serial number as well as the coding of the control units installed in the vehicle and transfers it to the SVM database via the online connections.



S295\_096



# Guided Fault Finding

## Problem-related hardware and software update

The problem-related hardware and software update is used to control problems that are described in the TPL and do not generally lead to recalls.

Before the repair is started, the hardware needed according to the TPL needs to be ordered through spare parts. If a software problem is involved that can be rectified with an update, a control unit does not need to be ordered.

At the end of the repairs, the current control unit configuration is documented in the SVM database.



Guided Fault Finding	Audi	V07.58.00	21/06/2004
Function/Component Selection	Audi A8 2003>		
Select Function or Component	2004 (4)		
	Saloon		
	ASE 4.0 TDI / 2002		
Software Version Management			
Problem-related hardware and software update			
Direct input of action code for a problem-related update			
Mode	Go to	Print	?

S295\_097

Guided Fault Finding	Audi	V07.58.00	21/06/2004
Test plan	Audi A8 2003>		
	2004 (4)		
	Saloon		
	ASE 4.0 TDI / 2002		
- Direct input of action code for a problem-related update			
Mode	Go to	Print	?

S295\_098

Before the update is started, the action code needs to be entered according to the instruction in the TPL.

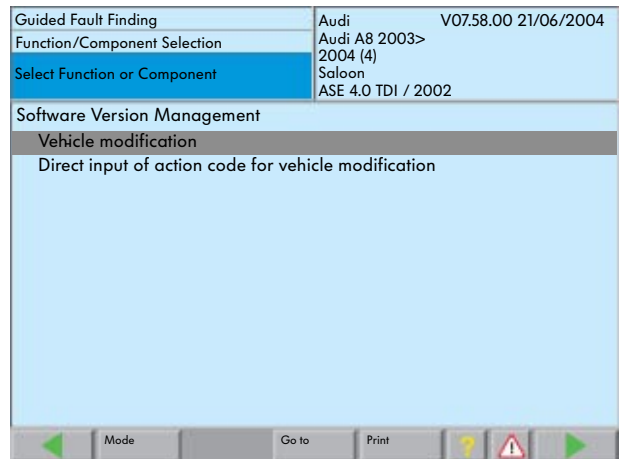
The further procedure is displayed as a mask on the screen.

Guided Fault Finding	Audi	V07.58.00	21/06/2004
Function check	Audi A8 2003>		
Read data for SVM	2004 (4)		
	Saloon		
	ASE 4.0 TDI / 2002		
Read head data			
Please enter the required action code:			
Press here to display the input keyboard			
Mode	Go to	Print	?

S295\_099

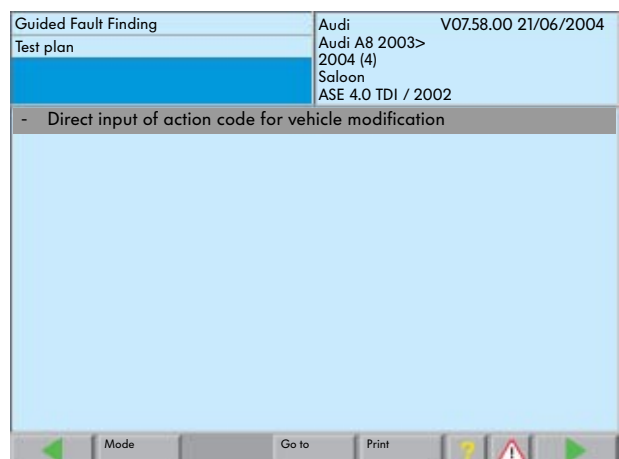
## Vehicle modification

If modules have been retrofitted (e.g. auxiliary heating, tow bar), the modified control unit configuration will be sent to the SVM database and documented.



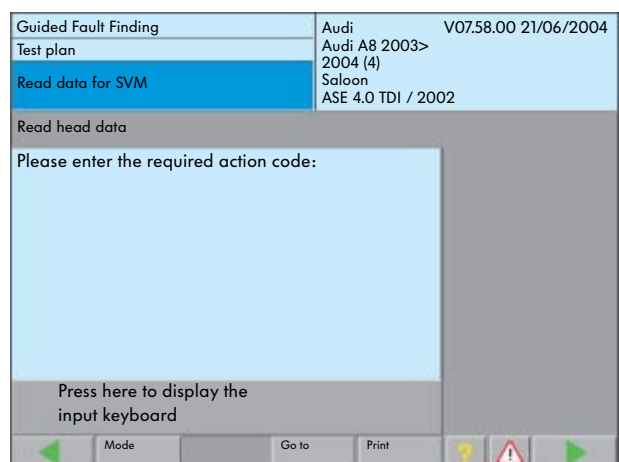
S295\_100

Pressing the “Continue” button twice will open the screen for inputting the action code.



S295\_101

So that the necessary configuration can be carried out, the action code given in the installation or modification description needs to be entered.



S295\_102



You will find the latest information on the SVM-Audi in the Audi-ServiceNet®.



# Guided Functions

**The contents of the guided functions in the vehicle diagnosis, testing and information system VAS 5051, in the vehicle diagnosis and service information system VAS 5052 as well as in the vehicle diagnosis system VAS 5053**

## Advantages of the “Guided Functions”

- Fast access to functions used on a daily basis
- Complete vehicle system test not needed
- Available throughout the VAS diagnosis systems
- Usage date with the basis CD V06.00.00 and the Volkswagen brand CD V06.42.00 or the Audi brand CD V06.47.00

## Overview

Among other things, the “Guided Functions” allow

- vehicle keys to be adapted,
- the service interval display to be reset,
- help to be provided with the replacement of control units,
- the coding and adjustment of control units,
- control element diagnosis to be performed,
- data blocks to be read,
- general system descriptions to be called up,
- component tests to be carried out on electronic systems and
- fault memory entries to be read. If there is a fault entry, direct entry into the guided fault finding is possible using the “Mode” button.



S295\_139



## Entry

Entry is via the vehicle selection as with the “Guided Fault Finding”.

The screenshot shows a sequence of screens for vehicle selection:

- S295\_162:** Select brand menu with 'Audi' selected.
- S295\_163:** Select type menu with 'Audi A3 2004 >' selected.
- S295\_164:** Select model year menu with '2005 (5)' selected.
- S295\_165:** Select body shape menu with 'Saloon, 5-door (Sportback)' selected.
- S295\_166:** Select engine code menu with 'AXX 2.0l Motronic / 147kW' selected.

Once the vehicle and the engine variant has been selected, you can select the required system by touching the screen.

- A fault memory query is possible during the maintenance is possible using the “Vehicle System Test” button. If a fault has been stored, direct entry into the guided fault finding is possible using the “Mode” button.

The screenshot shows the 'Select vehicle system or function' screen for the selected vehicle. The 'Vehicle System Test' button is highlighted in the bottom navigation bar.

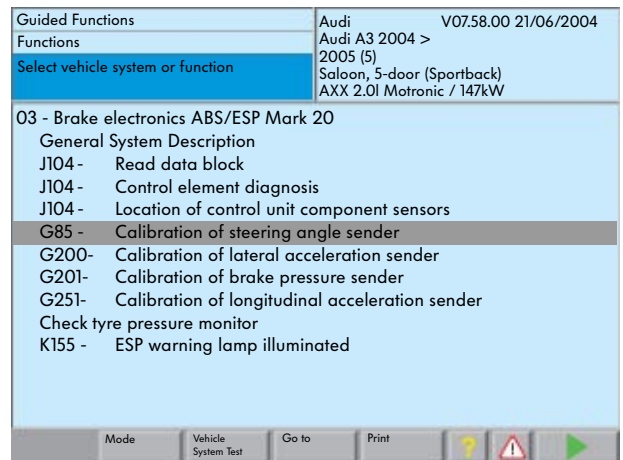
Press the “Mode” button to switch to the “Guided Fault Finding”. When you return, the fault memory is not erased.

Activation of vehicle system test, query only of the systems that are possible in this vehicle type.



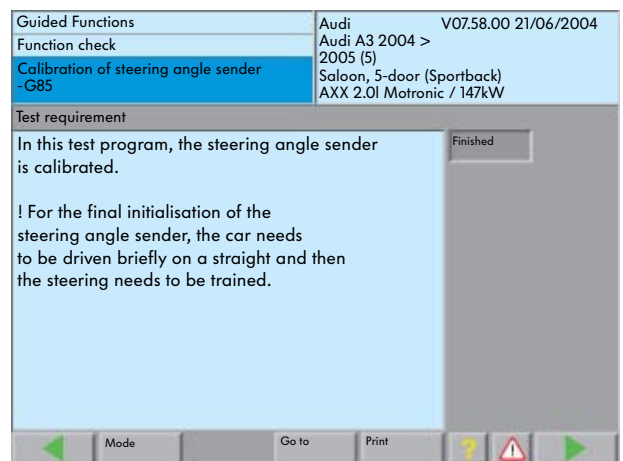
# Guided Functions

The possible testing and diagnosis steps are then shown for the selected system.



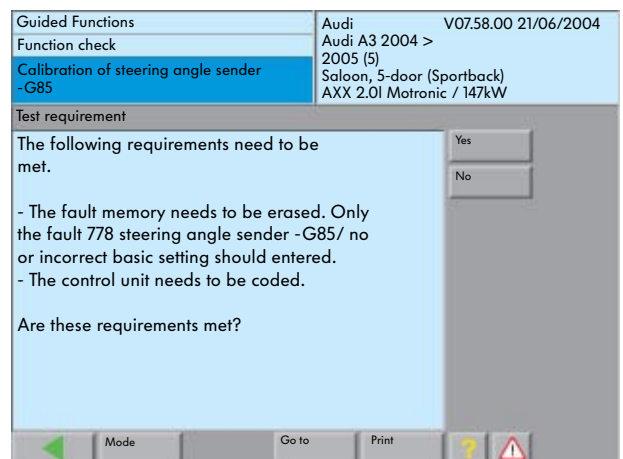
S295\_116

Pressing the “Continue” button twice opens the test program.



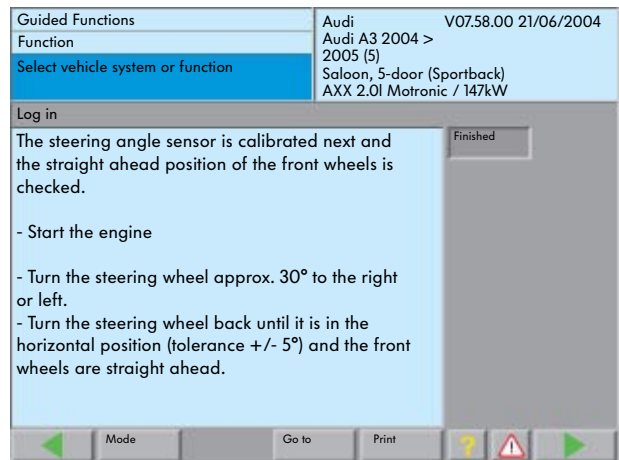
S295\_172

The further procedure for the function test is menu-guided.



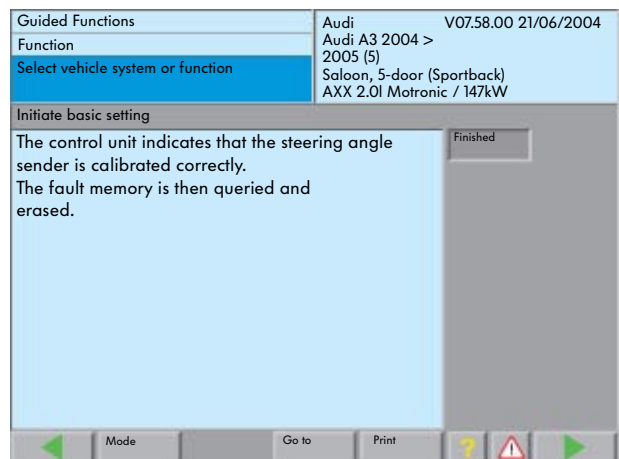
S295\_171

Instructions for carrying out operating steps on the vehicle are provided for the user on screen in the mask.

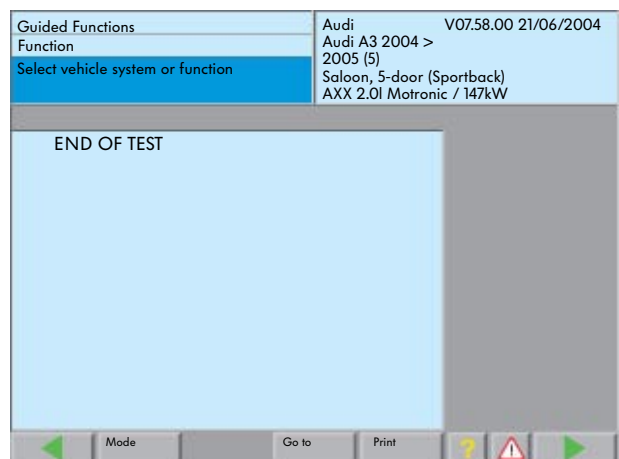


S295\_173

The mask shows the respective latest progress of the function test.



S295\_174



S295\_175

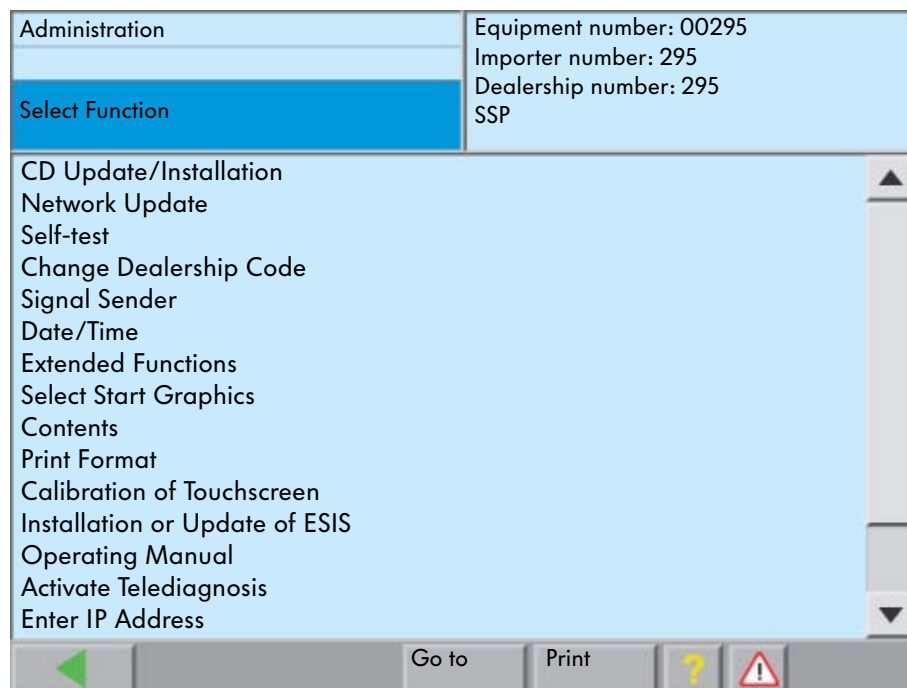
# Administration

## The contents of the administration in the vehicle diagnosis, testing and information system VAS 5051 as well as in the vehicle diagnosis and service information system VAS 5052

### Starting Administration

The Administration is started from the start mask by pressing the “Administration” button.

It provides the functions for internal administration of the tester.



S295\_118



This selection provides just an overview of the functions in the Administration mode. You will find a detailed description in the operating manual for the vehicle diagnosis, testing and information system VAS 5051 and in the operating manual for the vehicle diagnosis and service information system VAS 5052.

<b>Functions</b>	
CD Update/Installation	Basic and brand CDs can be installed using this function.
Network Update	When this menu item is selected, the test unit searches for a software update under the corresponding URL address.
Self-test	This function carries out a self-test of the vehicle diagnosis connector in the test unit including the diagnostic cable and the internal test instrument unit (only VAS 5051).
With first installation: Enter workshop code then: Change dealership code	This function is used to enter the sales/importer number, dealership number and dealership code. After confirming the entry, this data is blocked. Next only the name and the address of the dealership can be changed.
Signal Sender	This function allows you to change the duration and pitch of the acoustic signal.
Date/Time	After selection, the date and the time can be adjusted. The date can, however, only be changed with first installations or when a new basic CD is installed.
Extended Functions	This can only be used with a special key CD.
Select Start Graphics	The function allows you to select the start graphics.
Contents	After selecting this item, the installed basic and brand CDs are displayed with their respective version number. After selecting a CD, its contents appear.
Print Format	This function allows you to set different paper formats with the accompanying software printer drivers for screenshots and print styles.
Screen Calibration	This function allows the touch screen to be calibrated. (VAS 5051 only after first installation or after installation of a new basic CD)
Installation or Update of ESIS	This function allows you to install "Electronic Service Information System". (US market only)
Operating Manual	This function displays the operating manual.
Activate or Deactivate Telediagnosis	This function allows remote access to the test unit via a network.
ELSA Installation	This function allows you to install the procedure system for the "Electronic Service Information System". (Not VAS 5051 and VAS 5053)
Application Statistics	The selection shows statistics on how often and how long the individual modes have been used.
Application Installation	Other applications can be installed with this function, for example, data CD for update programming and multimedia training CDs from service training.
Network Settings	After selecting this function, another mask appears where you can make network settings.



# Time Management

## Time Recording

### Calculation of diagnosis times

The group has been using the VAS 5051 since 1996, the VAS 5052 since 2001 and the VAS 5053 since 2004.

In these systems, the test steps are added in the “Guided Fault Finding” and the “Guided Functions” using specially developed parameters.

The labour items (AP) with times for the single reading (01 29 00 00) and repeated reading (01 29 00 50) of error memories have the following content structure:

- 1 Query fault memory before repair (including connecting and disconnecting diagnostic system)
- 2 Erase fault memory (01 29 00 00)
- 3 Carry out any repairs
- 4 Query fault memory again after repairs and then erase (01 29 00 50)

### New customer service number for vehicles from model year 2003

From model year 2003, the customer service number 01 50 00 00 for the “Guided Fault Finding” and the “Guided Functions” is available. The customer service number is initially without time.

The time from the diagnosis protocol is entered in the DMS.

All required work, for example, reading the fault memory or programming control units are covered by the labour item AP 01 50 00 00.

The diagnosis protocol, which is included with the order, provides proof. The time that is given on the print out is only the time that the mechanic spent on the vehicle with the diagnosis system. In addition, all removal and installation work, fetching special tools and other work have to be added to this.

This is then invoiced together.



## Diagnosis protocol

After diagnosis, the necessary times are calculated and can therefore be checked.

These times are displayed in the diagnosis protocol and can be invoiced together with the times for removal and fitting of the faulty part.

<b>VAS 5051</b>	<b>Diagnosis Protocol</b>	<b>15/06/2004 13:37</b>
<b>Workshop code:</b> 12345678		<b>Version:</b> V07.58.00 21/06/2004
<b>Dealership code</b> Jones Cars		<b>Car registration</b> SSP 295
		<b>Vehicle ID no.</b> WVWZZZSSP295

**Diagnosis**      **time: 85 time units**

S295\_119



# Online Connection

## Networked Workshops

### Changing services

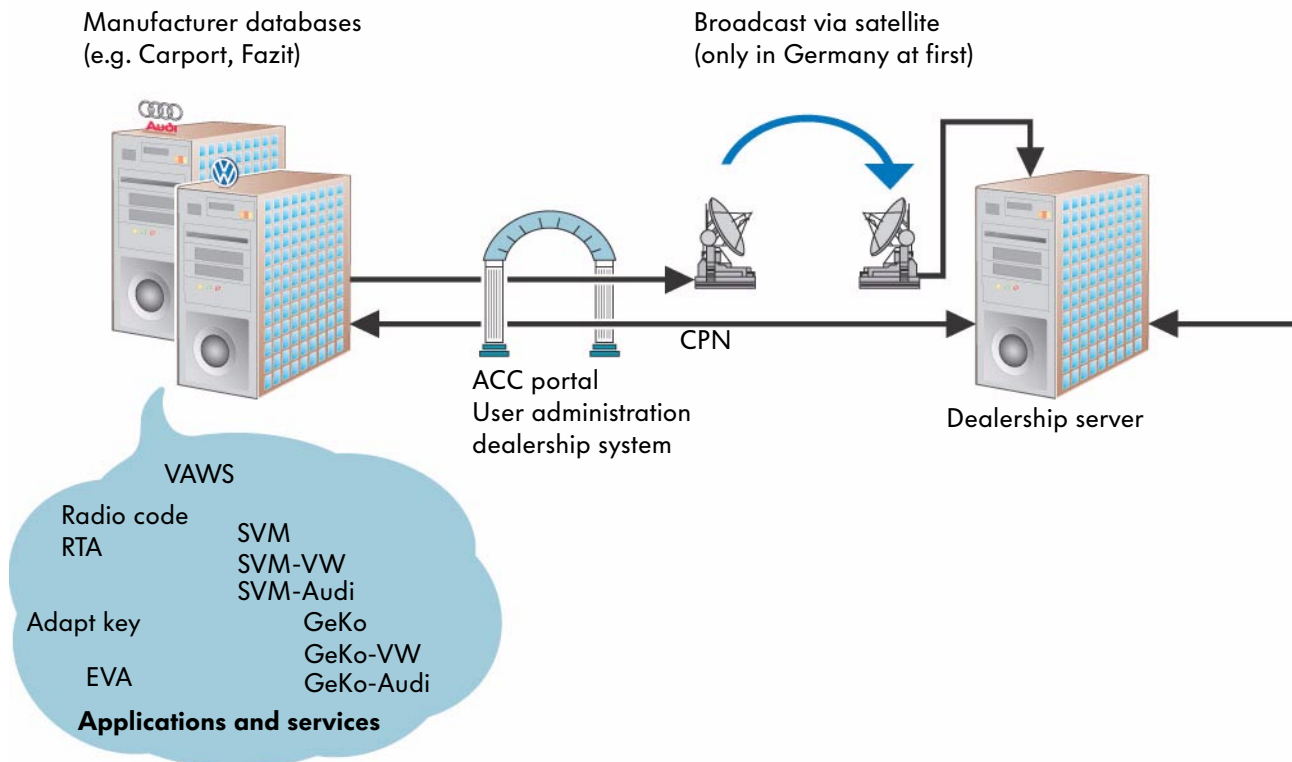
As in many other industries, the use of networked diagnosis systems is also inevitable in vehicle services.

### Service and diagnosis work

The following service and diagnosis work is only possible in a network:

- Software version management
- Secret and component protection
- Software updates for control units
- Telediagnosis
- Software-supported performance of actions
- Adapt key (GeKo)
- Enable radio code

### Data transfer via online connection





## The Standard

### Required hardware

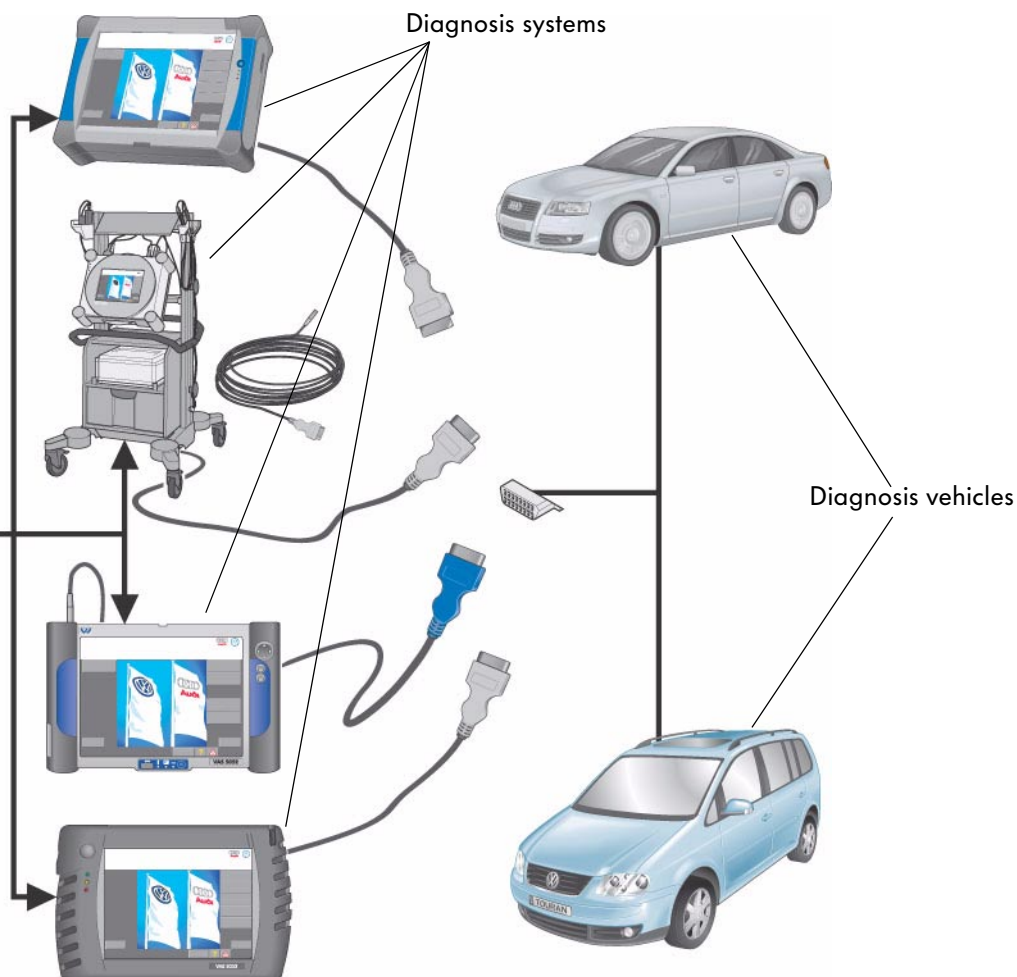
To use network communication, the VAS diagnosis systems require a network card and a network connection in the workshop.  
The VAS 5051B, VAS 5052 and VAS 5053 systems have an internal network card. An Ethernet PCMCIA can be added to the VAS 5051.  
An IP address is also required for each diagnosis system (see page 89).

### Data transfer

The data transfer occurs via the CPN partner network.



- Radio code and immobilizer code query no longer via dealership online access
- Vehicle keys are supplied pre-coded
- Online connection may not be interrupted during any GeKo adjustments and coding



S295\_120



# Online Connection

## Accessories for connection to a network

### VAS 5051 network connection

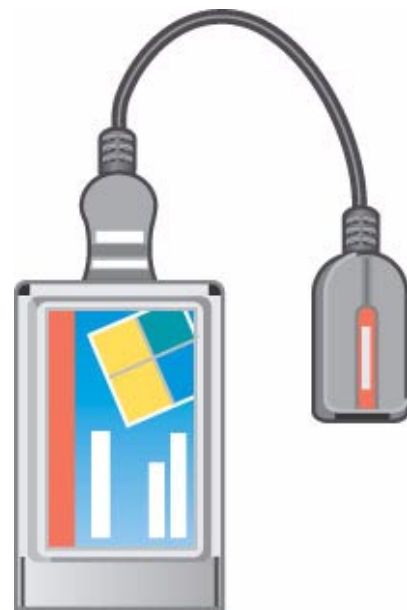
The VAS 5051 also requires an Ethernet PCMCIA card for network communication.

### VAS 5015/45 Ethernet

The Ethernet PCMCIA card allows communication with other computer systems via an online connection.

### Required software

The necessary software components are supplied with the update CDs for the VAS 5051.



S295\_121

### VAS 5052, VAS 5051B and VAS 5053 network connection

The diagnosis systems have an internal network card and therefore required a network cable to network communication.



S295\_122



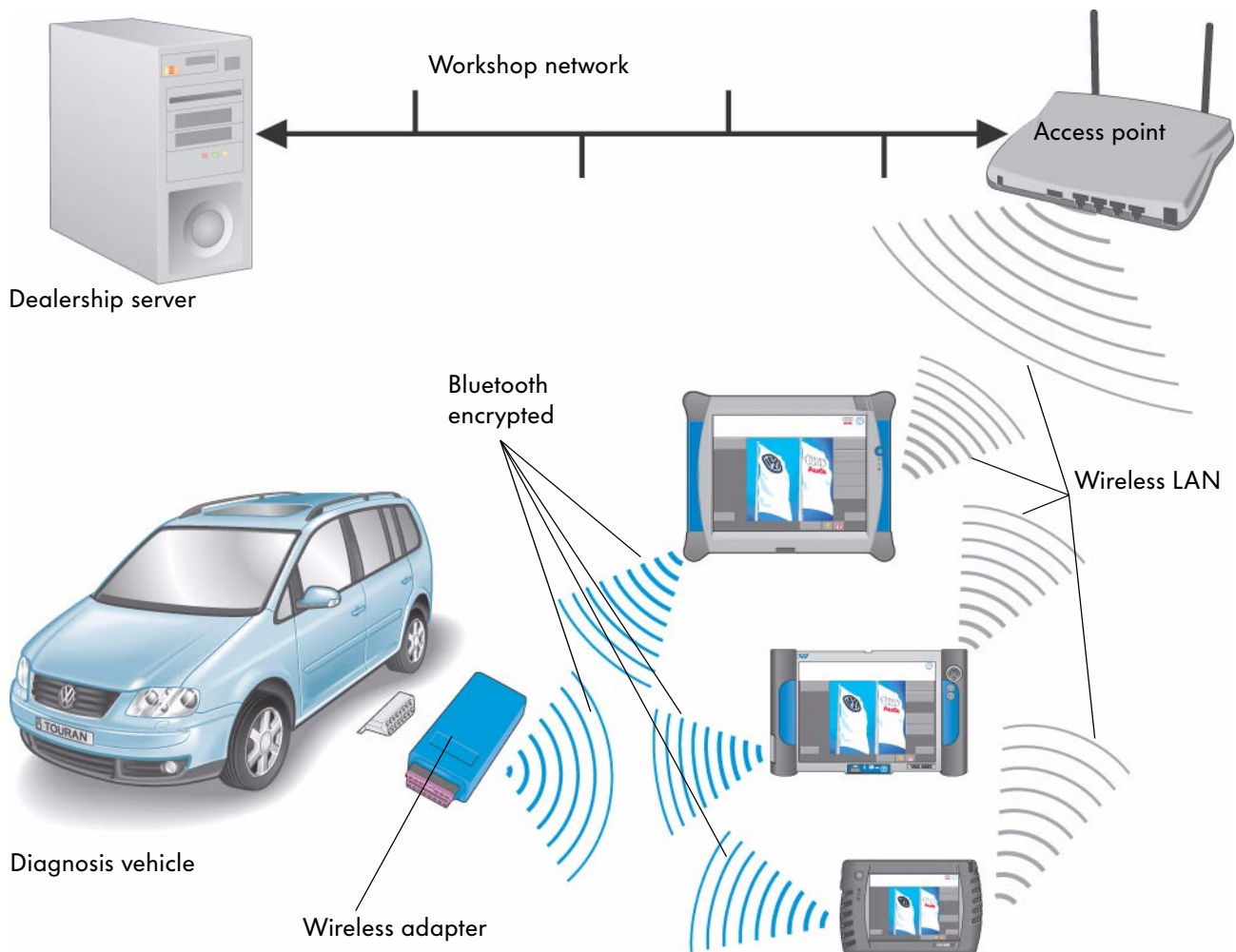
Further information on the installation of network, the network and on the versions of the basic and brand CDs for the diagnosis systems are available in ServiceNet®.

## Diagnosis wireless adapter 5054

In future, to meet the increasing demands for convenience, the data transfer between the vehicle and the diagnosis systems will also be possible via a wireless connection in addition to the diagnosis lead.

A wireless adapter that can be used as an intermediate storage medium is connected to the diagnosis socket.

### Data Transfer



S295\_124



# Telediagnosis

## Diagnosis with Support

### General description

To support diagnosis on the vehicle, the VAS diagnosis systems can be operated from a central point (e.g. experts at the TSC, at the importer, in the factory) via an online connection.

The expert can see the data read from the vehicle on his screen and can support the mechanic.  
The mechanic and the expert communicate by telephone.

### Telediagnosis



Expert at TSC



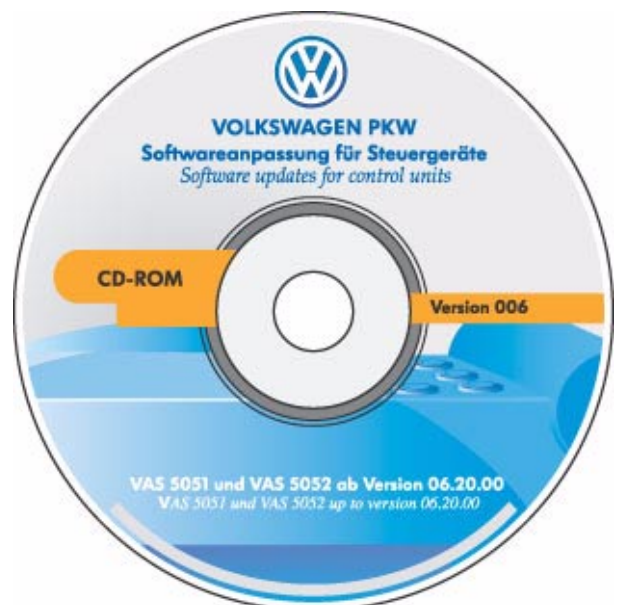
Mechanic in the workshop



S295\_125

### Software requirements for workshop

All VAS 5051s with the basic CD version 2.10 and all VAS 5052s with the basic CD V06.00.00 and higher have the telediagnosis function.



S295\_126

## VAS 5015/45 Ethernet telediagnosis

When used in a workshop or dealership network, the Ethernet PCMCIA card is required.

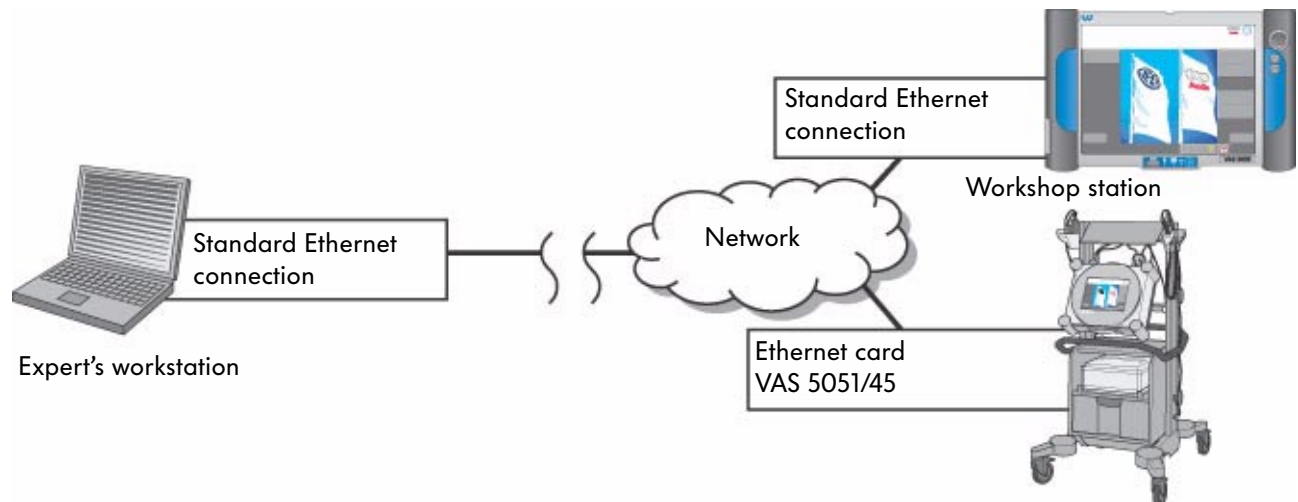
Contents:

- EMC plate with cable holder
- PCMCIA Ethernet card with connection lead
- Trim
- 10 m connection lead
- Protective cap
- Installation instructions



S295\_127

## Ethernet Connection



S295\_128

The VAS 5015 as well as the VAS 5016 are networked within the workshop and can communicate with the expert's workstation via an online connection.

The administrator on site or at the sales centre assigns an IP address and subnet mask to the VAS 5015 and VAS 5016.



The "Telediagnosis" function can only be used with the VAS 5015 diagnosis systems in a workshop or dealership network with the original VAS 5015/45 package for technical and licensing reasons.

# Telediagnosis

## VAS 5015/38 ISDN telediagnosis

If the system is not used in a workshop or dealership network, an ISDN card is required for telediagnosis.

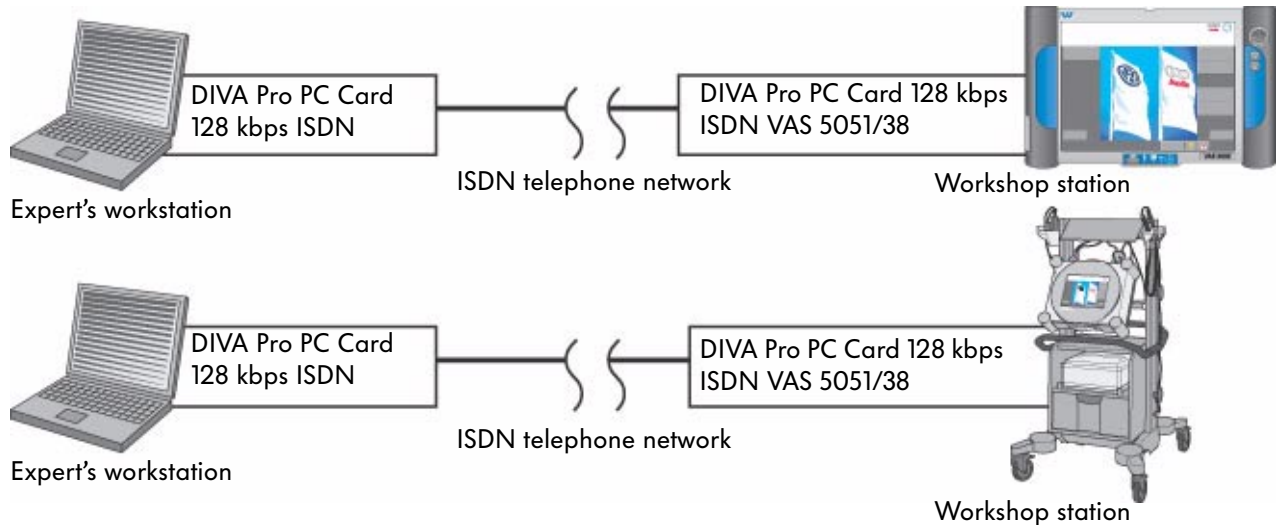
Contents:

- EMC plate with cable holder
- ISDN card with connection lead
- Trim
- 10 m connection lead
- Protective cap
- Installation instructions
- An ISDN connection on site



S295\_129

## ISDN Connection



S295\_130

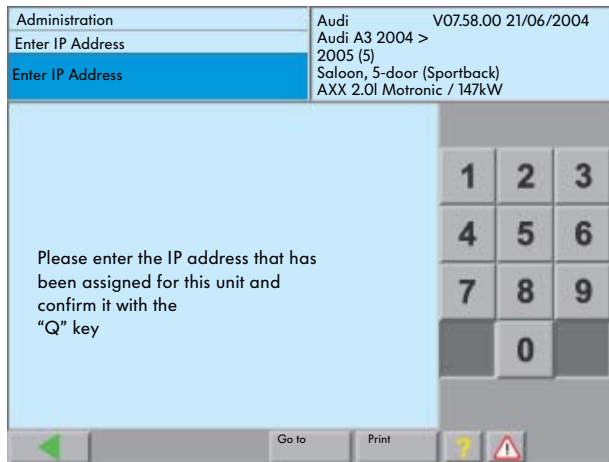
The "Telediagnosis" function can only be used with the ISDN card from the original VAS 501/38 package for technical and licensing reasons.

The retail dealership concept prevents simultaneous use of an ISDN connection on systems that are connected to a workshop or dealership network.

In markets with standardised workshop networking, only the Ethernet card VAS 501/45 may be used.

## Function

Before a data connection to the TSC, importer or factory (expert workstation) can be set up with the VAS 5051 or the VAS 5052, you should make sure that the network card or the standard Ethernet connection in the diagnosis system is connected.



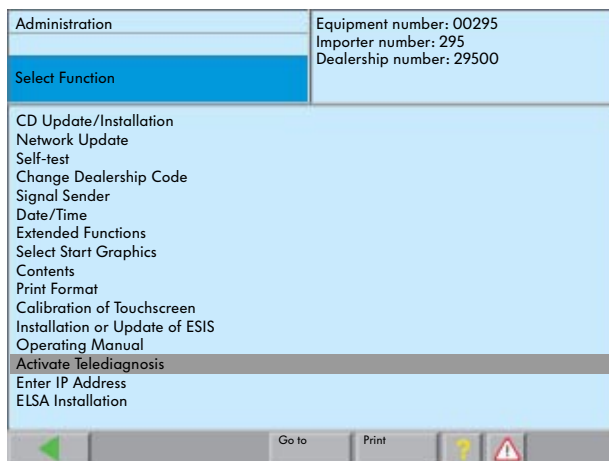
S295\_131

## Entering the IP address

An IP address needs to be entered for systems that are connected via a workshop or dealership network.

It is entered by pressing the “Administration” button on the start screen and then selecting the “Enter IP Address” function.

The IP address is issued by the system administrator at the dealership in accordance with Volkswagen Group guidelines.



S295\_132

## Activate Telediagnosis

The “Activate Telediagnosis” function is started from the “Administration” menu item in the VAS 5051 or VAS 5052.

The connection can then be set up from the expert’s workstation.



Once the connection between both stations has been set up, the workshop unit switches to “slave mode”. The expert’s workstation takes on the master function.

Operation can occur on both units as agreed. The screens are identical on both stations.

The mechanic and the expert communicate by telephone.

The data connection is set up from the expert’s workstation.

# Emissions Testing Station

## VAS 6300 Emissions Testing Station

### Emissions testing station control unit

The VAS 5052 vehicle diagnosis and service information system is used as an operating and display unit together with the 6300/2 software/hardware package. It controls the devices connected in concept 1 or 2 via an interface distributor and communicates with the vehicle control units

### Concept 1

In addition to the control unit, concept 1 uses the ignition tester V.A.G 1767, the exhaust tester V.A.G 1787 or 1788 and the diesel tester V.A.G 1743.

VAS 5052  
control unit



Printer



V.A.G 1767  
ignition tester



V.A.G 1743  
Tester for diesel  
engines

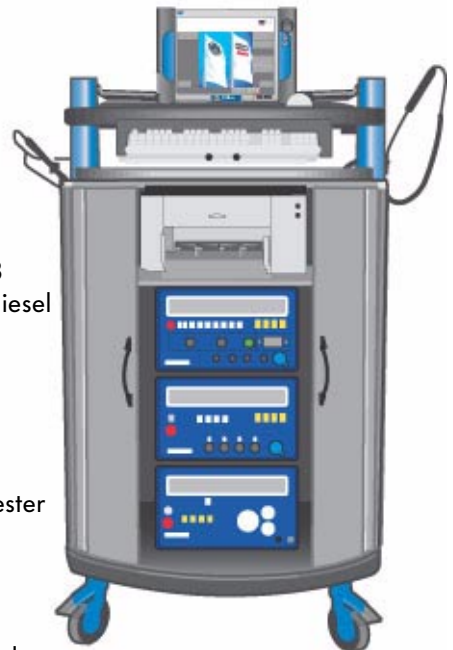


V.A.G 1788  
4-gas exhaust tester



Diesel measuring head

VAS 6300  
Concept 1



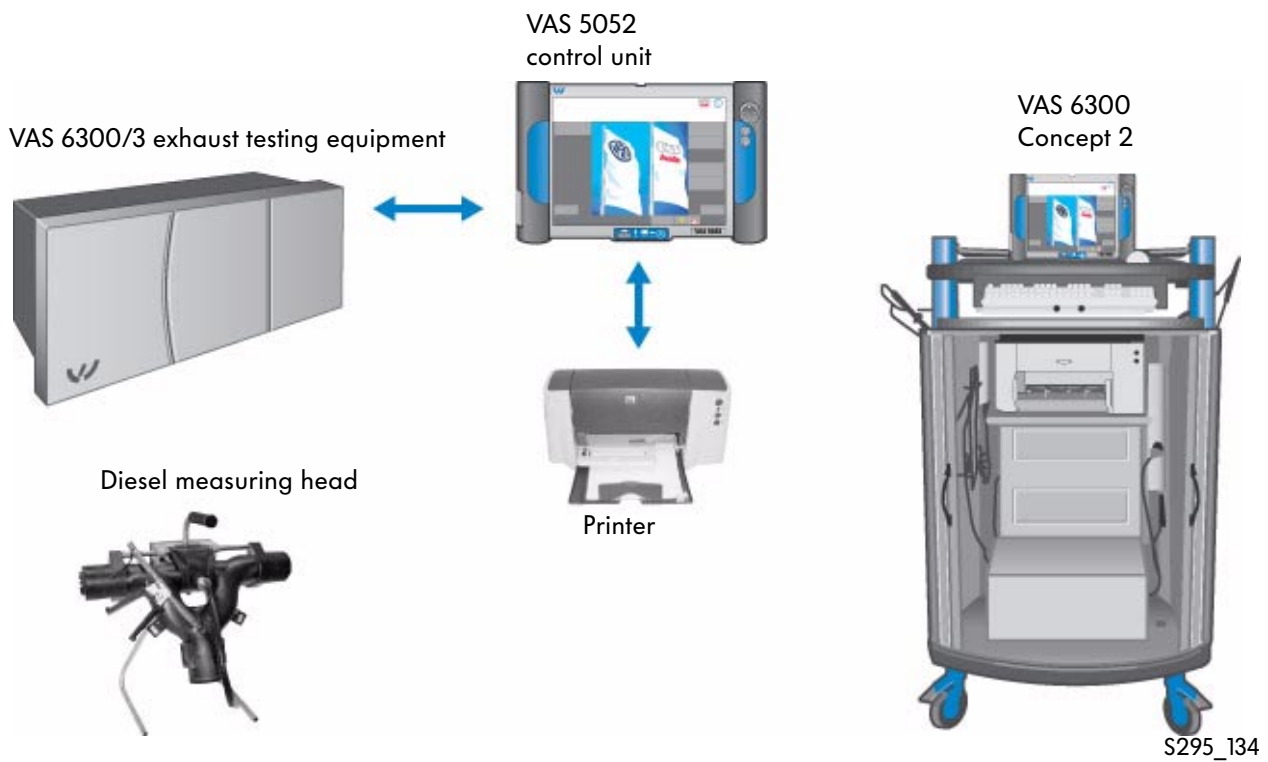
S295\_133





## Concept 2

In addition to the control unit, concept 2 comprises the exhaust testing equipment VAS 6300/3, a state-of-the-art testing instrument that can be used across the world.



You will find further information on the CD VAS 6300 Multimedia Training supplied with the emission testing station. This CD also contains the emissions testing software required for the VAS 5052.



# Glossary

## A

API	Current product information	Information on problems, new features (videos etc.)
APOS	Labour position activities, time units	
ASANET	Data exchange protocol	Defined protocol for transfer of information to a wide range of workshop equipment that link the asanetwork
ASC	Audi Service Circle	
AU	German emissions test	
AVUS	Automatic Vaudis Update System	

## B

DC	Dealership Concept	The equipment, structure, hardware and software which the dealership can install
Bluetooth		Wireless data transfer

## C

CAN	Controller Area Network	Network for control unit communication in the vehicle
CICSA	Mainframe carrier system	Black screen, green font, PESOS runs on this, for example.
CPIS	Central Partner Information System	Hardware and software inventory of all partners, automatic reporting to central system about which components are installed. (Drops/Vaudis/Elsa/ServiceNet®)
CPN	Central Partner Network	Closed network segment, which all Volkswagen and Audi partners can access



<b>D</b>		
DBC	Data Broadcast	Data transfer via satellite
DISS	Direct Information System	Special info tool in Elsa Win from 3.0, can be called up from Service SAGA2. Problems that cannot be solved are coded according to query schemes (which car, which symptom) and sent to the manufacturer.
DMS	Dealer Management System	In Germany mainly VAUDIS DOSYS translation of dealer online access for importers
DMS-BB	Dealer Management System Backbone	Standardised interface for order, customer and vehicle data to the DMS
<b>E</b>		
EA	Expert Advisor	Support system for IS-Handel
ELFI	Electronic vehicle identification	Chassis number is sent, equipment is returned (100% coverage for vehicles from Golf V), integrated in ELSA
ELSA	Electronic service information system	Electronic repair guide
ELSA WIN	Electronic service information system	Electronic repair guide ELSA on Windows basis
ELWIS	Electronic workshop information system	
ERWIN	Electronic repair and workshop information	ELSA for non-VW-Audi dealerships and interested private persons
ESIS	Electronic Service Information System	ELSA-equivalent on North American market
ETKA	Electronic parts catalogue	Follow-up to microfilm
EVA	Electronic sales assistant	multimedia vehicle configuration, Cash sale calculation, leasing, financing



# Glossary

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## F

FAZIT	Vehicle information and central identification tool	Database, in which all theft-related data for the immobilizer and component protection is stored.
FISH	Individual vehicle service notes	Related to vehicle identification. Integrated in ELSA
FISS	Field information high-speed system	Customer complaints, workshop discoveries

## G

GW	Guarantee	
GeKo	Secret and component protection	System for adapting the immobilizer, querying the radio code and enabling the component protection with the VAS testers. The user requires system authorisation.

## H

HC	Hotline Channel	Knowledge database / problem solutions
Holz	Dealer online access	
HOT server	Server at dealership (via satellite)	HOT = name of company that introduced this technology
HSO	Handbook Service Organisation	Process descriptions within a dealership
HST	Handbook Service Technology	Workshop literature of the dealership, see TPL

## K

KD	Customer service	
----	------------------	--

## L

LIVAS	Literature administration and processing system	Repair guides, text systems
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## M

Module

Complex assembly that has a special function and is configured for a specific complete system.

## P

PS Product Support

PROFI Product field information Further development or improvement of Field information high-speed system (FISS)

## R

RESERVE Repair service results All repair data for a vehicle

RG Repair guide

RSC Regional Service Centre

RTA Radio transponder code query

RVS Computer network system

## S

SAM Service Auto-Mat Automatic system for dropping off and picking up vehicles

SG Control unit

SN(K) Damage numbers (catalogue)

SSP Self-Study Programme

SVM Software Version Management



# Glossary

---

## T

TCC	Trade Care Centre	Manufacturer-supported market coordination
TD	Telediagnosis	
TPL	Technical problem solving	Problems known to manufacturer, their solutions and explanations for customers
TPL Archive	Technical problem solution archive	
TSC	Technical Service Centre	

## V

VAUDIS	Volkswagen/Audi Diskette System	
VAWS	Volkswagen Audi Workshop System	Starting with appointment management, handles the service core process systematically and supports all parts of the process.
VCS	VAG Computer Service Vesis	
VK	Sales customer service	

## W

WFS	Immobilizer	
WIV	Maintenance interval extension	
WT	Maintenance tables	

## Z

ZSB	Assembly	
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# Test Yourself

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## 1. How can the VAS 5053 software be updated?

- a) On the network via the workshop server.
- b) Via the VAS 5051.
- c) Via the VAS 5051B.

## 2. What is the standard sort method for the faults immediately after query of the fault memory in “Self-diagnosis” mode?

- a) According to address words
- b) In the order that they were stored in the fault memory of the control unit.
- c) According to the kilometre reading

## 3. A DSO image can be displayed together with a data block after following which procedure?

- a) By entering the “Testing Instruments” mode and calling up the data block with the “Measured Value Self-Diagnosis” button.
- b) By entering the “Vehicle Self-Diagnosis” mode and then switching to the “DSO” function in the “Testing Instruments” mode.
- c) By entering the “Vehicle Self-Diagnosis” mode, “Read Data Block” function and then switching to the “Testing Instruments” mode and pressing the “Measured Value Self-Diagnosis” button.

## 4. What are the sort buttons in the “Fault Memory Content” mask of the “Guided Fault Finding” mask used for?

- a) The system test plans are listed in the order of the sort criterion.
- b) The sort option organises the faults in order of occurrence for the user.
- c) User-defined test plans are listed in the order of the selected sort method.





### 5. How can the sampling rate be set for a long-duration measurement?

- a) By adjusting the time/div. setting using the buttons.
- b) In trigger mode, the sampling frequency can be set in kHz steps.
- c) The sampling rate depends on the set recording time.

### 6. Does a control unit that is not recognised, but is installed have to be selected later in the vehicle system test?

- a) Yes, otherwise the system components in the function/component selection cannot be accessed.
- b) No, if the system was not recognised, it is also not present and any further work on this system is not necessary.
- c) Yes, as the accessibility of the system is the actual fault and further diagnostic steps are necessary.

### 7. In what context does the “Note” label appear?

- a) This is a particularly serious fault that must be solved with top priority.
- b) The label is an indication to the mechanic for further processing later on.
- c) The entry is stored in the fault memory, but has low priority and should not be seen as a fault of the reporting system.

### 8. What does the diagnosis protocol provide information on?

- a) About the number of installed systems without their sub-bus subscriber.
- b) It provides information on the processed system and user-defined test plans.
- c) About the total time required for all steps performed on the diagnostic tester.





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