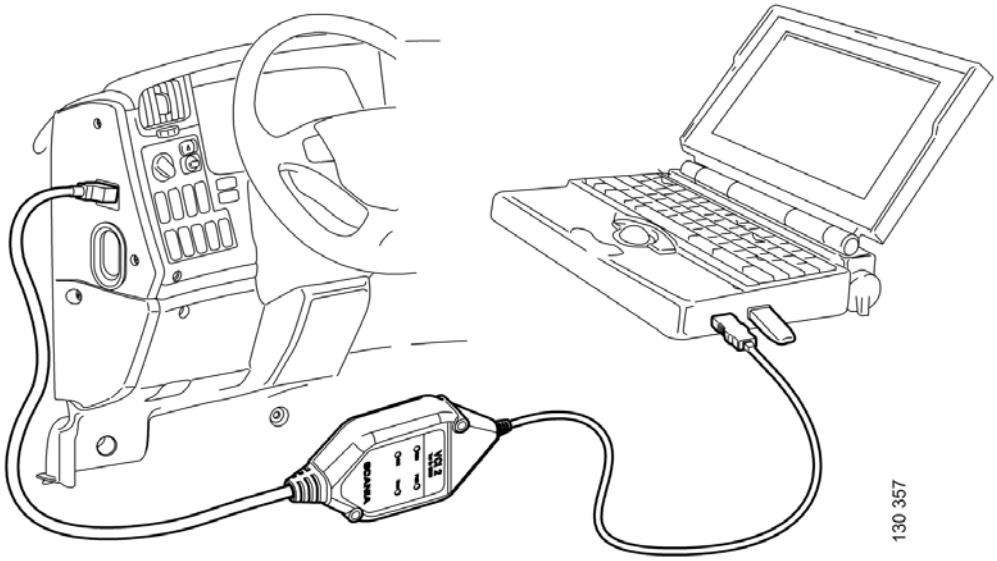
SCANIA

SDP:01

Issue 1 **en**

Scania Diagnos & Programmer 3

User instructions

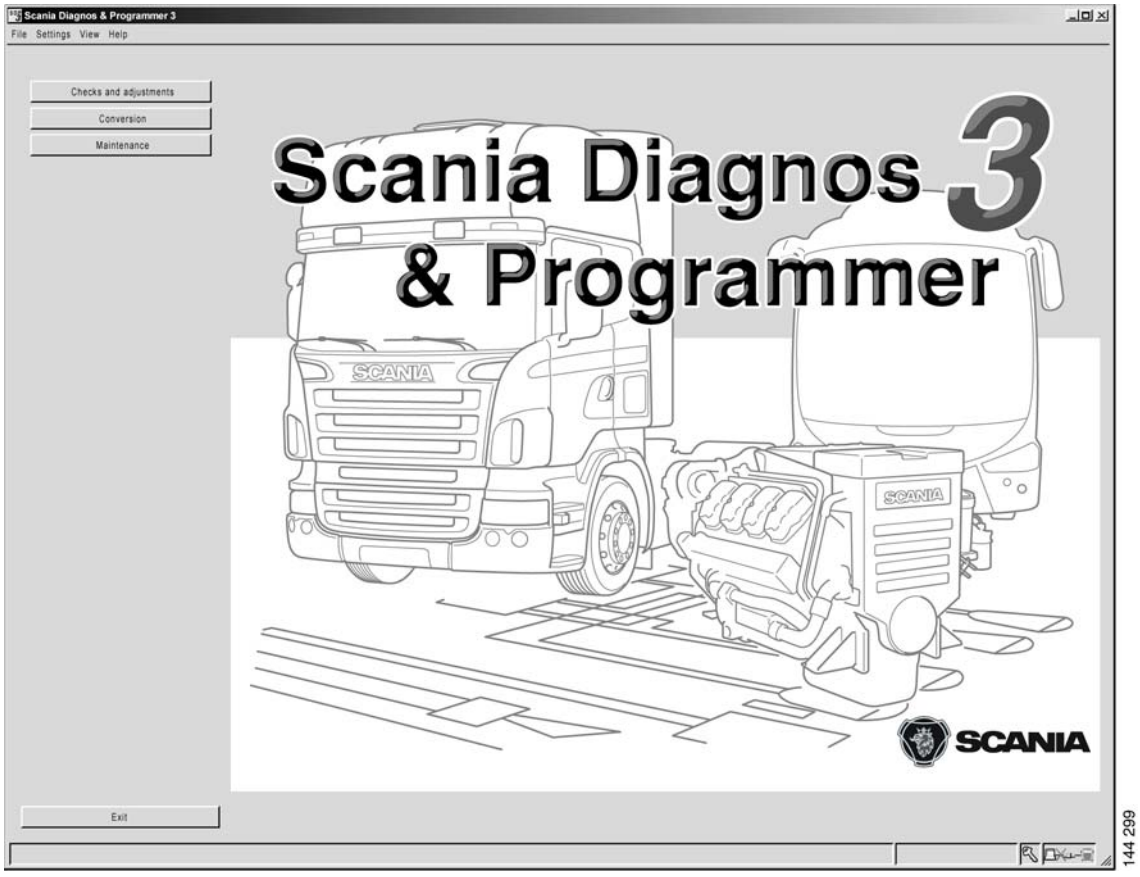


Contents

Introduction

General

Scania Diagnos & Programmer 3 (SDP3) is a further development of Scania Diagnos 2 and Scania Programmer 2. The program has been developed to support the new requirements associated with the introduction of a new and more complex electrical system with CAN communication.



Why SDP3?

Today's vehicles and especially today's electrical systems with their control units and distributed functions place greater demands on tools and technicians. It is both time-consuming and complicated to carry out troubleshooting on vehicles of such complexity. SDP3 has therefore been designed to support the technician during troubleshooting and thus reduce downtime.

SDP3 is similar in many respects to SD2 and SP2. One of the advantages of SDP3 is that troubleshooting and programming are included in the same program.

Another advantage of SDP3 is that there are more possibilities than before for the vehicle to give a description of itself. SDP3 makes use of these possibilities, and only information which is relevant to the vehicle that is connected is displayed, i.e. chassis-specific information.

The following information is provided in SDP3:

- Name and version of the vehicle system.
- Stored fault codes, proposals for remedial action and delete option.
- Control unit configuration and settings.
- Information about electrical components and their location.
- Input and output signals.
- Activation of components.
- Spare part programming.

The following is also new:

- Circuit diagrams. For each circuit there is a diagram which clearly shows how the particular circuit is implemented in the respective vehicle.
- Chassis data. The vehicle gives the program a description of itself and how it is configured.
- User functions. In order to meet service market requirements to work more effectively, there is an option to troubleshoot via user functions, e.g. cruise control.
- Function diagrams. These illustrate how a user function operates. They show the effects in a specific vehicle of what the user has chosen to do. Here you can see which systems and components are involved in a user function and the sequence in which things occur. For example, the cruise control user function has several function diagrams to show the different ways in which the cruise control can be switched off.

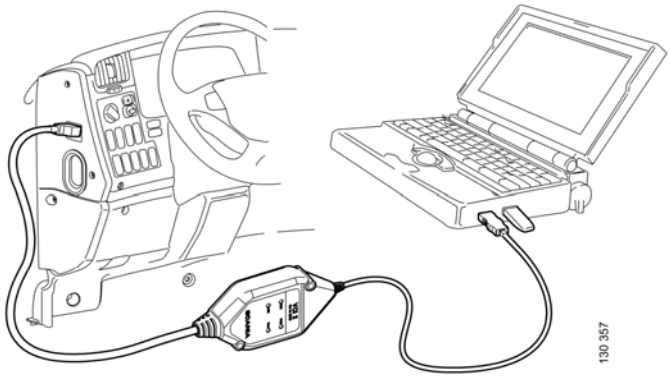
System requirements and ancillary equipment

System requirements

The system requirements applicable to the SDP3 program are set out in the PC binder which is supplied with the software. The system requirements can also be found on the Scania Technical Information website which can be accessed via SAIL.

Ancillary equipment

Use of the program requires a PC, a USB key and a VCI2. These components must comply with the applicable system requirements, *see System requirements*, so that the program will operate correctly.



USB key

A USB key available from Scania is required to use the SDP3 program. In accordance with the applicable agreements, the USB key is the property of Scania. This means that a stolen or lost USB key should be reported to Scania, where it is entered on a list of blocked IDs. To do this, contact your distributor who will in turn contact Scania.

You can obtain more information about USB keys in the *USB procedure* in the PC binder and also in the *Warranty information bulletin concerned*. The information can also be found on the Scania Technical Information website which can be accessed via SAIL.

It may over time become difficult to read the serial number on the USB key due to wear or damage. It is possible to obtain the serial number with the help of SDP3. Connect the USB key to the PC and start SDP3. This can be done regardless of whether the VCI2 is connected or not. In the menu under Settings you will find information about the USB key.

Information about the USB key can be obtained under Settings in the menu.

SDP3 also provides information on accessibility status for a connected USB key. If accessibility is shown as BLOCKED it implies that Scania has entered the USB key in a list of blocked IDs. If the accessibility is shown as UNKNOWN, it indicates that the USB key is of a different type to the one approved by Scania.

VCI2

The VCI2 used for SDP3 differs from the VCI used for SD2 and SP2. VCI2 is the interface that is used between the vehicle and the PC and can be purchased from Scania as a special tool, part number 99 430.

Function of the lamps

PWR (green)	The lamp lights up continuously when the VCI2 is supplied with voltage both from the vehicle and the PC. The lamp flashes when the VCI2 is connected to the PC.
USB (yellow)	The lamp lights up (flashes rapidly) when data is transmitted between the PC and VCI2 via the USB key.
CAN (yellow)	The light lights up (flashes rapidly) when data is transmitted between the VCI2 and the vehicle via the CAN bus.
Error (red)	The lamp lights up when there is a communication error on the CAN bus.

After connecting VCI2 to the PC and starting SDP3, you can access information about VCI2 by opening the menu under View. This works regardless of whether VCI2 is connected to the vehicle or not.

Information about VCI2 can be obtained under Settings in the menu.

Safety

Always ensure that a task is carried out so that there is no risk that you or anyone else will be injured.

Road test

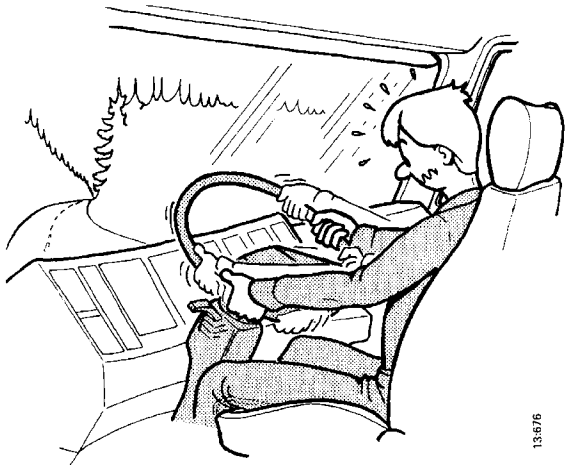
Remember that there are some risks if you carry out a road test when the program is connected. In order to carry out a road test, two persons are required: one who drives the vehicle, and one who operates the program. Scania strongly advises against road tests on public highways with the VCI2 and/or PC connected unless otherwise specified.

Vehicle components can be unexpectedly activated or the engine can stop (causing the loss of power steering).

Connecting and disconnecting

Connection or disconnection of the VCI2 and/or PC when the vehicle is moving is forbidden.

The vehicle must be stationary when the VCI2 and/or PC is connected or disconnected. Other instructions for use can be found in the program.



Adjusting

During adjustment, settings in the vehicle's electrical system are changed. Some of these changes, or combinations of settings, may have a negative effect on the characteristics of the vehicle without prior warning. Incorrect use of the software therefore entails a risk of personal injury, damage to property and a breach of the relevant legislation.

Adjustments should therefore only be carried out by personnel who are receiving ongoing training by the Scania organisation on SDP3 and the vehicles concerned, and who are studying the SDP3 operating instructions and other instructions for tools and vehicles on an ongoing basis.

WARNING!

Adjustment of the vehicle parameters should only be carried out on stationary vehicles.

Installation

Note: Before the program is distributed, it has been virus-checked as comprehensively as possible.

Make sure that the PC on which the program is installed is virus-free!

Note: Also remember that the VCI2 or USB key should not be connected when you install the program.

Installing programs

1 Close all active programs except Windows.

2 Regardless of whether the file was downloaded from the Internet or comes from a CD, proceed as follows:

3 Double-click the program file.

4 Installation starts and a number of dialogue boxes will be displayed. Follow the instructions in these dialogue boxes.

Installing SDP3 may involve several installations and it is only when all these have been carried out that you can use the program correctly.

About SDP3

Information about the design of SDP3 is shown below.

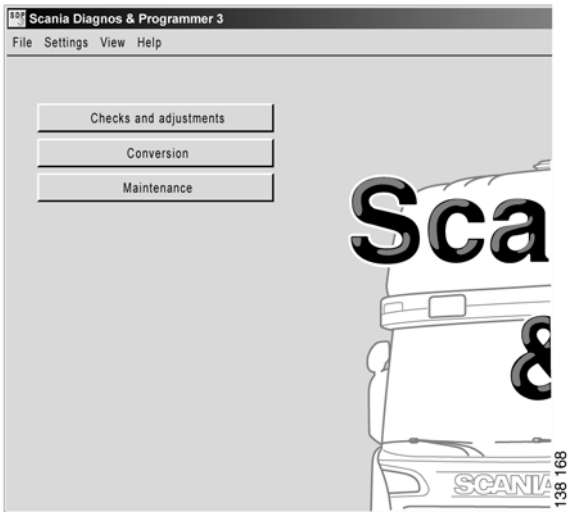
The section Working with SDP3 provides more detailed information about what you can do and how to work with the program.

Checks and adjustments

Here you can check and adjust the functions which are available on the vehicle. The vehicle functions have been divided up into electrical systems and user functions.

Here you can access information in order to troubleshoot the different control systems and their related systems and circuits. There is also an option to troubleshoot via user functions.

You can also reset parameters in the vehicle control units and carry out calibrations and resetting.



Selecting the work option: Checks and adjustments, Conversion or Maintenance.

Conversion

Here you can set the correct parameters in the vehicle control units after a conversion.

Maintenance

Here you can access those parts of the program which are required when carrying out an inspection.

You can also save and analyse the vehicle's stored operational data via the menu option View stored operational data. You can also read more about how this works in the section later on that describes Stored operational data.

Electrical system

SDP3 allows troubleshooting from different directions. Under electrical system, you can troubleshoot in relation to the electrical system. The approach is in principle the same as the one used in SD2 for troubleshooting. The main difference is that SDP3 communicates with all the vehicle control units at the same time.

Navigation under the Electrical system has the same structure as the vehicle's electrical system.

1 Vehicle

2 System

The vehicle has a number of electronic control systems. The system is the control unit with its components and circuits.

3 Control unit

Information about the control unit's hardware is presented here.

4 Server

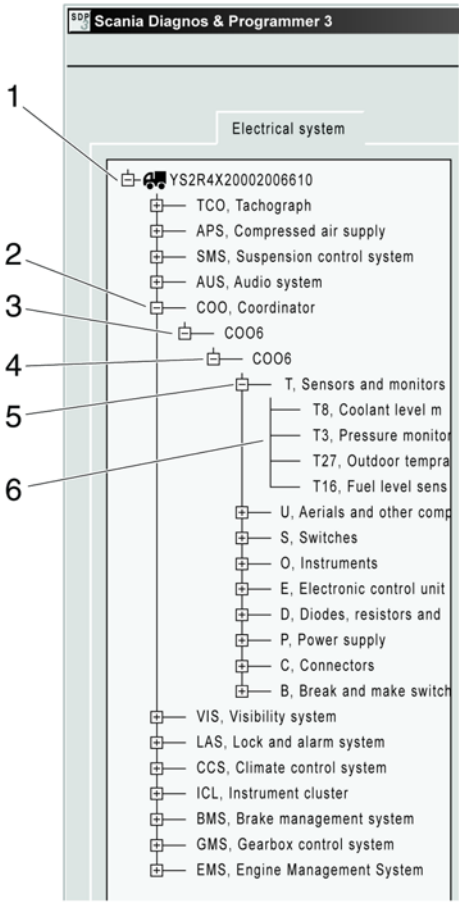
Information about the control unit's software is presented here, i.e. the functions which are available in the control unit. Here you can carry out checks related to the control unit, carry out adjustments and calibrations.

5 Component group

The circuits are grouped under each component group according to the main component in the circuit.

6 Circuit

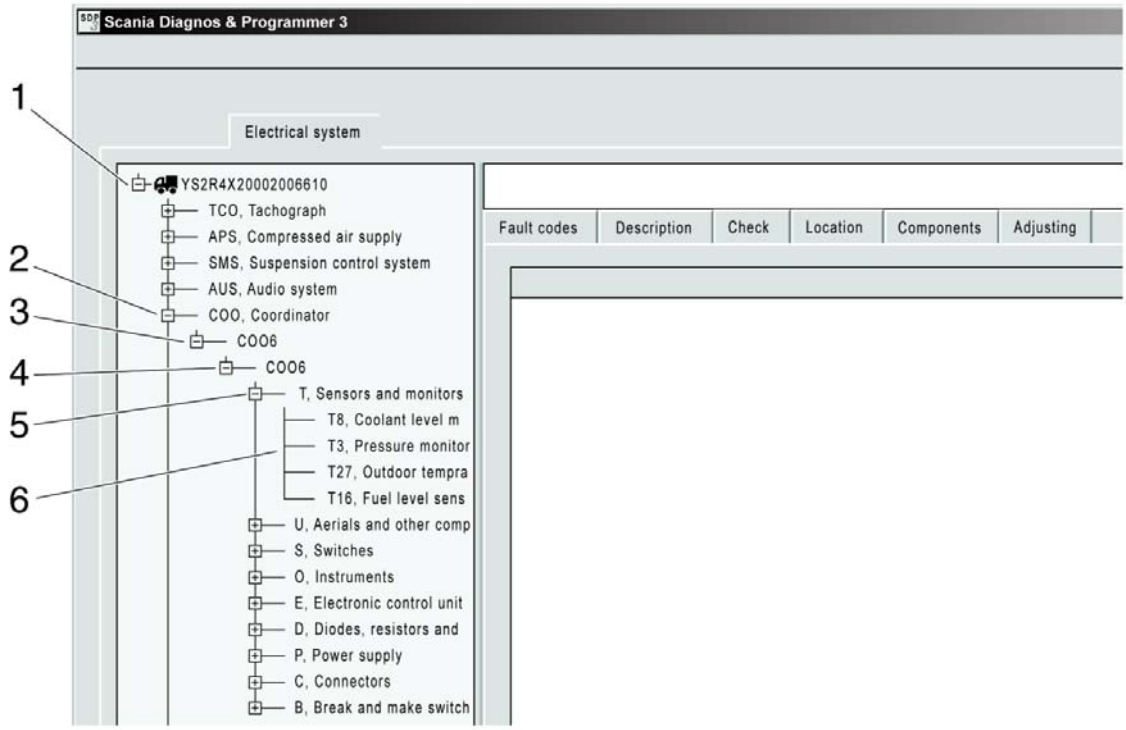
Here you can obtain information in order to troubleshoot the vehicle's electrical circuits.



Levels when navigating under the Electrical system.

Navigation and tabs

The content under the different tabs varies, depending on where you are in the navigation tree.



The table on the following page gives an indication of what sort of information the tabs contain on the different levels.

	Fault codes	Description	Checking	Location	Components	Adjusting
1 Vehicle	Fault codes for all systems in the vehicle.					
2 System	Fault codes for one system.	Description of the system.				
3 Control unit	Fault codes for the control unit.	Description of the control unit.		Location diagram for control unit.	Connection diagram and pin connection list for the control unit.	
4 Server	Fault codes for a server in the control unit.	Description of the server.	Troubleshooting the vehicle using tests linked to a control unit.			Adjusting and calibrating the control unit.
5 Component group	Fault codes for circuits in the component group.					
6 Circuit	Fault codes for the circuit.	Description of the circuit.	Troubleshooting a circuit. Shows circuit diagram, and possibility to read and activate signals.	Location diagram for circuit components.	Description of circuit components.	

User functions

SDP3 allows troubleshooting from different directions. Here you can troubleshoot by starting from the vehicle's user functions.

Navigation under User functions is divided up as follows:

1 Vehicle

2 Group of user functions

The user functions are grouped into categories.

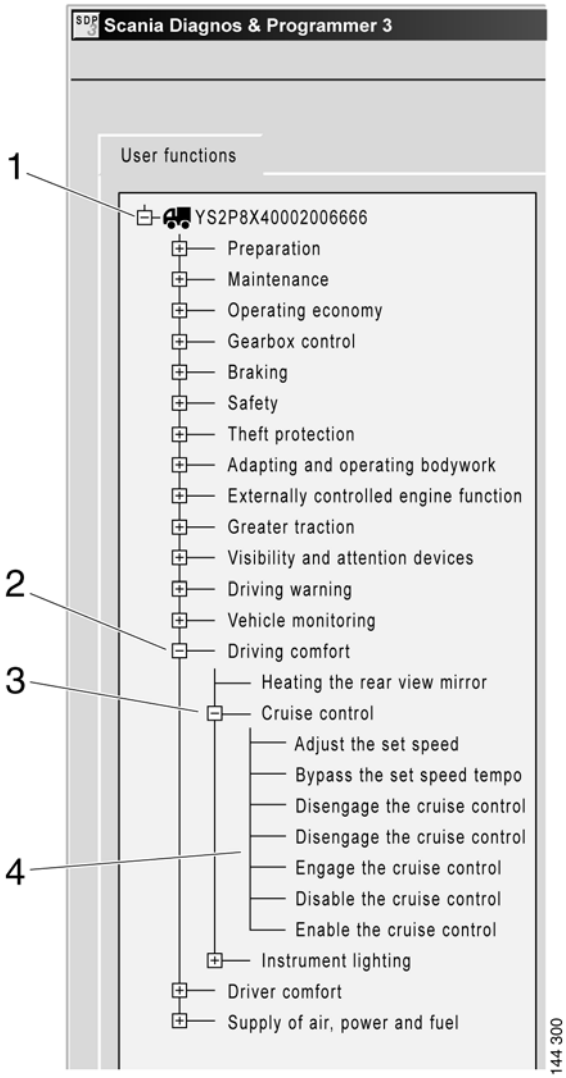
3 User function

An example of a user function is Cruise control.

4 Application

An example of an application for Cruise control is:

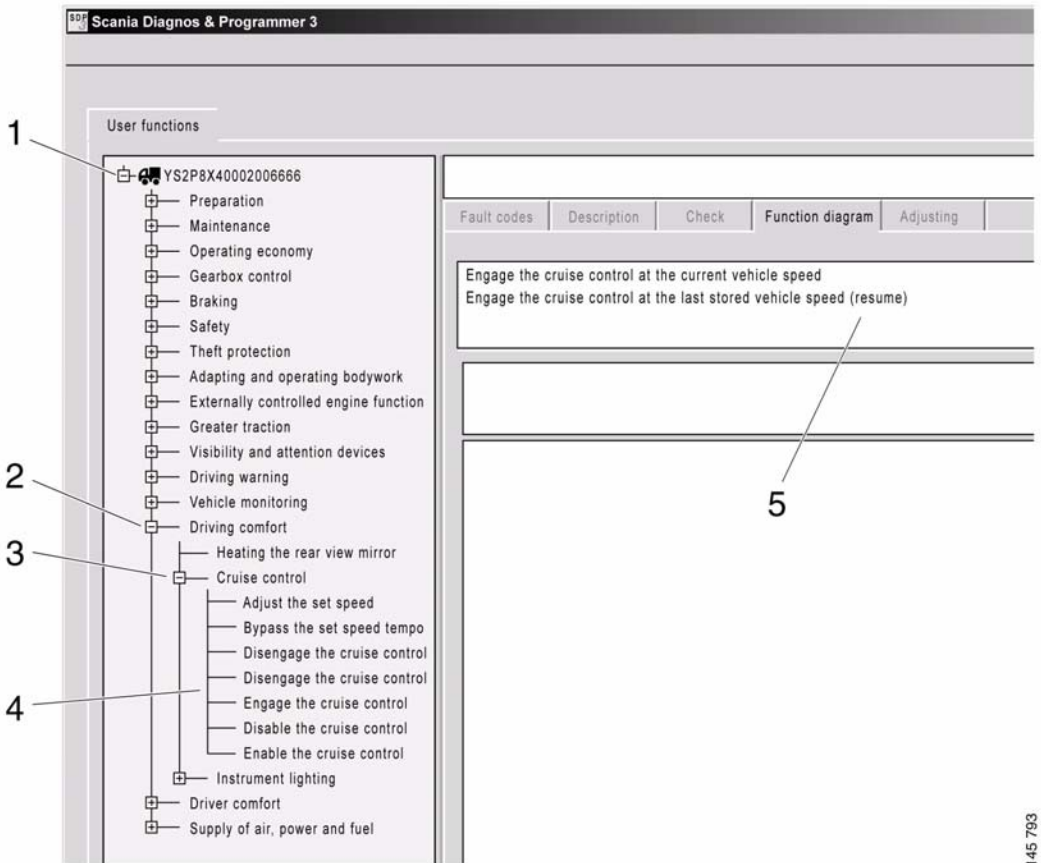
- Engage cruise control
- Disengage cruise control



Levels when navigating under the User functions.

Navigation and tabs

The content under the different tabs varies, depending on where you are in the navigation tree.



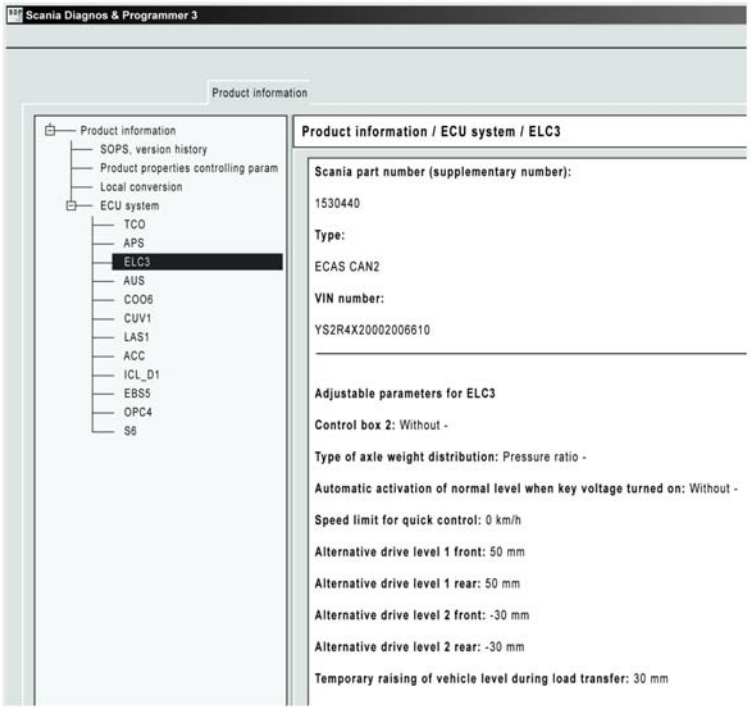
The table below gives an indication of what sort of information the tabs contain on the different levels.

	Fault codes	**Description**	**Checking**	**Function diagrams**	**Adjusting**
1 Vehicle					
2 Group of user functions					
3 User function		Description of the user function.	Troubleshooting the vehicle with tests linked to a control unit.		Calibration of current user function.
4 Application				Function diagram for the different ways in which the application can be carried out, **5**.	

Product information

Information about how the vehicle is equipped is available here. Here, for example, the user functions which are available on the vehicle and electrical information from the chassis specification are displayed.

Information about the settings of the different control unit parameters is also available here. You can view when and which USB key was connected when the parameters were last changed.



Specification information for the vehicle.

Graphic symbols in the program

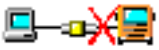
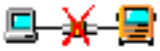
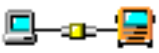
Explanations of the graphic symbols used in the program are provided below.

Some symbols may be combined to display more than one state.

Navigation tree

	The control unit in the vehicle is not responding.
	The control unit is responding but the information does not exist in SOPS. Control units may have been fitted in the vehicle and not programmed correctly.
	The configuration in the control unit differs from the configuration in SOPS.
	The VIN number in the control unit differs from the VIN number in SOPS.
	The control unit responds but there is no support for it in SDP3. There is either no support at all for the supplementary number or there is no support for the supplementary number in combination with the vehicle configuration.
	There are fault codes associated with the system or user function.

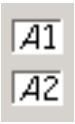
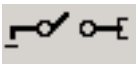
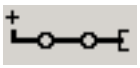
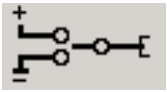
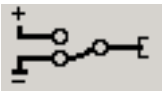
Status bar

	No contact between VCI2 and vehicle.
	No contact between computer and VCI2.
	Contact between computer, VCI2 and vehicle but communication not working.
	Communication between computer and vehicle is OK.
	Normal battery voltage, more than 24.5 V.
	Low battery voltage, between 22.0 - 24.5 V. The system is working but the battery charger should be connected.
	Incorrect battery voltage, less than 22 V. The system is not working and the battery charger must be connected.

Fault codes

!	Fault code.
	Primary or secondary fault code.
	The fault code was registered as active when fault codes were last read.
Σ	Number of times a fault code has been registered as active.
	Vehicle system time at which the fault code was last registered as active.

Read/activate

	The control unit recognises an activity (input signal, output signal or communication).
	The control unit detects that a received value (of a signal or a message) is outside the expected range.
	Communication works well but the control unit does not recognise the value received.
	Interference in communication between the control unit and SDP3.
	The control unit recognises an activity (input signal, output signal or communication) for a given function.
	The circuit to the control unit input is open (not closed to earth).
	The circuit to the control unit input is closed (to +24 V).
	The circuit to the control unit input is open (not closed to earth or to +24 V).
	The circuit to the control unit is closed (to earth).

Using SDP3

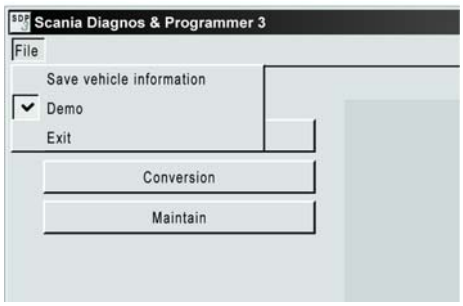
Demo mode

The USB key must be connected in order to run the program in demo mode. VCI2 does not, however, need to be connected.

Starting demo mode

Demo mode is under File in the menu. When you highlight Demo in the menu, the program goes into demo mode. There you have the option of selecting from a number of demo vehicles which have been included in order to view them.

If you have saved information from your own vehicles, you have to navigate to the folder where the files are saved and select the file you wish to use from there.



Demo mode is started and stopped from File.

Exiting demo mode

To exit demo mode, you have to go to the menu and deselect Demo.

This is how demo mode works

The information displayed in demo mode has been provided by real vehicles and has been recorded and saved in the program.

The program works in the same way as it would if it were connected to a vehicle. The program "does not know" that it is running in demo mode. The saved information represents the program's communication with the vehicle control units.

If you choose to do something which means that the program is expecting more information than is available in the saved vehicle information, the program will interpret this as an interruption of communication with a control unit. An example of this is when the program sends a new value to a control unit and expects to receive a modified value back, e.g. when locking/unlocking the Immo/LAS.

SDP3 will then think that contact has been lost with the control unit and will work as it would during normal fault control.

Saving vehicle information

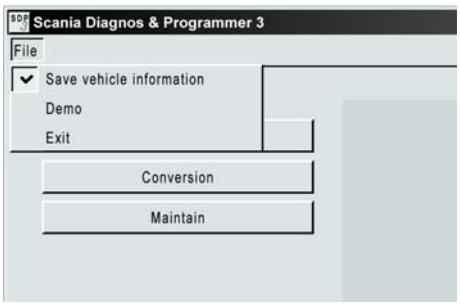
You can save information from your own vehicles to a file using SDP3.

When you are connected to a vehicle, you can access the menu under File and select Save vehicle information.

The files can be saved in any folder.

The information saved contains vehicle data which can be used to view the vehicle in demo mode.

The saved file also contains stored operational data.



Save vehicle information can be accessed under File in the menu.

Stored operational data

Under the Maintenance work option, there is an option to save and view stored operational data from a selection of the vehicle control units.

When you access and view stored operational data the file will be sent to Scania. Experience from real operating conditions is an important aid to the development of engines and the diagnostics program.

To view the stored operational data, you will continue with SDP3 to the SVAP website. It is therefore necessary for the computer to have a network connection to Scania.

You need to have a certificate for your computer in order to access stored operational data. You can find out how to obtain a certificate and how it operates on the Service Development website under Workshop Tools & Equipment. You will access the website via SAIL. The information will also be included in a TI.

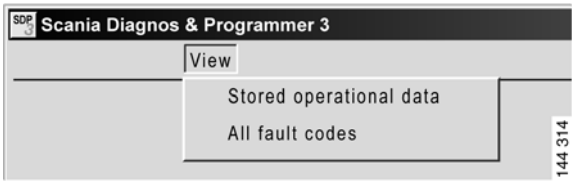
Proceed as follows to save, analyse and send stored operational data:

1 Click the Maintenance work option.

2 Select Stored operational data under View in the menu.

3 Log in using your SAIL identity in the login dialogue which is displayed.

4 Then follow the instructions given in the program.

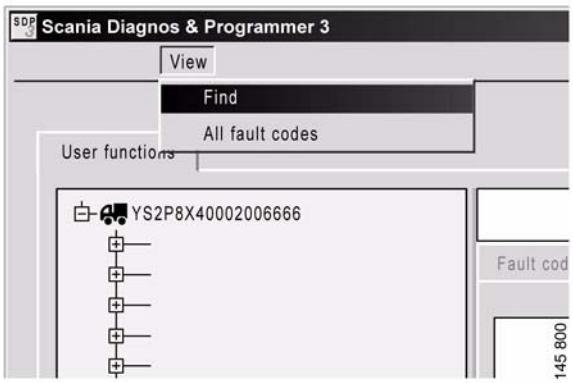


Stored operational data can be accessed under View in the menu in the Maintenance work option.

Search

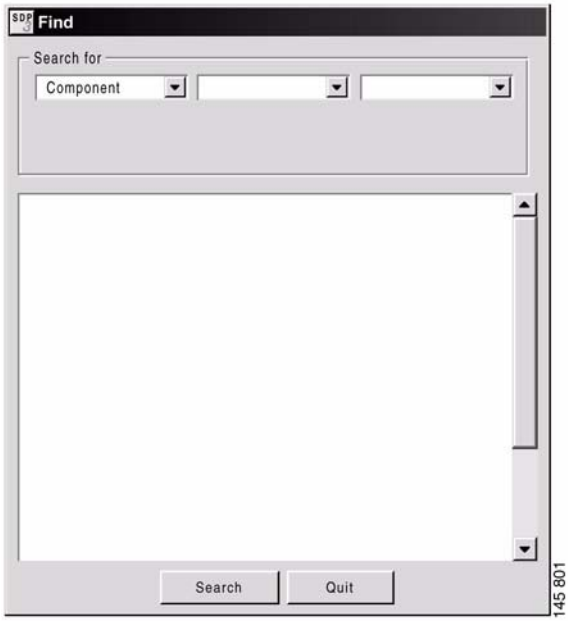
In SDP3 you now have the option to search for components. The search is carried out on circuits and user functions.

Select Find under View in the menu bar.



Enter your search conditions in the Find window. The more conditions you enter, the more reliable the hits. Up till now you could only search on components. Select category and option by pressing the arrow on the right of the relevant box and highlight your selection in the list. Press the Search button.

A list is displayed with links to all entries which meet your search conditions. Select the link to view the relevant section.



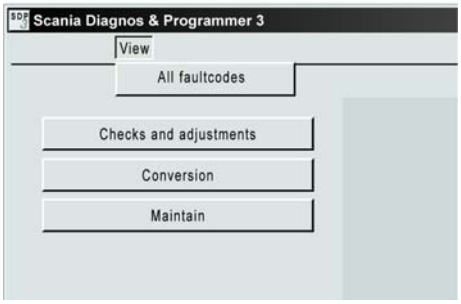
View all fault codes per system

There is an option to view all fault codes including descriptions for the different systems. You do not need to be connected to the vehicle, VCI2 or USB key.

Start SDP3 and go to the menu under View and select All fault codes.

Enter the system name and part number (complete) for a list of applicable fault codes for the control unit.

Part numbers for control units supported in the current version of SDP3 are shown per system.



Under View there is a list with all the fault codes for different control units.

Starting a task

When you have started the program, the start window will be displayed. Here you can choose which type of task you wish to carry out, such as Maintenance, Checks and adjustments or Conversion. More information about the relevant work option can be found on the following pages.

Finishing a task

You finish a task by selecting Close in the File menu.

Connecting

General

Note: In order for SDP3 to be able to communicate with certain control units, the systems must be activated. This applies to the auxiliary heater and radio, which must be turned on when connecting.

The response time of individual control units varies after the starter voltage has been switched on. If SDP3 starts the control unit identification too soon after the starter voltage has been switched on, some control units may not respond. In that case, re-establish the connection.

The SDP3 program carries out a number of checks when connecting to the vehicle. During the connection phase you will be given information about the activities being carried out by SDP3. If a fault occurs during the connection, you will be informed about this and guided through with the help of the program.

SDP3 reads and compares, for example, the information in the SOPS file with the information available in the control units on the vehicle. If there are discrepancies you as the user will be informed about this, and if spare parts programming needs to be carried out on one or more control units, SDP3 will provide this option.

Flow when connecting

The basic flow is displayed here. With some types of work the flow only includes parts of the steps below.

1 SDP3 connects to the vehicle.

2 SDP3 identifies the vehicle's control units.

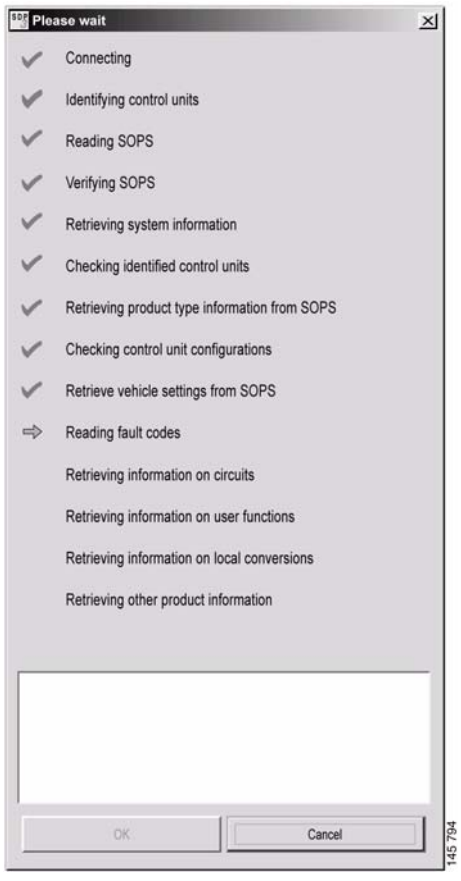
3 SDP3 reads the SOPS from the coordinator and instrument cluster which are the control units containing SOPS.

4 SDP3 verifies SOPS. This means that the program checks both SOPS strings and checks that they are the same.

If SDP3 cannot read the contents of one or both SOPS strings or they differ, you will be informed about this and about how to proceed.

5 SDP3 retrieves system information about the control units from its database.

6 SDP3 checks identified control units against SOPS.



If one of the control units does not correspond to SOPS, you will be informed about this and about how to proceed.

7 SDP3 retrieves information about the product type from SOPS. This means that SDP3 checks whether it is connected to a truck, bus or industrial and marine engine.

8 SDP3 checks the identity of the control units.

9 SDP3 retrieves the vehicle settings from SOPS.

SDP3 compares the control unit configuration with the contents of SOPS.

If the configuration differs, you will have the opportunity to carry out spare parts programming on the control units which are not configured correctly.

10 SDP3 reads fault codes from the control units.

11 SDP3 retrieves other information about the vehicle from its database.

Spare parts programming

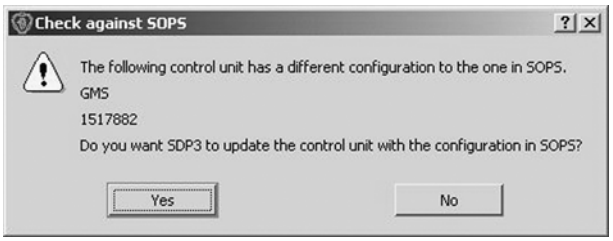
If the control unit configuration does not correspond to the contents of SOPS (which can be due to one of the control units being replaced), SDP3 will propose spare parts programming.

During the spare parts programming the parameters in the control unit are changed to correspond with the content in SOPS.

If you are asked whether you wish to carry out spare parts programming on one or more control units, you need to be sure that it is necessary before you answer yes. Otherwise you should refrain from carrying out spare parts programming.

If you choose to carry out spare parts programming on a control unit, SDP3 will guide you through the entire procedure.

After renewing one or more control units, SDP3 should always be connected and a spare parts programming carried out before the vehicle leaves the workshop.



When the control unit configuration differs from SOPS, SDP3 suggests spare parts programming.

Checks and adjustments

In the task Checks and adjustments, you can carry out troubleshooting on the vehicle and change adjustable values.

Here it is possible to gain access via user functions and electrical systems in order to troubleshoot and adjust the vehicle.

You can also obtain information about how the vehicle is equipped by viewing vehicle information.

Procedure when checking

A suitable procedure when troubleshooting is described here.

Start by finding out what problems the customer has experienced.

1 Start SDP3.

2 Start the Checks and adjustments work option.

3 Go to Electrical system and read the registered fault codes.

All registered fault codes will be displayed under Electrical system.

If there are fault codes connected with the problems which the customer has experienced, continue troubleshooting via Electrical system by checking the circuits concerned and rectify the fault.

Otherwise, you should carry out troubleshooting via User functions Start by checking that the vehicle has a user function which could be connected with the problem experienced by the customer. Then continue troubleshooting using the information provided under User functions.

Troubleshooting via Electrical system

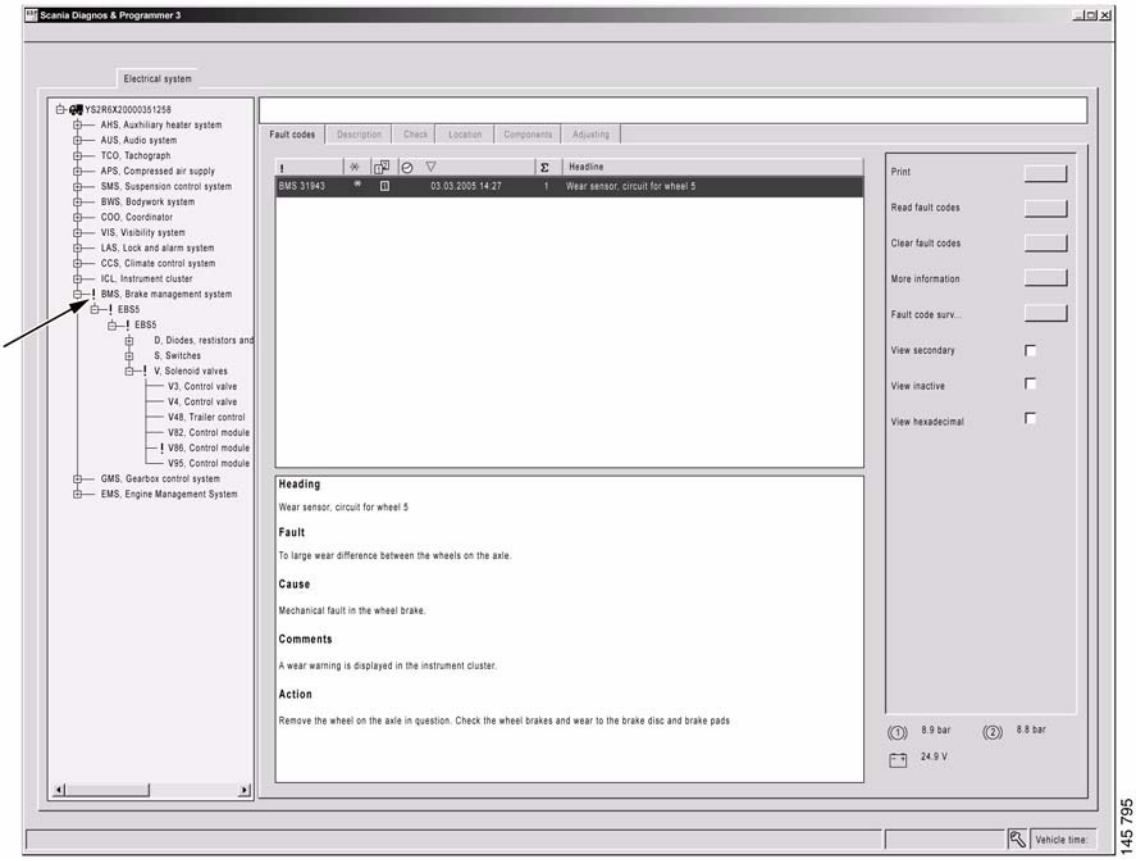
The vehicle's electrical system is displayed here. You can obtain a description of the electrical system with its related circuits and components. You can read fault codes, read signals, activate components and carry out tests, adjustments and calibrations.

A description is provided below of the contents of the tabs in the electrical system view. The contents may vary slightly depending on where you are in the navigation tree.

Fault codes

You can read and clear fault codes here. You can see which fault codes are registered. You can choose to view fault codes for the entire vehicle or for each control unit.

The exclamation mark indicates that there are fault codes. The exclamation mark is displayed all the way from the vehicle level down to the circuit where the fault is located.



Fault codes: fault code information for the vehicle is displayed here.

The fault codes are divided into active and inactive ones. Active fault codes are fault codes which have been registered and where the fault persists. Inactive fault codes are fault codes which have been registered but where the fault has then disappeared.

The fault codes are also divided into primary and secondary fault codes. A primary fault code is an original fault code. A secondary fault code means a fault code which has been registered in a control unit because a primary fault code has occurred in another control unit.

Active and primary fault codes are always displayed, and you can then choose whether you also wish to view inactive and secondary fault codes.

Background information from the vehicle is saved in the control unit for some fault codes. The information is from the latest registration. Information which may be useful when troubleshooting is provided under the More information button.

Fault code monitoring

Here you can obtain help to check that a fault really has been resolved after you have rectified it, i.e. that the fault code will not recur. Fault code monitoring is used for those fault codes where the fault does not become active immediately, but for which more complicated verification in the control unit is required before the fault code is set.

Here you can obtain a continuous read-out of the fault code status. This can be used when:

- it is necessary for certain conditions to be met in the vehicle so that the control unit can test and verify the fault code.
- the fault code is cycle filtered, which means that the control unit does not set an active fault code until it has tested it four times with a negative result.
- the fault code has a long validation period.

When you have selected a fault code which is monitored, the button is active. You can then access and monitor that particular fault code.

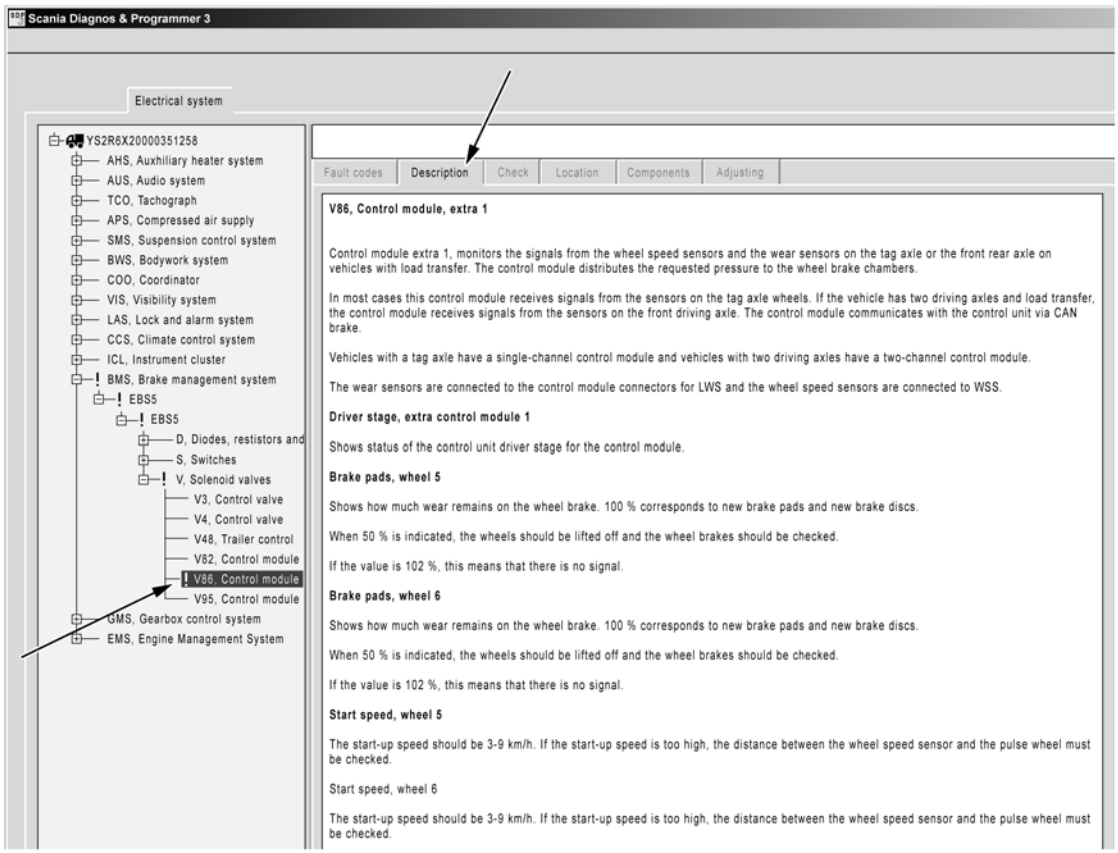
If you have not selected a fault code, you can click on fault code monitoring and select from those fault codes which are monitored. This can be used when fault codes are cleared.

The conditions that apply to the way in which the control unit verifies the fault codes are described in the relevant fault code text.

Description

Here you can obtain a description of the different systems and their circuits. The description applies to what you have selected when navigating.

Information may be available here which can be used when troubleshooting a circuit in the Check tab.



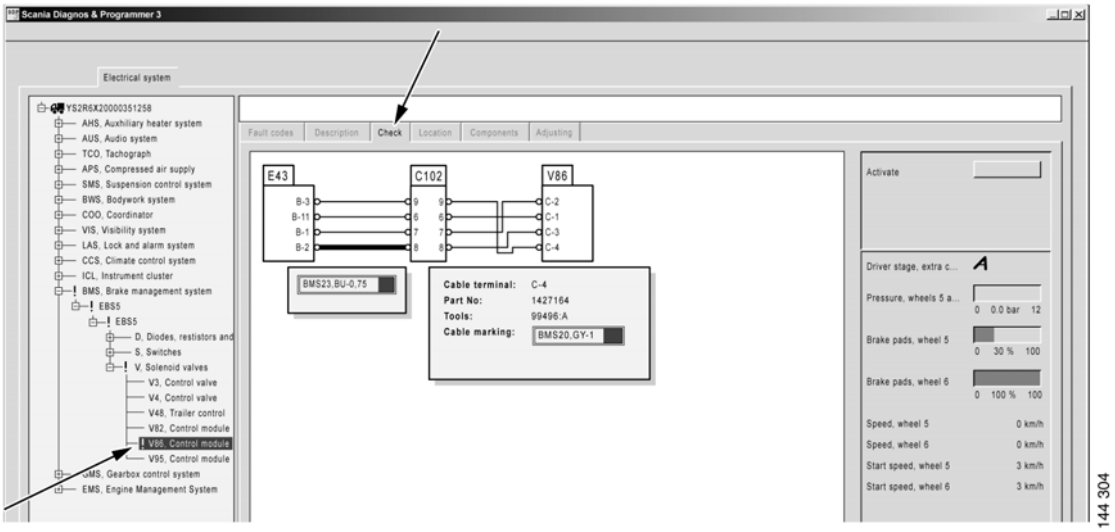
Description: descriptions of the vehicle's electrical system and circuits are displayed here.

Checking

A circuit diagram for the circuit concerned is displayed here. You can read signals from the control unit and activate different functions and components in order to check whether the circuit is working as expected.

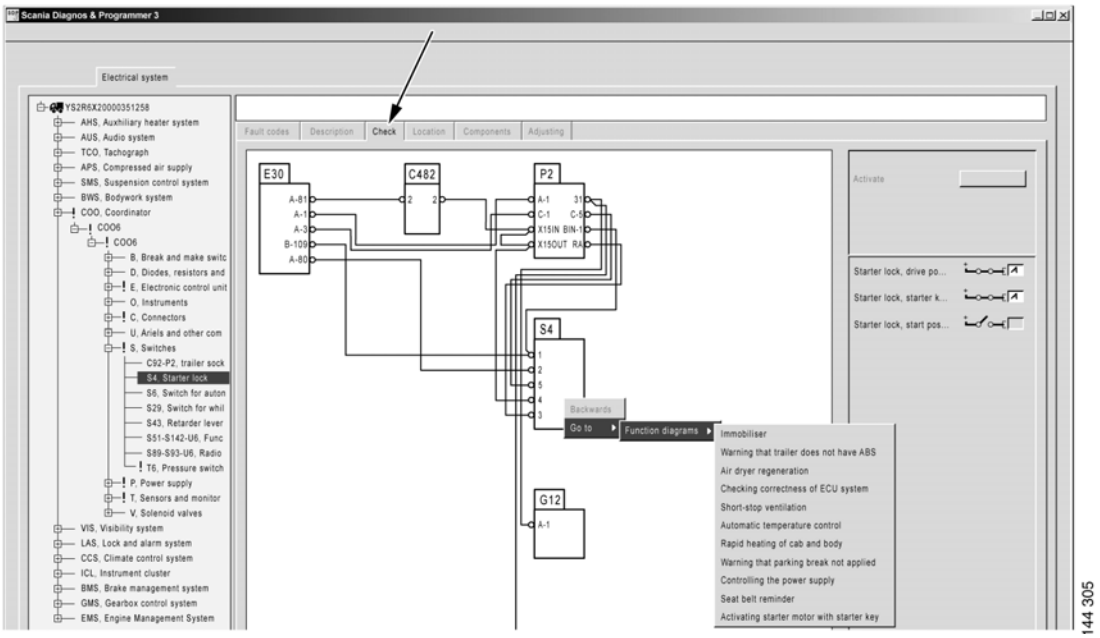
By placing the mouse pointer on a cable harness in the circuit diagram and pressing the left mouse button, the cable is highlighted and the cable marking is displayed.

By placing the mouse pointer on a terminal and pressing the left mouse button, you can obtain information about the pin part number and tools for crimping the cable terminal.



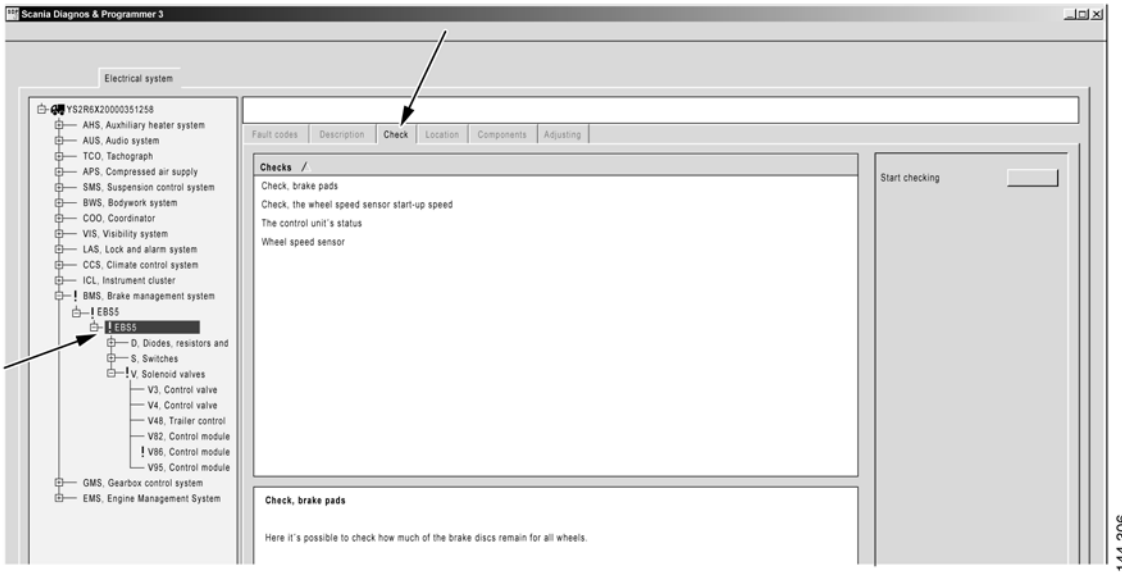
Check: the vehicle circuits can be checked here.

From the circuit diagram you can access a user function directly in the user function view by right-clicking on the mouse button.



Navigation from circuit to user function.

You can also carry out a number of predefined tests related to the specific control unit. Further tests will be added later.



Check: different tests can be carried out here.

Activation

When you start up the activation window **1**, SDP3 takes control over the inputs and outputs of the control units concerned.

Activation operates by selecting what is to be activated in the activation window, e.g. a value or a status **2**. When you press the button **3**, the value is sent to the control unit. The current status is displayed to the right of the button.

The activation button works differently depending on what is required during the particular activation being carried out. The following options are available:

- Activation takes place when you press the button and to stop activation you have to press the button again.

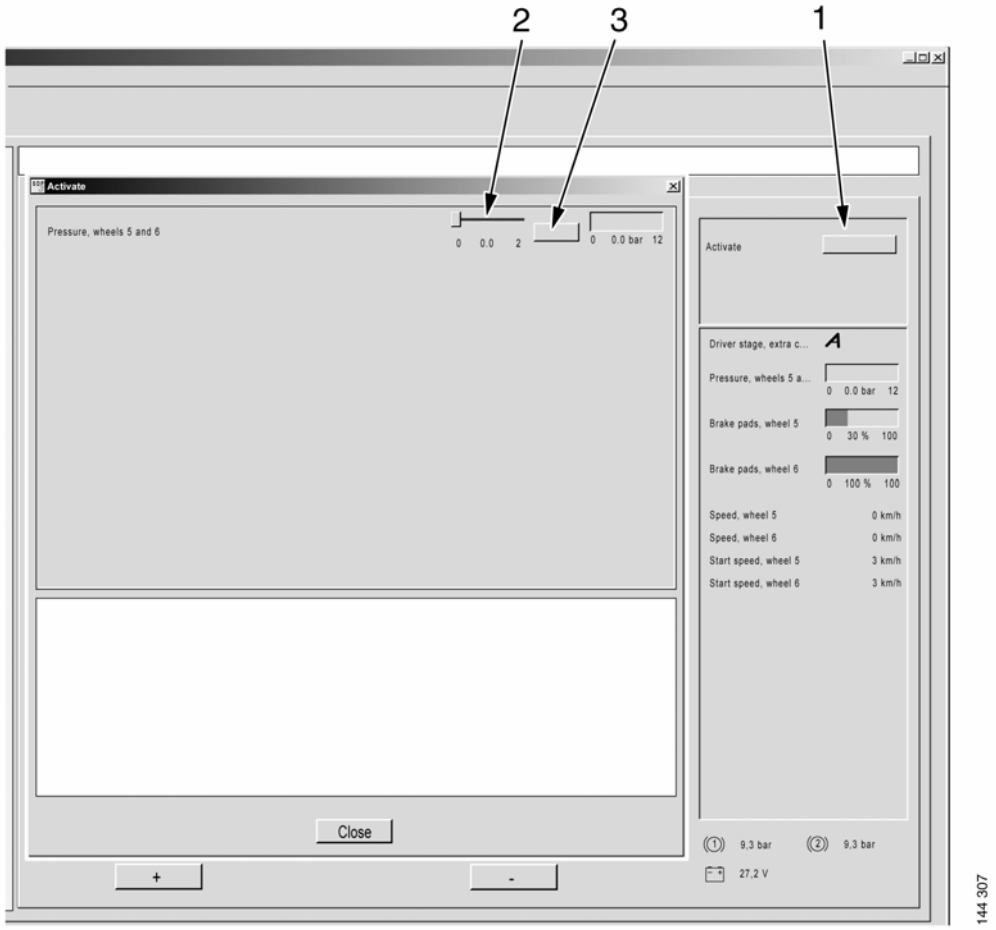
  Some activations have a time limit which means that the activation ceases automatically after a certain time. Then the button is also reset.

- Spring-loaded button, you have to hold down the button during activation.

When activation ceases, the value is reset to what it was at when you opened the window.

It is only when you exit and close the activation window that the control unit goes back to checking the components concerned.

As a safety feature, activation can always be interrupted by pressing the space bar.

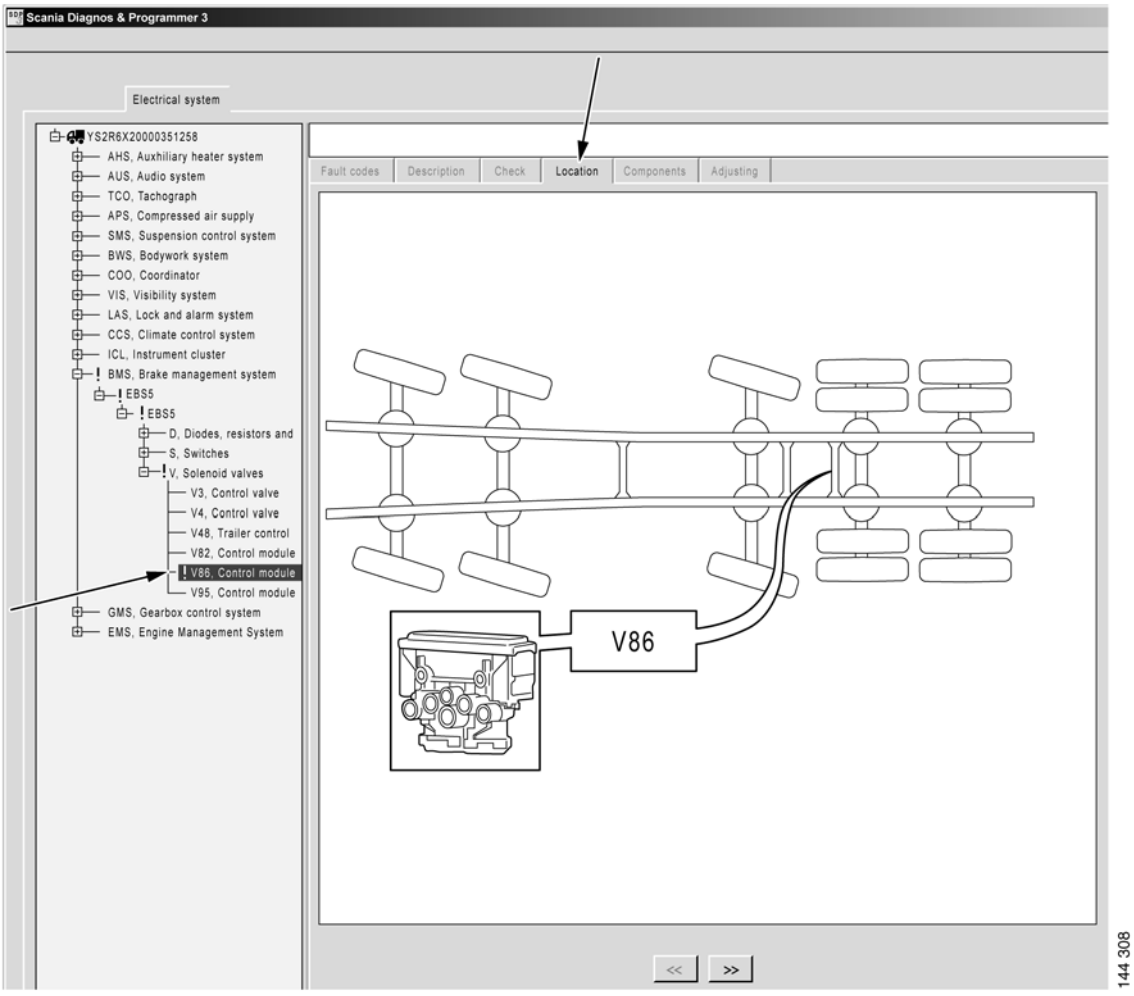


Here it is possible to check the vehicle components by activating them using SDP3.

Location

Location diagrams are displayed here. These indicate where on the vehicle a particular electrical component is located.

In cases where there are several location diagrams, you can move between them using the arrow keys below the diagram.

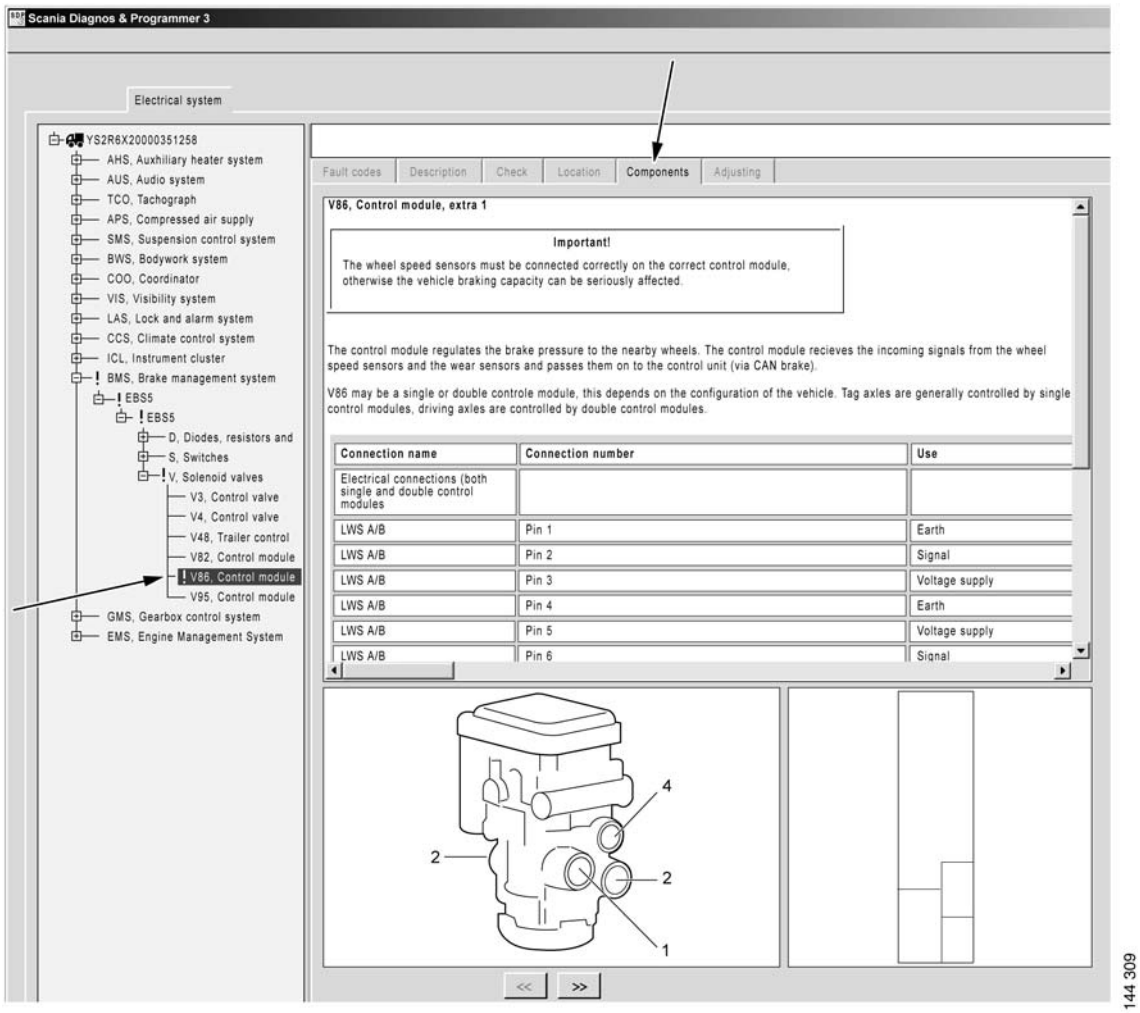


Location: location diagrams for the components in the circuit are displayed here.

Components

Here you find a description of the components which are included in a circuit.

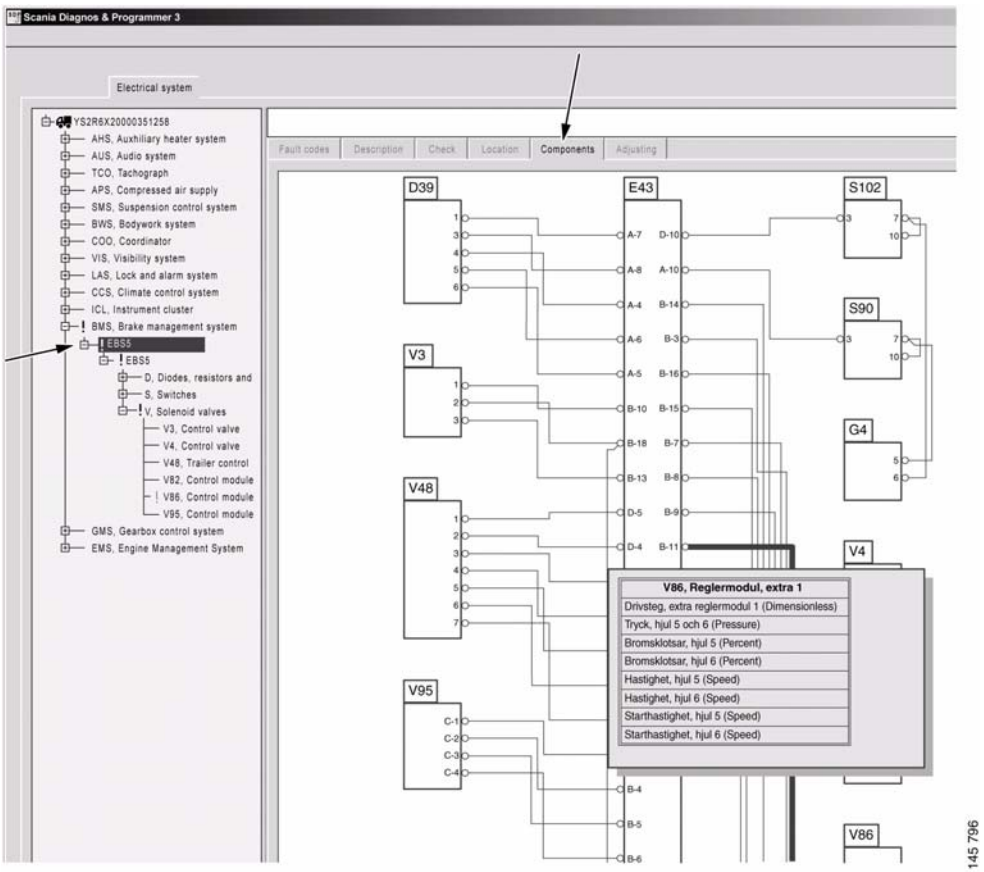
For the control units there is also a description of the control unit pins and a wiring diagram.



Components: descriptions for the components in the circuit are displayed here.

At system level, an overview is displayed of the way in which different components are connected to the control unit. By placing the mouse pointer on a connection to a component and pressing the left mouse button, you can obtain information about the function of the component and the signals which travel between the control unit and component.

If you press the right mouse button, the text box disappears but the highlighting remains so that you can see the connection.



Adjusting

Adjustment provides the programming which has previously been carried out with Scania Programmer 2.

Here you can view the customer parameters which can be changed and their current values.

There is also an option to calibrate and reset the values.

The program works in different ways depending on whether you wish to change a customer parameter or carry out a calibration or resetting. The following pages contain a description of how to carry out an adjustment or calibration.

Adjusting

You should have checked the vehicle and rectified any fault codes before carrying out an adjustment.

1 To carry out an adjustment, press the Change button.

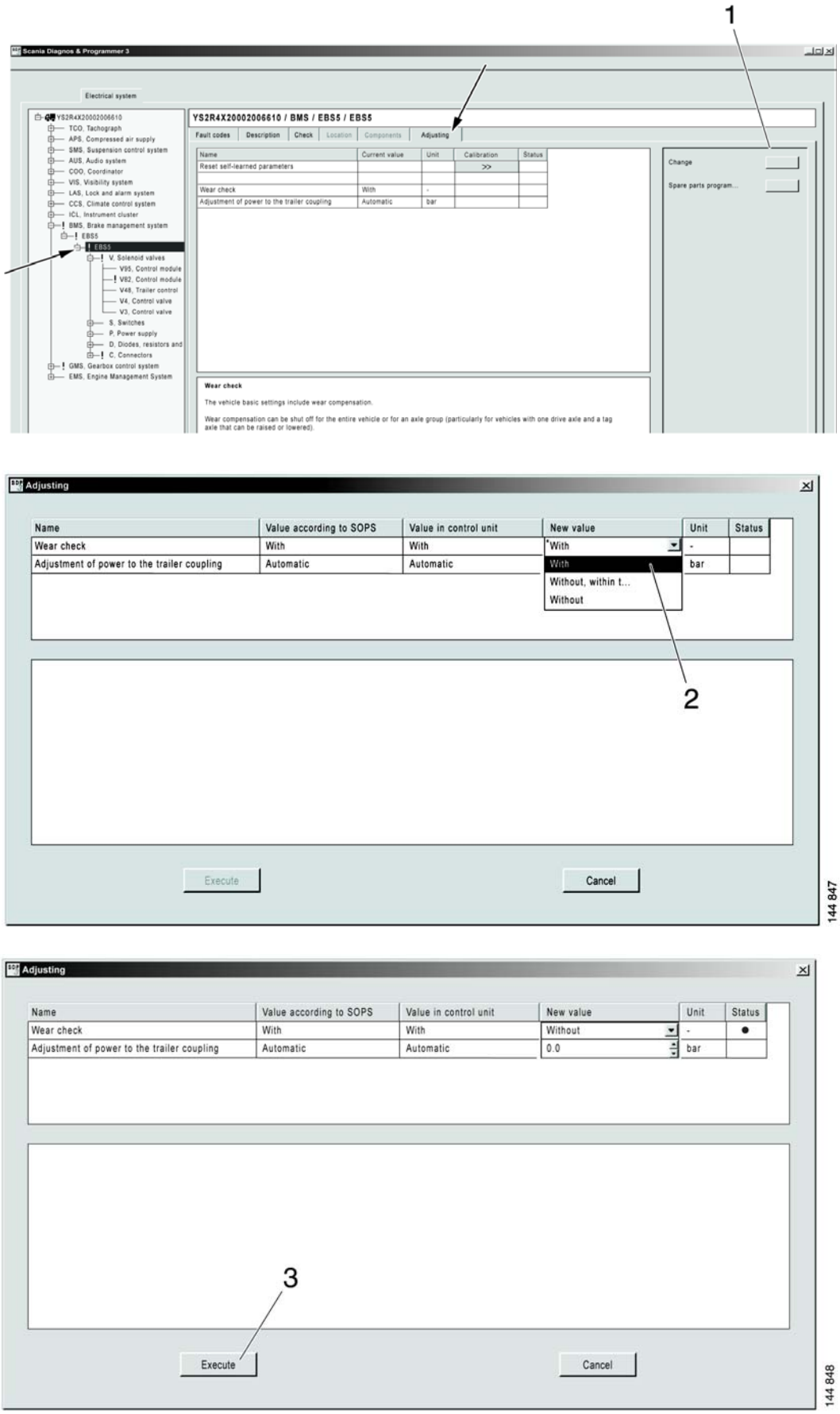
   Here you can see the value that is held in SOPS and that is set in the control unit. If these values differ, a red dot is displayed.

   The star displays the value that was set at the factory.

2 Select a new value.

3 Then press Execute.

   When you start an adjustment, the values which are changed are marked with a red dot. When you carry out the adjustment, the changed customer parameters will be marked with a green tick.

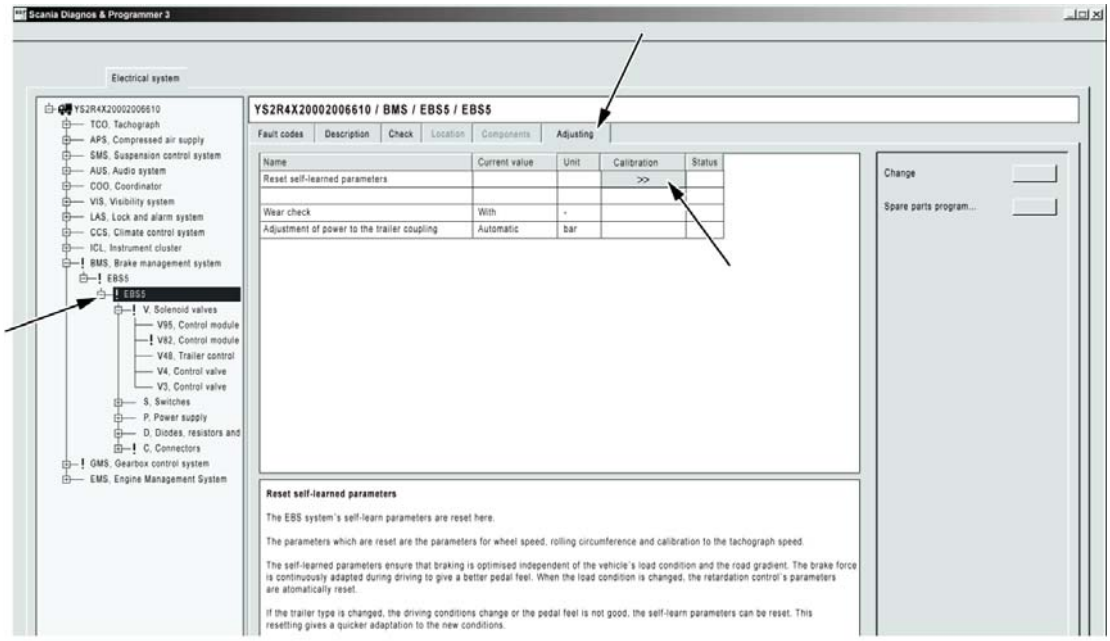


Procedure when adjusting customer parameters on the vehicle.

Calibration

1 Highlight what you wish to calibrate and proceed by pressing the arrow keys.

2 A wizard will now appear which will help you to carry out the calibration.



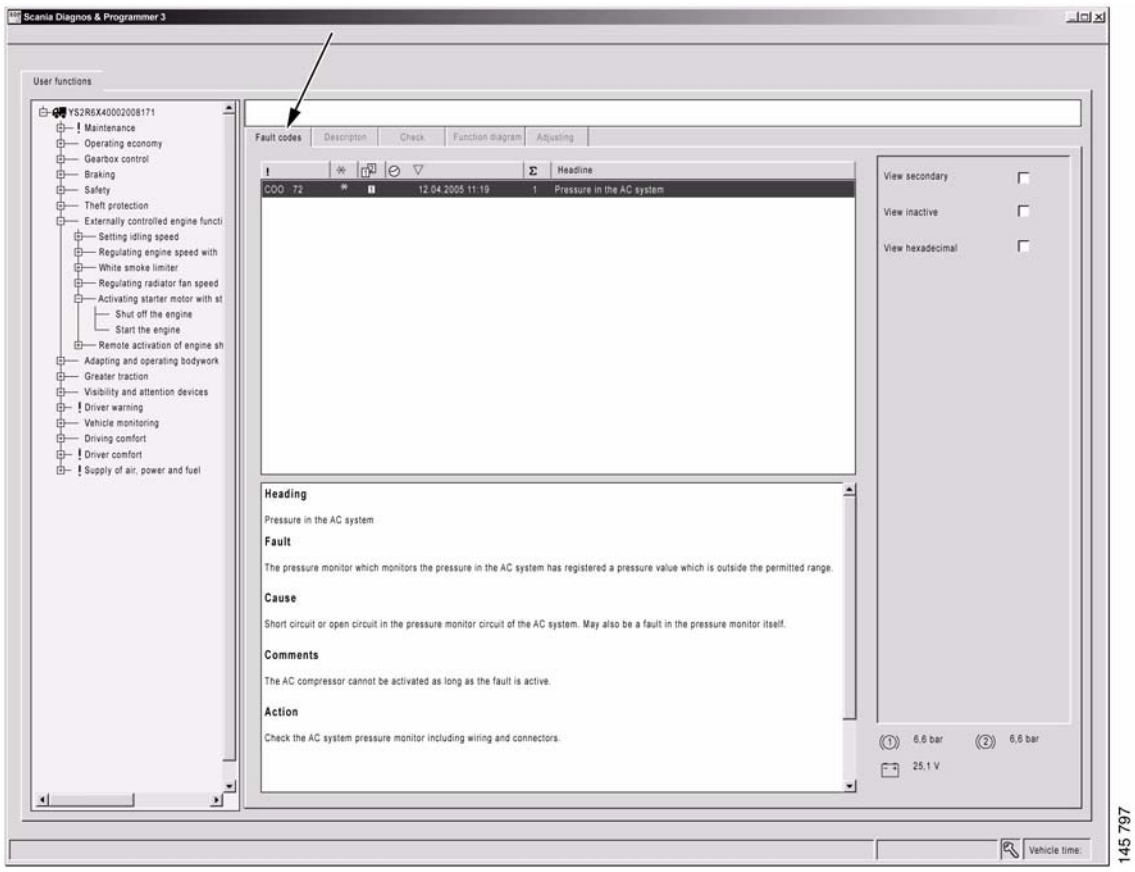
Calibration and resetting is carried out during adjustment.

Troubleshooting via User function

Fault codes

Here you can see which fault codes are registered for a user function.

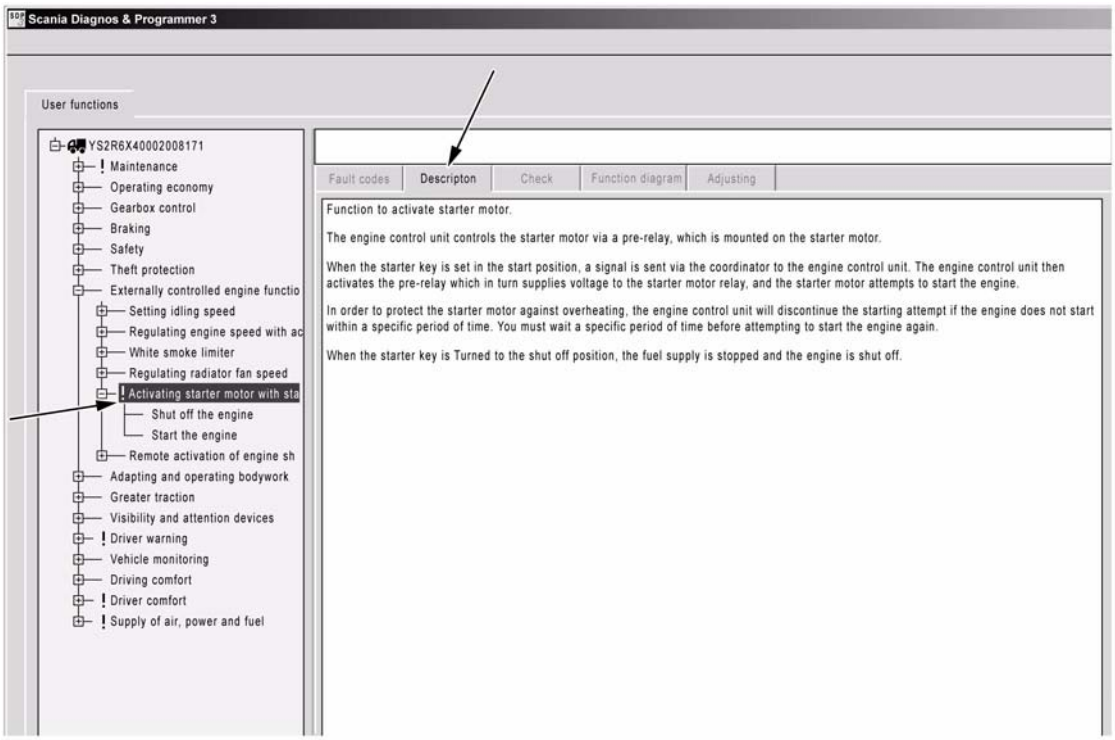
Other information relating to fault codes is the same as for fault codes under electrical system.



Fault codes: fault code information for the vehicle is displayed here.

Description

Here you can obtain a brief description of the vehicle's user functions.



Description: descriptions of the vehicle's user functions are displayed here.

Checking

You can carry out checks on some of the vehicle's user functions here. Unlike checks under the Electrical system, these checks may work on several interrelated control units. Several checks for user functions are under development and will be added later.

Function diagrams

The function diagrams which are available for a user function are displayed here. The function diagrams provide a visual representation of the function. They provide an overview of the control units and other components which are involved in a user function in the specific vehicle. They also show the order in which signals travel between the components concerned.

A blue broken arrow **1** shows the influence from the surroundings, e.g. the driver turns the key.

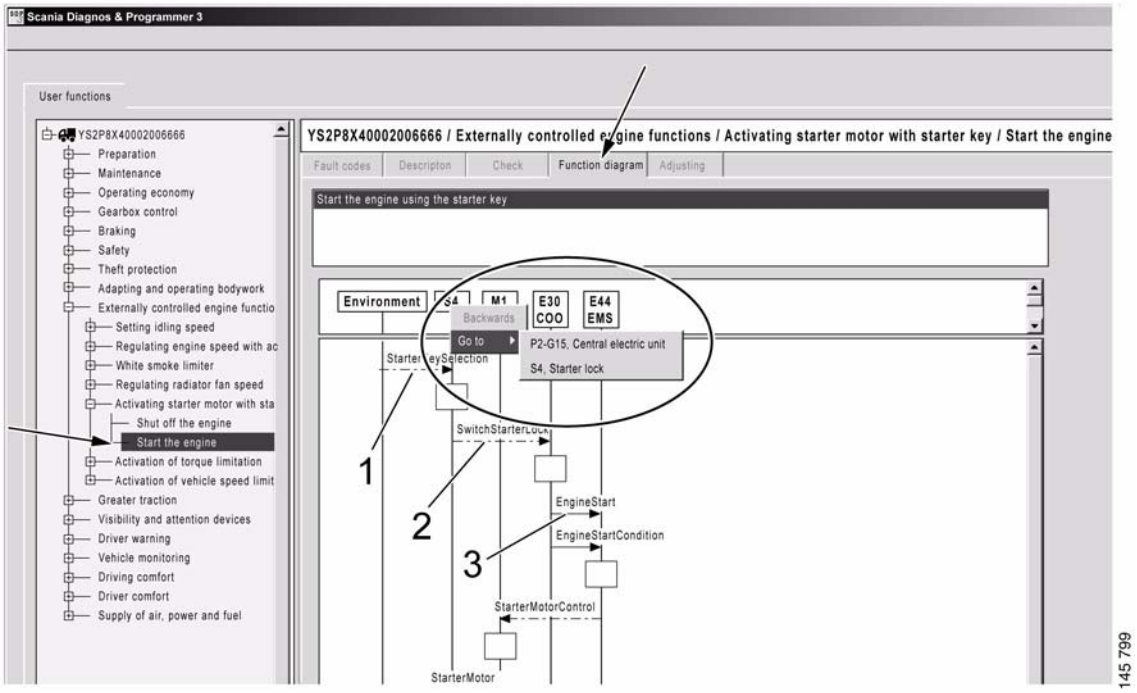
A blue continuous arrow **2** shows conventional electrics. There must be circuits in the electrical system view to obtain these arrows, e.g. S4 closes + 24 V to E30.

A black arrow **3** displays CAN messages between different control units.

By right clicking on a component, you can go back to checking the circuit in the electrical system view.

Adjusting

Here you can calibrate a user function that extends over several control units.



Function diagram: a function diagram for the vehicle's user functions is displayed here.

Conversion

General

In the Conversion work option, you can carry out "major adjustments" of the vehicle, i.e. conversions. You should have checked the vehicle and rectified any fault codes before selecting this type of work option.

Remember that the control units affected by a conversion can reset certain control unit settings and calibrations. Make sure that the control units concerned have the correct parameters set and also make sure that after a conversion you calibrate the control units which may have been affected.

Note: Scania cannot accept responsibility for conversions carried out on a vehicle and which contravene the national regulations in a specific country.

Local conversion

You can obtain information about any local conversions here. You can carry these out yourself by setting the parameters covered by the conversion. When you choose to carry out the conversion, the affected control units are reprogrammed.

After conversion, you must report the changes to Scania by sending in the changed SOPS file. The report is a prerequisite for being able to show correct information in Scania Multi.

Procedure

1 Start SDP3 and check the vehicle in the Checks and adjustments work option.

2 Read and rectify the fault codes registered in the vehicle.

3 Start the Conversion work option and select Local conversion.

4 Highlight the conversion you wish to carry out and proceed **1**.

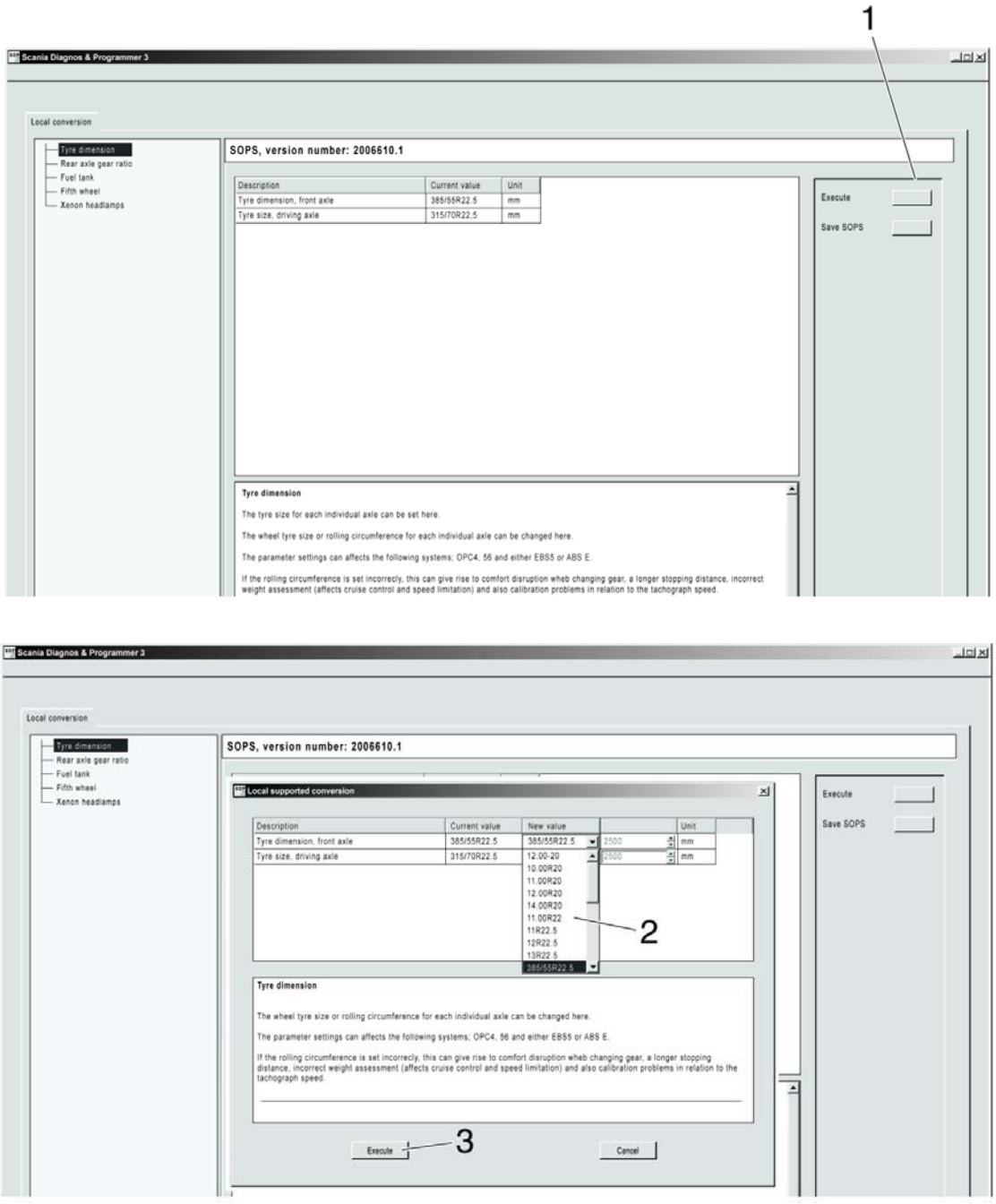
5 Set the new values for the parameters concerned **2**.

6 Execute **3**.

7 Save the SOPS file by selecting Save SOPS.

8 Go to the Checks and adjustments work option and calibrate and reset any control unit which may have been affected.

9 Report by sending in the changed SOPS file to Scania.



Procedure during local conversion. References are made in the text on the previous page to the numbers in the illustration.

Factory supported conversion

Here you can obtain information about how to carry out conversions which require you to save the SOPS file before starting the conversion and then sent it to your distributor/importer. Send the SOPS file together with a detailed description of the conversion you intend to carry out. Conversions which result in changes to the SOPS file are described in TI 00-04 05 25.

You can send the information via an e-mail message, on a floppy disk or CD. The distributor/importer will then pass on the proposed conversion to Scania for approval.

When the conversion has been approved by Scania and you have received a modified SOPS file, you can start the conversion.

No conversions are allowed to be carried out while you are waiting for the modified SOPS file.

After conversion, a report should be made to Scania confirming that the new SOPS file has been downloaded and the vehicle has been converted. The report is a prerequisite for being able to show correct information in Scania Multi.

Procedure

1 Start SDP3 and check the vehicle in the Checks and adjustments work option.

2 Read and rectify the fault codes registered in the vehicle.

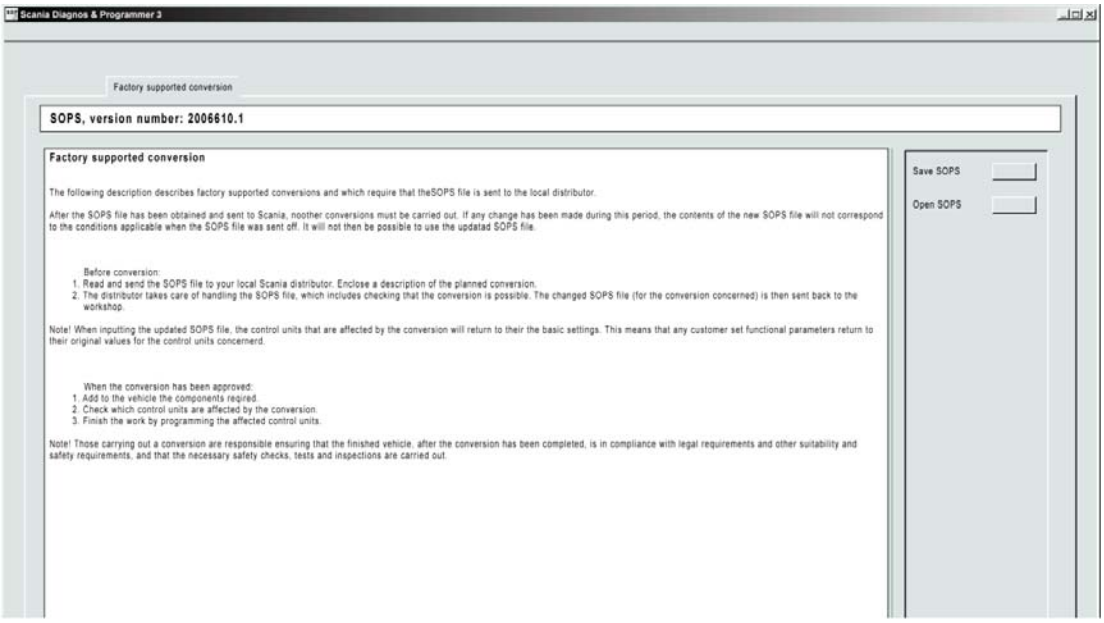
3 Start the Conversion work option and select Factory supported conversion.

4 Read about how the procedure is carried out.

5 Save the SOPS file.

6 Send the SOPS file as an e-mail attachment (or on a CD or floppy disk) to your distributor/importer along with a detailed description of the actual conversion.

7 Receive the modified SOPS file and approval for the conversion.

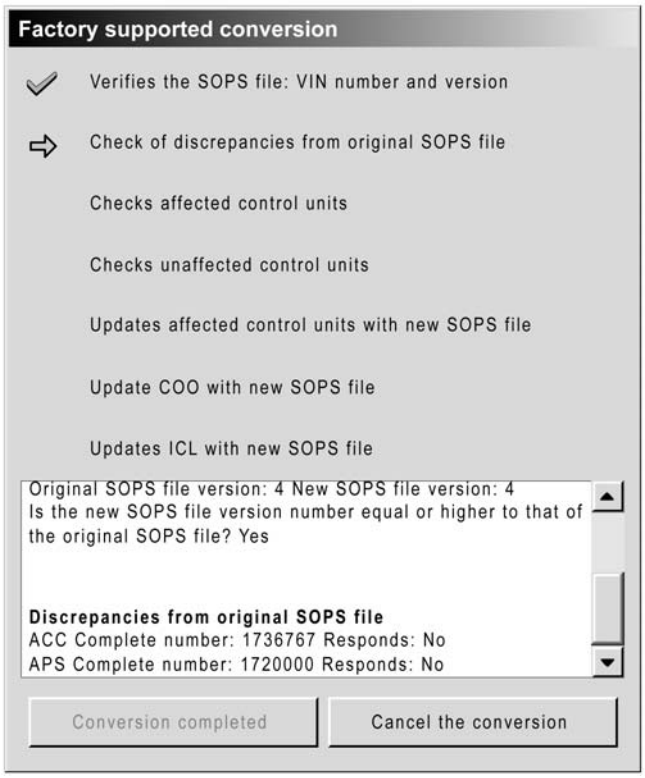


Factory supported conversion.

When it is time to load the new SOPS file in the vehicle, a seven stage programming procedure will begin. You can follow the procedure step by step on the screen.

8 Go to the Checks and adjustments work option and calibrate and reset any control unit which may have been affected.

9 Confirm to Scania that the new SOPS file has been downloaded to the vehicle.



Maintenance

In the Inspections work option you can access limited parts of the program which are required during an inspection.

The parts which are currently accessible are connecting, checking the control unit parameters and support for reading fault codes.

Communication between SDP3 and the vehicle

An information exchange takes place continuously between SDP3 and the vehicle control units. Signals and messages are sent in both directions. Unexpected interference in communication can occur which affects the ability to, for example, read and display information from the vehicle control units.

When interference occurs in the communication between the vehicle and SDP3, you as the user will receive information about this, either in the form of a fault message or via a symbol which indicates what is wrong.

It may be worth knowing that disruptions to communication which occur after you have connected the program and started work are usually temporary. Where the fault message indicates a cause, check what is indicated and try again. Where no cause is given, try again several times to see whether the communication problem disappears. If the fault does not seem to affect the work you are doing, you can ignore the fault message and continue.

The fault control in the program is under development and is being continuously improved.

Fault control

Electromagnetic fields

Scania VCI2 and most of the computers on the market are protected against the electromagnetic fields which are generated by all electrical equipment.

However, this protection is limited and is not always sufficient to allow trouble-free communication. Take care when using the programs close to the following equipment:

- Mobile phones and transmitters
- Electric welders
- Power supply installations, e.g. thyristor units

Help Desk

It may be necessary to ask questions and receive help with the programs.

Dealers should refer to the importers with their questions and suggestions for program development. Importers should consult the factory in Södertälje, Sweden.

If any faults or "bugs" are detected in Scania software, this should be reported to the factory. You can do this by contacting your distributor, who will report this through the normal reporting system. Reports about faults help us make adjustments to future versions and improve the program.