

DIAGNOSTIC TOOLS AND TEST EQUIPMENT

PRODUCT OVERVIEW



WABCO

Original document:

The German version is the original document.

Translation of the original document:

All non-German language editions are translations of the original document.

Edition 13 (01.2019)

Document number: 815 010 037 3 (en)



You will find the current edition at:
<http://www.wabco.info/i/524>

Table of contents

1	List of abbreviations	5
2	Symbols used in this document	6
3	WABCO System Diagnostics	7
3.1	Diagnostic Software	7
3.1.1	<i>Ordering Diagnostic Software</i>	8
3.1.2	<i>Diagnostic Software overview</i>	13
3.1.3	<i>Installing the Diagnostic Software</i>	14
3.1.4	<i>Change the language of the Diagnostic Software</i>	20
3.1.5	<i>Diagnostic Software Search Engine</i>	23
3.1.6	<i>Diagnostic Newsletter</i>	23
3.2	Licence agreement	24
3.2.1	<i>Activating the Diagnostic Software</i>	24
3.2.2	<i>Licence version</i>	32
3.2.3	<i>Extended authorisation (PIN)</i>	33
3.3	Hardware	34
3.3.1	<i>PC/Laptop</i>	34
3.3.2	<i>Diagnostic Interface</i>	34
4	Cable for diagnosis	35
4.1	Diagnostic accessory case	35
4.2	ABS/ASR	37
4.2.1	<i>ABS B 4-channel (towing vehicle)</i>	37
4.2.2	<i>ABS / ASR C 4-channel (towing vehicle)</i>	37
4.2.3	<i>ABS / ASR C 6-channel (towing vehicle)</i>	37
4.2.4	<i>ABS/ASR D/E (towing vehicle)</i>	38
4.2.5	<i>ABS Vario C (trailer)</i>	38
4.2.6	<i>ABS Hydraulics</i>	38
4.2.7	<i>ABS VCS I (trailer)</i>	39
4.2.8	<i>ABS VCS II (trailer)</i>	39
4.2.9	<i>ATC / HVAC</i>	40
4.3	CAN Viewer	40
4.4	EBS	41
4.4.1	<i>EBS EPB (Mercedes)</i>	41
4.4.2	<i>EBS Euro (towing vehicle)</i>	41
4.4.3	<i>TEBS (trailer)</i>	41
4.5	ECAS	42
4.5.1	<i>ECAS / ESAC (towing vehicle)</i>	42
4.5.2	<i>ECAS/ESAC (Mercedes)</i>	42
4.5.3	<i>ECAS/ESAC (MAN, Iveco)</i>	43
4.5.4	<i>ECAS (trailer)</i>	43
4.6	EPS (towing vehicle)	43
4.7	ETS (bus)	43

Table of contents

4.8	IVTM/OptiTire™	44
4.9	MTS (Bus).....	44
4.10	OnLane (lane departure warning).....	45
4.11	Trailer Central Electronic (trailer).....	45
4.12	ZBR (CVC) / Central Board Computer.....	45
4.13	OBD Multiswitch.....	45
4.14	Solaris Bus.....	46
5	Testing devices and ancillary equipment	46
5.1	Test case for air braking systems.....	46
5.2	"Agriculture" compressed air test kit	46
5.3	Pressure gauge.....	47
5.4	LSV test device	47
5.5	LSV adjuster	47
5.6	Tool sets for MAXX / PAN disc brakes	48
5.7	Test plug ABS.....	48
5.8	Flashing code connector.....	48
5.9	WABCO Compact Tester II	49
5.10	WABCO Leakage Finder 2.0.....	50
5.11	WABCO Mobile Test Bench	52
5.12	WABCO Bio-Cleaning System Set.....	52
5.13	WABCO Power Supply test case.....	52
5.14	WABCO ABS/EBS Code Reader.....	53
5.15	WABCO TPMS Manager	53
5.16	WABCO Trailer Model.....	53
6	WABCO regional offices.....	54

1 List of abbreviations

ABBREVIATION	MEANING
ABS	Anti-Lock Braking System
LSV	Load Sensing Valve
AMT	Automated Manual Transmission
APS	Air Processing System
ASR	(German: Antriebs-Schlupf-Regelung); Drive Slip Regulation
ATC/ATR	Automatic Temperature Control
CAN	Controller Area Network; asynchronous serial bus system for networking control units in vehicles
CBU	Central Brake Unit
CDC	Cruise Distance Control
E-APU	Electronic Air Processing Unit
EBS	Electronic Braking System
ECAS	Electronically Controlled Air Suspension
ECU	Electronic Control Unit
ENR	(German: Elektronische Niveau-Regelung); Electronic level control
EPB	Electro-Pneumatic Brake (equivalent to EBS)
EPS	Electronic Power Shift or Electro-Pneumatic Shift control
ESC	Electronic Stability Control
ESAC	Electronic Shock Absorber Control
ETS	(German: Elektronische Türsteuerung); Electronic Door Control
HBS	Hydraulic Anti-Lock Braking System
HPB	Hydraulic Power Brake
ITC	Integrated Temperature Control (DAF terminology for ATC)
IVTM	Integrated Vehicle Tire Pressure Monitoring system for commercial vehicles
KWP K	Bidirectional single-wire bus for data transmission in the automotive industry
LDWS	Lane Departure Warning System
MTS	(German: Modulare Tür-Steuerung); Modular door control for buses
OBD	On-board diagnosis
ODR	Operating Data Recorder
PC	Personal Computer
SAE	Society of Automotive Engineers
SD	Software Diagnosis
TEBS	Electronic Braking System for Trailers
TECAS	Electronically Controlled Air Suspension for Trailers
TPMS	Tire Pressure Monitoring System
TRR	Trailer Router / Repeater
USB	Universal Serial Bus
VCS	Vario-Compact-System; compactly structured ABS for trailers
ZBR	(German: Zentraler Bord-Rechner); Central on-board computer

2 Symbols used in this document

DANGER

The signal word denotes a hazard with a high degree of risk which, if not avoided, will result in death or serious injury.

WARNING

The signal word denotes a hazard with a medium degree of risk which, if not avoided, can result in death or serious injury.

CAUTION

The signal word denotes a hazard with a low degree of risk which, if not avoided, may result in minor or moderate injury.

NOTICE

Description of a possible situation which may result in material damage if the warning is ignored.



Important information, notes and/or tips



Reference to information on the internet

- Action step
 - ⇒ Consequence of an action

Action sequence

1. Step 1
2. Step 2
 - List
 - List



Note on the use of a tool / WABCO tool

3 WABCO System Diagnostics

WABCO System Diagnostics are special programmes with extensive functions which allow you to carry out diagnosis on electronic WABCO systems.

For system diagnosis, you require:

- a standard PC or laptop ▶ Chapter "3.1.1 Ordering Diagnostic Software", page 8
- the WABCO Diagnostic Software ▶ Chapter "3.1.2 Diagnostic Software overview", page 13
- a Diagnostic Interface ▶ Chapter "3.3.2 Diagnostic Interface", page 34
- a cable for the relevant vehicle type ▶ Chapter "4 Cable for diagnosis", page 35

Special testing equipment and accessories to round off the diagnostics range.

3.1 Diagnostic Software

The rapid developments in vehicle technology and increasingly broad range of functions and sophisticated safety features mean that Diagnostic Software is required.

WABCO provides Diagnostic Software for all diagnosable WABCO systems and components in a variety of vehicles.

There are three ways to obtain the Diagnostic Software:

- as a USB stick version
- online as what is referred to a Single Download
- as part of a WABCO System Diagnosis Subscription

For the diagnosis of multiple WABCO systems, WABCO offers you different customer-specific packages with Diagnostic Software ▶ Chapter "3.1.2 Diagnostic Software overview", page 13. These packages contain numerous programs which can be downloaded from the Internet at any time in the most current version and can be used immediately.

WABCO System Diagnostics subscription has the advantage that you are quickly informed of new versions and can obtain all newly developed Diagnostic Software at no extra cost.

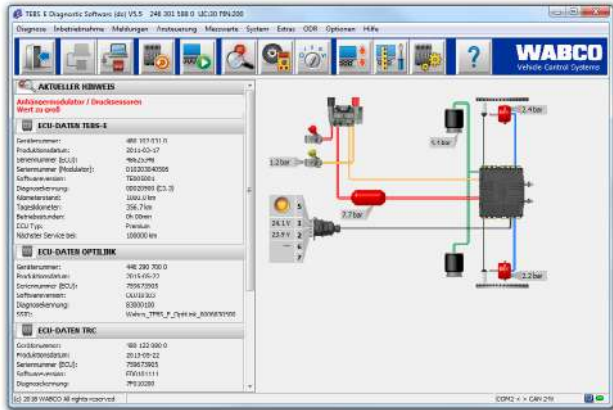
Diagnosis with the Diagnostic Software can be carried out by any user. If parameters need to be changed or a calibration needs to be carried out, authorisation (PIN) is required ▶ Chapter "3.2.3 Extended authorisation (PIN)", page 33.

The graphic user interface of the Diagnostic Software is clearly structured and intuitive to operate. Thanks to detailed repair information and circuit diagrams with measured values, successful diagnosis and repair is made easy and fast.

WABCO System Diagnostics

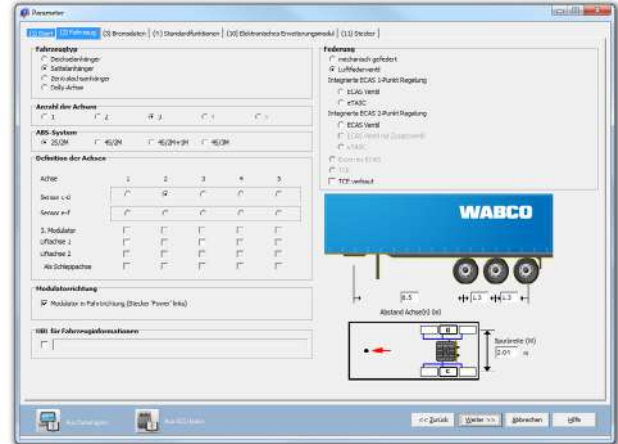
There are examples of the Diagnostic Software below, with extracts from the software for the trailer EBS E system.

MAIN MENU



- ECU data
- Displaying the current diagnostic memory
- System configuration
- Current measured values

CONFIGURATION OPTIONS (EXAMPLE)

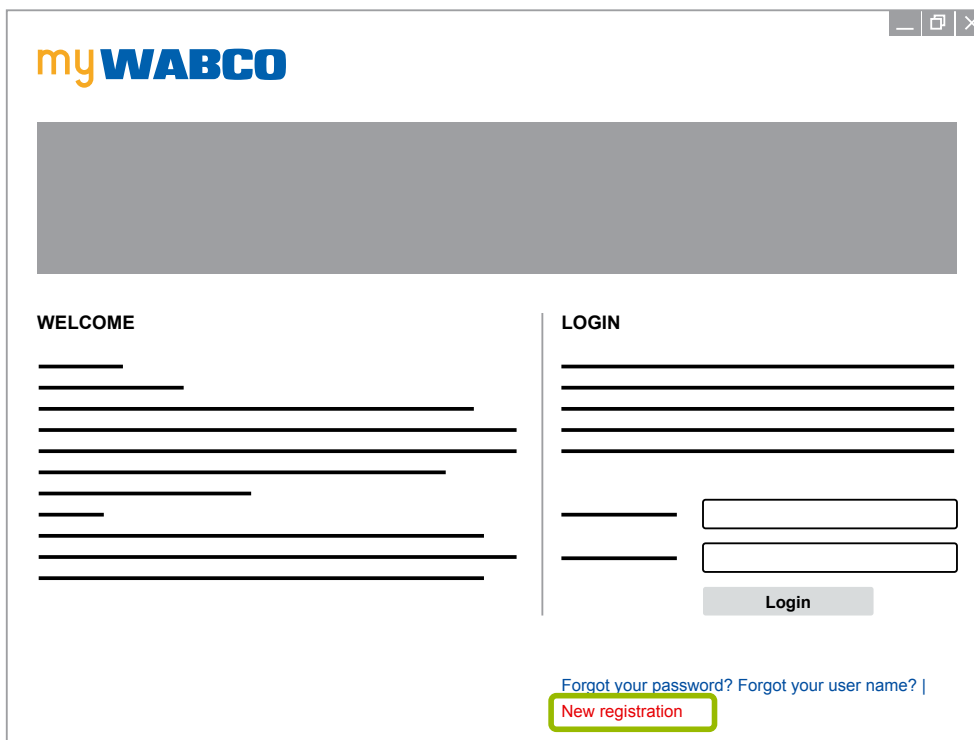


- Selection of vehicle type
- Axle definition
- Configuration of the lifting axle valves
- Selection of suspension

3.1.1 Ordering Diagnostic Software

Register at myWABCO

1. Enter the following link in your Internet browser to access the myWABCO page:
<https://www.am.wabco-auto.com>
2. Click on **New registration**.



WABCO System Diagnostics

3. Fill in the required fields marked with an asterisk (*).
4. Click on **Next**.

The screenshot shows a web browser window titled "REGISTER". On the left, a progress indicator shows "Step 1" as the active step and "Step 2" as the next step. The form contains several input fields, some with an asterisk (*) indicating they are required. The fields include text boxes, a dropdown menu, and a checkbox. At the bottom, there are two buttons: "Next" (highlighted with a green box) and "Cancel".


5. Fill in the required fields marked with an asterisk (*).
6. Click on **Transmit**.
 - ⇒ You will promptly receive an e-mail to confirm your e-mail address.

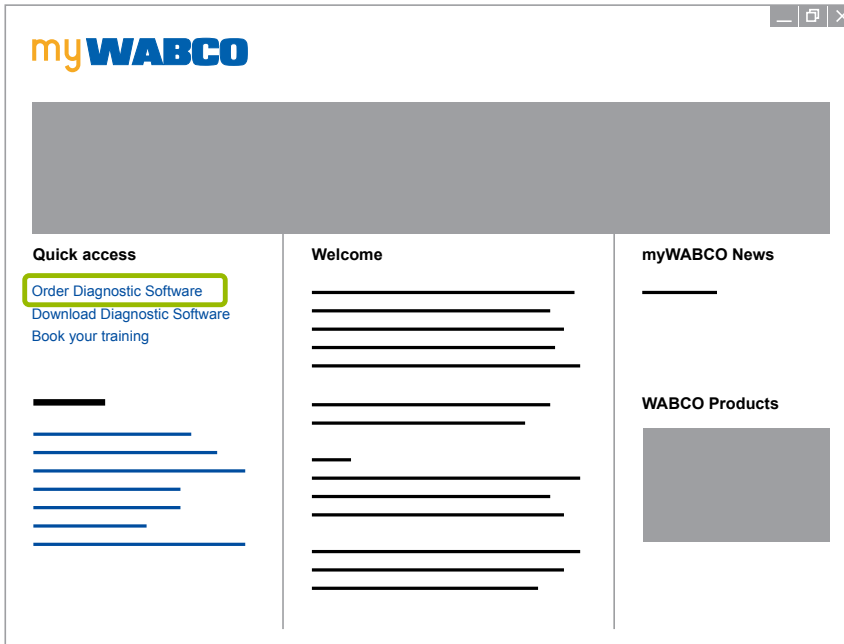
The screenshot shows the same "REGISTER" form, but now "Step 2" is the active step. The "Next" button is no longer visible. The form contains several input fields, some with an asterisk (*) indicating they are required. The fields include text boxes, dropdown menus, and a checkbox. At the bottom, there are three buttons: "Back", "Transmit" (highlighted with a green box), and "Cancel".

7. Click on the link in the confirmation e-mail to activate your account.
8. Log into your myWABCO account with your user name and password.
 - ⇒ You are now registered.

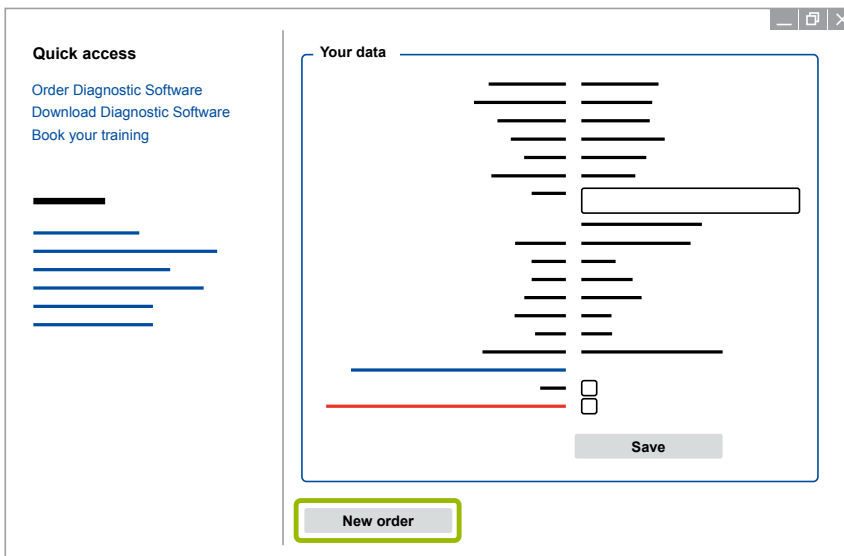
Ordering Diagnostic Software

1. Login with your myWABCO account.
2. Click on **Order Diagnostic Software** in the **Quick Access** area.

 If a security warning from your internet browser appears at this point, select the option to also display unsafe objects.



3. Enter your sales tax identification number (VAT-ID).
4. Click on **New order**.



5. Enter your order data.



Select the appropriate Diagnostic Software package or select a single software ▶ Chapter "3.1.2 Diagnostic Software overview", page 13.

6. Confirm that you agree to the terms of use.

7. Click on **Continue**.

Quick access
Order Diagnostic Software
Download Diagnostic Software
Book your training

WABCO Diagnostic Software subscription – New order

Your data

Order information

Continue
Reset

8. Check your data.



If the data is incorrect, you can correct the data by clicking **Change input**.

9. Click on **Buy now**.

Quick access
Order Diagnostic Software
Download Diagnostic Software
Book your training

WABCO Diagnostic Software subscription – Check new order

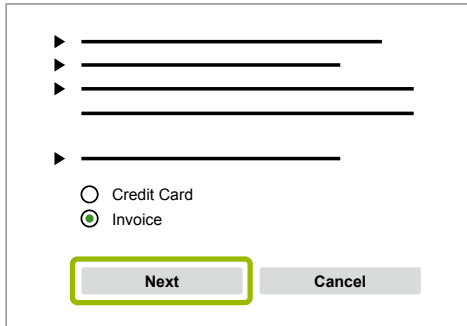
Your data

Order information

Buy now
Change input

Pay for Diagnostic Software (invoice)

1. Select **Invoice**.
2. Click on **Next**.



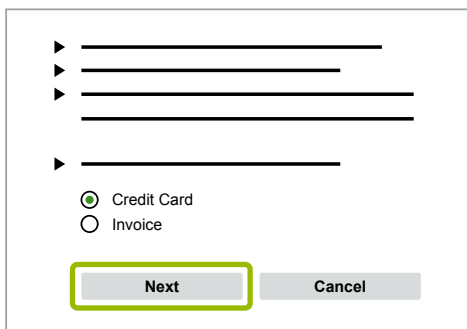
A screenshot of a web form for selecting a payment method. It features four horizontal lines with right-pointing triangles on the left, representing a list of items. Below these is a radio button selection area with 'Credit Card' (unselected) and 'Invoice' (selected). At the bottom, there are two buttons: 'Next' (highlighted with a green border) and 'Cancel'.

⇒ You will receive an invoice by e-mail and by post.

3. When we receive payment we will send you an e-mail as confirmation.
⇒ Then you can log in to myWABCO to order the desired Diagnostic Software.

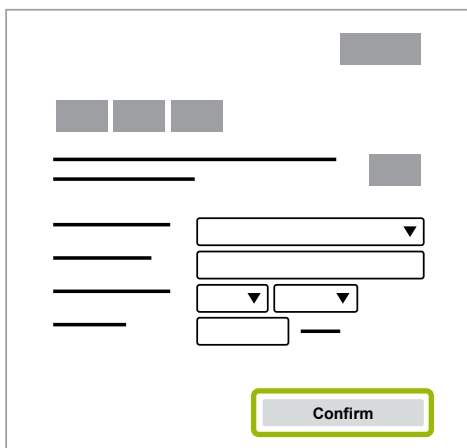
Pay for Diagnostic Software (credit card)

1. Select **Credit card**.
2. Click on **Next**.



A screenshot of a web form for selecting a payment method. It features four horizontal lines with right-pointing triangles on the left. Below these is a radio button selection area with 'Credit Card' (selected) and 'Invoice' (unselected). At the bottom, there are two buttons: 'Next' (highlighted with a green border) and 'Cancel'.

3. Enter your credit card details.
4. Click on **Confirm**.



A screenshot of a web form for entering credit card details. It includes several input fields: a card number field, an expiration date field with two dropdown menus, and a name field. A 'Confirm' button is highlighted with a green border at the bottom right.

⇒ You can now download the Diagnostic Software.

3.1.2 Diagnostic Software overview



You can find the current Diagnostic Software overview on the internet at:
<http://www.wabco.info/i/852>

The screenshot shows the WABCO website's 'Overview Product Numbers / Packages' page. The page title is 'WABCO Diagnostic Software Subscription – Software overview'. Below the title, it states 'Overview product numbers' and 'WABCO product numbers are formatted like 246 301 XXX 0'. A table follows, listing software packages and their corresponding part numbers for various languages.

Software	bg	cs	da	de	el	en	es	fr	hr	hu	it	ja	ko	nl	no	pl	pt	pt-br	ro	ru	sv	tr	zh
ABS C		621	622	620	623	631	432	630			885	168	192						627	886	156	626	
ABS D Hydraulic		321	480	650	651	416	414	696	481	415				887	169	322			323	888	652		
ABS D+		604	625	666	628	633	123	635	488	634	466	417	889	640	134	426			639	890	636	637	
ABS E+		480	478	382	383	451	453	454	668	479	455		675	456	457	458	459	460	481	462	463	474	
ABS MPB				571	572				697					573									
ABS SAE		304	629	624	663	691	489	632					902	170	326	425			326	903	156		
APS-EAPI				380	741	384	390	392	673	391	397	393		211	396	210			212	394	395	398	

Fig. overview "Available Diagnostic Software" Last updated: 01/10/2018 (detail)

Order numbers for:

- Diagnostic programs: 246 301 XXX 0
- USB stick versions: 446 301 XXX 0

The XXX value can be found in the table of the current Diagnostic Software overview.



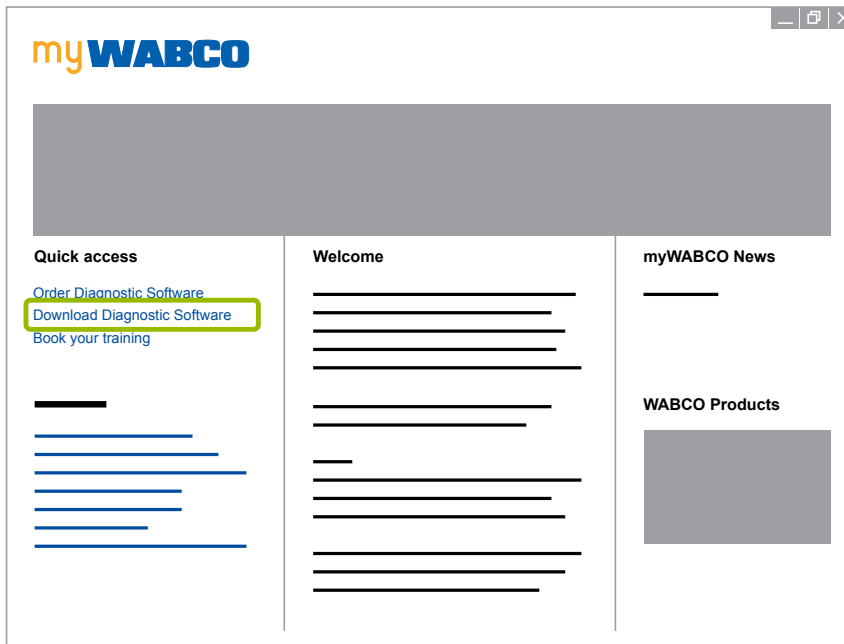
If the product number of the desired language package is not displayed, first download the basic software in English or German. Then you can download the desired target language. To do this, proceed as described in ► Chapter "Downloading the language package", page 20.

SOFTWARE PACKAGE	PART NUMBER	CONTENT
Total	246 301 900 0	Virtually all available programs for the diagnosis in towing vehicles, buses and trailers. Includes: 246 301 901 0, 246 301 902 0, 246 301 904 0
Trailer	246 301 901 0	The most common programs for diagnosis of WABCO systems and components in trailers.
Bus	246 301 902 0	The most common programs for diagnosis of WABCO systems and components in buses.
Towing vehicle	246 301 904 0	The most common programs for diagnosis of WABCO systems and components in towing vehicles.
Light commercial vehicle	246 301 804 0	The most common programs for diagnosis of WABCO systems and components in light commercial vehicles.
Off-Highway	246 301 805 0	The most common programs for diagnosis of WABCO systems and components in off-highway vehicles.

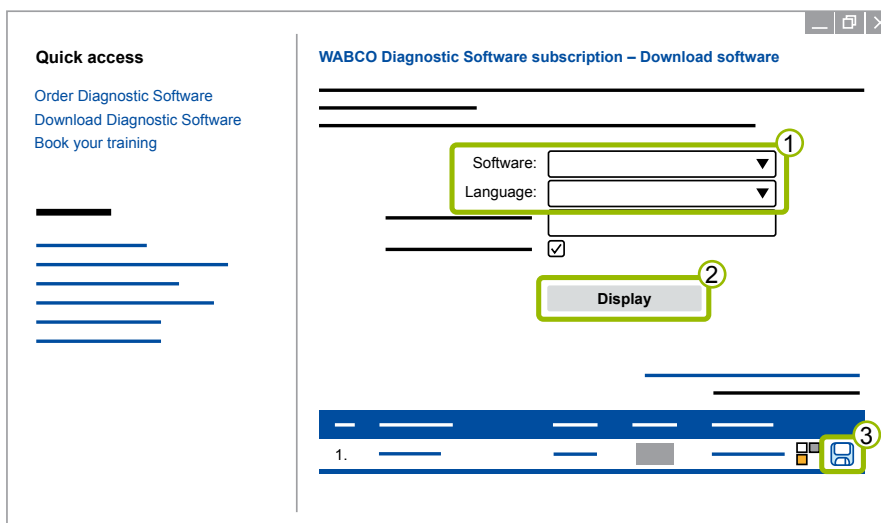
3.1.3 Installing the Diagnostic Software

Downloading Diagnostic Software

1. Enter the following link in your Internet browser to access the myWABCO page:
<https://www.am.wabco-auto.com>
2. Login with your myWABCO account.
3. Click on **Download Diagnostic Software**.

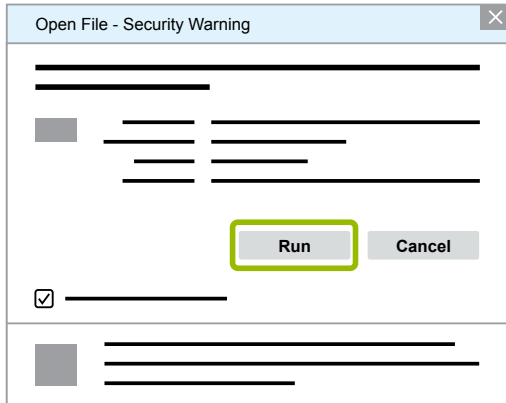


1. Select the **Software** and the **Language** ①.
2. Click on **Display** ②.
⇒ The selected software is displayed.
3. Click on the **Download button** ③.
⇒ The software will be downloaded.



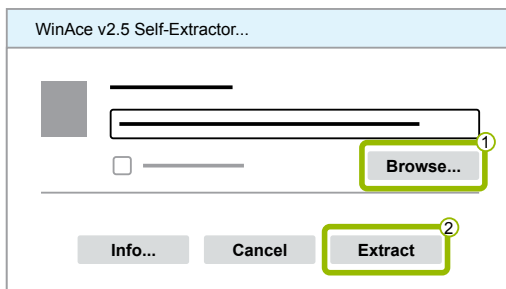
Installing the Diagnostic Software

1. Double-click the EXE file of the downloaded Diagnostic Software.
2. Accept the security warning by clicking **Run**.

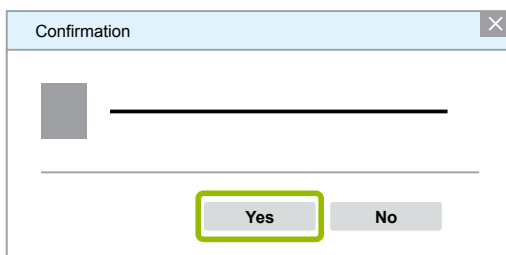


⇒ A new dialogue window opens.

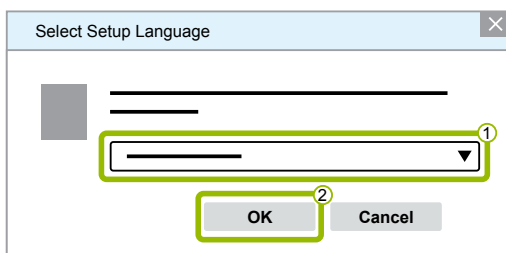
3. Click on **Browse...** ①.
4. Select a file path to extract the file.
5. Click on **Extract** ②.



6. Click on **Yes** to start the installation.



7. Select **English** ①.
8. Click on **OK** ②.



⇒ A new dialogue window is opened.

9. Click on **Next**.



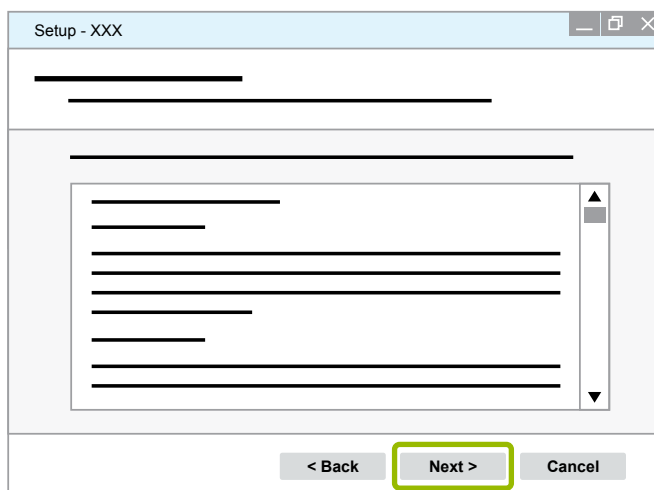
10. Accept the licence agreement ①.

11. Click on **Next** ②.



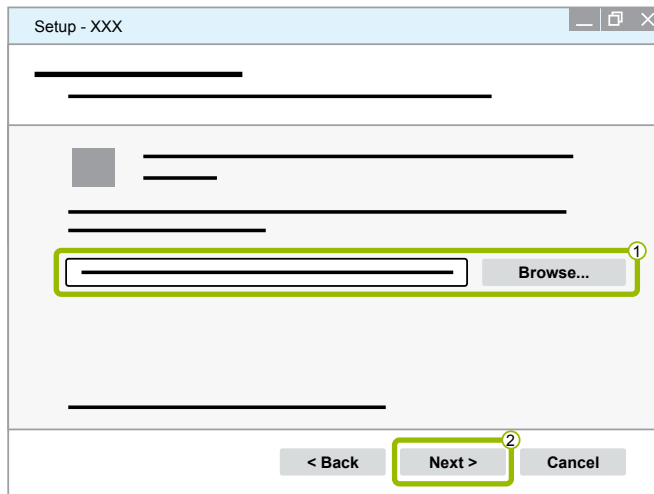
12. Read the important information.

13. Click on **Next**.



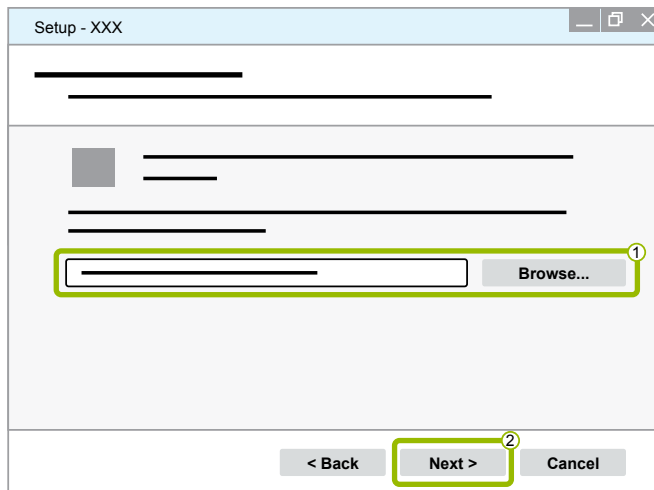
14. Select the target folder ①.

15. Click on **Next** ②.



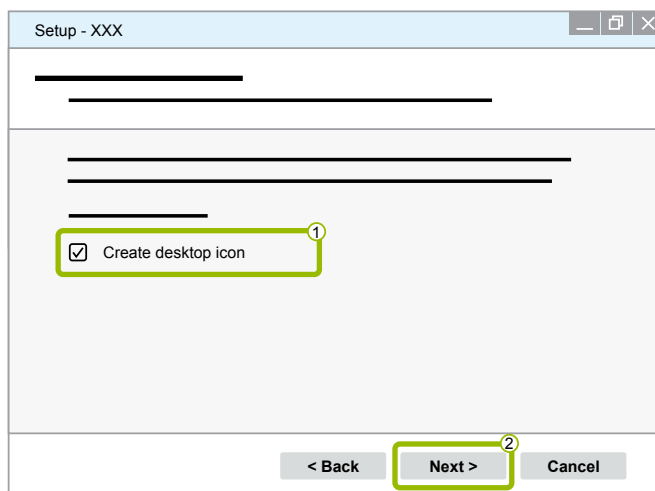
16. Select a folder in which the program shortcut is to be created ①.

17. Click on **Next** ②.

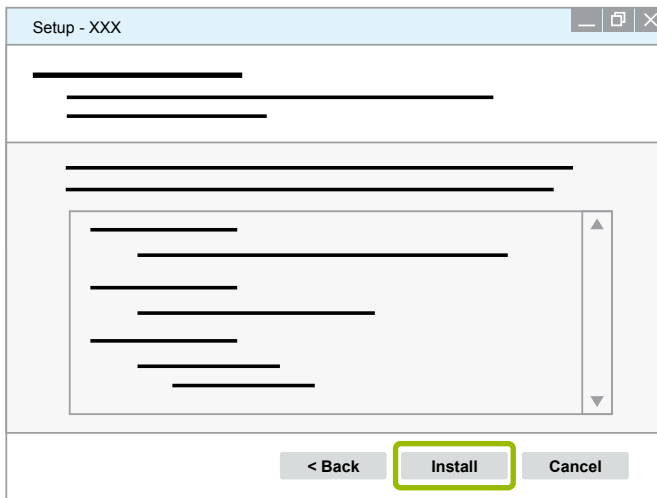


18. If you want to create a desktop icon, check **Create desktop icon** ①.

19. Click on **Next** ②.

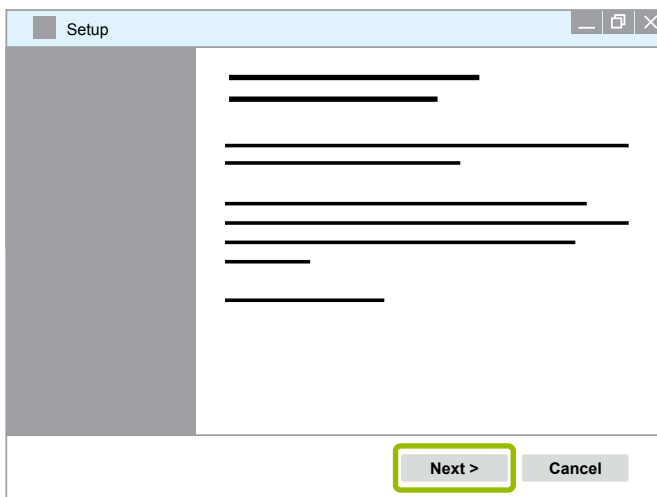


20. Click on **Install**.

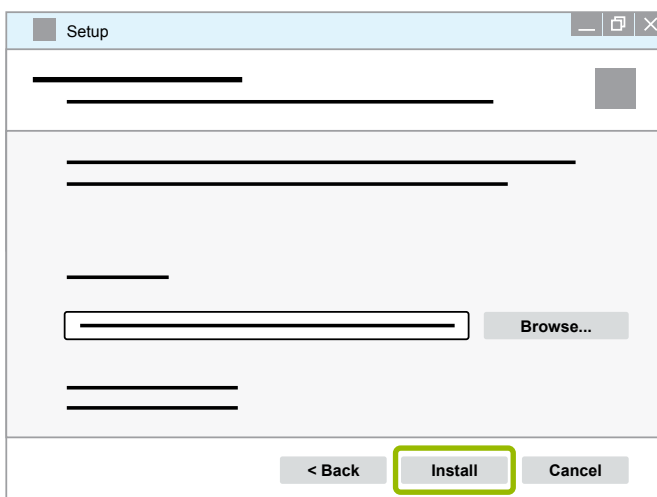


⇒ A new dialogue window is opened.

21. Click on **Next**.

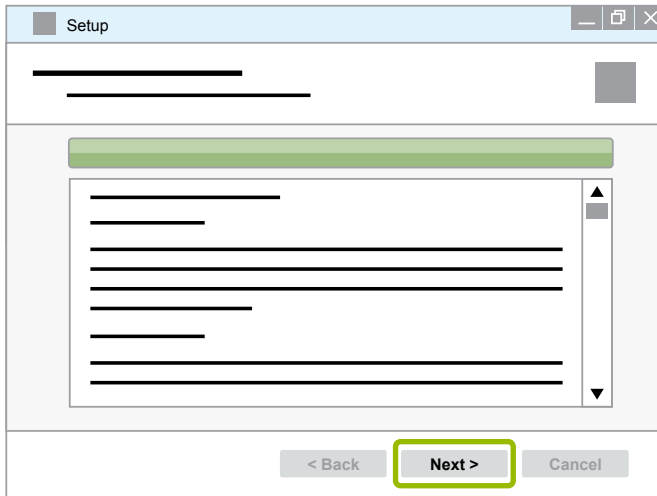


22. Click on **Install**.

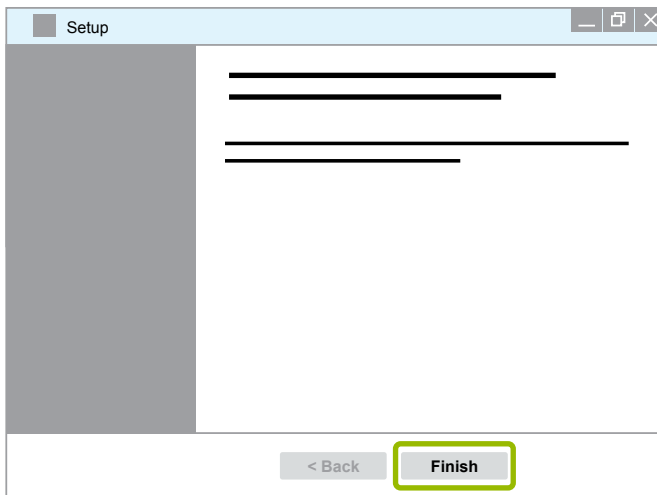


⇒ The installation is executed.

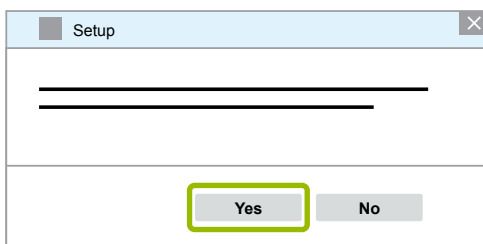
23. Click on **Next**.



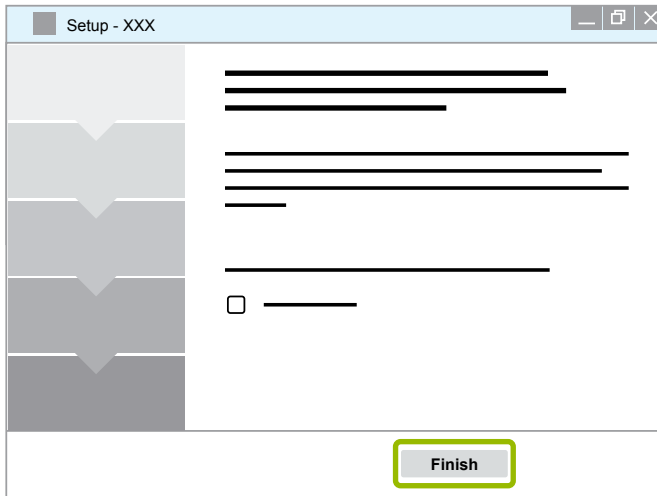
24. Click on **Finish**.



25. Click on **Yes**.



26. Click on **Finish**.



⇒ The software is now installed.

3.1.4 Change the language of the Diagnostic Software

Downloading the language package

To download the language package you want, proceed as described in ► Chapter "Downloading Diagnostic Software", page 14.

Storing files

- The zip file must be unpacked to the correct folder.
- If an individual installation directory was used, the path differs.
- **SOFTWARENAME** and **VERSION** stand for your selected software and software version.

Example

For the Diagnostic Software of TEBS E the zip file must be unpacked in the following folder:

WABCO Diagnostic Software\TEBS-E\5.41



The standard path is:

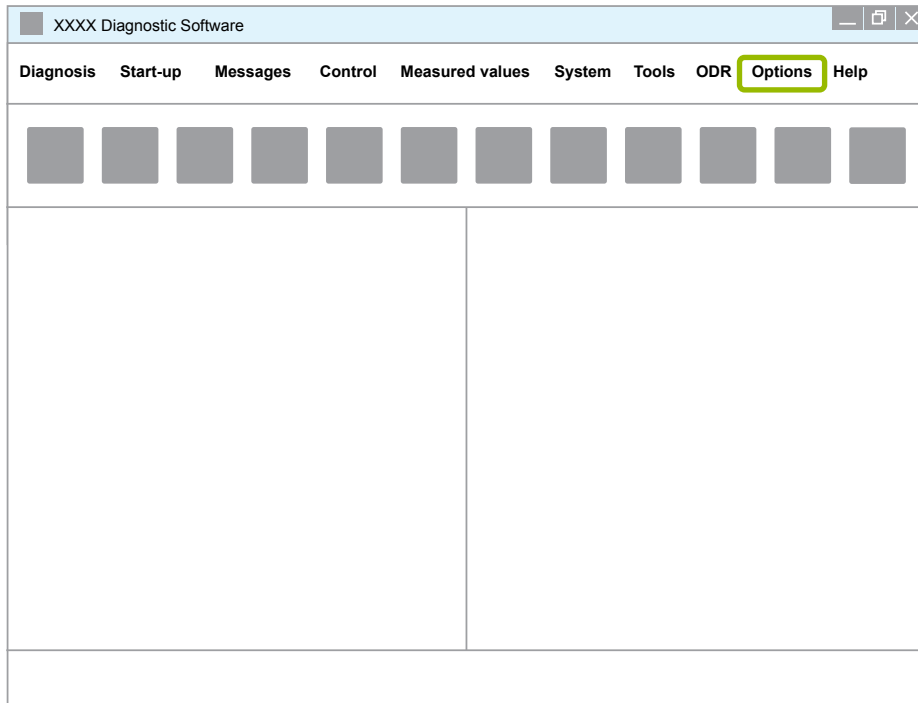
C:\Program Files (x86)\WABCO Diagnostic Software\SOFTWARENAME\VERSION

1. Open the corresponding path for your Diagnostic Software.
2. Unpack the zip file in the **VERSION** folder.

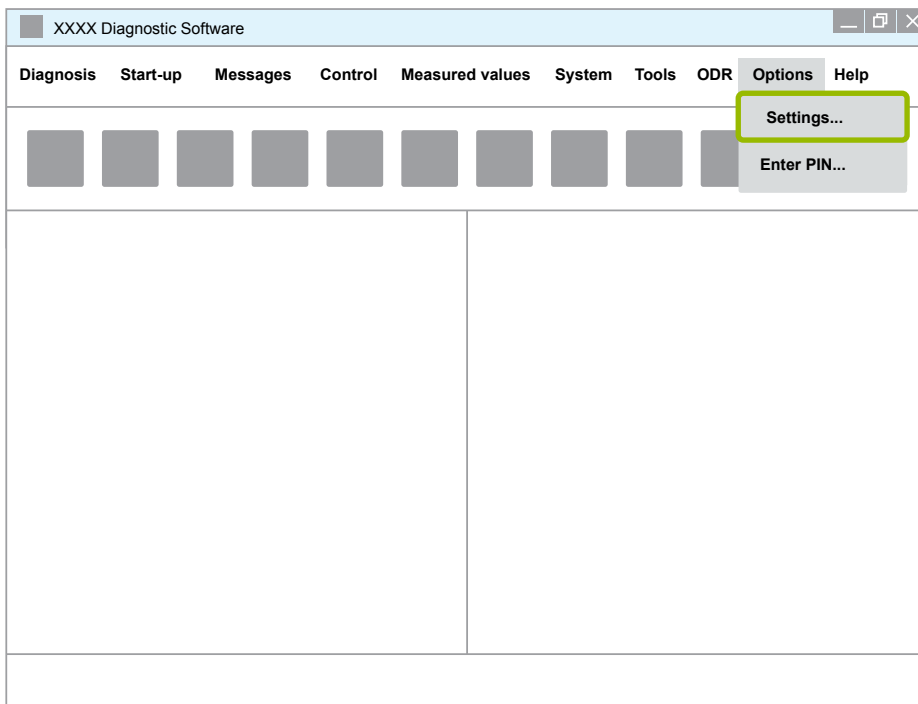
⇒ The files are now stored correctly.

Change language

1. Start the Diagnostic Software.
2. Click on **Options**.

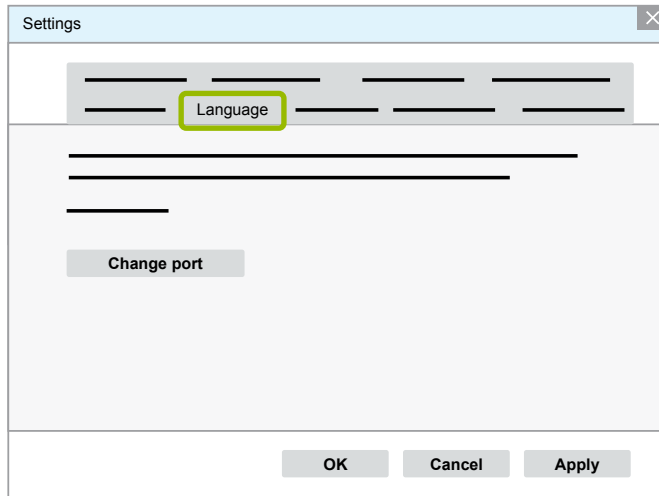


3. Click on **Settings**.



⇒ The **Settings** dialogue window is opened.

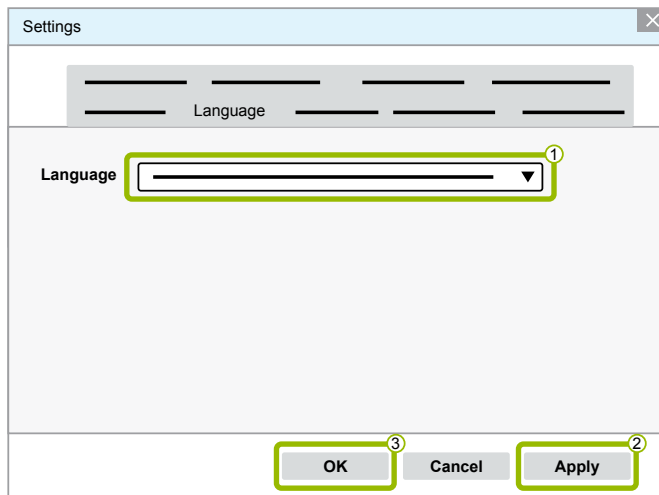
4. Select the **Language** tab.



5. Select the desired language ①.

6. Click on **Apply** ②.

7. Click on **OK** ③.



⇒ The language is now changed.

3.1.5 Diagnostic Software Search Engine

The Diagnostic Software Search Engine will enable you to find the matching Diagnostic Software for every WABCO ECU.



Start your browser and enter the following Internet address:

<http://abo.wabco.info/ecu2diag.php>

- Enter the part number of your ECU into the search field.
 - ⇒ In the response you will get the name and version of the WABCO Diagnostic Software to use.

3.1.6 Diagnostic Newsletter

Is the Diagnostic Software installed on your workshop computer up-to-date? It is easy to lose track when subscribing to the Diagnostic Software package which comprises over 40 programs.

The WABCO Diagnostic Newsletter informs you about:

- Changes to and updates for existing diagnostic programs
- New diagnostic programs and language versions

Use of this service is anonymous. No advertising mail is sent.

The WABCO Diagnostic Newsletter is cost-free and can be used multiple times per company.

Registering for the WABCO Diagnostic newsletter



Start your browser and enter the following Internet address:

<http://www.wabco.info/i/853>

- Enter your e-mail address and select the action *subscribe*.
- Click on the *Execute* button.
 - ⇒ Shortly afterwards you will receive an email with a link.
- Click on this link.
- Click the link *Edit settings*.
 - ⇒ On the page that opens you can define, which topics you would like to be informed about in future.
- Click individual fields to activate the newsletter for individual programs or activate complete columns or rows by clicking the language in the column header or name of the system.



A green symbol indicates that the program is available in this language.

Of course, you can also click on a red symbol. In this case, you will be notified immediately the program becomes available in this language.

A second click on the previously activated field will deactivate your selection.

You can revise your personal newsletter settings by the same procedure any time you wish.

Registering for the WABCO Diagnostic newsletter



Start your browser and enter the following Internet address:
<http://www.wabco.info/i/853>

- If you no longer wish to receive the newsletter, select the function *unsubscribe*.

3.2 Licence agreement

The licence agreement is displayed automatically when a WABCO diagnostic program is installed. You must accept this licence agreement if you wish to install a diagnostic program.



You can also open the licence agreement via the following link:
<http://www.wabco.info/i/854>

A Diagnostic Subscription lasts for one year. After the expiration of the year we remind you of the extension of the contract.

If you intend to install the Diagnostic Software on several computers, you need to purchase additional licences. To install on another PC, copy the *.exe file for the Diagnostic Software you have downloaded from the internet to the other PC. You can now execute the program from this computer and install the Diagnostic Software.

3.2.1 Activating the Diagnostic Software

Following installation you can use the Diagnostic Software without restrictions for 10 days. After these 10 days have expired, you must activate the Diagnostic Software. Every time the program is started, you are informed of how long the program remains operational without activation.



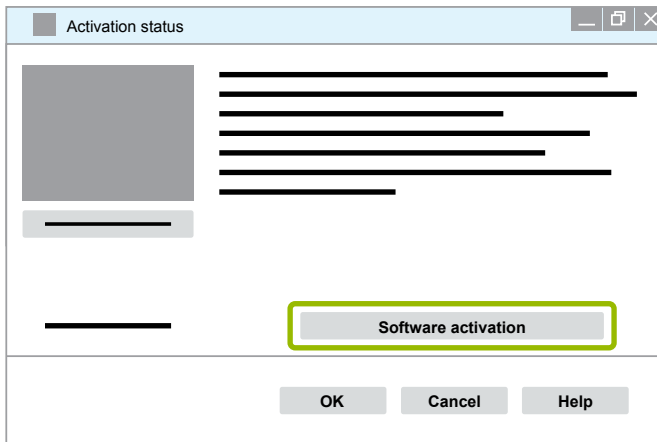
After activation, the Diagnostic Software is tied to the PC. This means the license is used up. So you should only activate the Diagnostic Software on the PC on which it will be used and not, for example on an office PC for testing.

1. Start the Diagnostic Software.
2. Fill in the required user data ①.
3. Click on **OK** ②.

⇒ A new dialogue window opens.

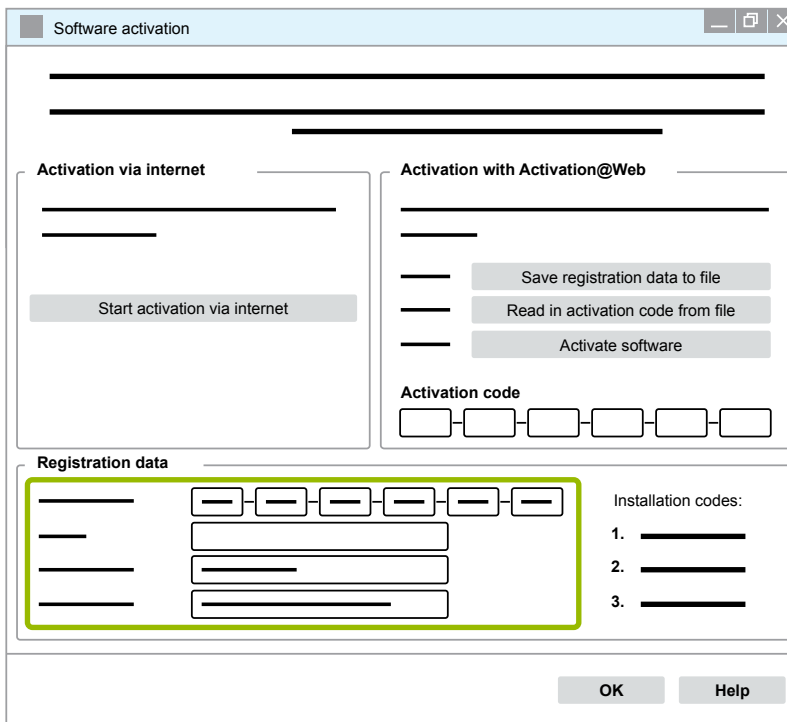
Activating the Diagnostic Software

1. Click on **Software activation**.



⇒ A new dialogue window opens.

2. Check your registration data.



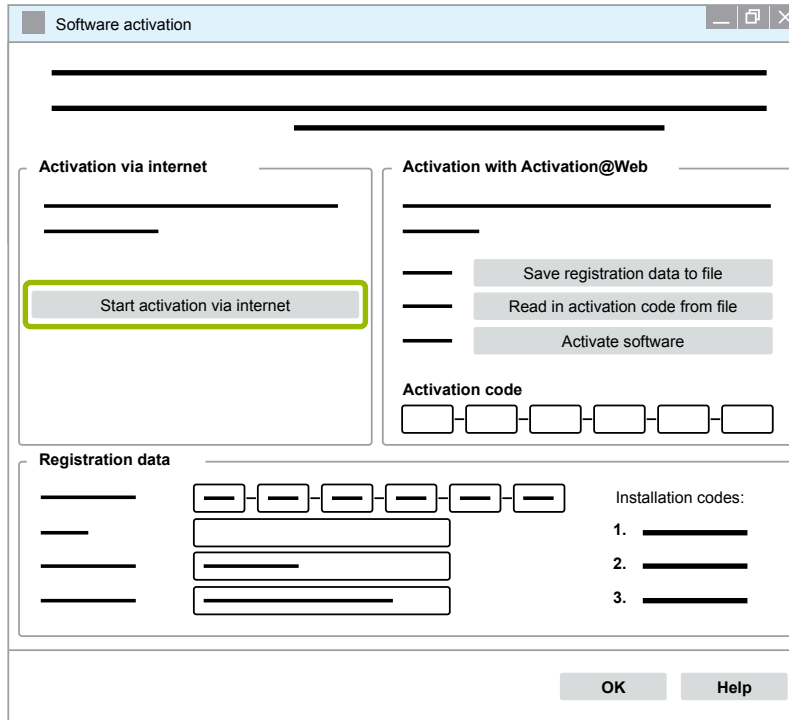
You now have a two options to request an activation code:

- Activation via internet
- Activation with Activation@Web

Activation via internet

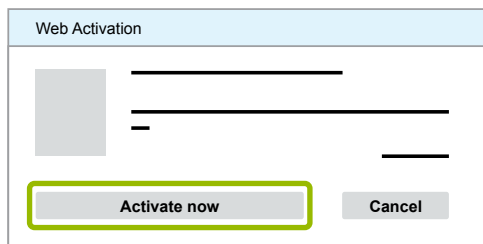
Online activation requires an internet connection on the computer on which the software is to be installed.

1. Click on **Start activation via internet**.



⇒ A new dialogue window opens.

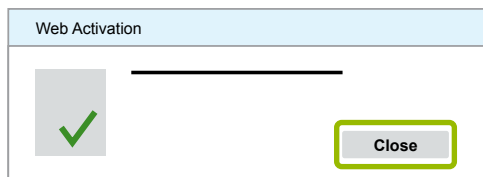
2. Click on **Activate now**.



⇒ The activation starts.

⇒ A new dialogue window opens.

3. Click on **Close** to complete the activation.

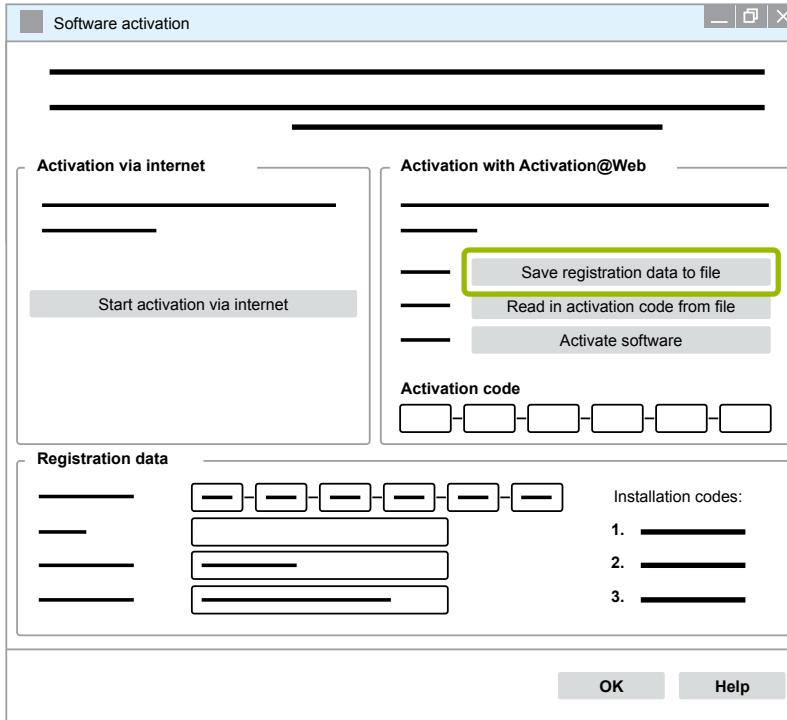


⇒ You are now registered.

Activation with Activation@Web

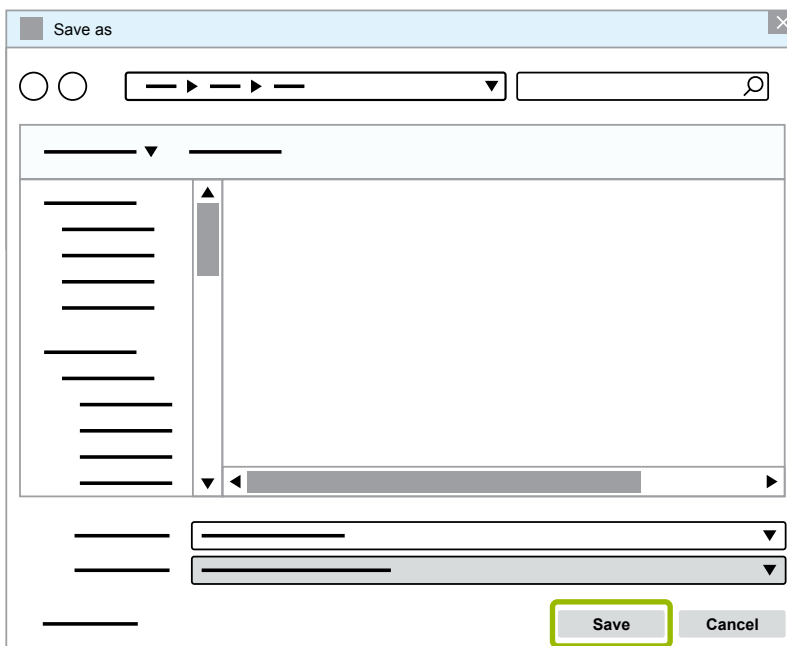
Activation@Web is a continually available Internet portal that can generate activation codes at any time of day or night. For this purpose you only need a PC with an internet connection. You do not need to use the PC on which the software is to be installed for this.

1. Click on **Save registration data to file**.



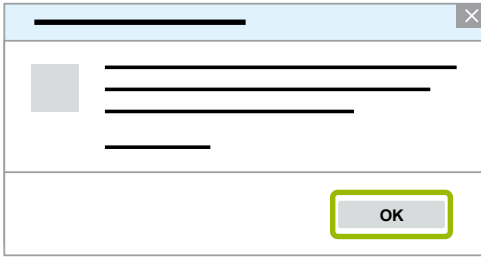
⇒ A new dialogue window opens.

2. Select a removable disk (USB) as the storage location.
3. Click **Save**.



⇒ A new dialogue window opens.

4. Click on **OK**.



5. Connect the data carrier to an Internet-capable computer.
6. Start your browser of the Internet-capable computer.



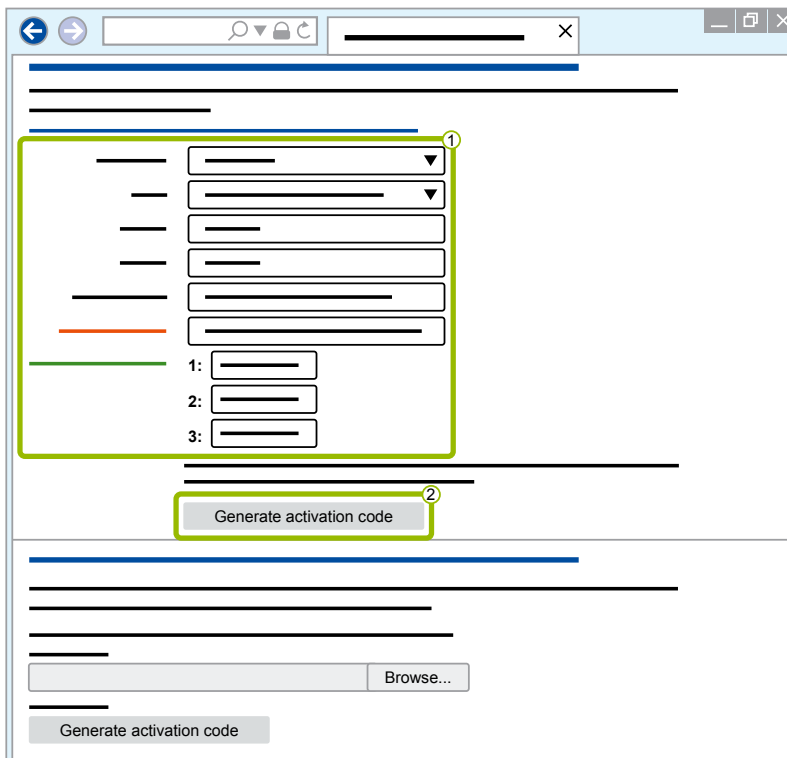
Enter https://abo.wabco.info/software_activation.php in the address bar.

You now have a two options to request an activation code:

- Activation via e-mail
- Activation via removable disk (USB)

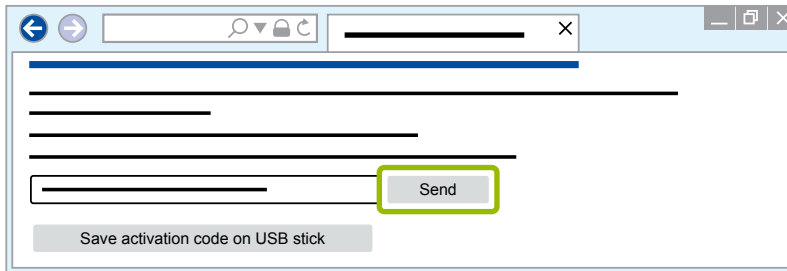
Activation via e-mail

1. Fill in the fields in the form manually or transfer the data using a removable disk (USB) ①
 - ▶ Chapter "Activation with Activation@Web", page 27.
2. Click on **Generate activation code** ②.



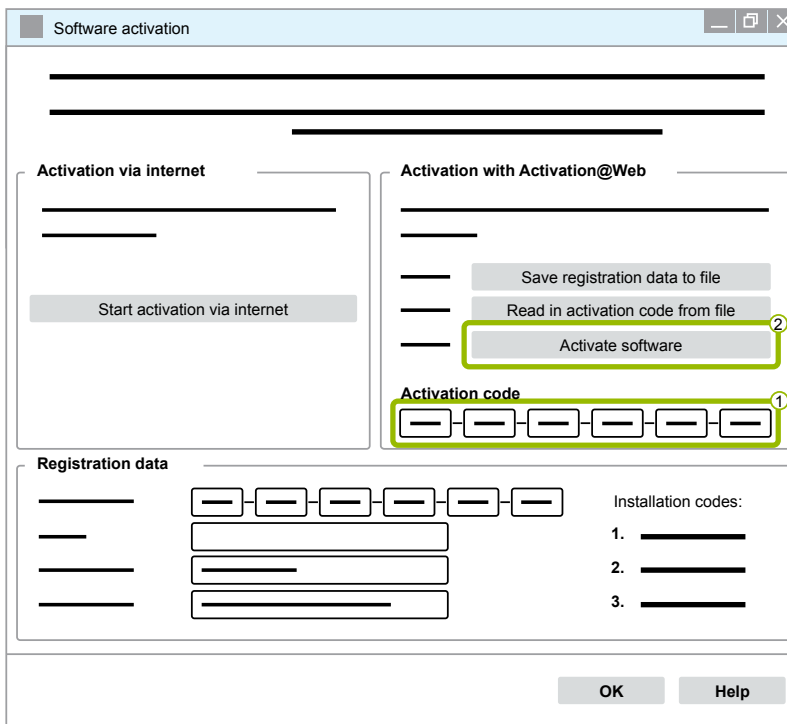
WABCO System Diagnostics

1. Enter your email address.
2. Click on **Send**.



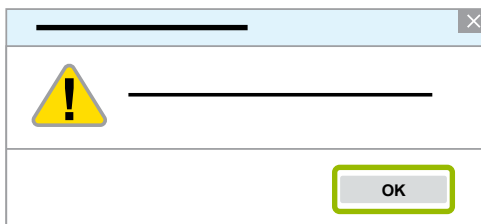
⇒ The activation code will be sent to the specified e-mail address.

3. Enter the **Activation code** ①.
4. Click on **Activate software** ②.



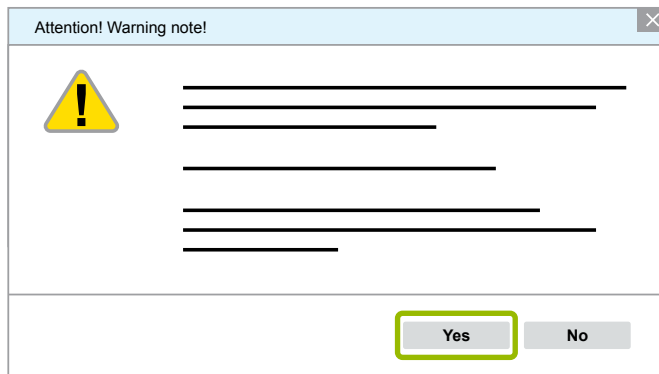
⇒ A new dialogue window opens.

5. Click on **OK**.



⇒ A new dialogue window opens.

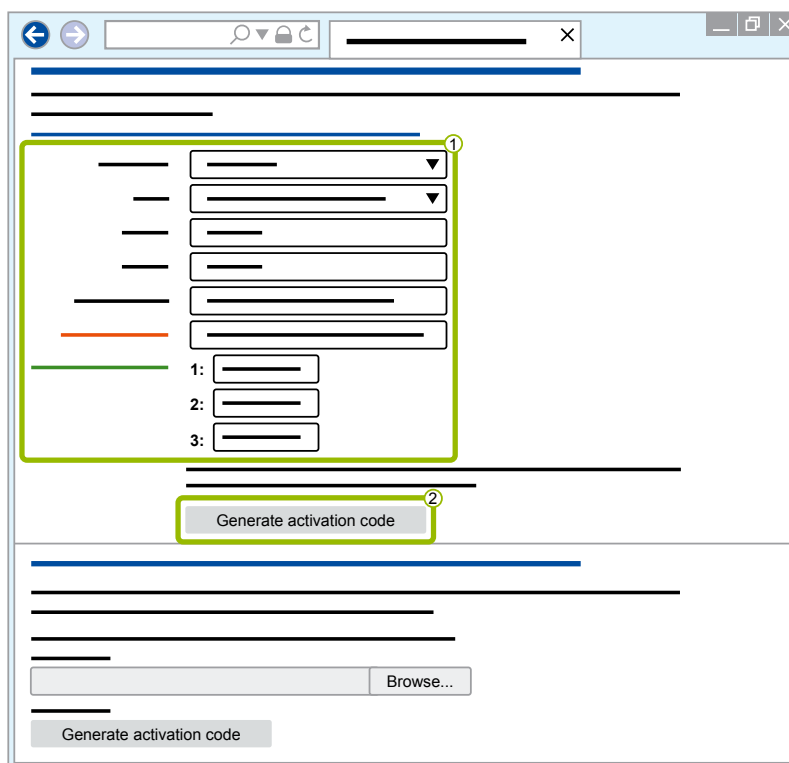
6. Read the warning notice.
7. Click on **Yes**.



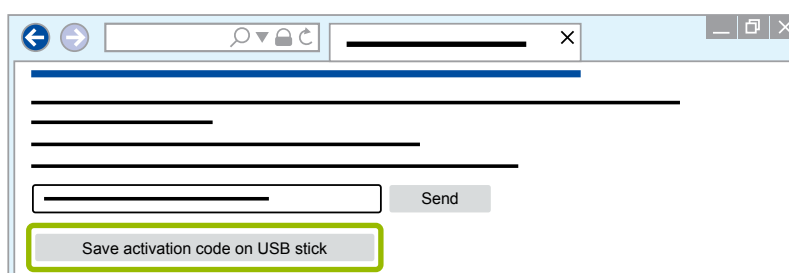
⇒ The Diagnostic Software is now activated.

Activation via removable disk (USB)

1. Fill in the fields in the form ①.
2. Click on **Generate activation code** ②.

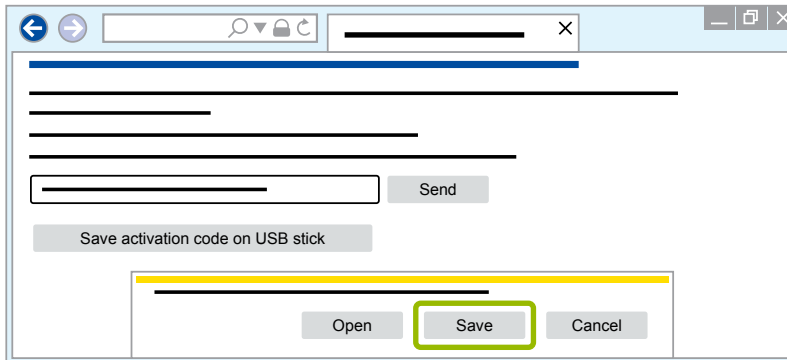


3. Click on **Save activation code on USB stick**.



⇒ A new pop-up window is opened.

4. Click **Save**.

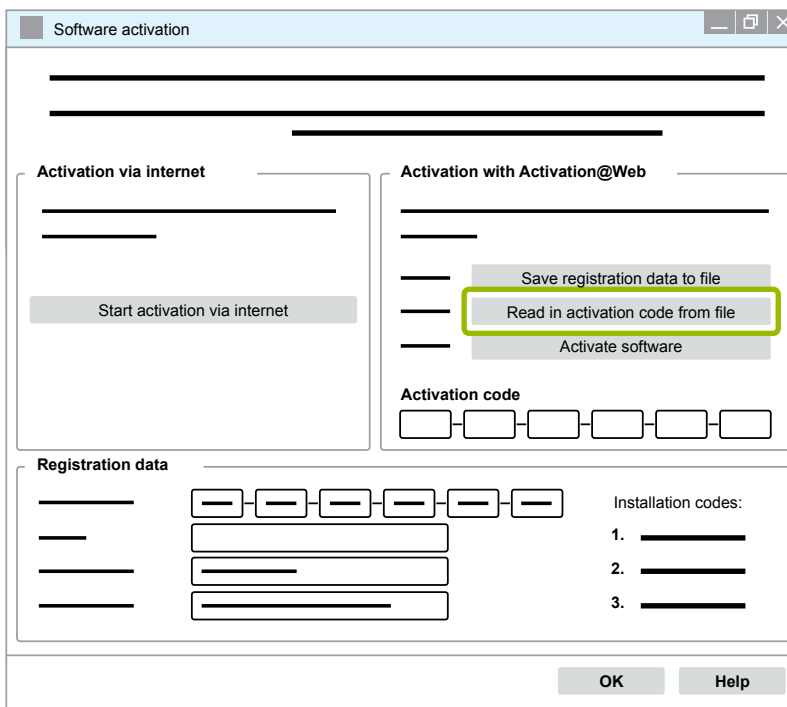


⇒ The activation code will be downloaded.

5. Save the downloaded activation code on your removable disk (USB).

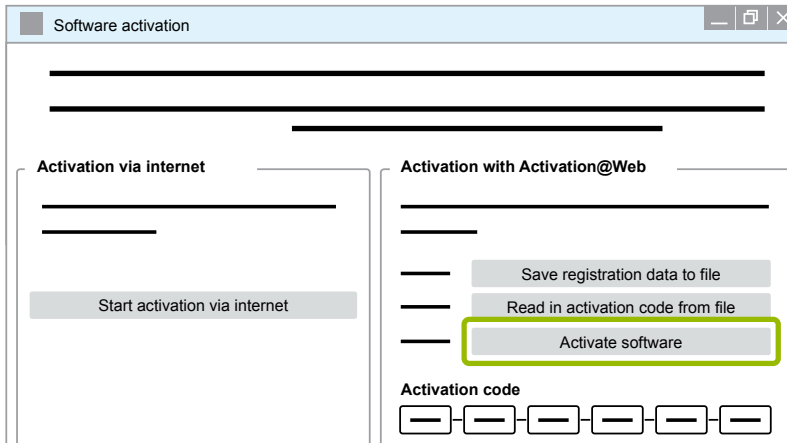
6. Insert the removable disk (USB) into the PC where the Diagnostic Software is used.

7. Click on **Read in activation code from file**.



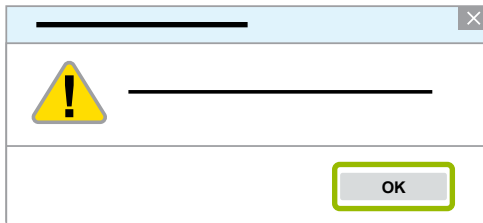
⇒ The activation code is entered automatically.

8. Click on **Activate software**.



⇒ A new dialogue window opens.

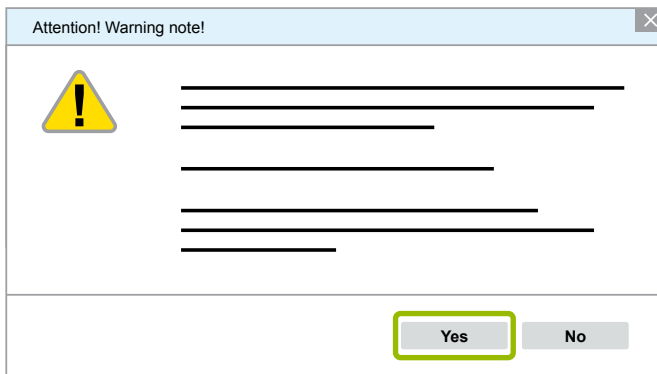
9. Click on **OK**.



⇒ A new dialogue window opens.

10. Read the warning notice.

11. Click on **Yes**.



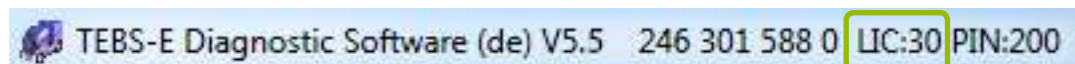
⇒ The Diagnostic Software is now activated.

3.2.2 Licence version

You are provided with the license version (LIC) in the download area as well as in the WABCO Diagnostic Newsletter if there is a software update.

If there is a change in the version as compared to the version you have, the Diagnostic Software must be reactivated.

You will find the current licence version for all programs at the top section of the window in your program:



3.2.3 Extended authorisation (PIN)

Training / E-Learning

Diagnosis with the WABCO Diagnostic Software can be carried out by any user.

If parameters are to be changed however, authorisation is required (PIN). You can obtain this PIN through relevant training course or E-Learning at the WABCO Academy.



More information on WABCO Academy training and E-Learning courses can be found on the Internet at: <http://www.wabco-academy.com/>


After you have completed a corresponding training or E-Learning course at the WABCO Academy, you will receive a PIN letter. This letter (in contrast to the previously valid licence letter which you needed to retrieve this data from the internet) contains your personal user ID as well as the Personal Identification Number (PIN) for WABCO Diagnostic Software. This PIN is used to enable enhanced functions of the Diagnostic Software and change the settings in the electronic control units.

You can continue to retrieve other PINs for older software versions from the internet.

PIN letter (example)

Confidential, only for Kontakt Test

You will need your personal user ID and the PIN for the PIN version of the respective diagnostic program to set parameters within the WABCO diagnostic software. This version is displayed as "PIN." in the top line of the diagnostic program.



You will find more detailed information on the subject of PIN version in the market information: <http://www.wabco.info/223>

Your user ID is: XXXXXX


Here are the PINs for the respectively most recent version of the software for which you have completed training:

Program name	PIN Version	PIN	PIN2
ABS C - PIN-Version: 211	211	XXXX	-
ECAS Truck JED - PIN-Version: 110	110	-	-
TCE - PIN-Version: 230	230	XXXX	-
ABS D Hydraulic - PIN-Version: 120	120	XXXX	-
ABS D+ - PIN-Version: 100	100	XXXX	-
EBS Bus Standard - PIN-Version: 120	120	XXXX	-

Should you require PINs for older PIN versions of a diagnostic program than the ones listed here, these are available on the internet at www.wabco.info/pin/

You will need the following personal licence number to log in: XXXXXX

as well as the associated confirmation number: XXXXXX

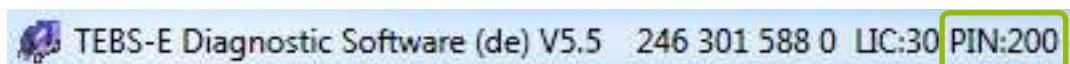


PIN version

You are provided with the PIN version in the download area as well as in the WABCO Diagnostic Newsletter if there is a software update.

If there is a difference in the new version as compared to the version that you are using, you will require a new PIN. You can obtain it through the respective training at the WABCO Academy.

You will find the current PIN version for all programs at the top section of the window in your program:




3.3 Hardware

3.3.1 PC/Laptop

The Diagnostic Software can run on any standard PC with a Windows operating system (Microsoft Windows XP or higher).



There are no special requirements for the hardware. The PC must have a free USB port for the Diagnostic Interface however.

WABCO recommends the following laptop:

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 301 999 0		WABCO Laptop "Toughbook" <ul style="list-style-type: none"> ■ Suitable for the workshop: shock- and dirt-resistant ■ On request it can also be supplied with the Diagnostic Software already installed.

3.3.2 Diagnostic Interface

The WABCO Diagnostic Interface Set is required to start a diagnosis of the electronic control unit:

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 301 030 0		Diagnostic Interface Set: <ul style="list-style-type: none"> ■ Diagnostic Interface 2 ■ USB connecting cable to PC/Notebook USB driver / Installation instructions: http://www.wabco.info/i/840
300 400 103 0		Diagnostic Interface Set: <ul style="list-style-type: none"> ■ Diagnostic Interface 3 ■ USB connecting cable to PC/Notebook ■ Bluetooth and Wi-Fi®

The vehicle connection on the Diagnostic Interface matches the connection for the Diagnostic Controller and earlier versions of the Diagnostic Interface, permitting the continued use of connecting cables used in the past.

Depending on the WABCO system you wish to diagnose, you will require corresponding connecting cables ▶ Chapter "4 Cable for diagnosis", page 35.

The USB driver required to install the Diagnostic Interface is installed together with the WABCO Diagnostic Software.

You can still use the earlier versions of the Diagnostic Interface with serial connection (446 301 021 0) and USB interface (446 301 022 0).

4 Cable for diagnosis

4.1 Diagnostic accessory case

WABCO offers accessory cases matching the Diagnostic Software packages. These cases include the cables that are most commonly used.



Please note that not all cables available from WABCO are included in the accessory cases.


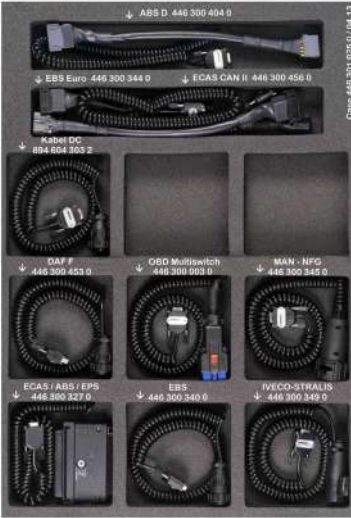

Having these accessory cases means you will always have the most important connecting elements between ECU and your PC on hand. Once the vehicle has been diagnosed, all cables can be stored in a manner where they are protected as well as easily identified. If you already own the individual components, you may also order the case without content.

Combinations of accessory cases and Diagnostic Software packages

	COMBINATION 1	COMBINATION 2	COMBINATION 3	COMBINATION 4
Diagnostic Software package	Complete 246 301 900 0	Trailer 246 301 901 0	Towing vehicle 246 301 904 0	Bus 246 301 902 0
Accessory Cases	Trailer 446 301 023 0 Towing vehicle 446 301 025 0	Trailer 446 301 023 0	Towing vehicle 446 301 025 0	Bus 446 301 026 0
Additional hardware	Any bus diagnostic cables that may be required		Diagnostic Interface Set 446 301 030 0	



Cable for diagnosis

Accessory Cases




TRAILER	TOWING VEHICLE	BUS
<p>Order number: 446 301 023 0 (with content) 446 301 024 0 (without content)</p>	<p>Order number: 446 301 025 0 (with content) 446 301 019 0 (without content)</p>	<p>Order number: 446 301 026 0 (with content) 446 301 019 0 (without content)</p>
 <p>Trailer EBS 449 672 030 0</p> <p>Trailer VCS II 449 615 010 0</p> <p>Trailer VCS I 449 612 010 0</p> <p>CAN Adapter 446 300 360 0</p> <p>Cable CAN Adapter 446 300 361 0</p> <p>Diagnostic Interface set 446 301 030 0</p> <p>Trailer Connection 446 300 329 2</p> <p>Cable Diagnostic IVTM 446 300 348 0</p> <p>Case 446 301 023 0 / 04_13</p>	 <p>ABS D 446 300 404 0</p> <p>EBS Euro 446 300 344 0</p> <p>ECAS CAN II 446 300 456 0</p> <p>ECAS DC 894 604 303 2</p> <p>DAF F 446 300 453 0</p> <p>OBD Multiswitch 446 300 003 0</p> <p>MAN - NFG 446 300 345 0</p> <p>ECAS / ABS / EPS 446 300 327 0</p> <p>EBS 446 300 340 0</p> <p>IVECO-STRALIS 446 300 349 0</p> <p>Case 446 301 025 0 (04_13)</p>	 <p>EBS -Euro 446 300 344 0</p> <p>MTS MAN 446 300 369 0</p> <p>Setra - MTS 446 300 347 0</p> <p>OBD Multiswitch 446 300 003 0</p> <p>MAN - NFG 446 300 345 0</p> <p>ATC CAN 446 300 363 0</p> <p>EBS 446 300 340 0</p> <p>Diagnostic Interface Set 446 301 030 0</p> <p>Case 446 301 026 0 (04_13)</p>
<p>CONTENTS:</p> <p>Diagnostic Interface Set (USB)</p> <ul style="list-style-type: none"> ■ 446 301 030 0 <p>Diagnostic cable ISO 7638 (CAN 24 V)</p> <ul style="list-style-type: none"> ■ 446 300 360 0 ■ 446 300 329 2 blue diagnostic socket K-line ■ 449 612 010 0 VCS I with connection socket OE ■ 449 615 010 0 VCS II with connection socket OE ■ 449 672 030 0 TEBS with connection socket OE ■ 446 300 348 0 yellow diagnostic socket CAN 5 V <p>Connecting cable</p> <ul style="list-style-type: none"> ■ 446 300 361 0 CAN adapter ISO 7638 <p>Document "Diagnosis and test equipment - product overview"</p>	<p>CONTENTS:</p> <p>Diagnostic cable</p> <ul style="list-style-type: none"> ■ 446 300 340 0 Mercedes ■ 446 300 344 0 EBS Euro (for Neoplan) ■ 446 300 345 0 (for MAN) ■ 446 300 349 0 EBS (for IVECO) ■ 446 300 404 0 ABS-D ■ 446 300 453 0 EBS (for DAF) ■ 894 604 303 2 ABS D/E (ISO 9141) <p>Connection adapter</p> <ul style="list-style-type: none"> ■ 446 300 327 0 EPS 35-pin <p>OBD multi-switch cable</p> <ul style="list-style-type: none"> ■ 446 300 003 0 <p>Connecting cable</p> <ul style="list-style-type: none"> ■ 446 300 456 0 ECAS <p>Document "Diagnosis and test equipment - product overview"</p> <p>i Supplement for trailer accessory case 446 301 023 0. Does not contain Diagnostic Interface (can be ordered separately).</p>	<p>CONTENTS:</p> <p>Diagnostic Interface Set (USB)</p> <ul style="list-style-type: none"> ■ 446 301 030 0 <p>Diagnostic cable</p> <ul style="list-style-type: none"> ■ 446 300 340 0 (for Mercedes, EvoBus) ■ 446 300 344 0 EBS Euro (for Neoplan) ■ 446 300 345 0 MAN ■ 446 300 460 0 OBD-15-pin (for DAF, Scania, MAN) ■ 446 300 363 0 ATC + MTS CAN X204 ■ 446 300 368 0 MTS Y ■ 446 300 369 0 MTS (for MAN) <p>OBD multi-switch cable</p> <ul style="list-style-type: none"> ■ 446 300 003 0 <p>Document "Diagnosis and test equipment - product overview"</p>

4.2 ABS/ASR



4.2.1 ABS B 4-channel (towing vehicle)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 327 0		Connection adapter 35-pin (ABS, ECAS, EPS, Reserve) <ul style="list-style-type: none"> ■ Selector switch to position "ABS" ■ Ignition on/off
446 300 314 0		Ground adapter 35-pin







4.2.2 ABS / ASR C 4-channel (towing vehicle)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 327 0		Connection adapter 35-pin (ABS, ECAS, EPS, Reserve) <ul style="list-style-type: none"> ■ Selector switch to position "ABS" ■ Ignition on/off
446 300 314 0		Ground adapter 35-pin
894 604 303 2		Diagnostic cable (ISO 9141)



4.2.3 ABS / ASR C 6-channel (towing vehicle)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 319 0		Connection adapter 54-pin (ABS C 6-channel)
894 604 303 2		Diagnostic cable (ISO 9141)


4.2.4 ABS/ASR D/E (towing vehicle)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 404 0		Connection adapter (ISO 9141)
894 604 303 2		Diagnostic cable (ISO 9141)
446 300 002 0		Diagnostic cable ABS E+ (UDS Y)
446 300 408 0		Connection adapter Basic (ISO 9141) ABS D/E & KWP K-Line
446 300 405 0		Connection adapter ABS D Full SAE Y
446 300 407 0		Connection adapter ABS D Basic SAE Y

4.2.5 ABS Vario C (trailer)




PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 318 0		Connection adapter ABS Vario
446 300 329 2		Diagnostic cable blue diagnostic socket (K-line)

4.2.6 ABS Hydraulics

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 355 0		Diagnostic cable ABS Hyd NG

Cable for diagnosis




4.2.7 ABS VCS I (trailer)

PRODUCT NUMBER	FIGURE	DESCRIPTION
449 612 010 0		Diagnostic cable with connection socket (length 1 m)
446 300 401 0		Diagnostic cable directly to test device (length 6 m) i Only for electronic control units with ISO supply. ECUs with a mixed supply can be tested only by using a separate diagnostic socket.
446 300 329 2		Diagnostic cable blue diagnostic socket (K-line)





4.2.8 ABS VCS II (trailer)

PRODUCT NUMBER	FIGURE	DESCRIPTION
449 615 010 0		Diagnostic cable with connection socket (length 1 m)
446 300 455 0		Diagnostic cable directly to test device (length 6 m) i Only for electronic control units with ISO supply. For the Premium versions 400 500 081/082/084 0 and Standard version 400 500 070 0. ECUs with a mixed supply can be tested only by using a separate diagnostic socket.
446 300 361 0		Diagnostic cable CAN between Diagnostic Interface USB (446 301 030 0) and diagnostic cable ISO 7638 (CAN 24 V)
446 300 329 2		Diagnostic cable blue diagnostic socket (K-line)
446 300 360 0		Diagnostic cable ISO 7638 (CAN 24 V)
446 300 470 0		CAN converter <ul style="list-style-type: none"> ■ Connection between serial Diagnostic Interface (446 301 021 0) and CAN adapter. ■ Required if diagnosis is carried out via ISO 7638 connection.

4.2.9 ATC / HVAC

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 326 2		Diagnostic cable ATC (ATR)
446 300 317 0		Connecting cable 25-pin ATC (ITC)
446 300 363 0		ATC + MTS CAN diagnostic cable (X204)

4.3 CAN Viewer

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 470 0		CAN converter <ul style="list-style-type: none"> ■ Connection between serial Diagnostic Interface (446 301 021 0) and CAN adapter. ■ Required if diagnosis is carried out via ISO 7638 connection.
446 300 360 0		Diagnostic cable ISO 7638 (CAN 24 V)
446 300 458 0		Connecting cable for Diagnostic Software "CAN Viewer" 7-pin (ISO 7638)
446 300 459 0		Connection adapter CAN 15-pin (ISO 12098)

Establishing cable connection to vehicle via ISO 7638 (7-pin)



- USB Diagnostic Interface (446 301 022 0 / 446 301 030 0) or serial Diagnostic Interface (446 301 021 0) with CAN converter (446 300 470 0)
- Adapter (446 300 360 0) with connection cable (446 300 458 0)

Establishing cable connection to vehicle via ISO 12098 (15-pin)

- USB Diagnostic Interface (446 301 022 0 / 446 301 030 0) or serial Diagnostic Interface (446 301 021 0) with CAN converter (446 300 470 0) and connection adapter (446 300 459 0)

4.4 EBS

4.4.1 EBS EPB (Mercedes)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 340 0		Diagnostic cable Mercedes
446 300 454 0		OBd diagnostic cable for Mercedes



4.4.2 EBS Euro (towing vehicle)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 344 0		Y diagnostic cable EBS Euro
446 300 349 0		Diagnostic cable for IVECO Stralis
446 300 453 0		Diagnostic cable for DAF

4.4.3 TEBS (trailer)





PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 329 2		Diagnostic cable, blue diagnostic socket (K-line), otherwise 449 672 030 0 (diagnostic cable with blue connection socket) required in addition
446 300 360 0		Diagnostic cable ISO 7638 (CAN 24 V)
446 300 361 0		Diagnostic cable CAN <ul style="list-style-type: none"> ■ Connection between Diagnostic Interface USB (446 301 030 0) and diagnostic cable ISO 7638 (CAN 24 V).

Cable for diagnosis


PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 470 0		CAN converter <ul style="list-style-type: none"> ■ Connection between serial Diagnostic Interface (446 301 021 0) and CAN adapter. ■ Required if diagnosis is carried out via ISO 7638 connection.
449 672 030 0		Diagnostic cable with blue connection socket if no external diagnostic socket is installed.

4.5 ECAS

4.5.1 ECAS / ESAC (towing vehicle)



PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 327 0 446 300 317 0		446 300 327 0: Connection adapter 35-pin (ABS, ECAS, EPS, Reserve) 446 300 317 0: Connecting cable 25-pin (ECAS) <ul style="list-style-type: none"> ■ Selector switch to ECAS ■ Ignition on/off
446 300 311 0 446 300 314 0		446 300 311 0: Measurement adapter 25-pin (ECAS, ATC, only ECAS 4x2-A) 446 300 314 0: Measurement adapter 35-pin (ECAS, ABS)
894 604 303 2		Diagnostic cable (ISO 9141)
446 300 456 0		Connection adapter (ECAS CAN II)

4.5.2 ECAS/ESAC (Mercedes).


PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 340 0		Diagnostic cable Mercedes <ul style="list-style-type: none"> ■ For ECAS/ESAC ENR/ESR Mercedes-Benz, ECAS Mercedes-Benz, EvoBus

Cable for diagnosis



4.5.3 ECAS/ESAC (MAN, Iveco)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 345 0		Diagnostic cable for MAN
446 300 349 0		Diagnostic cable for IVECO



4.5.4 ECAS (trailer)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 329 2		Diagnostic cable blue diagnostic socket (K-line)




4.6 EPS (towing vehicle)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 327 0		Connection adapter 35-pin (ABS, ECAS, EPS, Reserve) <ul style="list-style-type: none"> ■ Switch to position EPS ■ Ignition on/off
446 300 314 0		Ground adapter 35-pin





4.7 ETS (bus)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 301 200 0		Connection adapter 25-pin
446 300 311 0		Ground adapter 25-pin


4.8 IVTM/OptiTire™

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 348 0		Diagnostic cable yellow diagnostic socket (CAN 5 V)
446 300 360 0		Diagnostic cable ISO 7638 (CAN 24 V) <ul style="list-style-type: none"> ■ Required only for trailers.
446 300 361 0		Diagnostic cable CAN <ul style="list-style-type: none"> ■ Connection between Diagnostic Interface USB (446 301 030 0) and diagnostic cable ISO 7638 (CAN 24 V) ■ Required only for trailers.
446 300 470 0		CAN converter <ul style="list-style-type: none"> ■ Connection between serial Diagnostic Interface (446 301 021 0) and CAN adapter. ■ Required if diagnosis is carried out via ISO 7638 connection. ■ Required only for trailers.





4.9 MTS (Bus)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 340 0		Diagnostic cable for 14-pin connection socket <ul style="list-style-type: none"> ■ For Mercedes-Benz, EvoBus
446 300 347 0		Diagnostic cable for 14-pin connection socket in footwell <ul style="list-style-type: none"> ■ For KK NF315 / SETRA
446 300 368 0		Y diagnostic cable MTS
446 300 369 0		Diagnostic cable MAN MTS (X203)


4.10 OnLane (lane departure warning)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 365 0		Diagnostic cable OnLane


4.11 Trailer Central Electronic (trailer)

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 329 2		Diagnostic cable blue diagnostic socket (K-line)
446 300 360 0		Diagnostic cable ISO 7638 (CAN 24 V)
446 300 361 0		Diagnostic cable CAN <ul style="list-style-type: none"> ■ Connection between Diagnostic Interface USB (446 301 030 0) and diagnostic cable ISO 7638 (CAN 24 V).
446 300 470 0		CAN converter <ul style="list-style-type: none"> ■ Connection between serial Diagnostic Interface (446 301 021 0) and CAN adapter. ■ Required if diagnosis is carried out via ISO 7638 connection.


4.12 ZBR (CVC) / Central Board Computer

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 345 0		Diagnostic cable for MAN

4.13 OBD Multiswitch

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 003 0		OBD cable with selector switch combines the following cables: <ul style="list-style-type: none"> ■ MB Actros 446 300 454 0 ■ MAN / DAF 446 300 460 0 ■ Hyundai 884 058 874 0 <p>i OBD cable has also connected the CAN lines.</p>

4.14 Solaris Bus

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 006 0		Solaris Bus

5 Testing devices and ancillary equipment






5.1 Test case for air braking systems

PRODUCT NUMBER	FIGURE	DESCRIPTION
435 002 007 0		<p>Test case for air braking systems</p> <ul style="list-style-type: none"> ■ Fast and precise testing of air braking systems in compliance with guidelines and directives. <p> http://www.wabco.info/i/846</p>

5.2 "Agriculture" compressed air test kit

PRODUCT NUMBER	FIGURE	DESCRIPTION
435 002 011 0		<p>"Agriculture" compressed air test kit</p> <ul style="list-style-type: none"> ■ Testing of compressed-air procurement systems in tractors and air braking systems in agricultural and forestry trailers. <p> http://www.wabco.info/i/847</p>


5.3 Pressure gauge

PRODUCT NUMBER	FIGURE	DESCRIPTION
453 002 000 0		Pressure gauge for dashboard <ul style="list-style-type: none"> ■ 453 002 000 0: calibrated, max. 10 bar, Ø 60 mm, illuminated
453 004 005 0 453 004 007 0 453 004 009 0		Pressure gauge <ul style="list-style-type: none"> ■ 453 004 005 0: calibrated, max. 10 bar, Ø 100 mm ■ 453 004 007 0: calibrated, max. 16 bar, Ø 100 mm ■ 453 004 009 0: calibrated, max. 25 bar, Ø 100 mm
453 004 012 0		Pressure gauge <ul style="list-style-type: none"> ■ calibrated, max. 16 bar, Ø 100 mm
453 197 000 0		Double pressure gauge for dashboard <ul style="list-style-type: none"> ■ calibrated, max. 10 bar, Ø 60 mm, illuminated
453 197 004 0		Double pressure gauge <ul style="list-style-type: none"> ■ calibrated, 2x 16 bar, diameter, Ø 100 mm
<p>i Depending on the vehicle size and the respective equipment, multiple pressure gauges can be used for measuring.</p>		





5.4 LSV test device

PRODUCT NUMBER	FIGURE	DESCRIPTION
435 008 000 0		LSV test device <ul style="list-style-type: none"> ■ Testing and adjusting the load sensing valves on vehicles with air suspension systems. <p>http://www.wabco.info/i/848</p>


5.5 LSV adjuster

PRODUCT NUMBER	FIGURE	DESCRIPTION
899 709 109 2		LSV adjuster <ul style="list-style-type: none"> ■ For adjusting the pneumatic LSV controller: Series 475 714 XXX 0 and 475 715 XXX 0


5.6 Tool sets for MAXX / PAN disc brakes

PRODUCT NUMBER	FIGURE	DESCRIPTION
300 100 010 2		Tool set "Basic"
300 100 013 2		Tool set "Extension"
300 100 011 2		Tool set "Adjuster replacement"
300 100 012 2		Tool set "Return unit"



5.7 Test plug ABS

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 007 316 0		<p>Test plug ABS</p> <ul style="list-style-type: none"> ■ For testing the function of the ISO 7638 port on the towing vehicle (24 V). ■ Only vehicles with hitching mechanism.

5.8 Flashing code connector

PRODUCT NUMBER	FIGURE	DESCRIPTION
446 300 334 0		<p>Flashing code connector</p> <ul style="list-style-type: none"> ■ For VARIO Compact ABS with external diagnostic socket (flashing code read out without diagnostic controller).



















5.9 WABCO Compact Tester II

PRODUCT NUMBER	FIGURE	DESCRIPTION
<p>446 300 430 0 (for towing vehicle, trailer and hydraulic ABS; also VCS II)</p> <p>446 300 005 0 (with Chinese front layout)</p>		<p>WABCO Compact Tester II</p> <ul style="list-style-type: none"> ■ Reading out the diagnostic memory of the WABCO ECU. ■ Connecting cable to the vehicle – matches the one for the Diagnostic Interface. ■ Operated via 3 buttons. <p>Options:</p> <ul style="list-style-type: none"> ■ While reading out / clearing the diagnostic memory ■ System display ■ Special functions depending on the system e. g. system commissioning ■ Functional test ■ Reading out the total odometer reading ■ Display ISS limit speed ■ Reset service interval ■ Extended fault display <p>Depending on the WABCO system you wish to diagnose, you will require corresponding connecting cables ▶ Chapter "4 Cable for diagnosis", page 35.</p> <p> http://www.wabco.info/i/845</p>

5.10 WABCO Leakage Finder 2.0

COMPONENTS	BASIC SET ORDER NUMBER: 300 400 001 0	EXTENDED SET ORDER NUMBER: 300 400 002 0
<p>The WABCO Leakage Finder 2.0 is used to detect ultrasonic signals. Using WABCO Leakage Finder 2.0, faulty components can be located in systems and their risk potential for the process evaluated. Ultrasonic signals, e.g. caused by friction on damaged parts, form the basis.</p>		
<p>WABCO Leakage Finder 2.0 incl. 2 batteries</p> 	<p style="text-align: center;">✓</p> <p style="text-align: center;">300 400 005 0</p>	<p style="text-align: center;">✓</p> <p style="text-align: center;">300 400 005 0</p>
<p>Ultrasonic transmitter</p> 	<p style="text-align: center;">✗</p>	<p style="text-align: center;">✓</p> <p>Ultrasonic sensor incl. 3 batteries: 300 400 006 0</p> <p>Protection sleeve for ultrasonic sensor: 300 400 010 0</p>

Testing devices and ancillary equipment

COMPONENTS	BASIC SET ORDER NUMBER: 300 400 001 0	EXTENDED SET ORDER NUMBER: 300 400 002 0
Flexible airborne sound probe 	 300 400 015 0	 300 400 015 0
Airborne sound probes 		 300 400 008 0
Structure-borne sound probe 		 300 400 007 0
Headphones with connecting cable 	 Headphones: 300 400 003 0 Connecting cable: 300 400 011 4	 Headphones incl. 2 batteries: 300 400 014 0 Connecting cable: 300 400 011 4
External loudspeaker 	 300 400 004 0	 300 400 004 0
Carrying aid for WABCO Leakage Finder 2.0	 300 400 001 2	 300 400 001 2
Original operating instructions	 815 980 255 3	 815 980 255 3


5.11 WABCO Mobile Test Bench

PRODUCT NUMBER	FIGURE	DESCRIPTION
453 197 003 0		<p>WABCO Mobile Test Bench</p> <ul style="list-style-type: none"> ■ Easy repair and testing of individual brake components. ■ Easy vehicle tests. ■ Precise function due to calibrated pressure gauges. ■ Flexible application thanks to integrated rollers and extendible handle. <p>http://www.wabco.info/i/842</p>


5.12 WABCO Bio-Cleaning System Set

PRODUCT NUMBER	FIGURE	DESCRIPTION
300 100 007 0		<p>WABCO Bio-Cleaning System Set</p> <ul style="list-style-type: none"> ■ Easy and fast cleaning of parts and tools ■ ph-neutral fluid ■ Micro-organisms decompose up to 500 ml of oil and grease per day ■ No health risk for the user ■ Circulation technology without aggressive detergents


5.13 WABCO Power Supply test case

PRODUCT NUMBER	FIGURE	DESCRIPTION
300 100 001 0		<p>WABCO Power Supply test case</p> <ul style="list-style-type: none"> ■ Tests the lights of cars, trucks or agricultural trailers (12V/24V). ■ Tests the light control signals on a truck (24V). ■ Tests the PIN control (e.g. to activate the lifting axle). ■ Tests the power supply unit of the trailer ECU (12V/24V). ■ Testing of different holders and measuring instruments


5.14 WABCO ABS/EBS Code Reader

PRODUCT NUMBER	FIGURE	DESCRIPTION
300 200 002 0		<p>WABCO ABS/EBS Code Reader B-DH A101</p> <ul style="list-style-type: none"> ■ Easy to use device, for the diagnosis of ■ WABCO braking systems in trailers, towing vehicles and buses. ■ For the diagnosis of any trailer equipped with WABCO ABS or EBS. ■ For the diagnosis of any truck equipped with WABCO ABS or EBS (Asia and South America only). ■ For rapid diagnosis of pre-repair within a vehicle fleet. <p>i The diagnostic cable 446 300 375 0 can be ordered as a supplement to the WABCO ABS/EBS Code Reader.</p>

5.15 WABCO TPMS Manager

PRODUCT NUMBER	FIGURE	DESCRIPTION
300 200 001 0		<p>WABCO TPMS Manager</p> <ul style="list-style-type: none"> ■ Reading and triggering of WABCO OptiTire™ sensors. ■ Display of tire and sensor status data.

5.16 WABCO Trailer Model

PRODUCT NUMBER	FIGURE	DESCRIPTION
300 000 002 0		<p>Trailer model</p> <ul style="list-style-type: none"> ■ Realistic training ■ Fully functional original WABCO equipment ■ State-of-the-art vehicle technology ■ Full diagnostic capability <p>i A truck model is in preparation.</p>

6 WABCO regional offices

 <p>Head office WABCO Europe BVBA Chaussée de la Hulpe 166 1170 Brussels Belgium T: +32 2 663 9800 F: +32 2 663 9896</p>	 <p>WABCO Belgium BVBA/SPRL 't Hofveld 6 B1-3 1702 Groot-Bijgaarden Belgium T: +32 2 481 09 00</p>	 <p>WABCO Austria GesmbH Rappachgasse 42 Vienna 1110 Austria T: +43 1 680 700</p>
 <p>WABCO GmbH Am Lindener Hafen 21 30453 Hanover Germany T: +49 511 9220</p>	 <p>WABCO GmbH Gartenstraße 1 Gronau 31028 Germany T: +49 511 922 3000</p>	 <p>WABCO Radbremesen GmbH Bärlochweg 25 Mannheim 68229 Germany T: +49 621 48310</p>
 <p>WABCO brzdy k vozidlům spol. s r.o. Sourcing & Purchasing Office U Trezorky 921/2 Prague 5 Jinonice 158 00 Prague Czech Republic T: +420 226 207 010</p>	 <p>WABCO brzdy k vozidlům spol. s r.o. Pražákova 1008/69, Štýřice, 639 00 Brno Czech Republic T: +420 543 428 800</p>	 <p>WABCO Automotive BV Rhijnspoor 263 Capelle aan den IJssel (Rotterdam) 2901 LB Netherlands T: +31 10 288 86 00</p>
 <p>WABCO (Schweiz) GmbH Freiburgstraße 384, Postfach 29 Bern 3018 Switzerland T: +41 31 997 41 41</p>	 <p>WABCO International Sourcing & Purchasing Office Harmandere Mh. Dedelesa Cd. 24 Atlas Park B/5 Pendik, 34912 Istanbul Turkey T: +90 216 688 81 72 Fax: +90 216 688 38 26</p>	 <p>WABCO Sales Office Halide Edip Adivar Mh. Ciftecevizler Deresi Sok. 2/2 Akin Plaza, Sisli, 34382 Istanbul Turkey T: +90 212 314 20 00 Fax: +90 212 314 20 01</p>
 <p>WABCO France Carre Hausmann 1 cours de la Gondoire 77600 Jossigny France T: +33 801 802 227</p>	 <p>WABCO Automotive Italia S.r.L. Studio Tributario e Societario, Galleria San Federico 54 Torino, 10121 Italy T: +39 011 4010 411</p>	 <p>WABCO Polska Spółka Z Ograniczona Odpowiedzialnoscia ul. Ostrowskiego 34 53-238 Wroclaw Poland T: +48 71 78 21 888</p>
 <p>WABCO España S. L. U. Av de Castilla 33 San Fernando de Henares Madrid 28830 Spain T: +34 91 675 11 00</p>	 <p>WABCO Automotive AB Drakegatan 10, Box 188 SE 401 23 Gothenburg Sweden T: +46 31 57 88 00</p>	 <p>WABCO Automotive U.K. Ltd Unit A1 Grange Valley Grange Valley Road, Batley, W Yorkshire, Англия, WF17 6GH T: +44 (0)1924 595 400</p>

WABCO regional offices

 <p>WABCO Australia Pty Ltd Unit 3, 8 Anzed Court Mulgrave, Victoria 3170 Australia T: +61 3 8541 7000 Hotline: 1300-4-WABCO</p>	 <p>WABCO do Brasil Indústria e Comércio De Freios Ltda Rodovia Anhanguera, km 106 CEP 13180-901 Sumaré-SP Brazil T: +55 19 2117 4600 T: +55 19 2117 5800</p>	 <p>WABCO Hong Kong Limited 14/F Lee Fund Centre 31 Wong Chuk Hang Road Hong Kong China T: +852 2594 9746</p>
 <p>Asia Pacific Headquarters, WABCO (Shanghai) Mgmt Co. Ltd 29F & 30F, Building B, New Caohejing Intl Bus. Center 391 Guiping Rd, Xuhui Dist. Shanghai 200233, China PRC T: +86 21 3338 2000</p>	 <p>WABCO (China) Co. Ltd. Jinan Shandong WABCO Automotive Products Co. Ltd. 1001 Shiji Av, Jinan Indust. Zone, Shandong 250104 China PRC T: +86 531 6232 8800</p>	 <p>WABCO (China) Co. Ltd No. 917 Weihe Road, Economic & Tech. Dev. Zone Qingdao 266510 China PRC T: +86 532 8686 1000</p>
 <p>WABCO (China) Co. Ltd Guangdong WABCO FUHUA Automobile Brake System Co. Ltd. Building E, No. 1 North, Santai Av, Taishan City Guangdong 529200 China PRC T: +86 750 5966 123</p>	 <p>Shanghai G7 WABCO IOT Technology Co. Ltd Room 503,Liguo Building, No. 255 Wubao Road, Minhang Dist. Shanghai 201100 China PRC T: 021-64058562/826</p>	 <p>China-US RH Sheppard Hubei Steering Systems Co. Ltd No. 18, Jingui Road, Xianning City Hubei 437000 China PRC</p>
 <p>WABCO India Limited Plot No. 3 (SP), III Main Road Ambattur Industrial Estate Chennai 600 058 India T: +91 44 42242000</p>	 <p>WABCO Japan Inc Gate City Ohsaki W. Tower 2F, 1-11-1, Osaki, Shinagawa-ku, Tokyo 141-0032 Japan T: +81 3 5435 5711</p>	 <p>WABCO Korea Ltd 23, Cheongbuksandan-ro, Cheongbuk-eup Pyongtaek-si Gyeonggi-do, 17792 Korea T: +82 31 680 3707</p>
 <p>WABCO Asia Private Ltd 25 International Business Park #03-68/69 German Centre 609916 Singapore T: +65 6562 9119</p>	 <p>WABCO Automotive SA 10 Sunrock Close Sunnyrock Ext 2, Germison 1401 PO Box 4590, Edenvale 1610 South Africa T: +27 11 450 2052</p>	 <p>WABCO Middle East and Africa FZCO Vehicle Control System DWC Business Park, Building A3, Room NO: 115, PO Box 61231, Dubai United Arab Emirates E-mail: info.dubai@wabco-auto.com</p>



WABCO
a **WORLD** of
DIFFERENCE

WABCO (NYSE: WBC) is a leading global supplier of technologies and services that improve the safety, efficiency and connectivity of commercial vehicles. Originating from the Westinghouse Air Brake Company founded nearly 150 years ago, WABCO continues to pioneer breakthrough innovations to enable autonomous driving in the commercial vehicle industry. Today, leading truck, bus and trailer brands worldwide rely on WABCO's differentiating technologies, including advanced

driver assistance, braking, steering and stability control systems. Powered by its vision for accident-free driving and greener transportation solutions, WABCO is also at the forefront of advanced fleet management systems that contribute to commercial fleet efficiency. In 2017, WABCO reported sales of \$3.3 billion. and has nearly 15,000 employees in 40 countries. For more information, visit

www.wabco-auto.com