Access to Diagnostic Software for Independent Non LDV Workshops

This document has been issued by LDV Australia in August 2024 and is subject to an annual review. Prices and the process outlined below are subject to change.

To comply the Motor Vehicle Service and Repair Information Sharing Scheme, Act 2021, LDV Automotive would like to provide the information below for the supply of diagnostic software to Independents Workshops / Mechanics (hence forth refer to as Independants).

The following outlines the inclusions covered for Independents when purchasing the diagnostic software, the Independent's installation requirements, LDV Automotive Australia requirements and LDV Dealer requirements.

INCLUSION

When requiring the diagnostic software, Independent's must purchase from an autheroised LDV Dealership the Vehicle Diagnostic Instrument Kit (VDI) – part number C00309498-KIT and Grade X license – part number C00082069 from an LDV Dealer Parts Department. They also gain access to:

1. LDV970 - LDV Diagnostic Software Welcome Letter (Appendix A)
2. Grade X Installation Guide (Appendix B).
3. Grade X Introduction Manual (Appendix C).
4. VDI User Manual (Appendix D).
5. High-level Technical Support / License Activation facilitated by LDV Australia.

Please note: The Grade X and VDI Software is supported on Windows based laptops.

PRICING

To comply with AASRA regulations, pricing for the VDI and Grade License X is advertised to their members. Pricing is as follows:

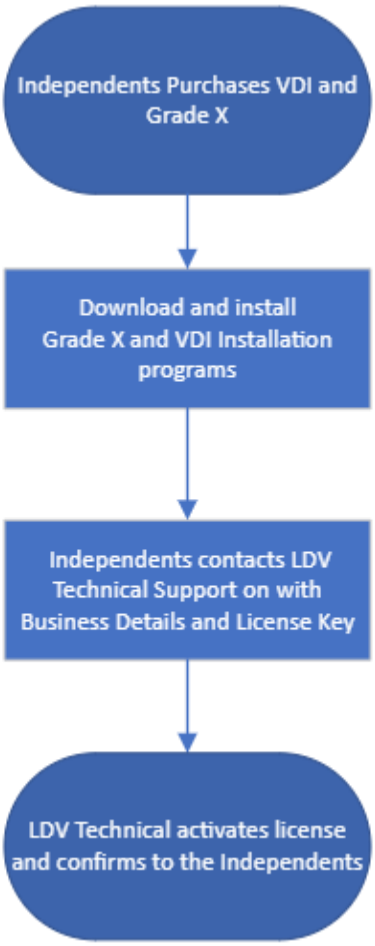
Part Description	Part Number	Purchase Price
VEHICLE DIAGNOSTIC INSTRUMENT	C00309498-KIT	$7,109.33
GRADE X EXTRA LICENCE	C00082069	$1,200.00

Note: The Purchse Price as provided to AASRA is ex GST. Prices are subject to review.

2A Hill Road, Lidcombe NSW 2141
PO Box 7517 Silverwater NSW 1811
Phone: +61 2 8577 8000 Fax: +61 2 8577 8199
ABN 34 000 486 706

PROCESS FOR SUPPLYING DIAGNOSTIC SOFTWARE

The following process to be completed to download, install and active the diagnostic software on the Independent's laptop.



Independents will be guided to an LDV Dealer by AASRA to purchase the Grade X License and VDI based on the supplied pricing.

After Purchasing, Independent's will receive the VDI (physical component), and the LDV Diagnostic Software Welcome Letter which will guide them to the link via a QR code to access and download the required installer programs.

Independent's must follow the instructions on the Grade X Installation Guide to install the software and retrieve the License Key. The Grade X License Key, along with a copy of the Dealer tax invoices confirming the purchase plus the Independent's business details must be sent to techldv@ateco.com.au

Once the purchase of the Grade X license has been confirmed, LDV Australia will activate the license and respond to the Independent with written confirmation via email.

- A copy of the tax invoice provided by the LDV Dealer confirming the purchase of the VDI and Grade X License.
- The Independents business name, matching that detailed on the LDV Dealer tax invoice.

Device and license pricing is exclusive of GST and is subject to regular pricing review. The VDI is a physical component supplied by an LDV Dealer and there for subject to warranty. Warranty coverage is for 12 months from the date of purchase for manufacturing defects.

Regards,

LDV Technical Support
LDV Automotive Australia

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PO Box 7517 Silverwater NSW 1811
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ABN 34 000 486 706

ATECO GROUP

Appendix A

Congratulations with the purchase of your LDV Grade X scan tool and license!

The QR code below will give you access to the Grade X software and VDI iii scan tool user guide as well as downloads for the VCI Manager.

It's important you take the time to read through these documents prior to using the diagnostic tool and Grade X software.

Please be aware the reflash and configuration features incorporated with this software are only intended for certified LDV Dealers. Use of this feature without correct training and knowledge may result in vehicle becoming inoperative

Basic steps to follow once you click on the QR code:

1. Read through all the material
2. Download Grade X software from the SAIC portal
3. Download VCI Manager from the SAIC portal
4. Follow the prompts to activate the license
5. Once you have a hardware key- email this along with your business name and copy of the tax invoice confirming the license purchase to Techldv@ateco.com.au.

Once the software purchase has been verified, the license will be activated and a reply confirmation email will be sent.

Ateco Group ABN 34 000 486 706
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PO Box 7517, Silverwater NSW 1811 Australia
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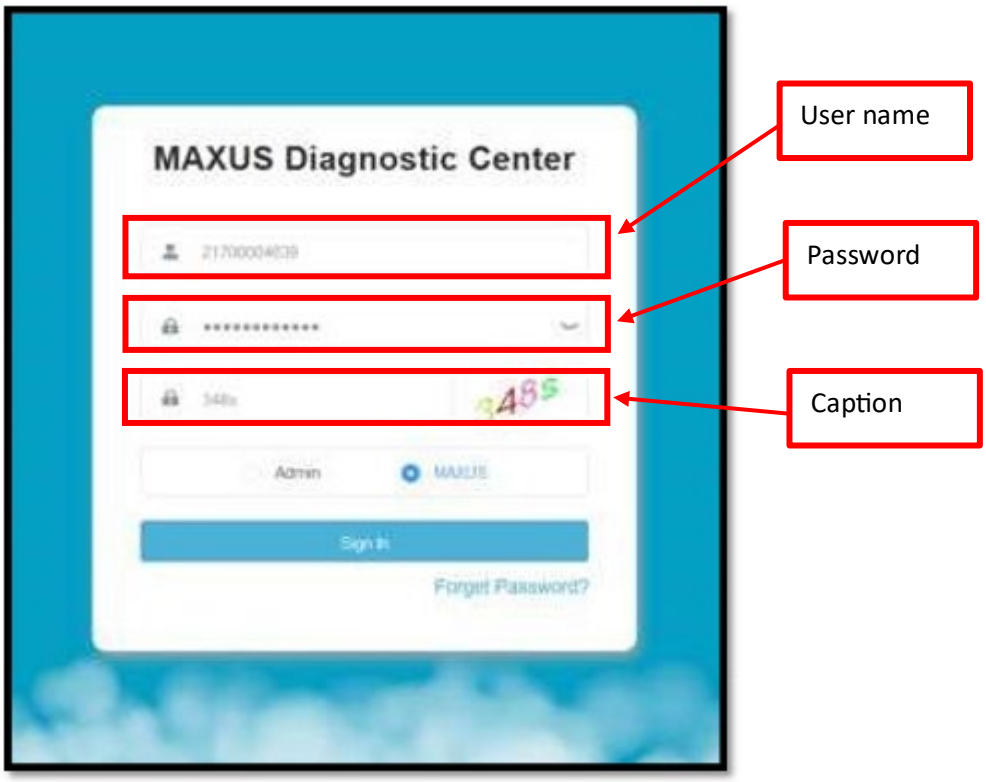
www.ateco.com.au

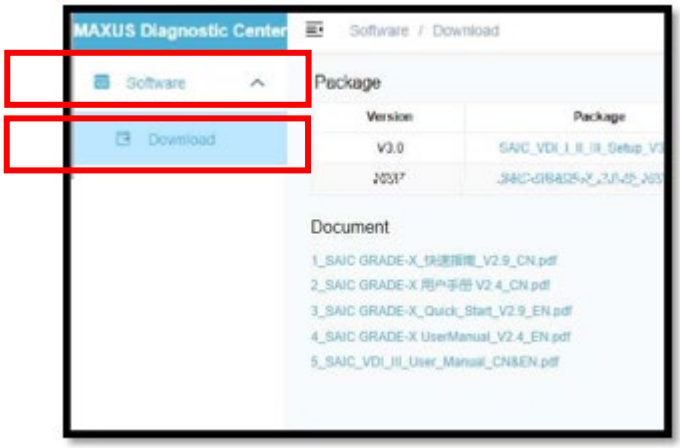
1. Go to the following website address: https://gradex.saicmaxus.com/#/login

2. Enter the following login details:

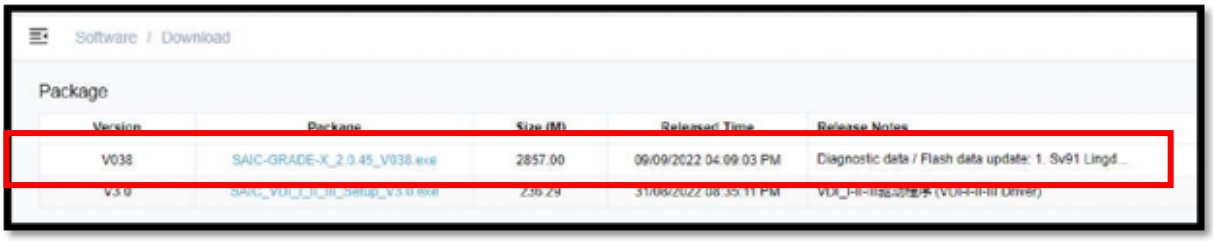
   Username: 21700004694
   Password: Ateco@max22



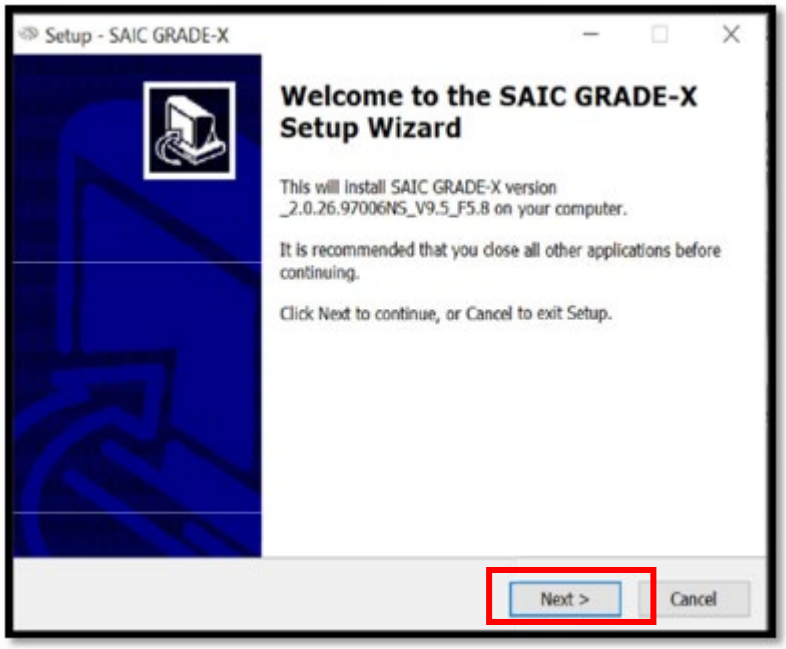
3. Once logged in successfully, click on the “Software” tab at the top left-hand side of the page.



4. On the download screen, under the ‘Package’ header, choose latest available version. The example below shows ‘SAICGRADE-X_2.0.45_V038.exe’ as the latest version available.



5. Download the software to a location on your computer where it can easily be found. Once downloaded, click ‘Run’. Below installation wizard will open, once open, click ‘Next’:



Note: Please ensure that the VDI software: SAIC_VDI_I_II_III_Setup_V3.0.exe is downloaded and installed.

6. When the installation is complete, ensure you have a good, stable internet connection and run the SAIC Grade X software.

7. Before entering login details, record the Licence Key (shown in third box as highlighted in RED below) and email to techldv@ateco.com.au with your business name as the subject line of the email. Ensure that you attach a copy of the LDV Dealer tax invoice showing the purchase of the Grade X license.

NOTE: License Key is locked to the device and CANNOT be used on other devices.

10. After receiving the reply confirmation that the license is now active, enter Username and Password:

Username: 21700004694
Password: Ateco@max22

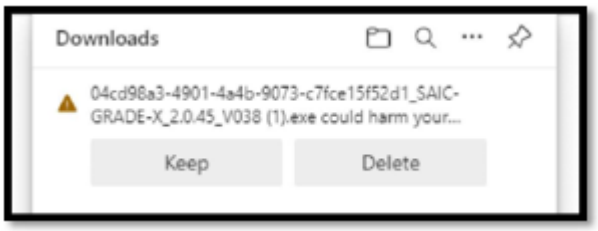
11. Once Username and password have been entered, click on ‘Confirm’. Message will appear on screen “License Activated”.

12. Your Grade X should now be configured and ready to use.

TROUBLESHOOTING

Confirm that Microsoft Edge, Firefox, or Google Chrome are being used to attempt download. If not, please use one of these browsers to perform download – Microsoft Edge is the browser recommended by SAIC.

Some web browsers and anti-virus software may try and block the download due to the file being an .exe file. If an error message is shown as per below example (Microsoft Edge), click on ‘Keep’:



It may be necessary to go to your web browser settings to allow download permissions for the Grade X website.

If further assistance is required, please contact your local LDV Dealer or email:

techldv@ateco.com.au

Please ensure all license keys are emailed techldv@ateco.com.au using your business name as the subject line of the email, along with the tax invoice confirming the purchase of the software.

LDV Australia would like to take this opportunity to thank you for your assistance.

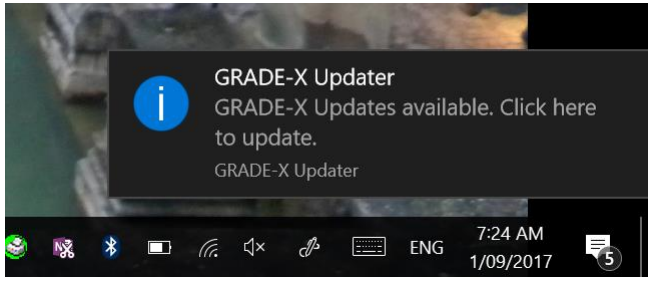
Kind Regards,

LDV Australia

Grade X
Introduction

Updating

1



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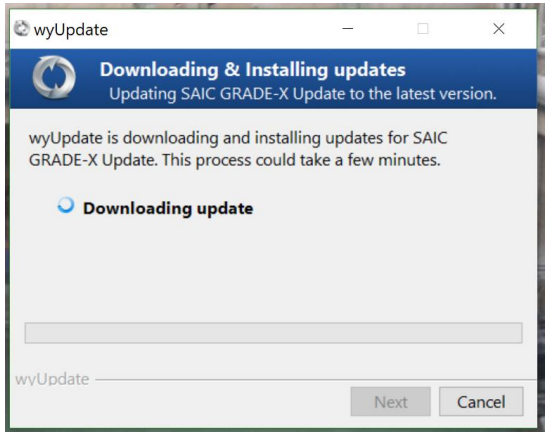

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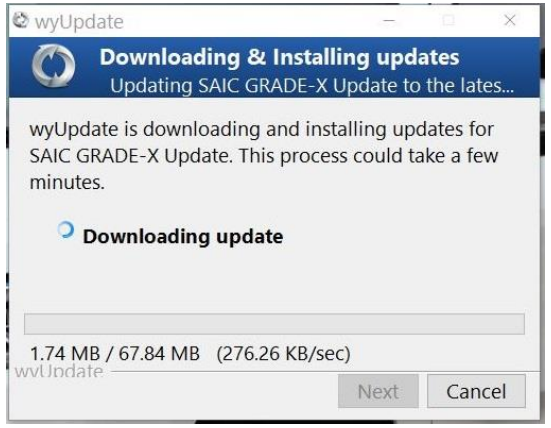

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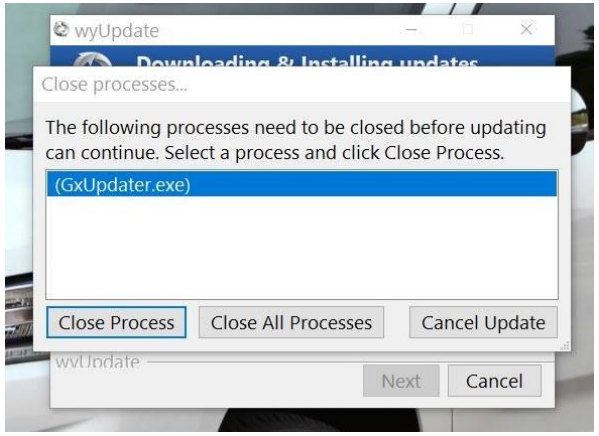

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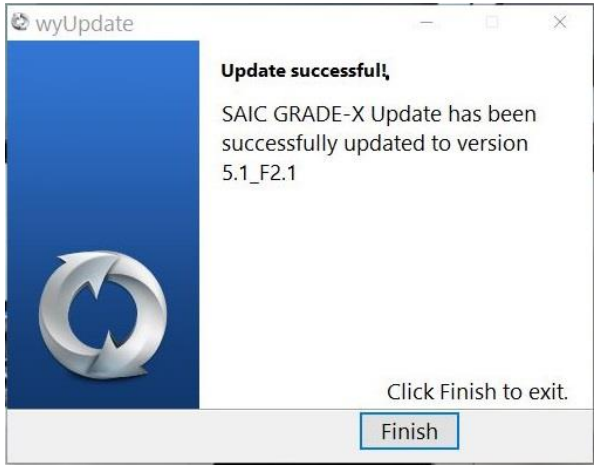
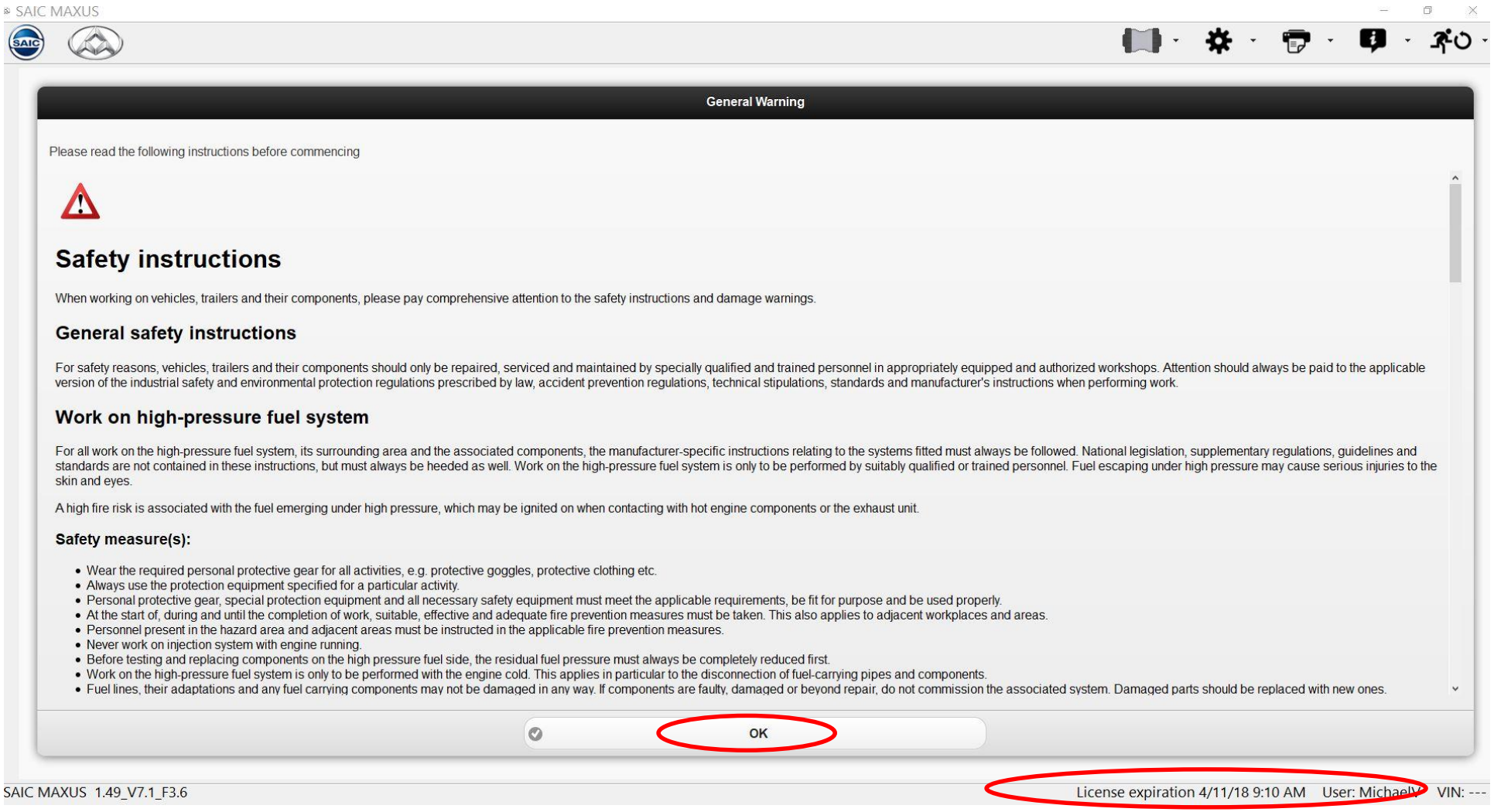


Safety Screen

This screen will load every time you start Grade X.

Click on "OK" at the bottom of the screen to continue.

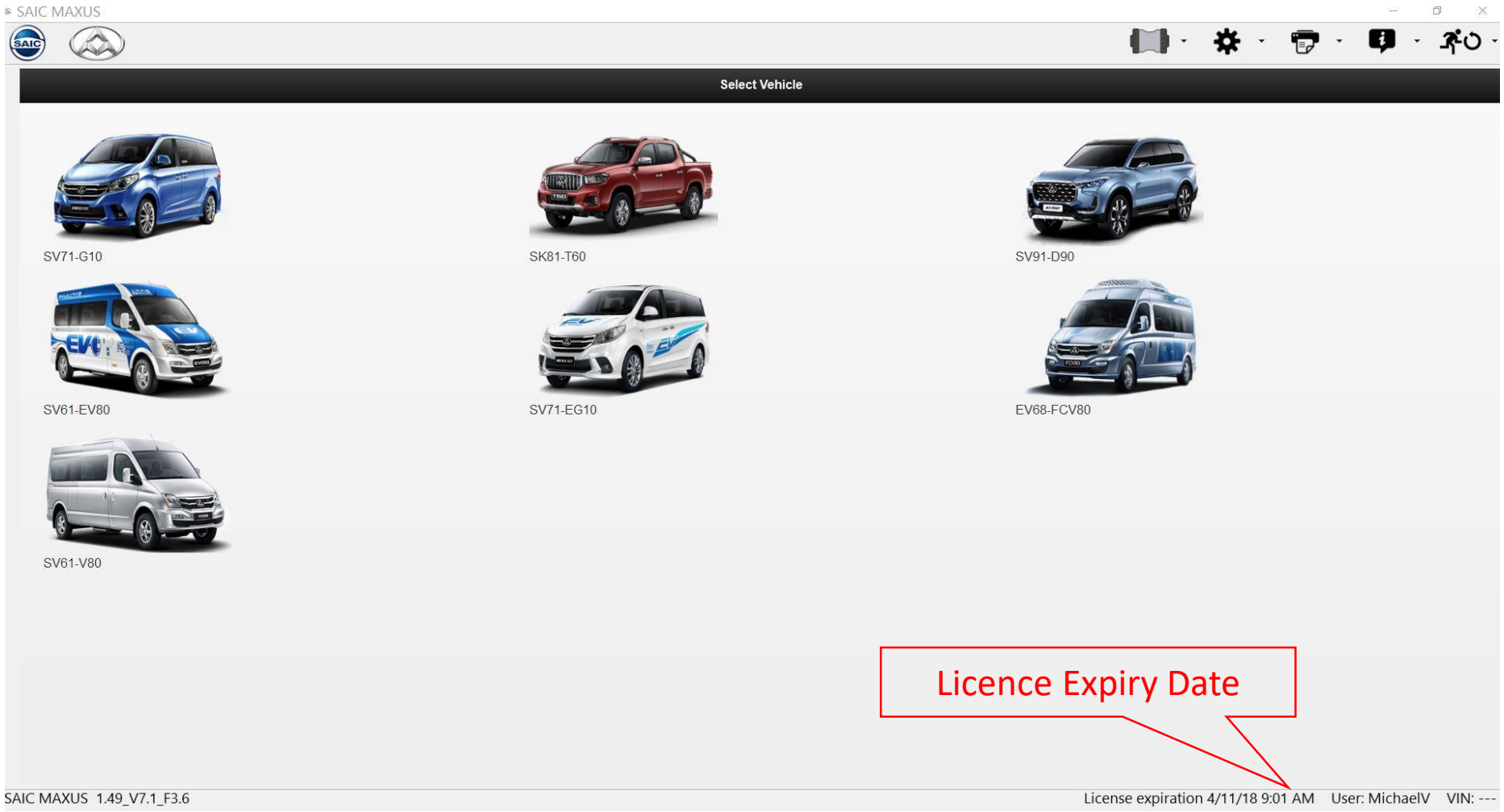
IMPORTANT
You MUST connect the Grade X tool to the internet every 7 days for Licence renewal and software updates. Failure to do so will result in the Grade X tool to stop functioning.



Vehicle Selection Screen

Click on the required vehicle to proceed.

NOTE: EV80, EG10 and FCV80 are not for the Australian market.



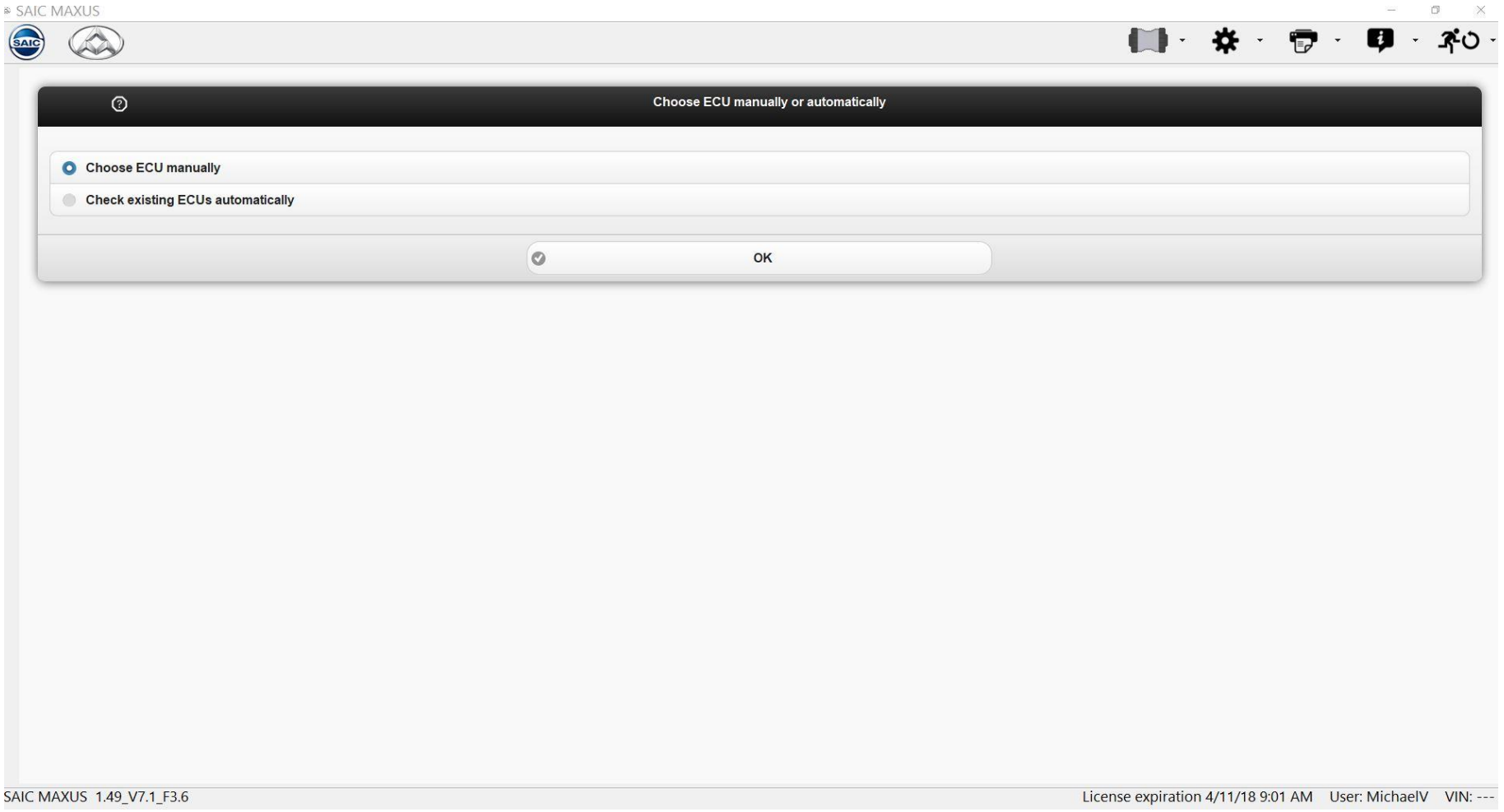
Current Version

Choosing which system you wish to communicate with

There are 2 options to pick.

1. Choose Specific Systems (Mainly used to play back recorded data when not connected to a vehicle.)
2. Choose ALL systems

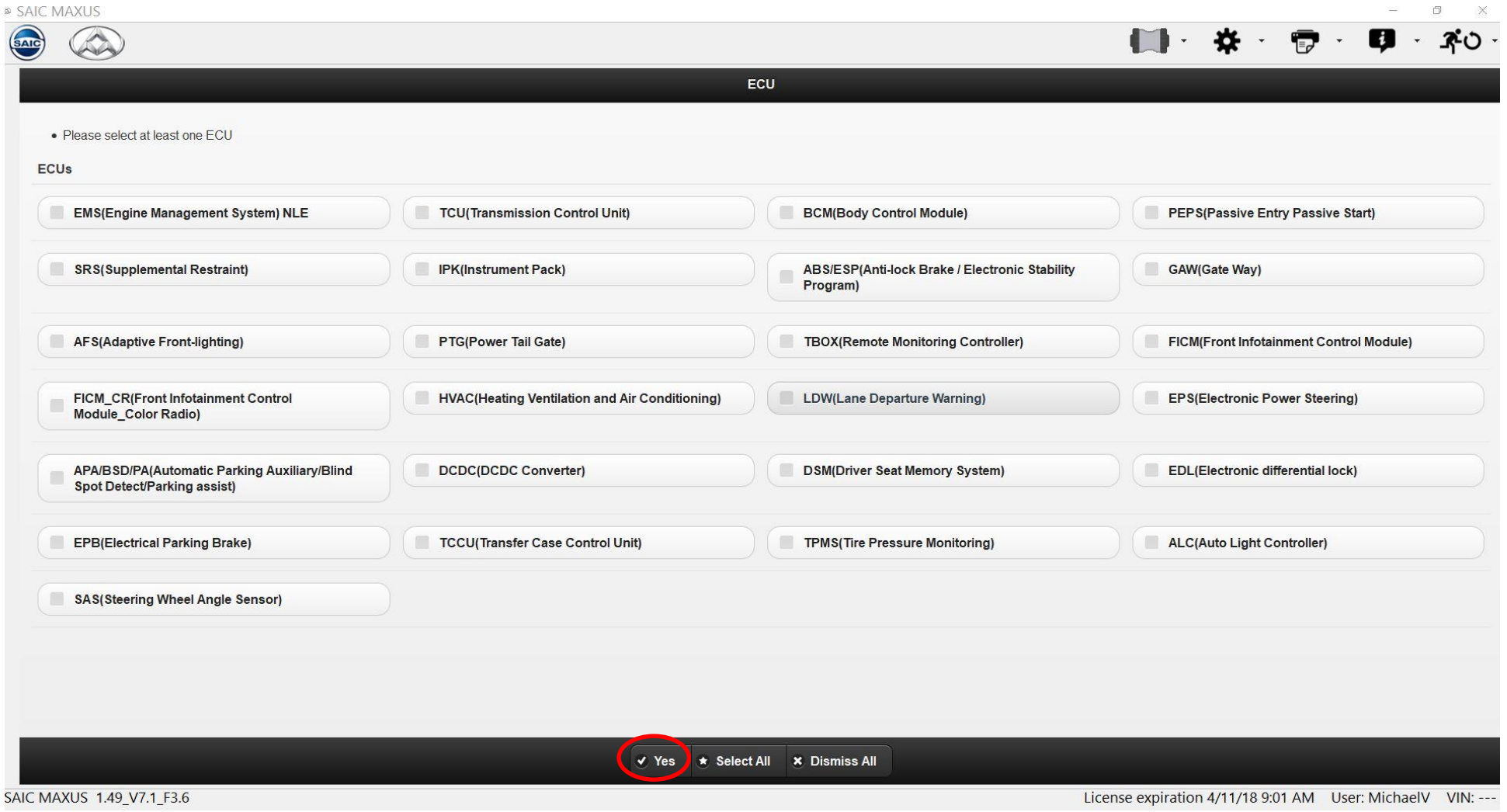
Click on your selection then select “OK”.



Choosing which system you wish to communicate with

Option 1. (Choose ECU Manually)

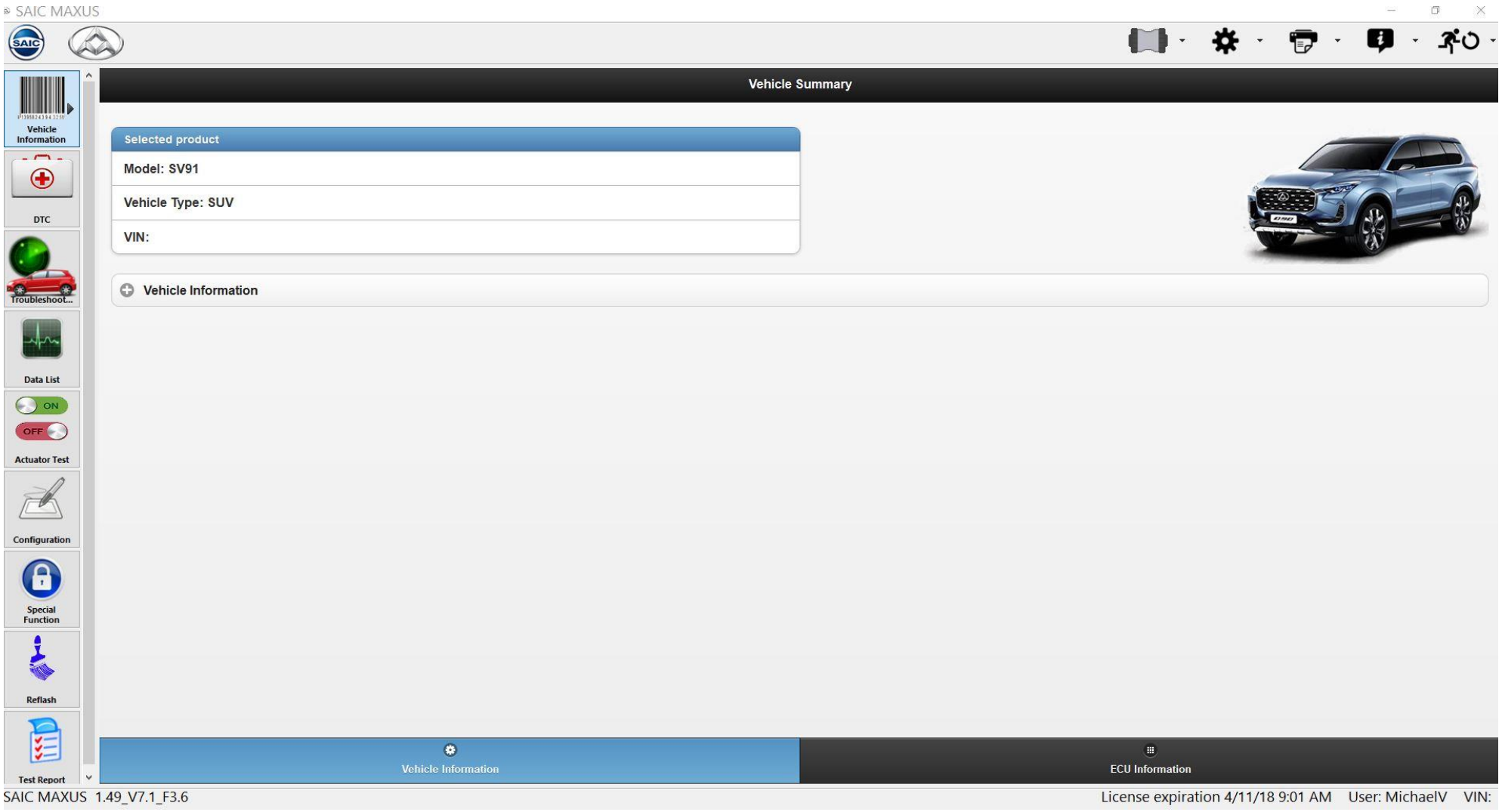
Select only the systems you wish to interrogate and then click on "Yes" at the bottom of the screen.



Choosing which system you wish to communicate with

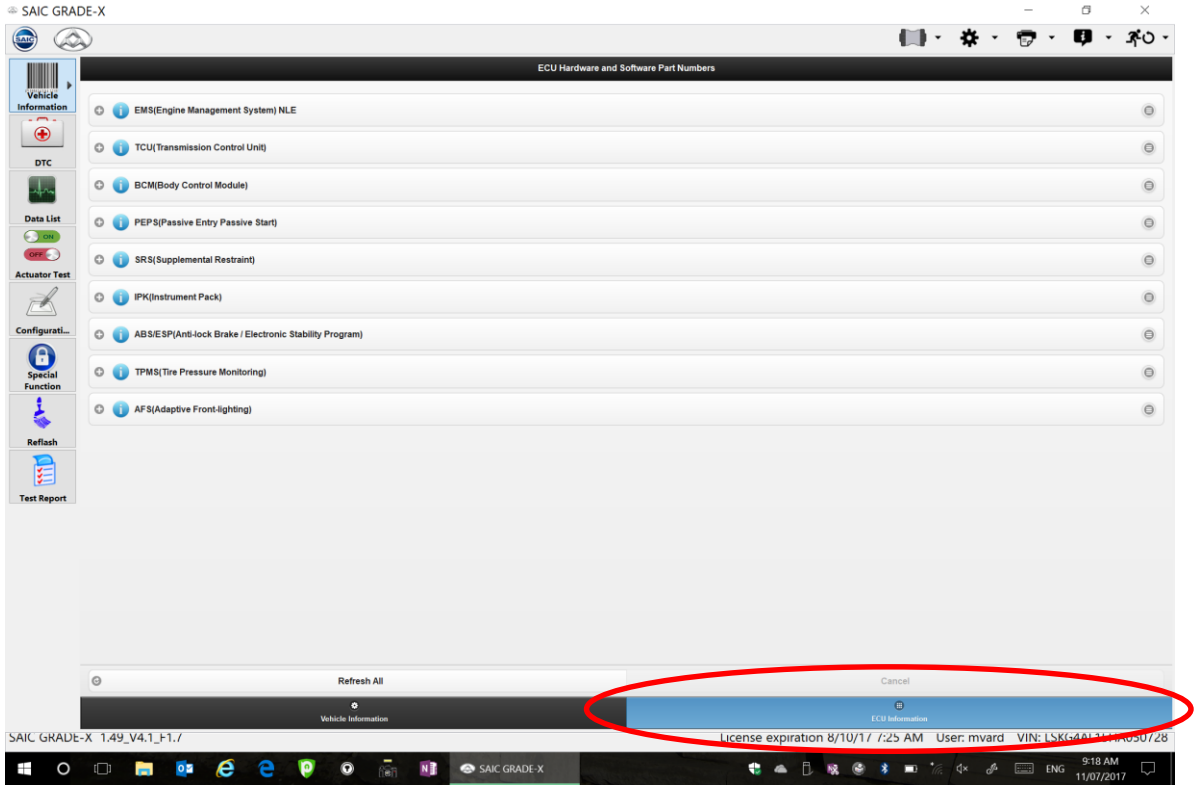
Option 2. (Check existing ECU's Automatically)

Selecting this option will result in communication with ALL modules. The result is pictured to the right.

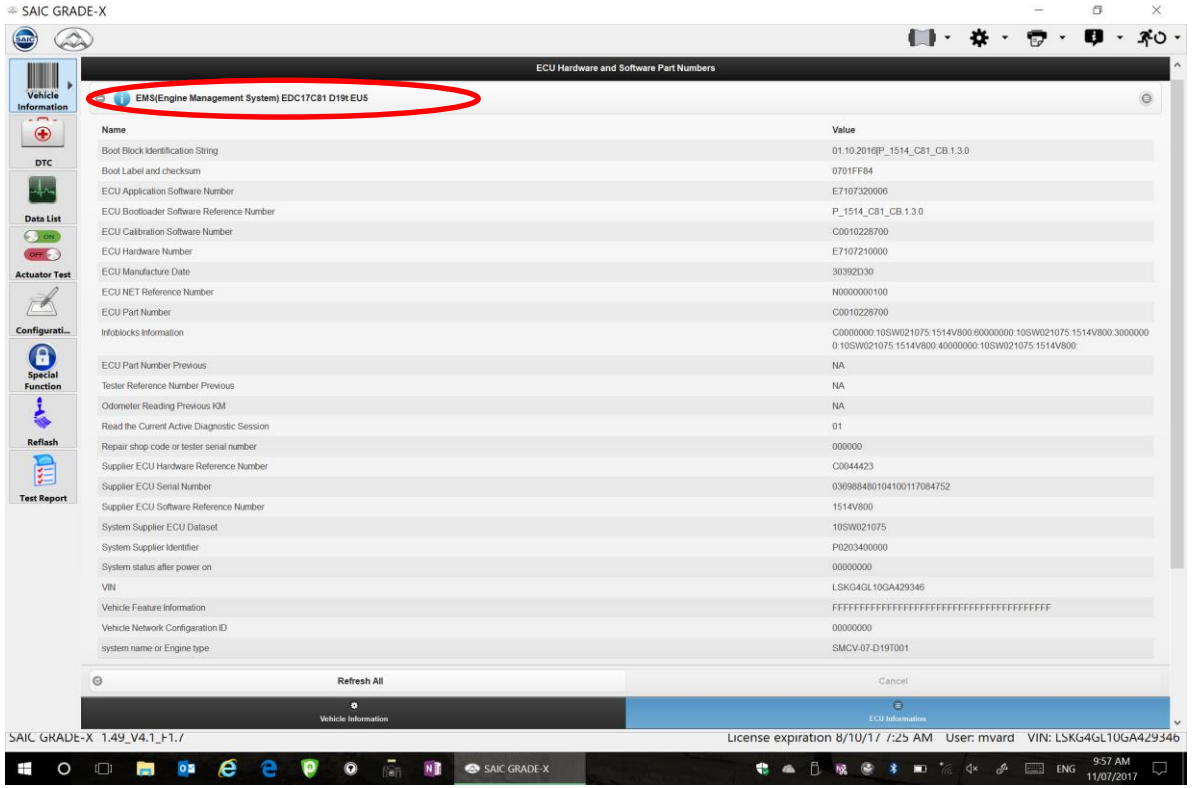


Choosing which system you wish to communicate with

Clicking on ECU Information at the bottom of the screen will bring up a list of all the modules.



Clicking on one of the systems will expand the option listing all the ECU part numbers, software Version Numbers, VIN, etc.



DTC

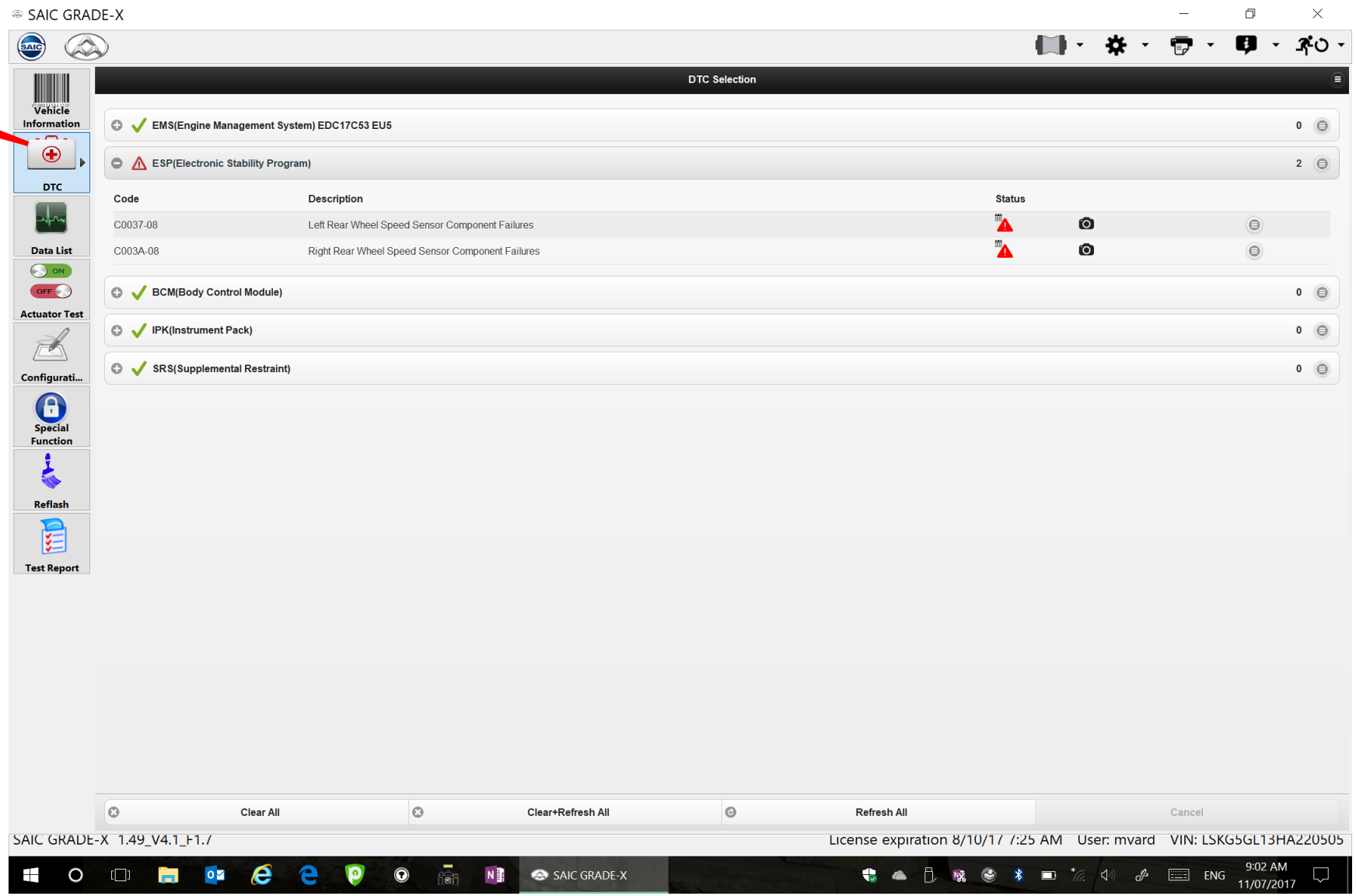
Select the DTC icon

The Grade X tool will cycle through all systems checking for DTC's.

If no DTC is found a Green Tick appears in front of the system.

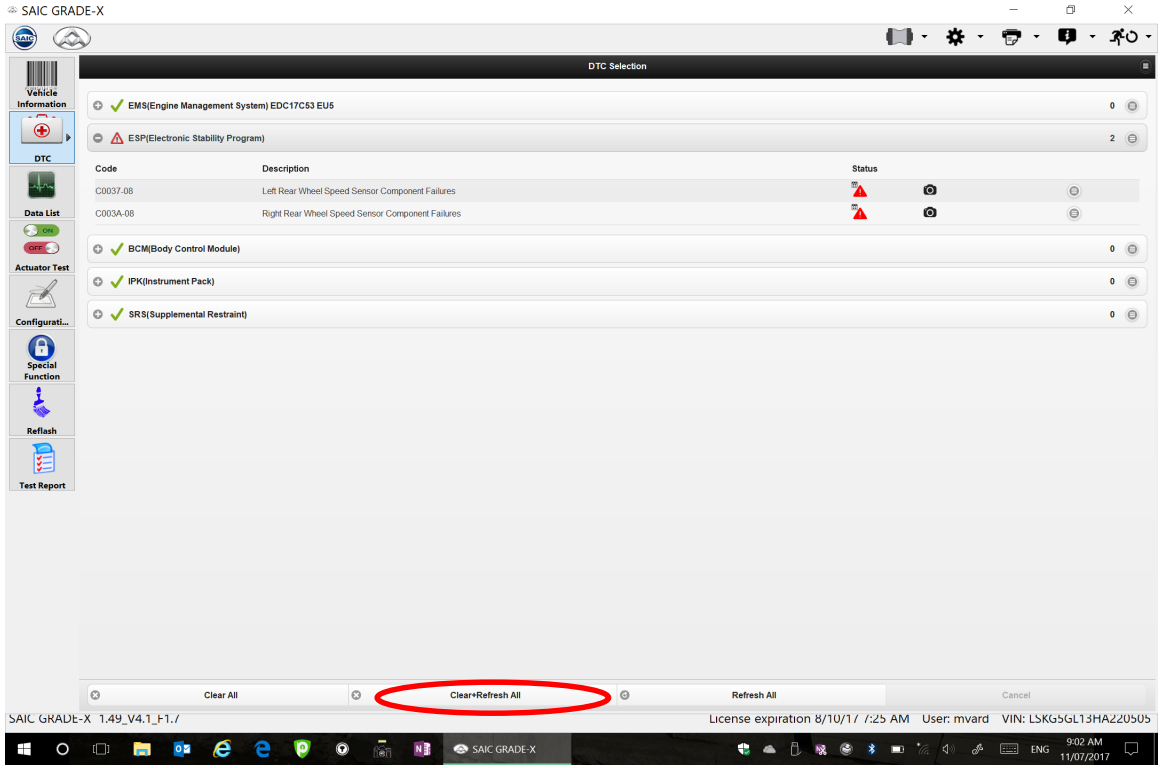
If a DTC is found a Red triangle appears in front of the system.

Click on the "+" to expand the system and list the codes.

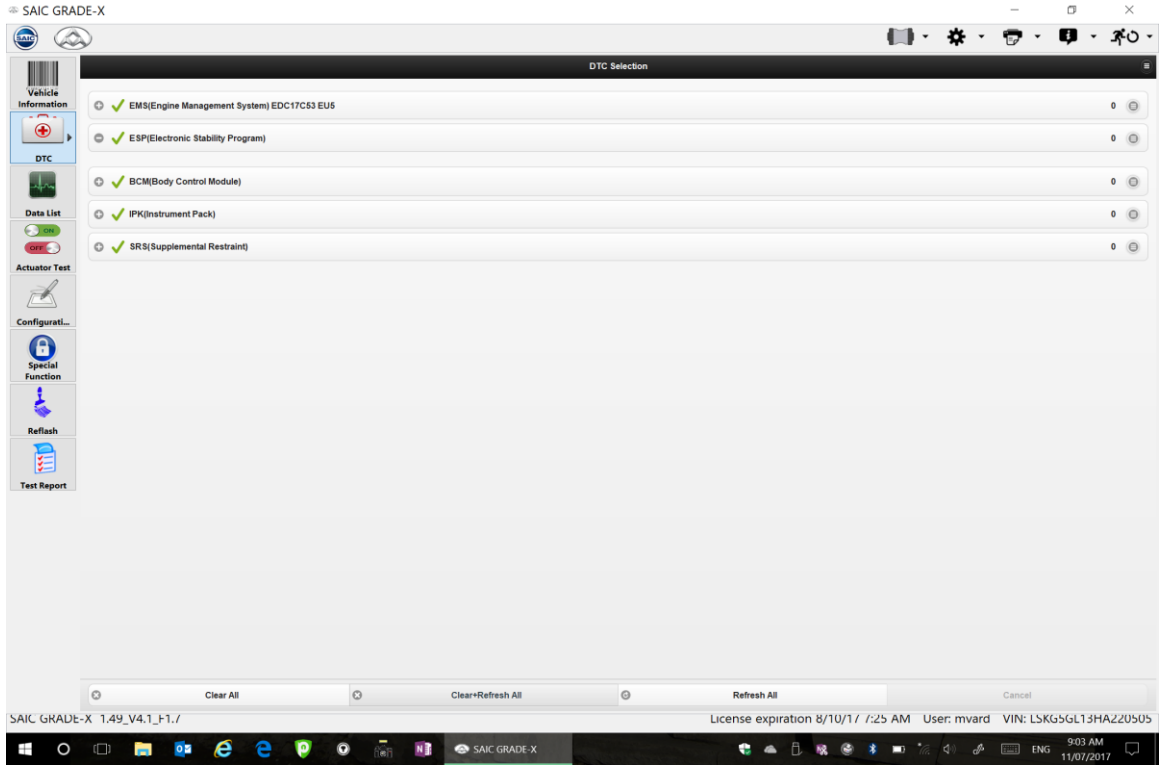


DTC

Click on Clear+Refresh in the bottom, middle of the screen to cycle through all systems one at a time in an attempt to clear the codes.

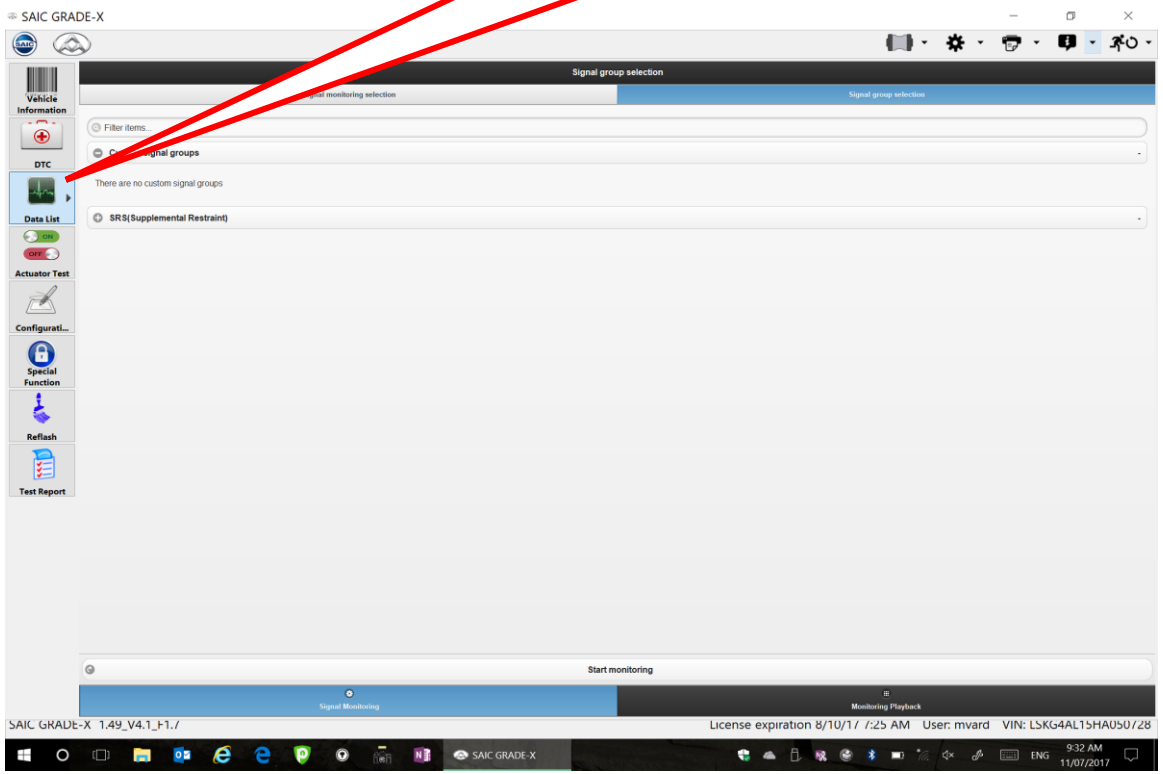


Codes all cleared

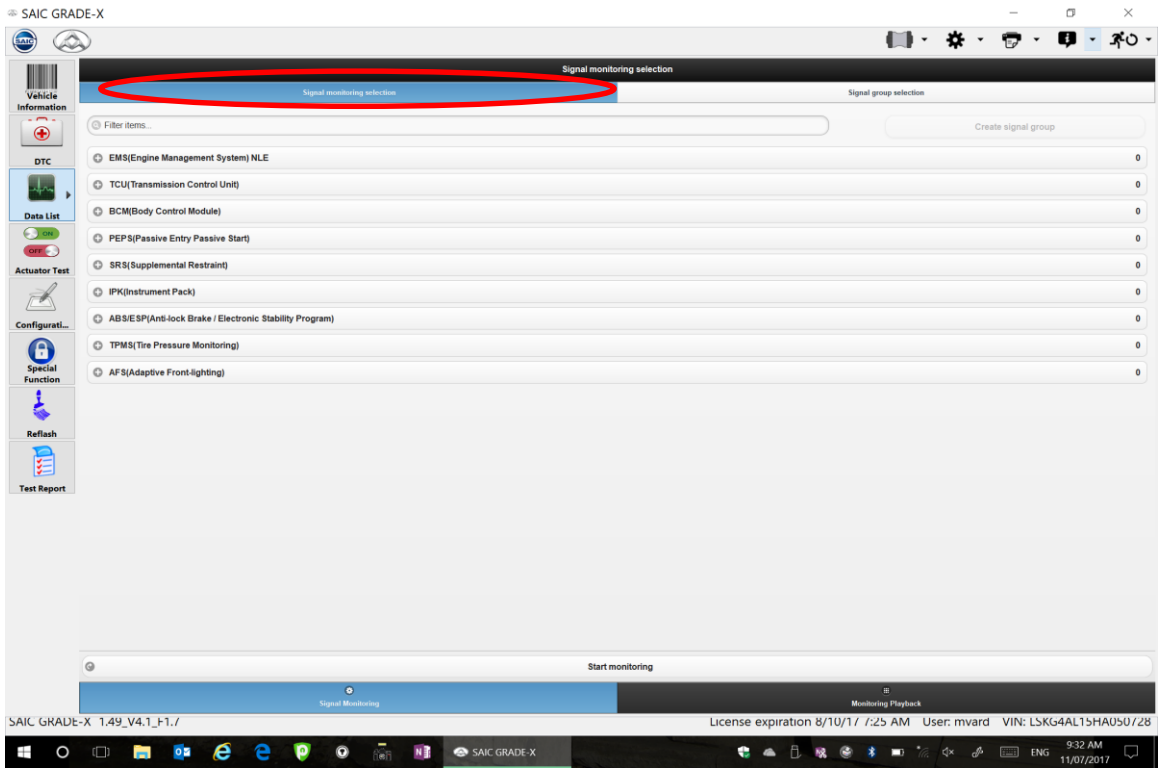


Data List (Monitoring)

Clicking on this icon will result in the screen below.

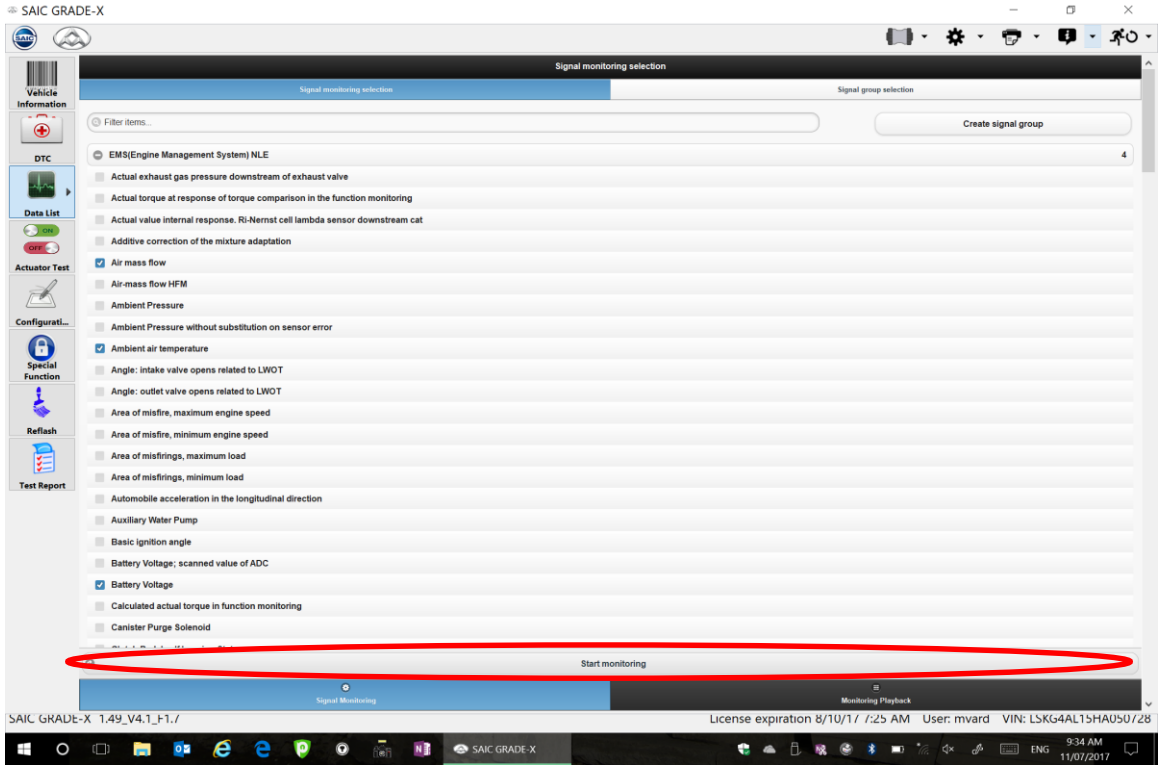


Clicking on "Signal monitoring selection will bring up a list of available systems

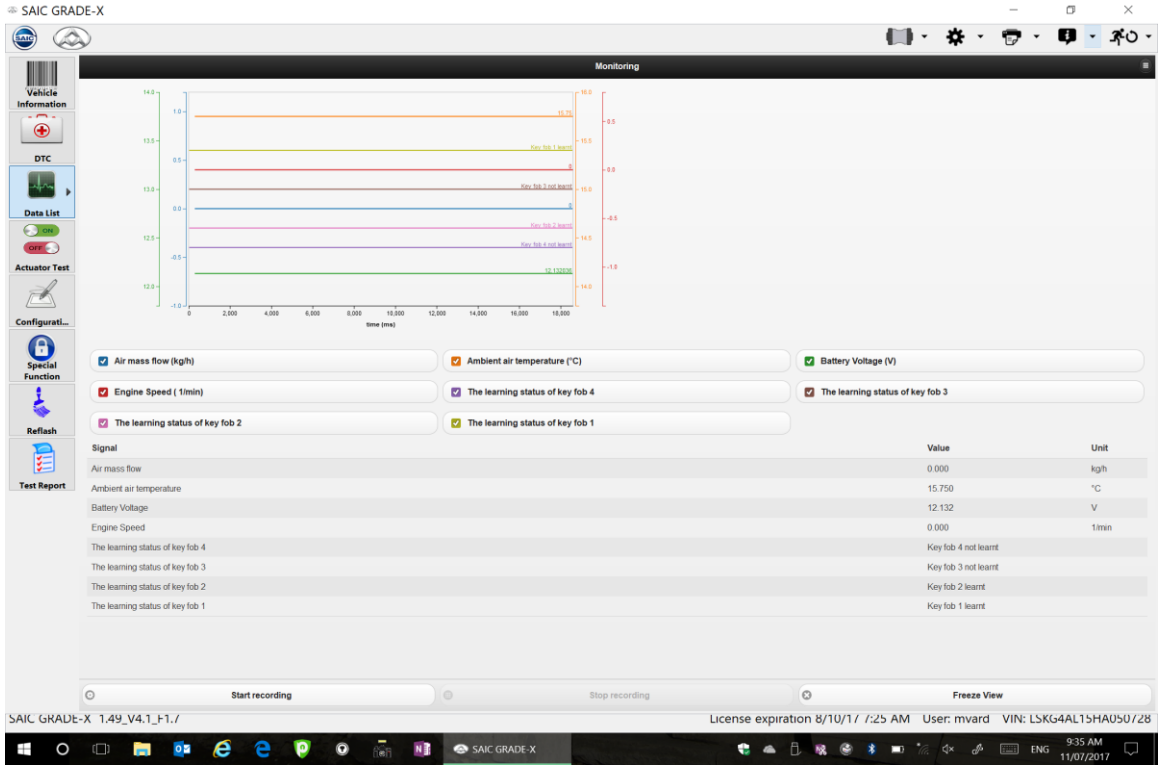


Data List (Monitoring)

Click on the System Required and select the options you want to monitor then click on "Start Monitoring" (Note: More than one system at a time can be monitored)

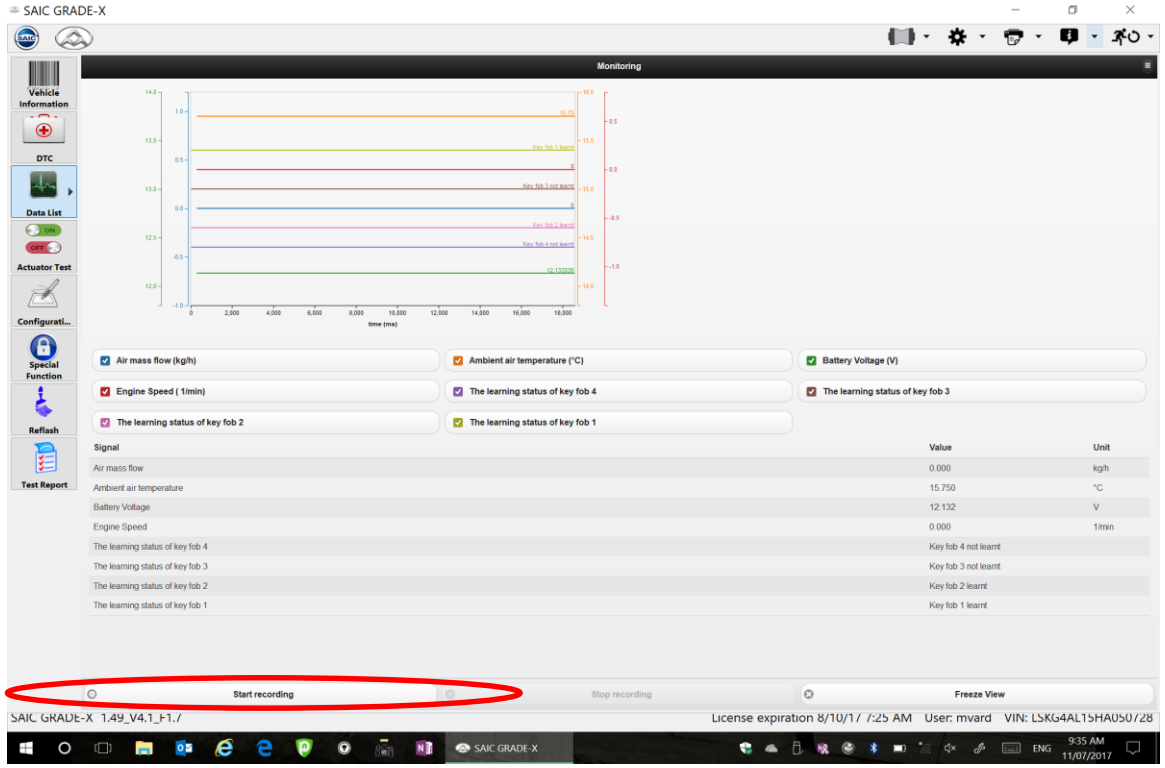


A line graph as well as the RAW data is displayed for the items requested. Unticking an item will remove it from the line graph but the RAW data will remain visible.

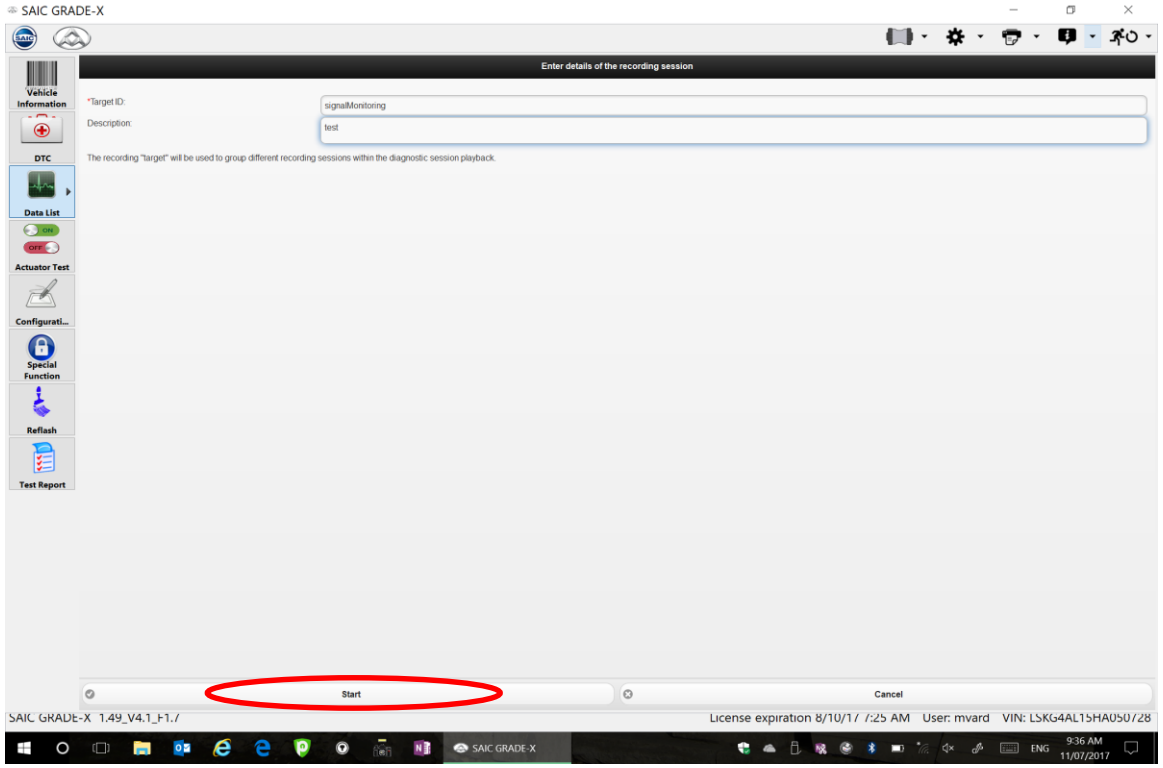


Data Recording

Click on “Start Recording” at the bottom of the screen.



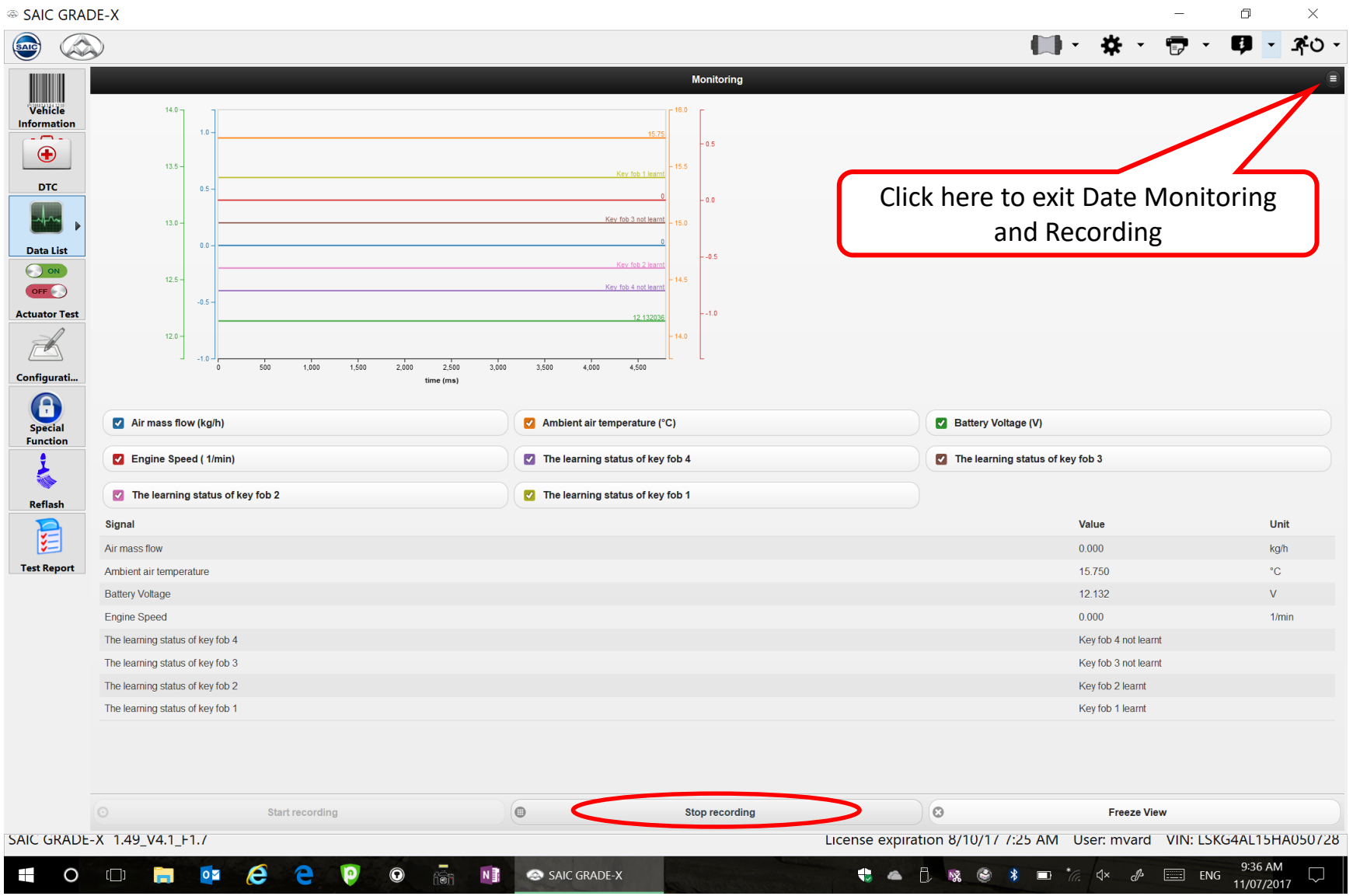
Enter a file name and Click on “Start”
Files are saved in C:\temp\GRADE-X_storage



Data Recording

Click on “Stop Recording” at the bottom of the screen when you are done.

Click on the icon under the running man icon to exit.



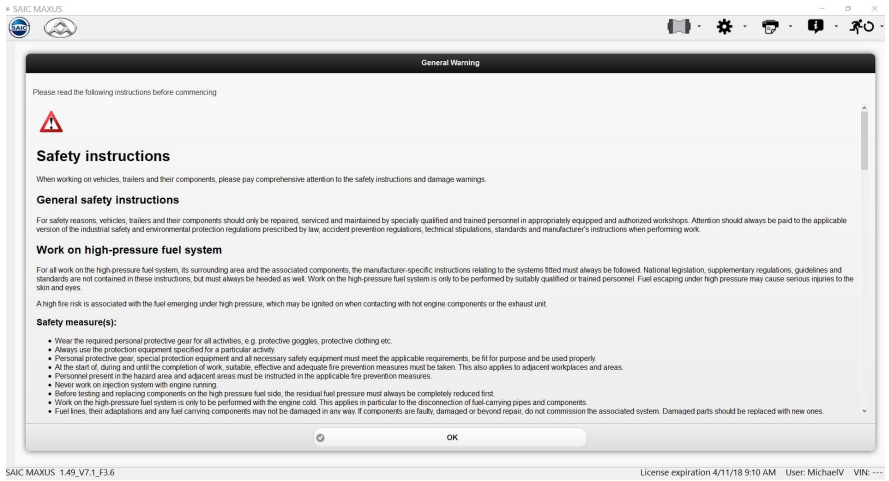
Data Recording Playback

Playback of recorded data is possible even when not connected to the vehicle.

Important: You must remember which vehicle and which system the data was recorded from.

1. Start Grade X
2. Select the Vehicle type
3. Select “Choose ECU Manually”
4. Select the system you wish to view.

1



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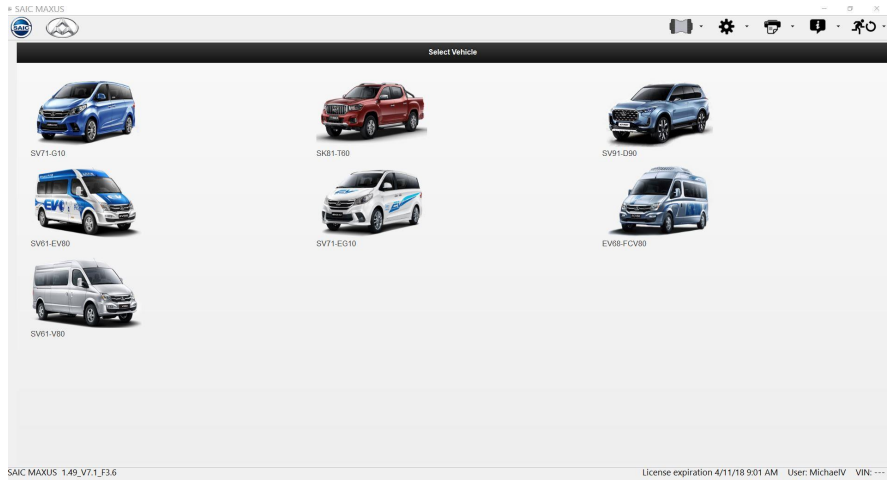

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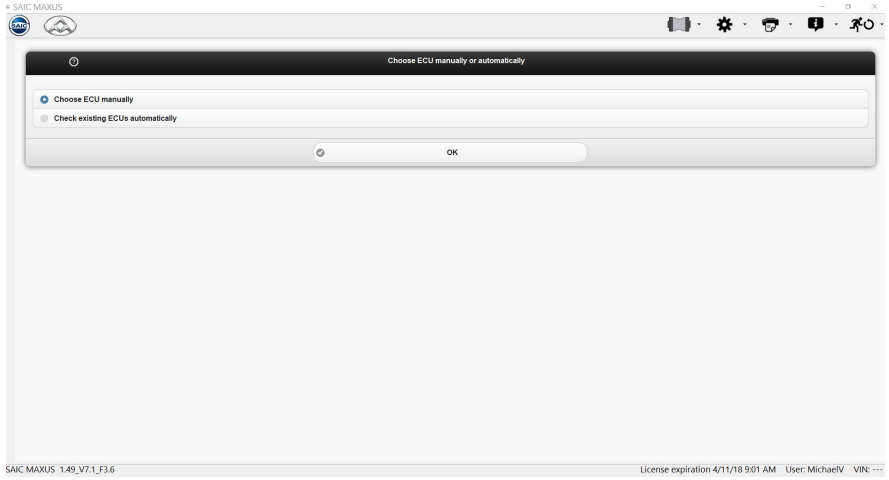
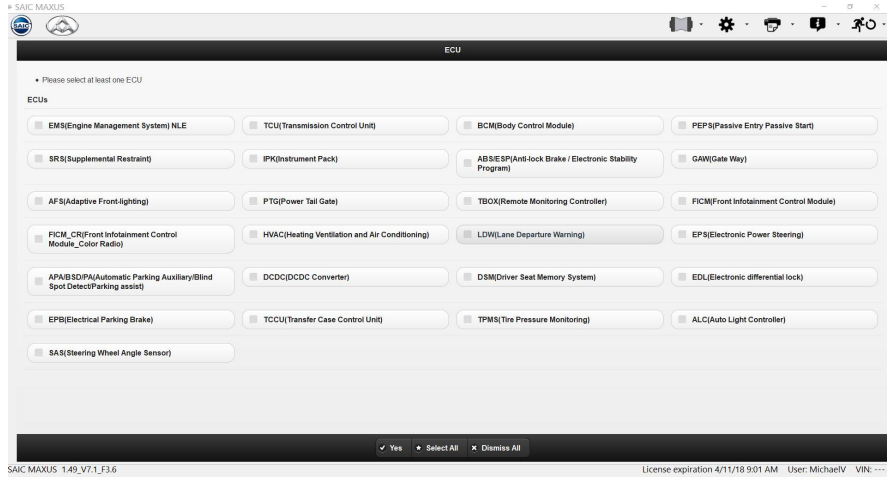


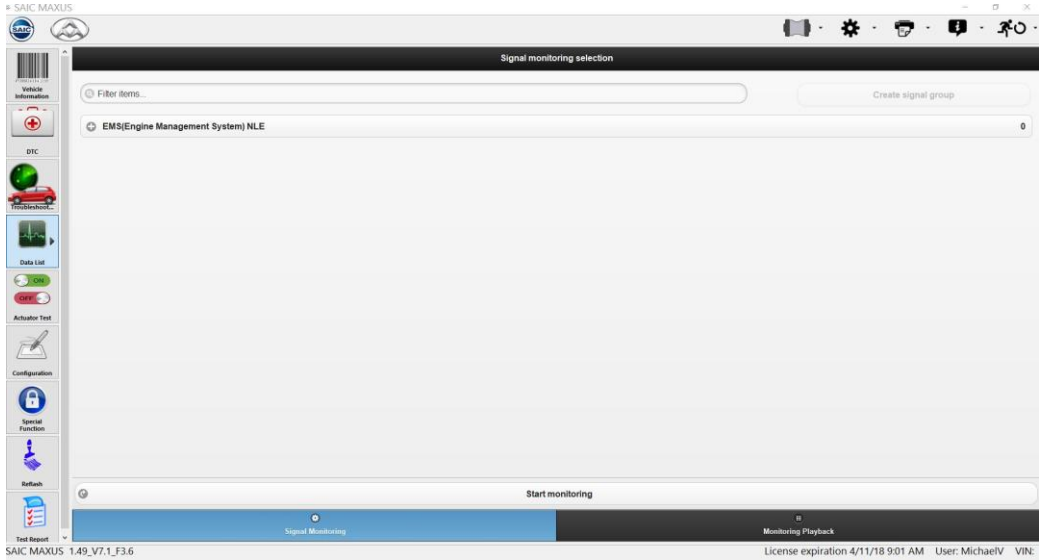
4



Data Recording Playback

5. Select "Data List"
6. Click on the "+" on EMS to list the recorded files.
7. Select the Data file you wish to view.
8. Click on the "Close button" when finished.

5 & 6



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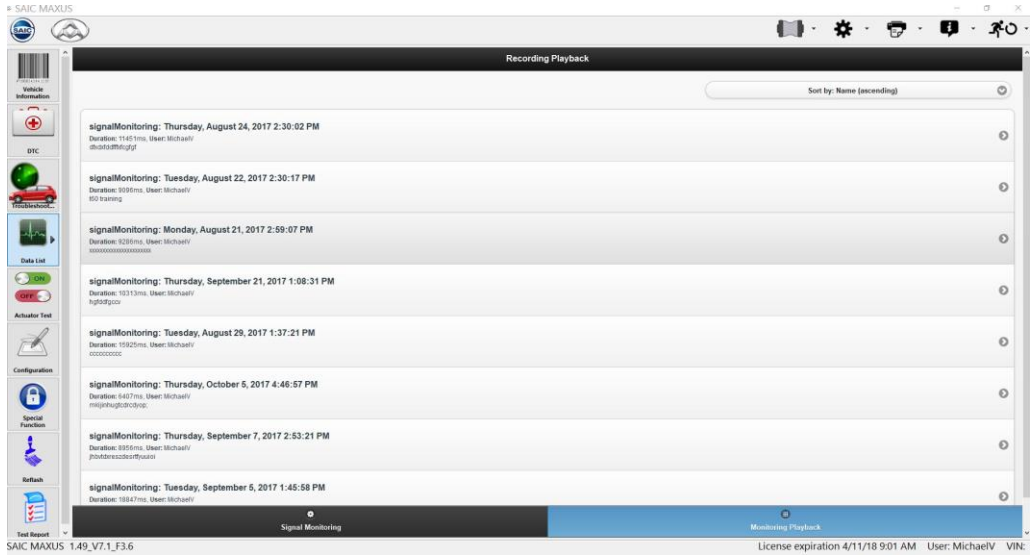


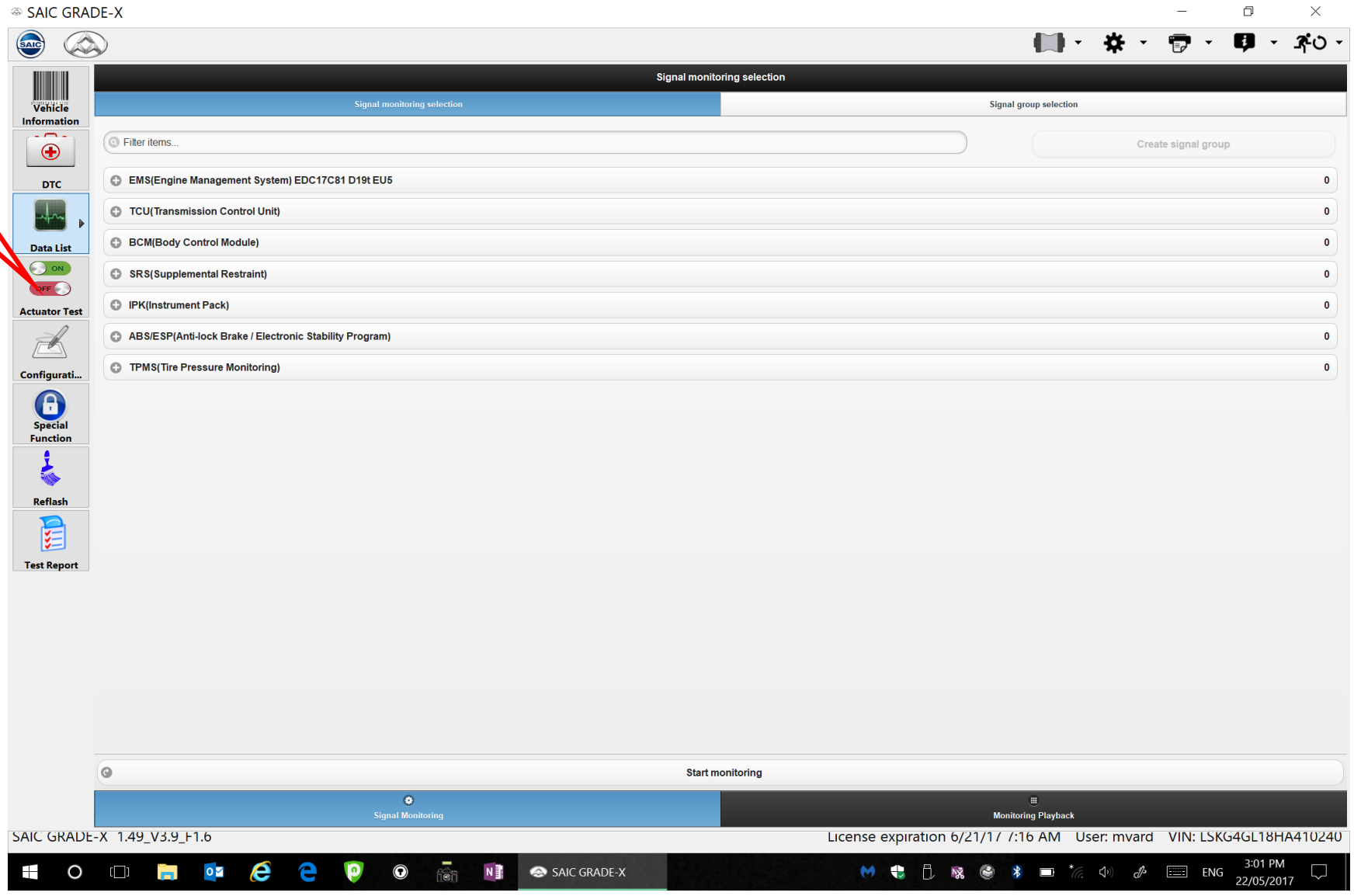
8

Actuator Test

Select the Actuator Test icon

A list of available systems will be visible.

Click on the system you wish to Test.



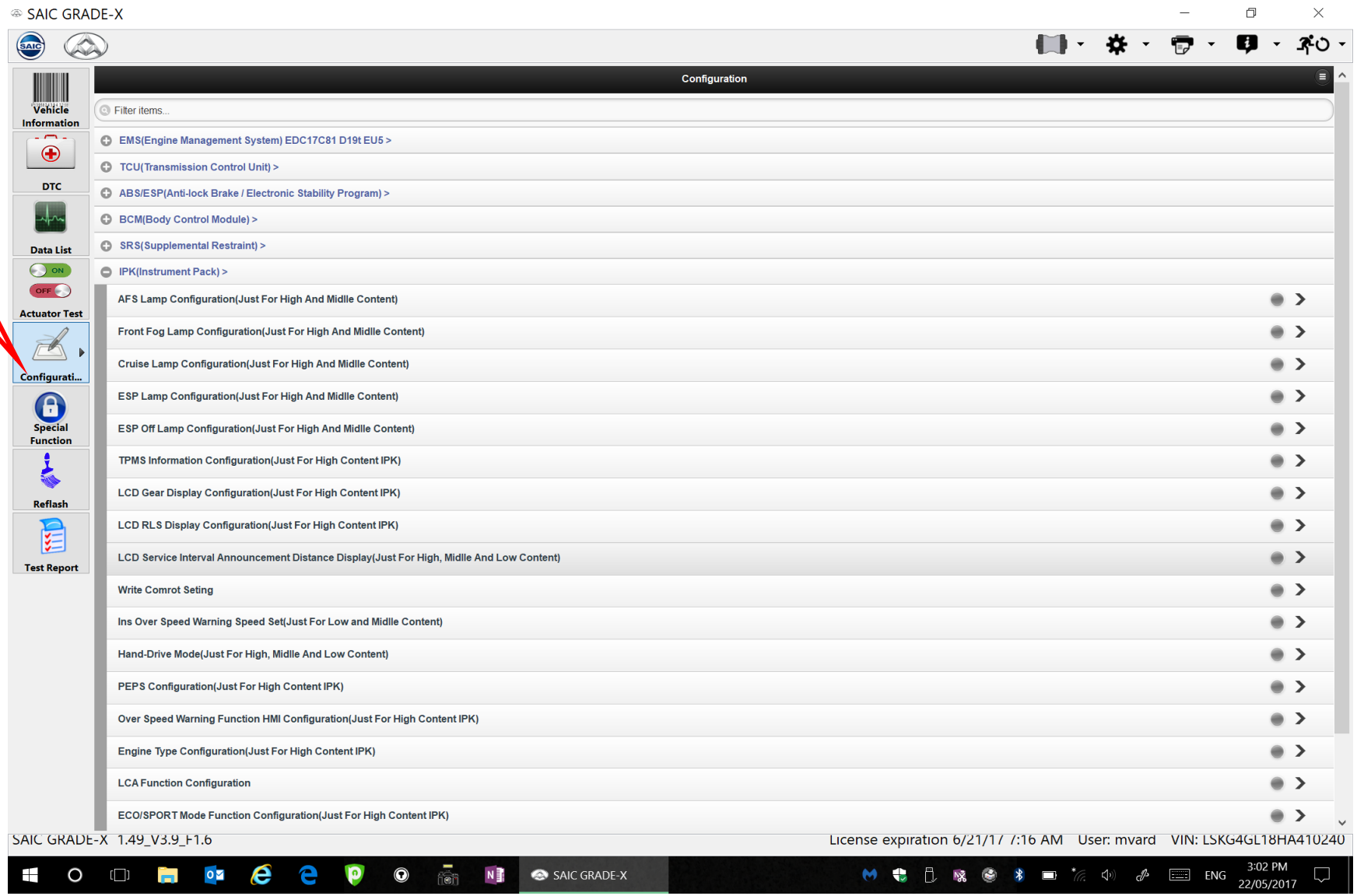
Configuration

Select the Configuration icon

A list of available systems will be visible.

Click on the system you wish to Configure.
A list of options will appear.

This where you would reset the Service Reminder on a G10, T60 and D90 under the IPK system.



Special Functions

Select the Special Functions icon

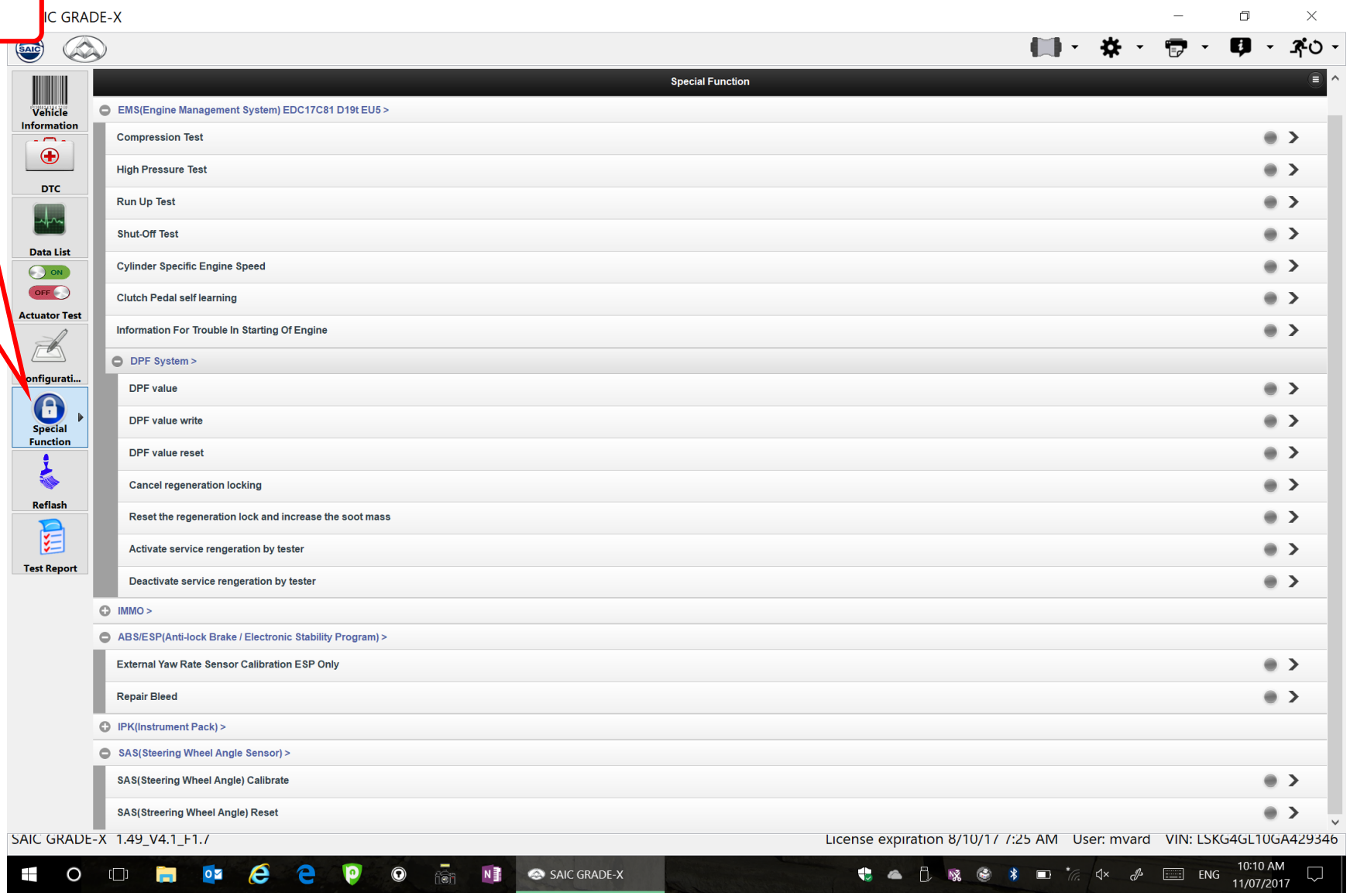
A list of available systems will be visible.

Click on the required system.

A list of options will appear.

Items done in this section include.

- Immobilizer and key coding
- Forced Regen on DPF
- Yaw and SAS sensor Calibrations
- Clutch self learning

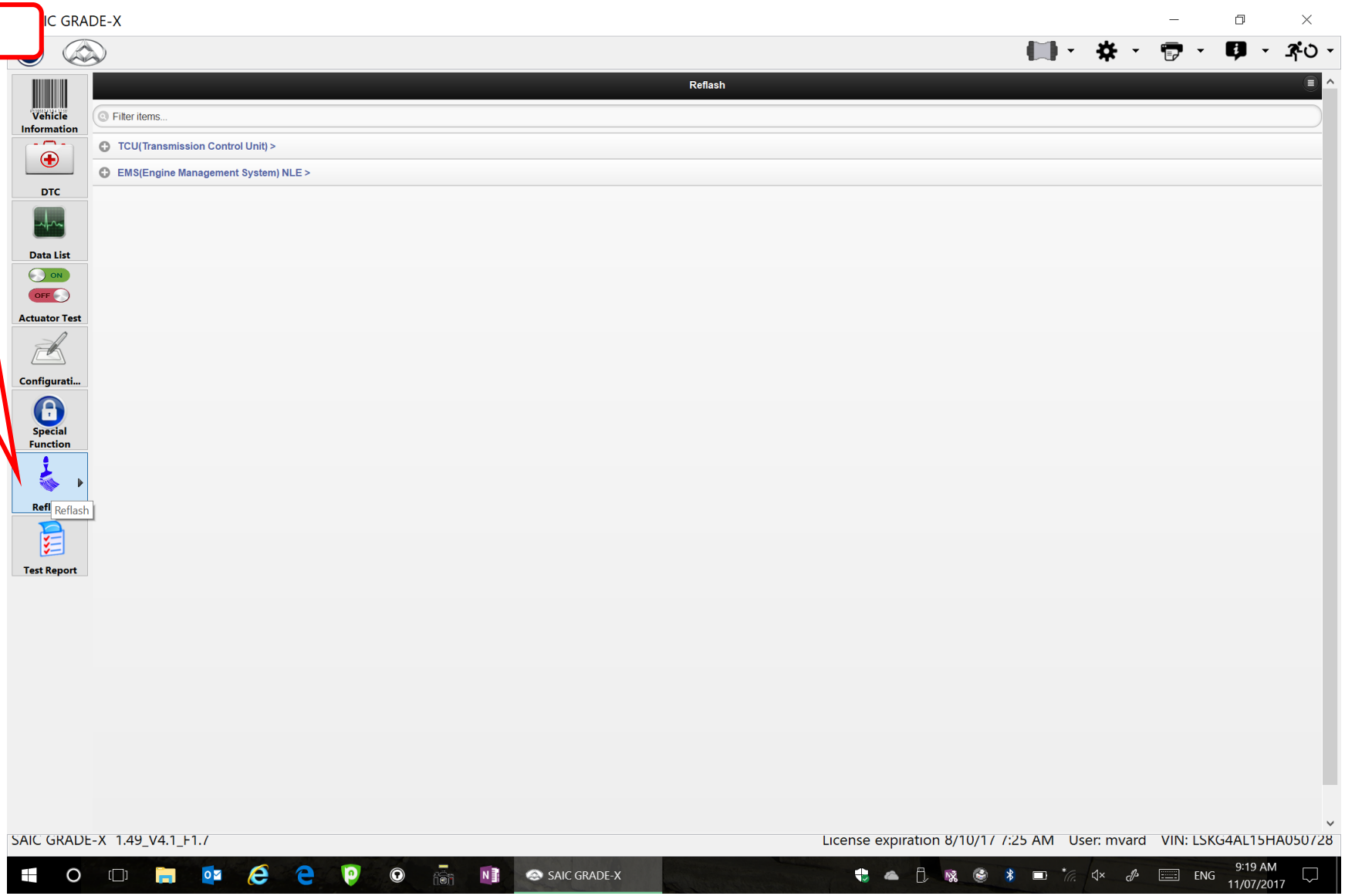


Reflashing

Select the Reflash icon

A list of available systems will be visible.

Click on the required system.



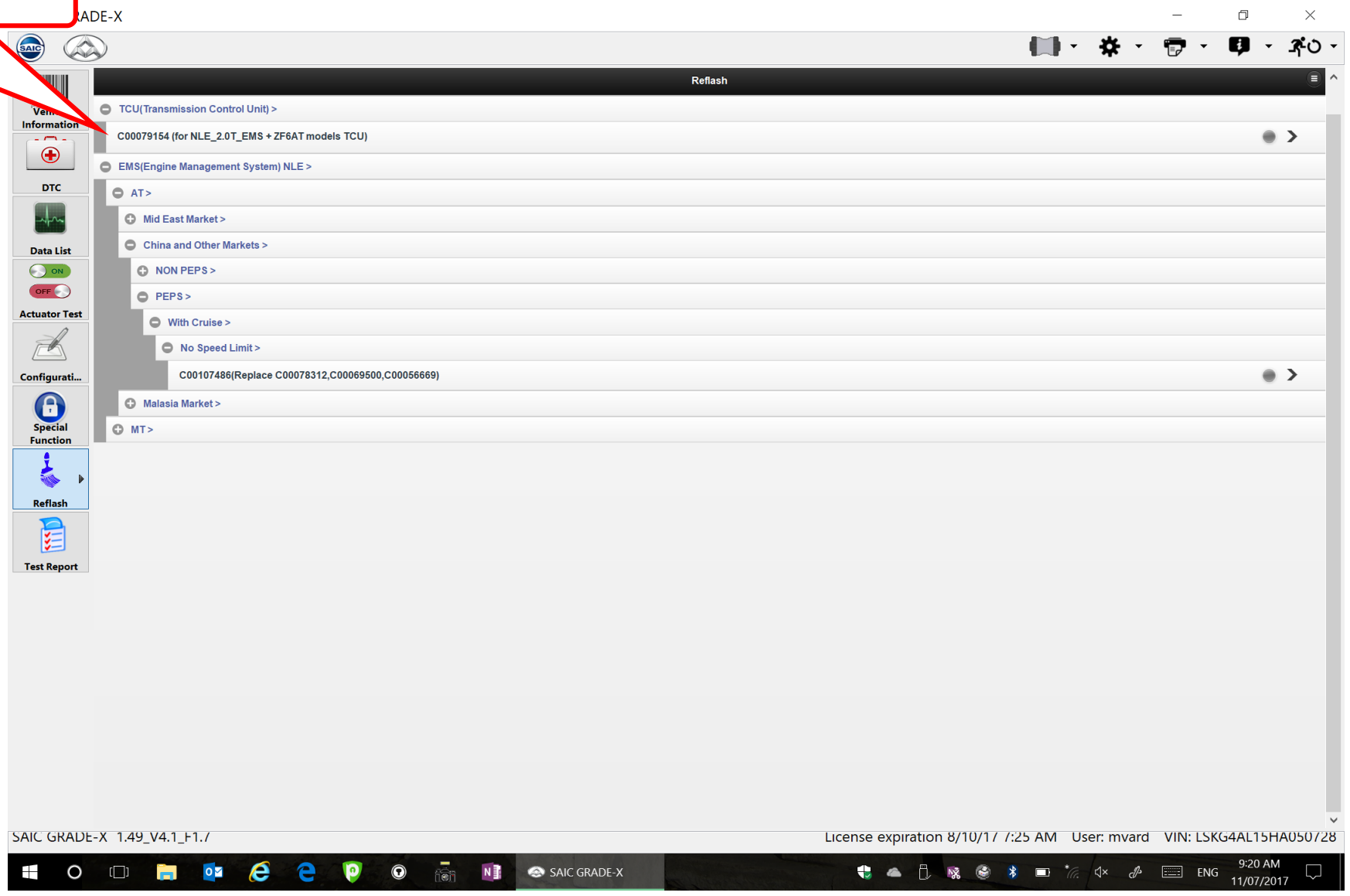
Reflashing

Select the Reflash icon

If a reflash is available it will be listed under the system heading.

Drill down ensuring you select the correct vehicle options. (DO NOT reflash any system unless instructed to do so by National Service)

Refer to the separate "Reflash" Operating instructions before proceeding.

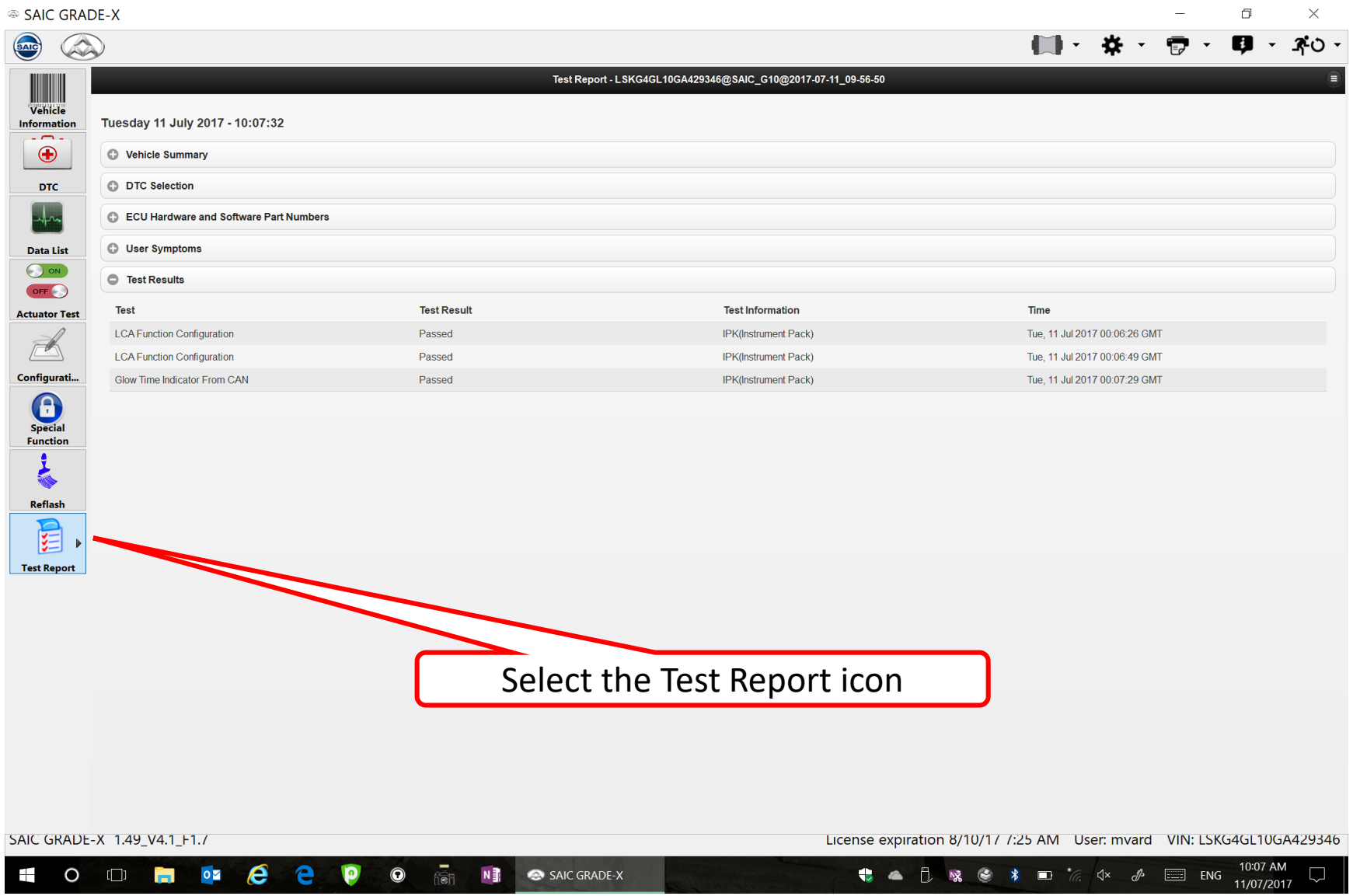


Test Report

5 Items will become available.

1. Vehicle Summary (VIN)
2. Stored DTC List
3. ECU Hardware and Software Numbers by system
4. User Symptoms
5. Test Results (A list of all tests performed with their outcome is listed here)

Sample Health Report



Appendix D

VDI III

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bg	Ръководство за обслужване
cs	Návod k obsluze
da	Betjeningsvejledning
de	Originalbetriebsanleitung
el	Οδηγίες χρήσης
es	Instrucciones de manejo
et	Kasutusjuhend
fi	Käyttöohje
fr	Instructions de commande
hr	Upute za uporabu
hu	Használati utasítás
it	Manuale d‘uso
ja	取扱説明書
ko	사용설명서
lt	Naudojimo instrukcija
lv	Lietošanas instrukcija
nl	Gebruiksaanwijzing
no	Bruksanvisning
pl	Instrukcja obsługi
pt	Manual de utilização
ro	Manual de utilizare
ru	Инструкция по эксплуатации
sk	Návod na obsluhu
sl	Navodila za uporabo
sr	Uputstvo za rukovanje
sv	Bruksanvisning
th	คู่มือในการใช้งาน
tr	Kullanım kılavuzu
uk	Інструкція з експлуатації
zh-CN	操作说明书
zh-TW	原始指令

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pt – Conteúdo português 403

ro – Cuprins română 422

ru – Содержание, русский язык 441

sk - Obsah Slovenčina 459

sl – Vsebina slovenščina 478

sr – Sadržaj Srpski 497

sv – Innehåll svenska 516

th – เนื้อหา ภาษาไทย 535

tr – İçindekiler Türkçe 554

uk – Зміст українською 573

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1. Symbols used

1.1 In the documentation

1.1.1 Warnings – structure and explanation

Warnings warn of dangers to the user or people in the vicinity. Warning notices also indicate the consequences of the danger as well as preventive action. Warnings have the following structure:

Warning symbol	**SIGNAL WORD – nature and source of danger!** Consequences if the measures and instructions provided are not followed. ➢ Measures and instructions to prevent the danger.

The signal word indicates the likelihood of occurrence and the severity of the danger if it is ignored:

Signal word	Likelihood of occurrence	Severity of danger if ignored
DANGER	**Immediate,** imminent **danger**	**Death** or **serious** injury
WARNING	**Possible** impending **danger**	**Death** or **serious** injury
CAUTION	Possible **dangerous situation**	**Minor** injury

1.1.2 Symbols – designation and explanation

Symbol	Designation	Meaning
!	Attention	Warning of possible property damage.
	Information	Practical instructions and other useful information.
1. 2.	Multiple-step instructions	Recommended procedure involving several step.
➢	Single-step instruction	Recommended procedure involving only one step.
⇨	Intermediate result	An instruction produces a visible intermediate result.
➜	Final result	The final result becomes apparent on completion of the instructions.

1.2 On the product

! Observe all warning signs on products, and ensure they remain legible.

Symbol	Meaning
CE	EU declaration of conformity
FC	US declaration of conformity
EAC	Certification for the Russian Federation
	Certification for Ukraine
	Certification for Australia, New Zealand
	Certification for Morocco
	Certification for South Korea
	Certification for Serbia
E9	ECE certification (Spain)
	While driving, VDI III may only be used and diagnostic data may only be recorded by trained and instructed workshop personnel.
	Attention: general warning sign indicating danger. Before commissioning, connecting and operating Bosch products, it is absolutely essential to read the entire operating instructions carefully, especially the safety instructions.
	Dispose of used electrical and electronic devices, including cables, accessories and batteries, separately from household waste.
10	China RoHS (environmental protection) – 10 years

2. User instructions

Before commissioning, connecting and operating this product, it is absolutely essential that the operating instructions and, in particular, the safety instructions are studied carefully. By doing so, any uncertainties about handling this product and any safety risks associated with it can be eliminated in the interest of the user's safety and in order to make sure to prevent any damage to the product. Whenever this product is handed over to another person, not only the operating instructions but also the safety instructions and information on its intended use must be handed over as well.

2.1 User group

The product may be used by trained and instructed personnel only. Personnel merely scheduled to be trained, familiarized, instructed or to take part in a general training course may only work with the product under the supervision of an experienced person.

All work on electrical devices must be carried out by individuals with sufficient knowledge and experience in the use of electrical and hydraulic equipment.

2.2 FCC compliance (USA)

VDI III complies with the requirements of Section 15 of the FCC rules. The following conditions apply regarding operation:

- VDI III must not cause any harmful disruptions;
- VDI III must withstand reception of interference, including interference that can cause unwanted operation.

VDI III has been tested and complies with the limits for a Class A digital device as defined in Part 15 of the FCC regulations. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. VDI III may generate, use and emit energy at radio frequencies that can disrupt radio communication if it is installed improperly or used in a manner inconsistent with the operating instructions. Operation of VDI III in a residential area is likely to cause harmful interference, in which case the user will be required to remove the interference at his or her expense.

All changes or modifications to VDI III not expressly allowed by Robert Bosch GmbH may void the permission to operate VDI III.

2.3 Open-source software (OSS)

For an overview of the open-source software, see "C:\PROGRAM FILES (X86)\BOSCH\VTX-VCI\VCI SOFTWARE (SAIC-VDI)\LEGAL".

2.4 Electromagnetic compatibility (EMC)

VDI III satisfies the requirements of the EMC directive 2014/30/EU.

VDI III is a class/category A product in accordance with EN 61 326. VDI III may cause high-frequency household interference (radio interference) so that interference suppression may be necessary. In such cases, the operator may be required to take appropriate action.

2.5 Range of application

VDI III is intended for indoor use only.

- Do not expose VDI III to rain or moisture, and prevent the formation of condensation.
- Degree of contamination 2, keep area around VDI III clean.

2.6 Wireless link (Bluetooth and WLAN)

VDI III users are responsible for compliance with the applicable directives and restrictions in the country concerned.

Important information on WLAN and Bluetooth

WLAN (wireless local-area network) is a term used to describe a wireless local network. Bluetooth and WLAN provide a radio connection on the free 2.4 GHz ISM band (ISM: industrial, scientific, medical). This frequency range is subject to government legislation but can be used without a license in most countries. Consequently, a large number of applications and devices employ this frequency band for transmission. This can result in frequency interference and malfunctions.
Depending on ambient conditions, the radio connection may be impaired, e.g. in the case of Bluetooth links, cordless telephones, radio-controlled thermometers, radio-controlled garage door openers, radio-controlled light switches or radio-controlled alarm systems.

ⓘ Bluetooth may cause drops in bandwidth in the WLAN network. The antennas of Bluetooth and WLAN devices should be at least 30 centimeters apart. Use the USB extension cable (special accessory) to maintain some distance between the Bluetooth USB adapter on the computer and the WLAN antenna.

ⓘ Extreme caution is to be used around pacemakers and other vital electronic devices while wireless systems are being used, as proper functioning of these devices may be impaired.

Pay attention to the following to ensure the best possible connection:

➢ The radio signal always tries to find the most direct path. When setting up the computer and access point, make sure there are as few obstacles as possible, e.g. steel doors and concrete walls, that might interfere with the signal from and to VDI III.
➢ Inside buildings, the range of WLAN / Bluetooth is also greatly affected by the construction materials used. Conventional masonry, wooden walls and various types of dry wall scarcely impair the propagation of radio waves. Thin gypsum walls are problematic, however, as considerable amounts of moisture may accumulate in the gypsum, which may result in the absorption of radio signals. Metal walls and concrete (in particular reinforced concrete) largely block out radio waves. The ceilings of basements are often impenetrable. Generally speaking, walls with a lot of metal components (e.g. pipes, cables) obstruct radio waves.
➢ Radio reception is also impeded by large metal objects such as radiators and window frames as well as active sources of interference such as wireless telephones, motion detectors and microwave ovens.
➢ Human beings are also an obstacle to wireless transmission. Always make sure that no people are present between the transmitter and receiver.
➢ We recommend having the network infrastructure installed and maintained by a network specialist.
➢ When using a WLAN connection, keep the SSID and the codes for the wireless connection in a safe place. Make sure the information is ready to hand in case of malfunctions.
➢ We recommend that you closely inspect the intended location during commissioning: determine where in your building VDI III works well and what the limits of wireless transmission are.
➢ The wireless connection is affected by weather conditions. The reception signal may therefore vary.
➢ Please contact your network specialist if you have any questions.
➢ In the event of problems with the radio connection, the USB link can be activated and used instead of the radio connection.

2.7 Other applicable documents

Designation	Document number
Quick Start Guide	1 689 989 459
Important information and safety instructions	1 689 989 460
Specifications – WLAN USB adapter	1 689 989 305

3. Safety instructions

These operating instructions are intended to ensure easy and safe setup and use of VDI III. Read these operating instructions and other applicable documentation carefully before using VDI III and the software.

4. Product description

4.1 Intended use

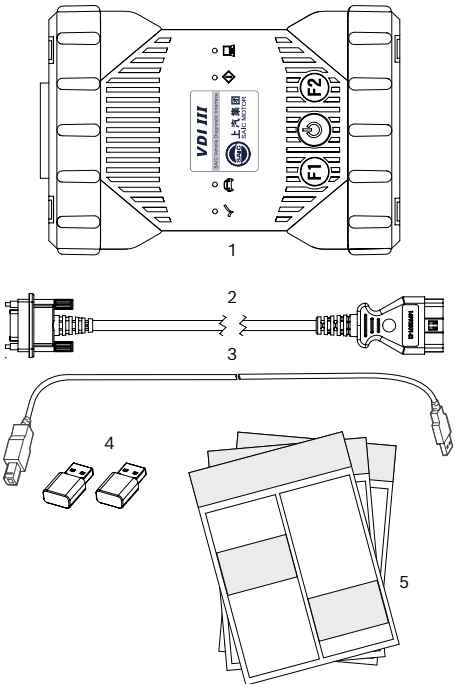
If VDI III and the accessories supplied are operated in any other way than the one specified by the manufacturer in the operating instructions, the protection provided by VDI III and the accessories supplied may be compromised.

VDI III is a measuring instrument used by professional technicians in diagnosing, repairing and programming electrical and electronic vehicle systems. Additionally, the software application with VDI III can be used to measure voltage levels, for example.

4.2 Scope of delivery

The VDI III base kit includes connecting cables and hardware for transferring and reprogramming vehicle control units using the diagnostic interface.

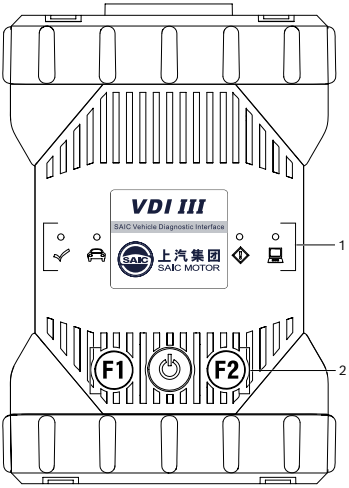
The scope of delivery depends on the product variant ordered as well as the special accessories ordered and may deviate from the following list.

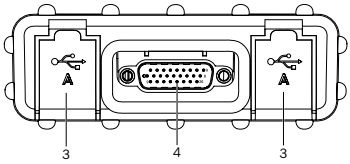


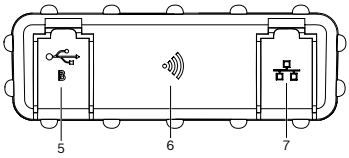
Item	Kit component	Part number	Qty.
1	VCI system tester	1 699 200 873	1
2	Diagnostic connection cable (data transmission to J1962)	1 699 200 366	1
3	USB connecting cable A to B, 3 m	F00K.108.653	1
4	WLAN USB stick	–	2
5	Applicable documentation	–	3

4.3 VDI III ports and control elements

VDI III has various buttons and standardized ports for operating the device and connecting it to the vehicle electrical system and workshop network. These ports and buttons are shown in the following illustrations.







Item	Description
1	LED status lights
2	Control buttons
3	2x USB-A port
4	Port for diagnostic connection cable
5	USB-B port
6	WLAN adapter
7	Ethernet port

4.4 Universal serial bus (USB) port

VDI III has a fixed USB configuration that cannot be changed. This ensures that VDI III can always establish a connection to a single computer running the "VCI Manager" software or the user software so it is possible to configure the LAN or WLAN settings required by the local network. In addition, the USB connection is required to configure the firmware on VDI III, to pair the computer with VDI III and to update the firmware.

4.5 Wireless local area network (WLAN)

During setup and configuration of the WLAN connection (802.11b/g/n), VDI III must be connected to a computer running the "VCI Manager" software and be paired with the computer by USB.

4.6 Other properties of VDI III

4.6.1 Data transfer

The connection between VDI III and the vehicle electronics is established via the 26-pin diagnostic connection cable.

4.6.2 Power supply

VDI III is designed to be supplied with power from the vehicle battery by the diagnostic connection cable. For data transfer or a system update, VDI III can also be supplied with voltage from the USB port on a computer.

If VDI III is to be configured for a wireless connection, power must be supplied by USB connecting cable.

4.6.3 LED status lights

Four light-emitting diodes (LEDs) are located on the front of VDI III. The LED indicators provide the following status information.

Symbol	Color Status	LED function
	Green	VDI III without errors
	Red	Error occurred, perform a reset
	Green	VDI III connected to vehicle
	Flashing red	Not connected to external 12 or 24 V voltage supply
	Off	VDI III without errors
	Red	Error occurred or VDI III in recovery state
	Off	VDI III not connected to a computer
	Flashing green	VDI III connected to computer
	Off	VDI III off
	Green	VDI III on
	Yellow/ green	Depending on user software
	Yellow/ green	Depending on user software

4.7 VCI Manager Launcher

The Windows program "VCI Manager Launcher" running on the host computer can be used by the user to select various VCIs in the network. After VCI selection, further settings can be made directly in VCI Manager. For this purpose, VCI Manager Launcher opens VCI Manager automatically.

4.8 VCI Manager

The "VCI Manager" Windows program running on the host computer can be used by the user to configure and update VDI III. Also, "VCI Manager" is used to configure the connection between the diagnostic device and the host computer and to update the firmware of the diagnostic device.

4.9 System requirements

The "VCI Manager" software is used to set up and update VDI III. "VCI Manager" is installed on a computer. VDI III is controlled by way of the associated user software.

The system requirements listed below refer to the use of the "VCI Manager" software. The user software requirements may differ.

- Windows 7, Windows 8 or Windows 10 (32-bit and 64-bit)
- 100 MB free hard disk space
- 512 MB RAM
- 1 GHz processor
- 1 free USB port
- 1024x768 display resolution

5. Operation

The following contains the information needed to begin using VDI III, including the installation of the "VCI Manager" software, updates of the firmware on the device, the configuration of connection methods and communication with the vehicle.

5.1 Notes on installation

Please follow the installation instructions of the user software.

5.2 Software installation

The "VCI Manager" software and the associated "VCI Manager Launcher" software are needed to set up and manage VDI III. The software is available for download from your dealer.

1. Download VCI Manager and VCI Manager Launcher.
2. Install VCI Manager and VCI Manager Launcher by double-clicking "**setup.exe**".

➜ VCI Manager and VCI Manager Launcher will be installed.

3. Read and follow the attached safety instructions and all information provided by the downloaded operating instructions of VDI III.

5.3 Setting up the diagnostic-device hardware

5.3.1 Connecting the diagnostic device

Before the firmware can be updated, VDI III must be connected to VCI Manager Launcher.

1. Connect VDI III to a computer by USB connecting cable.
   ⇨ VDI III will boot in recovery mode. (only with factory settings).
2. Start the "VCI Manager Launcher" program.
   ⇨ VCI Manager Launcher will show a list of VCIs available in the network.
3. Select the desired VDI III, and use <**OK**> to confirm.

➜ VCI Manager Launcher will begin USB configuration.

USB configuration may take several minutes. Do not disconnect VDI III from the computer during the process.

5.3.2 Updating the diagnostic-device software

VDI III is shipped from the factory without firmware. To install or update the firmware of the diagnostic device, proceed as follows.

1. Connect VDI III to a computer by USB connecting cable.
   ⇨ VDI III will boot in recovery mode (only with factory settings).
2. Start the "VCI Manager Launcher" program.
   ⇨ VCI Manager Launcher will show a list of VCIs available in the network.
3. Select the desired VDI III, and use <**OK**> to confirm.
   ⇨ The <**Connect**> button will change to <**Recover**>.

VDI III will be displayed without a serial number when initially connected to VCI Manager.

4. Use the <**Recover**> button to start the update process.

Do not disconnect VDI III from the computer during the update process.

5. Click the <**Start update**> button to install the firmware on VDI III.
6. Click <**OK**> to continue.
7. The update process will take about 5 minutes. Once the update process is complete, VDI III will automatically restart. Wait until you hear the acoustic signal from VDI III before proceeding to use VDI III.

5.3.3 Configuring VDI III using VCI Manager

In order to configure VDI III for the network connection, VDI III must be connected to a computer running VCI Manager by USB. The VCI Manager icon displayed on VDI III will indicate the communication method to be used when <**Connect**> is clicked.

Symbol	Description
	VCI Manager connects to VDI III by way of the USB port
	VCI Manager connects to VDI III by way of the Ethernet port
	VCI Manager connects to VDI III by WLAN
	No wireless point-to-point connection is set up. Use the USB connecting cable to connect VDI III to the computer to set up the connection.
	The wireless adapter in the computer and the one in the diagnostic device are incompatible with each other.
	VCI Manager is connected to the VDI III

The following steps are required to configure VDI III.

1. Double-click the VCI Manager icon on the computer's desktop to launch the "VCI Manager" software.
2. Select VDI III in "**VCI Explorer**."
3. Click the <**Connect**> button to connect to the selected VDI III by USB.

➜ The VDI III will be displayed with a green checkmark, indicating that VCI Manager" is controlling this VDI III.

4. Click the <**Show details**> button to see details about the selected VDI III.

If VDI III is connected to another computer in the network, it will still be detected by VCI Manager but will not be available for connection.

If VDI III is connected to the computer by USB, the VCI Manager functions in all tabs are available. If VDI III is not connected by USB, the functions in the tabs "**Network setup**" and "VDI III update" cannot be selected.

5.3.4 Checking the computer and VDI III software versions

Ensure that the "VCI Manager" software version installed on your computer is the same as the software version installed on VDI III in order for VDI III to operate properly. Check the software versions as follows.

1. Connect VDI III to the computer by USB connecting cable.
2. Double-click the VCI Manager icon on the computer's desktop to launch the "VCI Manager" software.
3. Select VDI III in "**VCI Explorer**."
4. Click the <**Connect**> button to connect to the selected VDI III by USB.
5. Use "**Help**" to see details about the software versions.

5.4 WLAN connection setup

VDI III is capable of communicating in your workshop network by WLAN. The "**Network setup**" tab in VCI Manager provides a number of functions for selecting and configuring VDI III network connection interfaces, including WLAN and security settings.

VDI III must be connected by USB to make settings in the "**Network setup**" tab. As long as there is no USB connection, the "**Network setup**" tab is disabled.

VDI III supports the point-to-point method for wireless connections.

Point-to-point

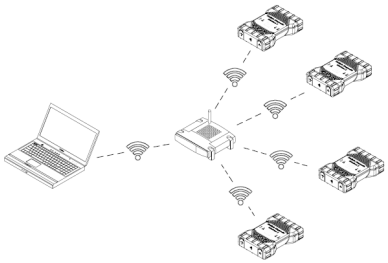
With the point-to-point wireless communication method, VDI III connects to your computer directly using a USB WLAN adapter. The various types of connections are described in the following sections.

5.4.1 Activating the WLAN connection via an access point

VDI III can be configured for a connection via access point. The following must be prepared before configuration:

- An IP address and subnet mask that can be assigned to VDI III (if the existing LAN does not assign IP addresses automatically)
- A wireless-network access point SSID (network name)
- Network security standard WPA2 enabled
- Data encryption by TKIP or WEP (64-bit or 128-bit)
- WLAN password

The figure below shows several VDI IIIs that are connected to a single computer by wireless access point.



With the following procedure, you can configure VDI III for a wireless connection in your network environment. Contact your IT administrator before starting setup.

1. Double-click the VCI Manager icon on the computer's desktop to launch the "VCI Manager" software.
2. Plug VDI III into an external 12 V power source.
3. Plug the USB connecting cable into the computer and VDI III, and allow VDI III to boot completely.

4. Establish a connection to VDI III in VCI Manager.
5. Select the "**Network setup**" tab.
6. In the "**Wireless (802.11)**" tab, select the option "**Activate wireless interface**"
   ⇨ The "**IP address configuration**" input field will become active.
7. Select the option "**Automatic assignment of IP address**" if your network assigns IP addresses automatically.

If your network uses fixed IP addresses, your IT administrator will assign the IP address and subnet mask.

8. Select <**Access Point >**>.
9. Assign network name:
   – If the network uses a hidden SSID or is not within range, "Enter network name (SSID)" can be used to enter the network name.
   – If the network is within range, the option "Select from list of available networks" can be used to select the network. Use <Update> to have VDI III search for available WLAN signals.
10. After the network name has been entered, continue with <**Configure>**.
11. Enter the security settings for the network, and select <**Next**>.
12. Select <**Yes**> to reconfigure VDI III or <**No**> to cancel the procedure.
13. Select the "Settings" tab and check if VDI III has been configured correctly.
14. By disconnecting the USB connection, you can check if the configuration has been successful.
15. Save the settings for future changes.

5.4.2 Enabling a direct point-to-point wireless connection

VDI III can be configured for a point-to-point wireless connection. The following figure shows a single diagnostic device connected to a computer using a point-to-point wireless connection.

The following steps are required to configure VDI III for a point-to-point connection.
For the descriptions listed below, it is assumed the computer runs Windows 7. The steps required may differ depending on the operating system.

1. Plug the WLAN USB adapter into an available USB port on the computer.

Do not plug the WLAN adapter into a USB hub.

2. Switch on the computer.
3. Use the USB connecting cable to connect VDI III to the computer, and allow VDI III to boot completely.

Do not connect the USB connecting cable of VDI III to a USB hub.

4. Start the "VCI Manager" program.

The point-to-point connection is automatically configured. The wireless connection will be available as soon as power is supplied by the DLC cable.

The following steps are required if the password for a point-to-point connection is to be reset.

1. Click the wireless-network icon in the Windows taskbar.
   ⇨ A list of available wireless networks within range of the computer will be displayed.
2. Select "**Open Network and Sharing Center**."
3. Select "**Manage Wireless Networks**" from the left column.
4. Select the "**Change adapter**" menu, and click the diagnostic device in the list.
5. Remove the saved point-to-point network. Its name will contain the sequence of characters "MTS 6531" and the last 8 digits of the serial number of VDI III (MTS 6531xxxxxxxx).
6. When you reconnect VDI III to the computer using the USB connecting cable, a new password will be created.

5.4.3 Reset to factory settings

Resetting VDI III to factory settings will also reset the settings for the point-to-point connection to the factory default. Any software upgrades that have been installed to VDI III will still be installed. When the reset is finished, VCI Manager will display the "**VCI Explorer**" tab. All wireless-access-point configurations will be lost.

1. Start the "VCI Manager" program.
2. Plug VDI III into an external 12 V power source.
3. Plug the USB connecting cable into the computer and VDI III, and allow VDI III to boot completely.
4. Establish a connection to VDI III in VCI Manager.
5. Select the "**Network setup**" tab.
6. Click <**Set factory default**>.

➜ VDI III will be set to factory settings.

5.5 Connecting the diagnostic device to a vehicle

The vehicle connection kit of VDI III contains a diagnostic connection cable that connects VDI III to the vehicle's DLC interface (SAE J1962).

Refer to the wiring diagram for the vehicle to be tested to determine the location of the DLC connection on the vehicle.

1. Connect the 26-pin end of the diagnostic connection cable to the top of VDI III, then tighten the screws.
2. Connect the 16-pin end of the diagnostic connection cable to the DLC connection of the vehicle.

Connecting the diagnostic device to the power supply

VDI III is powered by the vehicle's 12- or 24 V battery.

CAUTION – non-approved accessories – malfunction
Risk of injury

➢ Non-Bosch cables are not approved for use with this device, including non-Bosch USB connecting cables.

CAUTION – cables – overload
Risk of injury
➢ Make sure that any cable connected to a power source with the potential of high currents, such as a 12 V automotive battery, is in good condition. VDI III is protected by its own internal protection device. A fault in the cable itself, especially a power-to-ground short, might create a hazardous situation that may cause injury.

CAUTION – loopback self-test adapter – overload
Risk of injury
➢ Do not apply power to VDI III through the self-test adapter barrel connector unless the circuit is protected by a fuse, circuit breaker or power supply with a current limiter. The fuse, circuit breaker or power supply with a current limiter must be set to no more than 3 A.

5.6 Resetting VDI III

1. Disconnect the voltage supply from VDI III.
2. Wait at least 20 seconds.
3. Reconnect the voltage supply to VDI III.

5.7 Loopback self-test

With the self-test adapter, you can conduct a loopback self-test of VDI III. To do this, perform the following steps.

1. Connect the diagnostic connection cable to VDI III.
2. Connect the self-test adapter to the vehicle end of the diagnostic connection cable.
3. Power the self-test adapter either by the vehicle connection or a 12 V power supply unit.
4. Start VCI Manager, and connect VDI III.
5. In VCI Manager, select "**Help**."
6. Click <**Cable test**> to start the test.

6. Troubleshooting

This section contains descriptions of measures that can be taken if VDI III does not appear to work properly. If the error is not eliminated by the indicated remedy, it is necessary to contact service.

6.1 VDI III error LED lights after power on

Recommendations

1. Switch off VDI III, and check if the issue persists when the power supply is switched on again.
2. Connect VDI III to a computer by USB, and perform the recovery procedure.

6.2 VDI III does not switch on

VDI III should switch on as soon as external power is applied. If VDI III does not switch on, check the cable connections first. Try supplying power to VDI III from the other of the two power sources – DLC connection or USB port.

Recommendations

➢ Make sure the cables are securely attached to VDI III and the contacts are clean.
- If the diagnostic device is connected to the vehicle's DLC connection, try supplying power by the USB port.
- If the diagnostic device is connected to the USB port, try supplying power by the DLC connection.

6.3 "Vehicle" LED flashes red

If VDI III does not detect 12 V on pin 16 of the diagnostic connection cable, VDI III will inform the user by automatically turning on and flashing the vehicle LED red. This condition might be seen if VDI III is only powered by a 5-V USB connection or if the diagnostic connection cable has accidentally been displaced from the vehicle data link connector (DLC) and is powered by the backup capacitor. When VDI III detects 12 V on pin 16, the vehicle LED will stop flashing red.

Recommendations

1. Ensure that 12 V are applied to pin 16 of the diagnostic connection cable.
2. Ensure the ground connection on J1962 pin 5 is good.

6.4 VDI III speaker beeps

If VDI III is performing diagnostic services for the computer and does not detect 12 V on pin 16 of the diagnostic connection cable, VDI III will inform the user of the loss of power by beeping the speaker. VDI III will continue to beep until the backup capacitor is drained. When VDI III detects 12 V on pin 16, the speaker will stop beeping.

Recommendations

➢ Ensure that 12 V are applied to pin 16 of the diagnostic connection cable during diagnostic sessions.

6.5 VDI III switches off immediately when disconnected from the vehicle during a diagnostic session

If VDI III does not remain on during cranking or after the DLC connection is interrupted, there may be a problem charging the internal capacitor.

VDI III should remain on if power is lost during engine cranking or after it has been disconnected from the electrical system (the vehicle's DLC) during a diagnostic session. The VDI III speaker will beep to notify the user that power has been lost unexpectedly during the diagnostic session.

Recommendations

1. Check the 12 V voltage supply of the vehicle DLC.
2. Ensure that VDI III has been connected to the vehicle's DLC for at least 90 seconds to charge the internal capacitor.

6.6 "Checkmark" LED on VDI III flashes

If the internal temperature of VDI III has exceeded the maximum limit, VDI III will automatically turn off the wireless adapter. This will be visible to the user by the checkmark LED flashing. When the internal temperature of VDI III drops to an acceptable value, the wireless adapter will be re-enabled for wireless communication.

Recommendations

➢ Move VDI III to a cooler location near the vehicle.

6.7 Suspected defective diagnostic connection cable

If a defective diagnostic connection cable is suspected, perform the VCI Manager cable test. The "VCI Manager" software supports a cable test by means of the self-test adapter. The cable test indicates whether or not the diagnostic connection cable is defective. The self-test adapter used for the test is not intended to be used for vehicle communication. Perform the following steps.

1. Connect the diagnostic connection cable to VDI III.
2. Connect the self-test adapter to the vehicle end of the diagnostic connection cable.
3. Power the self-test adapter either by the vehicle connection or a 12 V power supply unit.
4. Start VCI Manager, and connect VDI III.
5. In VCI Manager, select "**Help**."
6. Click <**Cable test**> to start the test.

➜ The "VCI Manager" software will run a series of tests of the diagnostic connection cable. The results will be indicated as PASS or FAIL.

6.8 Wireless communication with network by DWA 131 E1 dongle unsuccessful

The D-Link DWA 131 E1 dongle is not intended to be used for wireless communication of a computer with a network. The DWA 131 E1 dongle is only intended to be used with VDI III for point-to-point communication or wireless communication of infrastructure.

Recommendations

Adjusting the power options:

1. Press <**Win**>+<**X**>, and select "**Device Manager**" from the list shown.
2. In the list of devices shown, right-click the "**DWA 131**" entry.
3. Select "**Properties**."
4. Select the "**Power Management**" tab.
5. Deselect the option "**Allow the computer to turn off this device to save power**."

Eliminating sources of interference

1. Make sure you do not have two D-Link wireless dongles connected to the computer.
2. Make sure the computer does not use the DWA 131 E1 dongle to connect to the workshop network instead of VDI III.

6.9 VCI Manager displays a yellow icon on VDI III after use of the device

There may be instances when Windows does not recognize the installation of the DWA 131 E1 wireless adapter. In these cases, Windows may create a new wireless profile instead of using the existing one already stored on the computer. The yellow icon displayed on VDI III means that the USB connecting cable between VDI III and the computer must be plugged in.

Recommendations

➢ Unplug and then re-install the wireless adapter. Windows will attempt to recognize the wireless adapter. If the attempt is successful, the yellow icon will disappear and VDI III will be ready for a wireless point-to-point connection.

6.10 Computer application is unable to communicate with VDI III by USB

VCI Manager must be installed on the computer and VDI III must be switched on for the connection to work. VDI III must be configured by USB before it can communicate using any other connection type.

Recommendations

If other applications, including VCI Manager, are able to connect to VDI III, proceed as follows:

➢ Check the Windows Firewall settings to see if the application is being blocked.

If all installed applications are unable to communicate with VDI III, proceed as follows:

1. Use the USB connecting cable to connect VDI III to the computer, not to the vehicle.

! Do not connect the USB connecting cable of VDI III to a USB hub.

2. Verify that the USB connecting cables are securely attached and VDI III has fully booted up.
3. Start the "VCI Manager" program.
4. Does VCI Manager detect VDI III?

If not:

- Try a different USB connecting cable / port on the computer.
- Check the Windows Firewall to see if VCI Manager is being blocked.
- Check if the VDI III USB connection is detected by Windows.

6.11 Computer application is unable to communicate with VDI III by WLAN or Ethernet

1. Make sure the WLAN USB adapter is securely attached to VDI III.
2. Make sure VDI III can make a connection by USB.
3. If using point-to-point, make sure the computer has no more than one dongle connected to it:
   - Connect VDI III to the computer by USB.
   - In VCI Manager, make sure the connection is enabled and the IP configuration is correct.
4. If using the workshop's WLAN network:

Contact the IT department and make sure the computer is detecting the access point and the security settings for VDI III have been configured correctly.

7. Cleaning and maintenance

The housing of VDI III may only be cleaned with a soft cloth and a neutral cleaning agent. Do not use abrasive cleaning agents or coarse workshop rags.

VDI III does not contain any parts that can be maintained by the user. Do not open VDI III. Opening it will void the warranty.

➢ Do not immerse VDI III or any of its parts or accessories in water.
➢ Even though VDI III and its accessories are water-resistant, they are not waterproof. Allow to dry completely before storing.
➢ Avoid using harsh solvents such as petroleum-based cleaning agents, acetone, benzene, trichloroethylene etc.

7.1 Restoring the VDI III system software (recovery)

As a result of a power failure or a connection error during a software update, the VDI III software may become corrupted. In this case, it is necessary to perform a recovery:

1. Connect VDI III to the computer by USB connecting cable.
2. Launch VCI Manager.
3. Select VDI III in "**VCI Explorer**."
4. To start the recovery, press and hold the power button on VDI III for at least 5 seconds.
   ⇨ The VDI III icon in VCI Manager is marked "Recovery."
5. Select VDI III in VCI Manager.
6. Carry out recovery.

7.2 Spare and wearing parts

Kit component	Part number
VCI system tester	1 699 200 873
Diagnostic connection cable (data transmission to J1962)[1)]	1 699 200 366
USB connecting cable A to B, 3 m[1)]	F00K.108.653
WLAN USB stick[1)]	1 687 010 590
Test adapter (self-test)[1) 2)]	1 699 200 154

1) Wearing part
2) Special accessory

8. Decommissioning

➢ Disconnect VDI III from the voltage supply.

8.1 Temporary shutdown

If the device is not used for an extended period of time:

➢ Disconnect VDI III from the voltage supply.

8.2 Changing location

➢ If VDI III is handed over to someone else, hand over all the documentation included in the scope of delivery as well.

➢ VDI III must only be transported in the original or equivalent packaging.

➢ Read and follow the instructions concerning initial commissioning.

➢ Disconnect the power.

8.3 Disposal

VDI III, accessories and packaging must be recycled in an environmentally friendly manner.

➢ Do not dispose of VDI III as general waste.

For EU member states only:

VDI III is subject to the European directive 2012/19/EU (WEEE).

Dispose of used electrical and electronic devices, including cables, accessories and batteries, separately from household waste.

➢ Make use of the local return and collection systems for disposal.

➢ Proper disposal prevents environmental pollution and health hazards.

9. Glossary

Term	Description
AC	Alternating current
Baud rate	The speed at which data is transferred over a serial data link
BPS	Bits per second
Computer	Personal computer
DC	Direct current
DCE	Data communication equipment
DLC	Data link connector
DTE	Data terminal equipment. A term used to describe a device connected to an RS232 port.
ECU	Engine control unit
ECM	Engine control module
Ethernet	Connection of systems to networks by means of twisted-pair cabling in compliance with IEEE 802.3.
Hz	Hertz – a unit of measure for frequency
I/P	Instrumentation port
I/O	Input/output
I/F	Interface
LAN	Local-area network
LED	Light-emitting diode
MTS 6531	Type of system tester, corresponds to VDI III
OBD	On-board diagnosis
OEM	Original equipment manufacturer
PCM	Powertrain control module
PCU	Powertrain control unit
RCV	Receive
RS232C	Standardized serial interface
SCI	SERIAL COMMUNICATION INTERFACE
USB	Universal serial bus – a common standard of computer interface
VCI	Vehicle communication interface Short term for a diagnostic device
Vdc	Volts DC
WLAN	Wireless local-area network

10. Technical data

Property	Value/range
Host interface	
Wired	High-speed USB 480 Mbps Ethernet 10/100 Mbps
WLAN USB stick	802.11b/g/n
Processor system	
Microprocessor	Intel MX6 Solo
Clock speed	800 MHz
RAM	512 MB DDR3 RAM
ROM	256 MB flash memory
User interface	
LEDs	4 status LEDs 3 illuminated buttons
Beeper	Signal tone
Power supply	
From the vehicle battery using the diagnostic connection cable or from the computer using a plugged-in USB connecting cable. ***Caution:*** the diagnostic connector of the vehicle must be protected by a fuse with a max. rating of 6 A / 32 V.	7 V – 32 V, 750 mA 5 V, 0.5 A
Mechanical properties	
Dimensions	165 x 115 x 40 mm (6.5 x 4.5 x 1.6 inch)
Weight	0.24 kg (0.53 lb)
Operating temperature	-20 °C – +70 °C (-4 °F – 158 °F)
Storage temperature	-20 °C – +80 °C (-4 °F – 176 °F)
Humidity at 25 °C	30 % – 95 %
Maximum operating altitude	4000 m
Degree of protection with the diagnostic connection cable ***not connected***	IP 30
Degree of protection with the diagnostic connection cable ***connected*** according to IEC 60529	IP 54, Cat. 2
Diagnostic connection cable	
J1962 (ISO 15031-3) Voltage resistance	DLC 26-pin 18 V, Cat. 0

zh-CN - 内容（中文）

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1. 使用的标识

1.1 在文献资料中

1.1.1 警告提示 - 结构和含义

警告提示用于提醒用户或周围人员注意危险。此外，警告提示还会描述危险所造成的后果，以及预防危险的措施。警告提示由下面几部分构成：

警告符号 **信号词 - 危险类型和来源！**
忽视列举的措施和提示，可能会发生危险。
➢ 避免危险的措施和提示。

信号词点出危险的发生概率，以及忽视警告提示所导致的危险的严重程度：

关键词	危险发生概率	忽视警告提示可能导致的危险的严重程度
危险	**直接**致命的**危险**	**死亡**或者**重**伤
警告	**可能**致命的**危险**	**死亡**或者**重**伤
小心	可能发生的**危险情况**	**轻**伤

1.1.2 符号 - 名称及其含义

符号	名称	含义
❗	注意	警告可能导致物资损失。
	信息	使用提示和其他有用信息。
1. 2.	多步骤操作	由多个步骤组成的操作要求。
➢	一步操作	由一个步骤组成的操作要求。
⇨	中期结果	在操作要求中可以看到中期结果。
➜	最终结果	在操作要求末尾可以看到最终结果。

1.2 产品上

❗ 注意产品上的所有警告符号并确保其处于清晰可读的状态。

符号	含义
CE	欧盟一致性声明
FC	美国一致性声明
EAC	俄罗斯联邦认证
	乌克兰认证
	澳大利亚、新西兰认证
	摩洛哥认证
	韩国认证
	认证（塞尔维亚）
E9	ECE 认证（西班牙）
	驾驶期间使用 VDI III 和诊断数据的绘图只允许由受过培训和指导的修理厂员工进行。
⚠	注意：一般警示标志用来警告可能发生的危险。开始调试、连接和操作 Bosch 产品之前，必须仔细阅读操作说明、使用说明书，更要认真通读安全须知。
	废旧电气/电子器件，包括线路、配件和电池，均须与家居垃圾分开处理。
10	中国 RoHS（环境保护） - 10 年

2. 用户须知

调试、连接和操作该产品之前，必须认真阅读使用说明书，尤其要认真通读安全须知。同时为了用户安全及避免损坏产品，请预先避免和排除使用该产品可能发生的危险和相应安全隐患。如果要将该产品转交给他人使用，除操作说明书外，还必须将安全须知以及按规定使用的相关说明一并转交。

2.1 用户群

仅可以由经过培训的合格人员使用此产品。还在参加培训、训练、指导班或常规培训研讨会的员工只可以在有经验员工的监督下使用本产品工作。

仅可由在电气和液压系统领域具备丰富知识和经验的人员进行电气设备的所有操作。

2.2 FCC 一致性（美国）

VDI III 符合 FCC 指令第 15 章的要求。运行需满足以下条件：

- VDI III 不得造成任何损害性故障；
- VDI III 必须允许接收干扰，包括可能导致意外运行的干扰。

VDI III 已通过测试并遵守 A 等级数字设备的极限值，符合 FCC 规定的第 15 章。在商业环境中操作时，遵守该极限值能够有效防护辐射干扰。VDI III 产生、使用并可能以无线电频率发射在安装和使用不当或者不遵守使用说明书时可能导致无线传输发生故障的能量。在住宅区操作 VDI III 可能会导致辐射干扰，用户必须自行承担排除辐射的费用。

VDI III 上所有未经 Robert Bosch GmbH 明确批准的更改或修正均可能导致 VDI III 的运行许可证失效。

2.3 开源软件（OSS）

开源软件许可证概览参阅 "C:\PROGRAM FILES (x86)\Bosch\VTX-VCI\VCI Software (SAIC-VDI)\Legal"。

2.4 电磁兼容性（EMC）

VDI III 符合 EMC 指令 2014/30/EU 的各项要求。

VDI III 是一款符合 EN 61 326 标准的 A 级别/类别的产品。VDI III 可在居民区引起高频干扰（无线电干扰），必须采取抗干扰措施。在这种情况下，要求运营方采取相应措施。

2.5 应用范围

VDI III 仅可用于室内。

- VDI III 不可淋雨，也不可曝露在湿气当中，此外还应避免出现凝露。
- 脏污度 2，使 VDI III 周边区域保持整洁。

2.6 无线连接（蓝牙和 WLAN）

VDI III 运营方必须确保遵守各国的法规和限制令。

关于 WLAN 和蓝牙的重要提示

WLAN（无线局域网）是一种采用无线形式的本地无线网络。蓝牙和 WLAN 属于采用公用 2.4 GHz ISM（ISM：工业、科学、医疗）频段的无线连接。该频段受到国家相关部门的监管，但是在大多数国家可以直接使用，无需经过授权。因此很多应用和设备使用该频段。这就导致出现频率叠加，从而形成干扰。

视环境条件的不同，可能对无线连接造成不良影响，例如存在蓝牙连接、无线电话、无线温度计、车库门无线开门装置、无线光控开关或者无线警报装置时。

在 WLAN 网络中使用蓝牙连接可能影响带宽。蓝牙设备的天线与 WLAN 设备之间应至少相隔 30 厘米。可以使用 USB 延长线（特殊附件），将台式机/笔记本电脑的 USB 蓝牙适配器与 WLAN 天线进行空间上的隔离。

如果佩戴心脏起搏器或者其它性命攸关的电子设备，使用无线电设备时必须格外小心，避免产生不良影响。

遵守下列几点注意事项，可以改善连接效果：

- 无线电信号始终搜索直接路径。布局台式机/笔记本电脑和无线访问节点时，应使诸如铁门和水泥墙等障碍物尽可能少地干扰 VDI III 发出或者收到的无线电信号。
- 其次 WLAN/蓝牙在建筑物内的可达范围与建筑材料有关。传统的砖墙、木墙和各种干墙只对无线电波的传播有少量衰减。薄石膏墙会严重阻碍无线电波，因为石膏中可能聚集大量湿气从而屏蔽无线电信号。金属墙和混凝土（特别是钢筋混凝土）会强烈屏蔽无线电波。很多时候无线电波不能穿透地下室屋顶。总体来说，采用较多金属材料的墙体（例如管道、线路等）会对无线电波形成阻碍。
- 散热器和窗框等大型金属体以及主动式干扰源（比如手机、运动探测器和微波炉）也会影响无线信号的接收。
- 人体也会影响无线电传输。因此必须注意：人员不得进入发射器和接收器中间区域。
- 我们建议由网络专业人员安装和维护网络基础设施。
- 请妥善保管 WLAN 的 SSID 服务设置标识符和无线连接密码。确保发生故障后可以拿到这些数据。
- 调试时请仔细检查所处地点，确定 VDI III 在建筑的哪些位置可以正常工作，哪里是无线技术的极限。
- 无线波段受气候条件的影响。因此接收信号可能会发生变化。
- 如果有问题，请咨询网络专业人员。
- 如果无线连接出问题，您可以放弃无线连接，转而激活并使用 USB 连接。

2.7 共同有效材料

名称	文件编号
快速启动指南	1 689 989 459
重要提示和安全须知	1 689 989 460
规格 - WLAN-USB 适配器	1 689 989 305

3. 安全提示

本操作说明书用于简便、安全地安装和使用 VDI III。使用 VDI III 和软件前，请仔细阅读本操作说明书和随附的材料。

4. 产品说明

4.1 按规定使用

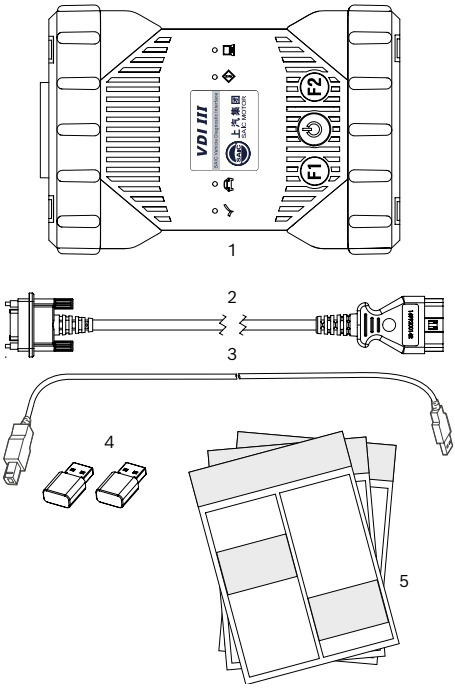
如果不按照供应商提供的使用说明书运行 VDI III 和随附的附件，会导致 VDI III 和随附附件支持的保护受损。

VDI III 是专业技术人员用于电气和电子车载系统诊断、维修和编程的测量仪。此外可以使用 VDI III 借助软件程序测量电平等。

4.2 供货范围

VDI III 基础套件包括用于与车辆进行数据传输的连接缆线和硬件，以及可以通过诊断接口对车辆控制装置进行重新编程的连接线和硬件。

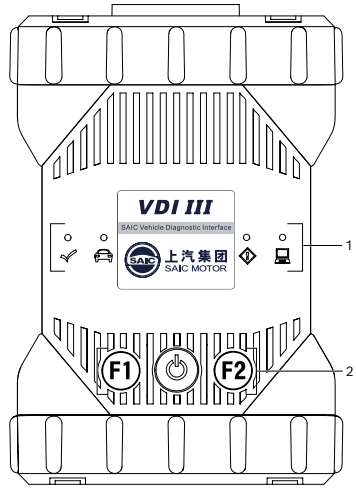
供货范围取决于所订购的产品类型和特殊附件，可能与下表存在差异。

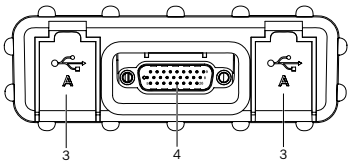


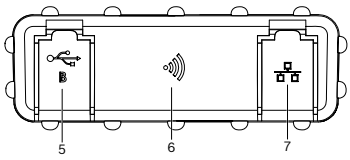
编号	套件部件	ET 编号	件
1	VCI 系统测试仪	1 699 200 873	1
2	诊断连接线（数据传输，符合 J1962 规定）	1 699 200 366	1
3	USB 连接缆线，A 到 B，3 m	F00K.108.653	1
4	WLAN U 盘	-	2
5	同时有效文档	-	3

4.3 VDI III 接口和操作元件

VDI III 上带有各种按键和标准化接口，可用于操作设备或连接车载电源及车间网络。下图中展示了这些接口和按键。







编号	说明
1	LED 状态指示灯
2	操作键
3	2x USB-A 接口
4	连接诊断连接线
5	USB-B 接口
6	无线网络适配器
7	以太网接口

4.4 通用串行总线（Universal Serial Bus，USB）接口

VDI III 具备固定的 USB 配置，不得更改。应确保 VDI III 始终与运行着"VCI Manager"或用户软件的单个计算机保持连接状态，由此来进行局域网所需的 LAN 或 WLAN 设置。此外，USB 连接还可以用于在 VDI III 中对固件进行配置与更新，将台式机/笔记本电脑与 VDI III 进行配对。

4.5 Wireless Local Area Network（WLAN，无线局域网）

调整和配置 WLAN 连接（802.11b/g/n）期间，必须通过 USB 将 VDI III 连接到运行着"VCI Manager"软件的计算机上并与计算机进行配对。

4.6 VDI III 其他属性

4.6.1 数据传输

通过 26 针的诊断连接线实现 VDI III 和车辆电子装置之间的连接。

4.6.2 电源

VDI III 专为通过诊断连接线从车辆电池进行馈电而设计。要进行数据传输或系统升级，也可以通过 USB 由台式机对 VDI III 进行供电。

如果要配置用于无线连接的 VDI III，则必须通过 USB 连接缆线进行供电。

4.6.3 LED 状态指示灯

在 VDI III 的正面安装了四个发光二极管 (LED)。LED 灯显示以下状态信息。

符号	颜色 状态	LED 功能
	绿色	VDI III 无故障
	红色	出现故障，执行重置
	绿色	VDI III 与车辆连接
	闪红光	未连接 12 或 24 V 外部电源
	关闭	VDI III 无故障
	红色	出现故障或者执行 VDI III 的系统恢复
	关闭	VDI III 未连接计算机
	闪绿光	VDI III 已连接计算机
	关闭	VDI III 已关闭
	绿色	VDI III 已开启
F1	黄/绿	取决于用户软件
F2	黄/绿	取决于用户软件

4.7 VCI Manager 启动器

借助于在主机上运行的 Windows 程序 "VCI Manager 启动器"，用户可以从网络中的各种 VCI 中进行选择。选择 VCI 之后，可以直接在 VCI Manager 中进行进一步的设置。VCI Manager 启动器会自动打开 VCI Manager。

4.8 VCI Manager

用户可以借助主机上运行的"VCI Manager"Windows 程序配置并更新 VDI III。此外，"VCI Manager"还可以用于配置诊断设备与主机之间的连接，以及更新诊断设备的固件。

4.9 系统配置

通过"VCI Manager"软件设置和更新 VDI III。"VCI Manager"安装在计算机上。在相应的用户软件中对 VDI III 进行操作。

下列系统前提条件与"VCI Manager"软件的使用有关。用户软件的前提条件可能有所差别。

- Windows 7、Windows 8 或 Windows 10 （32-Bit和 64-Bit）
- 100 MB 可用硬盘空间
- 512 MB RAM
- 1 GHz 处理器
- 1 个可用 USB 接口
- 1024x768 显示器分辨率

5. 操作

以下为开始使用 VDI III 所需的信息。包括"VCI Manager"软件的安装、设备固件的更新、连接方式的配置以及与车辆的通信。

5.1 安装须知

请注意用户软件的安装提示。

5.2 安装软件

需要"VCI Manager"软件和关联的"VCI Manager启动器"来设置和管理VDI III。该软件可以从您的贸易伙伴处下载。

1. 下载 VCI Manager和 VCI Manager启动器。
2. 双击 "**setup.exe**" 安装 VCI Manager和 VCI Manager 启动器。

➜ 正在安装 VCI Manager 和 VCI Manager 启动器。

3. 阅读并遵守随附的安全须知和所下载的VDI III操作说明书中的所有备注。

5.3 诊断设备的硬件安装

5.3.1 连接诊断测试器

VDI III必须先连接 VCI Manager 启动器，然后才能更新固件。

4. 将 VDI III 通过 USB 连接缆线与计算机相连。

   ⇨ VDI III 在恢复模式下起动。（仅限出厂设置）

5. 启动"VCI Manager 启动器"程序。

   ⇨ VCI Manager 启动器显示网络中可用的 VCI 列表。

6. 选择所需 VDI III 并通过 <**OK**> 确认。

➜ VCI Manager 启动器从 USB 配置开始。

USB 配置需要持续几分钟。过程中不要将 VDI III 与计算机断开。

5.3.2 诊断设备软件更新

VDI III 出厂时未安装固件。安装或更新诊断设备固件时的操作如下。

7. 将 VDI III 通过 USB 连接缆线与计算机相连。

   ⇨ VDI III 在恢复模式下启动（仅限出厂设置）。

8. 启动"VCI Manager 启动器"程序。

   ⇨ VCI Manager 启动器显示网络中可用的 VCI 列表。

9. 选择所需 VDI III 并通过 <**OK**> 确认。

   ⇨ <**连接**>按键的名称现在变为<**恢复**>。

在初次连接 VCI Manager 时显示 VDI III，不显示其序列号。

10. 利用 <**恢复**> 按键开始更新过程。

更新过程中不要将 VDI III 与计算机断开。

11. 点击 <**开始更新**> 按键将固件安装到 VDI III 上。
12. 点击 <**OK**> 继续。
13. 升级持续约 5 分钟。更新过程结束后，VDI III 自动重新启动。当 VDI III 的信号音响起后才可以继续使用 VDI III。

5.3.3 利用 VCI Manager 配置 VDI III

为了在网络连接前对 VDI III 进行配置，必须通过 USB 将 VDI III 连接在运行着 VCI Manager 的计算机上。点击〈**连接**〉，VDI III 上的 VCI Manager 符号将显示建立连接所需使用的通信方法。

符号	说明
	VCI Manager 通过 USB 接口与 VDI III 建立连接
	VCI Manager 通过以太网接口与 VDI III 建立连接
	VCI Manager 通过 WLAN 与 VDI III 建立连接
	未建立点对点无线连接。建立连接时，借助 USB 连接缆线将 VDI III 连接在计算机上。
	计算机上和检测设备上的无线适配器不兼容。
	VCI Manager 已经连接 VDI III

配置 VDI III 时需要执行下列步骤。

1. 双击计算机桌面上的 VCI Manager 图标启动"VCI Manager"软件。
2. 在 "**VCI Explorer**" 中选择 VDI III。
3. 点击〈**连接**〉按键，以便通过 USB 与所选 VDI III 建立连接。

➜ VDI III 此时显示带有绿色小勾，表示 VCI Manager 此时控制着此 VDI III。

4. 点击〈**显示详情**〉按键查看有关所选 VDI III 的更多信息。

如果 VDI III 已经连接了网络内的另一台计算机，VCI Manager 会识别到这一情况，将无法建立连接。

如果 VDI III 通过 USB 与计算机连接，则可以使用所有选项卡上的 VCI Manager 功能。如果 VDI III 未通过 USB 连接，则无法选择 "**网络设置**" 和"VDI III 更新"选项卡上的功能。

5.3.4 检查计算机和 VDI III 的软件版本

确保安装在计算机上的"VCI Manager"软件的版本与安装在 VDI III 上的软件版本一致，这样 VDI III 才能正常运行。检查软件版本时操作如下。

1. 借助 USB 连接缆线将 VDI III 与计算机相连。
2. 双击计算机桌面上的 VCI Manager 图标启动"VCI Manager"软件。
3. 在 "**VCI Explorer**" 中选择 VDI III。
4. 点击〈**连接**〉按键，以便通过 USB 与所选 VDI III 建立连接。
5. 通过 "**帮助**" 调用软件版本的详细信息。

5.4 设置 WLAN 连接

借助 WLAN 连接可以通过车间网络与 VDI III 通信。VCI Manager 中的 **"网络设置"** 选项卡提供了用于选择和配置 VDI III 网络接口的多种功能，其中还包括 WLAN 的设置及安全性。

可以接受 **"Network Setup"**（网络设置）选项卡中的设置，但必须通过 USB 连接 VDI III。如果没有 USB 连接，则禁用 **"网络设置"** 选项卡。

VDI III 支持点对点无线连接模式。

点对点

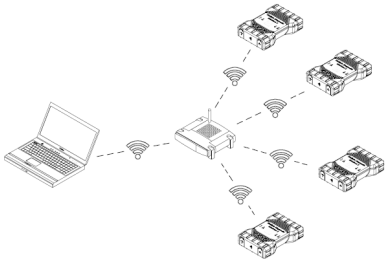
在点对点无线连接中，VDI III 借助 USB-WLAN 适配器直接与建立连接。以下内容将介绍不同类型的连接方式。

5.4.1 通过访问节点激活 WLAN 连接

VDI III 可以配置为通过无线接入点进行连接。配置前必须进行如下准备：

- 可以为 VDI III 分配 IP 地址和子网掩码（如果现有 LAN 不自动分配 IP 地址）
- 无线网络接入点 SSID（网络名称）
- 启用网络安全标准 WPA2
- 通过 TKIP 或 WEP（64-Bit 或 128-Bit）进行数据加密
- WLAN 密码

下图显示了几个通过无线接入点连接到单台计算机的 VDI III。



使用以下步骤配置 VDI III 以在网络环境中进行无线连接。在开始设置之前，请与您的 IT 管理员联系。

1. 双击计算机桌面上的 VCI Manager 图标启动"VCI Manager"软件。
2. 将 VDI III 连接在 12 V 外部电源上。
3. 将 USB 线插入计算机和 VDI III 并等待，直至 VDI III 完全起动运行。

4. 在 VCI Manager 中与 VDI III 建立连接。
5. 选择 "**网络设置**" 选项卡。
6. 在"**无线（802.11）**"选项卡中，选择"**启用无线接口**"

   ⇨ 输入掩码"**IP 地址的配置**"变为激活状态。
7. 如果您的网络自动分配 IP 地址，请选择"**自动接收 IP 地址**"选项。

如果您的网络基于固定 IP 地址，您将从 IT 管理员处收到相应的 IP 地址和子网掩码。

8. 选择 <**Access Point**>>。
9. 分配网络名称：

- 如果网络使用隐藏的 SSID 或超出范围，您可以使用输入网络名称（SSID）选项输入网络名称。
- 如果网络在范围内，则可以通过"从可用网络列表中选择"选项选择网络。VDI III 通过 <更新> 搜索可用的 WLAN 信号。

10. 输入网络名称后，通过 <**配置**>> 继续。
11. 输入网络安全设置，然后选择 <**继续**>。
12. 选择 <**是**> 进行 VDI III 重新配置，或选择 <**否**> 进行中止。
13. 选择"设置"选项卡，检查VDI III配置是否正确。
14. 通过断开 USB 连接，您可以检查配置是否成功。
15. 保存设置以供以后更改。

5.4.2 激活无线直接连接（点对点）

VDI III 可以采用点对点无线连接。下图显示单个诊断设备通过点对点无线连接模式与计算机建立连接。

将 VDI III 配置成点对点模式需要执行下列步骤。
下列说明适用于计算机 Windows 7 系统下的操作。视操作系统而定，所需步骤可能与此存在差异。

1. 将 WLAN-USB 适配器插入计算机的一个可用 USB 接口中。

不要将 WLAN 适配器插入 USB 集线器中。

2. 接通计算机。
3. 将 VDI III 通过 USB 连接缆线连接在计算机上并等待，直至 VDI III 完全起动运转。

不要将 VDI III 的 USB 线连接到 USB 集线器上。

4. 启动"VCI Manager"程序。

自动采用点对点连接模式。如果通过 DLC 电缆供电，则采用无线连接模式。

若要重置点对点连接的密码，需要执行下列步骤。

1. 点击 Windows 任务栏中的无线网图标。

   ⇨ 显示计算机可达范围内可用无线网的列表。
2. 选择"**打开网络和共享中心**"。
3. 在左侧列中选择"**无线网络管理**"选项。
4. 选择"**更改适配器**"菜单，点击列表中的诊断设备。
5. 移除保存的点对点网络连接。名称由字符串 "MTS 6531" 和 VDI III 序列号的后 8 位组成 (MTS 6531xxxxxxxx)。
6. 利用 USB 线恢复 VDI III 与计算机的连接时需要设置新密码。

5.4.3 恢复出厂设置

将 VDI III 恢复出厂设置时，点对点连接的设置将重置为出厂状态。保留 VDI III 上安装的所有软件更新。重置完成后，VCI Manager 中将显示 "**VCI Explorer**" 选项卡。无线访问点的配置被全部删除。

1. 启动"VCI Manager"程序。
2. 将 VDI III 连接在 12 V 外部电源上。
3. 将 USB 线插入计算机和 VDI III 并等待，直至 VDI III 完全起动运行。
4. 在 VCI Manager 中与 VDI III 建立连接。
5. 选择 "**网络设置**" 选项卡。
6. 点击 <**Set Factory Dafault**> (恢复出厂设置)。

➜ VDI III 恢复为出厂设置。

5.5 将诊断设备连接到车辆上

VDI III 的车辆连接套件包含一根连接 VDI III 与车辆的 DLC 接口 (SAE J1962) 所需的诊断连接线。

根据所需检查车辆的电路图可以确定 DLC 接口在车辆上的安装位置。

1. 将诊断连接线的 26 极插头插入 VDI III 的上侧，然后拧紧螺栓。
2. 将诊断连接线的 16 极插头连接在车辆的 DLC 接口上。

将诊断设备连接到电源上

通过车辆的 12 或 24 V 电池为 VDI III 供电。

小心 - 不允许使用的附件 - 功能故障

人员伤害危险

➢ 不允许将不属于 Bosch 的电缆与本设备一同使用；也包括 Bosch 部分无关的 USB 电缆。

小心 - 电缆 - 过载

人员伤害危险

➢ 确保每根与耐高电流电源（如 12 V 汽车电池）连接的电缆均状态良好。VDI III 受到自有内部保护装置的保护。电缆自身出现故障（尤其是发生对地短路）可能产生危险，从而导致受伤。

小心 - 环回自测适配器 - 过载

人员伤害危险

➢ 如果电路受到保险丝、断路开关或者限流电源保护，则只能通过自检式适配器空心连接器为 VDI III 供电。保险丝、断路开关或限流电源最高只能设置为 3 A。

5.6 执行 VDI III 复位

1. 断开 VDI III 的电源。
2. 至少等待 20 秒。
3. 重新连接 VDI III 的电源。

5.7 环回自测

利用自测适配器可以对 VDI III 进行环回自测。因此，请按照下列步骤操作。

1. 将诊断连接线连接到 VDI III 上。
2. 连接诊断连接线车辆端的自测适配器。
3. 通过车辆接口或者 12 V 电源驱动自测适配器运行。
4. 启动 VCI Manager 并连接 VDI III。
5. 在 VCI Manager 中选择 "Help"（帮助）。
6. 点击 <Cable Test>（**电缆检测**）开始测试。

6. 故障排除

本章节介绍了当 VDI III 功能出现故障时所应采取的措施。如果通过规定的补救措施不能排除故障，则必须通知服务部门。

6.1 接通后 VDI III 故障 LED 亮光

建议

1. 关闭 VDI III 并检查，当重新接通电源时是否出现同样的问题。
2. 将 VDI III 通过 USB 连接到计算机上，然后执行恢复过程。

6.2 VDI III 未自动启动

VDI III 应在接通外部电源后立即启动。如果 VDI III 未自动启动，首先检查电缆连接。然后尝试将 VDI III 与两个电源中的另一个电源（DLC 或 USB 接口）连接。

建议

➢ 检查 VDI III 的导线是否固定到位以及触点是否洁净。

- 如果诊断设备连接在车辆的 DLC 接口上，则尝试通过 USB 接口供电。
- 如果通过 USB 接口为诊断设备供电，则尝试通过车辆的 DLC 接口供电。

6.3 "车辆"LED 闪红光

如果 VDI III 在诊断连接线的针 16 上未检测到 12 V，则 VDI III 会将这一情况告知用户，方法是车辆 LED 自动接通并闪红光。如果仅通过一个 5 V USB 接口为 VDI III 供电或者诊断连接线被意外从车辆的数据传输连接器 (DLC) 上拔下并由备用电容器供电，则可能出现这种情况。如果 VDI III 在针 16 上检测到 12 V，则车辆 LED 停止闪红光。

建议

1. 确保诊断连接线的针 16 上电压为 12 V。
2. 确保 J1962 针 5 接地良好。

6.4 VDI III 扬声器发出哔声

如果 VDI III 对计算机执行诊断服务并且未在诊断连接线的针 16 上检测到 12 V 电压，则 VDI III 会通过扬声器的哔声将断电情况告知用户。VDI III 发出哔声，直至备用电容器没电。如果 VDI III 在针 16 上检测到 12 V 电压，则扬声器哔声停止。

建议

➢ 确保在诊断会话中诊断连接线的针 16 上电压为 12 V。

6.5 如果在诊断会话过程中与车辆断开连接，VDI III 立即自动关闭

如果 VDI III 在起动过程中或者在 DLC 连接断开后未保持启动状态，则可能会在内部电容器充电时出现问题。
如果在发动机起动过程中断电或者在诊断会话过程中与电源（车辆 DLC）断开连接，VDI III 必须保持启动状态。VDI III-扬声器发出哔声，通知用户供电在诊断会话过程中意外中断。

建议

1. 检查车辆 DLC 上的 12 V 电源。
2. 确保 VDI III 至少与车辆 DLC 连接 90 秒，以便为内部电容器充电。

6.6 VDI III 上的"小钩"LED 闪烁

如果 VDI III 的内部温度超出上限，VDI III 会自动关闭无线适配器。用户可以通过"小钩"LED 闪烁得知。如果 VDI III 的内部温度降至一个允许的数值，无线适配器将重新激活进行无线通信。

建议

➢ 将 VDI III 置于车辆附近温度较低处。

6.7 怀疑诊断连接线出现故障

如果怀疑诊断连接线出现故障，请对 VCI Manager 进行电缆检测。"VCI Manager"软件支持利用自测适配器进行电缆检测。电缆检测将查明诊断连接线是否出现故障。检测所使用的自测适配器不能用于车辆通信。执行下列步骤。

1. 将诊断连接线连接到 VDI III 上。
2. 将自测适配器连接在诊断连接线车辆端。
3. 通过车辆接口或者 12 V 电源驱动自测适配器运行。
4. 启动 VCI Manager 并连接 VDI III。
5. 在 VCI Manager 中选择 "**Help**"（帮助）。
6. 点击 <Cable Test>（**电缆检测**）开始测试。

➜ "VCI Manager"软件对诊断连接线执行一系列检测。结果显示为 "PASS"（通过）或 "FAIL"（未通过）。

6.8 通过加密狗 DWA 131 E1 与网络进行无线通信失败

D 连接加密狗 DWA 131 E1 不能用于进行计算机与网络间的无线通信。加密狗 DWA 131 E1 只能与 VDI III 配合用于点对点通信或者无线公共设施通信。

建议

调整能源选项：

7. 按 <**Win**> + <**X**> 并从显示的列表中选择 ″**设备管理器**″。
8. 在显示的设备列表中，右键单击条目 ″**DWA 131**″。
9. 点击″**属性**″。
10. 选择 ″**电源管理**″ 选项卡。
11. 取消勾选"**计算机可以关闭设备来节能**"选项。

排除干扰源

12. 确保不要将两个 D 连接加密狗连接到计算机上。
13. 确保装有 DWA 131 E1 加密狗的计算机未连接到车间网络，而不是 VDI III。

6.9 在 VCI Manager 中使用该设备后通过 VDI III 显示一个黄色符号

在某些情况下，Windows 无法检测到是否安装了无线适配器 DWA 131 E1。此时，Windows 可能会创建一个新的无线配置文件，而不使用已经保存在计算机上的文件。通过 VDI III 显示的黄色图标表示必须将在 VDI III 和计算机之间插入 USB 连接缆线。

建议

➢ 取下无线适配器，然后重新安装。Windows 尝试识别无线适配器。如果成功，黄色图标将消失，VDI III 做好进行点对点无线连接的准备。

6.10 计算机应用无法通过 USB 与 VDI III 通信

首先，必须在计算机上安装 VCI Manager，VDI III 启动后连接才能正常运转。必须通过 USB 接口对 VDI III 进行配置，设备才能通过另一种连接方式进行通信。

建议

如果使用除 VCI Manager 以外的其他应用与 VDI III 建立连接，则操作如下：

➢ 在 Windows 防火墙的设置中检查应用是否被禁用。

如果安装的所有应用都无法与 VDI III 建立连接，则进行如下操作：

14. 借助 USB 连接缆线将 VDI III 与计算机相连，而不是车辆。

! 不要将 VDI III 的 USB 线连接到 USB 集线器上。

15. 确保 USB 连接缆线已牢固插入，VDI III 已完全运转起来。
16. 启动″VCI Manager″程序。
17. VCI Manager 是否检测到 VDI III?

如果″否″：

- 尝试使用计算机上的另一根 USB 连接缆线/另一个 USB 端口。
- 在 Windows 防火墙的设置中检查 VCI Manager 是否被禁用。
- 检查 Windows 是否检测到 VDI III 通过 USB 建立连接。

6.11 计算机应用无法通过 WLAN 或以太网与 VDI III 通信

18. 检查 WLAN-USB 适配器在 VDI III 内是否正确装配。
19. 确保 VDI III 能够通过 USB 建立连接。
20. 在点对点连接时确保计算机上只连接了一个加密狗：

- 将 VDI III 通过 USB 与计算机相连。
- 在 VCI Manager 中，确保连接已激活，IP 配置正确。

21. 使用工厂自有 WLAN 网络时：
与 IT 部门取得联系，检查计算机是否检测到接入点，VDI III 安全设置的配置是否正确。

7. 清洁与维护

只用软布和中性清洁剂清洁 VDI III 的外壳。不要使用任何摩擦性的清洁剂和质地粗糙的车间抹布。

VDI III 不包含任何用户可维护的部件。不要打开 VDI III，否则会导致保修期失效。

➢ 不得将 VDI III 或任何部件以及附件浸入水中。
➢ 虽然 VDI III 及附件不受水侵蚀，但并不防水。存放之前应彻底擦干。
➢ 避免使用侵蚀性溶剂，如含有石油、丙酮、苯、三氯乙烯等的清洁剂。

7.1 恢复 VDI III 的系统软件 (Recovery)

软件升级期间如果出现断电或连接故障，则会损坏 VDI III 的软件。在这种情况下，必须执行恢复：

1. 借助 USB 连接缆线将 VDI III 与计算机相连。
2. 启动 VCI Manager。
3. 在 "VCI Explorer" 中选择 VDI III。
4. 按住VDI III上的启动键至少 5 秒，启动恢复 (Recovery)。

   ⇨ VDI III 图标在 VCI Manager 中标记为 "Recovery"。
5. 在 VCI Manager 中选择 VDI III。
6. 执行还原。

7.2 备件和磨损件

套件部件	ET 编号
VCI 系统测试仪	1 699 200 873
诊断连接线（数据传输，符合 J1962 规定）1)	1 699 200 366
USB 连接线缆，A 到 B，3 m1)	F00K.108.653
WLAN U 盘1)	1 687 010 590
检测适配器（自检）1) 2)	1 699 200 154

1) 易损件
2) 特殊附件

8. 停止运行

➢ 切断 VDI III 的电源。

8.1 暂时停用

长时间闲置时：

➢ 切断 VDI III 的电源。

8.2 更换位置

➢ 转交 VDI III 时，需要同时提供供应范围内包含的所有文件资料。

➢ 运输 VDI III 时，必须使用原包装或者同质包装。

➢ 注意首次调试的提示信息。

➢ 断开电气连接。

8.3 废弃处理

VDI III、配件和包装必须进行环保回收再利用。

➢ 切勿将 VDI III 按照家庭垃圾进行处理。

仅适用于欧盟国家：

VDI III 遵循欧洲准则 2012/19/EU (WEEE)。废旧电气/电子器件，包括线路、配件和电池，均须与家居垃圾分开处理。

➢ 使用现有的归还系统和收集系统来进行回收利用。

➢ 按规定处理，避免破坏环境和损害人身健康。

9. 术语表

术语	说明
AC	交流电 (Alternating Current)
波特率	通过串联数据连接传输数据的速度
BPS	每秒的数位
计算机	Personal Computer
DC	直流电 (Direct Current)
DCE	数据传输装置 (Data Communication Equipment)
DLC	数据传输接口 (Data Link Connector)
DTE	数据接收设备 (Data Terminal Equipment)。此处指与 RS232 接口相连的设备。
ECU	发动机控制单元 (Engine Control Unit)
ECM	发动机控制模块 (Engine Control Module)
以太网	根据 IEEE 802.3，使用双绞线以标准化方式将系统连接到网络。
Hz	赫兹 - 频率单位
I/P	设备接口 (Instrumentation Port)
I/O	输入/输出 (Input/Output)
I/F	接口 (Interface)
局域网	局域网 (Local Area Network)
LED	发光二极管 (Light-Emitting Diode)
MTS 6531	系统测试仪的类型，与 VDI III 相符
OBD	车载诊断
OEM	原始设备制造商 (Original Equipment Manufacturer)
PCM	发动机控制模块 (Powertrain Control Module)
PCU	发动机控制单元 (Powertrain Control Unit)
RCV	接收 (Receive)
RS232C	标准串行接口
SCI	串行接口 (SERIAL COMMUNICATION INTERFACE)
USB	Universal Serial Bus - 计算机接口标准
VCI	与车辆进行数据传输的接口 (Vehicle Communication Interface) 诊断仪缩写
Vdc	直流电压，伏
WLAN	无线局域网 (Wireless Local Area Network)

10. 技术参数

属性	数值 / 范围
主机接口	
电缆连接	高速 USB 480 Mbps 以太网 10/100 Mbps
WLAN U 盘	802.11b/g/n
处理器系统	
微处理器	Intel MX6 Solo
频率	800 MHz
RAM	512 MB DDR3 RAM
ROM	256 MB 闪存
用户界面	
LED 指示灯	4 个状态 LED 指示灯 3 个亮灯按键
信号传感器	信号音
电源	
由车辆电池通过诊断连接线供电，或由 PC 通过连接的 USB 线供电。 注意：必须使用最大 6 A/32 V 的保险丝保护车辆诊断插口。	7 V - 32 V，750 mA 5 V，0.5 A
机械属性	
尺寸	165 x 115 x 40 mm（6.5 x 4.5 x 1.6 英寸）
重量	0.24 kg（0.53 lb）
工作温度	-20 ° C - +70 ° C（-4 ° F - 158 ° F）
储存温度	-20 ° C - +80 ° C（-4 ° F - 176 ° F）
25 ° C 时的空气湿度	30 % - 95 %
最大工作海拔高度	4000 m
未插入诊断连接线时的防护等级	IP 30
插入诊断连接线后的防护等级（按照 IEC 60529 标准）	IP 54，等级 2
诊断连接线	
J1962（ISO 15031-3）耐压强度	DLC 26 极 18 V，等级 0

11. 危險物質的標記

按照 SJ/T 11364（中國"關於限制在電子電器設備中使用某些有害成分的指令"2）條例準備本表。
本產品和其部件的環保使用期限（EFUP）是 10（10）年。

元件名稱	有害物質					
	鉛 (PB)	汞 (HG)	鎘 (CD)	六價鉻 (CR(VI))	多溴聯苯 (PBB)	多溴二苯醚 (PBDE)
組裝的印刷電路板（APCB）	x	O	O	O	O	O
座體	O	O	O	O	O	O
配件	O	O	O	O	O	O

O: 表明在此部件所有均質材質中上述的危險物質含量低於 GB/T 26572 標準所要求的限量。

X: 表明在此部件所有已使用過的均質材質中上述的危險物質含量高於GB/T 26572 標準所要求的限量。

產品環境資訊指明的方向
請遵照本產品的使用與維護指示。不當使用或處理本產品可能會影響環境和人類的健康。

依照國家"廢棄電子電機產品回收規定"相關條例。當您計畫丟掉廢棄物時，請帶給擁有企業處理廢棄電子電機產品資格的公司予以處理。該產品中危險物質的內容請參考上表。

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