HELLA GUTMANN SOLUTIONS

mega macs 42 SE

User Manual

en

Original User Manual

HBMM42SEV5100EN0217S0
460 987-22 / 02.17

Table of Contents

1 About this Manual

1.1 Reading the Manual

Please read the user manual completely. Pay special attention to the first pages containing the safety notes and the conditions of liability. They exclusively deal with your safety during the work with the device.

When working with the device, it is recommended to read the individual work steps in the manual again to prevent hazard of persons and equipment or operating errors.

The device shall be used exclusively by a qualified person. Information and knowledge included this training is not explained in this user manual.

1.2 Marking of Text Parts

	**DANGER** Text parts marked in this way indicate an imminent dangerous situation which, if not avoided, will lead to death or severe injuries.
	**WARNING** Text parts marked in this way indicate a potentially dangerous situation which, if not avoided, will lead to death or severe injuries.
	**CAUTION** Text parts marked in this way indicate a potentially dangerous situation which, if not avoided, will lead to minor or slight injuries if it is not avoided.
	**NOTICE** All texts labeled **NOTICE** refer to a hazard in the device or environment. Therefore, it is absolutely necessary to observe the notes or instructions stored here.
	**NOTE** Texts marked with **NOTE** contain important and helpful information. It is recommended to observe these texts.
	**Struck-through waste bin** This label indicates that the product must not be discarded as domestic waste. The bar underneath the waste bin indicates whether the product was "placed on the market" after August 13, 2005.
	**Direct current voltage** This label indicates a direct current voltage. Direct current voltage means that the electrical voltage does not change over a longer period of time.
	**Observe user manual** This label indicates that the user manual must always be read and always be available.

2 User Information

2.1 Safety Precautions

2.1.1 General Safety Precautions

⚠	• The device is intended for use on motor vehicles only. It is a precondition for the use of the device that the user has knowledge of automotive technology and is therefore aware of the sources of danger and risks in the workshop and on motor vehicles. • Please read the entire user manual of the mega macs 42 SE thoroughly and carefully before using the device. You can also find the mega macs 42 SE user manual on the DVD enclosed. • All notes given in the individual sections of this user manual apply. The following measures and safety precautions must also be followed. • Furthermore, pay attention to all general instructions from labor inspectorates, trade associations and vehicle manufacturers as well as all laws, legal ordinances and instructions which have to be commonly obeyed by a repair shop.

2.1.2 Safety Precautions for the mega macs 42 SE



To prevent incorrect handling and consequent injuries to the user or damage to the device, observe the following:

- Only connect original power adapter to the power cord (supply voltage 12 V).
- Protect the LC display and the device from long periods of exposure to solar radiation.
- Protect the device and the connecting cable from hot components.
- Protect the device and the connecting cables from rotating parts.
- Regularly check the connecting cables/accessory parts for damage (destruction of the device due to short circuit).
- Connect the device exclusively according to user manual.
- Keep the device away from fluids such as water, oil or gasoline. The mega macs 42 SE is not waterproof.
- Protect the device from strong impacts (do not drop).
- Do not open the device on your own. Only technicians authorized by Hella Gutmann are allowed to open the device. Warranty and guarantee will be rendered void at any case of unauthorized tampering of the device or if the protective seal is damaged.
- If the device malfunctions, contact Hella Gutmann or a Hella Gutmann trading partner without delay.

2.1.3 Safety Precautions for High Voltage/Line Voltage

	Very high voltages occur in electrical systems. Due to voltage flashover on damaged components, such as marten damage or touching live components, the risk of electric shock is likely. High voltage via the vehicle and line voltage via the building's mains supply can cause severe injury or even death if adequate care is not taken. Therefore regard the following: • Only use power supply cables with grounding contact. • Only use a checked or the attached power cord. • Always use the original cable set. • Regularly check cables and adapters for damage. • Always connect the ground cable from device to vehicle first. • Perform any assembly work such as the connection of the device to the vehicle or the replacement of components only when ignition is switched off. • Do not touch live components when ignition is switched on.

2.1.4 Safety Precautions – Risk of Injury

When working on the vehicle, there is a risk of injury through rotating parts or rolling of the vehicle. Therefore regard the following:

- Prevent the vehicle from rolling.
- Additionally, place the gear selector to park position in vehicles with automatic transmission.
- Deactivate the start/stop system to avoid an inadvertent engine start.
- Connect the device to the vehicle only when engine is shut down.
- Do not reach into rotating components when engine is running.
- Do not run cables near rotating parts.
- Check the high-voltage parts for damage.

2.1.5 Safety Precautions – Chemical Burns

Escape of the liquid crystals due to a damaged LC display can cause chemical burn. Therefore regard the following:

- Immediately rinse affected parts of the body or clothing with water (consult a doctor).
- Seek medical attention immediately after inhaling or swallowing.

2.1.6 Safety Precautions for Hybrid/Electric Vehicles

Very high tensions occur on hybrid and electric vehicles. Due to voltage flashover on damaged components, such as marten damage or touching live components, the risk of electric shock is likely. High voltage at or in the vehicle can lead to death in case of inattention. Therefore regard the following:

- Only the following qualified employees are allowed to de-energize the high-voltage system:
  - High-voltage technician
  - Skilled electrician for predetermined operations – Hybrid or rather electric vehicles
  - Skilled electrician
- Place warning signs and warning tapes.
- Check the high-voltage system and the high-voltage lines for damage (visual inspection!).
- De-energizing the high-voltage system:
  - Switch off ignition.
  - Disconnect the service disconnect plug.
  - Remove the fuse.
- Securing the high-voltage system against re-activation:
  - Withdraw the ignition key and keep it safe.
  - Keep the service disconnect plug safe or secure the battery master switch against re-activation.
  - Insulate the battery master switch, the plug connections etc. with dummy plugs, covering caps or insulating tape with the corresponding warning notice.
- Check the de-energized state with a voltage tester. Even with disconnected high-voltage system, residual voltage can still be present.
- Ground and short-circuit the high-voltage system (necessary only if voltage is higher than 1000 V).
- Voltage below 1000 V: Cover the parts which are close to the system or which are energized e.g. with insulating cloth, hoses or plastic coverings. Voltage higher than 1000 V: Cover the parts with insulating plates/protective panels specially developed for this purpose so that sufficient protection against contact to adjacent parts is ensured.
- Regard the following before re-energizing the high-voltage system:
  - All tools and utilities are removed from the hybrid/electric vehicle.
  - Remove the grounding and short circuit of the high-voltage system. Do not touch any of the cables now.
  - Attach the protective paneling that has been removed before.
  - Remove the protective measures at the switching system.

2.2 Non-Liability

2.2.1 Software

2.2.1.1 Safety-Relevant Software Modifications

The present device software provides numerous diagnostic and configuration functions. Some of these functions affect the behavior of electronic components. These components also include components in safety-related vehicle systems e.g. airbag or brakes. The following notes and instructions also apply to future updates and related software extensions.

2.2.1.2 Performing Safety-Relevant Software Modifications

- Work on safety-related areas, e.g., the occupant safety system and the brake systems, may only be performed if the user has read and acknowledged this note.
- The user of the diagnostic device must comply fully with all work steps and conditions given by the device and the vehicle manufacturer, and follow the related instructions without fail.
- Diagnostic programs that make safety-related software modifications in the vehicle may and are only allowed to be used if the related warning notes including the declaration given in the following are accepted without reservation.
- It is imperative that the diagnostic program is used correctly, as programs, configurations, settings, and indicator lamps can be deleted/cleared with it. These changes affect and modify safety-related data and electronic controls, in particular safety systems.

2.2.1.3 Prohibition of Safety-Relevant Software Modifications

Changes or modifications to electronic controls and safety-related systems are not allowed to be made in the following situations:

- The ECU is damaged and it is not possible to read out the data.
- The ECU and its allocation cannot be read out unambiguously.
- Reading out is not possible due to data loss.
- The user does not have the related training and knowledge necessary.

In these cases the user is not allowed to change programs, configurations, or to make other changes in the safety system. To avoid any danger, the user has to contact an authorized dealer instantly. Only an authorized dealer can guarantee the safe function of vehicle electronics together with the factory.

2.2.1.4 Waiver of the Use of Safety-Relevant Software Modifications

The user undertakes not to use any safety-related software functions if one of the following conditions arise:

- There are doubts about the specialized skills of third parties to use these functions.
- The user does not have the prescribed training qualifications.
- There are doubts about the correct function of the safety-related software engagement.
- The device is transferred to a third party. Hella Gutmann Solutions GmbH is unaware of this fact and has not authorized the third party to use the diagnostic program.

2.2.2 Non-Liability

2.2.2.1 Data and Information

The information in the database of the diagnostic program has been compiled based on automotive and importer information. Great care was taken to ensure the correctness of the information. The Hella Gutmann Solutions GmbH accepts no liability for any mistakes and the resulting consequences. This statement also applies to the use of data and information that are found to be incorrect or that were incorrectly displayed, also to errors that occurred inadvertently during compilation of the data.

2.2.2.2 Burden of Proof on the User

The burden of proof is on the user of the device, that he has paid attention to technical explanations, notes on operation, equipment care as well as maintenance and safety without exception.

2.2.3 Data Protection

The Customer agrees that its data may be stored for implementing and executing the contractual relationship and that technical data may be stored for performing data audits relevant to data security, statistical analysis and quality control. The technical data shall be stored separately from personal data and shared only with our contractors. We are obliged to treat all customer data that we receive confidentially. We may only disclose customer data if statutory provisions permit or require such disclosure or if the Customer has agreed.

2.2.4 Documentation

The notes given in the device describe the most common fault reasons. However, there are often further reasons for existing faults, which cannot be listed here, or there are further sources of error, which are unknown yet. The Hella Gutmann Solutions GmbH is not liable for failed or unnecessary repair work.

The Hella Gutmann Solutions GmbH does not accept any liability for the usage of data and information that are found to be incorrect or that were incorrectly displayed, also for errors that occurred inadvertently during the compilation of the data.

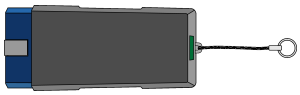
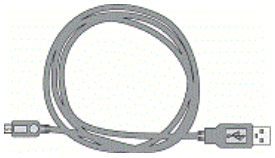
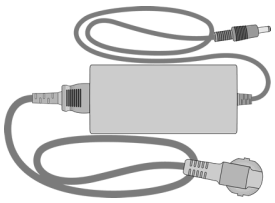
Notwithstanding the above, the Hella Gutmann Solutions GmbH does not accept any liability for any losses in relation to loss of profit, goodwill, or any other loss, including financial loss.

The Hella Gutmann Solutions GmbH accepts no liability for damages or operating trouble resulting from failure to observe the "mega macs" user manual and the special safety precautions.

The burden of proof is on the user of the device, that he has paid attention to technical explanations, notes on operation, equipment care as well as maintenance and safety without exception.

3 Device Description

3.1 Delivery Contents

Quantity	Designation	
1	mega macs 42 SE	
1	DT VCI	
1	Bluetooth adapter	
1	USB cable for connecting the DT VCI to the device	
1	USB cable for connection to a PC	
1 each	Power adapter and cable for the mega macs 42 SE	
1	Vehicle charging cable	
1	Quick Start Guide	
1	DVD	

3.1.1 Checking Delivery Contents

Please check the delivery contents upon receiving your device so that complaints can be issued immediately regarding any potential damage.

Proceed as follows to check the delivery contents:

1. Open the package supplied and check for completeness based on the delivery slip.

   Should you identify any damage to the package, then open the package in the presence of the delivery service and check the device for hidden damage. Any transport damage to the package supplied and damage to the device shall be registered in a damage report by the delivery service.

2. Take the device out of the packaging.

⚠	**CAUTION** Danger of short circuit due to loose parts in or on the device Danger of destruction of the device and/or the automotive electronics Never put the device into operation if you suspect that there are loose parts inside or on the device. In this case please contact the Hella Gutmann repair service or a Hella Gutmann trading partner immediately.

3. Check the device for mechanical damage and shake the device slightly to ensure that there are no loose parts inside.

3.2 Intended Use

The mega macs 42 SE is a mobile device for detecting and rectifying faults in automotive electronic systems.

It uses a diagnostic interface to establish a connection to the automotive electronics and to provide access to descriptions of the vehicle system. A lot of this data is transferred to the device directly from the Hella Gutmann diagnostic database via online connection. Therefore, the device must be permanently online.

The device is not suitable for repairing electrical machines and equipment or home electrics. Diagnostic devices from other manufacturers will not be supported.

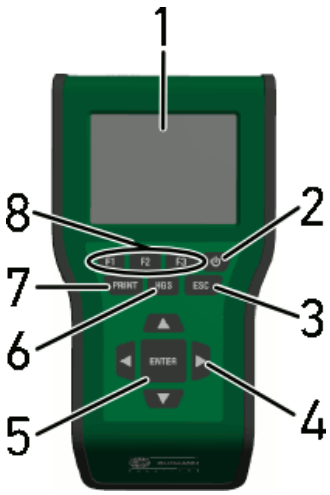
If the device is used in a way not authorized by Hella Gutmann, the safety of the device may be influenced.

3.3 Using the Bluetooth Function

The terms of use of the Bluetooth function may be restricted or prohibited through law or corresponding legal regulations in certain countries.

Observe the provisions in force in the respective country before using the Bluetooth function.

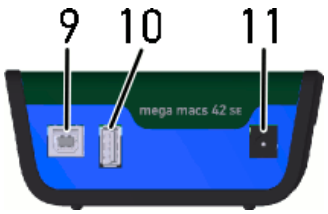
3.4 Front of Device



	Designation
1	**LC display** (liquid crystal color display)
2	**ON/OFF button** Switch the device on and off.
3	**ESC** Finish or cancel a function.
4	**Arrow keys** Navigate with the cursor in menus or functions.
5	**ENTER** Confirm a function, input, or menu selection.
6	**HGS** Call up information on the communication parameters. In case of a complaint, Hella Gutmann Solutions GmbH requires this information to detect and repair the fault. Leave the HGS menu with **ESC**.

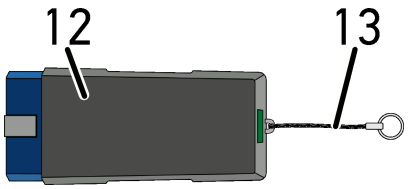
	Designation
7	**PRINT** Here you can use various functions such as: • Save screen shot • Print screen shot • The **Print** menu Gutmann Portal must be installed on the PC.
8	**Function keys** Start various functions such as: • VIN search • Search criteria for the vehicle identification • Connection help

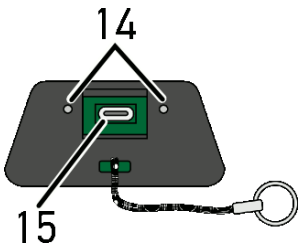
3.5 mega macs 42 SE connectors



	Designation
9	**USB device interface** Use the USB device interface for data exchange between the PC and the device.
10	**USB host interface** Connect external devices such as a printer or the DT VCI via the USB host interfaces (USB interface for short).
11	**Power supply socket** Voltage supply of the device and battery charge connection.

3.6 DT VCI connections





	Designation
12	DT VCI for diagnostic connector in the vehicle
13	Retaining strap for mounting e.g. a lanyard
14	**Green and blue indicator lamp (LED)** The indicator lamps show the operating status of the DT VCI.
15	Micro USB interface for USB cable to USB interface of the PC

3.7 Meaning of the Flashing Frequencies

Status display		Meaning
Blue LED	Green LED	
LED switched off.	LED switched off.	• Software inactive/faulty. • No voltage present. • DT VCI faulty.

Status display		Meaning
Blue LED	**Green LED**	
LED flashes quickly (1x per sec.).	LED switched off.	• Update failed. • Update invalid. • DT VCI faulty.
LED flashes slowly (every 3 sec.).	LED switched off.	• Update failed. • Update invalid. • DT VCI faulty.
LED flashes slowly (every 3 sec.).	LED permanently on with regular brief interruptions.	DT VCI ready for operation.

4 Installation of the HGS PassThru Software

4.1 Provision of HGS PassThru

Since 2010, the Euro 5 standard has been applicable for all new vehicles. It regulates, among other things, the type-approval of vehicles with regard to emissions. With the Euro 5 standard, manufacturers are obligated to provide independent repairers with unrestricted Internet access to all information relating to the maintenance and repair of the vehicles.

Only Euro 5-capable devices may be used to to program the ECUs. HGS PassThru is an interface used to install the latest software version from the online portal of the manufacturer on the vehicle ECU. The PassThru function is an add-on and does *not* replace the diagnostics. Here, Hella Gutmann establishes a direct communication between the manufacturer's OEM server (Original Equipment Manufacturer) and the vehicle.

Provision of the software varies depending on the manufacturer. The following options are available:

- Download the PC software
- Request the PC software on CD or DVD
- Online solutions

Here charges may accrue depending on the manufacturer e.g. for:

- Registration
- Licenses
- Software

The software content (scope of information and function) varies depending on the manufacturer. Some manufacturers provide the legally required functions and information only, whereas others provide additional data.

4.2 Supported Operating Systems for HGS PassThru

- at least Microsoft Windows 7 (32/64 bit)

4.3 System Requirements for HGS PassThru Driver

Hella Gutmann requires the following for installation of the HGS PassThru driver:

- at least 2 GB free internal memory
- at least 40 GB free hard disc space
- at least 1 free 2.0 USB port on the laptop/tablet
- web-compatible laptop or tablet

4.4 Installing the HGS PassThru Software

An installation wizard guides you through the necessary steps.

Proceed as follows to install the HGS PassThru software:

1. Switch on the laptop/tablet.

2. Call up the website of Hella Gutmann.
3. Select **WORKSHOP SOLUTIONS > SERVICE > PassThru**.
4. Select **DOWNLOADS > Software – PassThru**.
   The window **HGS PassThru Setup** is displayed.
5. Save the PassThru setup.exe with **>Save file<**.
   A target directory is suggested for the files of the PassThru setup.exe. If you wish to have another target directory then select a suitable directory. At the end of installation, the files will be copied into the selected target directory.
6. Save the PassThru setup.exe with **>Save<**.
   The PassThru setup.exe will be saved in the target directory.
7. Click the PassThru setup.exe in the target directory.
   The window **HGS PassThru Setup** is displayed.
8. Select the requested language with ▼.
9. Confirm the selection with **>OK<**.
   The selection is saved automatically. The setup wizard of HGS – PassThru is displayed.
10. Click **>Next<**.
    The general terms and conditions (GTCs) appear.
11. Read the GTCs and confirm them at the end of the text.
12. Click **>Next<**.
    Select a product to be able to install the HGS PassThru Setup software successfully.
13. Select **>HGS VCI<**.
14. Install the product with **>Install<**.
    Installation is started.
15. Wait until installation is finished.
16. Click **>Finish<**.
    A link to HGS PassThru will be automatically created on the desktop.

Installation of the HGS PassThru software is now complete.

5 Initial Start-Up of the HGS PassThru Software

This section describes how the HGS PassThru software is used.

5.1 Preconditions for Initial Start-Up of HGS PassThru

- Voltage supply of device and laptop or tablet through mains supply and mains cable is ensured.
- Laptop or tablet is booted.
- Laptop or tablet available for connecting vehicle to the Internet.
- HGS PassThru file correctly installed on laptop or tablet.
- Admin rights available.
- Latest Java version installed.
- Stable Internet connection
- All processes/programs that have been started or are running in the background are closed.

5.2 Running the HGS PassThru Software

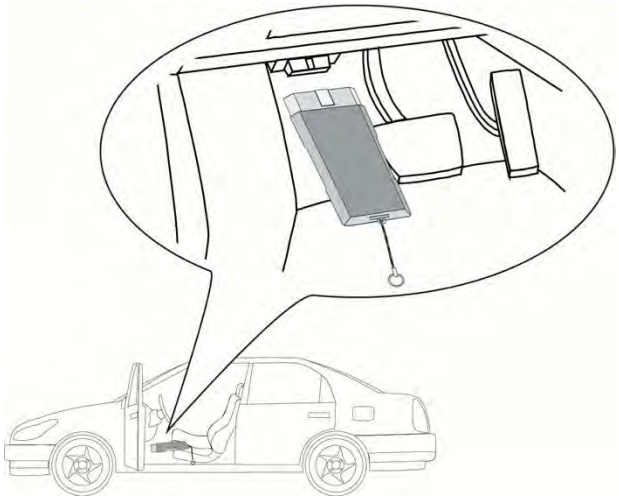
	CAUTION Pay attention that the voltage supply during the entire procedure is no lower than 12 V. A voltage drop may lead to the abortion of the download and the ECU may be damaged. The old software version of the ECU *cannot* be re-established if an update is intended.

Proceed as follows to run the HGS Pass Thru software:

1. Insert the USB cable into the USB connection of the DT VCI.

	NOTICE Danger of short circuit and voltage peaks when connecting the DT VCI Danger of destruction of automotive electronics Switch off ignition before connecting the DT VCI to the vehicle.

2. Insert the DT VCI into the vehicle's diagnostic connector.



Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

3. Insert the USB cable into the USB connection of the laptop/tablet.
A connection is established. Laptop/tablet is connected to the vehicle via HGS VCI.

   The PassThru function is active.

4. Switch on the vehicle ignition.
5. Observe the manufacturer's specifications.
6. Select **Start > All Programs > Hella Gutmann Solutions > HGS PassThru communication**.

   Alternatively you can run the HGS PassThru software as follows.

   - Windows 7: Select the HGS PassThru shortcut in the desktop.

7. Select the requested language.
8. Start the communication test via **Start test**.

The communication test is started. Connection between laptop/tablet and HGS VCI is tested.

The connection between laptop/tablet and HGS VCI is active if the left row of arrows is green.

The connection between HGS VCI and vehicle is tested afterwards.

The connection between HGS VCI and vehicle is active if the right row of arrows is green.

The connection between laptop/tablet and vehicle via HGS VCI has been successfully established now.

9. Finish the communication test with **Finish**.
10. Call up the requested manufacturer website online with the laptop/tablet.
11. Follow the instructions on the manufacturer portal.
12. Select PassThru (HGS VCI) of Hella Gutmann.

6 Initial Start-Up

This section gives a description of how to switch the device on and off as well as all the necessary steps for the first use of the device.

6.1 Charging the Battery

Prior to initial start-up of the device, charge the battery for at least 8 to 10 h while the device is switched off.

Proceed as follows to charge the battery:

1. Insert the voltage supply plug into the device's socket.
2. Insert the power plug into the plug socket.
   The battery is being charged.

6.2 Switching on the Device

☞	**NOTE** At the first start-up of the device and after every software update, you need to confirm the general terms and conditions (GTC) of Hella Gutmann Solutions GmbH. Otherwise, certain device functions will be unavailable.

Proceed as follows to switch on the device:

1. Switch on the device with ⏻.
   The GTCs appear.
2. Read the GTCs and confirm them at the end of the text.
   An info window appears.
3. Confirm the info window with **ENTER**.

6.3 Entering Company Data

☞	**NOTE** You cannot start working with the device unless you have entered the company data.

Proceed as follows to enter the company data:

1. Select and confirm **>Name 1<**.
2. Delete the entry with **F1** where necessary.
3. Open the virtual keypad with ▲.
4. Enter the company name.
5. Close the virtual keypad with **ESC**.
6. Confirm the input with **ENTER**.
   The input will be saved automatically.
7. Repeat steps 2 to 6 for further entries.

Now you can start working with the device.

6.4 License Release

☞	**NOTE** In order to use the full scope of the purchased licenses you need to download them from the HGS license server before taking the device into operation for the first time.

Proceed as follows to retrieve licenses:

1. Select and confirm **Contracts** under **> Settings** in the main menu.
2. Select an confirm the **>License<** tab.
   Data download is in progress. Purchased licenses are displayed.

Now you can start working with the device.

6.5 Switching off the Device

Proceed as follows to switch off the device:

1. Switch off the device with ⏻.
2. Observe the confirmation prompt.
3. Switch off the device with **ENTER**. Abort the procedure with **ESC**.
   The device is switched off.

7 Configuring the Device

Configure all interfaces and functions under**>Settings<** in the main menu.

7.1 Always Online

To obtain all the data about the related vehicle provided by Hella Gutmann, the device requires a permanent online connection. To keep the connection costs down, Hella Gutmann recommends a DSL connection and a flat rate.

1. Install the Gutmann Portal on the office or workshop PC.

   The latest software for the Gutmann Portal is on the DVD supplied.

2. Connect the device to a web-compatible PC.

   Once the connection symbol in the top toolbar changes from black to green, the online connection has been set up successfully and is active.

7.2 Setting the Display Brightness

Proceed as follows to set the display brightness:

1. Select and confirm **Display** under **> Settings** in the main menu.
2. Select **>Brighter<** or **>Darker<**.
3. To change the display brightness, press **ENTER** and keep pressed until the requested display brightness is reached.
   The setting will be saved automatically.

7.3 Company address

Here you can modify and enter the company data, that shall appear on the hard-copy printout, e.g.:

- Company address
- Fax number
- Homepage

7.3.1 Entering the Company Address

Proceed as follows to enter the company address:

1. Select and confirm **Company address** under **> Settings** in the main menu.
2. Select and confirm **>Name 1<**.
3. Delete the entry with **F1** where necessary.
4. Open the virtual keypad with ▲.
5. Enter the company name.
6. Close the virtual keypad with **ESC**.

7. Confirm the input with **ENTER**.
   The input will be saved automatically.
8. Repeat steps 2-6 for further entries.

7.4 Calling up Version Information

Here you can find all information required for the identification of the mega macs 42 SE.

Proceed as follows to call up version information:

- Select and confirm **Version** under **> Settings** in the main menu.

  An info window appears.

  Here you can find information including the software and hardware version and the device number.

7.5 Update of Device and DT VCI

Update the device and the DT VCI here.

Hella Gutmann Solutions supplies customers with regular software updates. The update is subject to charge. These updates contain new vehicle systems as well as technical modifications and improvements. We recommend keeping your device up to date.

7.5.1 Preconditions for an Update

Ensure the following to perform updates:

- Device is connected to a web-compatible PC through USB cable.
- A Bluetooth-compatible PC or Bluetooth adapter is plugged into the PC.
- The corresponding licenses are activated by Hella Gutmann.
- The access software Gutmann Portal is installed on the PC.
- Voltage supply of device and DT VCI is ensured.

7.5.2 Starting the System Update

Here you can start a system update.

Proceed as follows to start the system update:

1. Select and confirm **Update** under **> Settings** in the main menu.
2. Select and confirm **>Update<**.

	NOTICE Insufficient voltage supply System data loss Do not switch off the device and the DT VCI during the update and do not disconnect them from voltage supply. Ensure sufficient voltage supply.

3. Start the update with **ENTER**.
   The device searches for a new update that will then be downloaded and installed.

   The device switches off automatically after the successful update.

4. Switch on the device with ⏻.
   The installation will be checked automatically after startup.

7.5.3 DT VCI-Update

Update the software for the DT VCI here.

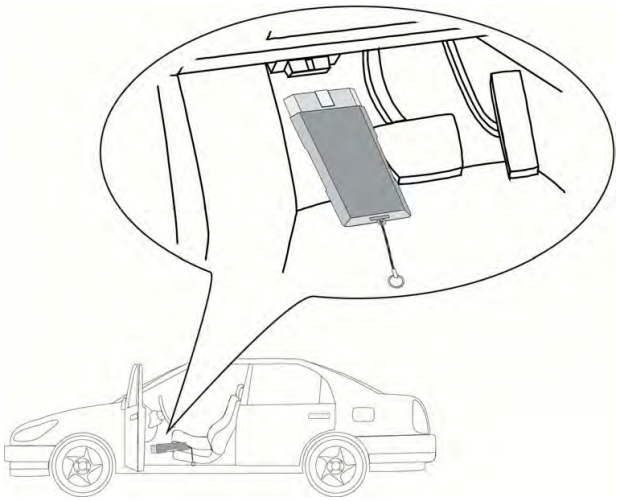
7.5.3.1 Starting a DT VCI Update

Update the software for the DT VCI here.

	NOTICE Insufficient voltage supply System data loss Do not switch off the device and the DT VCI during the update and do not disconnect them from voltage supply. Ensure sufficient voltage supply.

Proceed as follows to start the DT VCI update:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

2. Select and confirm **Update** under **> Settings** in the main menu.

3. Select and confirm **>Update VCI<**.

4. Regard the window with infos and instructions.

5. **Start update** with **ENTER**.
   The DT VCI update will be started.

The message *DT VCI update successfully done* appears if the update was successful.

7.5.4 Starting System Check

Check the present software for incorrect or missing files here.

Proceed as follows to start the system check:

1. Select and confirm **Update** under **> Settings** in the main menu.
2. Select and confirm **>System check<**.
   Installation is being checked.

   The list generated on completion of the system check must not contain any files with errors.

   The message *Test finished* appears if the present software is OK.
3. Should the list nevertheless include incorrect files, start a system update.

7.6 Configuring the Printer

7.6.1 Printing via USB Port

Here you can set the option to print via a USB port.

It is possible to connect to the USB port any printer that supports at least the printer language PCL5 or higher and that has a USB port.

Proceed as follows to print out results via USB port:

1. Connect printer and diagnostic device with the USB cable.
2. Select and confirm **Print** under **> Settings** in the main menu.
3. Select and confirm **>Printout<**.
4. Select and confirm **>USB printer<**.
   The selection will be saved automatically.

It is now possible to print using the printer on the USB port.

7.6.2 Printing with Standard PC Printer

Here you can set the print function with the standard printer connected to the PC.

If there is no additional printer connected to the device, it is possible to print with the printer of a PC system. This requires a connection between the diagnostic device and the PC. The connection to the PC is realized via USB port or Bluetooth.

Proceed as follows to print out results with the standard printer:

1. Select and confirm **Print** under **> Settings** in the main menu.
2. Select and confirm **>Printout<**.
3. Select and confirm **>Network<**.
   The selection will be saved automatically.

Now you can start printing via PC.

7.6.3 Screenshot

Use the screenshot function to save the current screen content. The screenshot is saved in the respective device file.

7.6.3.1 Printing a Screenshot Without Customer Data

Here you can set whether a screenshot shall be printed without customer data.

Proceed as follows to print a screenshot without customer data:

1. Select and confirm **Print** under **> Settings** in the main menu.
2. Select and confirm **>Screenshot<**.
3. Select and confirm **>Direct printout<**.
   The selection will be saved automatically.
4. Press **PRINT**.
5. Select and confirm **>Print screenshot<**.

   The **Customer data** window is displayed.

   Here you can enter customer data.
6. Select and confirm **>Print without customer data<**.
   The screenshot will be printed via the PC without customer data.

7.6.3.2 Printing a Screenshot With Customer Data

Here you can set whether a screenshot shall be printed as a menu and with customer data.

Proceed as follows to print a screenshot as a menu and with customer data:

1. Select and confirm **Print** under **> Settings** in the main menu.
2. Select and confirm **>Screenshot<**.
3. Select and confirm **>Direct printout<**.
   The selection will be saved automatically.
4. Press **PRINT**.
5. Select and confirm **>Print screenshot<**.

   The **Customer data** window is displayed.

   Here you can enter customer data.
6. Select and confirm **>Customer<**.
7. Open the virtual keypad with ▲.
8. Enter the customer name.
9. Close the virtual keypad with **ESC**.
10. Confirm the input with **ENTER**.
    The input will be saved automatically.
11. Repeat steps 6-10 for further entries.
12. Select and confirm **>Print with customer data<**.
    The screenshot will be printed via the PC with the customer data entered.

7.6.3.3 Printing the Menu Without Customer Data

Here you can set whether a screenshot shall be printed as a menu and without customer data.

Proceed as follows to print a screenshot as a menu and without customer data:

1. Perform steps 1-4 as described in the section **Printing a screenshot without customer data (Page 30)**.
2. Select and confirm **>Print menu<**.
   The **Customer data** window is displayed.

   Here you can enter customer data.
3. Select and confirm **>Print without customer data<**.
   The screenshot will be printed via the PC as a menu and without customer data.

7.6.3.4 Printing the Menu With Customer Data

Here you can set a screenshot to be printed as a menu and with customer data.

Proceed as follows to print a screenshot as a menu and with customer data:

1. Perform steps 1-4 as described in the section **Printing a screenshot with customer data (Page 30)**.
2. Select and confirm **>Print menu<**.
   The **Customer data** window is displayed.

   Here you can enter customer data.
3. Perform steps 6-12 as described in the section **Printing a screenshot with customer data (Page 30)**.

7.6.3.5 Saving Screenshots

Here you can send screenshots from the device file to the Gutmann Portal. They are displayed on the PC as a graphics file.

The screenshots are saved in the Gutmann Portal installation directory in the "Screenshots" subfolder.

Proceed as follows to save screenshots:

1. Select and confirm **Print** under **> Settings** in the main menu.
2. Select and confirm **>Screenshot<**.
3. Select and confirm **>Save<**.
   The selection will be saved automatically.
4. Press **PRINT**.
5. Select and confirm **>Save screenshot<**.
   Screenshots will be saved.

7.7 Pass Thru

Use the PassThru function to transfer data from the shop computer to the vehicle in the shop.

Proceed as follows to call up PassThru:

1. Select and confirm **PassThru** under **> Settings** in the main menu.
   The terms of use for HGS PassThru are displayed.

2. Accept the terms of use with **ENTER**.
3. Perform the steps as described in section **Running the HGS PassThru Software (Page 22)**.

7.8 Configuring the Bluetooth Adapter

Configure the Bluetooth adapter here.

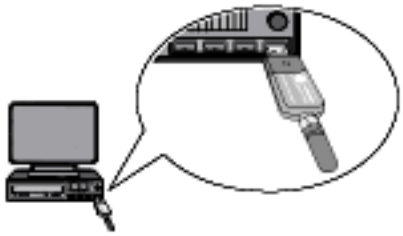
The integrated Bluetooth module enables a wireless connection to a PC on which the Gutmann Portal is installed.

7.8.1 Searching for the Bluetooth Adapter

☞	**NOTE** If the device has already been delivered with a Bluetooth adapter, both devices are already assigned to each other ex works. The Bluetooth adapter can only be found once the Gutmann Portal is started on the PC.

Proceed as follows to search for the Bluetooth adapter:

1. Insert the Bluetooth adapter into the USB port of the PC.



2. Select and confirm **Bluetooth** under **> Settings** in the main menu.
3. Select and confirm **>Bluetooth adapter search<**.
   Connection is established and the search for a Bluetooth adapter is in progress.

   The message *Bluetooth adapter found and determined as remote station* appears if the connection to the Bluetooth adapter via the device is established successfully.
4. Close the info window with **ENTER**.
   Bluetooth connection has been found and is being configured.

7.9 Setting the Country

Configure the following data here:

- Language
- Country
- Date format
- Time mode

7.9.1 Setting the Language Option

Here you can set the language if the software is multilingual (optional).

Proceed as follows to set the language:

1. Select and confirm **Country** under **> Settings** in the main menu.
2. Select and confirm **>Language<**.

   The compilation of languages depends on the prevailing software.
3. Select and confirm the requested language.
4. Regard the window with infos and instructions.
5. Switch off the device with **ENTER**. Abort the procedure with **ESC**.
   The device switches off automatically. The language setting will be saved automatically.
6. Switch on the device with ⏻.
   The main menu appears.

7.9.2 Making Country Settings

Make your country settings here.
The country version contains certain information such as the print format for letters.

Proceed as follows to make the country settings:

1. Select and confirm **Country** under **> Settings** in the main menu.
2. Select and confirm **>Country<**.

   The compilation of countries depends on the prevailing software.
3. Select and confirm the country setting matching your language.
   The selection will be saved automatically.

7.9.3 Setting the Date Format

Here you can set the date format.

Proceed as follows to set the date format:

1. Select and confirm **Country** under **> Settings** in the main menu.
2. Select and confirm **>Date format<**.
3. Select and confirm the requested date format.
   The selection will be saved automatically.

7.9.4 Setting the Time Format

Here you can set the time format.

Proceed as follows to set the time format:

1. Select and confirm **Country** under **> Settings** in the main menu.
2. Select and confirm **>Time format<**.
3. Select and confirm **>24 h<** or **>12 h<**.
   The selection will be saved automatically.

7.10 Setting Units

Adapt physical units to the prevailing regional metric system here.

7.10.1 Assigning Units

Proceed as follows to assign regional units to physical sizes:

1. Select and confirm **Units** under **> Settings** in the main menu.
2. Select and confirm the requested metrical unit.
3. Select and confirm the requested unit.
   The selection will be saved automatically.

7.11 Setting the Demo Mode

Here you can set whether the device shall give predetermined values during the vehicle communication. This setting is mainly intended for marketing and sales presentations.

☞	**NOTE** In the course of vehicle diagnostics the demo mode must be switched off. Otherwise the device will deliver predetermined diagnostic results and no real values.

Proceed as follows to set the demo mode:

1. Select and confirm **Demo mode** under **> Settings** in the main menu.
2. Select and confirm **>off<** or **>on<**.
   Demo mode is switched off or on.

7.12 Self-Test

Here you can perform various tests.

7.12.1 Precondition for Self-Test

Regard the following prior to the self-test:

- Voltage supply of the device through mains supply and mains cable is ensured.
- DT VCI connected to the device via Bluetooth.
- DT VCI is *not* connected to the vehicle's diagnostic port.

7.12.2 Performing the VCI Plug Test

This test serves as a function check for faults in the DT VCI.

Proceed as follows to perform the self-test:

1. Select and confirm **Self-test** under **> Settings** in the main menu.
2. Select and confirm **>VCI plug (USB)<**.
   The DT VCI is tested.

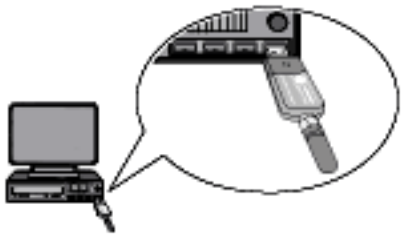
The message *VCI plug test successfully done* appears if the DT VCI has been tested successfully.

7.12.3 Performing VCI Diagnostics

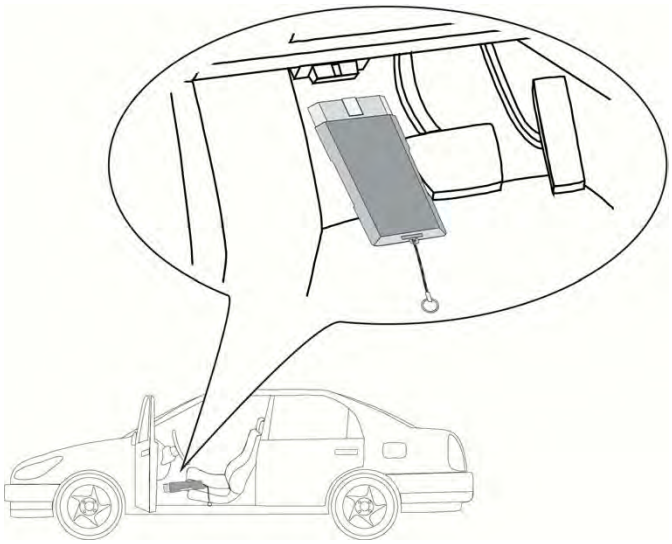
This diagnostics is used to test the functionality of Bluetooth for defects to determine data loss.

Proceed as follows to perform VCI diagnostics:

1. Insert the Bluetooth adapter into the USB port of the PC.



2. Insert the DT VCI into the vehicle's diagnostic connector.



Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

3. Select and confirm **Self-test** under **> Settings** in the main menu.

4. Select and confirm **>VCI diagnostics<**.
The **Bluetooth diagnostics** window appears.

The Bluetooth function will be tested.

VCI diagnostics is completed successfully if *0* is displayed under **Defective protocols** and *Diagnostics complete* is displayed under **Status**.

7.13 Configuring the Car History

This menu provides the diagnostic results to the present vehicle from the functions **>Trouble codes<**, **>Parameters<**, **>Basic settings<** and **>Codings**. This has the following advantages:

- You can evaluate the diagnostic results later.
- Compare previously performed diagnostics to present diagnostic results.
- You can show the customer the diagnostic results without needing to reconnect the vehicle.

7.13.1 Deleting Entries from the Car History

Proceed as follows to delete entries from the Car History:

1. Select and confirm **Car History** under **> Settings** in the main menu.
2. Select and confirm **>Delete all entries<**.
3. Observe the confirmation prompt.
4. Affirm the confirmation message with **ENTER**. Abort the procedure with **ESC**.
All entries will be deleted.

7.13.2 Configuring License Plate Number Input

You can select whether it is necessary to enter the license plate number during vehicle diagnostics.

Proceed as follows to set the license plate number input:

1. Select and confirm **Car History** under **> Settings** in the main menu.
2. Select and confirm **>License plate number input<**.

   This license plate number input is set ex works by default to **>on<**.
3. Select and confirm **>On<** or **>Off<**.

7.14 Setting the Date

Here you can set the present date.

☞	**NOTE** Always enter the date in the format configured under **Settings**- **> Country**. Otherwise a fault message appears.

Proceed as follows to set the date:

1. Select and confirm **Date** under **> Settings** in the main menu.
2. Delete a possibly present date with **F1**.
3. Open the virtual keypad with ▲.
4. Enter the requested date.
5. Close the virtual keypad with **ESC**.
6. Confirm the input with **ENTER**.
   The input will be saved automatically.

7.15 Setting the Time

Here you can set the current time.

Proceed as follows to set the time:

1. Select and confirm **Time** under **> Settings** in the main menu.
2. Set the requested hour under **Hours** using ◀ ▶.
3. Repeat step 2 for **Minutes** and **Seconds**.
4. Confirm your settings with **ENTER**.
   The setting will be saved automatically.

7.16 Contracts

Here you can see the general terms and conditions as well as the licenses and notes of the programs and functions used by the Hella Gutmann Solutions GmbH.

7.16.1 Retrieving the License

Here you can see an overview of the purchased licenses.

Proceed as follows to retrieve licenses:

1. Select and confirm **Contracts** under **> Settings** in the main menu.
2. Select and confirm **>License<**.
   Data download is in progress. Purchased licenses are displayed.

7.16.2 Displaying the Warranty

Here you will find the general terms and conditions (GTC) of Hella Gutmann Solutions GmbH.

Proceed as follows to have the GTCs indicated:

1. Select and confirm **Contracts** under **> Settings** in the main menu.
2. Select and confirm **>Warranty<**.
   The GTCs appear.
3. Close the GTCs with **F3**.

7.16.3 Displaying Other Licenses

Here you can view a list of the licenses and notes of the programs and functions used by the Hella Gutmann.

Proceed as follows to retrieve licenses:

1. Select and confirm **Contracts** under **> Settings** in the main menu.
2. Select and confirm **>Miscellaneous<**.
   A list with the licenses and notes of the programs and functions used by the Hella Gutmann appears.

7.17 Performing a Factory Reset

Here you can reset the device to factory settings.

The following data and files will be reset to the state of delivery if you do the factory reset:

- Data stored in the Car History
- User data such as company data

The following functions will be also modified or deleted:

- IP address mode
- Telekom HotSpot
- Bluetooth MAC address

- asanetwork
- Display settings
- Confirmation of General terms and conditions
- Printer settings

Proceed as follows to perform a factory reset:

1. Select and confirm **Factory reset** under **> Settings** in the main menu.
2. Observe the confirmation prompt.
3. Affirm the confirmation message with **ENTER**. Abort the procedure with **ESC**.
   The device will be automatically reset to the condition at delivery.

8 Working with the Device

8.1 Symbols

8.1.1 Symbols in the Header

Symbols	Designation
	Battery state of charge The battery state of charge is indicated here. • Green symbol: Battery is fully charged. • Symbol flashing green-white: Battery is being charged. • Symbol partly red: Battery must be charged.
	Vehicle connection status Here you can view the active and inactive connections between the PC and the DT VCI. The symbol shows the active connection. • Red symbol: Connection to the DT VCI is inactive. • Green symbol: Connection to the DT VCI is active.
	PC connection status Here you can view the active and inactive connections between the device and the PC. The symbol shows the active connection. • Black symbol: No connection is active. • Green symbol: Connection is active.

8.2 Vehicle Selection

Here you can select vehicles according to the following parameters:

- Manufacturer
- Model
- Fuel type

☞	**NOTE** You require an online connection if you wish to access all available information.

Proceed as follows to select a vehicle:

1. Select and confirm **>Diagnostics<** in the main menu.
2. Select the requested manufacturer.
3. Select and confirm the requested fuel type.
4. Select and confirm the requested model.
5. Select and confirm the requested vehicle type.
   The window **License plate number/VIN** appears.

   Here you can enter the license plate number or customer name (max. 11 characters) or the VIN (max. 17 characters).
6. Select and confirm **>License plate number<** or **>VIN<**.

7. Open the virtual keypad with ▲.
8. Enter **License plate number** or **VIN**.
9. Close the virtual keypad with **ESC**.
10. Confirm the input with **ENTER**.
11. Confirm the entry with **F1**.
    The input will be saved automatically.

Vehicle selection is now ready for **>Diagnostics<** and data will be stored in the **>Car History<**.

The device automatically switches to the diagnostic selection.

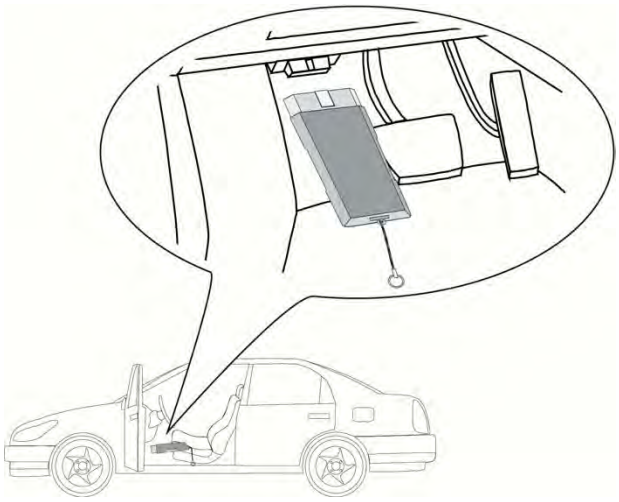
8.2.1 Identifying a Vehicle by VIN

☞	**NOTE** Reading out the VIN via DT VCI is not possible for every vehicle.

	NOTICE Danger of short circuit and voltage peaks when connecting the DT VCI Danger of destruction of automotive electronics Switch off ignition before connecting the DT VCI to the vehicle.

Proceed as follows to identify a vehicle by VIN:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.
2. Select and confirm **>Diagnostics<** in the main menu.
3. Select and confirm the requested manufacturer.
4. Identify the VIN with **>F1<**.
   Communication to vehicle is being established. A drop-down list appears.

   The corresponding vehicles are selected from the database.
5. Select the requested vehicle.
6. Perform steps 5 to 11 as described in the section **Vehicle selection (Page 40)**.

8.3 Diagnostics

Here you can exchange data between device and the vehicle systems that have to be checked. The respective scope of inspection and variety of functions depend on the "intelligence" of the vehicle system.

The following parameters are available under **>Diagnostics<**:

- **>Trouble codes<**

  Here you can read out and delete trouble codes stored in the ECU memory. Information on the fault code are available too.

- **>Measured value<**

  Here the device indicates the present flat rate units or states of the ECU graphically and alphanumerically.

- **>Actuators<**

  Here you can activate actuators with the help of the ECU.

- **>Service reset<**

  Here you can reset the service interval manually or automatically.

- **>Basic settings<**

  Here you can assign basic setting values to actuators and ECUs.

- **>Codings<**

  Here you can code actuators and ECUs for their tasks and you can adapt new components to the vehicle.

- **>Test function<**

  Here the device evaluates and depicts the performance of the individual cylinders.

8.3.1 Preparing Vehicle Diagnostics

The selection of the correct vehicle is a basic precondition for trouble-free vehicle diagnostics. The device provides assistance to simplify the selection, e.g. indicating the installation position of the diagnostic connector or vehicle identification by VIN.

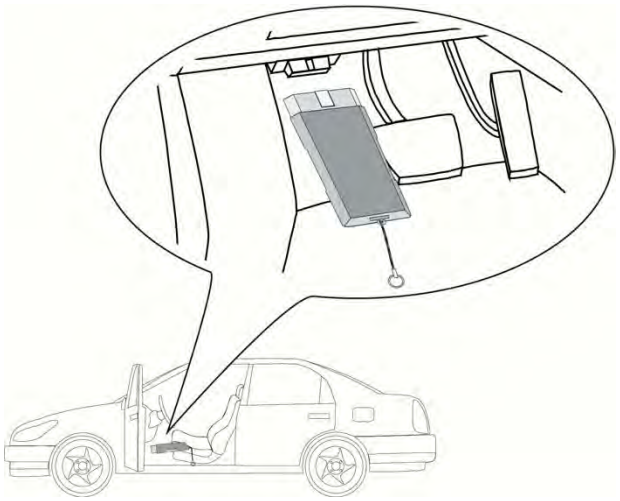
The following ECU functions are possible in the **>Diagnostics<** menu:

- Trouble code readout
- Parameter readout
- Actuator tests
- Service reset
- Basic settings
- Codings
- Test function

Proceed as follows to prepare vehicle diagnostics:

	NOTICE Danger of short circuit and voltage peaks when connecting the DT VCI Danger of destruction of automotive electronics Switch off ignition before connecting the DT VCI to the vehicle.

1. Insert the DT VCI into the vehicle's diagnostic connector.



Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.

Now you can select the type of diagnostics.

8.3.2 Trouble codes

If a component malfunction is detected while ECU carries out an internal test, a trouble code will be set in memory and the corresponding warning lamp will be activated. The device reads out the trouble code and displays it in plain text. It also indicates information about the trouble code, such as possible effects and causes.

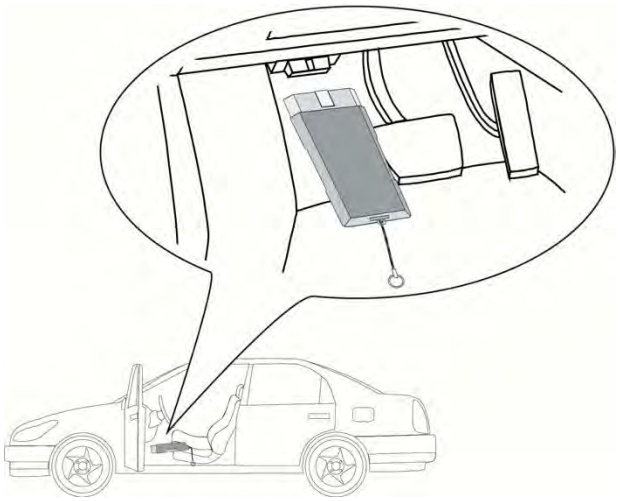
8.3.2.1 Reading Out Trouble Codes

⚠	**CAUTION** Pulling off of the DT VCI when actuating the clutch Risk of injury or material damage Proceed as follows before starting: 1. Apply the parking brake. 2. No gear is engaged. 3. Regard the window with infos and instructions.

☞	**NOTE** The selection of the following possibilities depends on the selected manufacturer and vehicle type: • Functions • Assemblies • Systems • Data

Proceed as follows to read out the trouble codes:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.
3. Select and confirm **>Trouble codes<**.
4. Select and confirm the requested assembly.
5. Observe the information and instructions windows.
6. Confirm the window with infos and instructions with **ENTER** where applicable.
7. Select and confirm the requested system.
8. Observe the info window.
9. Confirm the info window with **ENTER** where applicable.
10. Select and confirm further sub-categories where necessary.
    Communication to vehicle is being established. All trouble codes read out are indicated.
11. Select and confirm the requested trouble code.
    Corresponding repair tips are indicated.

    The repair tips contain the following information:

    - Trouble code number, original trouble code number in addition where necessary
    - Title of trouble code
    - Explanation of the function and task of the component
    - Possible effects
    - Possible causes, when, and under which conditions the trouble occurred, and when it was saved.
    - General diagnostic information regardless of the vehicle type and which does not always apply to the present problematic case.
12. Repair the vehicle. Then clear the saved trouble codes from the vehicle system.

8.3.2.2 Global Check, Reading Trouble Codes

The global check scans all ECUs assigned to the vehicle software for stored trouble codes.

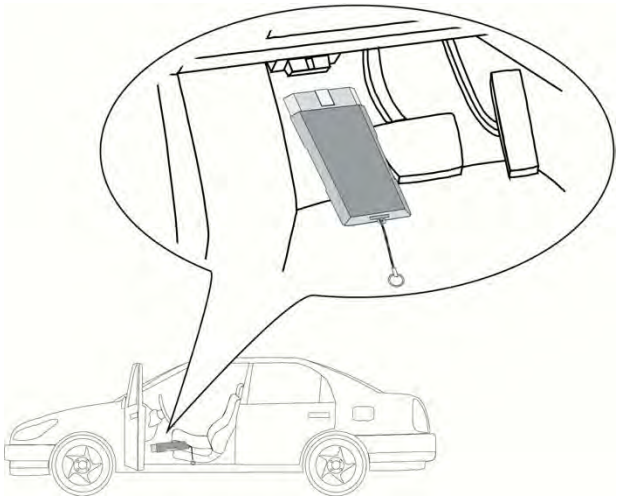
⚠	**CAUTION** Pulling off of the DT VCI when actuating the clutch Risk of injury or material damage Proceed as follows before starting: 1. Apply the parking brake. 2. No gear is engaged. 3. Regard the window with infos and instructions.

☞	**NOTE** The stored trouble codes cannot be retrieved any more after global check with trouble code deletion. Therefore, it is recommended to perform the global check with trouble code reading first.

☞	**NOTE** The selection of the following possibilities depends on the selected manufacturer and vehicle type: • Functions • Assemblies • Systems • Data

Proceed as follows to perform the global check with trouble code reading:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.
3. Select and confirm **>Trouble codes<**.
4. Select and confirm **>Global check<**.

5. Select and confirm further sub-categories where necessary.
   The device indicates all ECUs installed in the vehicle.

   The device automatically activates all ECUs.

   Use **F2** and **>Reset<** to deactivate all ECUs.

   Use ▼ ▲ and ↵ to deactivate or activate single ECUs.
6. Activate/deactivate the requested ECUs.
7. Start the global check with trouble code reading by pressing **F1**.
8. Regard the window with infos and instructions.
9. Confirm the window with infos and instructions with **ENTER**.
   Communication to vehicle is being established.

   Activated ECUs are read out. This may take a few minutes.

   The number of trouble codes in the prevailing ECU memory is indicated.
10. Call up the requested trouble code with **F1**.
    The device indicates all trouble codes and repair tips.

8.3.2.3 Global Check, Trouble Code Clearing

Here you can clear all the trouble codes stored in the ECUs.

☞	**NOTE** The stored trouble codes cannot be retrieved any more after global check with trouble code deletion. Therefore, it is recommended to perform the global check with trouble code reading first.

Proceed as follows to perform the global check with trouble code deletion:

1. Perform steps 1 to 10 as described in the section **Global check, trouble code reading**.

☞	**NOTE** Clearing all trouble codes in all vehicle systems is possible only if all systems can be read out with the same OBD plug.

2. Delete individual trouble codes with **F3**.
3. Regard the window with infos and instructions.
4. Use any button to confirm information and instruction windows.
5. Observe the info window.
6. Confirm the info window with **ENTER**.
   All saved trouble codes will be deleted.

8.3.3 Parameters

Many of the on-board systems supply digital measured values in the form of parameters for fast diagnostics. Parameters indicate the present state or nominal and actual values of the components. The device displays the parameters alphanumerically and graphically.

Example 1

The engine temperature can be within a range of -30 °C to 120 °C.

If the temperature sensor reports 9 °C but the engine actually has a temperature of 80 °C, the ECU calculates an incorrect injection time.

A trouble code is not stored, as this temperature is logical for the ECU.

Example 2

Fault text: *Oxygen sensor signal faulty*

In both cases, diagnostics can be significantly eased if the corresponding parameters are read out.

The mega macs 42 SE reads the parameters and displays them in plain text. It additionally provides information on the parameters.

8.3.3.1 Reading Out Parameters

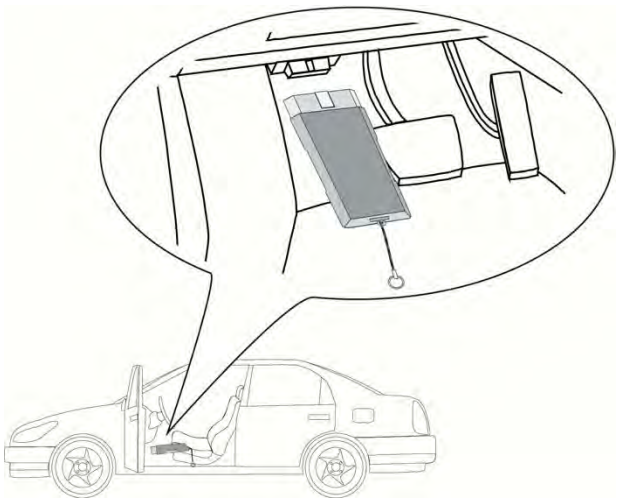
⚠	**CAUTION** Pulling off of the DT VCI when actuating the clutch Risk of injury or material damage Proceed as follows before starting: 1. Apply the parking brake. 2. No gear is engaged. 3. Regard the window with infos and instructions.

☞	**NOTE** Calling up the ECU parameters for the fault diagnostics after the trouble codes have been read has priority over all other work steps.

☞	**NOTE** The selection of the following possibilities depends on the selected manufacturer and vehicle type: • Functions • Assemblies • Systems • Data

Proceed as follows to read out the parameters:

1. Insert the DT VCI into the vehicle's diagnostic connector.



Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.
3. Select and confirm **>Parameters<**.
4. Regard the warning notice.
5. Confirm the warning notice with **ENTER**.
6. Select and confirm the requested assembly.
7. Regard the warning notice if appears.
8. Confirm the warning notice with **ENTER**.
9. Select and confirm the requested system.
10. Select an additional sub-function as necessary and confirm where applicable.
    Communication to vehicle is being established. A drop-down list appears.

    The key parameters are automatically selected by the device.

    Use **F1** to call up information on the requested parameters in the parameter selection.

    An explanation of the selected parameter appears.

    Deactivate all parameters with **F2**.
11. Use ▼ ▲ and **ENTER** to activate or deactivate requested parameters.

    You can activate maximum 4 parameters.
12. Start parameter reading with **ESC**.

    During the readout procedure, the recordings are automatically saved in the Car History under the previously entered license plate number.

☞	**NOTE** A light blue bar in the top toolbar indicates how much of the memory space reserved for this purpose in the Car History has been used. If the blue bar is complete, the first data of the present measurement will be removed from the memory and the free capacity is filled with new data.

13. Return to the parameter selection list with **F3**.

8.3.4 Actuators

Use this menu to activate components in electronic systems. You are hence able to check basic functions and cable connections of those components.

8.3.4.1 Activating the Actuator

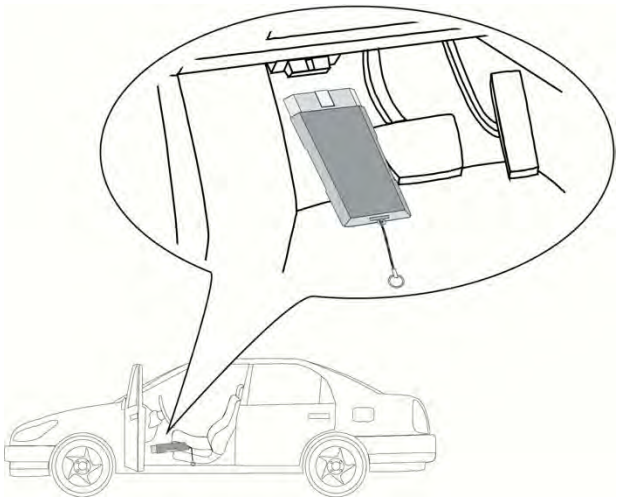
⚠	**DANGER** Rotating/moving parts (electric fan, brake calliper piston, etc.) Danger of cutting or pinching fingers or device parts Remove the following things from the work place before actuating actuators: • Limbs • Persons • Device parts • Cables

⚠	**CAUTION** Pulling off of the DT VCI when actuating the clutch Risk of injury or material damage Proceed as follows before starting: 1. Apply the parking brake. 2. No gear is engaged. 3. Regard the window with infos and instructions.

☞	**NOTE** The selection of the following possibilities depends on the selected manufacturer and vehicle type: • Functions • Assemblies • Systems • Data

Proceed as follows to activate the actuator:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.
3. Select and confirm **>Actuators<**.
4. Select and confirm the requested assembly.
5. Regard the warning notice if appears.
6. Confirm the warning notice with **ENTER**.
7. Select and confirm the requested system.
8. Select and confirm further sub-categories where necessary.
9. Regard the window with infos and instructions.
10. Confirm the window with infos and instructions with **ENTER**.
    Communication to vehicle is being established.

☞	**NOTE** If the vehicle offers the automatic actuator test, all ECUs and actuators connected to them will be automatically actuated one after the other.

☞	**NOTE** The actuator test of a component must be finished completely first before the next test can be started.

11. Use ▲ ▼ and **ENTER** to activate the requested component.
    The actuator test is performed.

The message *Actuator test successfully done* appears if the actuator test was successful.

8.3.5 Service reset

Use this menu to reset service intervals provided that this function is supported by the vehicle. The device performs the resets either automatically or you find a description for the manual reset procedure.

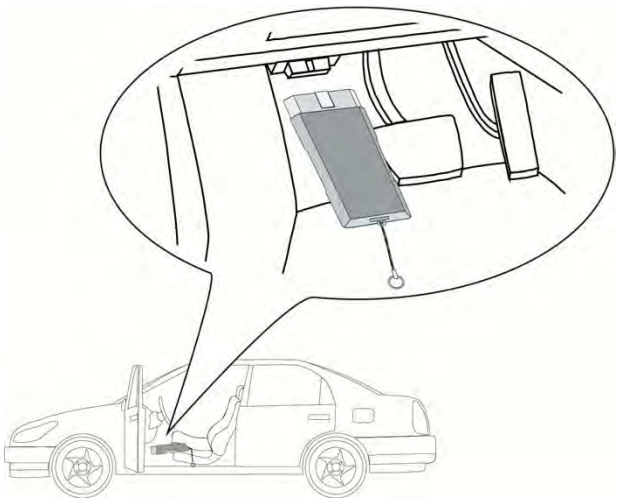
8.3.5.1 Performing Manual Service Resets

⚠	**CAUTION** Pulling off of the DT VCI when actuating the clutch Risk of injury or material damage Proceed as follows before starting: 1. Apply the parking brake. 2. No gear is engaged. 3. Regard the window with infos and instructions.

☞	**NOTE** The selection of the following possibilities depends on the selected manufacturer and vehicle type: • Functions • Assemblies • Systems • Data

Proceed as follows to perform the manual service reset:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.
2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.
3. Select and confirm **>Service reset<**.
4. Select and confirm the requested service reset.
5. Observe the information and instructions windows.
6. Follow the instructions on the screen.
7. Confirm the performed service reset with **ENTER**.

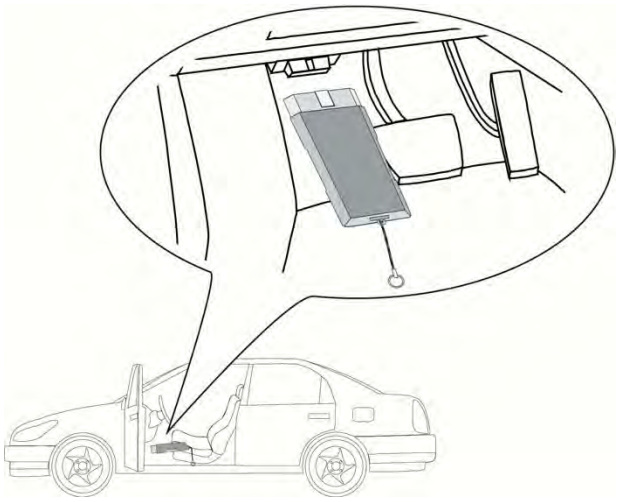
8.3.5.2 Performing Automatic Service Resets

⚠	**CAUTION** Pulling off of the DT VCI when actuating the clutch Risk of injury or material damage Proceed as follows before starting: 1. Apply the parking brake. 2. No gear is engaged. 3. Regard the window with infos and instructions.

☞	**NOTE** The selection of the following possibilities depends on the selected manufacturer and vehicle type: • Functions • Assemblies • Systems • Data

Proceed as follows to perform the automatic service reset:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.
2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.
3. Select and confirm **>Service reset<**.
4. Select and confirm the requested system.
5. Regard the window with infos and instructions.
6. Confirm the window with infos and instructions with **ENTER**.
   Communication to vehicle is being established.
7. Regard the window with infos and instructions.
8. Confirm the window with infos and instructions with **ENTER**.
   The service reset will be done automatically.

   The message *Service interval reset* appears if the service reset was successful.
9. Confirm the info window with **ENTER**.

8.3.6 Basic settings

Here you can adjust or adapt components and ECUs according to manufacturer's specifications.

8.3.6.1 Preconditions for Basic Settings

Regard the following in order to perform basic settings:

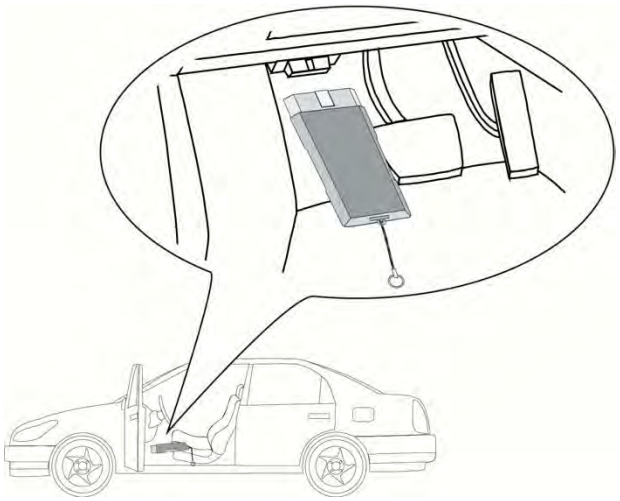
- Vehicle system is working properly.
- No trouble codes saved in ECU memory
- Vehicle-specific preparations performed.

8.3.6.2 Performing Manual Basic Settings

⚠	**WARNING** Wrong or incorrectly performed basic settings Risk of injury or material damage to vehicles Regard the following when performing basic settings: • Select the correct vehicle type. • Regard the window with infos and instructions.
⚠	**CAUTION** Pulling off of the DT VCI when actuating the clutch Risk of injury or material damage Proceed as follows before starting: 1. Apply the parking brake. 2. No gear is engaged. 3. Regard the window with infos and instructions.
☞	**NOTE** The selection of the following possibilities depends on the selected manufacturer and vehicle type: • Functions • Assemblies • Systems • Data

Proceed as follows to perform the manual basic setting:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.
3. Select and confirm **>Basic settings<**.
4. Select and confirm the requested assembly.
5. Select and confirm further sub-categories where necessary.
6. Regard the window with infos and instructions.
7. Follow the instructions on the screen.
8. Confirm the basic setting done with **ENTER**.

8.3.6.3 Performing Automatic Basic Settings

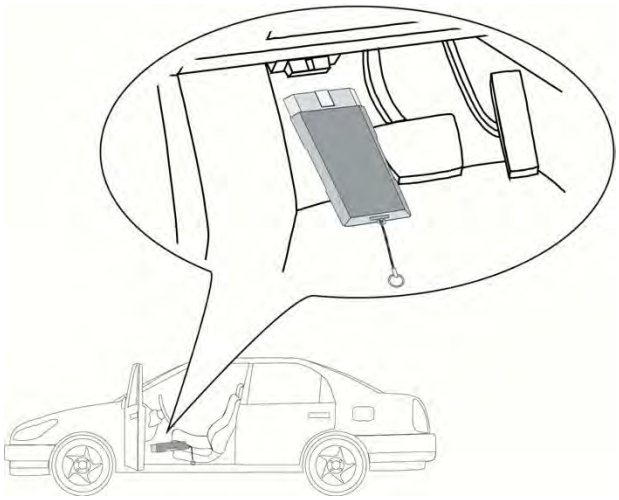
⚠	**WARNING** Wrong or incorrectly performed basic settings Risk of injury or material damage to vehicles Regard the following when performing basic settings: • Select the correct vehicle type. • Regard the window with infos and instructions.

⚠	**CAUTION** Pulling off of the DT VCI when actuating the clutch Risk of injury or material damage Proceed as follows before starting: 1. Apply the parking brake. 2. No gear is engaged. 3. Regard the window with infos and instructions.

☞	**NOTE** The selection of the following possibilities depends on the selected manufacturer and vehicle type: • Functions • Assemblies • Systems • Data

Proceed as follows to perform the automatic basic setting:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.
3. Select and confirm **>Basic settings<**.
4. Select and confirm the requested assembly.
5. Select and confirm further sub-categories where necessary.
6. Regard the window with infos and instructions.
7. Confirm the window with infos and instructions with **ENTER**.
   Communication to vehicle is being established.
8. Regard the window with infos and instructions.
9. Confirm the window with infos and instructions with **ENTER**.
   Communication to vehicle is being established. Basic settings are made automatically.

The message *Basic setting successfully done* appears if the basic setting was successful.

8.3.7 Codings

Here you can code components and ECUs. Codings are necessary, if components were replaced or additional functions in an electronic system must be activated.

8.3.7.1 Performing Manual Coding Procedures

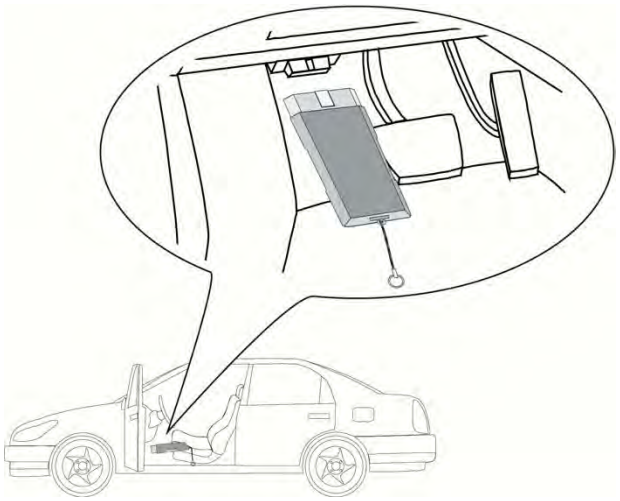
⚠	**WARNING** The ECU is not coded or is incorrectly coded Risk of death or serious injury as a result of the ECU not working or working incorrectly Material damage of the vehicle or the ambient area Regard the following when performing coding procedures: • Some working procedures require a specific training e.g. workings on the airbag. • Regard the window with infos and instructions.

⚠	**CAUTION** Pulling off of the DT VCI when actuating the clutch Risk of injury or material damage Proceed as follows before starting: 1. Apply the parking brake. 2. No gear is engaged. 3. Regard the window with infos and instructions.

☞	**NOTE** The selection of the following possibilities depends on the selected manufacturer and vehicle type: • Functions • Assemblies • Systems • Data

Proceed as follows to perform manual coding:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.
3. Select and confirm **>Codings<**.
4. Select and confirm the requested assembly.
5. Select and confirm the requested system.
6. Regard the window with infos and instructions.
7. Follow the instructions on the screen.
8. Confirm the coding done with **ENTER**.

8.3.7.2 Performing Automatic Coding Procedures

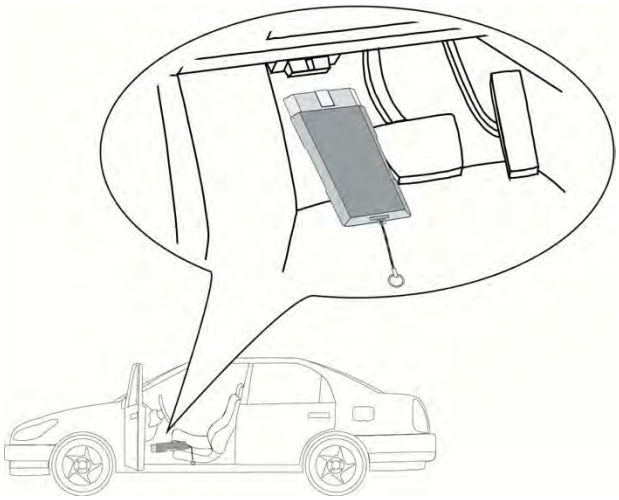
⚠	**WARNING** The ECU is not coded or is incorrectly coded Risk of death or serious injury as a result of the ECU not working or working incorrectly Material damage of the vehicle or the ambient area Regard the following when performing coding procedures: • Some working procedures require a specific training e.g. workings on the airbag. • Regard the window with infos and instructions.

⚠	**CAUTION** Pulling off of the DT VCI when actuating the clutch Risk of injury or material damage Proceed as follows before starting: 1. Apply the parking brake. 2. No gear is engaged. 3. Regard the window with infos and instructions.

☞	**NOTE** The selection of the following possibilities depends on the selected manufacturer and vehicle type: • Functions • Assemblies • Systems • Data

Proceed as follows to perform an automatic coding procedure:

1. Insert the DT VCI into the vehicle's diagnostic connector.



   Both LEDs of the DT VCI flash. The DT VCI is ready for operation.

2. Perform steps 1 to 11 as described in the section **Vehicle selection (Page 40)**.
3. Select and confirm **>Codings<**.
4. Select and confirm the requested assembly.
5. Select and confirm the requested system.
6. Regard the window with infos and instructions.
7. Confirm the window with infos and instructions with **ENTER**.
   Communication to vehicle is being established.
8. Regard the window with infos and instructions.
9. Confirm the window with infos and instructions with **ENTER**.
   Coding is performed automatically.

The message *Coding successfully done* appears if the coding process was successful.

8.4 OBD

Indication of the individual OBD modes for petrol and Diesel vehicles as well as the pre-test of the German exhaust-emission check and the VW short trip.

OBD modes and OBD tests	
Pre-test of German exhaust-emission analysis	Quick test of the exhaust-gas relevant parameters of an OBD vehicle. This test should be done before the actual exhaust-gas emission inspection.
Readiness code	Indication of the type of diagnostic connector.
Parameters	Indication of all emission-relevant parameters. The number of the available parameters depends on the vehicle.
Freeze frame data	Indication of ambient data (rpm, coolant temperature) of the stored fault code.
Permanent trouble codes	Indication of all permanent trouble codes that are emission-relevant.
Delete trouble codes	Deletion of all trouble codes from "Mode 2/3/7".
Oxygen sensor test results	Check and evaluation of oxygen sensor function. This mode is not supported at CAN bus protocols.
Result of sporadic system test	Indication of manufacturer-specific parameters.
Sporadic trouble codes	This mode displays all sporadic and emission-relevant trouble codes.
Actuator tests	Actuate the actuators that have been determined by the manufacturer as emission-relevant.
Vehicle Information	Indication of vehicle and system information e.g. the VIN.
Inactive trouble codes	Here you can view freeze frame data as well as permanent and sporadic fault codes.

8.5 Vehicle search

Here you can search for vehicles in the vehicle database using the following parameters:

- License plate number
- Vehicle type
- Manufacturer
- VIN

8.5.1 Searching a Vehicle By License Plate Number

Proceed as follows to search for a vehicle according to its license plate number:

1. Select and confirm **>Car History<** in the main menu.
2. Select **F3**.
3. Select and confirm **>License plate number<**.
4. Open the virtual keypad with ▲.

5. Enter the license plate number or customer name.
6. Close the virtual keypad with **ESC**.
7. Confirm the input with **ENTER**.
   Data download is in progress. The corresponding vehicles are selected from the database.
8. Select the requested vehicle.
9. Where necessary, start the diagnosis for the selected vehicle with **F1**.

8.5.2 Searching a Vehicle by Vehicle Type

Proceed as follows to search a vehicle by vehicle type:

1. Select and confirm **>Car History<** in the main menu.
2. Select **F3**.
3. Select and confirm **>Vehicle type<**.
4. Perform steps 4 to 8 as described in section **Searching a Vehicle by Registration Number**.

8.5.3 Searching a Vehicle by Manufacturer

Proceed as follows to search a vehicle by manufacturer:

1. Select and confirm **>Car History<** in the main menu.
2. Select **F3**.
3. Select and confirm **>Manufacturer<**.
4. Perform steps 4 to 8 as described in section **Searching a Vehicle by Registration Number**.

8.5.4 Searching a Vehicle by VIN

Proceed as follows to search a vehicle by VIN:

1. Select and confirm **>Car History<** in the main menu.
2. Select **F3**.
3. Select and confirm **>VIN<**.
4. Perform steps 4 to 8 as described in section **Searching a Vehicle by Registration Number**.

8.6 Car History

This menu provides the diagnostic results to the present vehicle from the functions **>Trouble codes<**, **>Parameters<**, **>Basic settings<** and **>Codings**. This has the following advantages:

- You can evaluate the diagnostic results later.
- Compare previously performed diagnostics to present diagnostic results.
- You can show the customer the diagnostic results without needing to reconnect the vehicle.

8.6.1 Selecting Vehicles from the Car History

Proceed as follows to select a vehicle from the Car History:

1. Select and confirm **>Car History<** in the main menu.
2. Select the requested vehicle.
3. Press **F1** to start the diagnostic procedure.
   The device automatically switches to the diagnostic selection.

8.6.2 Deleting Entries from the Car History

Proceed as follows to delete entries from the Car History:

1. Select and confirm **>Car History<** in the main menu.
2. Select the requested vehicle.
3. Select and confirm **F2**.
4. Select and confirm **>Delete<**.
   A confirmation message appears.
5. Observe the confirmation prompt.
6. Affirm the confirmation message with **ENTER**. Abort the procedure with **ESC**.

The selected entry will be deleted.

9 General Information

9.1 PassThru Troobleshooting

The following list shall help you to repair smaller problems yourself. Select the relevant problem description and check and perform the steps listed under **Solution** in sequence until the problem is solved.

Problem	Solution
The left row of arrows between the laptop/tablet and the HGS VCI is red. The second test does not start.	• Check the connections of the USB cable and plug connections to the laptop/tablet and DT VCI. • Check USB cable and plug connectors for damage. • Insert the USB cable and plug connectors correctly. • Disconnect the DT VCI from the diagnostic connection of the vehicle. Remove the USB cable from the DT VCI. Wait approx. 2 or 3 sec and then plug in the USB cable into the USB connection of the DT VCI again. Insert the DT VCI into the vehicle's diagnostic interface. Regard potential Windows messages. Repeat the communication test.
The left row of arrows between the laptop/tablet and the HGS VCI is green. The right row of arrows between the HGS VCI and the vehicle remains red.	• The DT VCI is properly inserted in the vehicle's diagnostic connector. • Check if 12 V voltage supply through vehicle is ensured at pin 16 of the DT VCI (DT VCI may be defective). • Perform the VCI plug test.

9.2 Troubleshooting

The following list shall help you to repair smaller problems yourself. Select the relevant problem description and check and perform the steps listed under **Solution** in sequence until the problem is solved.

Problem	Solution
The device does not boot.	• Check the connections of the power adapter and cable to the device and plug socket. • Ensure voltage supply.
The program hangs up or is without function.	• Briefly interrupt the voltage supply. Restart the device. • Check the present software for incorrect or missing files. • Perform a software update.

Problem	Solution
The device does not print.	• Switch on the printer. • Ensure that the printer is online. • Ensure the paper feed. • Exactly adjust the paper feed mode (continuous or rather single sheet). • Check the printer configuration. • Correctly connect the printer cable. • Exchange the printer cable for testing purpose. • Select another printer for testing purpose.
Communication to vehicle cannot be established.	• Select the correct vehicle by engine code. • Strictly follow the notes in the window with infos and instructions. • Check if 12 V voltage supply is ensured via the vehicle at pin 16 of the DT VCI (DT VCI may be defective). • Perform a DT VCI plug test.

9.3 Care and Maintenance

Like any device, the mega macs 42 SE must be handled with care. Therefore regard the following:

- Clean the device regularly with mild cleaning detergents.
- Use commercial household cleaning detergents and a moistened, soft cleaning cloth.
- Replace damaged cables/accessories immediately.
- Always use original spare parts.

9.3.1 Replacing the Battery

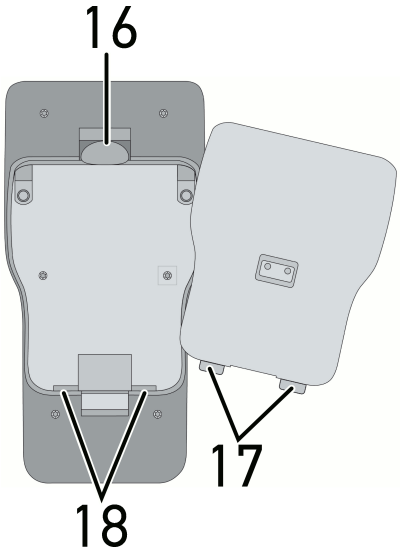
For this, only use the battery offered by Hella Gutmann, because the use of different products may damage the device.

Proceed as follows to replace the battery:

1. Switch off the device and remove all connecting cables.
2. Push the release slide (16) at the back of the device to the top.
   The battery is unlocked.
3. Remove the battery.

4. Insert the new battery into the device as shown below.

   Pay attention that the latches (17) on the left and right are engaged in the recesses (18).



5. Slightly push the battery until it clicks into place.
6. Switch on the device again.

9.4 Disposal

☞	**NOTE** The guidelines listed here is exclusively valid in Europe.

In compliance with Directive 2012/19/EU of the European Parliament and Council of 4 July 2012 relating to Waste Electrical and Electronic Equipment (WEEE), and the German national statute governing the distribution, return and environmental disposal of electrical and electronic equipment (Electrical and Electronic Equipment Act – ElektroG) of 16 March 2005, we are obliged to take back this device, distributed by us after 13 August 2005, at the end of its service life free of charge and to dispose of it in accordance with the above-mentioned directives.

Because this device is equipment that is used exclusively commercially (B2B), it must not be handed over to a public disposal facility.

The device can be disposed of at the following address (specifying the date of purchase and the device number):

Hella Gutmann Solutions GmbH

Am Krebsbach 2

79241 Ihringen

GERMANY

WEEE reg. no. DE 25419042

Phone: +49 7668 9900-0

Fax: +49 7668 9900-3999

Mail: info@hella-gutmann.com

9.5 Technical Data of the mega macs 42 SE

9.5.1 General Data

Supply voltage	12-15 V Power adapters: • Phihong, PSA18U-150L6, 100-240 V ~/50-60 Hz/0.6 A • Cincon, TRG45A150, 100-240 V ~/50-60 Hz/1.5 A
Current consumption	1.20 - 0.94 A
Battery charging voltage	8.4 V
Battery	Lithium polymer battery, 7.4 V, 950 mAh, rechargeable
Battery capacity	7.4 Wh / 950 mAh
Display	Construction type: LCD TFT color display Resolution: 1/4 VGA Size: 3.5"
Storage medium	Flash
Input	Membrane keypad
Ambient temperature	Recommended: 10...35 °C Working range: 0...45 °C
Compatibility	asanetwork
Weight	480 g incl. battery
Dimensions	47 x 110 x 202 mm (H x W x D)
Type of protection	IP20
Interfaces	• 1x USB device • 1x USB host • Bluetooth

9.5.2 DT VCI

Rated current	200 mA
Voltage supply	12-15 V (+/- 10 %)
Ambient temperature	Recommended: 10...35 °C Working range: 0...45 °C
Dimensions	110 x 50 x 26 mm (H x W x D)
Type of protection	IP20
Data transfer rate	max. 3 Mbit/s
Frequency band	2.4 GHz
Interfaces	• Bluetooth class 1 • Micro USB
Range	inside: 3-10 m outside: max. 50 m

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