HELLA GUTMANN

What's new?

Highlights in software version 70

Agenda

HELLA GUTMANN

HELLA GUTMANN

Automatic diagnostics

The next level in vehicle diagnostics

Automatic diagnostics
What's that?

THE STRONG PARTNER FOR WORKSHOPS

- **Detecting defective components with the help of artificial intelligence**
- **The entire automated procedure starts with just one click**
- **The expertise of the Technical Help Line**

"Automatic Diagnostics" (AD) is an intelligent function that continuously improves itself. Here the **mega macs X and mega macs 77** automatically select **the** next diagnostic step, and the user is guided through the diagnostic procedure. The AD system decides which further work steps are necessary to limit the possible causes and ultimately perform troubleshooting. Thanks to artificial intelligence, the mega macs not only knows the shortest possible route for each system diagnosis in AD mode but also which systems are installed in the vehicle, and which parameters are relevant to the diagnostic process.

The user can follow all automated work steps in real time and has the option of intervening manually at any time. At the end of the process, the AD suggests to the user which component or spare part most probably caused the fault and provides additional information required such as installation instructions.

This function is based on some two billion historic trouble codes and some five million statistically registered causes stored by the Technical Help Line. It this stage it is already possible in over 80 percent of cases to diagnose the components causing the fault with high probability.

HELLA GUTMANN

Automatic diagnostics
Why do workshops need this?

Identifying the right component with "Automatic Diagnostics"

Diagnostic complexity is also constantly increasing due to the wide range of drive types and numerous vehicle systems in existence. People have got used to diagnostics possibly being a time-consuming affair. Finding out the cause of a fault is often made more difficult by uncertainties. It is possible that one and the same trouble code is allocated to different occurrences. Or the list of stored trouble codes and subsequent faults is so long that the technician can only guess at where it would be best to begin.

Hella Gutmann is now ushering in a new age with the automation of vehicle diagnostics using artificial intelligence and big data technology. "Automatic Diagnostics" (AD) will help workshops to save valuable time in future and make the entire procedure of diagnostics simpler and more reliable. The linking of diagnostics to components also offers dealers new opportunities to improve the efficiency of their parts business. Integration in the mega macs SDI software was first introduced at Frankfurt's Automechanika 2022 and is now being implemented with software version 70.

"Automatic Diagnostics" is an intelligent, continuously self-improving system which generates a statistically validated diagnostic result. AD is based on some two billion registered trouble codes and some five million problem solutions stored by the Hella Gutmann Technical Help Line. This means that it is possible to recommend relevant components in around 80 percent of diagnostic cases – with this figure set to rise.

HELLA GUTMANN
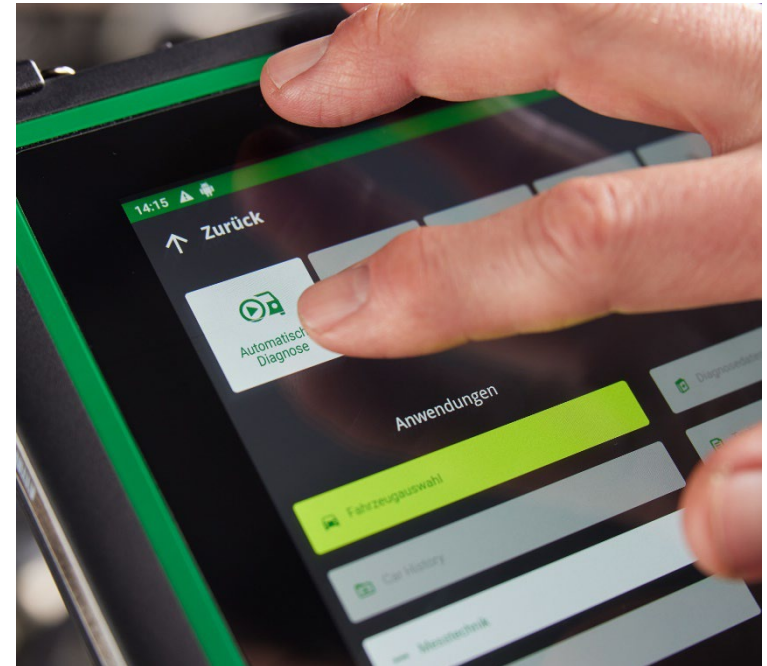
Automatic diagnostics
Why do workshops need this?

Identifying defective components with an automated diagnostic procedure

A single click on the 'Automatic Diagnostics' button sets off a chain reaction that starts with automatic vehicle identification and readout of the trouble codes and does not end until the statistically most probable defective component is localized. Here the mega macs automatically selects the next diagnostic step in AD mode. Thanks to artificial intelligence, it knows the shortest possible route for each system diagnosis. It checks which systems are installed in the vehicle, and which parameters are relevant to the diagnostic process. They can be correlated by the mega macs, which is able to correctly decide the next diagnostic step required – very like a self-learning automatic transmission system, which selects the the right gear according to the specific situation.

The intention is for vehicle diagnostics to in future become as simple as driving an automatic vehicle: connect mega macs to the vehicle, activate AD and do another task in the meantime. It is not until the automatically generated diagnostic result is available with relevant additional information that the automotive technician needs to take action. The technician is of course free to follow the automated work steps in real time on the display and intervene manually at any time, as with the Tiptronic principle. On vehicle identification, the user may be required to make further selections. If certain faults occur, it is also possible in the course of parameter query that the engine accelerates or the vehicle has to be moved.

Hella Gutmann has endeavored for years to make vehicle diagnostics as convenient, as efficient and as reliable as possible for workshops. A never-ending challenge, as the wide range of drive types and numerous vehicle systems in existence increase the complexity of diagnostics. It thus becomes all the more valuable for the daily routine at the workshop if the time taken for everyday vehicle diagnostics is shortened with intelligent methods and automation.

HELLA GUTMANN

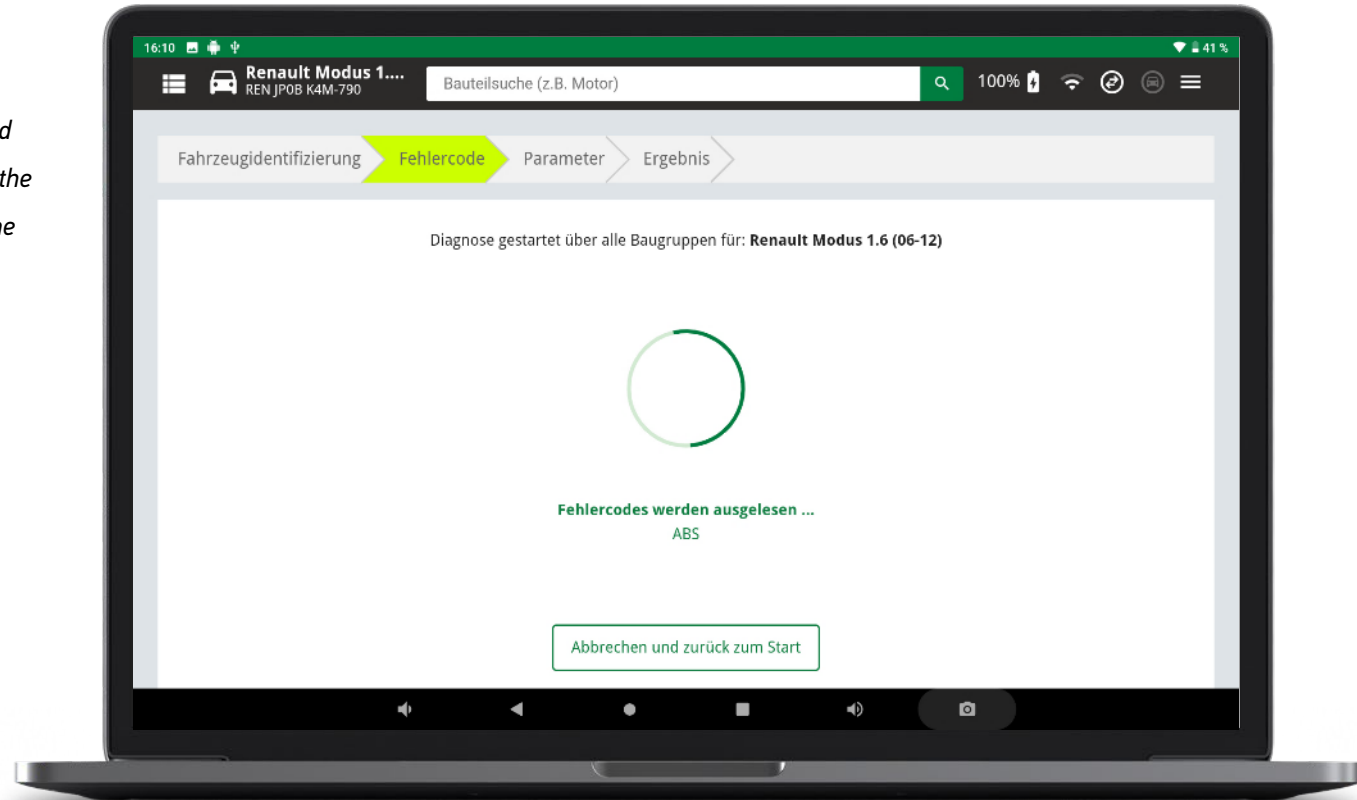## Automatic diagnostics
Why do workshops need this?

Vehicle identification is automated and does not involve manual inputting. The manufacturer and engine code are identified, displayed and selected by "Automatic Diagnostics".

This is followed by analysis of the trouble codes and parameters.

HELLA GUTMANN
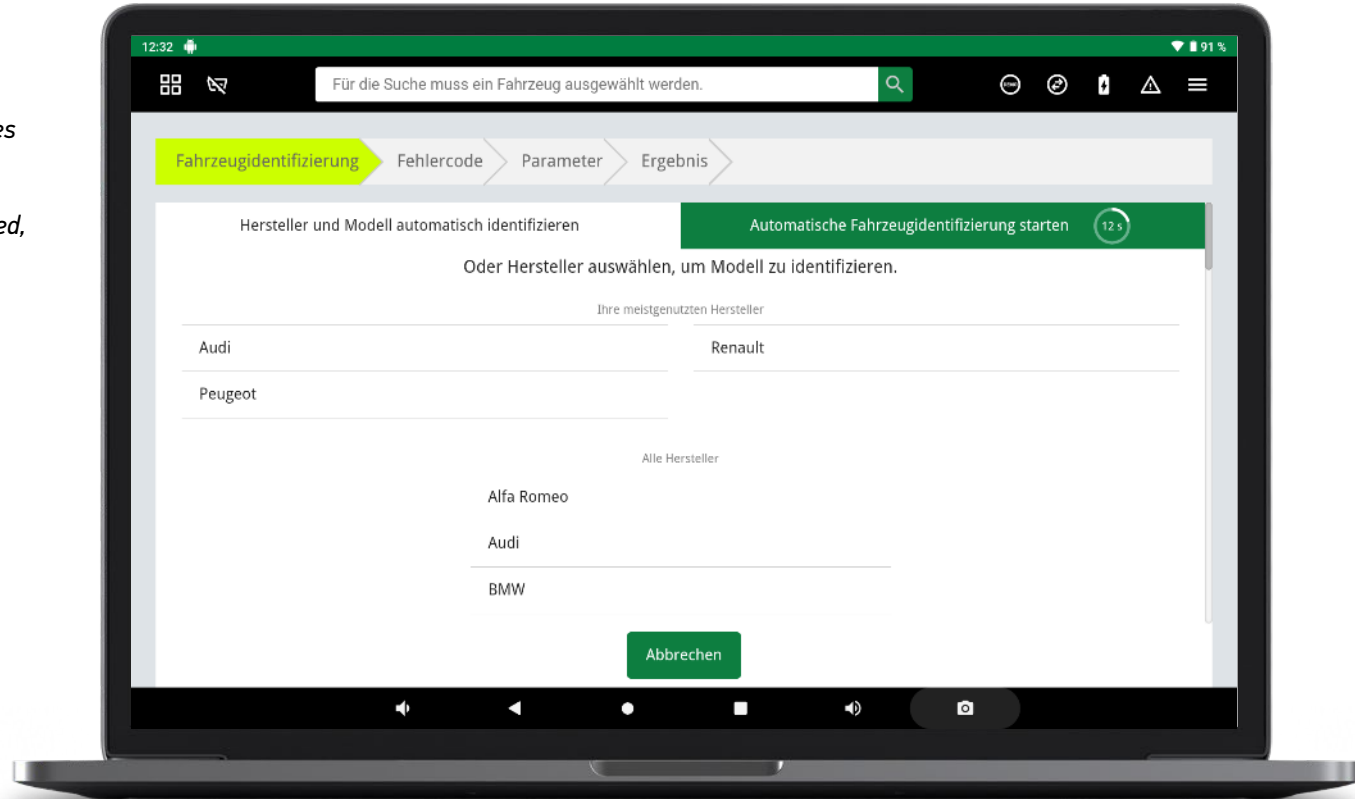
Automatic diagnostics
Why do workshops need this?

Automatic readout of the trouble codes and parameters which can be associated with the relevant trouble code result in display of the component possibly causing the fault.
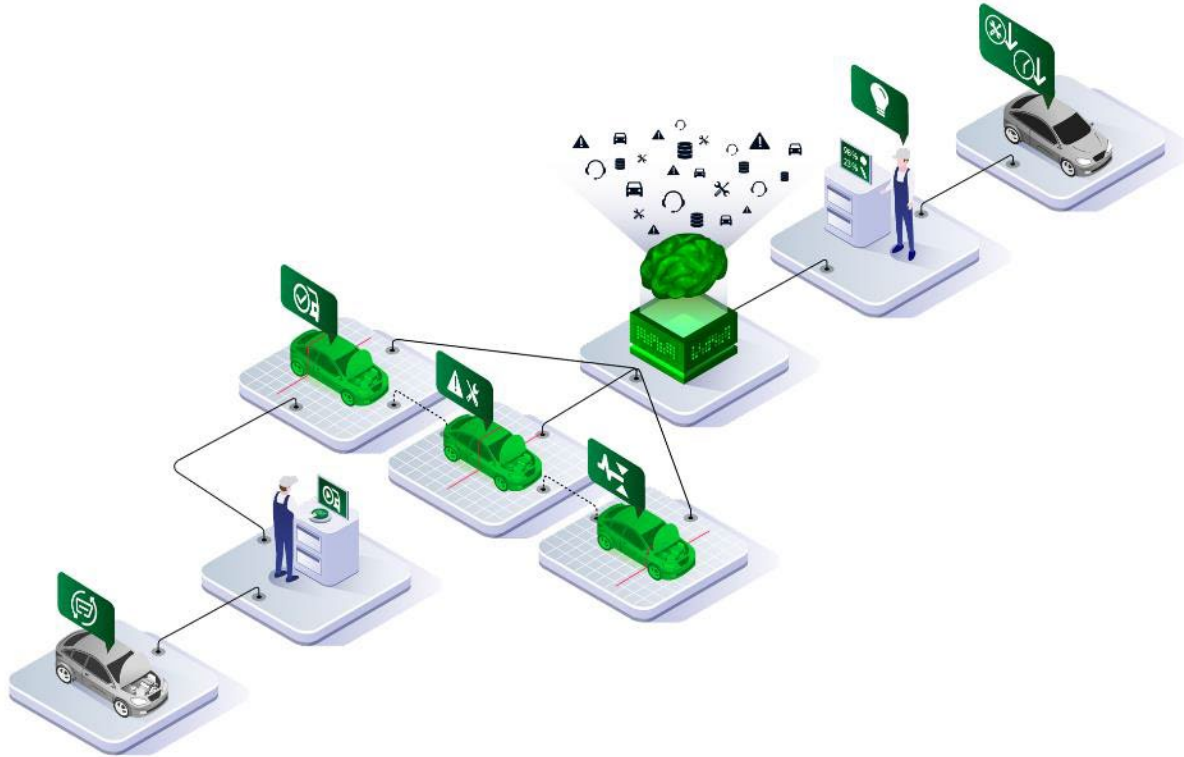
Automatic diagnostics
Why do workshops need this?

After "Automatic Diagnostics" is complete, it

is possible to manually edit the identification

(e.g. via license plate, order number, etc.)

and the kilometer/mileage reading for

unique assignment in the Car History.
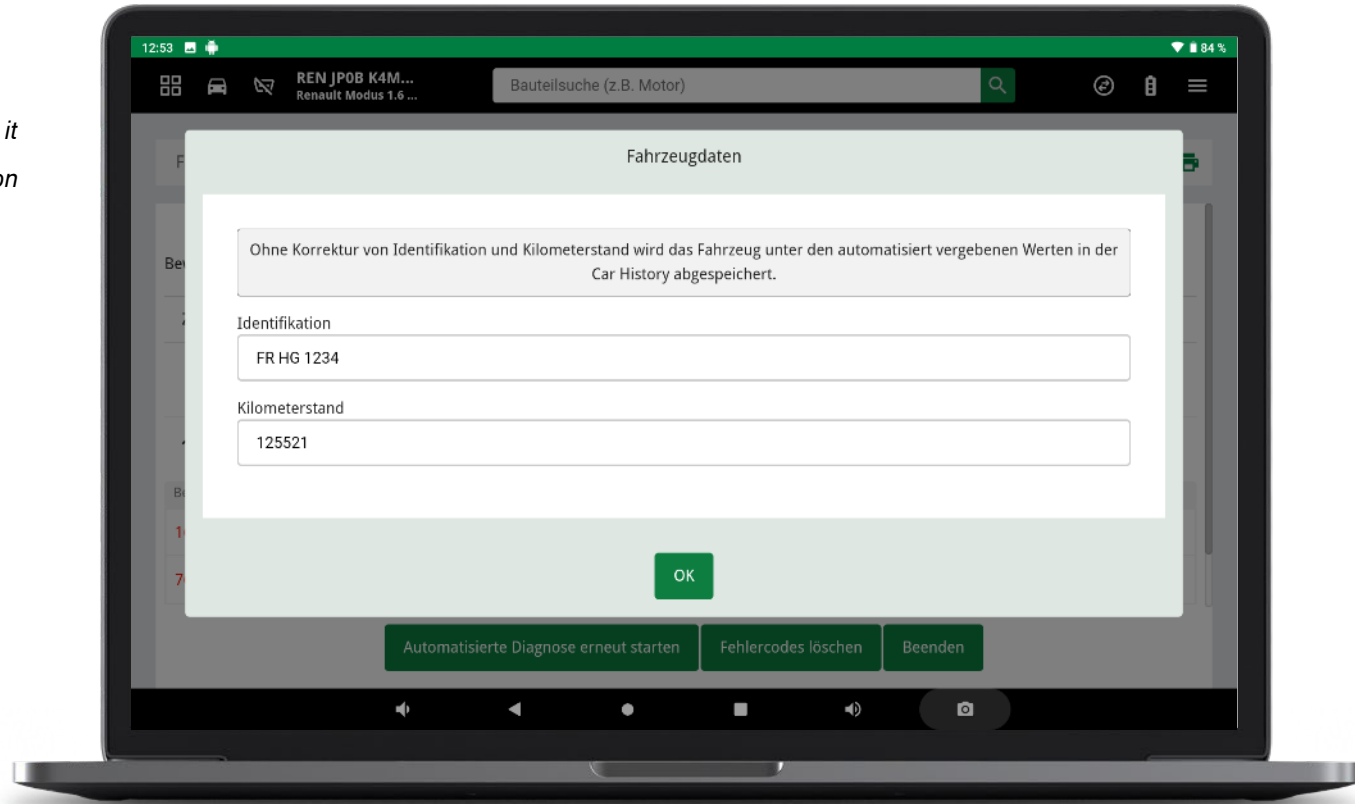
Automatic diagnostics
How does it work?

1. mega macs X or mega macs 77 is connected to the OBD interface

2. "Automatic Diagnostics" is started in the app launcher of the SDI at the touch of a button

3. Vehicle identification and the analysis of trouble codes and actual parameters are automated

4. The results are evaluated with the help of artificial intelligence and the entire technical expertise of Hella Gutmann

5. "Automatic Diagnostics" makes a recommendation for repair based on probability

6. The repair can be carried out in an efficient manner that saves time

GUTMANN

Automatic diagnostics
What are the benefits?

NEW VIN IDENTIFICATION

Selection of the vehicle manufacturer and model is fully automated with a success rate of over 90%.

TIME SAVING

The number of "clicks" has been reduced from as many as 30 down to very few.

FASTER TROUBLE CODE READOUT

All trouble codes are read out automatically, with prior analysis of the systems not installed in the vehicle – they are then disregarded – so making readout of the trouble codes faster. Parameters which point to a defective component according to the trouble code are automatically selected, queried and analyzed.

CLARITY + SAFETY THANKS TO ARTIFICIAL INTELLIGENCE (AI)

Defective components are suggested based on probability. Users are offered guidance and support with evaluation of the diagnostic result.

COMFORT

The mega macs operates independently. This allows other tasks to be performed at the same time.

SIMPLE USER GUIDANCE

Clear and self-explanatory user guidance in the SDI software.

SELF-LEARNING SYSTEM

An intelligent, continuously self-improving system which generates a statistically validated diagnostic result. This is based on some two billion registered trouble codes and some five million problem solutions stored by the Technical Help Line. This means that it is possible to recommend relevant components in around 80 percent of diagnostic cases – with this figure set to rise.

GREATER EFFICIENCY

The complexity of vehicle diagnostics involving a wide variety of manufacturers and vehicle types is reduced, making the process more efficient.

Vehicle Identification Service (VIS)

Identifying vehicles more efficiently

HELLA GUTMANN

Vehicle Identification Service (VIS)

What is "VEHICLE IDENTIFICATION SERVICE (VIS)"?

The new SDI function "Vehicle Identification Service" (mega macs 77 + mega macs X) is an extension of the existing vehicle identification system via VIN which is activated automatically in the background with Internet connection.
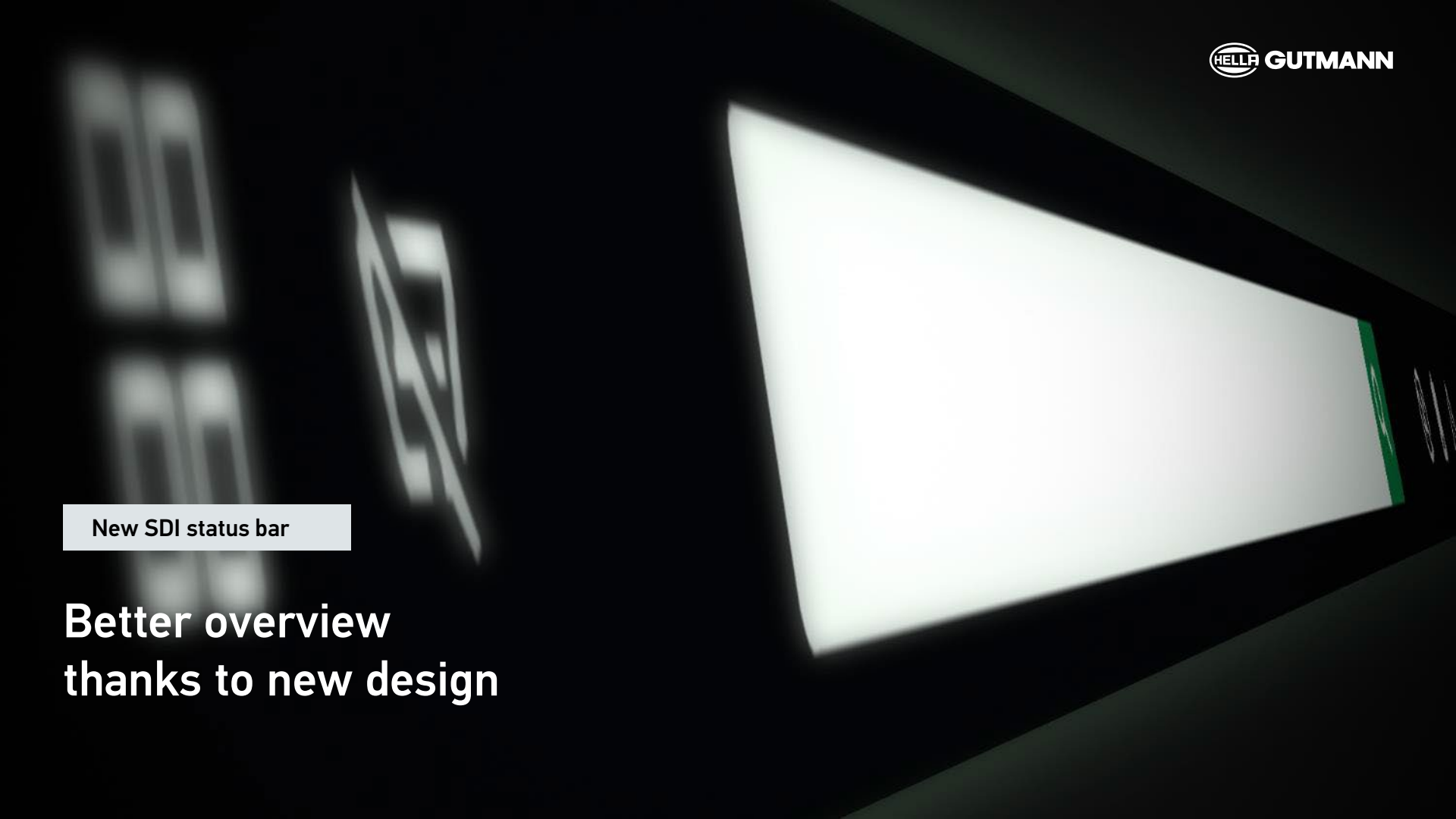
WHAT ARE THE BENEFITS OF "VEHICLE IDENTIFICATION SERVICE (VIS)"?

- Vehicle identification with "VIS" is up to 70% more accurate than with vehicle identification offline
- The identified vehicles are sorted based on probability and listed clearly

HOW DOES "VEHICLE IDENTIFICATION SERVICE (VIS)" WORK?

Vehicle identification starts following selection of the manufacturer and startup of the "Read out VIN" function. Once the diagnostic device is connected to the Internet, this is followed by a query via a new online database containing the "VIS" data. An AI (artificial intelligence) model is being trained based on selected vehicles whose VIN is known.

If the diagnostic device is offline, query takes place as before, although the success rate may be limited.
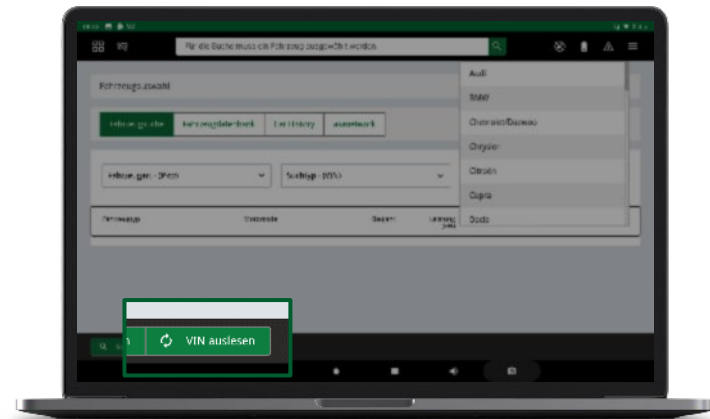
HELLA GUTMANN

New SDI status bar

Better overview
thanks to new design

New SDI status bar

WHY A NEW STATUS BAR?

The design and functionality of the status bar has been entirely revamped with version 70. The new status bar in the SDI includes many status displays and offers fast access to important functions at all times.

WHAT BENEFITS DOES THE NEW STATUS BAR OFFER?

- Dynamic adjustment of the size and display of the status bar takes place depending on the end device. Icons are prioritized or hidden according to the amount of space available.

- Icons will in future be divided into status and function icons for better differentiation: While status icons change their appearance depending on the current state (e.g. charging status), function icons can be clicked to access menus (e.g. functions, information or other submenus).

mega macs ONE

Further development
of the software interface

HELLA GUTMANN

HELLA GUTMANN

# Further development of the software interface mega macs ONE

WHY A NEW INTERFACE?

The design of the mega macs ONE software has been entirely revamped with version 70 to further enhance ease of use and for a better overview on navigation.

WHAT BENEFITS DOES THE NEW INTERFACE OFFER?

- Time saving with vehicle diagnostics through self-explanatory menu guidance

- Modern state-of-the art design

- Optimum support with vehicle diagnostics – including for inexperienced users

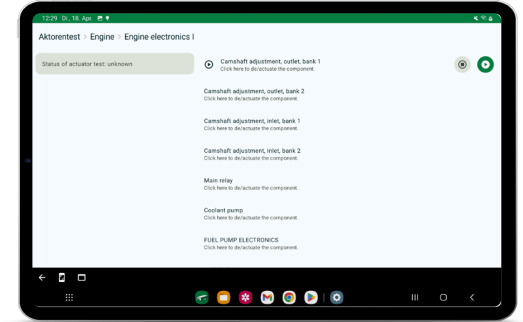- Clearer overview and simplified processing function of messages and text boxes

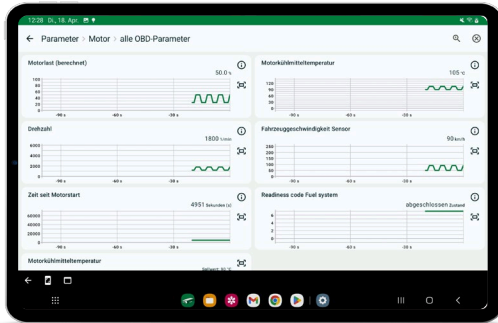# Further development of the software interface mega macs ONE
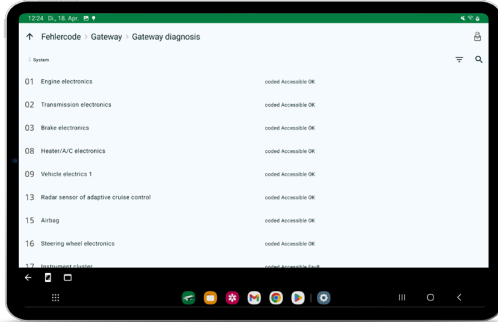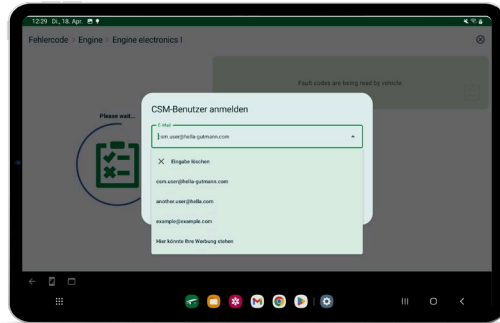

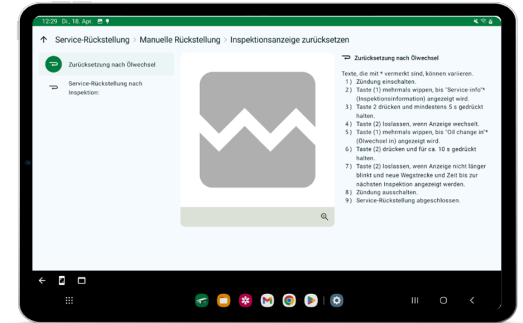*Trouble code query*
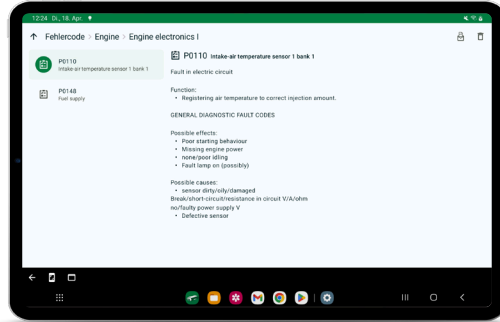
Diagnostic result

Actuator testing

Parameter depiction

Login of CSM user

Reset service indicator