Achieve the impossible

ABRITES Diagnostics for Mercedes Online
User Manual

Version: 31.7

www.ABRITES.com

Table of content:

I. Abrites diagnostics for Mercedes Online.
II. Using the Abrites diagnostics for Mercedes Online.
III. Abrites diagnostics for Mercedes Online Buses and trucks
IV. Mercedes Coding
V. Mercedes ECU Flashing
VI. Mercedes FBS4 Manager
VII. Smart Functions

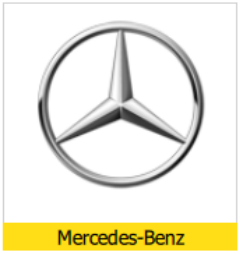
I. Abrites diagnostics for Mercedes Online:

The Abrites diagnostics for Mercedes Online is the next generation in the evolution of the Abrites Diagnostics for Mercedes. It provides dealer level diagnostics, live value and diagnostic trouble code monitoring, locating and clearing in order to assist the diagnostician to locate and resolve any issues with the vehicle at a dealer level in the environment of their own workshop. It can be installed on any Windows based system higher than XP and requires an AVDI interface to operate.

II. Using the Abrites diagnostics for Mercedes Online:

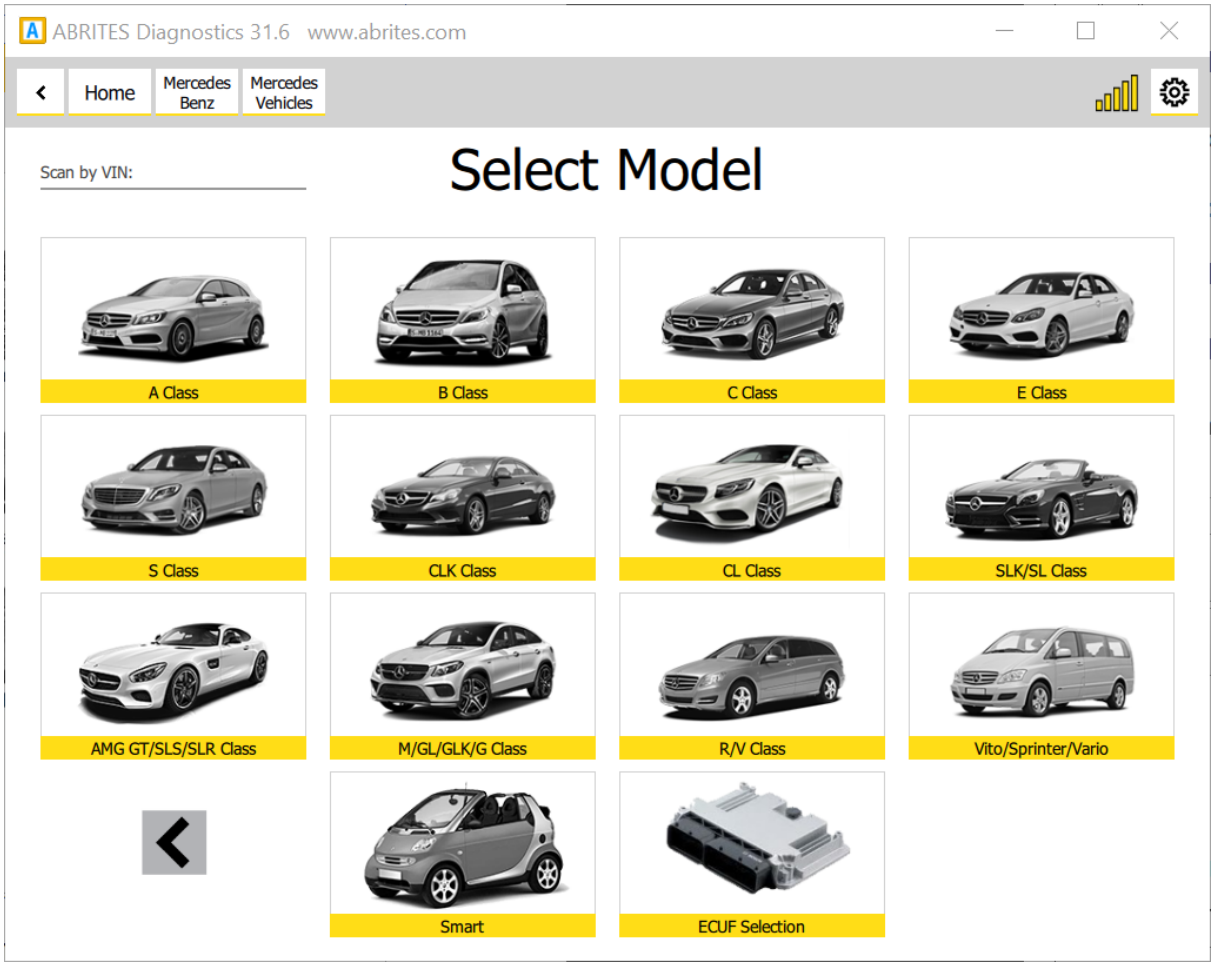
The Abrites diagnostics for Mercedes is an online application and as such it requires the computer you have installed it on to be connected to the internet. We can suggest a connection to the internet via 3G/ 4G from a mobile device as well as a WI-FI network. Please ensure to have port 8443 allowed by your internet service provider in order to ensure the correct functionality of your Abrites diagnostics for Mercedes Online.
Using the icon in the top right of your software screen you will be able to see the internet connectivity and signal strength and the three horizontal lines will allow you to choose a language in which the software to operate:

When you open the Abrites Quick Start you can select the Abrites diangostics for Mercedes Icon:



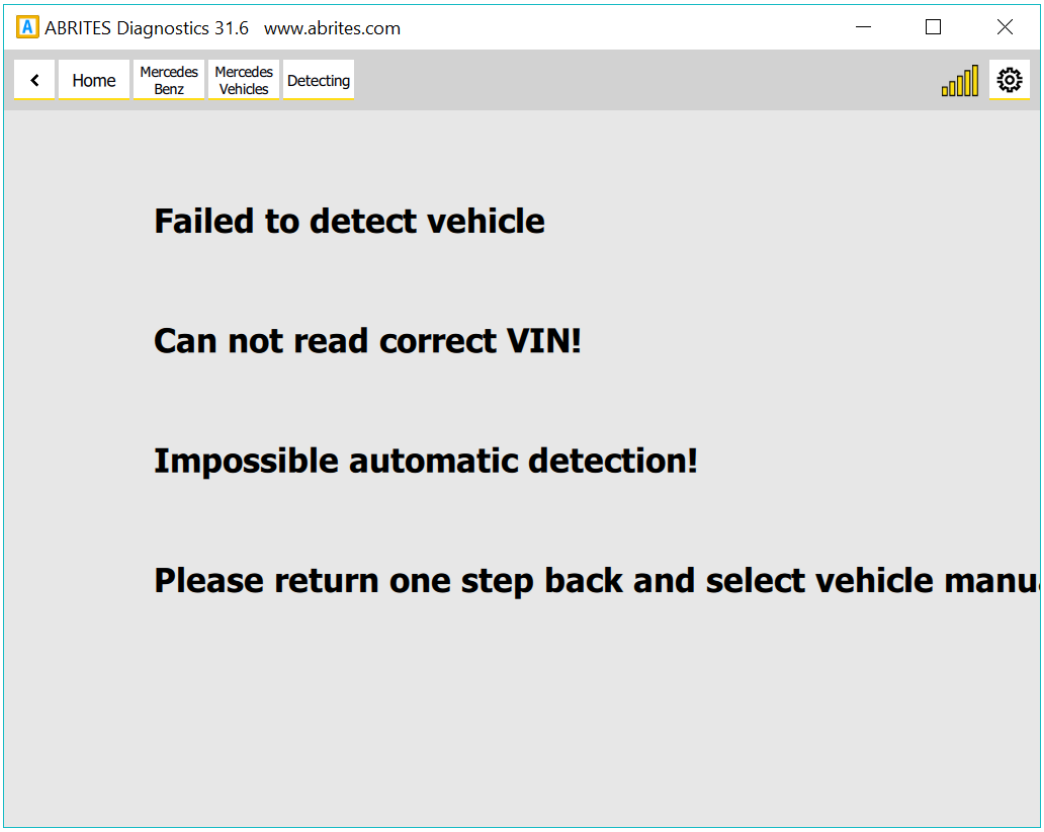
After clicking the Abrites diagnostics for Mercedes Icon you will see the software start up. The software will automatically start detecting the vehicle your AVDI is connected to. Once that is done you will see a list of modules. You will also have the ability to choose to select a car by the model as well as by the vehicle VIN number in order to assure correct vehicle selection of the software. It is customary for Mercedes-Benz vehicles to share modules throughout the vehicle models and shared platforms. For this reason we strongly suggest for you to select the vehicle by the VIN number so that the software best determines the vehicle in the best way possible. This means that the software will be able to get the full list of modules and this is preferred to be done by VIN. For example a vehicle like the W218

(CLS 2nd generation) uses many modules from the W212 (E class) on which the CLS is based. It is the same for the X (W)164 (ML 2nd generation) which shares many electronic components with the W221 (S class). This is something we need to keep in mind while operating with Mercedes-Benz vehicle as a whole because sharing components is a strong part of the company's principle. For this reason we need to stress on selecting the vehicle by VIN.



There is also the option to select the particular ECU from the vehicle which allows operating specific modules in cases where a problem with the overall communication is present.

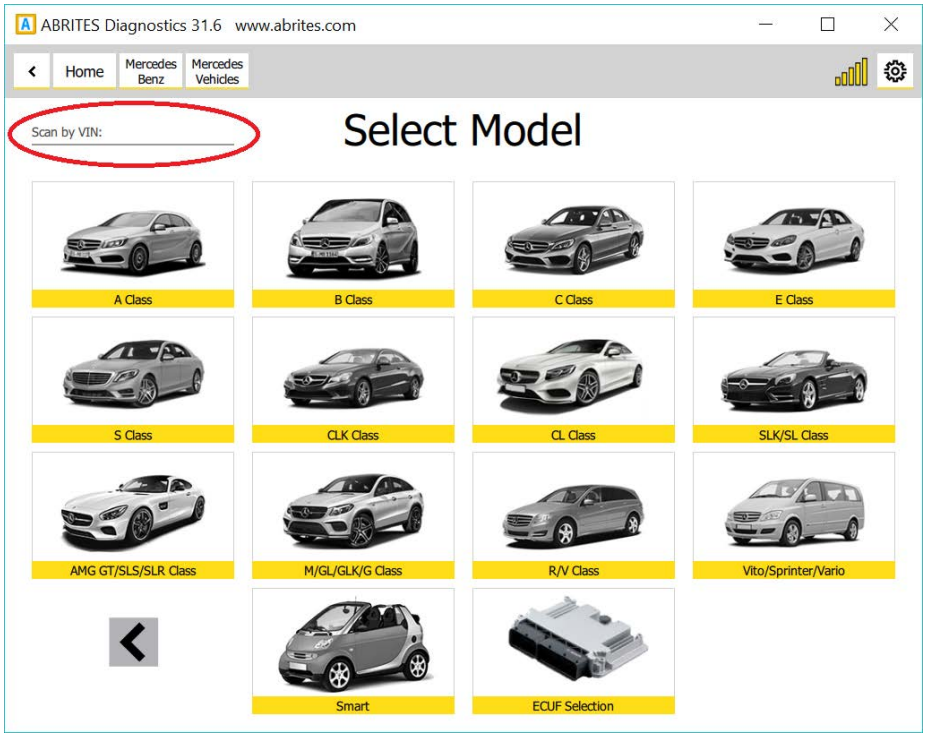
There can be different approaches to starting work with Mercedes-Benz vehicles via the Abrites diagnostics for Mercedes but we suggest to start by automatically allowing the software to determine the vehicle type and begin communication. Once that is done it will find out what the car is and will then populate the list of modules. If this is not possible the software will generate the following message:



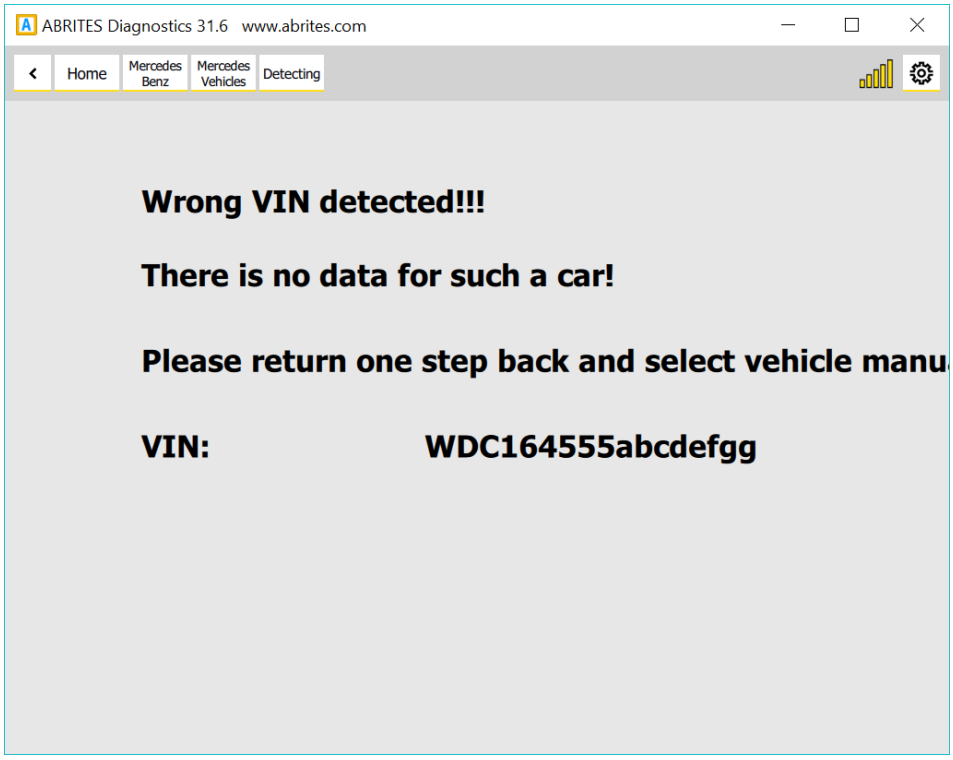
As mentioned above a reason for such message can be that the car is compiled from different modules or that the modules do not have VIN numbers inside them. In most of these cases the Abrites diagnostics for Mercedes Online will come up with a message saying that it cannot locate the vin. This is the **"Can not parse VIN ….."** case. In both of the cases described above we recommend the selection of the vehicle by VIN number. This is to be used in cases when the vehicle cannot be automatically detected when the software is started.

IMPORTANT: If the car is automatically detected by the software but the list of modules does not appear we have the same situation like described above(the "Can not parse VIN ….." case). This problem is often present with the US models due to the different VIN format which leads to wrong parsing. In such cases you will have to enter the VIN manually in the following format followed by the Enter button. Here is a simple example of a Mercedes Sprinter (W906, W221) : xxx906xxxxxxxxxxx , where 906 is the chassis number. When you are working on a W221 it is always recommended to enter the VIN manually in the same format as for the US models.

Searching the vehicle via its VIN number is done via the VIN search field in the top left of the screen:

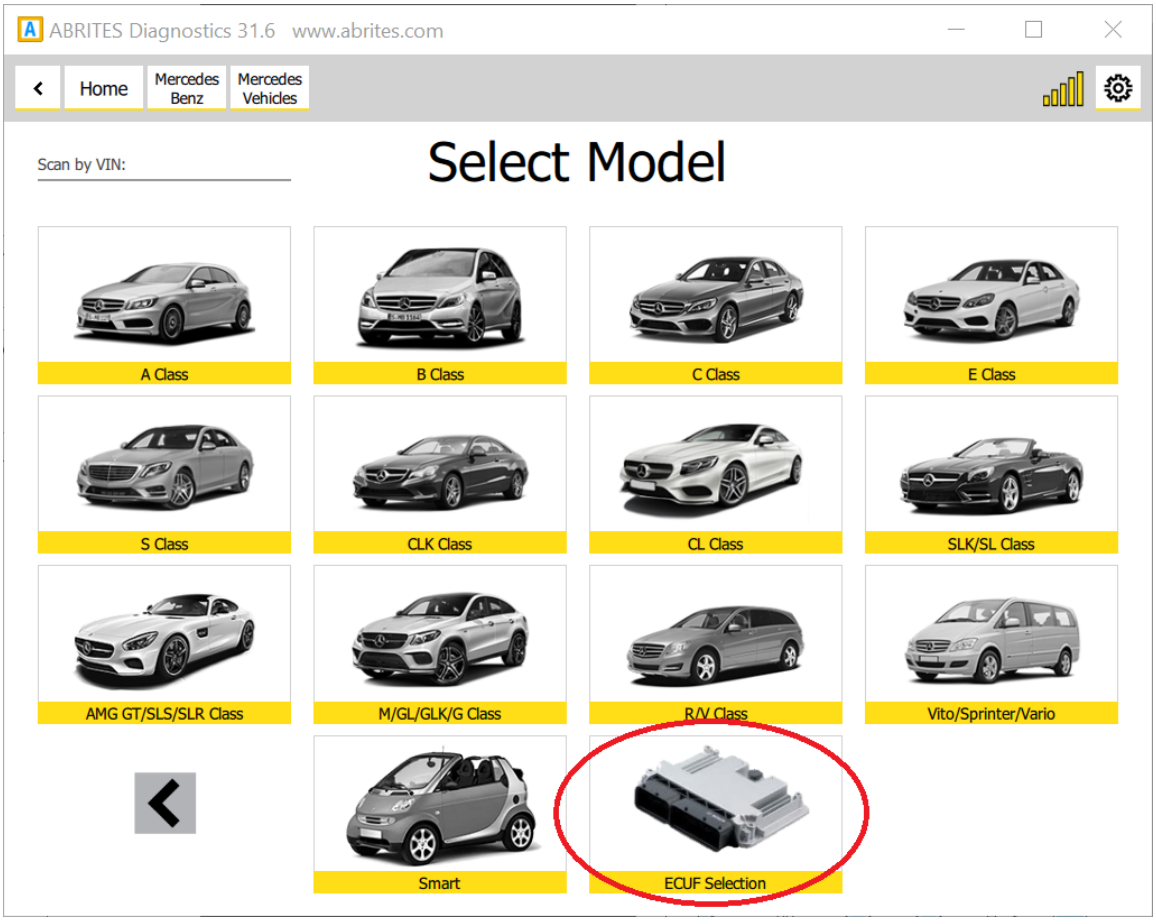


Here you can enter the VIN and determine the car which needs to be made of 17 digits. These VINs can be found in various places in the vehicle. The scan by VIN only starts after the “Enter” button is pressed. If an impossible VIN is selected you will see the following message:

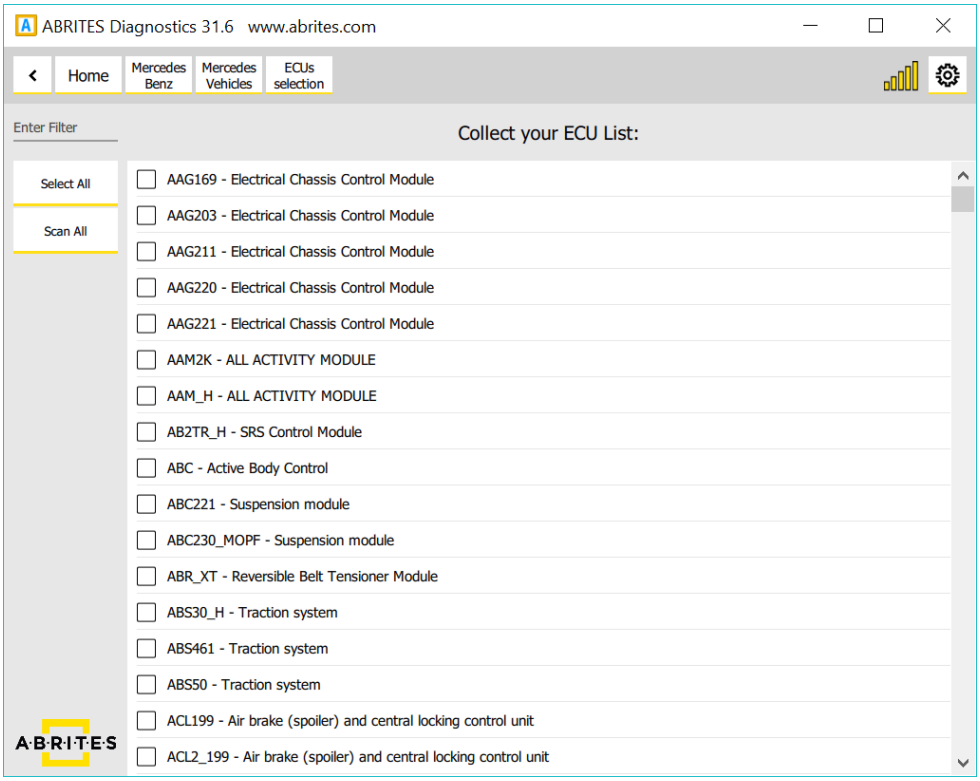


Only if all the previous methods fail do we suggest that you select the vehicle by chassis code.

If for some reason you see the error above or if you are unhappy with the results shown you can select from a full list of the electronic control modules installed in Mercedes vehicles worldwide.

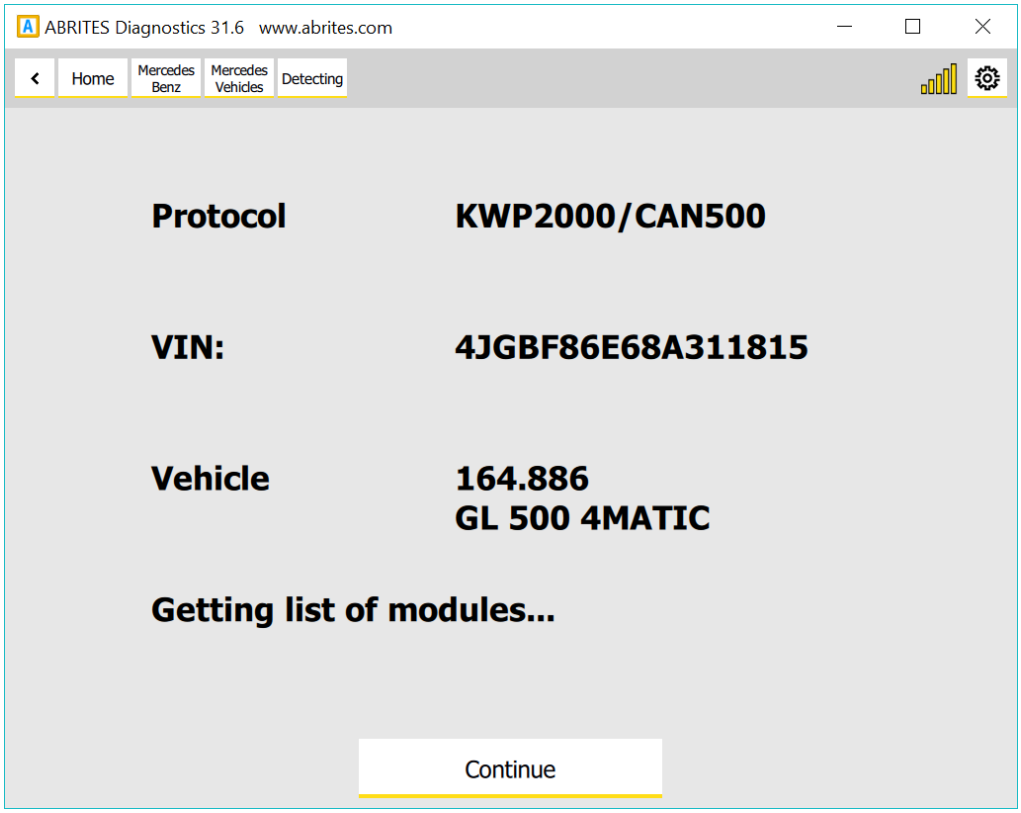


Once you reach this step you have a list of over 1300 separate electronic control modules which you can select from. We strongly suggest that you use the search option here in order to select the module you are looking for to avoid confusion.



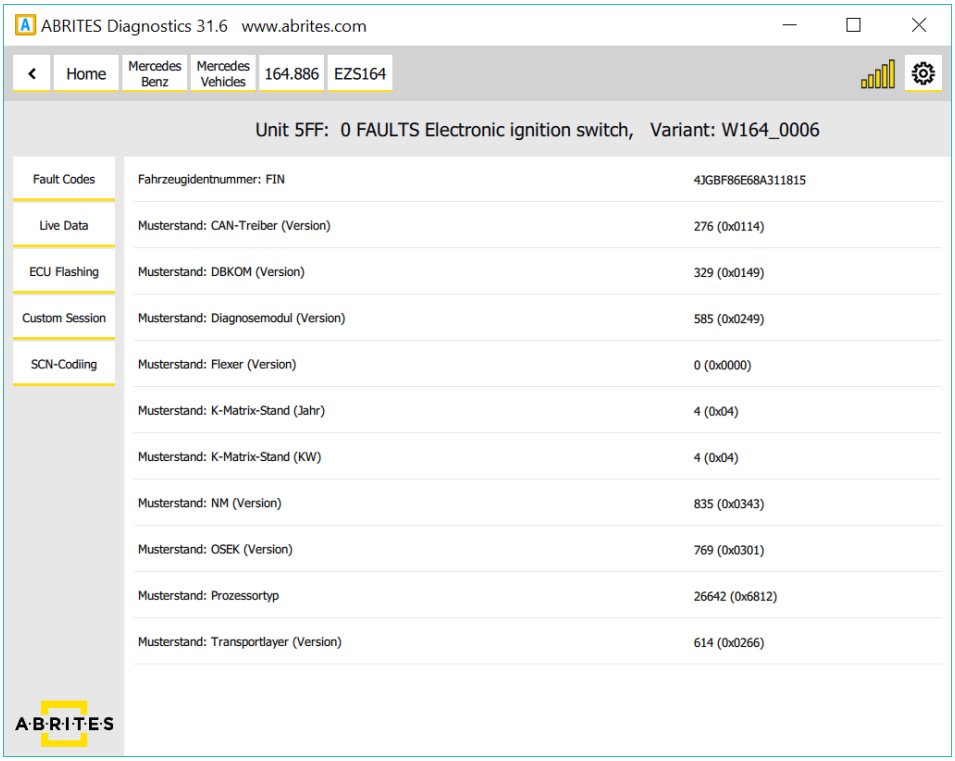
As you can see the list is large and you can search to select the unit you are looking for.

Once you have connected to the car you can see the following information:



In the particular case we have a W (X) 164 which we can can start diagnosing. Press “Continue”.Once you press continue you will see a list of the modules installed in this vehicle:

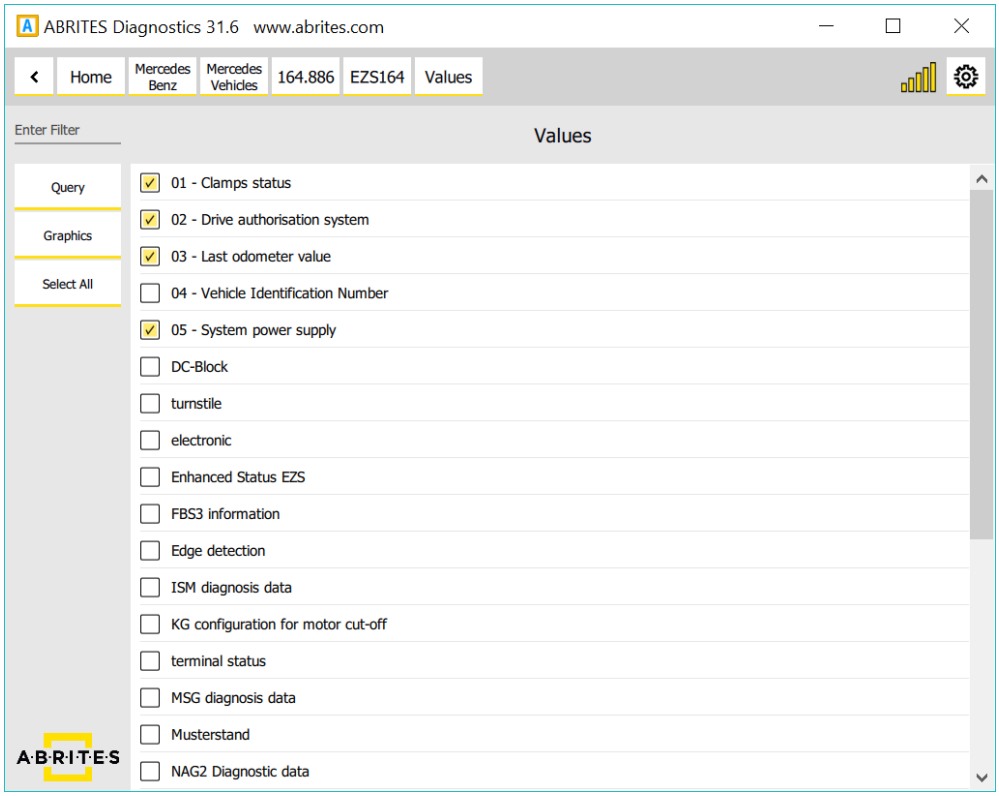
Each module has full



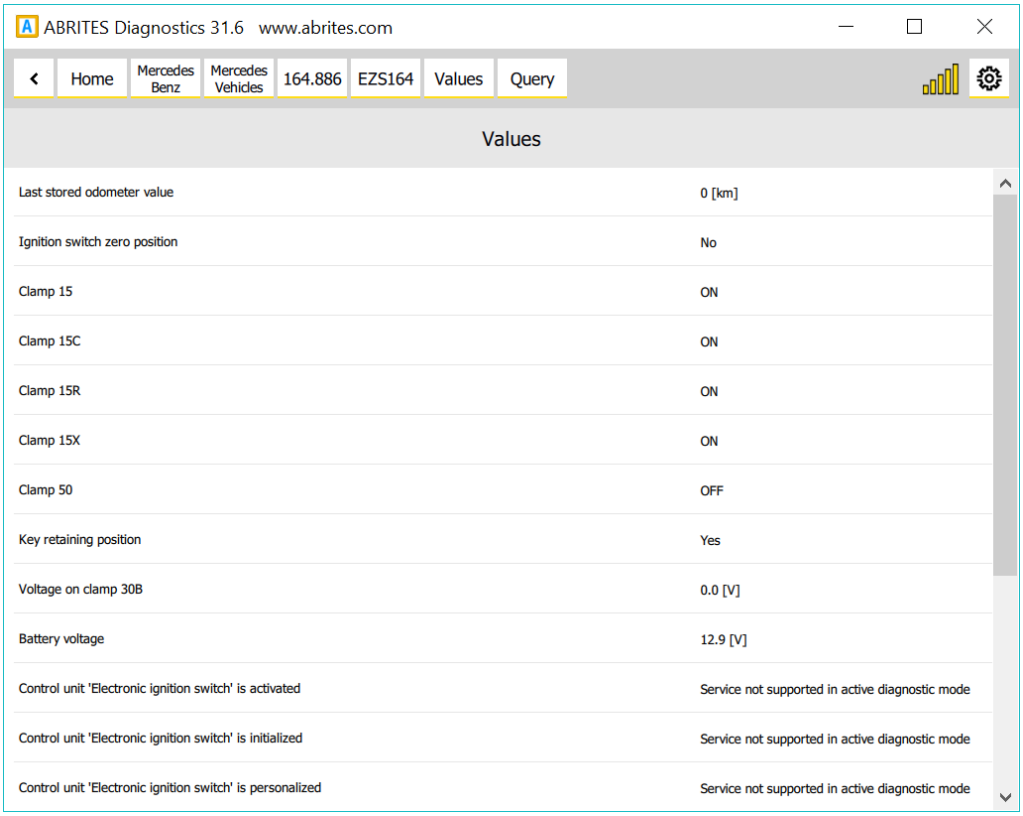
identification and can be read with all the data included in it for diagnostics. As you can

see we provide multiple languages and the identification is done in the

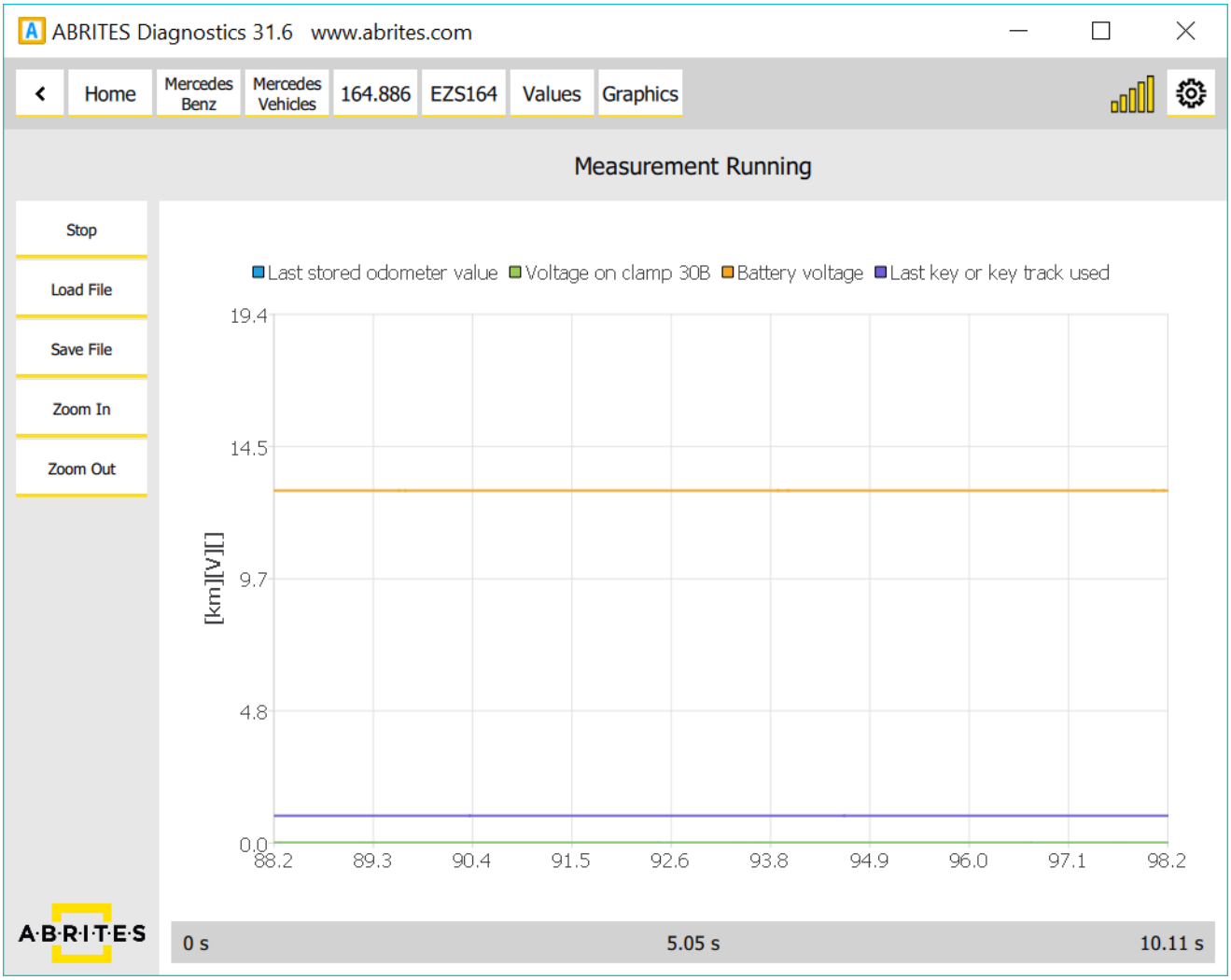
language you find fits you best:



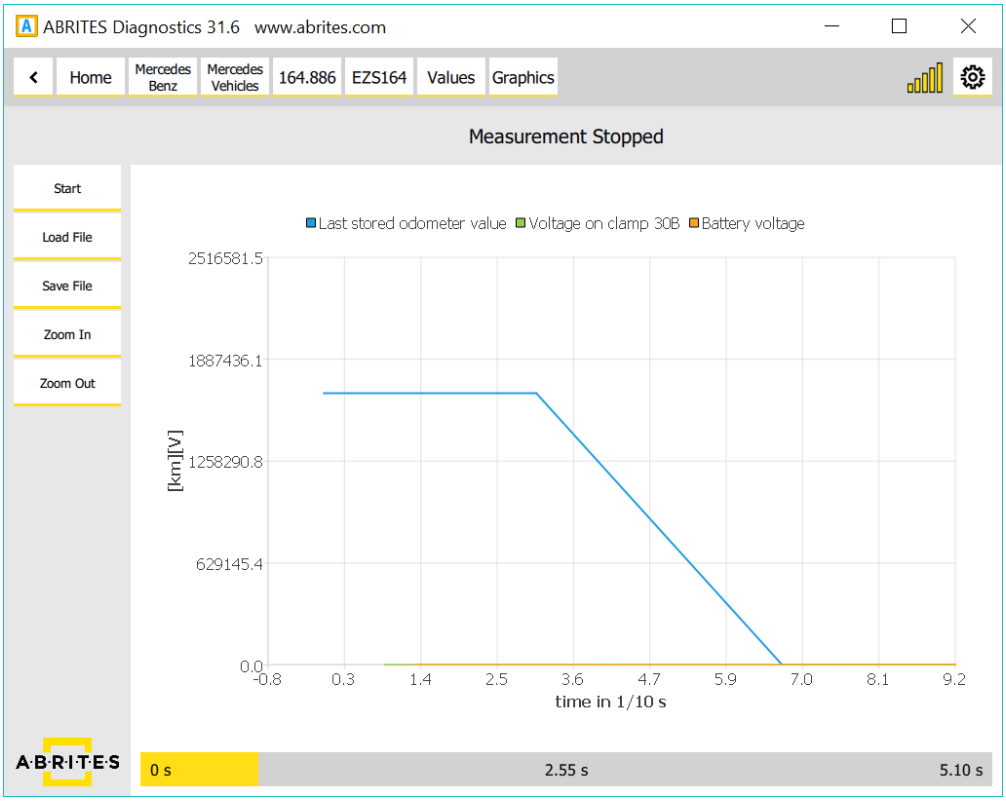
As you can see you can select multiple live values to monitor depending on the best way you find fit to diagnose the vehicle.



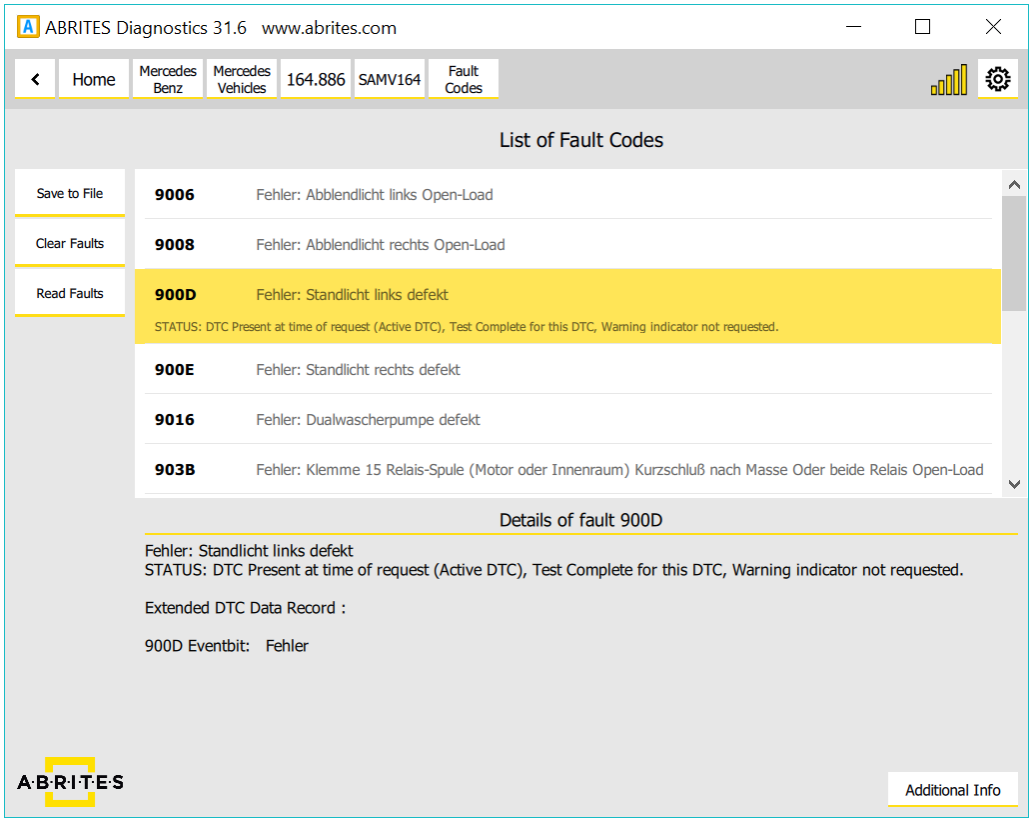
All the data can be viewed in the language that fits you best.



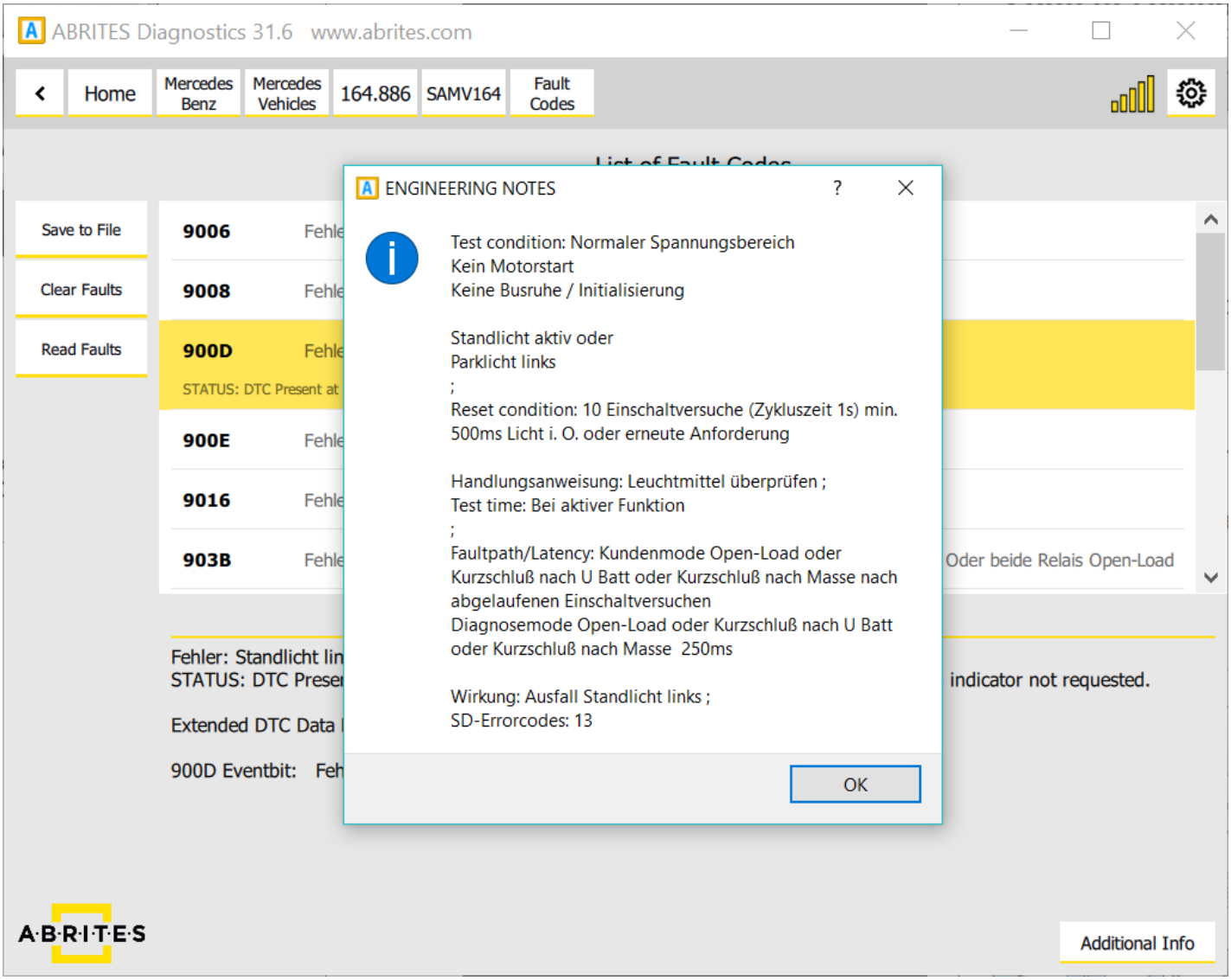
Live values can also be viewed as a table and saved in order to be used for later analysis.



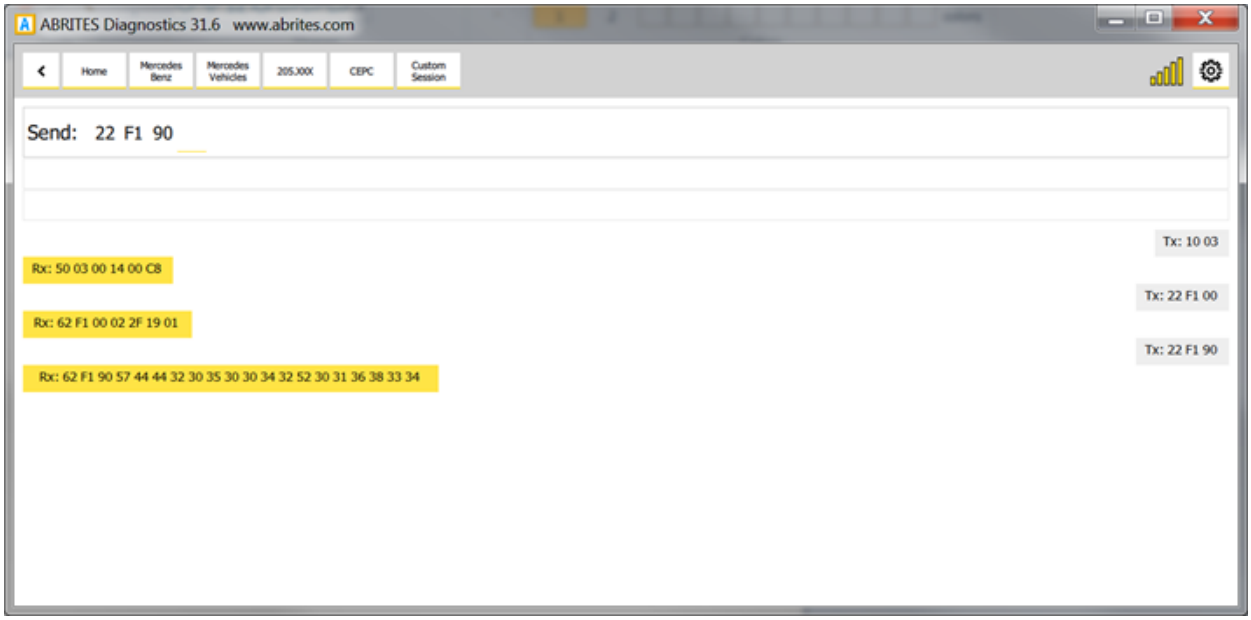
Using the fault code function allows to view the fault codes, read them, check all the details in regards to them and then clear them after the issue is resolved.



As you can see the level of details here is very high and is on par with the OEM diagnostics. Once again this is a complete solution ad provides multilingual support:



For advanced users we also provide the option to send custom requests to the electronic modules in the vehicles.

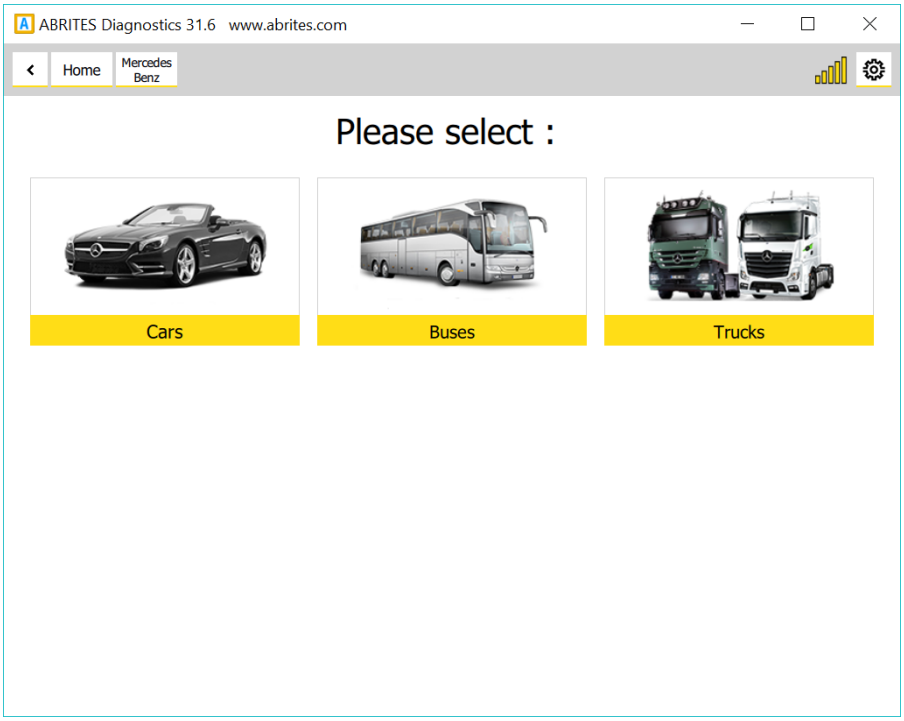


The current version of the manual describes just the beginning of the development of the Abrites diagnostics for Mercedes. We will continue the development of the software by adding special functions to assist our customers and provide them with an incomparable solution for Mercedes-Benz vehicles. In this manual we will continue adding information about the software itself as well as the philosophy of Mercedes-Benz diagnostics – old, current and new.

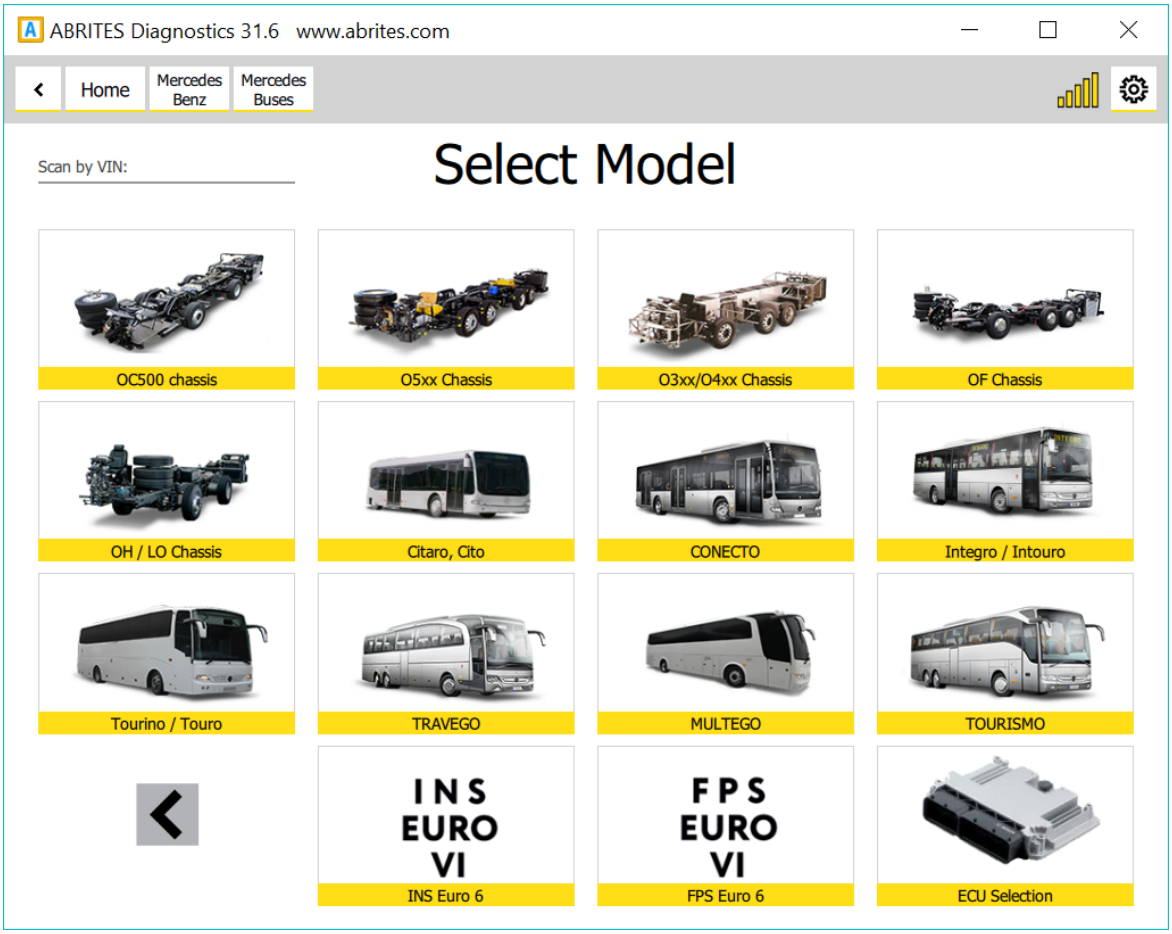
III.Abrites diagnostics for Mercedes Online Buses and trucks

Using the Abrites diagnostics for Mercedes Online you can perform diagnostics for Mercedes-Benz buses and trucks. With the help of the Abrites online platform you can scan for units, observe the identification of the modules installed in these trucks and buses, read DTC (Diagnostic Trouble Codes), clear the DTCs and monitor live values. You can perform these features in the following way:

1. Select if you are working on a car, truck or bus:



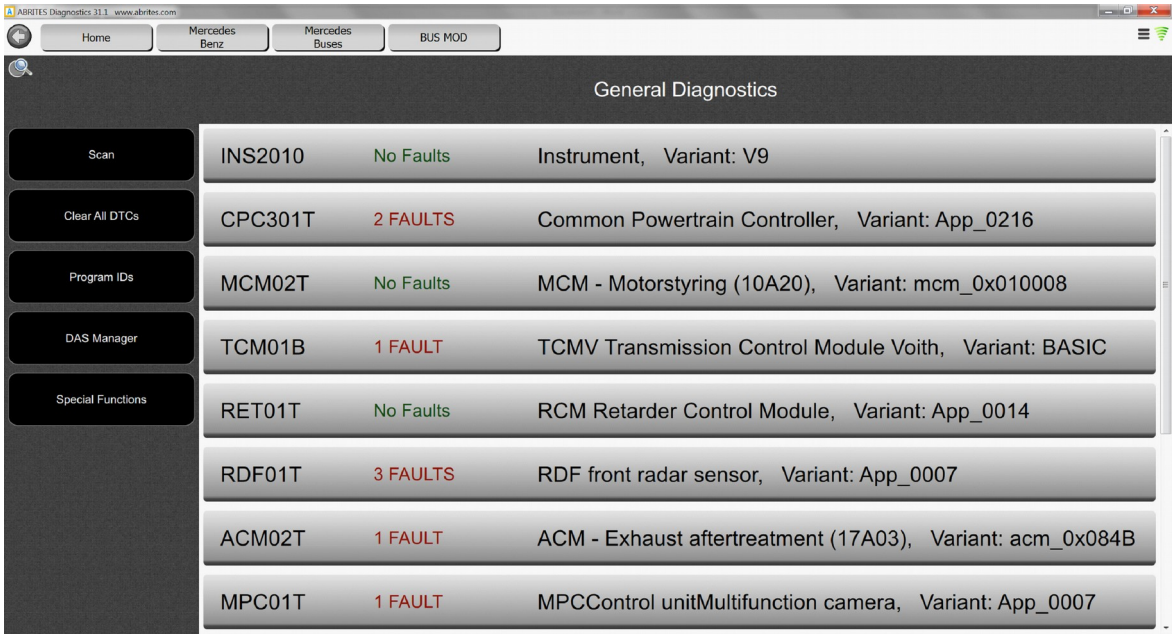
2. Here is what the bus menu looks like:



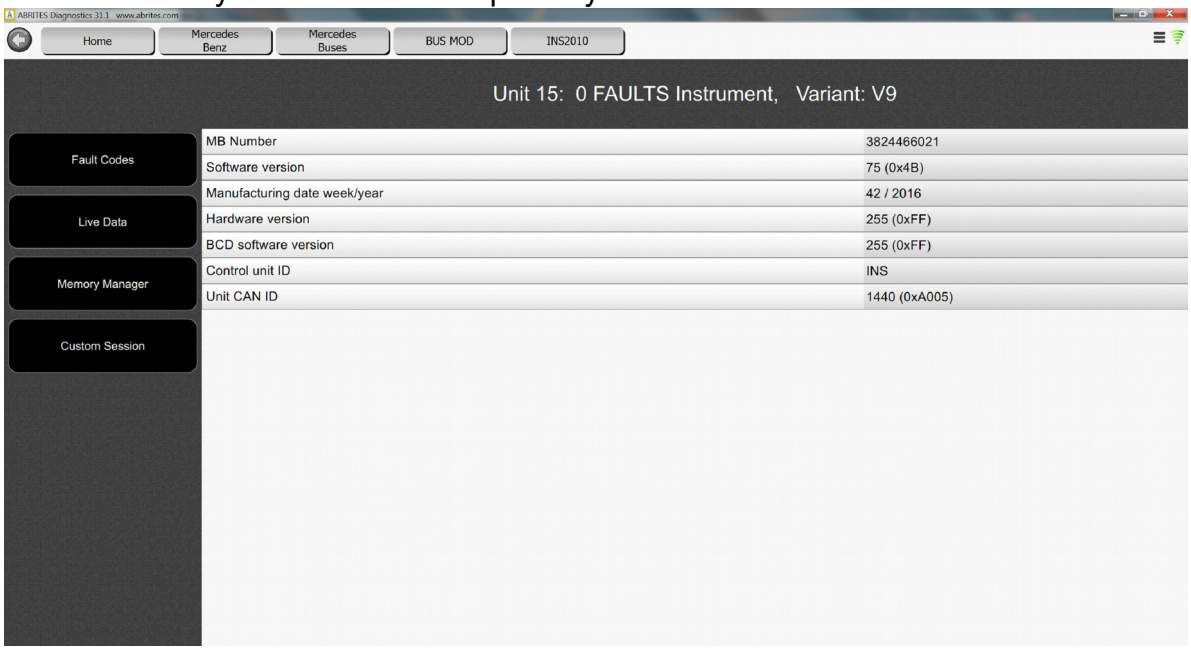
Here is the start scan of the buses:

3. Full scan of the modules inside the buses and trucks including the number of fault codes registered in each of them:

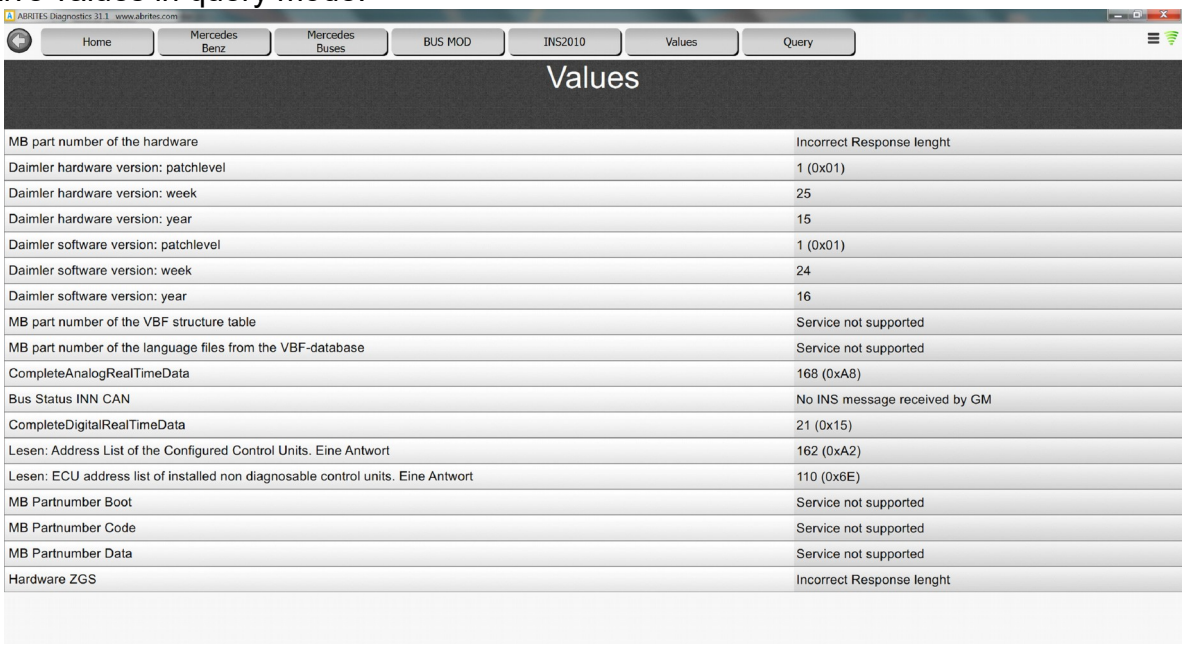
4.



Once you enter a module you can see the identification of the module itself and on the left side of the screen you can see what options you have with each module:

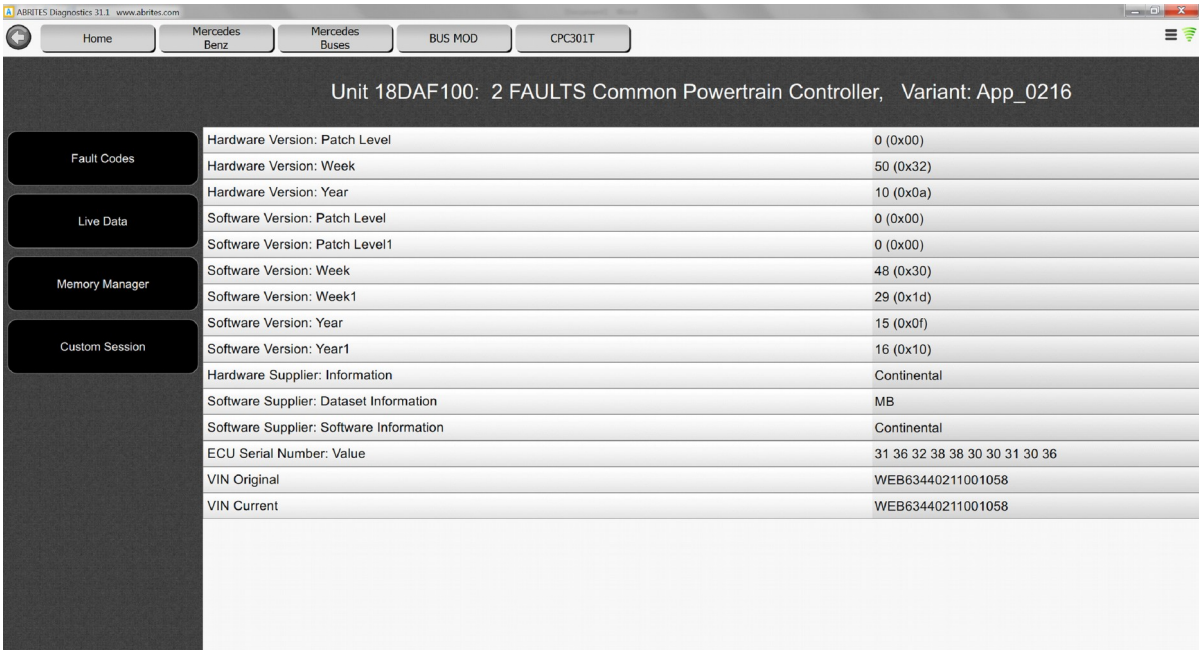


5. Live values in query mode:



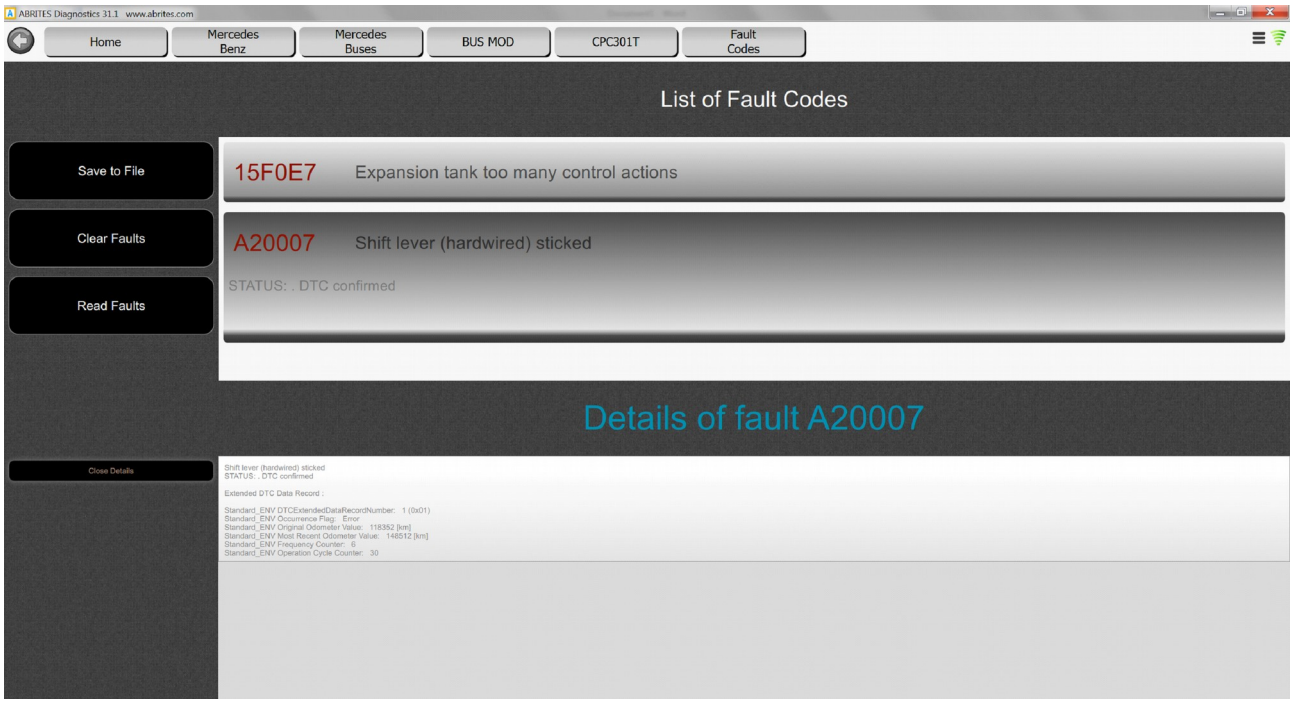
MB part number of the hardware	Incorrect Response lenght
Daimler hardware version: patchlevel	1 (0x01)
Daimler hardware version: week	25
Daimler hardware version: year	15
Daimler software version: patchlevel	1 (0x01)
Daimler software version: week	24
Daimler software version: year	16
MB part number of the VBF structure table	Service not supported
MB part number of the language files from the VBF-database	Service not supported
CompleteAnalogRealTimeData	168 (0xA8)
Bus Status INN CAN	No INS message received by GM
CompleteDigitalRealTimeData	21 (0x15)
Lesen: Address List of the Configured Control Units. Eine Antwort	162 (0xA2)
Lesen: ECU address list of installed non diagnosable control units. Eine Antwort	110 (0x6E)
MB Partnumber Boot	Service not supported
MB Partnumber Code	Service not supported
MB Partnumber Data	Service not supported
Hardware ZGS	Incorrect Response lenght

6. Full module identification:



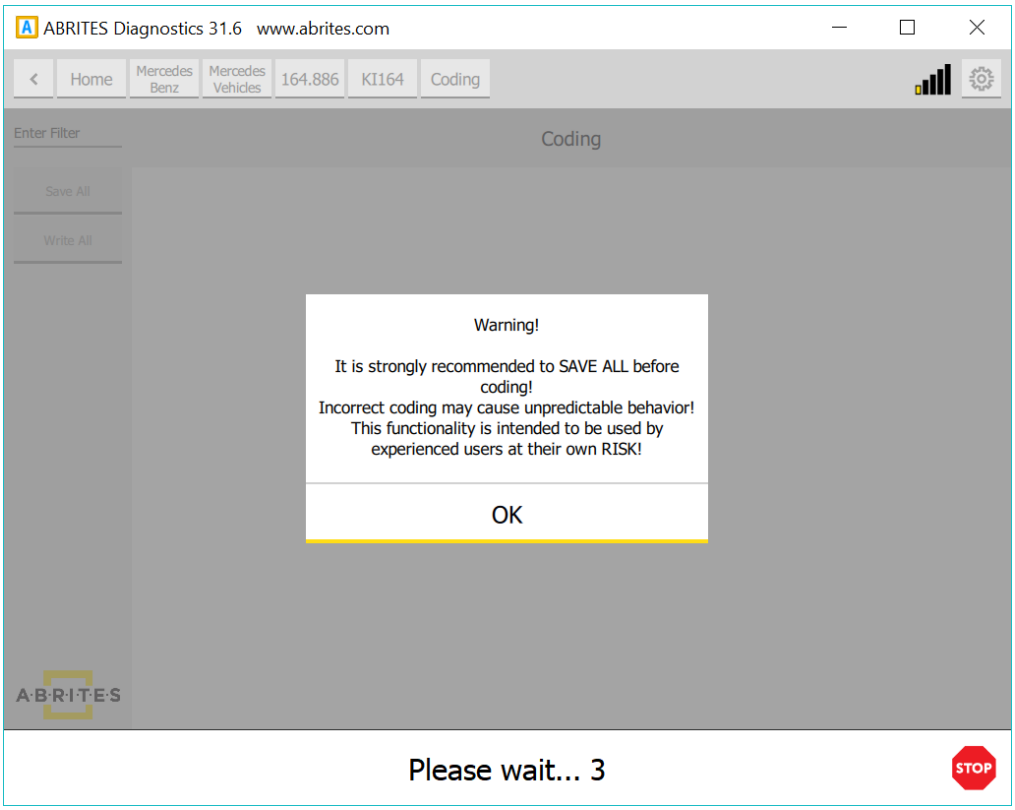
Hardware Version: Patch Level	0 (0x00)
Hardware Version: Week	50 (0x32)
Hardware Version: Year	10 (0x0a)
Software Version: Patch Level	0 (0x00)
Software Version: Patch Level1	0 (0x00)
Software Version: Week	48 (0x30)
Software Version: Week1	29 (0x1d)
Software Version: Year	15 (0x0f)
Software Version: Year1	16 (0x10)
Hardware Supplier: Information	Continental
Software Supplier: Dataset Information	MB
Software Supplier: Software Information	Continental
ECU Serial Number: Value	31 36 32 38 38 30 30 31 30 36
VIN Original	WEB63440211001058
VIN Current	WEB63440211001058

7. After scanning for faults you can enter each module and read the fault codes in full details as well as any possible solution where one is available. All of this is under the details menu – when the error occurred, what it is exactly and so on:

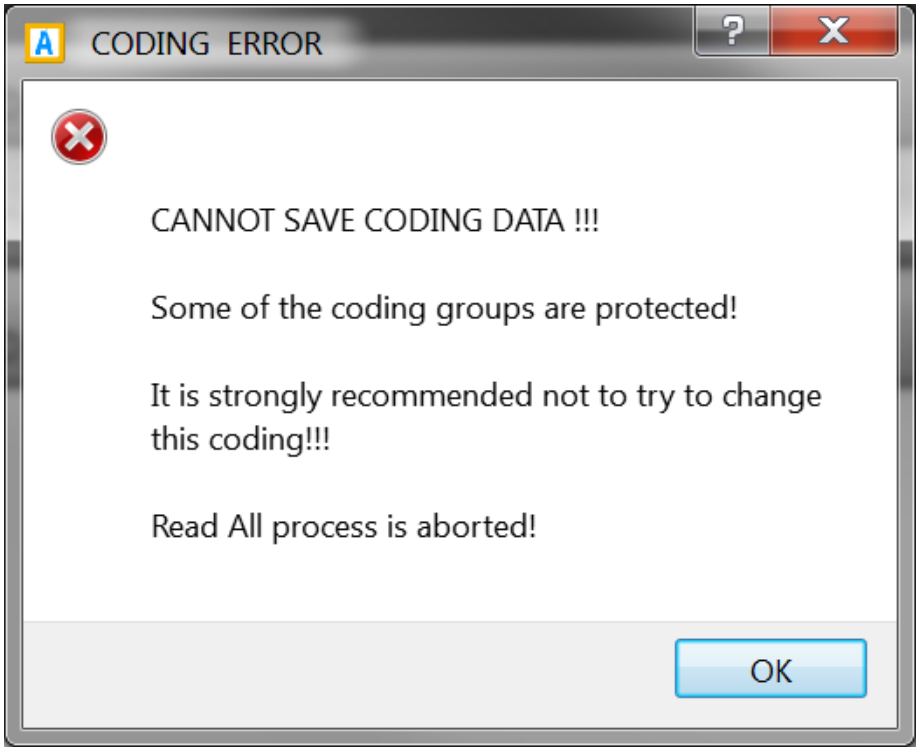


IV. Mercedes Coding

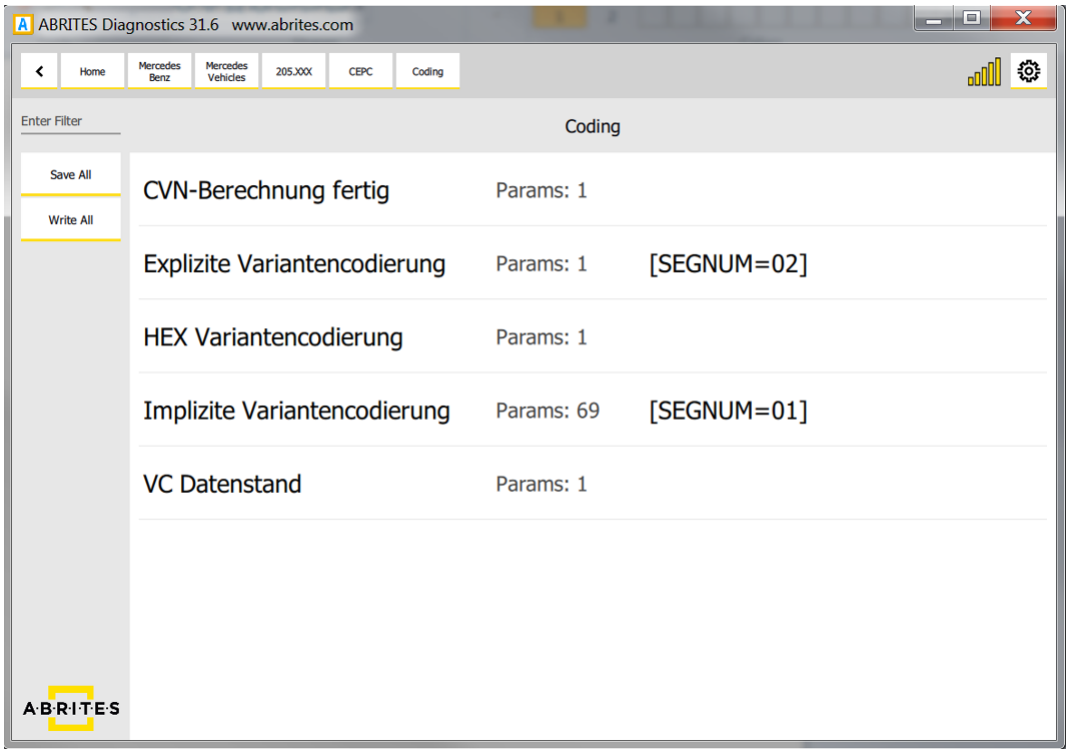
The coding in Mercedes will allow you to change different parameters related to functionality of an unit. It is important before making any changes in the coding groups, to save all current coding as backup. A warning will be displayed:



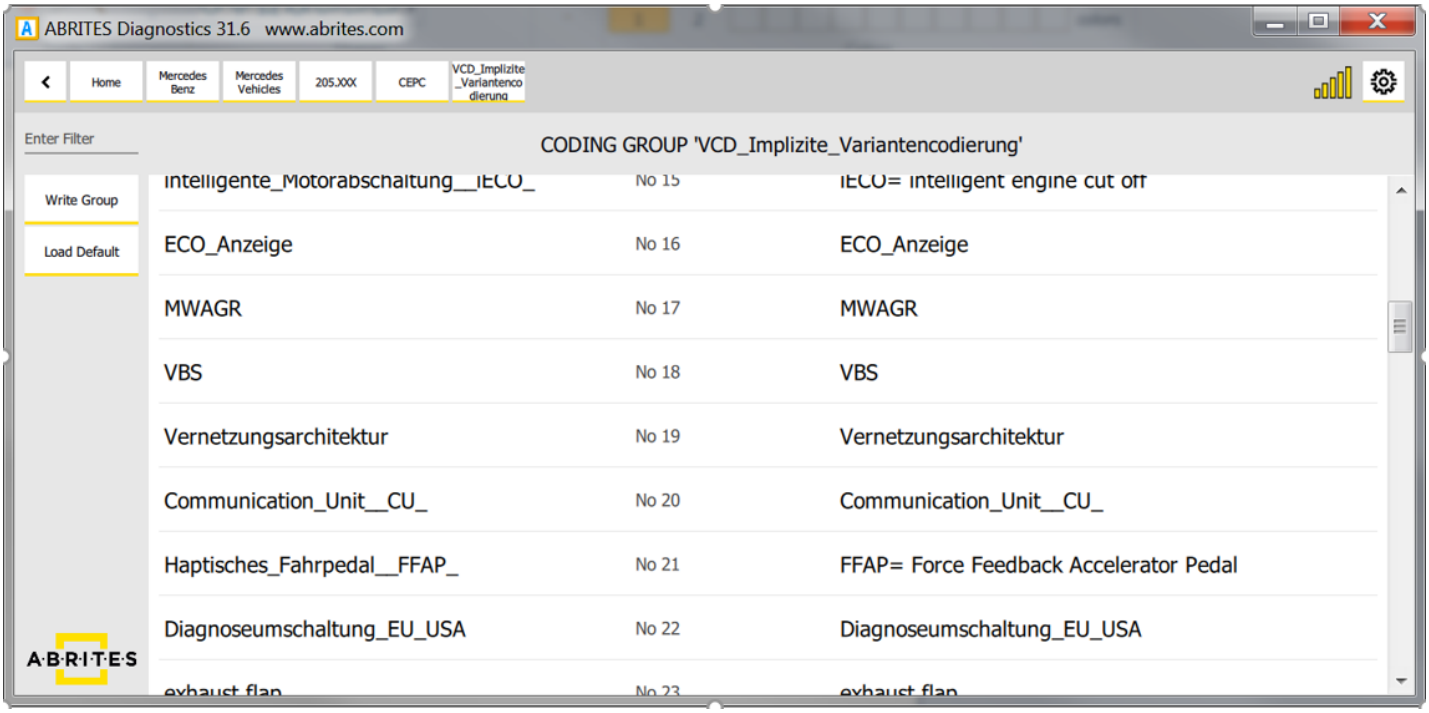
Some parameters cannot be edited and the software will display a message if such a parameter is changed:



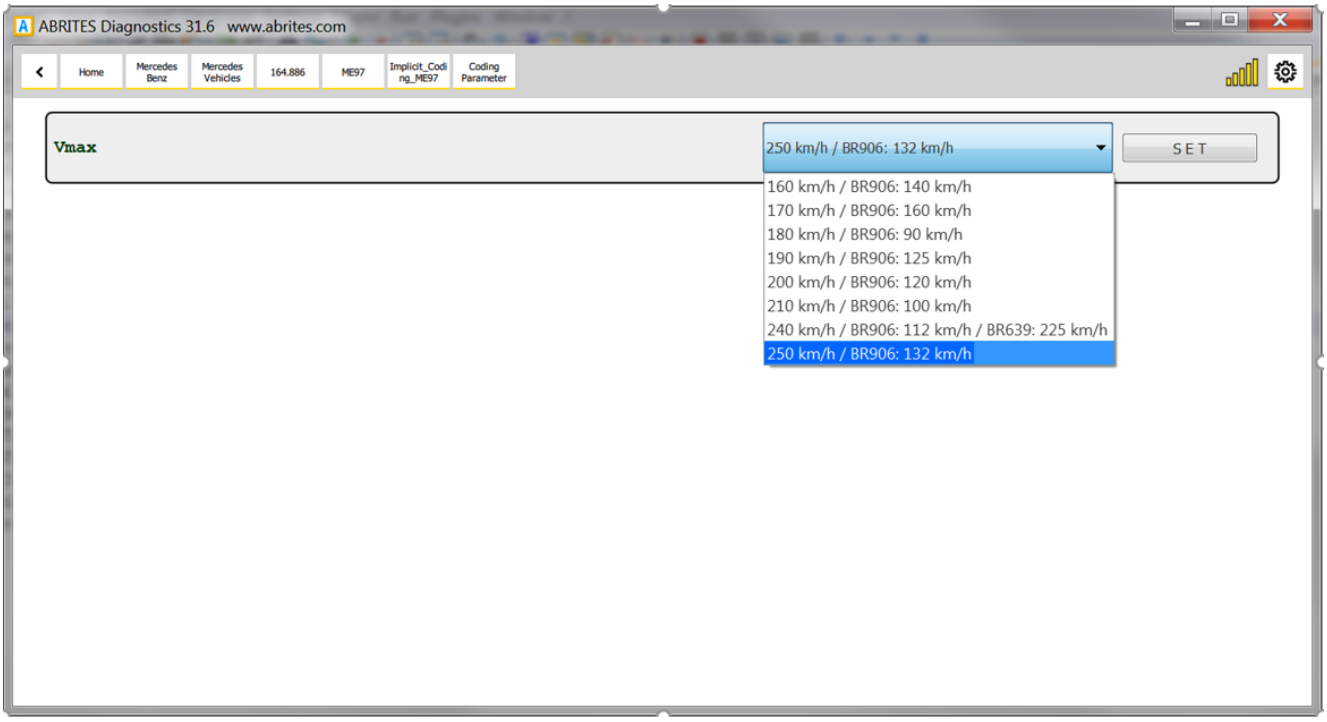
To enter the coding menu, please autodetect the car model or select it manually from the model list, enter the unit you want to code and enter the "Coding" option:



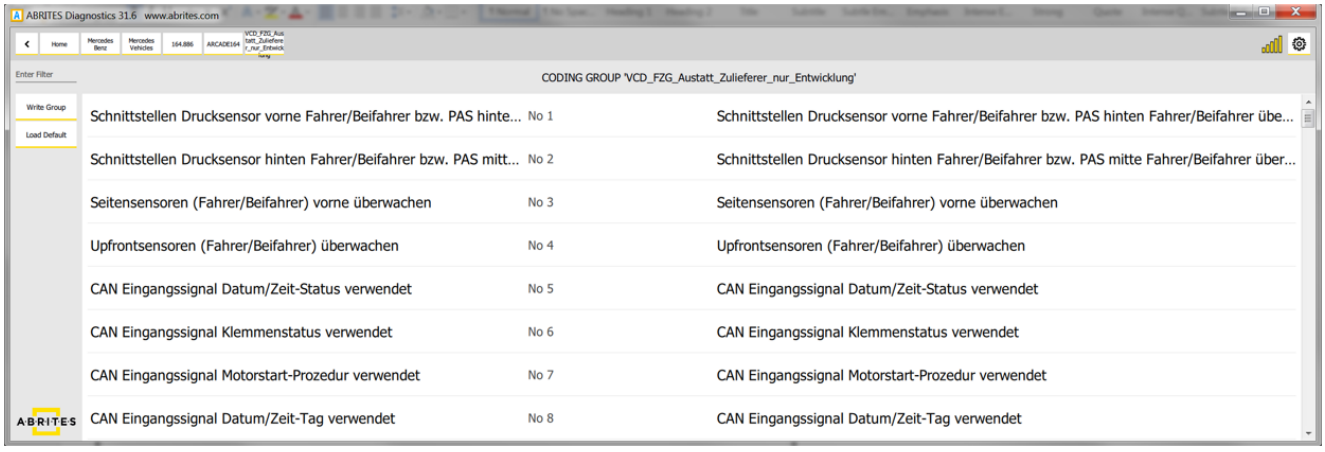
After the changes are made, you can write the coding using the "WRITE GROUP" button. You can change as many parameters as you want, followed by "WRITE GROUP":

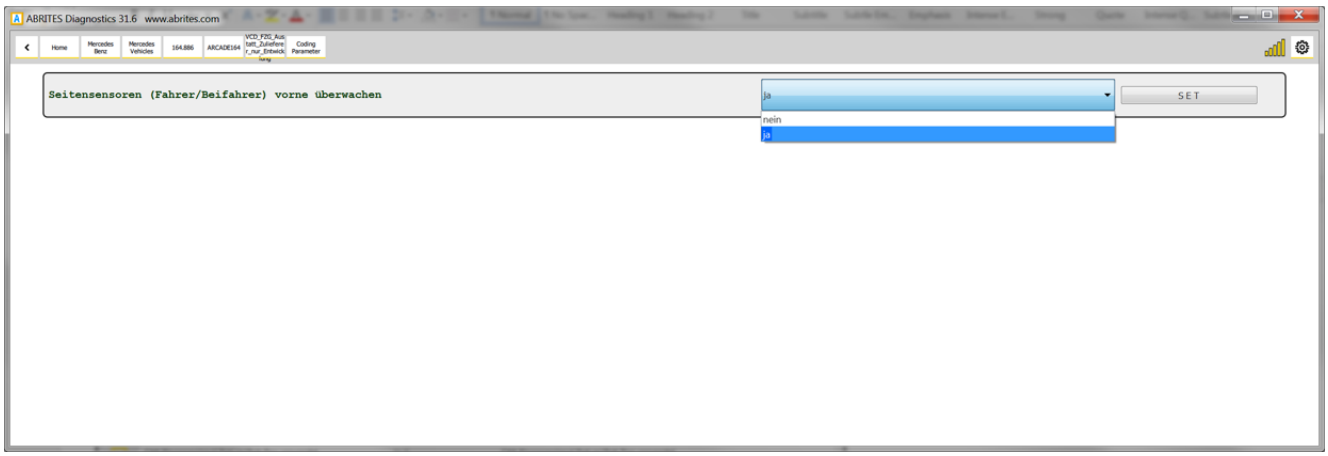


The following screenshot shows how to change the VMAX parameter responsible for the speed lmit:



The next screenshots show what the menu for activating/deactivating side sensors looks like:

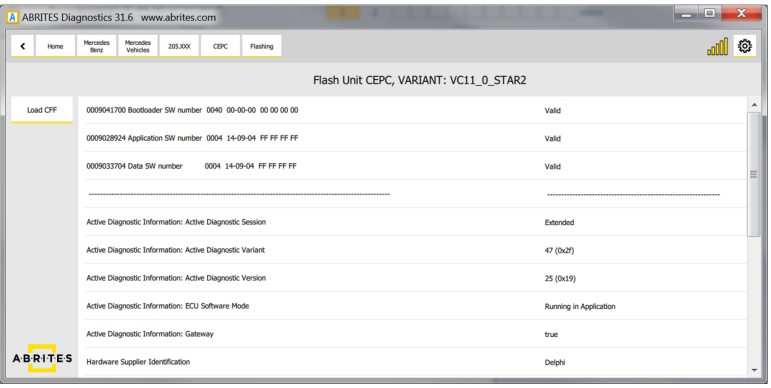




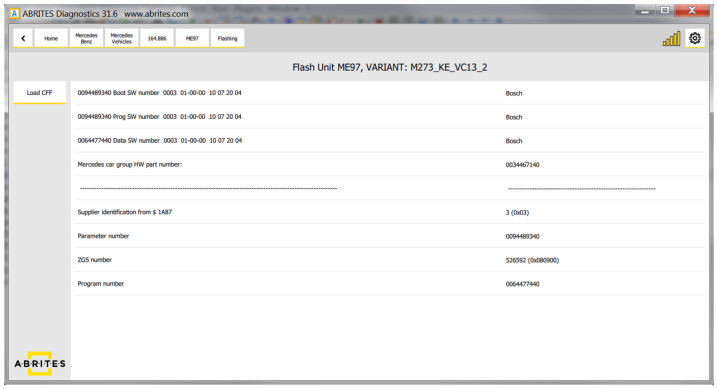
V. Mercedes ECU Flashing

The Mercedes ECU Flashing option will allow you to flash the control unit using a CFF file as shown in the screenshots below:

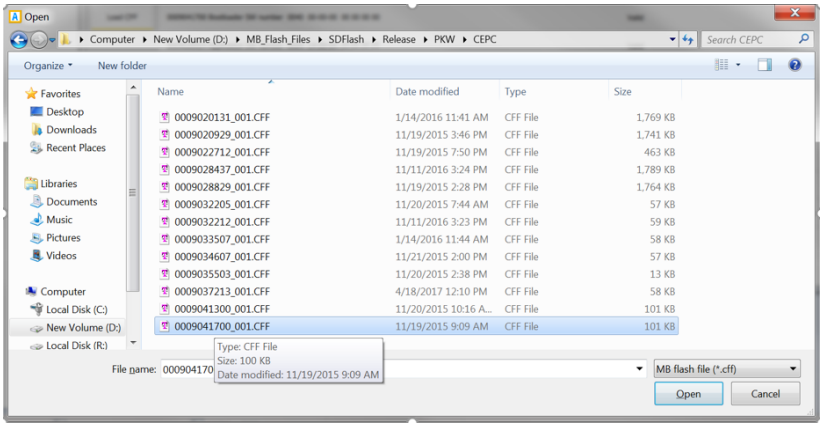
1



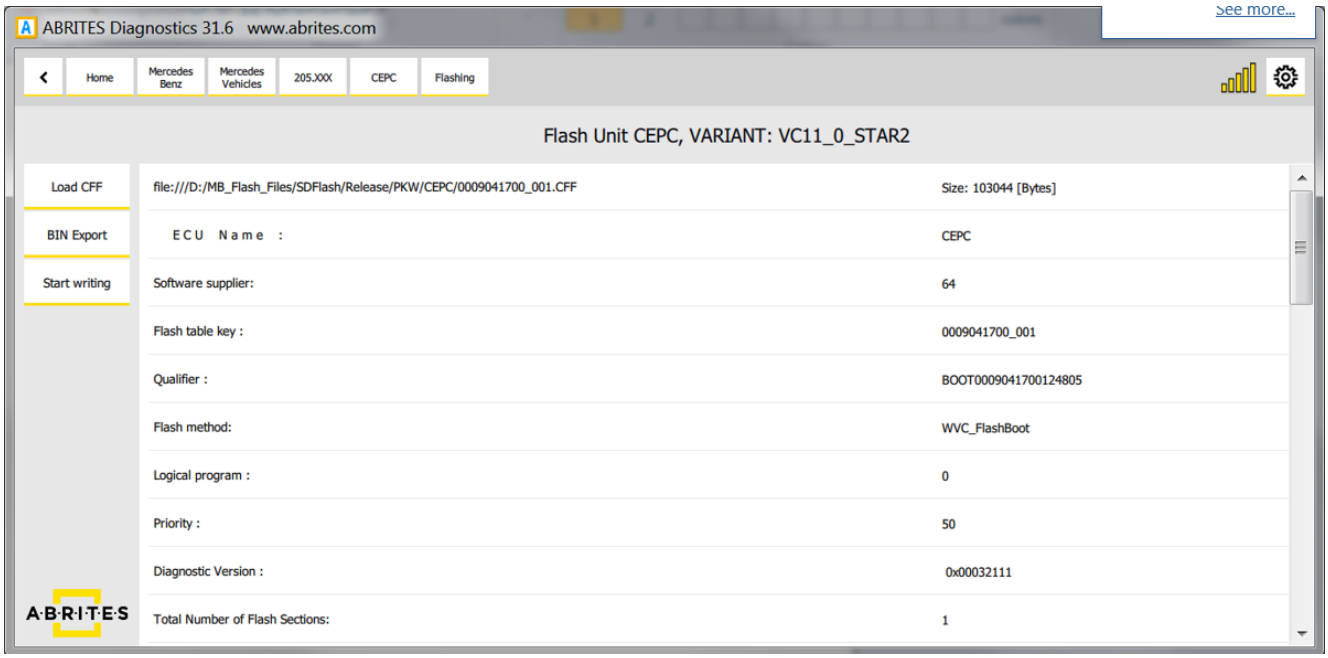
2



3



4

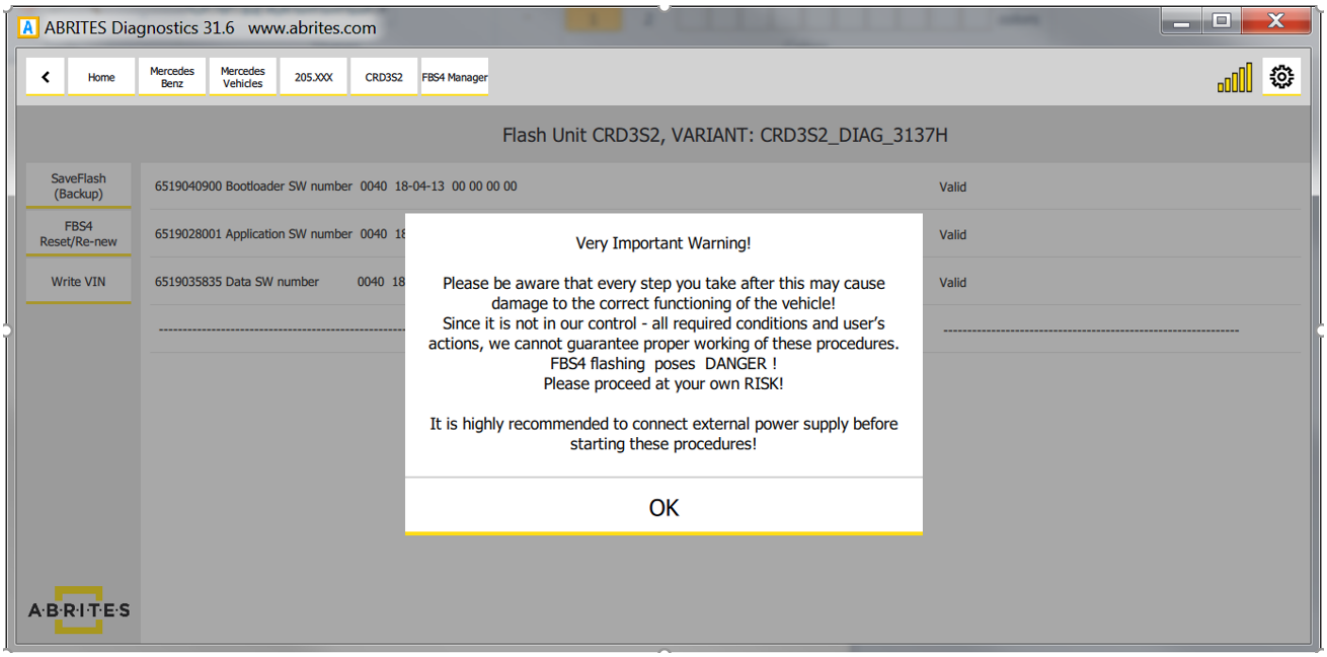


VI. Mercedes FBS4 Manager

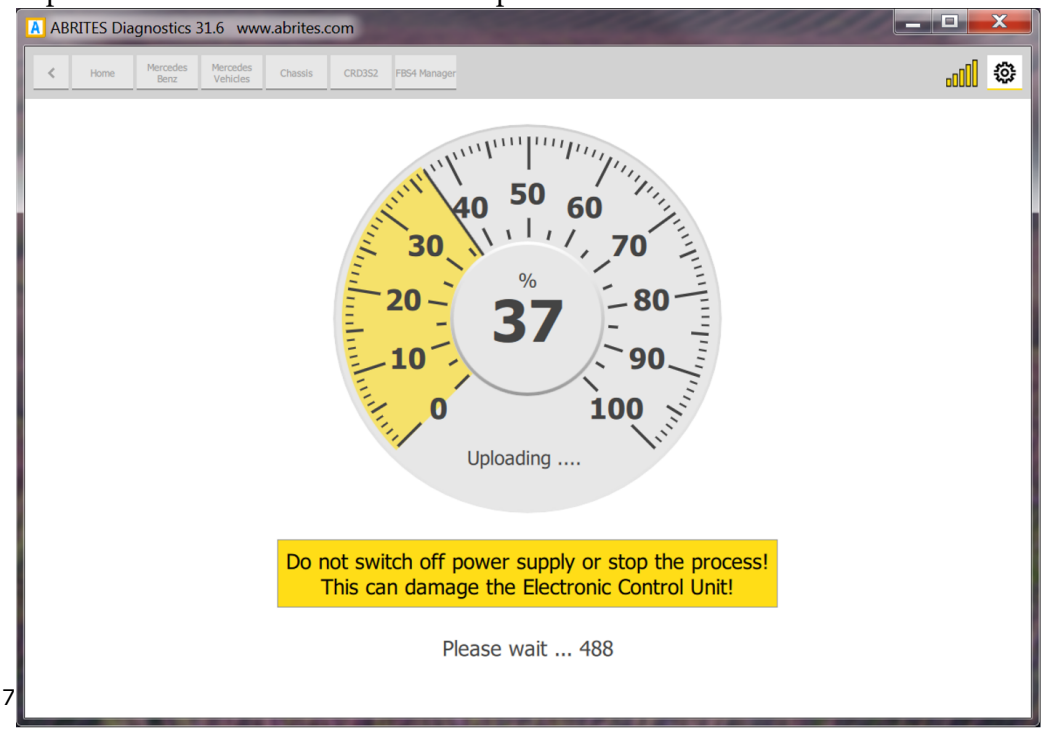
The Abrites Mercedes FBS4 Manager is a special function dedicated to the latest generation Mercedes- Benz FBS (DAS) related modules. It is where all the functions for FBS4 (around 2015+) vehicles will be developed. For the moment the focus of the function falls on its service related abilities. It allows the following for modules installed in Mercedes vehicles equipped with the FBS4 generation of DAS:

- Renewal of FBS4 7G Tronic units 722.9 (VGSNAG2). ALL BY OBD or internal CANBUS.
- Renewal of FBS4 CRD 3.X Engine Control Units. ALL BY OBD or internal CANBUS.

The FBS4 Manager can be opened once you enter an FBS4 module and clicking the "FBS4 Manager" button on the left side of the screen. **It very is important to follow the instructions as per the screenshot to avoid damage** :

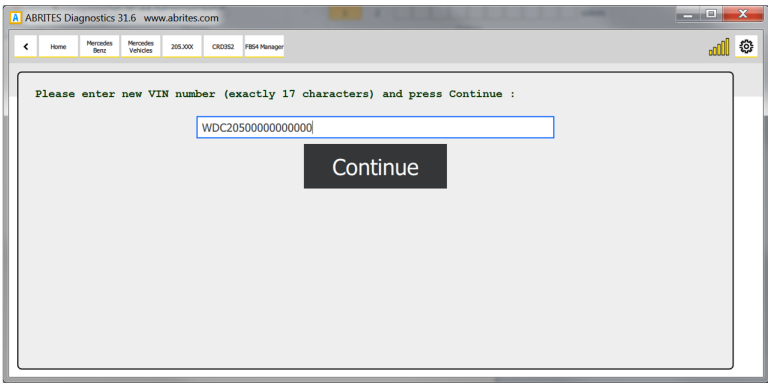


This is what the process looks like once the renew operation is started:

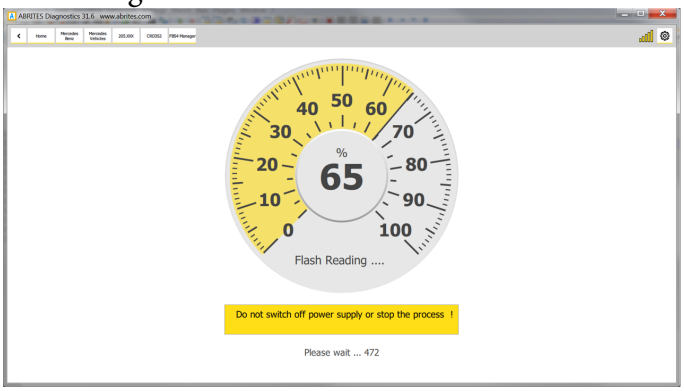


The FBS4 funcitonality offers the change of VIN in the supported units:

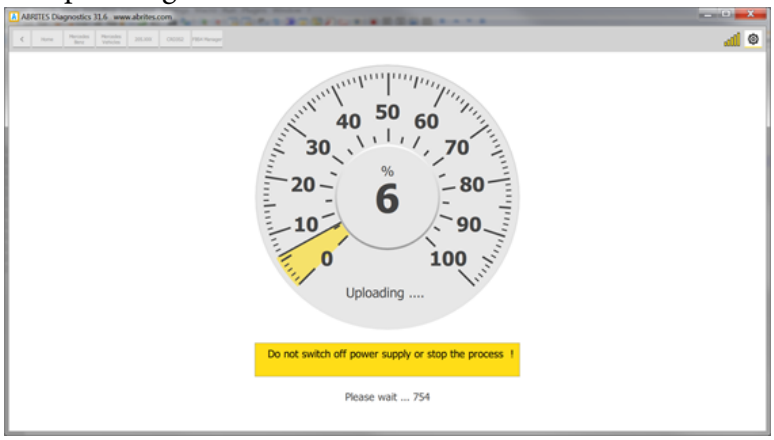
1. Writing the VIN



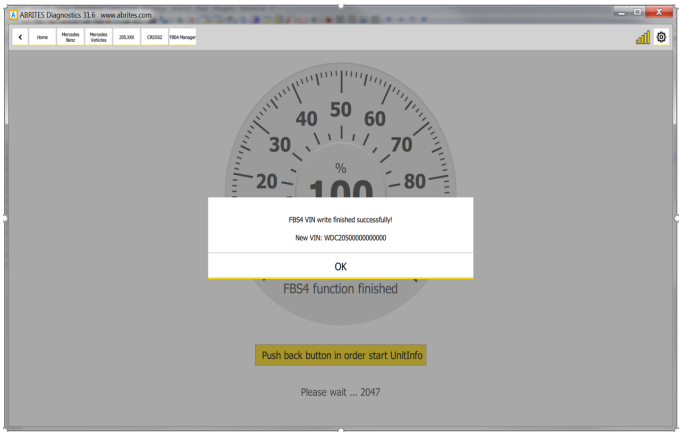
2. Reading Flash



3. Uploading the modified Flash



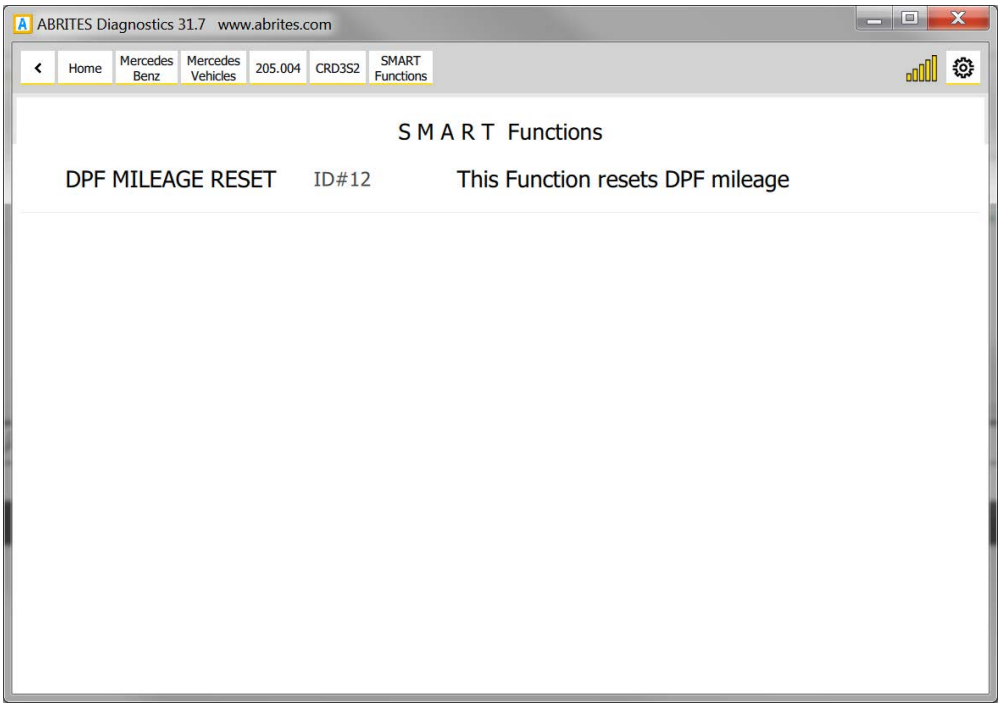
4. VIN writing has successfully finished



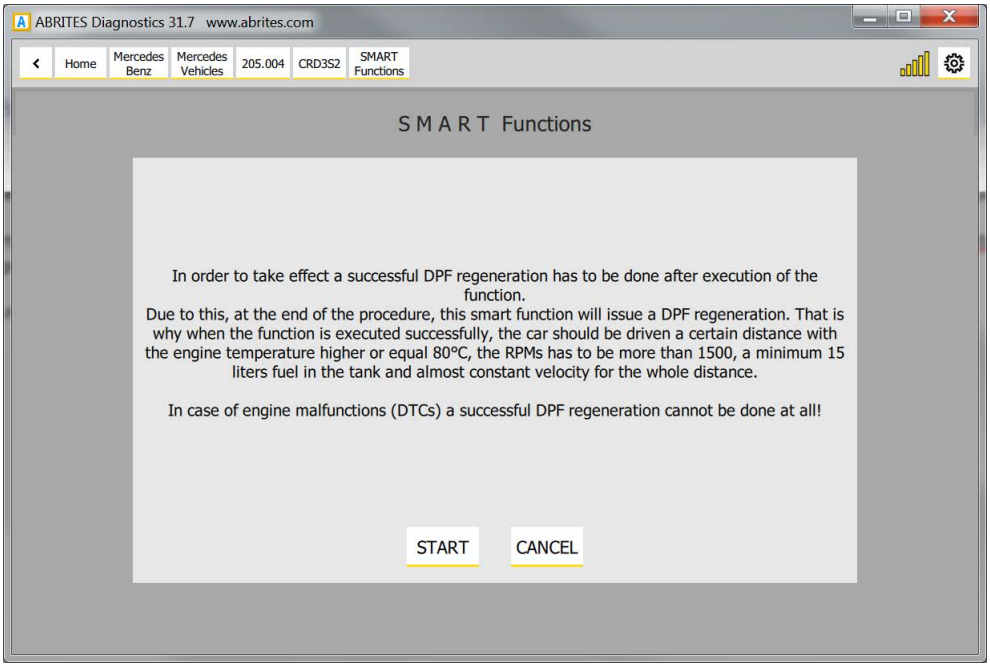
VII. Smart Functions

DPF mileage reset smart function – this function will clear all the DPF distance history. Select the ECU from the diagnostics menu and select SMART functions. The following message will appear:

1

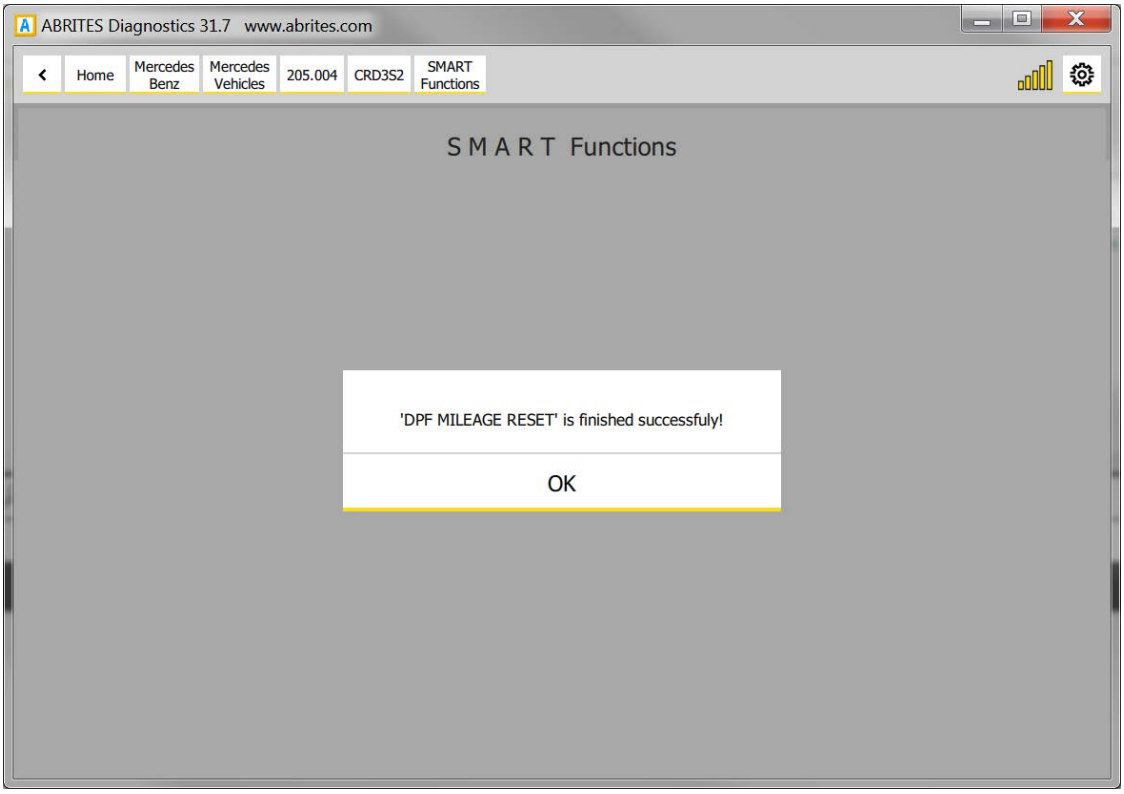


2

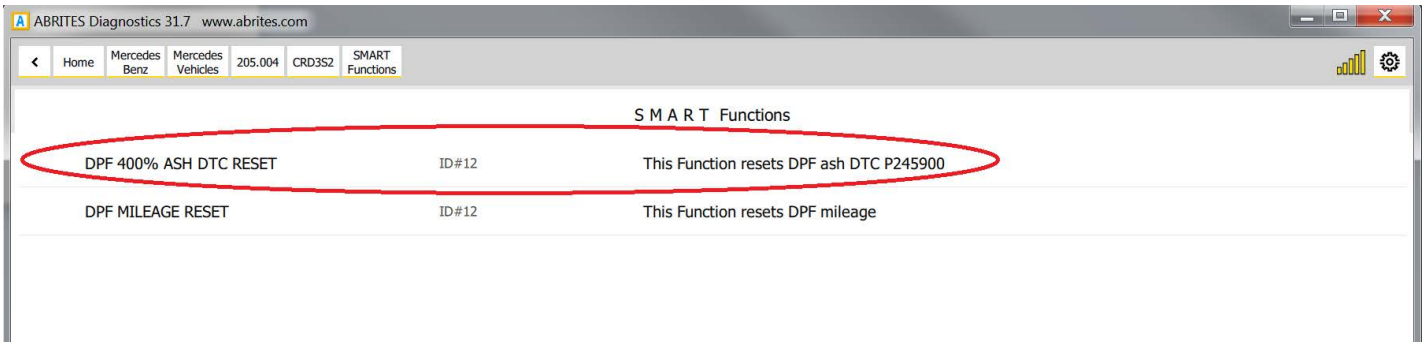


VERY IMPORTANT NOTE:
If the total distance of the car has been manipulated (total distance is decreased) even the fact that the function will finish successfully, this will immediately cause a DTC generation due to the fact that a DPF mileage distance more than 400km will be set (due to a negative calculated distance value).
In this case, a successful DPF regeneration will never be done!
To solve this issue, there is a 15 minutes test in the official Mercedes diagnostic tool which has to be executed!

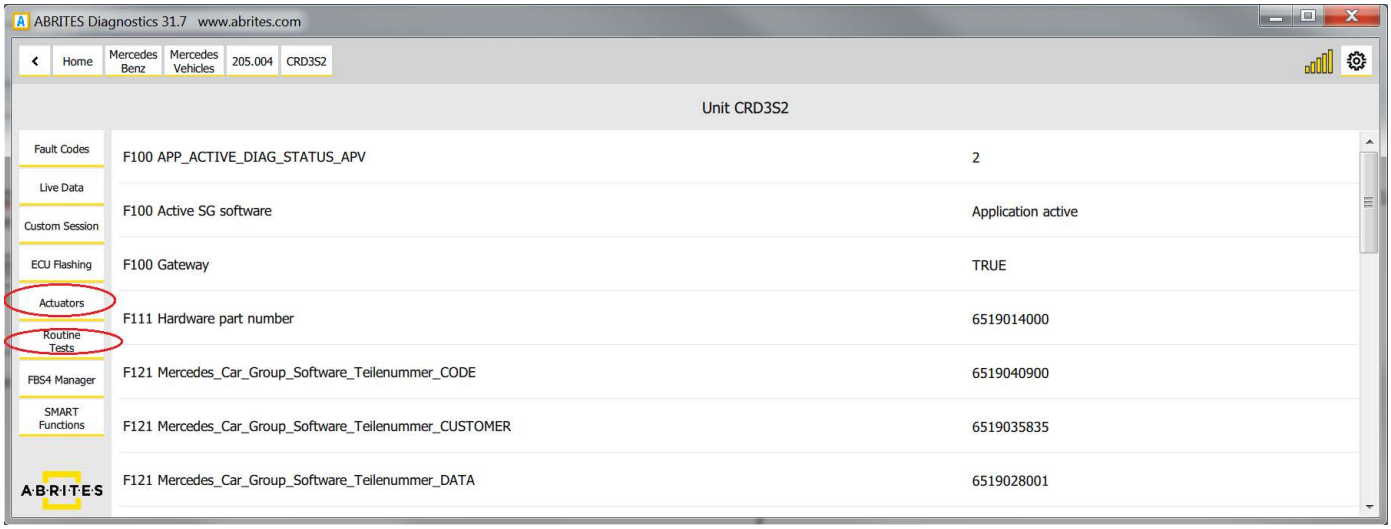
3

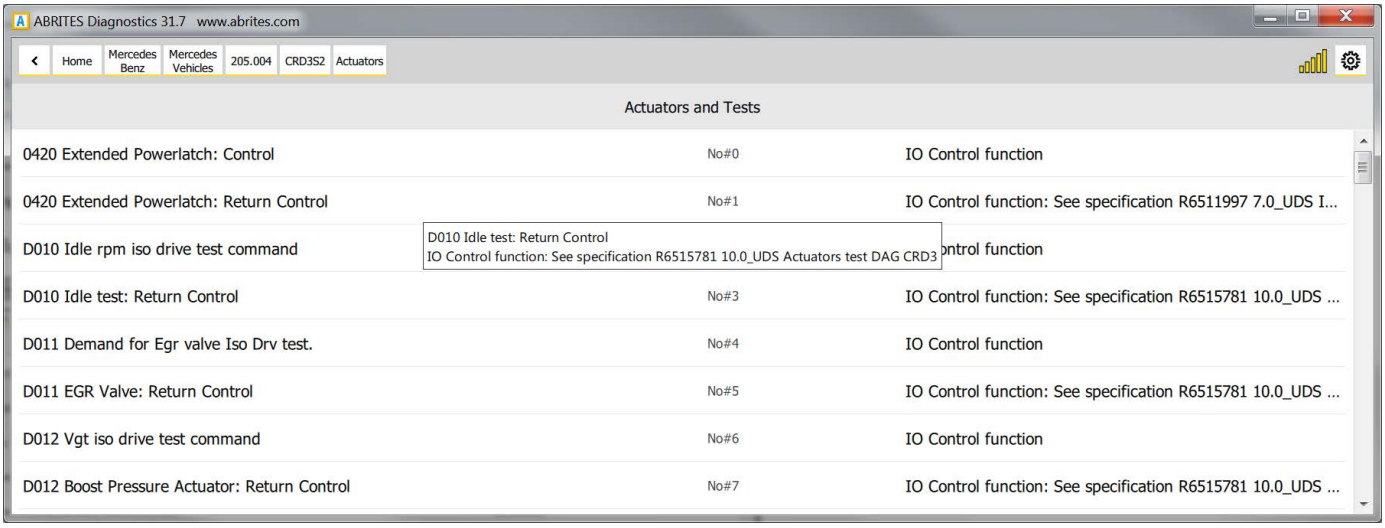


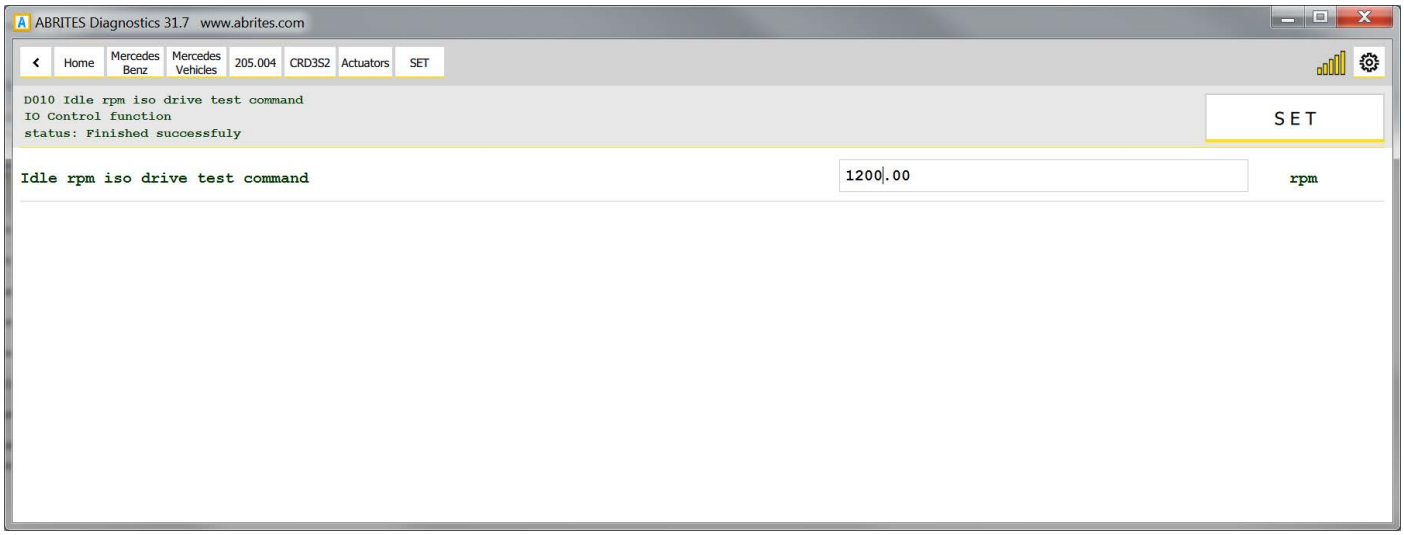
DPF 400% ASH DTC RESET – this function will allow the DPF regeneration and reset the DPF Ash DTC P245900. Select the ECU from the diagnostics menu and select SMART functions. The following message will appear:

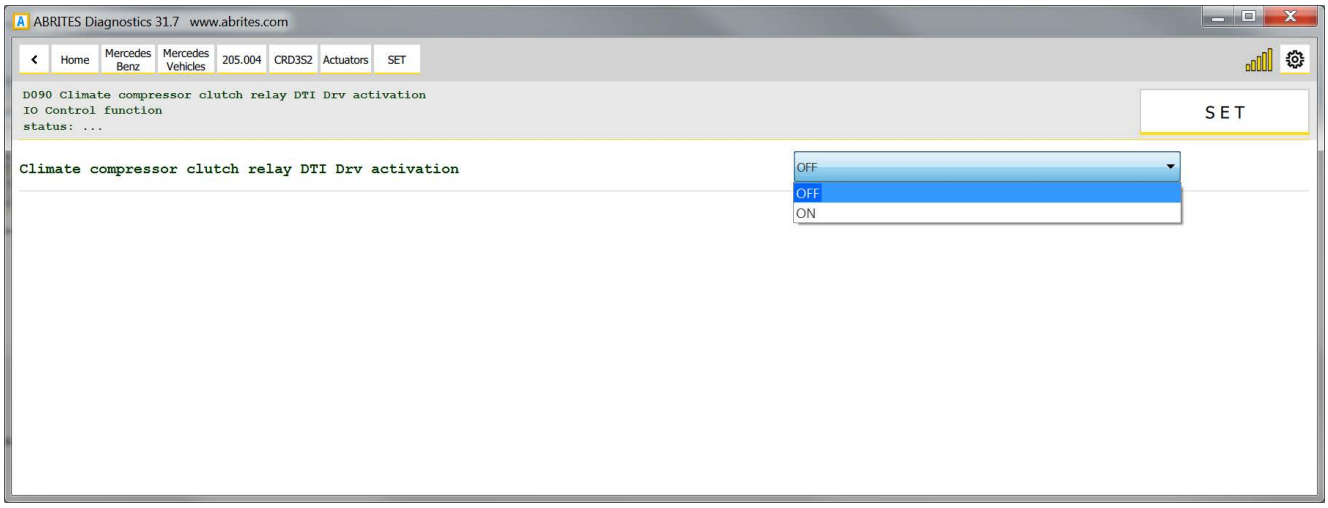


Actuators, Routine Tests, IO Controls, Adjustments/Calibrations added.
The **"Actuators"** and **Routine tests"** buttons will appear once you choose the module form the list and click on **"Unit Info"**:









Here is a list with some other SMART functions:

"SEAT BELTS ALARM" - "Activate/Deactivate seat belts alarm warning"
- SupportedUnits: IC222

"MAX SPEED LIMIT" - "Set/Reset of speed limit to max value"
- SupportedUnits: MED177, MED40, ME97, CR6EU5, CR6BIN5EU6

"V I M" - "Activate/Deactivate video in motion"
- SupportedUnits: HU5, HU5_ENTRY, HU5S1, HU_204, HU45, HU221, HU221EVO - At the moment we support the older models only but we will have a solution very soon.

"AMG START UP DISPLAY" - "Activate/Deactivate AMG start up display"
- SupportedUnits: HU5, HU5_ENTRY, HU5S1, HU_204, HU45 HU221EVO, HU221 - At the moment we support the older models only but we will have a solution very soon.

"CAR ANDROID PLAYER" - "Activate/Deactivate car play android auto"
- SupportedUnits: HU5S1

"SUN ROOF CALIBRATION" - "Initiate sun roof calibration. WARNING: If runnig, anti-pinch detection will not be active!"

- SupportedUnits: TSSR166, TSSR176, TSSR_204, TSSR_212, TSSR_246

"360 DEGREE VIEW CALIBRATION" - "Calibrate ALL cameras of 360° suround view system"), /*FunctionDescription */

- SupportedUnits: "SVS207"

"SVS FRONT CAMERA CALIBRATION" - "Calibrate FRONT camera of 360° suround view sistem"

- SupportedUnits: "SVS207"

"SVS REAR CAMERA CALIBRATION" - "Calibrate REAR camera of 360° suround view sistem"

- SupportedUnits: "SVS207"

"SVS RIGHT MIRROR CAMERA CALIBRATION" - "Calibrate RIGHT mirror camera of 360° suround view sistem"

- SupportedUnits: "SVS207"

"SVS LEFT MIRROR CAMERA CALIBRATION" - "Calibrate LEFT mirror camera of 360° suround view sistem"

- SupportedUnits: "SVS207"

"DPF MILEAGE RESET" - "This Function resets DPF mileage"

- SupportedUnits: CRD3, CRD3S2, CRD3H

"ADDLUE EMERGENCY START" - "Allow engine start in case of remaining 0km of ADBLUE"

- SupportedUnits: "CR60LS"

IMPORTANT:

ScanAll == Connect

'ECU Selection' is intended to be used for collecting of a custom car's device list.

For example if you have a too new car, which is missing in our database, the user can collect a list of units which corresponds to this new car and to start 'Scan All' of all those units.

That is why using of button 'Connect' (instead of ScanAll) is confusing due to the fact that if you have collected a list of 100 devices, it is impossible to connect with them in parallel.

When the list with the selected devices is done, clicking on 'ScanAll' button will start the procedure for scanning of every selected unit.

When scanning process is finished, every existing and detected unit from the list will be shown on the screen as it is done after automatic detection and scanning of a normal car.
Of course, there is no limitation about the number of the selected devices - it could be from 1 to thousands, so you can use it also for testing of a module on your desk, by selecting of only this module in the shown list and just pushing 'Scan All' button after that - if the device is connected and works properly, you will see it after scan process and you can continue with your work. If the device is defective or not connected properly you will see an empty list (blank page).