A·B·R·I·T·E·S
automotive solutions

ABRITES DIAGNOSTICS FOR RENAULT/ DACIA ONLINE

User manual
version 1.4

Important notes

The Abrites software and hardware products are developed, designed and manufactured by Abrites Ltd. During the production process we comply to all safety and quality regulations and standards, aiming at highest production quality. The Abrites hardware and software products are designed to build a coherent ecosystem, which effectively solves a wide range of vehicle-related tasks, such as:

Diagnostic scanning;
Key programming;
Module replacement,
ECU programming;
Configuration and coding.

Warranty

You, as a purchaser of Abrites hardware products, are entitled of a two-year warranty. If the hardware product you have purchased has been properly connected, and used according to its respective instructions, it should function correctly. In case the product does not function as expected, you are able to claim warranty within the stated terms. Abrites Ltd. is entitled to require evidence of the defect or malfunction, upon which the decision to repair or substitute the product shall be made.

There are certain conditions, upon which the warranty cannot be applied. The warranty shall not apply to damages and defects caused by natural disaster, misuse, improper use, unusual use, negligence, failure to observe the instructions for use issued by Abrites, modifications of the device, repair works performed by unauthorized persons. For example, when the damage of the hardware has occurred due to incompatible electricity supply, mechanical or water damage, as well as fire, flood or thunder storm, the warranty does not apply.

Each warranty claim is inspected individually by our team and the decision is based upon thorough case consideration.

Read the full hardware warranty terms on our website.

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Copyright:

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Warranties for Abrites products and services are set forth in the express written warranty statements accompanying the product. Nothing herein should be construed as constituting any additional warranty.
Abrites assumes no responsibility for any damage resulting from the use, misuse, or negligent use of the hardware or any software application.

Safety information

The Abrites products are to be used by trained and experienced users in diagnostics and reprogramming of vehicles and equipment. The user is assumed to have a good understanding of vehicle electronic systems, as well as potential hazards while working around vehicles. There are numerous safety situations that cannot be foreseen, thus we recommend that the user read and follow all safety messages in the available manual, on all equipment they use, including vehicle manuals, as well as internal shop documents and operating procedures.

Some important points:
Block all wheels of the vehicle when testing. Be cautious when working around electricity.
Do not ignore the risk of shock from vehicle and building-level voltages.
Do not smoke, or allow sparks/flame near any part of the vehicle fuel system or batteries.
Always work in an adequately ventilated area, vehicle exhaust fumes should be directed towards the exit of the shop.
Do not use this product where fuel, fuel vapours, or other combustibles could ignite.

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List of revisions

Date	Chapter	Description	Revision
01.01.2021	ALL	Document created	1.0
10.10.2022	5	Mileage	1.1
22.11..2022	4 and 5	Clio V related	1.2
01.11.2023	4 and 5	Clio V related, Master 3 ph2, Dacia Magneti Marelli	1.3
10.01.2024	5	DAB Module mileage procedure update	1.3
23.12.2025	5	Dacia Jogger, Sandero III Dashboard Calibration	1.4
13.03.2026	4	Section 4.1.3 Connection to BCM	1.4

1. Introduction

ABRITES Diagnostics for Renault/Dacia Online is a professional diagnostic software, which works together with the Abrites Vehicle Diagnostic Interface (AVDI).

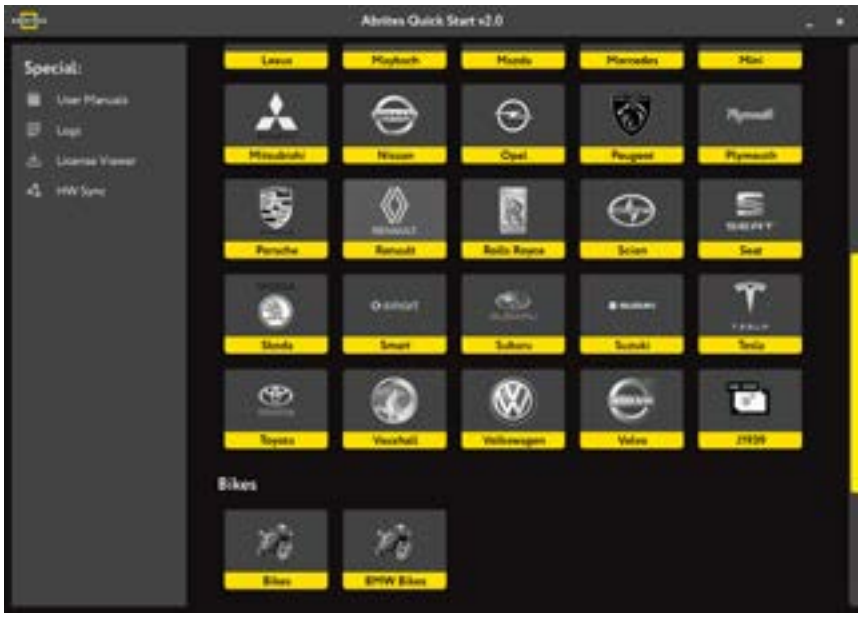
In order to operate, the software requires you to have an AVDI interface, a Windows based PC with a minimum of 1024MB RAM, 64GB of free hard drive space and at least Windows 7 64bit Service Pack 1 or later version to operate. For optimal operation, it is always recommended to have the latest software version installed, active AMS, and a stable Internet connection.

The tool's purpose is to allow you to perform standard and advanced vehicle diagnostics, starting with module identification, reading and clearing diagnostic trouble codes (DTCs), live data monitoring, actuator testing, as well as advanced operations such as key learning, module replacement, cluster calibration and other special functions. It can be used for diagnostics of Renault/Dacia vehicles using OBDII port. The supported vehicles are the ones produced after year 1999 and up to present day.

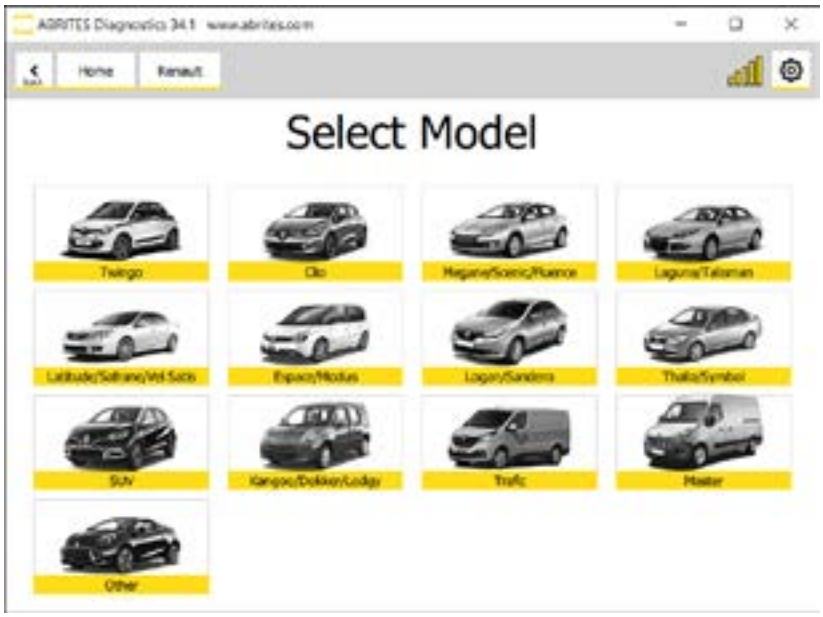
AVDI should be used with ABRITES software produced by Abrites Ltd.

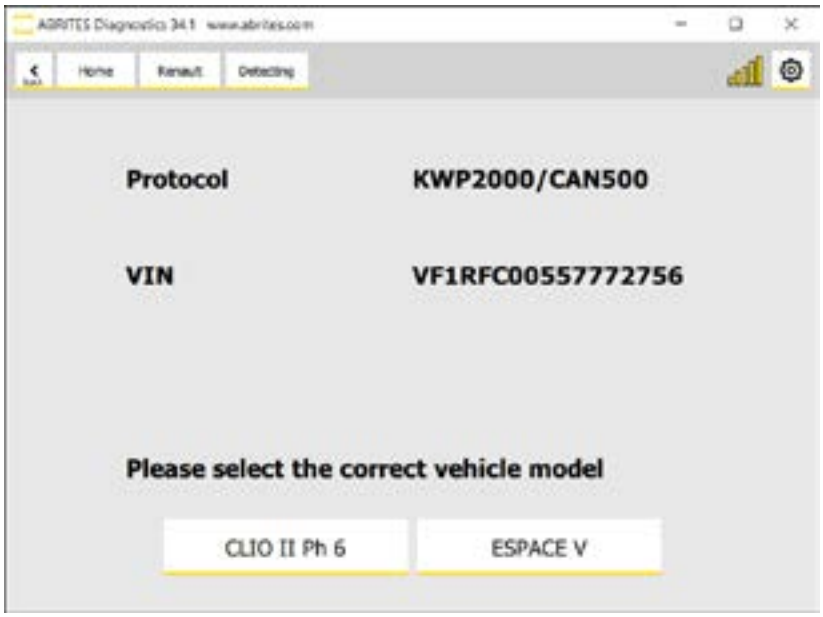
2. Abrites diagostics for Renault/Dacia Online

The Abrites diagnostics for Renault/Dacia Online is a Windows based Online application and it requires your computer to be connected to the Internet. We can suggest a connection to the Internet via 3G/4G from a mobile device or a Wi-Fi network. Please ensure to have port 8443 allowed by your Internet service provider so that t your Abrites diagnostics for Renault/Dacia Online is able to operate correctly. Using the icon in the top right of your software screen you will be able to see the Internet connectivity and signal strength. When you open the Abrites Quick Start Menu, you need to select Renault or Dacia Icons and select the Online version of the software, and choose between Renault, Dacia, or Samsung.



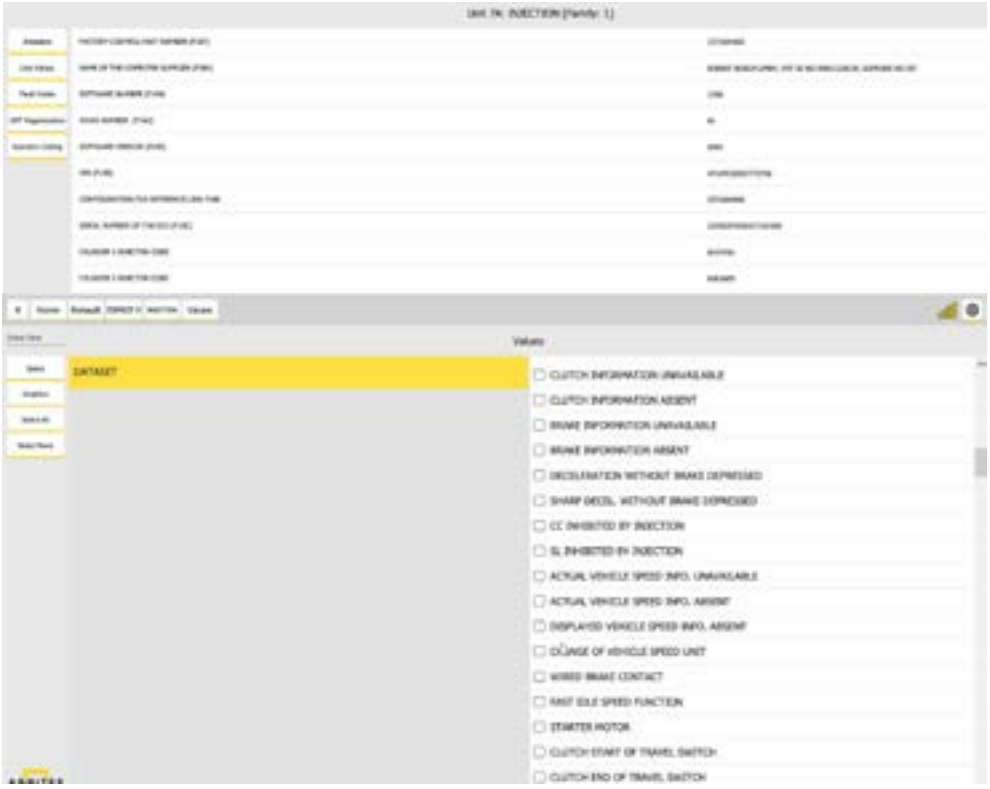
Once the brand is selected the new screen will show the model selection page. Here you can manually choose the model and generation you are working with. After you have selected the model, it will be checked and detected by the software. You will see the details of the car - the diagnostic protocols it uses, the VIN of the car, the model, and then you can continue to the list of modules installed in this particular vehicle. Also, if you have made a mistake with the vehicle selection, the software would ask you if your selection was correct and would suggest another option based on the auto-detection.





This is what the module list looks like:

After you see the list of modules you can enter each of them in order to do diagnostics: Read DTCs, view live data, perform actuator testing and so on. You can monitor live values in a graph form (with live graphics being displayed) or using the table view of the software to monitor as many parameters as you wish simultaneously:



2.1 Standard diagnostic functionalities

Abrites software for Renault has the following standard diagnostic functionalities:

- Read/Clear DTCs
- Actuator Tests
- Live Values Monitoring
- Vehicle Report

and extras like:

- DPF Regeneration
- Injector Coding
- Advanced functions

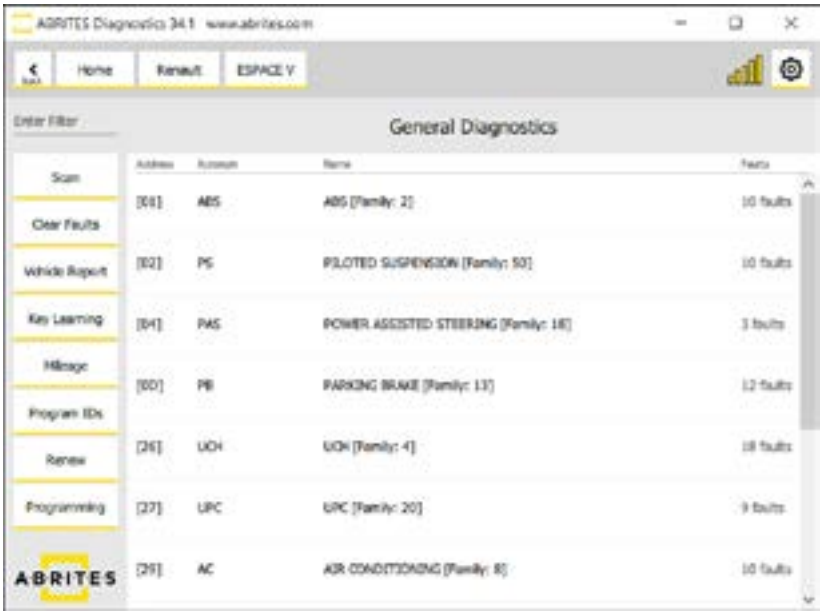
(Advanced diagnostic functionalities - dealer level coding functionalities, which come for free, included in the basic software package.)

3. Special Functions

The software provides special diagnostic functions in order to assist the user to perform advanced diagnostics on Renault/Dacia vehicles. The available special functions are displayed on the left side of the main screen of the software, in a lis form in the menu bar. You can open the required special function by clicking on it

The available special functions in ABRITES Diagnostics for Renault/Dacia Online software are:

- Key Learning - used for additional key programming and in cases when all keys are lost
- Mileage - lets you correct the mileage in the instrument cluster and the ABS, when a module is exchanged
- Program IDs - helps when VIN exchange or modification is required
- Renew - lets you make a unit virgin and adapt it to the vehicle
- Programming - read/update flash files of units

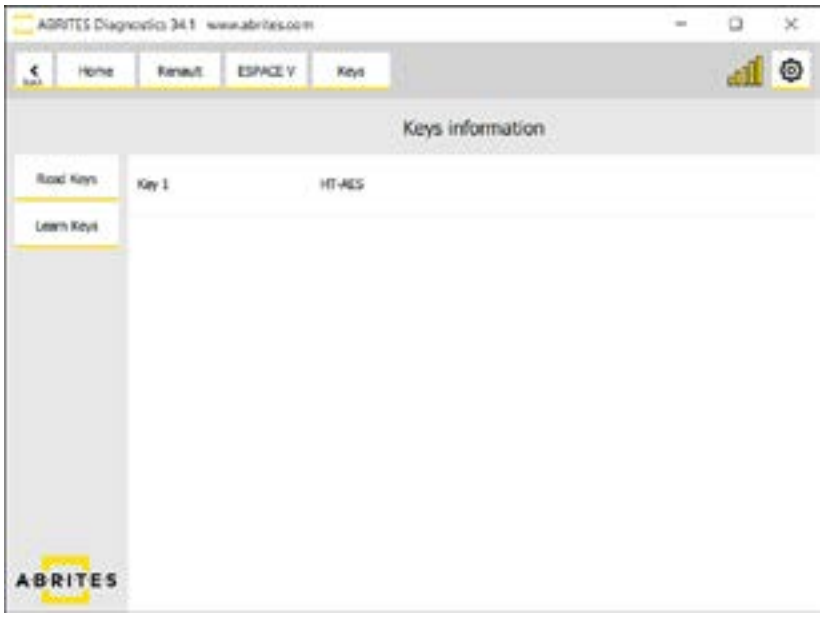


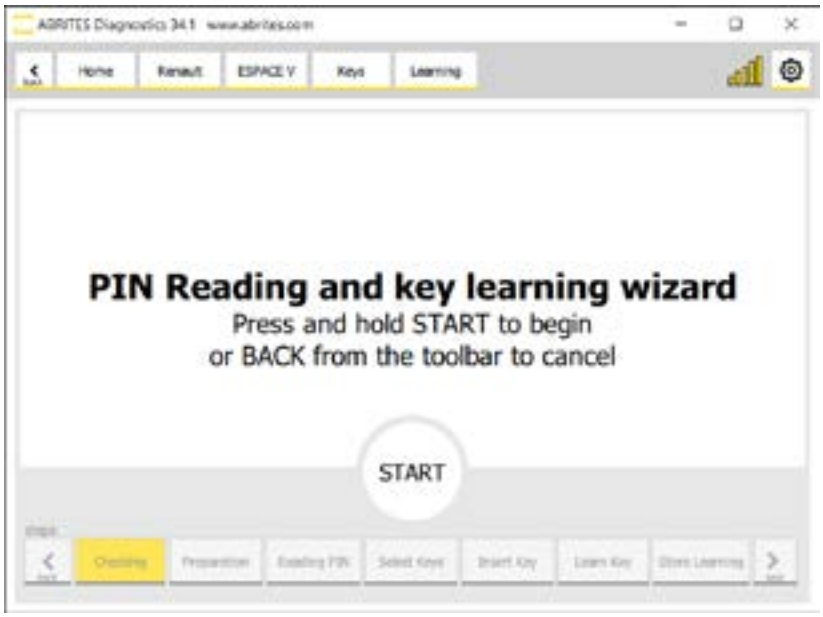
4. Special Function “Key Learning”

Abrites diagnostics for Renault/Dacia and the PROTAG programmer are required for key programming procedure. In some cases you may also need a direct CAN connection with the use of CB012 or CB021

First make sure to go to the key programming button and read the PIN CODE from the car:

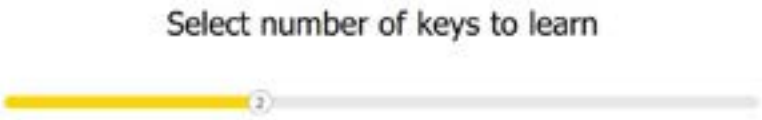
Make sure to save the PIN once you read it, this is done using the right click and “COPY” function



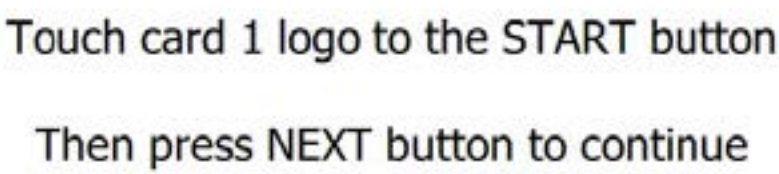


Make sure your Protag is connected in order to prepare a new card.

You will be able to detect the car and see the recognition of the transponder or key type in real time.



For vehicles with a card make sure to have the emblem on the key card facing the start/stop button.



4.1 Clio V Platform Additional Key Programming

In the latest version of the Abrites diagnostics for Renault/Dacia Online, we have added support for Renault Clio V, Renault Capture II and Renault New Zoe key programming (working key is required). The procedure requires a CB012 cable set (connected between the AVDI Interface and the CB101 or CB106 OBDII cable) also in order to connect to the internal CAN-BUS system of the car. CB021 Renault-Nissan jumper cable could also be used for the same purpose.

There are 3 possibilities for connection:

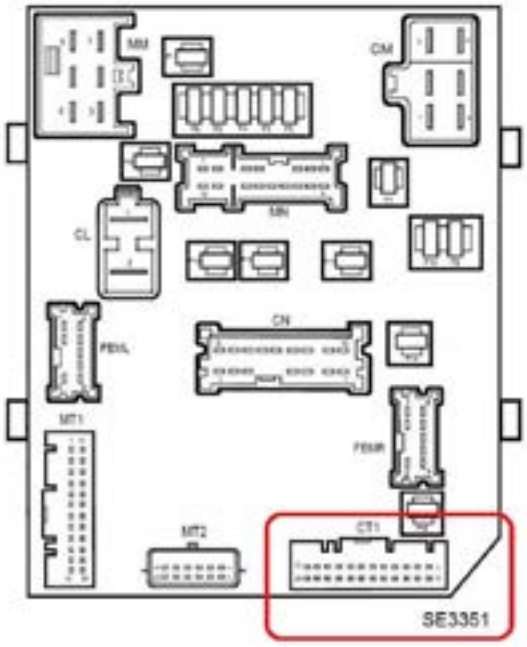
1. Connection to UPC Module
2. Connection to HFM
3. Connection to BCM (UCH)

In the next pages you will see pictures and connection diagrams for the 3 options listed above.

4.1.1 UPC Connection

Protection and Switching unit - UPC (1337), connector CT1:

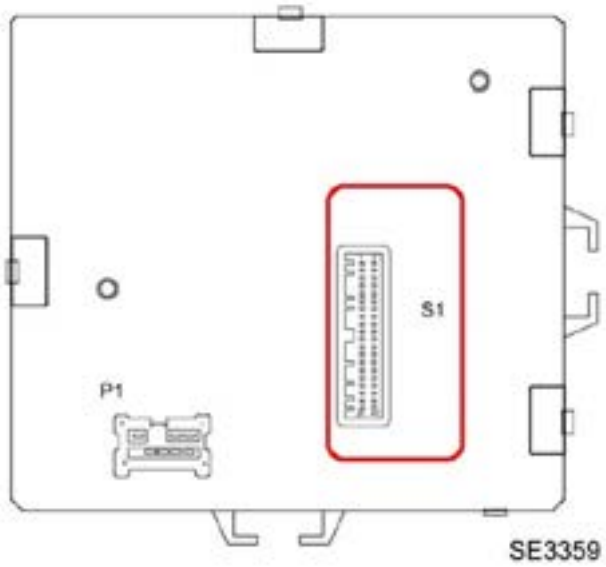
CAN H - pin 17 (white)
CAN L - pin 5 (green)



4.1.2 Connection to HFM

Hands-free access electric control unit (2003) on keyless version:

CAN H - pin 6
CAN L - pin 7



4.1.3 Connection to BCM (UCH)

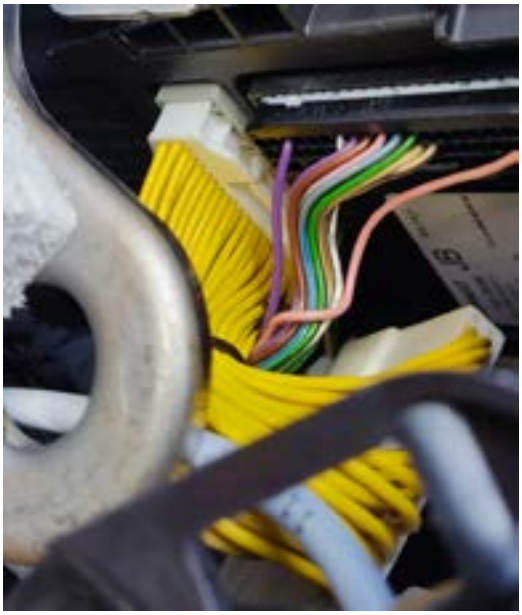
The BCM (UCH) connector has to be removed, you can than connect the one side of the CB021 to this connector, and the other side of the CB021 to the BCM (UCH) socket.

DS1 Grey connector
CAN H - pin 26 (white)
CAN L - pin 27 (gray)

Important : The new generation UCH (SWEET 400) requires CB012 connection by attaching the needles to pins 2 and 3 of the green connector.

DS3 Green connector :
CB012 Red Needle CAN H - blue cable (pin 2)
CB012 Black Needle CAN L - pink cable (pin 3)

Below you may find picture with connections in Clio V, where the BCM (UCH) unit is located on the left hand side of the dashboard by the steering wheel.



Pictures below show the connections to BCM (UCH) Unit of New Zoe, where the unit is located above the pedals:

4.2 Clio V Platform All Keys Lost

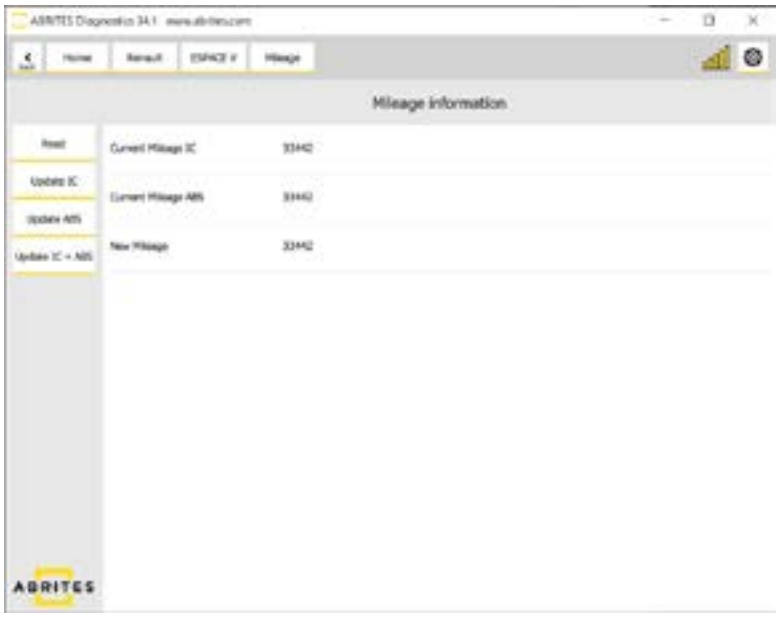
If no working key for the vehicle is available, you will have to use the ABRITES RH850/V850 Programmer. Our solution allows extracting the PIN code by dump from HFM (keyless models) and BCM (non-keyless models) modules to later program keys in All Keys Lost situations for a range of Renault vehicles:

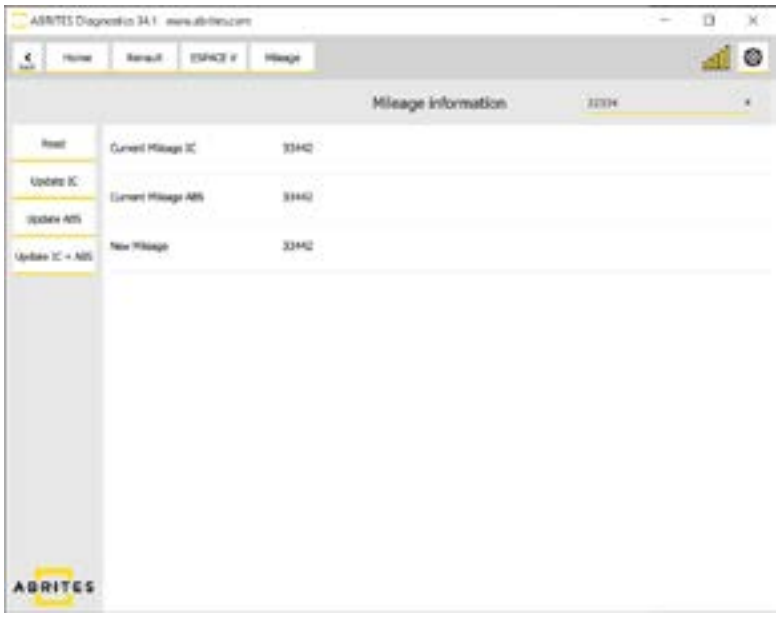
- Renault Clio V (2019+)
- Renault Captur II (2019+)
- Renault New Zoe (2019+)
- Renault Arkana European (2018+)
- Renault Megane IV Ph2 (2022+)
- Renault Talisman Ph2 (2020+)

In order to read the HFM or BCM you will have to use the ZN085 programmer and RH850/V850 Programmer software found in the quick start menu. Once you open the software you will have to select the type of MCU and the module you need to be working with. Once the module is selected you can find the wiring diagram. More details can be found in the RH850/V850 programmer's User Manual.

5. Special Function “Mileage”

Renault software is very powerful tool for mileage calibration, dashboard replacement and ABS/ESC replacement. The software is guided and user-friendly. Procedure is executed trough the “Mileage” special function and requires OBDII connection. Once the special function is open, you can read the mileage in the Instrument Cluster and the ABS module, and you can update the values in one of the units, or what is more useful - in both modules simultaneously. When you click on the “New Mileage“ section, you will see a window at the top right corner appear, this is where you can type the new value, press enter and than press “update“.





5.1 Clio V Mileage

Abrites software for Renault now supports mileage correction to Clio V and other models based on the same platform - Capture II and New Zoe. The procedure for these models requires OBDII connection, and direct connection to the BCM (UCH) unit using CB012 or CB021 (preferable) cable, and it is executed in the vehicle. Connection to BCM is explained in section "4.1.3 Connection to BCM (UCH)" of this user manual. This platform of vehicles have 3 types of Instrument Clusters, the only exception when you need to work by dump is when working with Analogue Cluster with mechanical dials.

5.1.1 Calsonic Kansei, or Marelli Analog dashboard

Analog dashboard produced by Calsonic Kansei or Marelli - it is done by dump, or by OBDII for supported software versions.

To work by dump you need to use ZN057 and the Abprog programmer to read and write the 95640 EE-PROM chip of the dashboard.

The following pictures will show how the Calsonic Kansei dashboard should be connected:

More pictures of the connections of Calsonic Kansei

Here are pictures of the connections to Marelli dashboard:

5.1.2 Visteon Low Line

This type of dashboards is done via OBDII.

5.1.3 Visteon High Line HD

It is done via OBDII, but the procedure re-flashes the unit.

- when doing the procedure to such a vehicle, you need to make sure you provide power supply to the vehicle. This procedure takes a few minutes longer than the others, but not more than 10.
- in this situation, the software would also suggest that you turn "permanent ignition on" - you could do that by switching the gears to N position, and holding the start button for 5 seconds - see image below. In this case the software would save a back-up file, which can later be used in case the unit needs to be restored (from the programming menu)

5.1.4 Work on Bench

There are very rare cases when the mileage calibration by OBDII is interrupted and cannot be completed successfully. If this is the case with the vehicle you are working with, you have the option to do the procedure for the dashboard on bench. You will have to set the correct mileage in the ABS module separately.

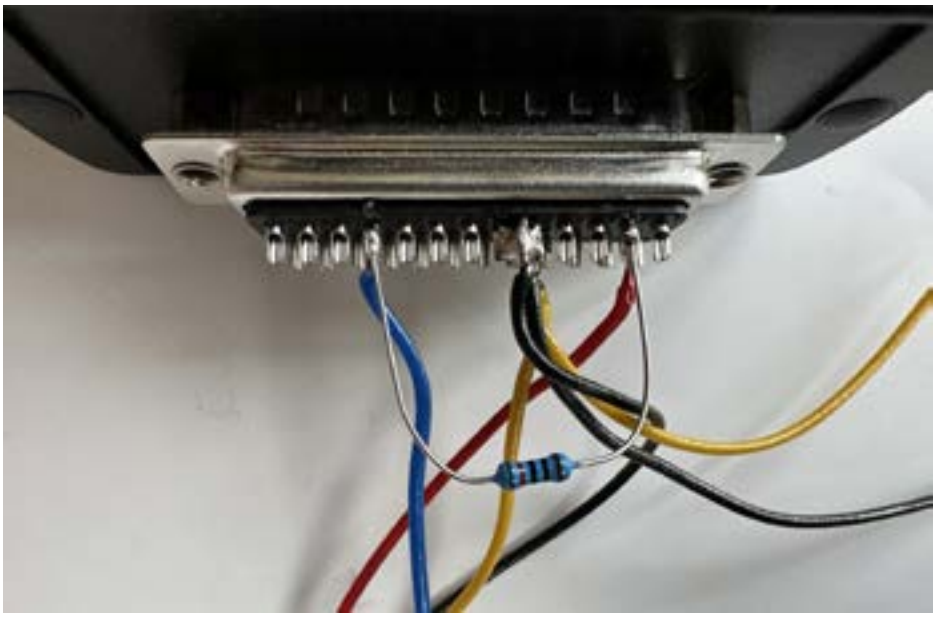
In order to connect the dashboard unit on bench you can make your own connection cable.

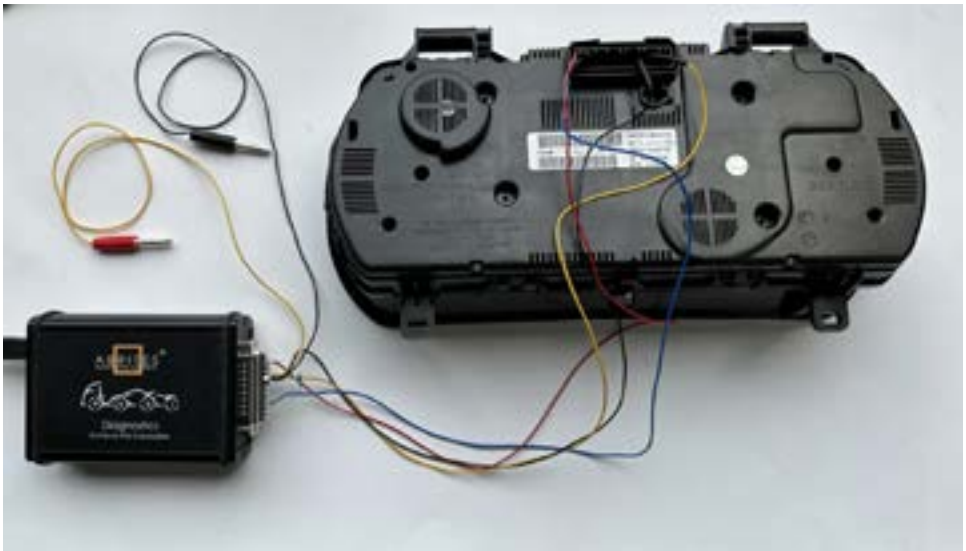
Dashboard pinout:
5 pin - Power 12v
7 pin - GND
18 pin- CAN H
19 pin- CAN L

You will have to make your own connection cable
DB25 connector pinout:
PIN 2 - CAN H
PIN 5 & PIN 6 (bridge) - GND
PIN 10 - CAN L
PIN 17 - IGN (power 12v)
120 Omh resistor should be installed between the CAN H and CAL 2 - PIN 2 and PIN 10

Please check the next page for more details.

This is how the set up for working with this type of dashboards on bench should look like. Please note that power cable 12V+ to pin 17 and GDN cable to pins 5 & 6 should also be used to provide power supply to the set up, as per the pictures below.





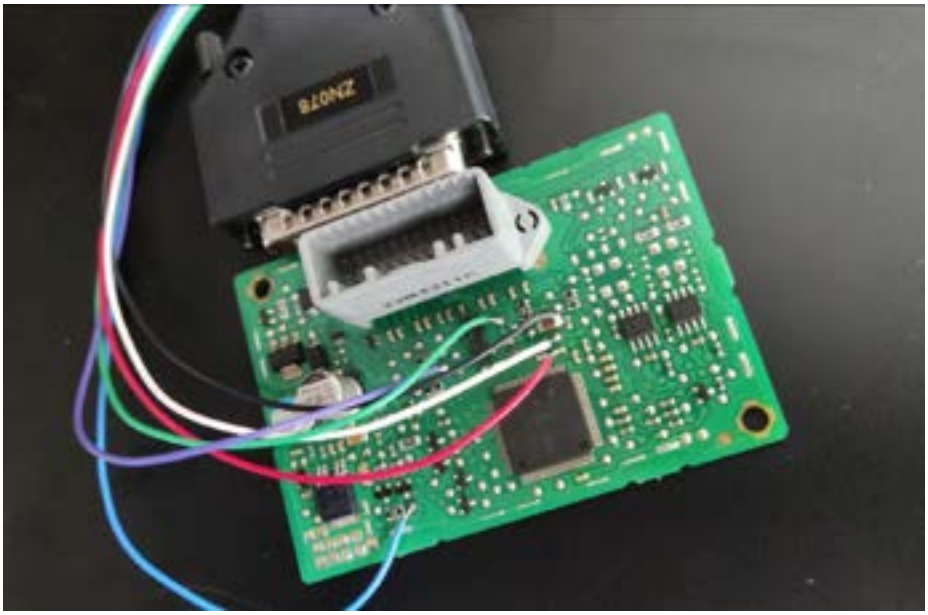
5.2 Master 3 Ph2 (2019+)

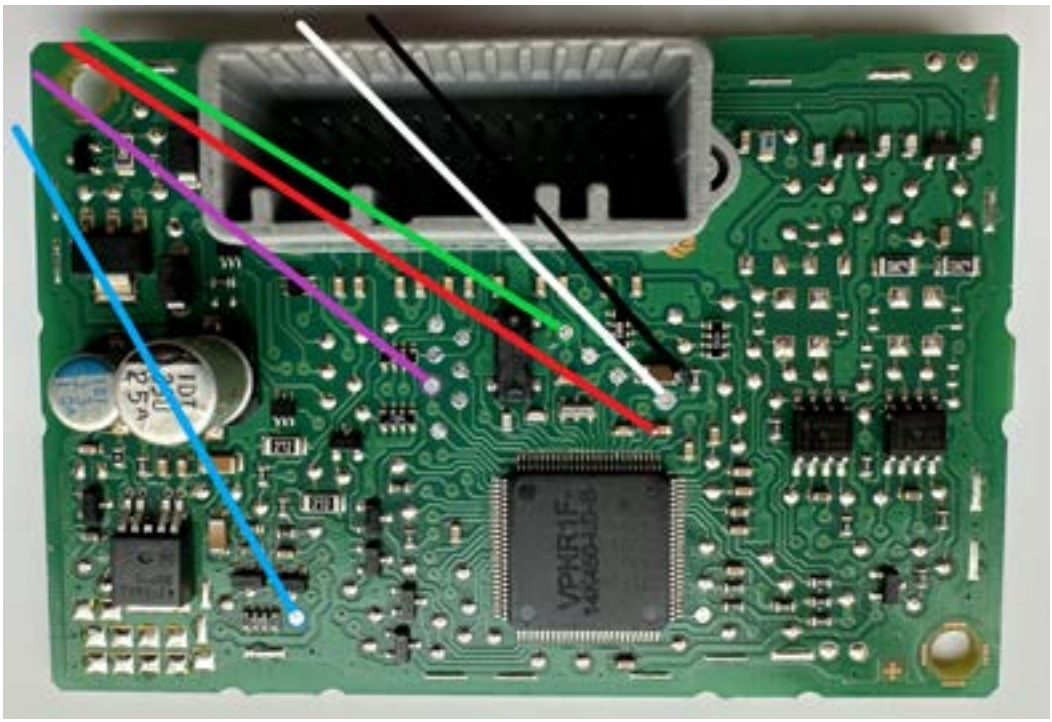
Master3 Ph2 is 2021+ is a bit unique when talking about mileage calibration, due to the presence of DAB (Dashboard Adaptation Box), sometimes called “Cluster Gateway”.

The procedure is executed as follows:

1. Open Renault Online software > “Mileage” button > calibrating the mileage. Modify the value and save the new mileage into the cluster’s memory.
2. Next ,turn Ignition OFF, disconnect and take the DAB module to read it “on bench” with the help of ZN030-ABPROG and ZN078. (Connection details available in the next page)
3. Open the ABPROG application, and read the V850 processor by selecting D_flash 32KB V850ES and save the file on your PC.
4. Connect the DAB module back to the vehicle without unsoldering the ZN078 wires - just the connector.
5. Open the Renault Online software and enter the “Renew” menu, select DAB module, and press “mileage by Dump” and you will be asked to upload the previously read V850ES dump. A new file will be generated > please save the new file with a different file name on your PC.
6. Next disconnect the DAB module again and work on bench. Open the ABProg software and write the new file into the processor, using the ABProg.
7. Now you can unsolder the ZN078 adapter’s wires, install the DAB module back in the vehicle and connect the connector.
8. The new mileage should be displayed on the dashboard!

5.2.1 DAB module connections with ZN078 and ABProg





5.3 Dacia Jogger, Sandero III Dashboard Calibration S6J3 MCU

This procedure is required in case you need to replace a faulty dashboard and set correct mileage on the replacement module.

Supported models :

- Dacia Jogger
- Dacia Sandero III
- Dacia Logan III
- Renault Trafic III phase 2
- Renault Kangoo III
- Renault Express II

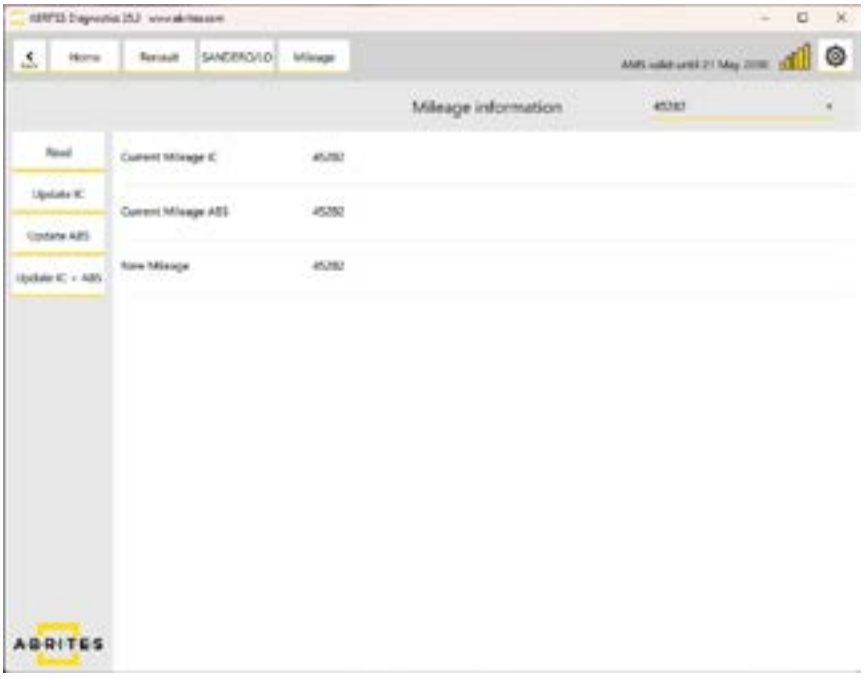
The procedure includes the following steps:

1. Connect the vehicle via OBD II

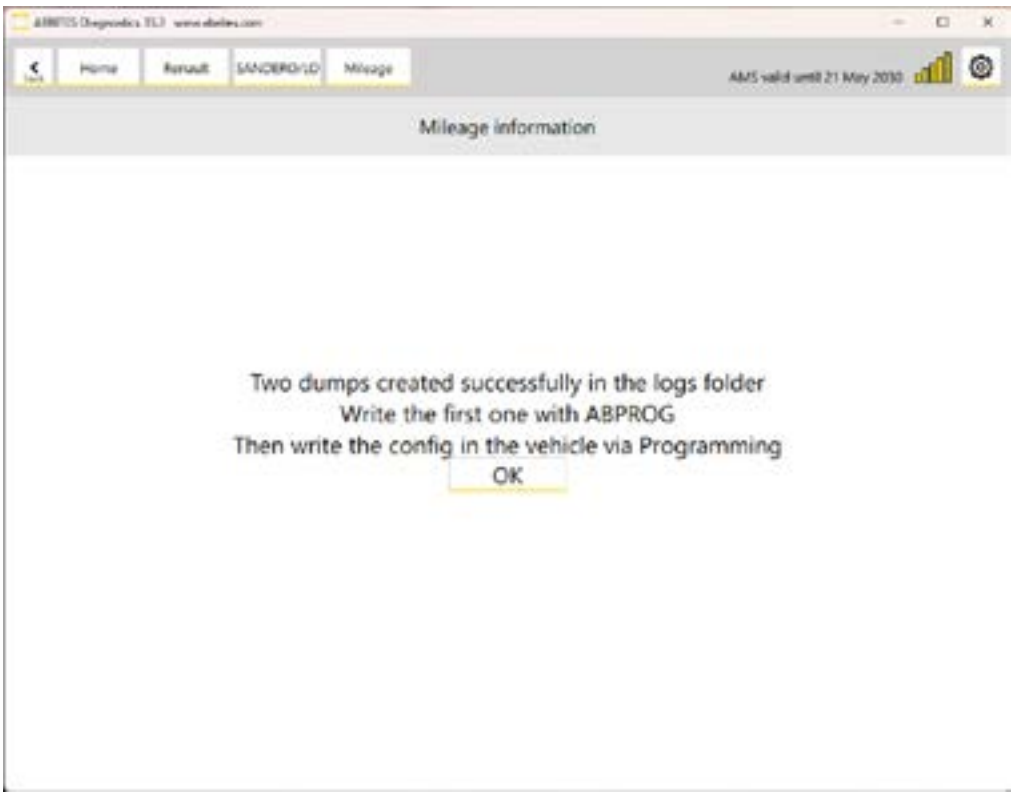
Open Renault Online software > “Mileage” button > Select “Read” Button , then follow the on-screen instructions.

The software will automatically read the values within the ABS and cluster modules

2. When the values are visualized, select the “New Mileage” value and set the desired value in the top right field, then press “Enter” > Update IC + ABS :

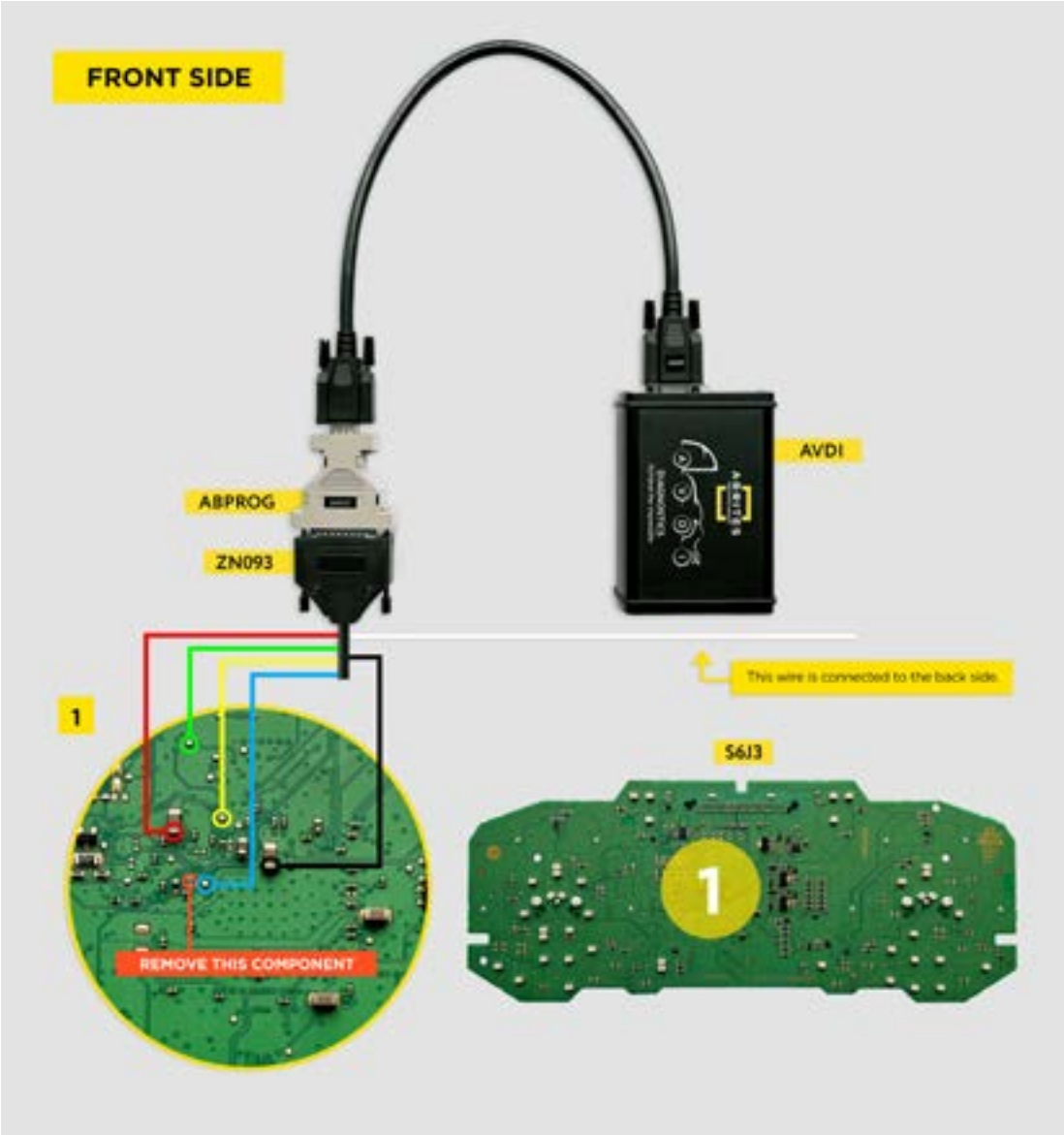


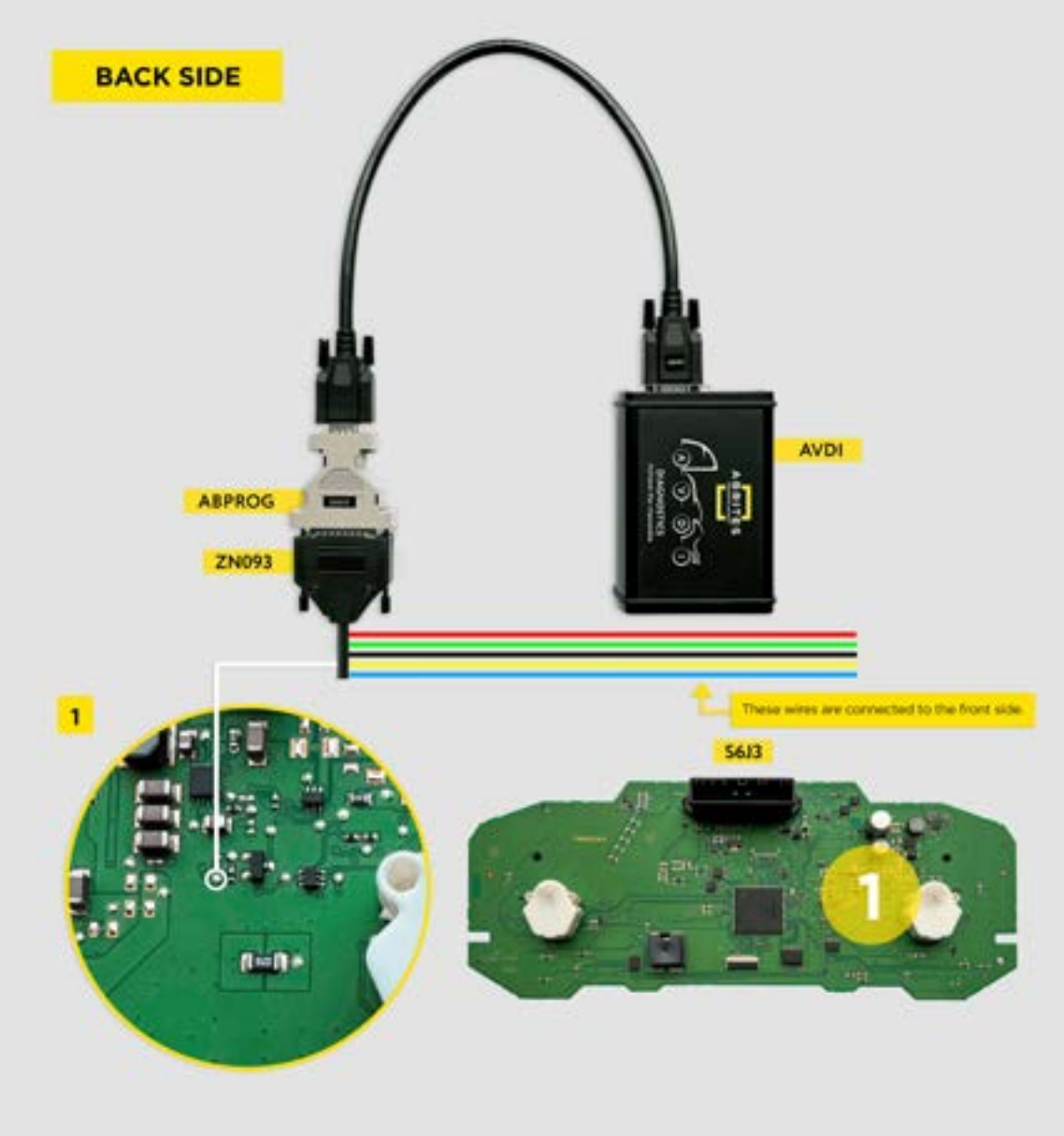
3. As soon as the process finishes, two files are saved automatically on your computer in the Renault log file folder (flash and config):



The files should look like this:

4. Take the cluster out of the car and connect it on bench as shown in the software wiring diagrams (Front and Back side) using the ABPROG and ZN093 adapter:



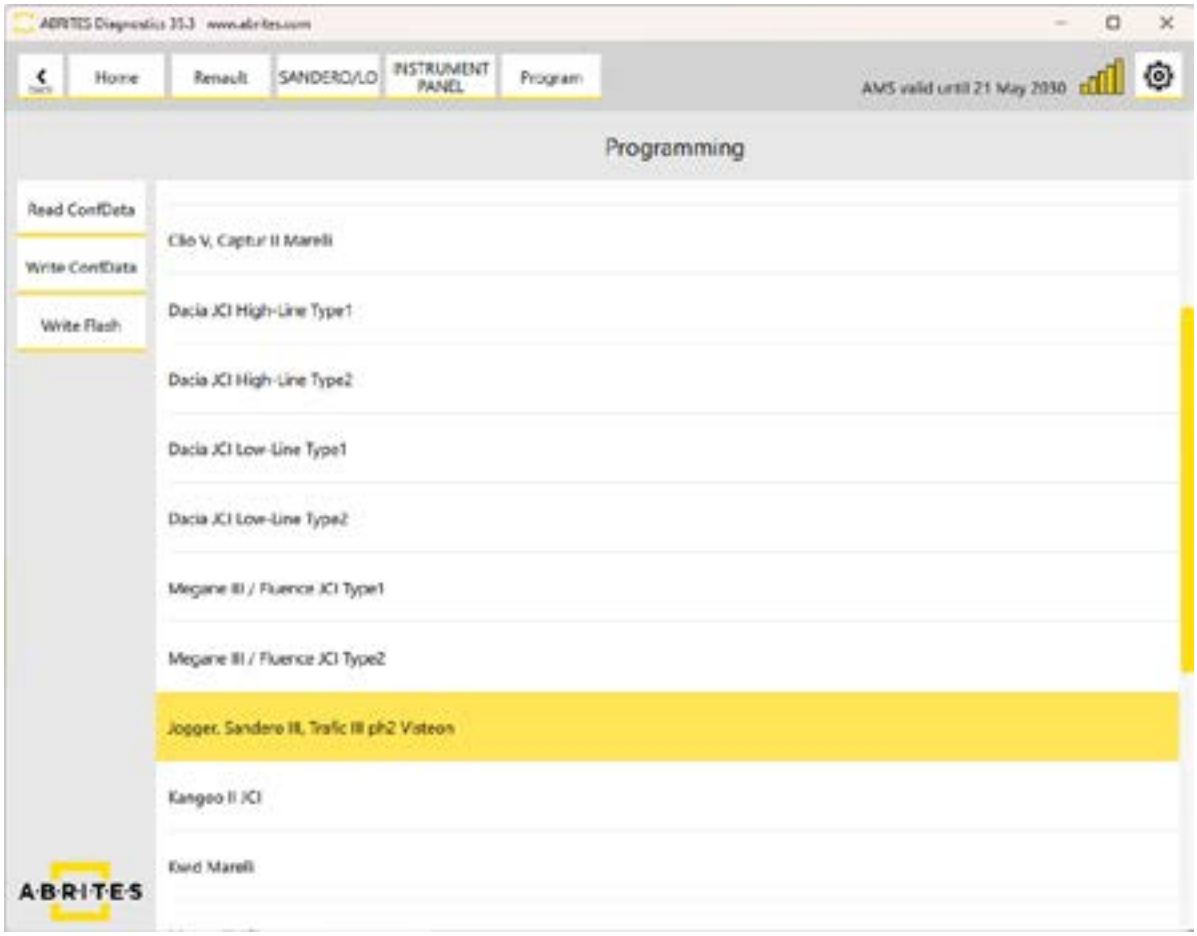


Important: Be careful and make sure you work with the module according to the wiring diagrams. Front and back sides are important to distinguish and solder the correct wires to the relevant sides, as well as remove the correct components, then return them to their places.

5. When ready , open the Programming menu >Instrument panel >select the “Jogger, Sandero III, Traffic III Ph2 Visteon option > select the “Write Flash” option.

On this step, you will have to select the “dash_jogger_visteon-xxxx xxxx xxxx.bin file.

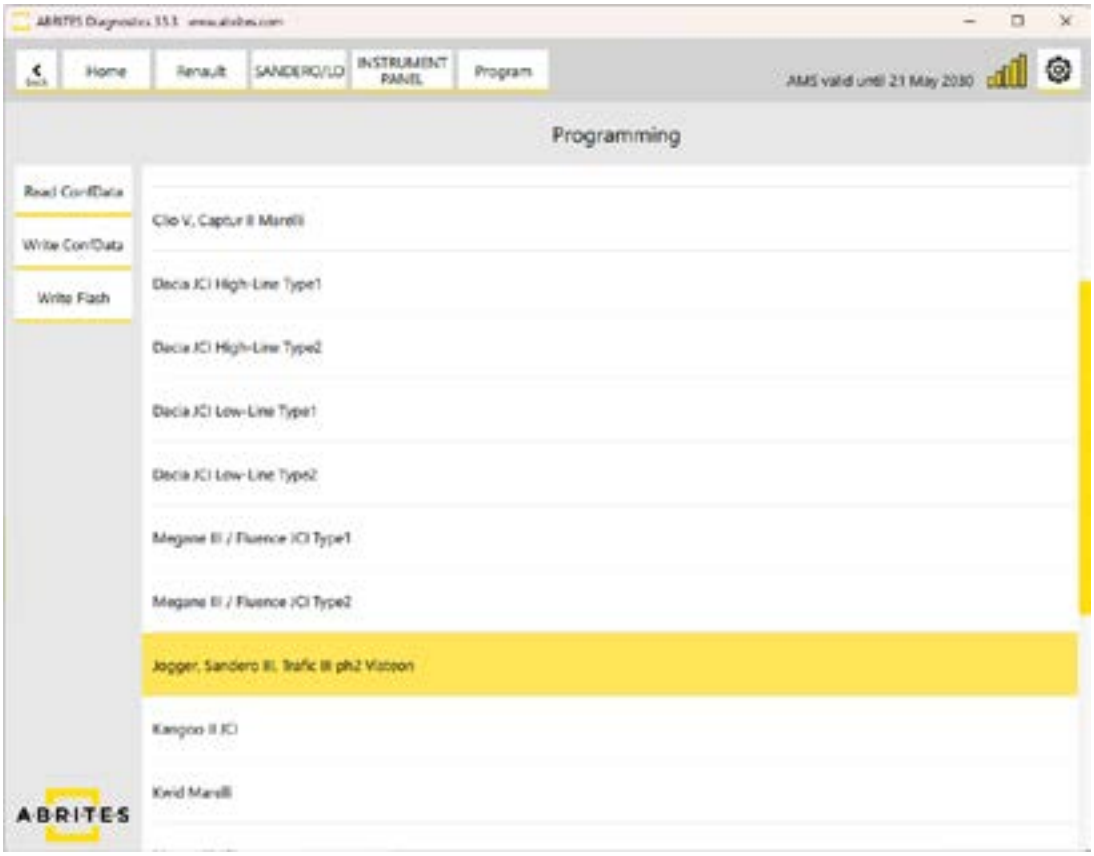
When the writing dash memory process finishes successfully, the dashboard is calibrated correctly .



6. Return the previously removed components, assemble the dashboard, and take it back into the vehicle
7. When you are ready ,again connect the vehicle by OBD, open the Renault Online software ,select the “Programming” menu > Instrument panel > select the “Jogger, Sandero III, Trafic III Ph2 Visteon option> select the “Write ConfData” button.

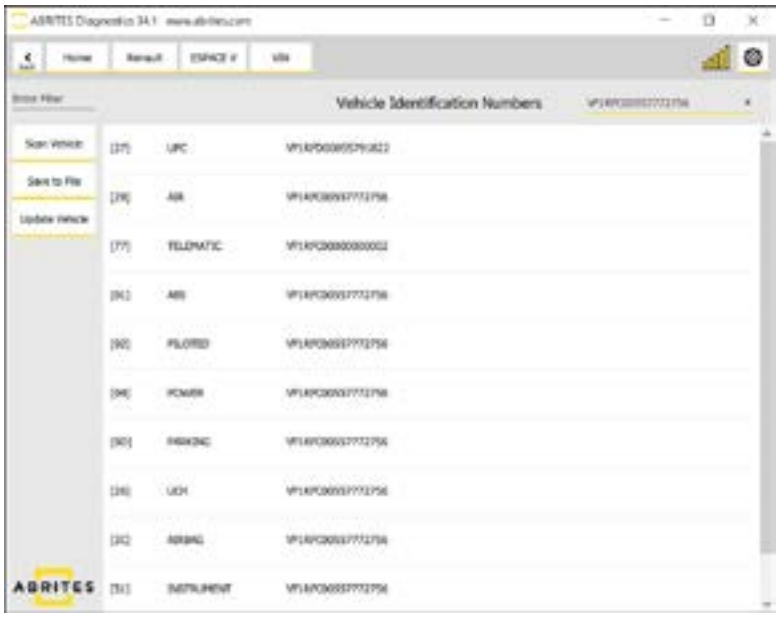
Here you have to load the second file, saved in the Renault Log folder - dash_jogger_visteon-config-xxxxxx-xxxxxxx.bin file

By performing the above steps the procedure of the Dash Calibration will be finished successfully



6. Special Function “Program IDs“

When you need to update the VIN number in a module you can do it from the Program IDs special function. Once you open it, you can scan the vehicle and you will see the list of all modules with the corresponding VIN. Once a module is selected, you will see a window in the upper right corner, where you are able to modify the value of the VIN, than you need to press “enter” and click “Update Vehicle” and with that, the new VIN value in the module will be set and the procedure is complete.



7. Special Function “Renew”

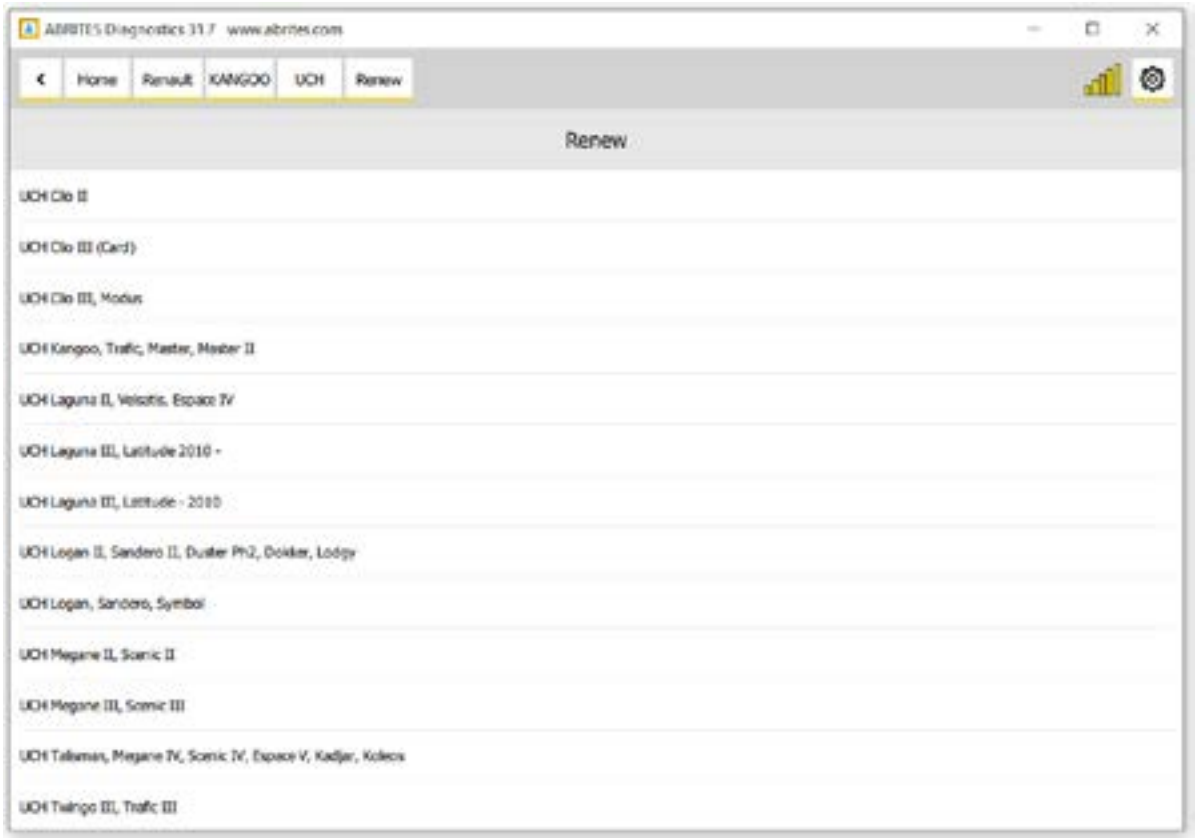
Used for module replacement

Using Abrites diagnostics for Renault/ Dacia you can replace many modules. ECUs, UCH, ESLs, etc. Here is what you need to do, we will use the **UCH** for an example.

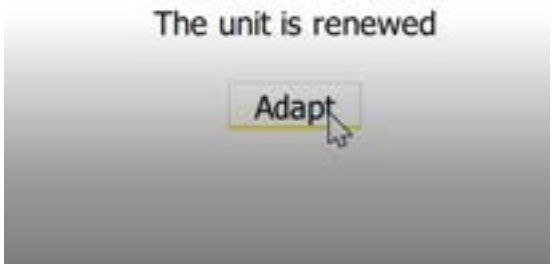
Make sure you read the **PIN code** from the car and copy it as we have discussed above.

Go to “Live values and confirm that the module (in this case UCH) is virgin or not. If it is virgin - you can adapt it. If it is not virgin you can renew it. Blank body computer says NO, meaning that the UCH needs to be renewed:

From the Renew menu we can select the UCH type and move forward:



Make sure you have the PIN and VIN



Once you confirm the needed values the UCH is adapted. **The procedure is the same for ECUs.**

ESL adaptation

The ESL adaptation procedure is done from the "Renew" special function.
It is not possible to renew the ESL via OBDII, you have to open it and erase the 24C04 EEPROM and then start the adaptation procedure.

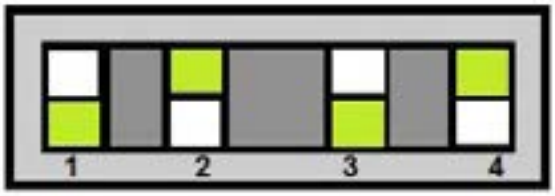
> The models after 2008/2009 require the PIN code for the adaptation. Once the ESL's EEPROM is erased you can select Renew > ESL > model > click "Adapt".

Here is a list of the supported ESLs for adaptation:

You could always use our EM002 ESL plug&play emulator for Renault/Nissan instead. It supports all ESLs for all Renault/Nissan models.

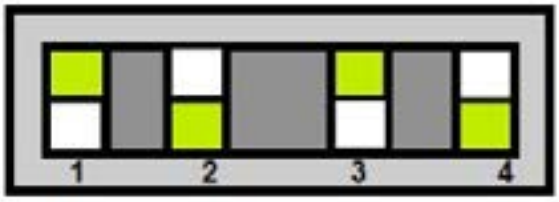
The Abrites **EM002 emulator for Renault/Nissan** supports all ESL types (old 6 pins(Renault) , new 6 pins(Renault), 8 pins(Nissan).

OLD type ESL diagram(Renault):



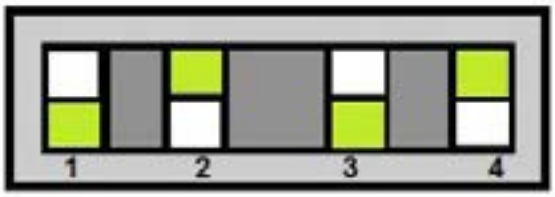
Connection to old ESL :
1 - BLACK (-)
2 - RED(+)
3 - GREEN (CAN H)
4, 5 - NOT USED
6 - BLUE (CAN L)

NEW type ESL diagram(Renault):



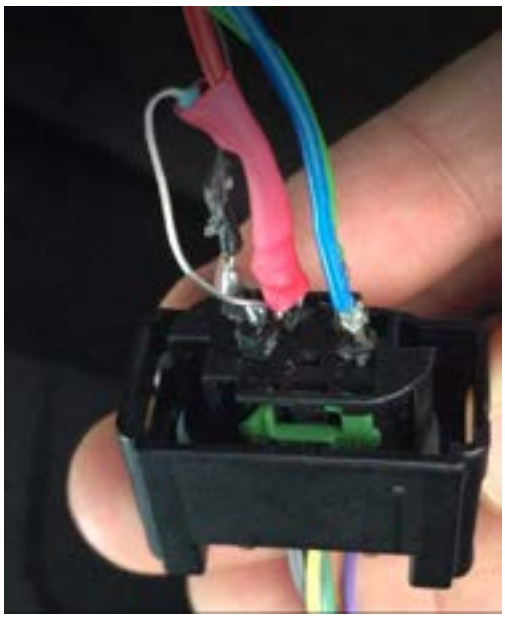
Connection to new ESL :
1 - BLACK (-)
2 - RED(+)
3 - GREEN (CAN H)
4 - Connect pin 4 of the ESL to pin 2 of the ESL through 100 Ohm resistor.
5 - NOT USED
6 - BLUE (CAN L)

8 pins ESL diagram(Nissan):



Connection to new ESL :
1 - BLACK (-)
2 - RED(+)
3 - GREEN (CAN H)
4, 5, 7 - NOT USED
6 - Connect pin 6 of the ESL to pin 2 of the ESL through 100 Ohm resistor.
8 - BLUE (CAN L)

Example new type ESL diagram(Renault):



*The white wire is used to update the emulator but at the moment there are no updates available.

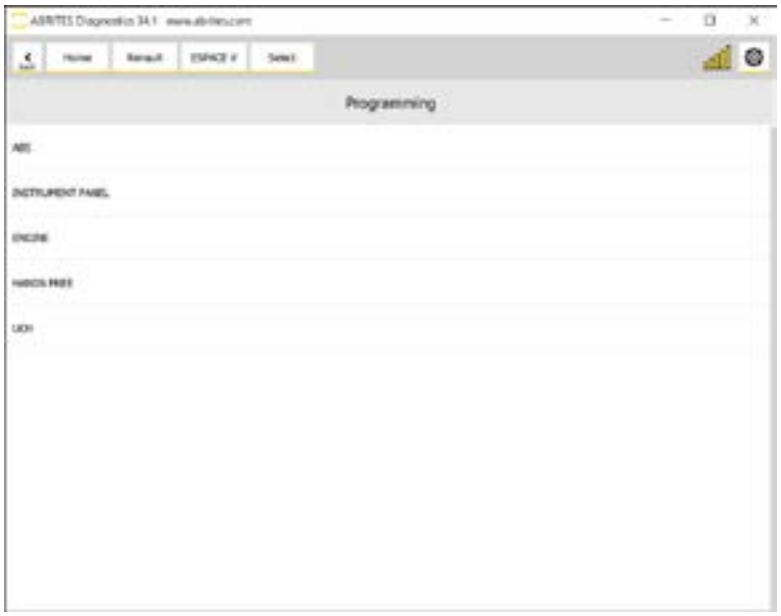
The Abrites **EM010 and EM011 emulators for Renault/Nissan** allow customers to simply remove the connector from the faulty ESL and plug it in to the emulator. Plug-and-play solution, no software required.

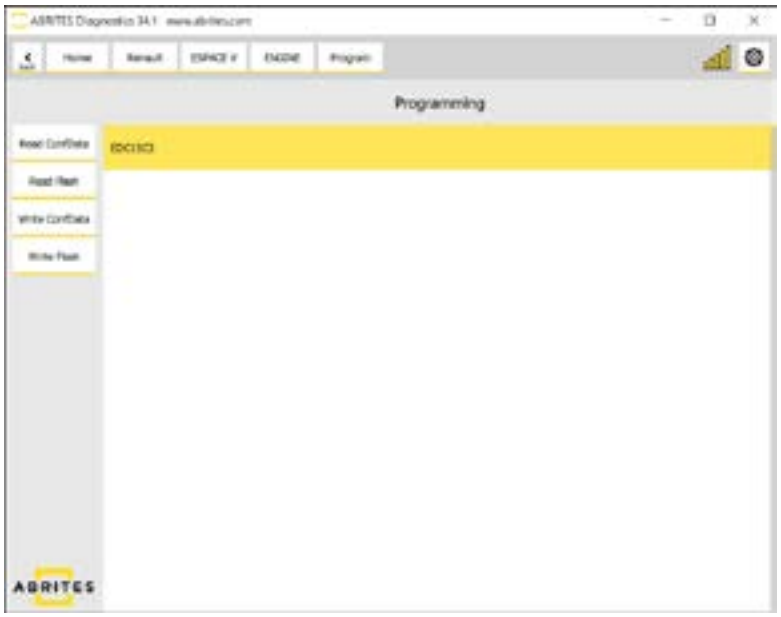
8. Special Function “Programming”

This special function allows you to read and write the Flash and/or the ConfData of different modules such as ABS, Instrument panel, Hands Free unit, UCH.

It is used for restoring modules and direct exchange of modules by transferring the EEPROM (and FLASH for Instrument panel for example) from the original unit to the other one.

RESTORING OF UNITS: Whenever the software reads the UCH’s flash for example a copy of the Flash is saved in the folder containing the log files of your Interface. Should the re-flashing procedure fail you can always use that file to restore the unit.

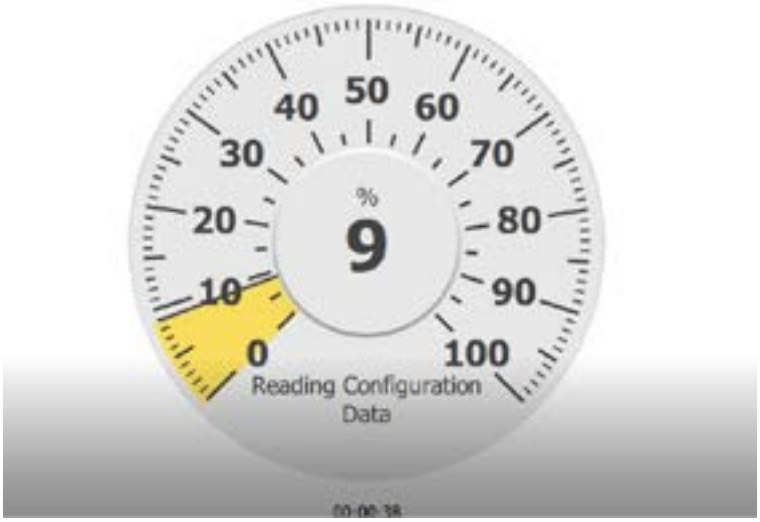




8.1 Other module exchange types. ABS etc.

There is a different adaptation method for these modules. The procedures are mostly intuitive but you need to follow these guidelines:

Select the ABS type, read the Conf Data (EEPROM), save it to a file and replace it to the donor ABS



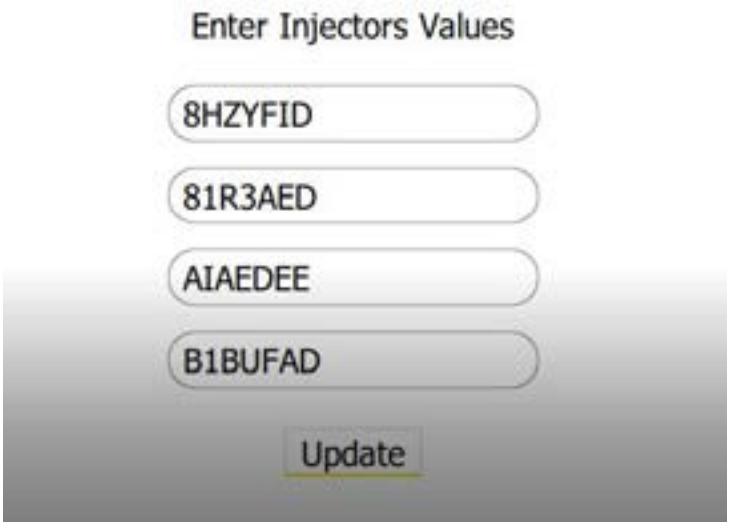
9. Other Special Functions

With the help of Abrites diagnostics for Renault/ Dacia you can perform many other functions. Here are just some of them:

DPF regeneration

Please make sure that the conditions are correct.

Injector calibration



Airbag clear crash data via OBDII

The procedure is done from the “Renew” special function via OBDII followed by the “Clear crash” option. Here is a list of all supported units: