



BUDS 
BRP UTILITY & DIAGNOSTIC SOFTWARE

BUDS3 MANUAL

Navigation & Key features

Version A

CALIFORNIA PROPOSITION 65 WARNING

WARNING

Operating, servicing and maintaining a recreational marine vessel can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, service your vessel in a well-ventilated area and wear gloves or wash your hands frequently when servicing this vessel. For more information go to: www.p65warnings.ca.gov/marine

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OBJECTIVES

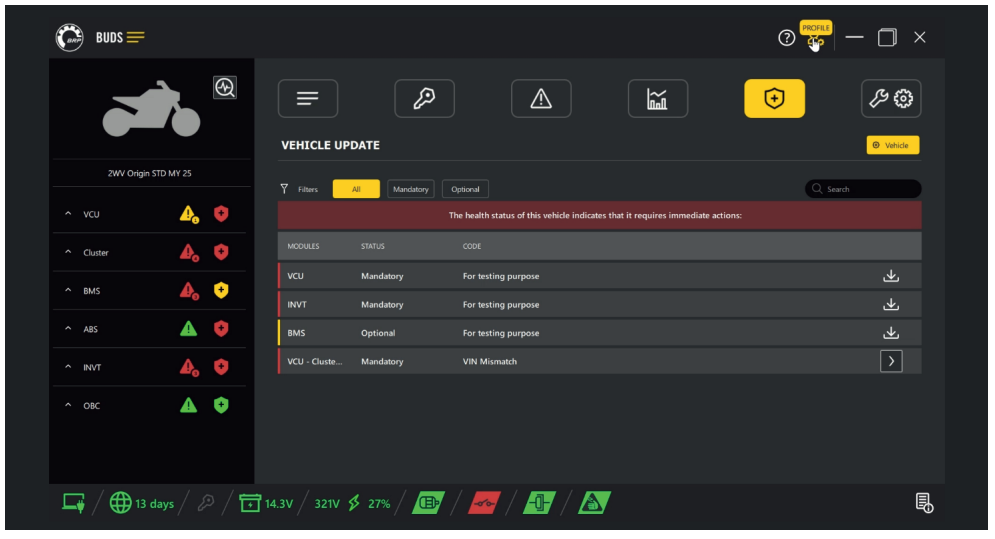
OBJECTIVES

- Identify the key features of BUDS 3 Interface.
- Navigate within the different pages of BUDS 3.

PROFILE AND SETTINGS

PROFILE AND SETTINGS LANGUAGES, UNIT AND OTHERS INFORMATIONS

In the main menu, select the **PROFILE** icon in the upper right corner.



Profile Page

This page provides information and settings for languages, unit and mouse over.

The screenshot displays the BUDS application interface with the following sections:

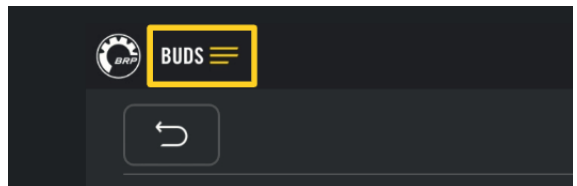
- Informations:** Checksum (2024-09-25a_33EB), Dealer number (100008), Dealer name (0000100008), Technician name (BUDS3 DT1), Profile (TechnicalServiceRep).
- Software:** Version (0.04.026), Update (UPDATE AVAILABLE), buttons for INSTALL NOW and SCHEDULE UPDATE.
- Temporary Privileges:** ManageModel, BRPViewer_Statistics, BRPViewer_VehicleUpdate.
- Settings:** Language (English), Unit (Imperial), Mouse over (On), Disclaimer (Read disclaimer).
- VCI:** VCI (Simulation), Serial#, Firmware (Not yet supported), Driver (Not yet supported).

Informations

- This is information about your user profile.

Settings Languages & Unit

- You must log out and log back in by pressing the BUDS icon in the upper right corner, close the window by pressing the X on the left upper corner for the change to take effect.



Software

- This is information about the software version and available updates.

VCI

- This is information about the Vehicle Communication Interface (VCI).

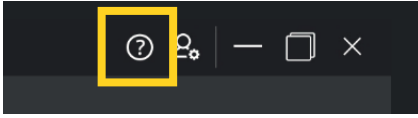
Temporary privileges

This is information about the temporary privileges granted to your account.

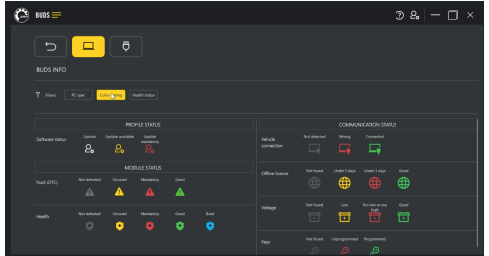
PROFILE AND SETTINGS

BUDS INFO

Open **BUDS INFO** in the right upper corner to reach to the Menu page ;

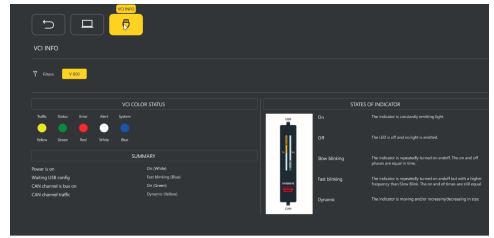


Icons Description: Selecting this page allows quick access to all color codes icons and descriptions.



VCI Info : Selecting this page allows quick access to general information relatives to the VCI is provide.

- VCI Color Status.
- Summary.
- States of indicator.







FOOTER SECTION

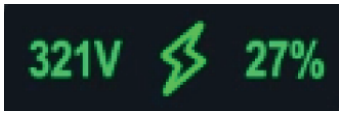


FOOTER SECTION



FOOTER ICONS

For all vehicles.

Vehicle connection status.	
Days remaining on the offline licence.	
Keys programming status.	
Low Voltage battery status.	

For Electric Vehicles only.


High Voltage battery status.	
E-motor status.	
Contact status.	


HVIL status.	
Isolation status.	

FOOTER SECTION


FOOTER ICONS FOR EV SAFETY


Contactor status icon.

FOR TESTING	
<p>The Contactor icon must be GREEN when you want to test the high voltage components.</p>	

FOR WORKING	
<p>The Contactor icon must be RED when you want working the high voltage components.</p>	

Isolation Monitoring Device status icon.

FOR WORKING	
<p>The Isolation Monitoring Device icon must be GREEN before you begin working on the vehicle. Meaning that the high voltage battery is isolated.</p>	

<p>⚠ DANGER</p> <p>If the Isolation status icon is RED, the high voltage battery is making contacts with external surfaces. And their a risk of electrocution, if you don't have your personal equipment on before touching the vehicle.</p>	
--	--

<p>NOTICE</p> <p>The High Voltage Battery may have up to 280 Volts even when the status indicates 0% state of charge. Follow EV safety procedure to avoid injury.</p>	<p>280V ⚡ 0%</p>
--	------------------

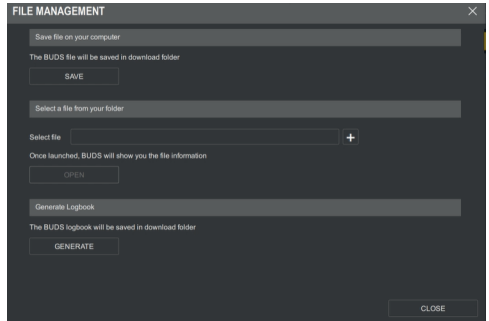
FILES MANAGEMENT ICON

BUDS3 generates BUDS files after each vehicle scan.



File Management options.

- Save the file.
- You can previously open saved files.
- Generate logbook.



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NAVIGATION MENU

NAVIGATION MENU

SUMMARY PAGE OVERVIEW

The Summary page displays general information about the vehicle. Informations change depending the vehicle.

- VIN
- Motor serial number
- Vehicle model number
- Delivery date
- Hour meter
- Odometer
- Maintenance information

Landing page possibilities

In this case BUDS3 detects no updates or no health issues. This means that the vehicle is in good condition.

The screenshot displays the BUDS3 Summary page for a Can-Am Spyder RT LTD MY 20. The interface is dark-themed and includes a navigation menu on the left, a main content area with a 'SUMMARY' tab, and a bottom status bar.

Navigation Menu (Left):

- Can-Am Spyder RT LTD MY 20
- VINXXXXXXXXXXXX
- ECM (Warning: Green triangle, Status: Green shield)
- CLUSTER (Warning: Green triangle, Status: Green shield)
- DPS (Warning: Green triangle, Status: Green shield)
- VCM (Warning: Green triangle, Status: Green shield)
- VCM (Warning: Green triangle, Status: Green shield)
- VCM (Warning: Green triangle, Status: Green shield)
- VCM (Warning: Green triangle, Status: Green shield)

Summary Page (Main Content):

Navigation: Summary (Active), Statistic, Report, BRP Statistic

Vehicle Information:

- VIN: jhd54646646
- Engine Serial #: 256161648
- Vehicle Model #: N4P8
- Delivery Date: 12-08-2023
- Engine Hour: 52h04min
- Odometer / Hour: 360 km / 50h

Maintenance Information:

- Last maintenance performed: 202 km / 25h
- Last maintenance date: 2023/12/24
- Maintenance required in: 202 km / 25h
- Maintenance required: Yes

Welcome message: 123456789123456789123456789123456

Bottom Status Bar: 13 DAYS, 12.5V

Updates or health issues detected

In this case, BUDS3 switch automatically to DTC page because updates and health issues have been detected.

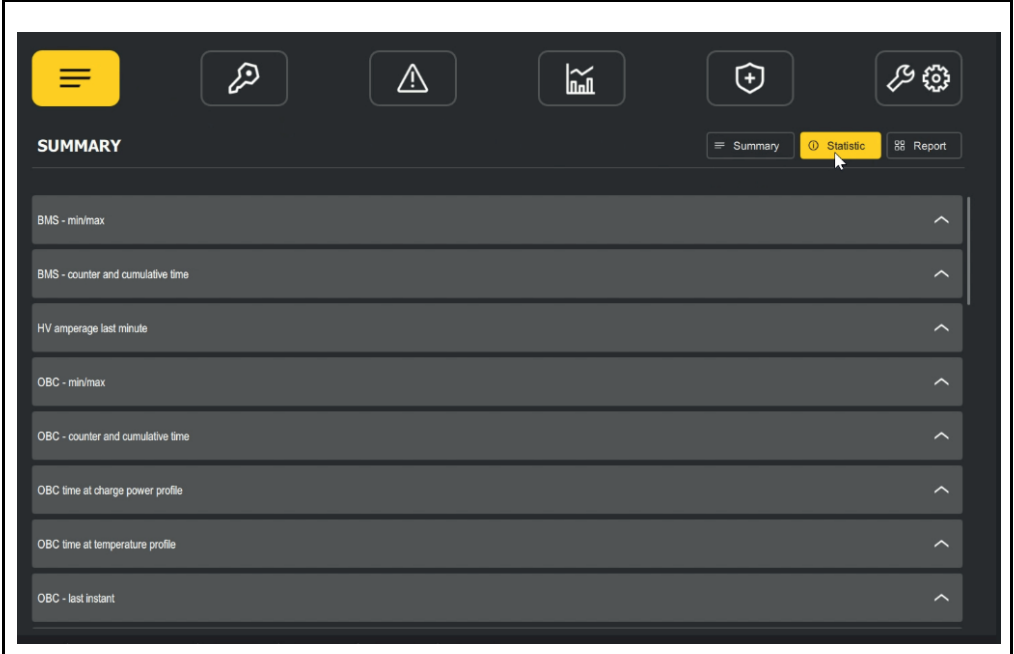
The screenshot displays the BUDS3 diagnostic software interface. At the top, the BUDS logo and user name 'BRUNO BELHOSTE | FBFO' are visible. The main navigation bar contains icons for menu, search, a prominent yellow warning triangle, a bar chart, a shield, and settings. The central section is titled 'FAULTS (DTC)' and features a 'Vehicle' button and a 'Possible DTC' button. Below this, there are filter tabs for 'All', 'ECM', 'CLUSTER', and 'DPS', along with module selection buttons 'Mod 4', 'Mod 5', and 'Mod 6'. A search bar is also present. The main area contains a table of DTCs:

MODULES	STATUS	CODE
ECM	Active	C123456 - xxxxx - High level description
CLUSTER	Active	C123456 - xxxxx - High level description
DPS	Active	C123456 - xxxxx - High level description
ECM	Occurred	C123456 - xxxxx - High level description
CLUSTER	Occurred	C123456 - xxxxx - High level description
DPS	Occurred	C123456 - xxxxx - High level description
DPS	Occurred	C123456 - xxxxx - High level description

On the left sidebar, the vehicle information 'Can-Am Spyder RT LTD MY 20' and VIN 'VINXXXXXXXXXXXX' is shown. Below this, a list of system components (ECM, CLUSTER, VCM) is displayed with green checkmarks for active components and yellow warning triangles for those with issues. At the bottom of the interface, there are status indicators for '13 DAYS' and '12.5V', along with navigation icons.

Vehicle Statistics

Under the statistic Tab, you can get information such a Speed profile, RPM profile and more.



Vehicle Reports

Under the report Tab, you can view all the data available on the vehicle. You have the option to print the data or export as PDF.

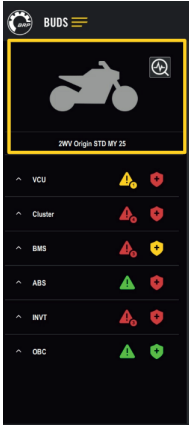
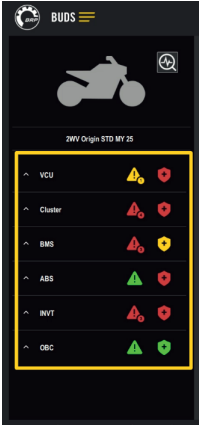
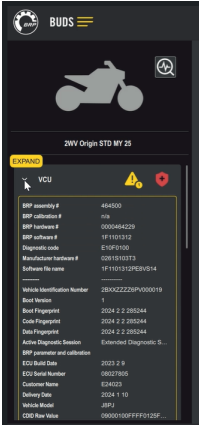
The screenshot displays a dark-themed user interface for vehicle reports. At the top, there is a navigation bar with several icons: a yellow menu icon, a key icon, a warning triangle icon, a bar chart icon, a shield with a plus sign icon, and a wrench and gear icon. Below the navigation bar, the word "SUMMARY" is displayed on the left, and three tabs are visible: "Summary", "Statistic", and "Report" (which is highlighted in yellow). Below the tabs, there are two buttons: "Print" and "PDF". The main content area consists of a list of vehicle information categories, each with a right-pointing arrow: "VEHICLE", "VCU INFO", "CLUSTER INFO", "BMS INFO", "ABS INFO", "INVT INFO", and "OBC INFO".

NAVIGATION MENU

LEFT PANE SECTION (FAULTS)

This is the module status section, which provides you with the Fault (DTC) and flash status for each model.

Scanned Modules Information

Vehicle description and VIN	Vehicle scanned list modules, information and status.	Modules Information																																								
 <p>BUDDS</p> <p>ZWW Origin STD MY 25</p> <ul style="list-style-type: none"> VCU Cluster BMS ABS INVT OBC 	 <p>BUDDS</p> <p>ZWW Origin STD MY 25</p> <ul style="list-style-type: none"> VCU Cluster BMS ABS INVT OBC 	 <p>BUDDS</p> <p>ZWW Origin STD MY 25</p> <p>EXPAND</p> <p>VCU</p> <table border="1"> <tr><td>ESP assembly #</td><td>46400</td></tr> <tr><td>ESP calibration #</td><td>m8</td></tr> <tr><td>ESP hardware #</td><td>000046400</td></tr> <tr><td>ESP software #</td><td>1F1101312</td></tr> <tr><td>Diagnostic code</td><td>E16F5100</td></tr> <tr><td>Manufacture software #</td><td>026101012</td></tr> <tr><td>Software file name</td><td>1F1101312PEB0514</td></tr> <tr><td>Vehicle Identification Number</td><td>28XKZZZ0P000019</td></tr> <tr><td>Root Version</td><td>1</td></tr> <tr><td>Root Firmware</td><td>2024 2 205244</td></tr> <tr><td>Cell Firmware</td><td>2024 2 205244</td></tr> <tr><td>Data Firmware</td><td>2024 2 205244</td></tr> <tr><td>Active Diagnostic Session</td><td>Extended Diagnostic S...</td></tr> <tr><td>ESP parameter and calibration</td><td></td></tr> <tr><td>ECU Build Date</td><td>2023 2 9</td></tr> <tr><td>ECU Serial Number</td><td>06027955</td></tr> <tr><td>Customer Name</td><td>E20023</td></tr> <tr><td>Delivery Date</td><td>2024 1 10</td></tr> <tr><td>Vehicle Model</td><td>JMFJ</td></tr> <tr><td>ECU Part Value</td><td>0600009FFFF0125F</td></tr> </table>	ESP assembly #	46400	ESP calibration #	m8	ESP hardware #	000046400	ESP software #	1F1101312	Diagnostic code	E16F5100	Manufacture software #	026101012	Software file name	1F1101312PEB0514	Vehicle Identification Number	28XKZZZ0P000019	Root Version	1	Root Firmware	2024 2 205244	Cell Firmware	2024 2 205244	Data Firmware	2024 2 205244	Active Diagnostic Session	Extended Diagnostic S...	ESP parameter and calibration		ECU Build Date	2023 2 9	ECU Serial Number	06027955	Customer Name	E20023	Delivery Date	2024 1 10	Vehicle Model	JMFJ	ECU Part Value	0600009FFFF0125F
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Software file name	1F1101312PEB0514																																									
Vehicle Identification Number	28XKZZZ0P000019																																									
Root Version	1																																									
Root Firmware	2024 2 205244																																									
Cell Firmware	2024 2 205244																																									
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Delivery Date	2024 1 10																																									
Vehicle Model	JMFJ																																									
ECU Part Value	0600009FFFF0125F																																									

DTC and Health Icons

DTC Icons : These icons indicates the status of diagnostic trouble codes (DTC).

- Green : Good, no fault detected.
- Yellow : Occurred, fault has occurred but is not active.
- Red : Active fault detected.



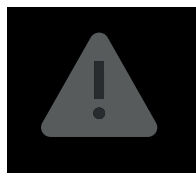
Health Icons : These icons indicates the modules updates.

- Green : Good, no updates required.
- Yellow : Optional updates available.
- Red : Mandatory updates.



Greys Icons.

- If the grey color DTC or Health icons appears, this means that the modules or the vehicle was not read properly and not detected.



NOTICE

In this case, you may need to verified the connection between the Vehicle / VCI / Computer. Then rescan the vehicle.

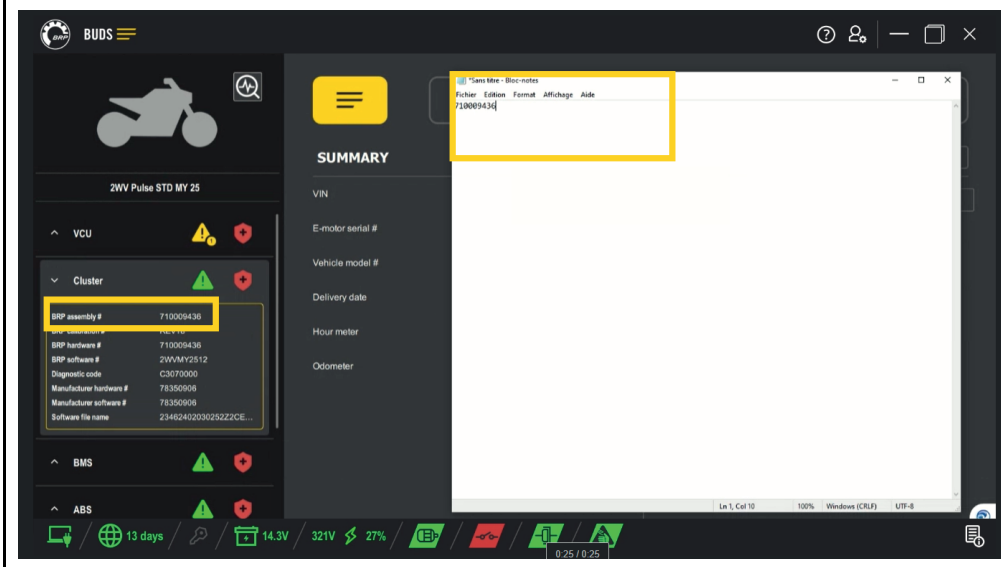


Clipboard Feature

Highlighting a line of information with a left-click to copy any information in the modules or on the Summary Page to the clipboard.

To be able to copy :

1. Pass over the field you want to copy.
2. Arrow will change for a hand.
3. Left click (it's copied).



FAULTS PAGE (DTC)

This page information concerning Diagnostic trouble Codes (DTC) related to the vehicle. There are two main menus

- **Vehicle menu** : The DTCs currently on the vehicle.
- **Possible DTC** : Displays all the possible DTCs that could occur on the vehicle.

The screenshot shows the BUOS interface for a 2017 Origin STD MY 25 motorcycle. The main content area is titled "FAULTS (DTC)" and displays a list of diagnostic trouble codes (DTCs) for the vehicle. The interface includes a navigation menu on the left, a top bar with the BUOS logo and user settings, and a bottom status bar showing various vehicle metrics.

Vehicle Information: 2017 Origin STD MY 25

Navigation Menu (Left):

- VCU (Warning icon)
- Cluster (Warning icon)
- BMS (Warning icon)
- ABS (Warning icon)
- INVT (Warning icon)
- OBC (Warning icon)

FAULTS (DTC) Table:

MODULES	STATUS	CODE	Actions
Cluster	Active	P0461 - Fuel sender range/performance	Trash, Check
Cluster	Active	B2A24 - Input Connector pin 24 voltage - out of range	Trash, Check
Cluster	Active	B2A25 - Input Connector pin 25 voltage - out of range	Trash, Check
Cluster	Active	U0100 - Lost communication with ECM (lost of CAN ID's)	Trash, Check
INVT	Active	P0AEE - Electric Motor temperature sensor - 1 - out of range	Trash, Check
INVT	Active	P0AF3 - Electric Motor temperature sensor - 2 - out of range	Trash, Check
VCU	Occured	U0288 - Loss of communication with Inverter	Trash, Check

Bottom Status Bar:

- 13 days
- 14.3V
- 321V
- 27%
- 0.52 / 0.52

Vehicle Faults (DTC)

1. Colors codes of the DTC. (Yellow for Occurred and Red for active)
2. DTC status (Occurred and Active).
3. Option to select by module.
4. Searching bar for specific module.
5. To delete DTC, check in the box and select the Delete icon. The Active Faults can't be deleted.

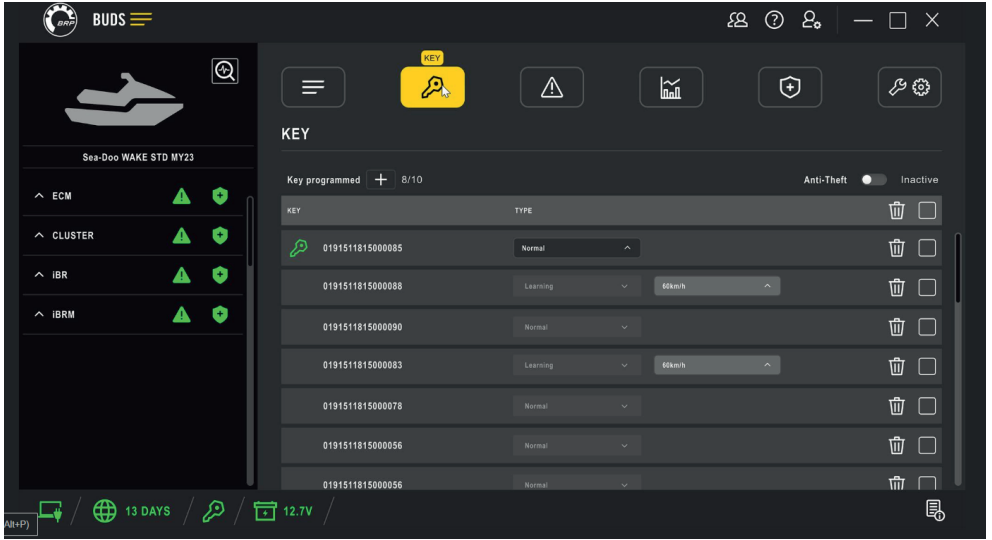
The screenshot shows the 'FAULTS (DTC)' screen. At the top, there is a navigation bar with a 'FAULTS (DTC)' button highlighted in yellow. Below this, there are several icons: a menu icon, a key icon, a warning icon (highlighted in yellow), a bar chart icon, a shield icon, and a settings icon. The main header area includes 'FAULTS (DTC)' and two buttons: 'Vehicle' and 'Possible DTC'. Below the header, there are filter buttons for 'All', 'Cluster', 'INVT', and 'VCU'. A search bar is located to the right of the filters. The main content area is a table with columns for 'MODULES', 'STATUS', and 'CODE'. The table lists several faults, including 'Fuel sender range/performance', 'Input Connector pin 24 voltage - out of range', 'Input Connector pin 25 voltage - out of range', 'Lost communication with ECM (lost of CAN ID's)', and 'Electric Motor temperature sensor - 1 - out of range'. The 'STATUS' column shows 'Active' for most faults and 'Occured' for the last one. A vertical bar on the left side of the table indicates the status of each row. A delete icon (trash can) is visible next to each row, and a checkbox is present to the right of each delete icon.

MODULES	STATUS	CODE
Cluster	Active	P0461 - Fuel sender range/performance
Cluster	Active	B2A24 - Input Connector pin 24 voltage - out of range
Cluster	Active	B2A25 - Input Connector pin 25 voltage - out of range
Cluster	Active	U0100 - Lost communication with ECM (lost of CAN ID's)
INVT	Active	P0AEE - Electric Motor temperature sensor - 1 - out of range
INVT	Active	P0AF3 - Electric Motor temperature sensor - 2 - out of range
VCU	Occured	U0288 - Loss of communication with Inverter

NAVIGATION MENU

KEYS PAGE

The keys page allows you to program various type of keys to a specific vehicle.



The **Green key icon** means that the key on the post, and indicates when the key is programmed.

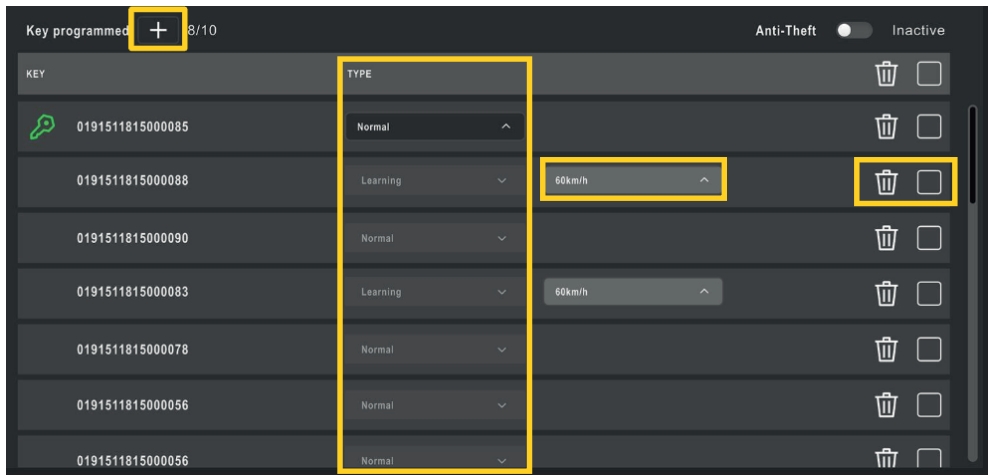


The **Red key icon** means that the key is not programmed.



Programming Keys

To **Programs Keys**, execute the following steps :



1. Select the **+** **Icon** to add key.
2. a pop up will open to support you in the programming.
3. As the key is added you can change the type directly from the key page.
4. Select the key type and speed if require.
 - Normal key.
 - Performance key.
 - Work key.
 - Learning key with top speed customizable.

For already **Existing Keys**, you can program them according to the requirements.

To **Delete Keys**, check in the box and select the Delete icon or select them all from the top and delete in the same time.

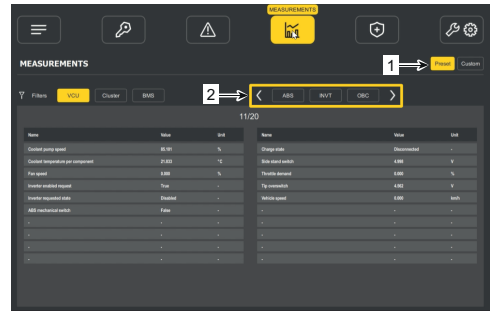
NAVIGATION MENU

MEASUREMENTS PAGE

The Measurements Page displays the **direct reading** for different modules on the vehicle.

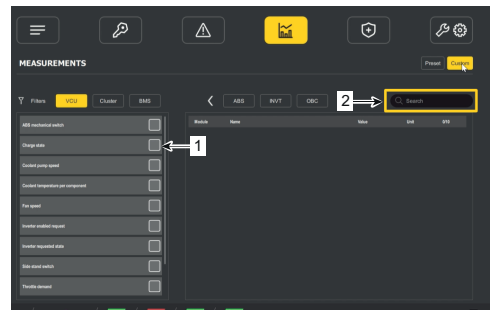
Preset Tab :

1. The Preset tab shows most common sensors that you want to read.
2. The carousel appears when the Preset tab is selected. More than 3 modules, the carousel is present to let you choose the module you want to look.



Custom Tab : Custom tab allows the access to specific reading.

1. Select the elements you want to read and compare from different modules in the same time.
2. Use the search bar to reach specific module.



VEHICLE UPDATES PAGE (FLASH)

This is the first page you land on if BUDS3 require updates or detects health issues after the initial scan. This page displays functions and updates that need to be performed on the vehicle.

The screenshot shows the 'VEHICLE UPDATE' interface. At the top, there are navigation icons for menu, key, warning, graph, shield, and settings. Below the title, there are buttons for 'Vehicle' and 'BRP viewer'. A 'Filters' section includes 'All', 'Mandatory', and 'Optional' buttons, along with a search bar. The main content is a table with columns for 'MODULES', 'STATUS', and 'CODE'. The table lists several updates, with the first row highlighted in yellow. Numbered callouts point to specific elements: 1 points to the 'ECM' module, 2 points to the 'Mandatory' status, 3 points to the update code 'C123 - Program ECM to latest available configuration', and 4 points to the download icon.

MODULES	STATUS	CODE	
ECM	Mandatory	C123 - Program ECM to latest available configuration	Download
CLUSTER	Mandatory	C123 - Variant coding to be reconfigured	Download
DPS	Mandatory	C123456 - High level description	Download
ECM	Optional	C123456 - High level description	Download
CLUSTER	Optional	C123456 - High level description	Download
VCM	Optional	C123456 - High level description	Download

1. The Modules with require updates or health issues detected.
2. Status of the updates and health issues (Yellow for Optional and Red for Mandatory).
3. Code indicates what the updates is for.
4. Select the Download icon to install the last updates (Flash).

NAVIGATION MENU

FUNCTIONS & SETTING PAGE

This section allows you to activate certain vehicle components and configure them or test their input. The accessories that have just been installed can be activated here. Use the search bar for specific component.

Function and Setting page is divided in 3 parts:

- Configuration
- Option
- Test

FUNCTIONS / SETTINGS

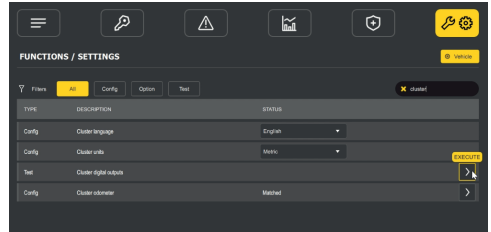
Vehicle

Filters: All Config Option Test Search

TYPE	DESCRIPTION	STATUS
Test	Button and physical input	>
Config	VCU backup and restore	>
Config	E-motor serial number	00000000 >
Test	Component activation	>
Config	E-motor angle offset	4.1223 rad >
Config	Real time clock	2021/11/17 9:42 >
Config	Vehicle factory coding	>
Config	Cluster language	English ▾
Config	Cluster units	Metric ▾

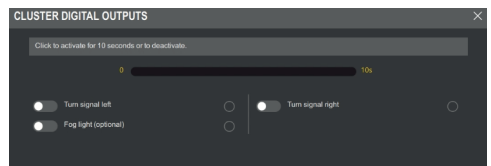
The cluster is being shown here to figure out how to test and configure it.

1. Selecting the arrow to the right opening a popup to description what the function will do.



CLUSTER VIEW IS SHOWN (SETTING FOR LANGUAGES AND UNITS)

2. Follow the screen instruction to execute the function sequence.



This page is intentionally blank

ADVANCED FUNCTIONS AND TROUBLESHOOTING

ADVANCED FUNCTIONS AND TROUBLESHOOTING PROCEDURE

Powering the Vehicle When Using B.U.D.S.

NOTICE


Make sure the unit's battery is fully charged before undertaking this operation. Never use a battery charger to temporarily substitute the battery as it may cause the ECM to function erratically, or not at all.

NOTICE



Continuous power to the computer is mandatory while performing this operation.

Reset the ECM as a Service Part

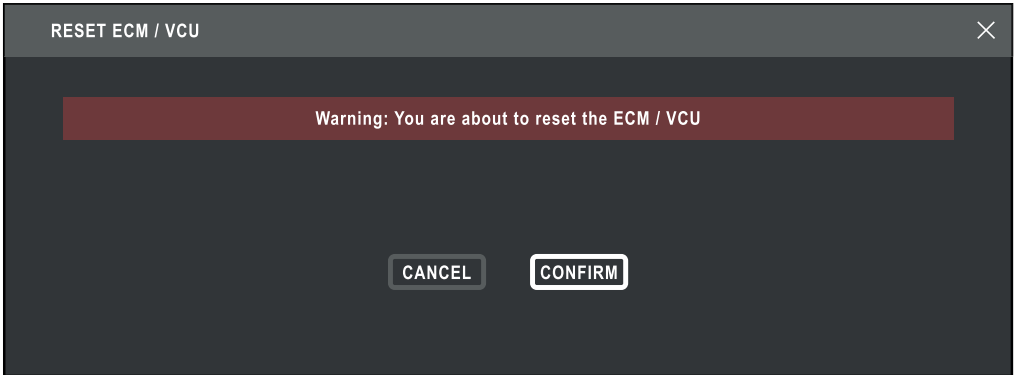
1. Connect one of the following tools to keep the vehicle energized:

<p>Power Interface (P/N 515177223)</p>	 A small black rectangular device with three cables extending from one side.
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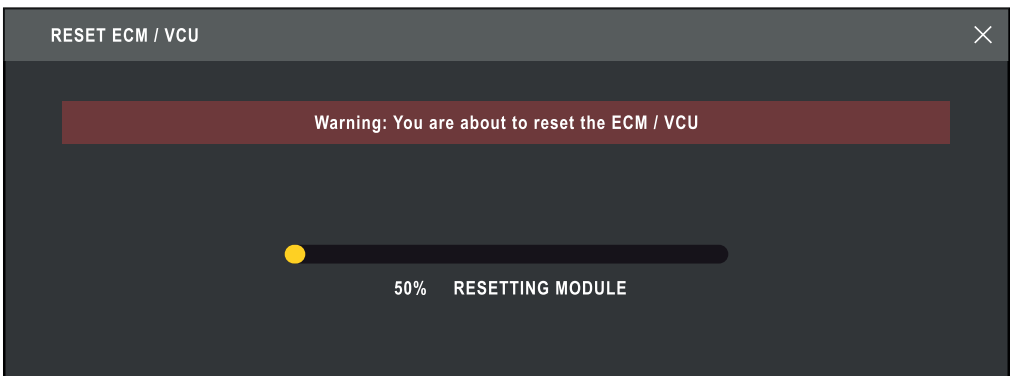
2. Connect the cables V800 VCI.

<p>B.U.D.S. V800 VCI (P/N 529036613)</p>	 A small black rectangular device with a coiled cable and a connector.
<p>B.U.D.S. Hardware V800 VCI (P/N 529036614)</p>	 A black cable with a connector and a coiled section.

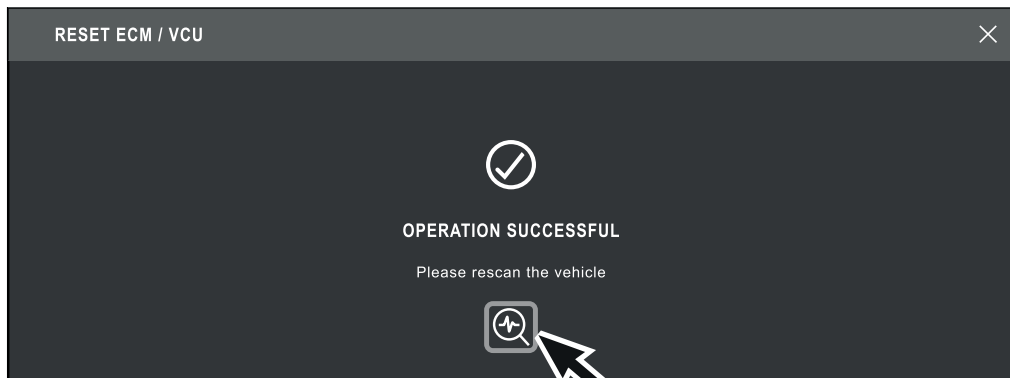
3. Connect the vehicle to the latest version of the BRP diagnostic software (B. U. D. S.).
4. In B.U.D.S., go to:
 - **Functions / Settings** page
 - **Reset ECM / VCU config**
5. Open the sequence.
6. **With no Health Issue :**
 - Click on **CONFIRM** to reset the ECM / VCU.



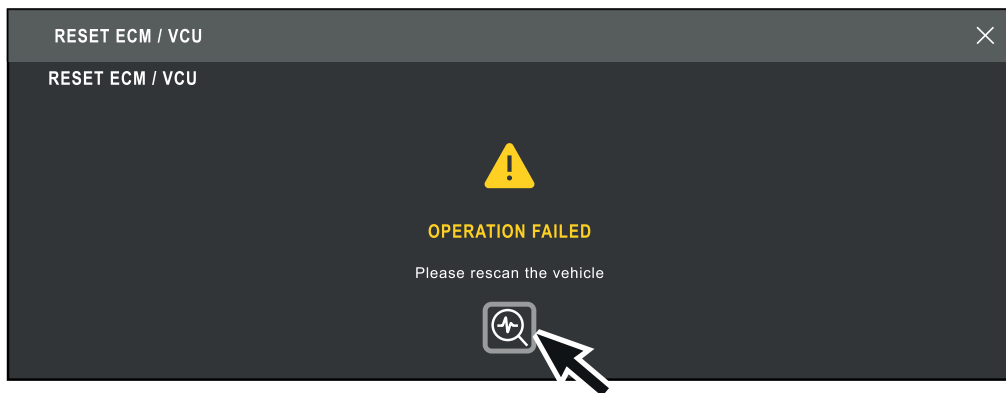
- Resetting the ECM as a Service Part processing.



- From the reset process you will receive a status **OPERATION SUCCESSFUL** or **OPERATION FAIL**. On both situation you will have to press the **scan** button in the popup.

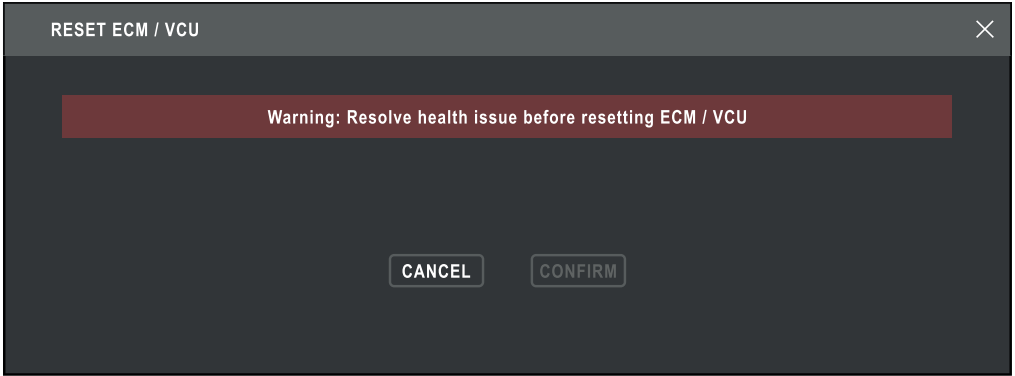


- If the operation fails, you must re-**scan** the vehicle



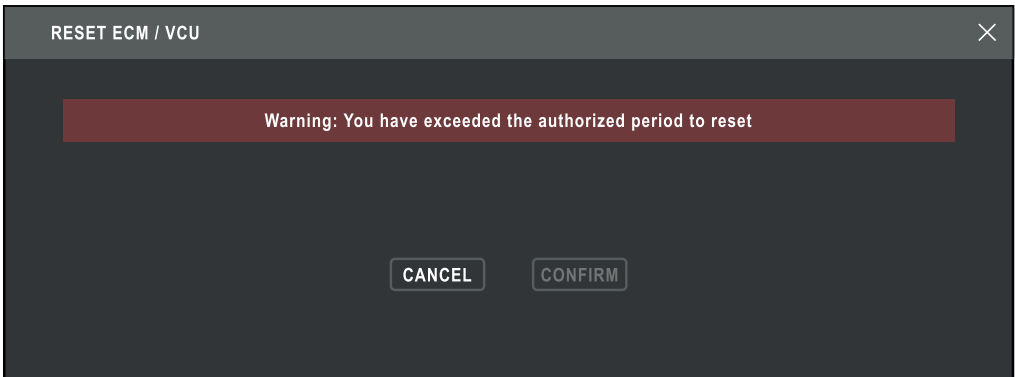
7. **With Health Issue :**

- The **confirmation** button is not active, the system ask you to **cancel** it.



8. Expired Authorization to Reset.

- You have exceeded the authorized period to reset.
- The **confirmation** button is not active, the system ask you to **cancel** it.



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