

USER MANUAL

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Legal Notices

We have made all efforts to offer current, correct and clearly-expressed information within the BUDS2 End User Documentation.

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Installation

The hardware, software and internet connection of your computer are all critical to ensure an optimal BUDS2 performance. BRP may not be able to assist you if your configuration doesn't match the following minimum requirements:

- Processor type:
 - o Intel: 3rd generation or later Core i5 or Core i7 processor, or
 - AMD: FX or Ryzen processor
- Processor frequency:
 - o 2 GHz or higher for dual-core processors, or
 - o 1.5 GHz or higher for processors with four cores or more
- RAM:
- 8GB or more
- Storage
 - \circ at least 5 GB available on the C drive:
 - a solid-state disk (SSD) is recommended
- Screen
 - resolution of at least 1366 by 768
- USB
 - o two USB ports available
 - Operating system
 - o Microsoft Windows 7 with service pack 1, 64-bit, or
 - o Microsoft Windows 10, 64-bit
- Internet
 - o a high-speed internet connection is required
 - o a connection with a download speed of 30 Mbps or higher is recommended

BRP recommends using the PC for BUDS2, BossWeb and other BRP usages only. Diagnostic tools from other powersport vendors, some computer security suites and some remote administration software have occasionally interfered with the correct operation of BUDS2.

Computer administrator privileges are required for BUDS2 installation, as well as for module update operations using a USB-to-USB cable connection.

To install BUDS2, execute the installation program called 'BUDS2_Setup.exe'. If you are not logged-in as Windows administrator, please run the installation program as Windows administrator. To do this, right-click on the installer and click on *Run as administrator*. If Windows opens a security warning, accept it by clicking on '*Run*'. If you want to cancel the installation process, press the '*Cancel*' button or the 'X' on the top right of the window at any point of the installation.

PUDS2 Sature ave				
W BOD32_Setup.exe		Open		
	۲	Run as administrator		
		Traublaction compatibility		

Figure 1: Running as Administrator

When the installer opens, select the installation language from the drop-down menu.

Installer La	nguage 🗾 🗾
(ar	Please select a language.
	English 💌
	OK Cancel

Figure 2: Language selection for installation process

Next, the install location and disk space requirements are shown. The install location cannot be changed. If the required disk space exceeds the available disk space, prepare additional disk space and re-start the installation program.

Install Location BUDS2 installation	folder.	(arb
Setup will install BU	IDS2 in the following folder.	
Destination Folde	er	

Figure 3: Information of the installation folder

Then, you can choose the folder of the Windows start menu to which you want to add a startup shortcut. By default, it is set to '*BRP/BUDS2*'. If you do not want to create a shortcut in the start menu, select the checkbox '*Do not create shortcuts*'. Acknowledge the configuration by selecting '*Install*'.

In case the error message 'BUDS2 already running, you have to shutdown all program instances' is shown, you need to stop the currently running BUDS2 application and restart the installation program.

It is not possible to install two versions of BUDS2. Thus, in case of the warning message 'BUDS2 already *installed* ...', you need to confirm to uninstall the currently installed version of BUDS2. If you want to keep captured BUDS2 files, backup them first.

BUDS2 Setup	
Choose Start Menu Folder Choose a Start Menu folder for the BUDS2 shortcuts.	(ar)
Select the Start Menu folder in which you would like to create the progra can also enter a name to create a new folder.	am's shortcuts. You
Administrative Tools BRP BUDS2 Cisco Cisco Systems VPN Client Google Chrome Intel Intel Intel PROSet Wireless IXXAT Java Java Development Kit	× E
Do not create shortcuts BUDS2 - KPIT Technologies Ltd.	all Cancel

Figure 4: Shortcut in Windows start menu

If you have never installed BUDS2 before, you need to install drivers for the VCI. If you had a BUDS2 version installed before, you do not need to install the VCI drivers again. The VCI installation is part of the BUDS2 installation. Thus, the VCI driver can be installed by selecting 'Yes' in the next confirmation dialog:

🛞 BUDS2 Setup		×
Install the VCI (\	Virtual CAN Interf	ace) drivers ?
	Yes	No

Figure 5: VCI driver installation

Finally, BUDS2 will be installed on your computer.

BUDS2 Setup	
Installing Please wait while BUDS2 is being installed.	
Extract: deploy.jar	
Show details	
RUDS2_KUTT Technologies Ltd	
< Back Next >	Cancel

Figure 6: Installation of BUDS2

After installation, an information dialog will show the outcome of the installation process. If VCI drivers were installed, a reboot of the computer is required. Otherwise you can select to run BUDS2 immediately from the installer. Otherwise the installer quits after selecting *'Finish'*.



Figure 7: Installation completed

Start-up

To start BUDS2, you can select *BRP->BUDS2* from the Windows start menu if you selected to add a shortcut in the installation process. Otherwise navigate to *'C:\Program Files (x86)\BRP\BUDS2\'* and double-click on the BUDS2 executable called *'BUDS2.exe'*.

BUDS2 will prompt you a login dialog, first. Enter your BOSSWeb information to log in.

	Neh				
BUSS					
	DEA	LER NO:			
	USE	RNAME:			
	PAS	SWORD:	SUBI	літ	
	BOS	SWeb 6.0 - Login			
SKI-UUU		580200.	EVINRUDE	ROTAX	Gam-am.
North America Canada 1-800-361-9980 US 1-800-366-6992 <u>Help By E-mail</u>	BRP Finland Oy Norway +47 73 828 800 Finland, Sweden and CE +358 16.3208.111 Help By E-mail	Europe, Middle East and Africa Dealers: 00800 25 25 50 50 Distributors: 0032 9 323 88 10 Help By E-mail	Marine Propulsion Systems (MPS) North America 1-800-888-4662 Government Sales 1-800-901-3228 Help By E-mail	BRP Australia +61 1800.811.090 Help By E-mail BRP Brazil +55 19 3246 21 00 Help By E-mail	Environment Check Browser Type Browser Version JavaScript Permanent Cookies Temporary Internet Files Details

Figure 8: BOSSWeb internet login

During the opening, BUDS2 will check for updates and install them if this is the case. At the end, you will be asked to restart the program. You will have to re-enter your BOSSWeb data.



Figure 9: Checking for updates

Installing Updates	
	Cancel

Figure 10: Install updates

BUDS2	x
Application has been updated and will restart now.	ОК

Figure 11: restart of the application

A disclaimer may show you important legal information during the startup process. Read it carefully and accept the disclaimer to start BUDS2. Declining it will close BUDS2.

Disclaimer
BUDS software is provided on an as is basis without warranty of any kind, expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.
BRP does not warrant that the operation of the software will be uninterrupted or error free, or that the software functions will meet your requirement, or that defects in the software will be corrected.
BRP does not warrant or make any representations regarding the use or the results of the use of the software or any documentation provided therewith in terms of their accuracy, correctness, reliability, or otherwise. No written or oral information or advice provided by BRP or a BRP authorised representative create a warranty or in any way increase the scope of this warranty.
BRP is not liable for any claims or damages whatsoever. This include loss of profits, property damage, personal injury, intellectual property infringement, interruption of business, or for any special, incidental or consequential damages, however caused, whether arising out of breach of warranty, contract, tort (including negligence), strict liability, or otherwise.
Don't show again
Disagree Agree Agree

Figure 12: Disclaimer

BUDS2 can work in two different modes:

- VCI mode: All data is read from the VCI. VCI mode is only available if a VCI is connected and the VCI drivers have been installed successfully.
- **File mode**: Data is read from a BUDS2 file which is a stored snapshot of a previous vehicle scan. BUDS2 is in *file mode* if a BUDS2 file has been opened.

If a VCI is connected at startup, BUDS2 will start up in VCI mode and start scanning the vehicle.



Figure 13: Connecting VCI

Progress	
Reading data records on ECM	
	Cancel

Figure 14: Reading ECUs

If no VCI is connected at startup, BUDS2 will prompt you to open a BUDS2 file. A file dialog will open and you can select the BUDS2 file to open. In this case BUDS2 will start up in *file mode*.

🕒 No V	/CI found		X
?	No VCI can be found. Do you want to open a BUDS2	2 file?	
	C	Yes	No

Figure 15: No VCI found

🔅 Select a BUDS2 file							
💮 🕞 - 📙 🕨 Ordinateu	r → OS (C:) → Program Files (x86) → BRP → BU	JDS2 🕨 Files	 ✓ ✓	ercher dans : Files	٩		
Organiser 🔻 Nouveau	dossier						
🔆 Favoris	Nom	Modifié le	Туре	Taille			
🧮 Bureau	12345678901234001_20150924141252.buds2	2015-09-24 14:12	Fichier BUDS2	383 Ko			
🔛 Emplacements récer	12345678901234001_20150924141607.buds2	2015-09-24 14:16	Fichier BUDS2	383 Ko			
) Téléchargements	12345678901234001_20150924141647.buds2	2015-09-24 14:16	Fichier BUDS2	383 Ko			
	12345678901234001_20150924141807.buds2	2015-09-24 1 18	Fichier BUDS2	383 Ko			
词 Bibliothèques		-0					
Documents							
🔛 Images							
👌 Musique							
Vidéos 🚼							
🖳 Ordinateur							
🚢 OS (C:)							
💼 Data (D:)							
🚽 apps (\\vsvlfs01\vldt							
🖵 global (\\brp) (N:)							
🚽 vldfs (\\vsvlfs01) (S:)							
PelchSi\$ (\\vsvlfs02)							
🚽 apps (\\vsvlfs01\vldt							
🙀 Réseau							
Nom o	du fichier :		+ *.bud	s2	•		
			0.	avrir 🚽 🗛	nnuler		

Figure 16: Opening a BUDS2 file

In both file and VCI mode, BUDS2 brings us to the main screen below:

VCI 371537 Vehicle	an	Summary	Keys	Faults	Measurements	Flash	Function	is Settings	File	Preference	es About	
Vehicle Open a BUDS2 file Creation date: 7/5/16 3:10 PM Cluster Open a BUDS2 file VCI Name: USBtoCANV2compact VCI Type: Sea-Doo_GTX_215_Itd buds Hardware ID: -1566891463 OS: Windows 7 Architecture: x86 Connectivity: Dealer Number: First Name: Last Name: Last Name: Last Name: Open Service Report 0DX: 16.1.17 OTX: 16.10.0 BUDS2: 16.10.0 BUDS2: 16.10.0 BUDS2: 16.10.0 BUDS2: 16.10.0 BUDS2: 16.10.0		VCI 371537			g	🖁 File 👎 Lo	og book	C				
Image: Cluster Save a BUDS2 file Hardware ID: 1566891463 Image: Save a BUDS2 file OS: Windows 7 Image: Save a BUDS2 file OS: Windows 7 Image: Save a BUDS2 file OS: Undows 7 Image: Save a BUDS2 file Save a BUDS2 file Image: Save a BUDS2 file Dealer Number: Image: Save a BUDS2 file First Name: Image: Save a BUDS2 file Open Service Report Image: Save a BUDS2 file Open Service Report Image: Save a BUDS2 file Image: Save a BUDS2 Image: Save a BUDS2 file Image: Save a BUDS2 Image: Save a BUDS2 file Image: Save a BUDS2 Image: Save a BUDS2 file Image: Save a BUDS2 Image: Save a BUDS2 file Image: Save a BUDS2 Image: Save a BUDS2 file Image: Save a BUDS2 Image: Save a BUDS2 file Image: Save a BUDS2 Image: Save a BUDS2 file Image: Save a BUDS2 Image: Save a BUDS2 file Image: Save a BUDS2 Image: Save a BUDS2 Image: Save a BUDS2		\ 	/ehicle					Open a BUDS2	? file		Creation date: VCI Name: VCI ID: VCI Type:	7/5/16 3:10 PM USBtoCANV2compact 371537 Sea-Doo GTX 215 ttd.bu
Image: Second			Clust	ter				Save a BUDS2	file		Hardware ID: OS:	-1566891463 Windows 7
IBRM Close BUDS2 file Dealer Number: Open Service Report First Name: Last Name: OUDX: 16.1.17 ODX: 16.1.00 BUDS2: 16.10.0 BUDS2: 16.10.0 BUDS2: 16.10.0 BUDS2: 16.0.25 Workspace: Workspace: Workspace		-0	ECM				4				Architecture: Connectivity:	x86
IBRM Open Service Report Authorization Level: OTX: 16.1.17 OTX: 16.10.0 BUDS2: 16.10.0 EDB: 16.0.25 Workspace:			IBR					Close BUDS21	ile		Dealer Number: First Name:	
OTX: 16.10.0 BUDS2: 16.10.0 EDB: 16.0.25 Workspace:			IBRM	1				Open Service F	Report		Authorization Level	16.1.17
BUDS2: 16.10.0 EDB: 16.0.25 Workspace: 16.0.25					_						OTX:	16.10.0
EDB: 16.0.25 Workspace:											BUDS2:	16.10.0
Workspace:											EDB:	16.0.25
											Workspace:	

Figure 17: BUDS2 main page

Status bar

The status bar at the bottom of the page includes the name of the BUDS2 file and the VIN. It can also indicate the key status (ON or OFF) and the battery voltage.

LISDie CANI/2compact	VIN: NDV/50022D444	
USBIOCANV2COMpact	VIN: YDV52963D414	Key: OFF Current voltage: 12.30 V

Figure 18: Status bar

Vehicle diagnostic dashboard

The dashboard, always shown in the left part of the window, visualizes an overview of the connected VCI, the vehicle and its modules. An element like VCI, vehicle or module can be selected by clicking on it. As a result, BUDS2 will show information about the selected element. If a module is selected, information of this module is shown (if available). If a VCI or a vehicle is selected, information about the vehicle or all contained modules is shown.

>	VCI 100013249]
	N SEA-DOO	'ehicle GTX LTD MY 16/0
_	- <u>\</u>	Cluster
		ECM
	- ○▲ 🗸	IBR
		IBRM

Figure 19: Vehicle diagnostic dashboard

Each module shows different status icons:



Toolbar

In the toolbar, shown on the top of the window, you can select the task you want to perform next.



Figure 20: Toolbar

Scan

To scan a vehicle connected via the VCI, select 'Scan' in the toolbar. A progress dialog shows you the progress of the scanning process. Pressing 'Cancel' in the progress dialog will stop the scanning process and clear all data which has already been read. The scanning is not interruptible at any time and, thus, cancellation may not respond immediately.



Figure 21: Progress of a vehicle scan

Preferences

- o Disclaimer: the disclaimer can be (de)activated
- o Language: allows to select BUDS2 user interface language
- License: displays your license information
- o Measurements: The measurement rate can be adjusted
- o Units: Metric or Imperial unit system can be selected
- o Updates: allow to change the frequency of the updates

Preferences		_		23
Disclaimer Languages	Updates			
License Measurements Units Updates	Updates checks frequency At BUDS2 startup Once per day At every application start			
	ОК		Cance	

Figure 22: Preferences

About BUDS2

Information on BUDS2, such as version number, can be seen. Clicking on Open Manual will open this manual.



Figure 23: About BUDS2

General functions

Search function

Above every table, there is a text field which can be used to search through the table entries.

Element	Minimum	Maximum	Unit
Battery Voltage	25.50	0.00	V

Figure 24: Search function

Table sorting

By clicking on the column name, the sorting of the table columns can be changed from default sorting to alphanumerical sorting either descending or ascending. The default sorting is based on the order of occurrence.

Element	Minimum	Maximum	Unit	Element	Minimum	Maximum	Unit	Element	Minimum	Maximum	Unit
Intake Temperature	143.25	-48.00	°C	Battery Voltage	25.50	0.00	V	Intake Temperature	143.25	-48.00	°C
Battery Voltage	25.50	0.00	V	Engine Temperature	143.25	-48.00	°C	Intake Air Pressure	2550	0	hPa
Engine Temperature	143.25	-48.00	°C	Exhaust Temperature	143.25	-48.00	°C	Exhaust Temperature	143.25	-48.00	°C
Intake Air Pressure	2550	0	hPa	Intake Air Pressure	2550	0	hPa	Engine Temperature	143.25	-48.00	°C
Exhaust Temperature	143.25	-48.00	°C	Intake Temperature	143.25	-48.00	°C	Battery Voltage	25.50	0.00	V

Figure 25: Table sorting (default, descendant, and ascendant)

Column and window sizes

The size of columns and windows can be changed by clicking on the column separator, or window border respectively, and dragging it to the preferred size.

Scroll bars

If needed, scroll bars are shown either in the window or inside tables. Select and drag the knob of the scroll bar to change the view port.

Summary Page

All information on the vehicle connected can be seen in the *Summary Page*. The vehicle information is divided into three categories on the right, *Summary, Health* and *Statistics*.

Summary

By selecting the VCI or the vehicle in the dashboard on the left, general information on the vehicle is shown on the right side. *'Vehicle model'* as well as the *'Customer'* settings can be changed, by changing the value in the text field. The value is written whenever the focus is moved away from the text field.

Identification				
VIN:	1A2B3C4D56789AB12			
Engine serial number	M9876543			
Vehicle model:	1234			
Purchase / Run Time				
Customer:	BRP			
Delivery Date:	2000/04/22			
Engine total hours: (000h00			
Last Service				
Maintenance Hours:	0050h00			
Maintenance Counte	r. 1			
Last Service done by:	08094			
Last Service Date:	2015/06/26			
	00101.00			

Figure 26: Summary Page

By clicking on 'Reset Service', the maintenance can be reset if a reset is supported by the vehicle.

Last Service	
Maintenance Hours:	0050h00
Maintenance Counter:	1
Last Service done by:	08094
Last Service Date:	2015/06/26
Last Service Hours:	0012h02
	Reset Service

Figure 27: Reset of last service

The view on the right changes if a specific module, for example ECM (Engine Control Module), is selected. Information on the selected module can then be seen in the *Summary* tab.

Health

On the top, the *Health* tab shows a legend for the icons in the dashboard. Below, general problems on the vehicle are reported. The view is set up dynamically and shows which faults appear in which module. A description can be seen for every problem.

ning ECM ning IS ning IBR ning CCK ning IBRM ning ECM	Optional or recommended flash file Optional or recommended flash file Optional or recommended flash file Optional or recommended flash file Optional or recommended flash file Module is in boot mode and application is valid / Faults codes or firmware updates have been found	
ning IS ning IBR ning CCK ning IBRM ning ECM	Optional or recommended flash file Optional or recommended flash file Optional or recommended flash file Optional or recommended flash file Module is in boot mode and application is valid / Faults codes or firmware updates have been found	
ning IBR ning CCK ning IBRM ning ECM	Optional or recommended flash file Optional or recommended flash file Optional or recommended flash file Module is in boot mode and application is valid / Faults codes or firmware updates have been found	
ning CCK IBRM ECM	Optional or recommended flash file Optional or recommended flash file Module is in boot mode and application is valid / Faults codes or firmware updates have been found	
ning IBRM ning ECM	Optional or recommended flash file Module is in boot mode and application is valid / Faults codes or firmware updates have been found	
ning ECM	Module is in boot mode and application is valid / Faults codes or firmware updates have been found	
ning IS	Module is in boot mode and application is valid / Faults codes or firmware updates have been found	
ning IBR	Module is in boot mode and application is valid / Faults codes or firmware updates have been found	
ming CCK	Module is in boot mode and application is valid / Faults codes or firmware updates have been found	
ning IBRM	Module is in boot mode and application is valid / Faults codes or firmware updates have been found	
ning IS	At least one occurred fault code	
r ECM	At least one active fault code	
r IBR	At least one active fault code	
1	ning CCK ning IBRM ring IS r ECM IBR	ining CCK Module is in boot mode and application is valid / Faults codes or firmware updates have been found ining IBRM Module is in boot mode and application is valid / Faults codes or firmware updates have been found ining IS At least one occurred fault code r ECM At least one active fault code r IBR At least one active fault code

Figure 28: Health Page

Statistics

Statistics is divided into Last instants, Min/Max, Run Time, RPM Profile, and Speed Profile tabs.

Last instants

Measurements of last 120 seconds are saved. The table at the bottom of the page shows a table with all these measurements. By selecting any of the options such as Engine Speed (rpm), Engine Temperature (°C), Intake Manifold Pressure (mbar), Present Torque ("Miist") (%), Throttle Accelerator Sensor (%), Throttle Position (%) in the top of the page, the corresponding information is shown and displayed graphically.



Throttle Accelerator Sensor (%)





Throttle Position (%)

Q				小	R.
Time stamp	Engine Speed(rpm)	Engine Temperature(°C)	Intake Manifold Pressure(mbar)	Present Torque ("Miist") (%)	
-1	0	-60	0	0.0	Ξ
-2	0	-60	0	0.0	_
-3	0	-60	0	0.0	
-4	0	-60	0	0.0	
-5	0	-60	0	0.0	
-6	0	-60	0	0.0	
-7	0	-60	0	0.0	
-8	0	-60	0	0.0	
-9	0	-60	0	0.0	
-10	0	-60	0	0.0	
-11	0	-60	0	0.0	Ŧ
•		III		+	

Figure 29: Last Instants Page

By selecting the refresh or clear button on the top right of the *Last Instants* tab, values are reloaded from the vehicle, or cleared, respectively.

Min/Max

The module saves the minimum and maximum value of the following elements: Battery Voltage, Engine Temperature, Exhaust Temperature, Intake Air Pressure, Intake Temperature).

	🗏 Summary 🏵 Health 槌 Statistics 🖹 CDID 💻 VCI Summary								
Last Instants Min/Max RPM Profile Run Time Speed Profile									
	Q								
	Element	Minimum	Maximum	Unit					
	Battery Voltage	11.20	14.90	V					
	Engine Speed	0	8320	rpm					
	Engine Temperature	0.00	102.00	°C					
	Exhaust Temperature	-48.00	-48.00	°C					
	Intake Air Pressure	160	990	hPa					
	Intake Temperature	3.00	44.25	°C					

Figure 30: Min/Max Page

By selecting the refresh or clear button on the top right of the *Min/Max* tab, values are reloaded from the vehicle, or cleared, respectively.

Run Time

The different keys of the vehicle are listed, learning key, limp home, normal key and rental key. Information on how long the vehicle was run with the respective key is shown.



Figure 31: Run Time Page

By selecting the clear button on the top right of the *Run Time* tab, the values are cleared in the vehicle.

RPM Profile

Indication how long the vehicle was run in which RPM range (revolutions per minute).



Figure 32: RPM Profile Page

By selecting the clear button on the top right of the RPM Profile tab, the values are cleared in the vehicle.

Speed Profile

This tab shows how long the vehicle has been operating in various speed ranges.



Figure 33: Speed profile page

Keys Page

To program keys into the vehicle or read the currently programmed keys, open the Keys Page.

Generic Sett	ings		
Add Keys		Erase All Keys Anti-Th	neft System
Key Type:	Normal - Add	Erase All Keys	vated 💌
Current Inse	rted Key		
ndex	Туре	Key ID	Read
1 Key Usage	NORMAL	01446CAE140000CC	Erase K
1 Key Usage	NORMAL	01446CAE140000CC	Erase K
1 Key Usage Index	NORMAL Type Normal	01446CAE140000CC	
1 Key Usage Index 1 2	NORMAL Type Normal Learning	01446CAE140000CC	
1 Key Usage Index 1 2 3	NORMAL Type Normal Learning Not Programmed	01446CAE140000CC	
1 Key Usage Index 1 2 3 4	NORMAL Type Normal Learning Not Programmed	01446CAE140000CC	
1 Key Usage Index 1 2 3 4 5	NORMAL Type Normal Learning Not Programmed Not Programmed	01446CAE140000CC	Erase K

Figure 34: Keys Page

Programming a new key:

- 1. Press on 'Read' to read the currently connected key
- 2. Select the key type, e.g. normal or rental
- 3. By clicking on 'Add', the currently connected key will be registered with the selected key type
- 4. The new key will be shown in the table 'Key Usage' which shows all programmed keys

To change the key type of an already programmed key, double-click on a key in the table or press the green *'Play'* button after selecting a key in the table.

Selecting 'Erase Key' will remove the currently connected key.

By clicking on 'Erase All Keys', all key settings are reset.

The keys are only programmed when the Anti-Theft System is enabled.

Faults Page

All faults are listed and described (Module, State, Code, Description) on the top right.

Active/Occurred

Active: Active faults

Occurred: Faults occurred but are no longer active

By selecting the refresh or clear button on the top right of the *Active/Occurred* tab, the faults are reloaded from the vehicle, or cleared, respectively.

2					\$				
Module	State	Code	Description						
CM	Active	P0107	Manifold absolute pressure sensor shorted to ground or ne	ot connected.					
CM	Active	P0118	Engine coolant temperature sensor fault - Short circuit to						
ECM Active P0122 TAS (Throttle Accelerator sensor) 1 fault (short circuit to GND)									
СМ	Active P0222 TAS (Throttle Accelerator sensor) 2 fault (short circuit to GND)								
СМ	M Active P0546 Exhaust gas temperature sensor open circuit or shorted to battery								
СМ	Active	P1619	Throttle Actuator - Adaptation of upper mechanical limit f	failed					
CM	Active	P1621	Throttle Actuator - Abortion of adaptation						
CM	Active	P212C	Electrical lower-range violation TPS 2						
СМ	Active	P2620	TPS value not plausible						
CM .	Activo	D2621	Electrical lower cance violation TDC1						
ore Deta	ils								
nvironm	ental Dat	a Possih	e Causes Service Actions						
	cincar b ac								
Q									
Q Parame	ter Name	2	Value	Unit					
Q Parame Exha	ter Name	e ant Temp	Value erature -35	Unit °C					
Parame Exha Faul	ter Name aust Cool It Frequer	ant Temp 1cy Coun	erature -35 er 01	Unit °C					
Parame Exha Faul Thro	ter Name aust Cool It Frequer ottle Posit	ant Temp 1cy Coun tion	Value erature -35 er 01 19.60784339904785	Unit °C %					
Parame Exha Faul Thro Reco	ter Name aust Cool It Frequer ottle Posit	ant Temp ncy Coun tion is Metho	Value erature -35 er 01 19.60784339904785 Identifier 129	Unit °C %					
Parame Exha Faul Thro Reco Engi	ter Name aust Cool It Frequer ottle Posit ord Acces ine Speed	ant Temp ncy Coun tion is Methor	Value erature -35 er 01 19,60784339904785 129 Identifier 129 0.0 0.0	Unit °C %					
Parame Exha Faul Thro Reco Engi Vehi	ter Name aust Cool It Frequer ottle Posit ord Acces ine Speed icle Hour	ant Temp ncy Coun tion ss Methor I Counter	Value erature -35 er 01 19.60784339904785 Identifier 129 0.0 300	Unit °C % rpm MIN					

Figure 35: Active/Occurred Faults Page

Inactive

The Inactive Faults tab shows all inactive faults, i.e. faults that did not occur.

In the bottom section of the page more details on the faults are given.

Environmental Data

The status of the vehicle when the fault occurred is shown (i. e. speed, ignition angle, ...).

Environmental Data Possible Cause	es Service Actions		
Q			
Parameter Name	Value	Unit	
Ignition Angle	0.0	۰	
Module State			
Exhaust Coolant Temperature	12	°C	E
Intake Air Pressure	0	mbar	
Module Fault Code	0		
Vehicle Hour Counter	180040	MIN	
Engine Temperature	-46	°C	
Vehicle Speed	0	km/h	
Engine Speed	0.0	rpm	
Module State 2			
Time After Engine Start	0	MIN	-

Figure 36: Environmental Data

Possible Causes

The reasons which may have causes the fault are mentioned in the Possible Causes tab.

Service Actions

Information on how to solve the issues is given in the Service Actions tab.

Measurements Page

The Measurements Page contains the Presets and Custom tabs.

Presets

In the *Presets* tab, there are graphs of the basic elements and a list of predefined measures.

Cluster -	Basic	DPS - Basic	ECM - E	Basic EC	M - Fuel Trim	TCM Advanced	TCM - Basic	VCM - Basic	
Show bas	ic measu	rements of Clus	ter						
Number (Of Bars C	On LCD				Filtered Engine Temperature From CA	N		
9 8 7 6 5 5 4 3 2 1 1 0 0	ter	ABS Pilc	ngine Spee pm) 2000 2000 2000 2000 2000 2000 2000 20	ed (RPM)	000 H 9000 - 11000 - 11000 - 000 H		110 80 60 20 -20 20	HIHI	
Q									
Nam	е	*		Value	Unit				*
ABS	Pilot	Lamp		Of					=
		mnoratur	-	22	°C				-

Figure 37: Presets

Custom

For a custom visualization of measurements, select the Custom tab. It offers 3 different graph types:

- Line graph visualizes one or more numeric measurement values
- Gauge graph visualizes one numeric measurement value
- Switch graph visualizes one Boolean value (On/Off or Enabled/Disabled)

In the left view, the measurement values are listed. If they are selected in the table, the according value is updated. To show a graph in the line graph, gauge graph or switch graph, select the respective graph type in the graph column. Once the graph type is selected, the graph is displayed in the right view.

	& Custom				Line Graph 23			Exhaust Water Temperature 23
Data Re	cord				🕡 📗 🥯 🎸 🖑 🗟 🔍 ସ	. 💥 📃 🛢 🛢		45 50 55 ST 100
					100			40 60
વ					95			35 65
M	Name	Value	Unit	Graph	90			30 70
ECM	Engine Temperature	-45.75	*C	please select	85			
ECM	Exhaust Water Temperature	90.00	°C	Gauge Graph				
ECM	Intake Temperature	-45.75	*C	please select	80 -			S 20 80 -
CM	Battery Voltage	11.80	V	Line Graph	75			
CM	Engine Speed	0.00	rpm	please select				-15 85-
CM	Idle Reference Speed	2500.00	rpm	please select	~			
CM	Intake Air Pressure	1.17	hPa	please select	65			210 90 -
ECM	Ambient Pressure	1010	hPa	Gauge Graph	60			
CM	TAS (Throttle Accelerator Sensor)	1.50	%DK	please select				5 95
CM	Throttle Opening	50.15	%DK	please select	30 -			100
					> 50			
					15			90 °C
					~			
					40 -			
					35			
					30			
					25			Ambient Pressure 💠
					20			
								150 500 550 TO
					15			400 600
					10			650
								700
								A 300
								750
					17:26:26.596 17:27:00.000 17:	27:40.000 17:28:20.000	17:29:00.000 17:29:26.596	
						Time-LIVE		÷m / ***
					Setup			850-
					Source Measurement	Y-Axis	X-Axis	Ē150
					a 🗹 Live			€_100 S
					Battery Voltage	v	 Time-LIVE 	950 -
								5.50
								1020.1
								1010 hPa

Figure 38: Custom Measurements

The line graph can be controlled by the following buttons in the toolbar.



start the graph drawing (visualizes and keeps samples)

pause the graph drawing (pauses sampling). After pausing the visualization and sampling can be restarted by pressing the start button



stop the graph drawing (clears all samples)



clear the samples on the graph



move the graphic to the preferred view port



define an area with the pointer which will be the new view port





0

reset the zoom to the original settings

open the settings dialog which lets the user change the graph style like color, line width, etc. (see below)



reset the cursor



import previously stored samples

Flash Page

Flash

If you want to flash a module with a new firmware, open the *Flash* tab. The *Flash Page* shows a table including all valid firmware files for the module currently selected in the dashboard. To flash a firmware file on a module, select one of the flash files in the table and double-click it or press the *'Play'* button on the right next to the search line.

Q		
State	Name	Description
Optional	7A1128RA8FOS4	ME17 SW28 File for Series ECM (MY15 ACE 900)
Optional	7A1128EA8FOM4	ME17 SW28 File for tests ECU

Figure 39: Flash Page

Fingerprint

The fingerprint for the selected module is shown in the *Fingerprint* tab, i. e. time when and by whom the software was last flashed.

🚪 Flash Fingerprint		
Q		
Name	Value	
ССК		
⊿ ECM		
Boot Fingerprint		
Day	27	E
FlashToolID	150527	
Month	5	
Year	2015	
Code Fingerprint		
Day	21	
FlashTooIID	150521	
Month	5	
Year	2015	
Data Fingerprint		
Day	21	
FlashTooIID	150521	
Month	5	
Vear	2015	-

Figure 40: Fingerprint Page

Functions Page

The Functions page contains the Functions and activators tab.

Functions

The *Functions* tab contains the information on input and output commands with routines. To activate a command or a routine, double-click on it in the list or click on the green 'Reading' button.

Q	
Name	
O Controls - Activate Fuel Injectors	
IO Controls - Activate Fuel Pump	
IO Controls - Activate Ignition Coils	
IO Controls - Shutdown an Injection Valve	

Figure 41: command input/output routines

Activators

This tab allows to test (activate and stop) several electric components



Figure 42: Activators tab

Settings Page

The Settings tab contains sensor or actuator initializations, configurations, and options available for the currently selected module. The current status of the initialization is in the second column. To perform an initialization, double-click on it in the list or click on the green 'Play' button

Settings	
Q	
Name	State
Configuration - Change Cluster Units	Metric
Configuration - Change Torque Sensor Offset	518
Configuration - Cluster Pointer Position Adjustment	N/A
Configuration - Enable Roller Bench Mode	N/A
Initialization - ECM First Initialization	N/A
Initialization - HCM Initialization	N/A
Initialization - Learn Engagement Point	N/A
Initialization - Reset Engagement Point	N/A
Initialization - Reset Gear Position Sensor	N/A
Initialization - Reset Longitudinal Offset	0.08
Initialization - Reset Steering Angle	-8.00
Initialization - Reset Suspension Position Sensor	N/A
Initialization - Reset TPS	True
Option - With Air Suspension	N/A

Figure 43: Settings Page

File Management Page

File



Figure 44: File Management Page / File tab

Open a BUDS2 file

Used to open a BUDS2 file that has been saved previously.

Save a BUDS2 file

All values read from the currently connected vehicle are saved to a file.

Open Service Report

A service report, i.e. a summary of all data, is opened. The report can either be printed or exported as PDF file.



Figure 45: Service Reports

Log Book

This functionality gives the opportunity to generate a logbook. This may be requested by BRP when contacting technical support.



Logs	Generate a logbook
Period ● Last week ● Last Day ● Last Hour 	

Figure 46: Logbook tab