

ABRITES DIAGNOSTICS FOR OPEL/VAUXHALL

Buick/Cadillac/Chevrolet/GMC





www.abrites.com

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.

All software and hardware products by Abrites Ltd. are copyrighted. Permission is granted to copy Abrites software files for your own back-up purposes only. Should you wish to copy this manual or parts of it, you are granted permission only in case it is used with Abrites products, has "Abrites Ltd." written on all copies, and is used for actions that comply to respective local law and regulations.

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.

Copyright information

Copyright:

- All material herein is Copyrighted ©2005-2021 Abrites, Ltd.
- Abrites software, hardware, and firmware are also copyrighted
- Users are given permission to copy any part of this manual provided that the copy is used with Abrites products and the "Copyright (c) Abrites, Ltd." statement remains on all copies
- Abrites" as used in this manual synonymous with "Abrites, Ltd." And all it's affiliates
- The "Abrites" logo is a registered trademark of Abrites, Ltd.

Notices:

- The information contained in this document is subject to change without prior notice. Abrites shall not be held liable for technical/editorial errors, or omissions herein.
- 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.

In case any technical difficulties occur, please contact the **Abrites Support Team by email at <u>support@abrites.com</u>.**

Table of contents

1. Introduction	6
2. Using the Abrites diagnostics for Opel/ Vauxhall	7
2.1 Module Identification	9
2.2 Read and Clear Diagnostic Trouble Codes (DTCs)	10
2.3 Live Data Display	11
2.4 Engine Oil Change Reset	12
2.5 Security access and ID change	13
3. Special Functions	14
3.1 Read Security Code (PIN Code reading and key management)	15
3.2 Key Learning	16
3.2.1 Legacy Mode	18
3.2.1.1. Mechanical key number	19
3.2.2 Programming keys for Vivaro and Movano	. 20
3.3 CAN Calibration (Odometer Correction)	21
3.4 Reading and updating Configuration Data	. 22
3.5 ECU Flasher	. 22
3.6 Radio Code	. 23
3.7 Airbag.	. 23
3.8 Dump tool	. 24
4. Appendix	26

List of revisions

Date	Chapter	Description	Revision
02.10.2015	all	Total revision	2.0
26.03.2020	all	Total revision	3.0

1. Introduction

Abrites Diagnostics for Opel/Vauxhall" is a Windows PC based diagnostic software for Opel and Vauxhall vehicles. With the help of this software you can perform complete diagnostic operations of all vehicles. For proper operation of your diagnostic software you will need a corresponding interface for connection between your PC and vehicle named "AVDI". AVDI is an interface produced by Abrites Ltd. intended to act as an interface between the PC and the electronic control units. AVDI should be used with ABRITES software produced by Abrites Ltd. ABRITES is a trade mark of Abrites Ltd.

2. Using the Abrites diagnostics for Opel/Vauxhall

The Abrites diagnostics for Opel Vauxhall is installed together with the rest of the Abrites diagnostic software applications as a part of the Abrites diagnostic suite provided to the user via e-mail. The user can start the software by clicking on the appropriate icon from the Abrites "Quick start" menu. Once the application is started the main software screen will open:

AB	BRITES Diagnostics for OPEL/Vauxhall 7.5	Days untill HW synchronization: 2	2 – 🗆 X
#	Opel/Vauxhall	Protocol VIN	^
11	Engine Control Module	CAN	
11	Engine Control Module	KWP	Previous
18	Transmission Control Module	CAN	
18	Transmission Control Module	CAN	
18	AF 13-II/17/20/22	KWP	Ģ
18	AR 25/35	KWP	Open
19	SLM (Shift Lever Module)	CAN	
1A	Rear Differential Clutch Control Mo	dule CAN	
20	ABS-2E	KWP	Next
21	ABS-5.3	KWP	
21	ABS 415	KWP	
26	Engine Cooling Module	KWP	
26	Body Control Module	KWP	
26	Body Control Module	CAN	Options
<			× 🗖
-	Vehicle Selection Special Functions	Scan for Units 🧽 Clear a	II DTCs

This is the main screen of the software and it shows all the navigation buttons as well as the ones for vehicle selection, scanning and general diagnostic trouble code (DTC) clearing. Once the Diagnostics is connected to the vehicle and the scanning of the available modules is performed the existing modules for the particular car will be displayed. From the drop down menu you can manually choose the brand and model of the vehicle you are working with.

A	BRITES Diagnostics for OPEL/Vauxhall 7.5		www.abrites.c —	
ŧ	Opel/Vauxhall	Protocol	VIN	^
11	Engine Control Module	CAN		
11	Engine Control Module	KWP		Previou
18	Transmission Control Module	CAN		
18	Transmission Control Module	CAN		
18	AF 13-II/17/20/22	KWP		Ģ
18	AR 25/35	KWP		Open
.9	SLM (Shift Lever Module)	CAN		
LA	Rear Differential Clutch Control Module	CAN		
20	ABS-2E	KWP		Next
21	ABS-5.3	KWP		~
C.			>	
2	Vehicle Selection			-
Cu	rrent context			(A
M	ake Opel/Vauxhall 🔻	Scan for Units Clear all DTC	s Filter	Options
M	odel < All Units > 🔻			
				Exit

This screen will display all the modules that are installed in the vehicle, as well as the protocols they use for communication, their VIN numbers and the number of diagnostic trouble codes (DTC) in each electronic module. The options here will allow you to clear all the diagnostic codes automatically for all units.

2.1 Module Identification

Once a single module is selected (using a double click from the diagnostic menu) the menu for this specific module is displayed:

ardware Key Nu	mber:	PCI5STN#56			
ystem <mark>Identif</mark> i	cation:	DELPH0100			
Programming Date:		25/2/2013			
CU Diagnostic	Address:	11			
electror	nic control unit	identification	-		
IN:		W0LJC7EL9!			
art Number:		55591709			
dentifier:		2806			
oftware Versic	on Number:	55591708			
ardware Key Nu	ardware Key Number:				
System Identification:					
ystem Identifi	cation:	DELPH0100			
ystem Identifi rog <mark>ramming D</mark> at	.cation: :e:	DELPH0100 25/2/2013			
ystem Identifi rogramming Dat CU Diagnostic	cation: :e: Address:	DELPH0100 25/2/2013 11			
ystem Identifi rogramming Dat CU Diagnostic	.cation: :e: Address:	DELPH0100 25/2/2013 11			
ystem Identifi rogramming Dat CU Diagnostic	.cation: .e: Address:	DELPH0100 25/2/2013 11			
ystem Identifi rogramming Dat CU Diagnostic	.cation: .e: Address:	DELPH0100 25/2/2013 11	1		F
ystem Identifi rogramming Dat CU Diagnostic Identification	.cation: se: Address: Data Display	DELPH0100 25/2/2013 11 Change ID	Reset Security Code	Clutch Pedal Position Learn	Clear log
ystem Identifi rogramming Dat CU Diagnostic Identification Read DTCs	cation: te: Address: Data Display Custom Request	DELPH0100 25/2/2013 11 Change ID Security Access	Reset Security Code	Clutch Pedal Position Learn	Clear log Write log

The first option from the list of buttons is the identification option. This displays all the relevant data connected to the electronic module including: VIN, part number, ID, software version, date of programming, electronic unit manufacturer and other options.

2.2 Read and Clear Diagnostic Trouble Codes (DTCs)

When selecting the Read DTC button the diagnostic trouble codes from the selected electronic control module are displayed in a list in order to be viewed and analyzed.

ody Contro	ol Module				×
	Symptom I Status: H	Description: Malf	unction		ŕ
U1534:	LIN Bus 3 Symptom I Status: H	Lost Communicat. Description: Malf	ion with Device 4 unction		
U1538:	LIN Bus 3 Symptom I Status: H	Lost Communicat. Description: Malf	ion with Device 8 unction		
u1540:	LIN Bus 4 Symptom I Status: H	Lost Communicat. Description: Malf Present	ion with Device (unction		
U1544:	LIN Bus 4 Symptom I	Lost Communicat. Description: Malf	ion with Device 4 unction		
=== Total:	17 DTCs f	found			Ξ
•					*
Iden	tification	Data Display	Change ID	Reset Security Code	Clear log
Rea	ad DTCs	Custom Request	Security Access	Program Security Code	Write log
Clea	ar DTCs	Custom Query	Enter Security Code		X

The software shows the trouble codes, their descriptions and their occurrence. Given these details, an analysis of the trouble codes can be made in order to determine the source of the issue.

When this analysis is perormed the diagnostic trouble codes can be cleared.

11538 · LTN Bus	3 Lost Communicat	ion with Device 8			
Sympton	Description: Malf	unction	1		
Status:	Present				
J1540: LIN Bus	4 Lost Communicat	ion with Device ()		
Symptom	Description: Malf	unction			
Status:	Present				
1544: LIN Bus	4 Lost Communicat	ion with Device 4	ł		
Symptom	Description: Malf	unction			
Status:	Present				
otal: 17 DTCs	found				
clear di	agnostic trouble	codes			(
clear di	agnostic trouble.	codes			ſ
clear di DTCs cleared	agnostic trouble	codes			ð
clear di MTCs cleared	agnostic trouble.	codes			
clear di DTCs cleared	agnostic trouble	codes			
clear di MTCs cleared	agnostic trouble	codes			4
clear di	agnostic trouble	codes		1	•
clear di TCs cleared	agnostic trouble	codes Change ID	Reset Security Code		Clear log
clear di YTCs cleared	agnostic trouble	codes Change ID	Reset Security Code		Clear log
clear di MTCs cleared	agnostic trouble	Codes	Reset Security Code		Clear log
clear di VTCs cleared Identification Read DTCs	agnostic trouble	codes Change ID Security Access	Reset Security Code		Clear log Write log
clear di VTCs cleared Identification Read DTCs	agnostic trouble	Code s Change ID Security Access	Reset Security Code		Elear log
clear di DTCs cleared Identification Read DTCs	agnostic trouble	Change ID Security Access	Reset Security Code Program Security Code		Clear log Write log
clear di DTCs cleared dentification Read DTCs	agnostic trouble Data Display Custom Request	Codes Change ID Security Access	Reset Security Code Program Security Code		Clear log Write log

When selecting the "Clear DTCs" button you will be able to clear the diagnostic codes immediately. If a DTC is not cleared upon second reading after clearing – the issue should be revised and repaired if needed.

2.3 Live Data Display

Displaying live data from the electronic control modules in real time offers much needed assistance when analyzing the cause of an issue. It helps to determine co-relations between events for example if the there is a delay between pressing the accelerator pedal and the climbing of the RPM of the engine.

Juomalic Transmission Data		_
agnostic Data Display Line Graph		
Parameter Name	Value	
Brake Pedal Fully Released Position Learned	No	
Brake Pedal Position Sensor Learned Released Position	1.65 V	
Brake Pedal Position Sensor	0 %	
Brake Pedal Position Sensor	0.00 V	
System Voltage	12.7 V	
Engine Controls Ignition Relay Feedback Signal	12.6 V	
/ehicle Speed	255 km/h	
Park/Neutral Position Switch	In Gear	

All the data is displayed in a table. The information provided by this function can be irreplaceable for determining the cause of a fault. Additional options for the data display are also available. There is an option to test and view many details.

ata Display
Last Engine Start Data
Cruise Control, PTO and Traction Control Data
EGR Data
Electrical and Immobilizer Data
Engine Speed Control Data
Exhaust Aftertreatment Data
Fuel System Data
Glow Plug Data
HO2S Data
Induction Data
Instrument Cluster Data
Manual Transmission Data
Engine Overspeed Data
Stop/Start System Data
Engine Start Inhibit Data
Engine Stop Inhibit Data
Close

The option to activate and deactivate features is also available.

2.4 Engine Oil Change Reset

Once a workshop performs a maintenance on a vehicle, a part of which an oil change may be they need to be able to "tell" the vehicle's electronic modules that the maintenance has been performed. Once the Engine oil reset button is pressed the software will reset the vehicle's counter thus telling the vehicle that it's oil has been changed.



ngine Control Module					×
Identifier: Software Version Hardware Key Num System Identific Programming Date ECU Diagnostic A	2 Number: 5 ber: F ation: I : 2 ddress: 1	2B06 5591708 CI5STN#56 DELPH0100 55/2/2013 1			
security Operation failed engine oi Operation comple	access - Security acce l life reset ted successfully	ess is already unl	.ocked		Ē
Identification	Data Display	Change ID	Reset Security Code	Clutch Pedal Position Learn	Clear log
Read DTCs	Custom Request	Security Access	Program Security Code		Write log
Clear DTCs	Custom Query	Enter Security Code	Engine Oil Life Reset		Close

The "Clutch pedel position learn" button allows the clutch position to be learned by on board diagnostics (OBD):



2.5 Security access and ID change

Every time a second hand module is adapted to a vehicle in order to adapt this unit you will need to use the security code of the vehicle and the module in order to replace it. Once this module is replaced you will also need to change the ID of the module in order to match the vehicle thus ensuring it's correct operation:

					~
electron	ic control unit	identification	-		^
VIN: Part Number: Identifier:		W0LJC7EL9DB128561 55591709 2B06			
Software Versio Hardware Key Nu System Identifi	n Number: mber: cation:	55591708 PCI5STN#56 DELPH0100			
Programming Dat ECU Diagnostic	e: Address:	25/2/2013 11			
security Operation faile	access d - Security acc	ess is already un	locked		
4					E •
4 Identification	Data Display	Change ID	Reset Security Code	Clutch Pedal Position Learn	Clear log
 Identification Read DTCs 	Data Display Custom Request	Change ID Security Access	Reset Security Code Program Security Code	Clutch Pedal Position Learn	Clear log Write log



×
hicle Identification Number
YYYYYYYYYY
X
Cancel

3. Special Functions

Special functions are designed to assist when performing advanced diagnostics on vehicles from the Opel and Vauxhall brands. These special functions include Engine control unit flash management, Pin code reading and key management and advanced module configuration of electronic modules. These functions are separated in the Special Functions list. The list is located at the bottom of the main screen. You can run a special function by double clicking on it or by selecting it and clicking on the button Open on the right of the list.

		[Anne and a second sec	Lasson		
	Opel/Vauxhall	Protocol	VIN	- î	
1	Engine Control Module	CAN			
1	Engine Control Module	KWP		P	Previou
8	Transmission Control Module	CAN			
8	Transmission Control Module	CAN		Г	_
8	AF 13-II/17/20/22	KWP			Ģ
8	AR 25/35	KWP			Open
9	SLM (Shift Lever Module)	CAN			
A	Rear Differential Clutch Control Module	CAN			1
0	ABS-2E	KWP			Next
1	ABS-5.3	KWP		~	
			>		
9	Vehide Selection 👫 Special Functions				
	🔒 🖹 🥋 🧼 🖾 📼	2	6		(P
lea	ad Security Key Learning Calibration Read/Update ECU Flasher Radio Code ConfData	Airbag	Open		Option
	and the second se				0
D	ump Tool				Exit

Special functions are opened from the appropriate tab of the main diagnostic screen of the Abrites diagnostics for Opel/Vauxhall. Each of the icons in this window represent a special function.

3.1 Read Security Code (PIN Code reading and key management)

This special function works for Opel and Vauxhall vehicles, as well as the following brands: Buick, Cadillac, Chevrolet, GMC. Security code is required for any immobiliser-related operation. In general, it can be found in the Car Pass or can be obtained from your local dealer. Read Security Code function is an instrument for extracting the security code from the car and thereby, eliminate the need from contacting the dealer.

In order to perform key learning for Opel and Vauxhall vehicle the Security Code (PIN code) isneeded. In order to learn keys the first step is to read the Security Code.

Once the function is selected the model should be selected and you need to press "Read". The complete list of supported vehicles can be seen in the software menu, in the Abrites website and webstore, under the dedicated license.

Make	Opel/Vauxhal	•
Model	Mokka	•
Unit	< AUTO DETECT >	•
	Automatically recognize pin code from the vehicle	
_	Security Code	
J		

d Security Code	W.H. PLUTANI	Reed Security Code	100 H	
Make	Opel/Vauxhall	Make	Ope//Vauxhall	•
Model	Matta	Mudel	Mokka	-
Reading sec	urity code, please wait	Unit	< AUTO DETECT >	•
			Automotically recognize pin code from the vehicle Security Code	
48 %	Cancel	Г	8570	
	↓ ×		Repd	Close

To read the security code you have to select the brand, vehicle model, and the electronic control unit from which the security code should be extracted. The list of the units depends on the brand and vehicle model and is updated whit every new software version. Next you have to click on the read button and to wait until the reading process is complete.

When the security code is extracted it will be shown in the box with a label "Security Code."

3.2 Key Learning

After the code is read you can open the key learning screen you will have the PIN in the field:

Key Learning is an instrument for programming transponder keys to immobiliser. The complete list of su ported vehicles can be seen on the picture below and in the Abrites website and webstore, under the dedicated license.

Key Learning	Protocol VIN A	
BUICK	ADAM	
CADILLAC	AGILA	0
CHEVROLET	AGILA B	
GMC	ANTARA	
OPEL/VAUXHALL	ASTRA F	er
	ASTRA G	
	ASTRA H	
	ASTRA J	
	ASTRA K	x
	CALIBRA	
E Contraction of the second seco	CORSA B	
	CORSA C	
 	CODEA D	-
Legacy Mode	Continue Cose	
		J

Key Learning	×
Please, select function:	
Program Keys	
Add Key	
Force Ignition On	
Read PIN Code	

After the model has been chosen, you will see the options - you can program keys, add key, force ignition on, and read PIN code. Using the add key option would let you program additional keys, without erasing the already programmed keys. The software works as a guided function and provides the steps that need to be taken. The software would apply the PIN code that has already been read, and would ask for verification. At the end, the software would ask if you want to program another key, if not, the procedure is completed and key was programmed successfully.

Key Learning	×
Use this function to program additional keys without erasing the already programmed keys.	
Insert a new key into the programming slot. Keep all door closed. Leave all other keys outside vehicle.	of the
Leave ignition OFF	

Key Learning	×
Please verify 9458 is the correct PIN for this vehicle before continuing.	
⊂ Yes	
د No	

ey Learning		×
Please wat		
		_
	L3	

ey Learning	>
Programming Completed Successfully! Total Number of Learned Keys: 3	
Do you want to program another key?	
C Yes	

3.2.1 Legacy Mode

Legacy mode serves as the older version of the key learning special function, and it has all the capabilities for older vehicles.

- Using this tool you can:
- Erase all transponder keys
- Program transponder-key
- View mechanical key number
- Program mechanical key number

From this window keys can be learned to the vehicle via on board diagnostics (OBD).

	1										
Make	Opel/Va	Opel/Vauxhall									
Model	Insignia	6		Connect							
mmobiliser :	Status										
Parameter			Value								
Total Keys L	earned		2								
8	Securily C	ode 8570		•							
Erase Tran:	Securily C sponder Keys	Program Tran and Remot	sponder e Key	Mechanical Key Number							

With the button Erase Transponder-Keys you can erase all transponder keys. This function is useful, for example when a car-key is lost or it's stolen. When you erase all keys, you can reprogram only those keys which are available.

Important: Erasing transponder-keys will not erase the programmed remote controls for the car.

With the button Program Transponder and Remote Key, you can learn a transponder key to the immobiliser. With this function you can program only new keys or repr gram already programmed keys (keys which were erased but belong to the same car). Only one key can be programmed at once. If you want to program two or more keys, please repeat the procedure accordingly.

3.2.1.1. Mechanical key number

To view mechanical key number click on the button Mechanical Key Number. For Astra H, Corsa D, Vectra C/Signum and Zafira B a valid security code shall be entered first. For all other models the security code is not required.

ahicla: mobiliser S	Astra G			L G
aramet	er		Value	
ranspo rans N	nder-Key 1 /KN		Not Prog	tranmed
Trans Trans Trans	Mechanic	al Key Number:	<u>\$1471</u>	
	Program			X Qose
Transpo	ase nder-Keys	Program Tra and Remo	nsponder te Key	Mechanical Key Number

If you want to program a new mechanical key number, enter it in the edit box and click on the Program button. If the security code is required, you will see a warning message asking you to enter it first.

3.2.2 Programming keys for Vivaro and Movano

In contrast to the other Opel models, for Movano and Vivaro all transponderkeys are programmed at once. That's why when you select Movano or Vivaro the only enabled button is "Program transponder-key". When you click on the button the software will ask you how many keys you want to program. Then you should follow the instructions provided by the software when to enter the next key and when to remove it. At the end of the procedure all previously programmed keys will be deleted and only the currently programmed keys will be available.

NOTE: ABRITES software for OPEL/Vauxhall doesn't require entering a security code for key programming of Vivaro or Movano. It's automatically extracted and entered by the software.

3.3 CAN Calibration (Odometer Correction)

When replacing an electronic module within a vehicle be it a new module or a used one the calibration of this module is vital for the correct operation of this vehicle.

The first step is to connect to the vehicle, then select it and select the unit that is to be calibrated. The current value will then be displayed.

You will need to input the correct value and press the "Write" button.



The operation then completes successfully and the new value is updated.



Note: While writing the odometer of the Corsa C Instrument Panel, the trip button should be hold pressed. When the operation is completed with success, a manual reset of the instrument shall be performed, either by disconnecting a battery or by removing a fuse F3 for a few minutes.

3.4 Reading and updating Configuration Data

This function allows the reading and updating of the Configuration data from the ECUs of Opel/ Vauxhall vehicles. It allows also the saving of data locally to a PC.

Jnit	Eng	ine	Mag	gnet	i Ma	arelli	MJ	D 6	02 -	- Z1	3DT	Ή (Astr	ra H	, C	orsa	D)	-	•	Carrow
00000c00	0A	0A	1C	01	0B	04	2B	45	57	6B	00	00	00	00	1B	01	+EWk		*	Read ConfData
0000c10	0B	03	2B	45	57	00	00	00	00	00	1C	02	0B	04	1B	45	+EWE			
0000c20	57	6B	00	00	00	00	1C	02	0B	04	1B	45	57	7B	00	00	WkEW{			
00000030	00	00	1R	02	0B	0.3	1R	4.5	57	00	00	00	00	00	12	0.3				200
00000c40	05	02	6B	57	00	00	00	00	00	00	13	03	05	03	6B	7B				Undata ConfDat
0000c50	57	00	00	00	00	00	01	05	0в	01	45	00	00	00	00	00	WE			opuate combat
00000C60	00	00	02	05	0B	02	57	63	00	00	00	00	00	00	02	06	Wc			r
0000c70	0в	02	6B	4A	00	00	00	00	00	00	02	07	0B	02	7B	4A	kJ{J			
00000c80	00	00	00	00	00	00	01	05	0B	01	45	00	00	00	00	00	E			
000000090	00	00	02	05	0В	02	57	63	00	00	00	00	00	00	02	05	Wc			Load from File
00000CA0	0в	02	57	63	00	00	00	00	00	00	03	05	0B	03	57	63	WcWc			
00000СВ0	74	00	00	00	00	00	02	06	08	02	6B	4A	00	00	00	00	tkJ			
00000cc0	00	00	02	07	08	02	7B	4A	00	00	00	00	00	00	1C	01	{J			
00000CD0	0B	04	2B	47	5B	6B	00	00	00	00	1B	01	0B	03	2B	47	+G[k+G			Save to File
00000CE0	5B	00	00	00	00	00	1C	02	0B	04	1B	47	5B	6B	00	00	[G[k			bare to racin
0000CF0	00	00	1C	02	0B	04	1B	47	5B	7B	00	00	00	00	1B	02	G[{			
00000000	0B	0.3	1R	47	5B	00	00	00	00	00	12	0.3	0B	02	6B	5B	G[k[
00000010	00	00	00	00	00	00	13	03	0B	03	6B	7B	5B	00	00	00	k{[=	
00000020	00	00	01	05	0B	01	17	00	00	00	00	00	00	00	02	05	G			
00000030	09	02	5B	65	00	00	00	00	00	00	02	06	0B	02	6B	4A	[ekJ			
00000040	00	00	00	00	00	00	02	07	0B	02	7B	4A	00	00	00	00	{J			
00000D50	00	00	01	05	0B	01	47	00	00	00	00	00	00	00	02	05	G			
000000060	0B	02	5B	65	00	00	00	00	00	00	02	05	UB	02	5B	65	[e		-	1

3.5 ECU Flasher

ECU flasher allows the reading, saving locally and updating of the flash data from the ECU.

U Flash	her														Ti			a line .		1	-
Model	As	tra	н						•		Engi	ne	Z18	XER	- S	iem	ens	Simtec 75	•	·	
00000	CED	5в	00	00	00	00	00	1C	02	0B	04	1в	47	5B	6B	00	00	[G[k		*	Read Flash
00000	CFD	00	00	1C	02	0B	04	1B	47	5B	7B	00	00	00	00	1B	02	G[{			
00000	DOD	0B	03	1в	47	5B	00	00	00	00	00	12	03	0B	02	€B	5B	G[k[
00000	D10	00	00	00	00	00	00	13	03	0B	03	6B	7B	5B	00	00	00	k{[- 2
00000	D20	00	00	01	05	0B	01	47	00	00	00	00	00	00	00	02	05	G			Garde.
00000	D30	09	02	5B	65	00	00	00	00	00	00	02	06	0B	02	єв	4A	[ekJ			vvrite Hash
00000	D40	00	00	00	00	00	00	02	07	0B	02	7B	4A	00	00	00	00	{J			
00000	D50	00	00	01	05	0B	01	47	00	00	00	00	00	00	00	02	05	G			
00000	D60	0B	02	5B	65	00	00	00	00	00	00	02	05	0B	02	5B	65	[e[e			
00000	D70	00	00	00	00	00	00	03	05	0B	03	5B	63	74	00	00	00	[ct			Load from File.
00000	D80	00	00	02	06	08	02	6B	4A	00	00	00	00	00	00	FF	FF	kJ			
00000	D 90	E.F.	FF	0A	A0	05	05	FF	10	2D	11	5°E	EE.	FF	E.F.	E.F.	$\mathbb{B}[2]$	·····			
00000	DAD	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF				
00000	DB0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF				Save to File
00000	DCD	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF				save to the
00000	DDO	FF	FF	FF	FF	FF	82	OF	FF	FF	02	07	08	02	7B	4A	00	{J.			
00000	DE0	00	00	00	00	00	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF				
00000	DFO	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF				
00000	E00	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF				
00000	E10	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF		1	÷.	
00000	E20	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF				
00000	E30	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF				
00000	E40	E7	E1	72	FF	FF	FF	FF	BF	02	E7	E1	72	FF	FF	FF	FF	rr			
00000	E50	BF	02	E7	E1	72	FF	FF	FF	FF	BF	02	FF	FF	FF	28	72	r(r		-	X
4																			F.		Close

3.6 Radio Code

This is a function dedicated to reading out the radio codes of the radio (multimedia modules) from the vehicles in order to aid adaptation or, as often the case is, to retrieve the multimedia unit to operation after loss of power.

Radio Code		X
Unit	Radio Delco CDR500	▼
	Radio Code	
		×
Read Code	Reset Counter	Cancel

3.7 Airbag

Special function airbag is vital to workshops carrying out damage repairs as in case the vehicle has been repaired after an accident the crash data needs to be cleared. This procedure needs to be pe formed even after regular maintenance of the airbag module where the gas container is replaced.

rbag		8
Unit	Airbag SAB6 - Siemens HC11	

3.8 Dump tool

Special function "Dump tool" will allow you to work with Configuration data dumps of different modules: You will be able to load files read with a programmer, save them edit parameters on them etc. Abrites Diagnostics for Opel/Vauxhall User Manual Dump Tool is an instrument for editing the content of the EEPROM files of specific electronic control units. You have to select a unit and load a dump file. Then when you click the "Parameters..." button you will see a pop-up window with all available parameters related to the chosen unit. Typical parameters are odometer, security code, and VIN. When complete with modifications click on the OK button. The dump data will be updated accordingly. All necessary check sums will be regenerated. Note that the dump files are loaded in a hexadecimal editor, which can be used by advanced users as a tool for manual editing of the EEPROM content.



You will be able to load files read with a programmer, save them edit parameters on them etc.

Some of the functionalities of this tool are listed below, but are not limited to this list: Supported electronic control units and their parameters:

- Airbag TEMIC (68HC908) GM24 417 006, GM24 417 007
- Airbag SIEMENS (68HC11E9) GM 24416701 DJ
 Clear crash data
- Immobiliser II (TMS)
 Security Code
- Engine Bosch EDC16 (95160)
- Engine Bosch EDC16 (95320)
- Engine Bosch EDC16 (95640)
 Odometer
- Engine Magneti Marelli (95320) V1
- Engine Magneti Marelli (95320) V2
- Engine Magneti Marelli (95320) V3
 Odometer
- Instrument Astra G SIEMENS VDO (93C56)
 Odometer
- Instrument Astra H SIEMENS VDO (M35080)
 - Odometer
 - Security code
 - Vehicle Identification Number
- Instrument Corsa D Johnson Controls (M35080)
- Odometer
- Security code
- Vehicle Identification Number

4. Appendix

Further information on the capabilities of the Opel/Vauxhall software:

There is no dedicated special function on unit exchange, but here is some information how AVDI can be useful in such cases. With the use of the Opel/Vauxhall software users can exchange units in some cases.

First generation uses K-line communication channel

ECU and immobiliser are synchronized. Unit exchange is done via the diagnostics menu. If, for example, the ECU has been changed, you need to go into the diagnostics menu > immobiliser > adapt or synchronize. This would allow the two units to work together and procedure should be completed. Models example: Vectra B, Zafira A, etc.

Second generation uses CAN communication

In this generations 6 modules are synchronized: ECU, BCM, Instrument Cluster, ABS, Airbag, EPS. New or virgin units are accepted for adaptation. When exchanging a used unit, you need the PIN code of the donor car. You need to reset the PIN Code, thus, making the unit "virgin". In that state, the unit is installed in the car, and once Ignition is ON, the module will be synchronized with the car.

Note: After the procedure, the module would require the PIN code of the (host) car to be written to it. Models Example: Astra H, Corsa D, Zafira B, etc

Third generation also uses CAN communication

Here are applied the same rules as in the previous generation.

N.B. When exchanging ECU, sometimes it is required to write the flash again, which is not supported by AVDI.

Also, it is required to change the VIN in the exchanged module, which is not fully supported by AVDI, and it works for certain modules only.