

ABRITES DIAGNOSTICS FOR JAGUAR/LAND ROVER



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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.

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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.

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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>.**

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List of revisions

Date	Chapter	Description	Revision
01.10.2015	ALL	Document created	1.0
13.06.2017	8	Immo Advanced	1.1
12.11.2020	9	Key Learning Special	1.2
24.02.2021	9	Key Learning Special	1.3
11.03.2021	9	Key Learning Special	1.4
11.03.2021	10	Dump tool	1.4
22.11.2021	9.1	EM015 - UWB Emulator	1.5
02.08.2022	9.2	EM015- UWB Emul. Update	1.6
01.03.2023	11	KP002	1.7

List of revisions

Date	Chapter	Description	Revision
01.11.2023	12	Abrites Key Reset	1.8

1. Introduction

"Abrites Diagnostics for Jaguar/ Land Rover" is a Windows PC based diagnostic software for Jaguar/ Land Rover vehicles. With the help of this software you canperform 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.

ABRITES Diagnostics for Jaguar and Land Rover provides the user with the ability to perform dealer-level diagnostic functions, such as module identification, both basic and detailed, reading of diagnostic trouble codes (DTCs), clearing of DTCs and many others.

2. Using the Abrites diagnostics for JLR

The Abrites diagnostics for Jaguar/ Land Rover 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 Jaguar/ Land Rover icon is selected the software will start and the user will see the following screen:

A ABRI	TES Diagnostics for Jaguar / Land Rover 1.4	www.abrites.	.com	
ID	< All Units >	Protocol	VIN DTC ^	
733	(EATC) Electronic Automatic Temperature Co	CAN		
734	(HCM) Headlamp Control Module	CAN		
735	(NCM) Navigation Control Module	CAN	=	Previous
736	(PAM) Parking Aid Module	CAN		
737	(RCM) Restraint Control Module	CAN		
740	(DDM) Driver's Door Module	CAN		Open
741	(PDM) Passenger's Door Module	CAN		
742	(DRDM) Driver Rear Door Module	CAN		
743	(PRDM) Passenger Rear Door Module	CAN		🤸
744	(DSM) Driver's Seat Module	CAN		Next
745	(BCM) Battery Control Module	CAN		
746	(DCDC) DC to DC Converter Control Module	CAN		
747	(ACDC-B) AC to DC Converter Module B	CAN		
750	(FCCM) Fuel Cell Control Module	CAN		*
751	(TPM) Tire Pressure Monitor	CAN		Options
752	(CTCM) Coolant Temperature Control Module	CAN		
•	III		•	
🚘 Ve	hicle Selection 🛛 👔 Special Functions 🛛 🖏 Options			Exit

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.

3. Standard Diagnostics

Standard diagnostics within the context of the Abrites diagnostics for Jaguar and Land Rover refers to functions such as device scanning for all the electronic control modules incorporated in the supported vehicles, reading of the identification data for all the modules, reading and clearing diagnostic trouble codes as well as service functions.

Device scanning allows the user to connect to the electronic modules of the vehicle and see the identifications for the them, the amount of diagnostic trouble codes for each one as well as the VIN numbers assigned to the separate units.



Once the scan is completed the details are displayed in the main window:

ID	Scanned Units - Range Rover Sport / L494	Protocol	VIN	DTC	-	
760	(ABS) Antilock braking system	CAN HS	SALWA2EF6EA010011	0		
792	(ATCM) All Terrain Control Module	CAN HS		0		
726	(BCM) Battery Control Module	CAN HS	SALWA2EF6EAJIJJII	1		Previou
764	(CCM) Central Control Module	CAN HS	SALWA2EF6EA010011	0		
710	(CHCM) Chassis Control Module	CAN HS	SALWA2EF6EA01001:	1		6
773	(CHCMB) Chassis Control Module B	CAN HS	SALWA2EF6EA010011	0		Open
701	(GPSM) Global Positioning System Module	CAN HS	SALWA2EF6EA01001:	0	4	0.5
732	(GSM) Gear Shift Module	CAN HS	SALWA2EF6EA010011	0		-
716	(GWM) Gateway Module A	CAN HS	SALWA2EF6EA010011	0		-
734	(HCM) Headlamp Control Module	CAN HS	SALWA2EF6EA010011	0		Next
720	(IPC) Instrument Panel Control Module	CAN HS	SALWA2EF6EA010011	0		
736	(PAM) Parking Aid Module	CAN HS	<u> </u>	0		
756	(PBM) Park Brake Control Module	CAN HS	SALWA2EF6EA010011	0		
7E0	(PCM) Powertrain Control Module	CAN HS	SALWA2EF6EA010011	0		1
730	(PSCM) Power Steering Control Module	CAN HS	SALWA2EF6EA01001:	1		Option
737	(RCM) Restraint Control Module	CAN HS	SALWA2EF6EA010011	0	-	
•	III			•		\bigcirc

Diagnostic trouble codes and live data monitoring

When the initial connection with the vehicle is established the user can select an electronic module and enter by clicking over it. In the following screen the full identification of the module can be displayed. Also the DTCs will be shown together with the live data from the vehicle.



Performing service functions for the Jaguar/ Land Rover vehicles

This function allows the user to complete the process of the vehicle service or maintenance by registering their modification into the vehicle's ECUs. This functionality also allows the calibration of modules, and testing on them.

Land Rover / 2014 / Range Rover Sport / L494/ 5.0L OHC SGDI SC V8 GAS- AJ133 - Service Functions	
Battery - Battery replacement	_
Battery - Battery replacement	<u>E</u> xecute
Battery - Battery replacement 2	
Running board control module - Service mode enabled	
Running board control module - Service mode disabled	
Body systems - Driver's side - Door glass window calibration	
Body systems - Passenger's side - Door glass window calibrati	
Body systems - Valet mode reset	
Parking brake - Longitudinal accelerometer calibration.	
Parking brake - Parking brake activation	
Parking brake - Parking brake pad replacement - Release to se	
\checkmark	X
	Close

4. Special Function Key learning

"Key learning" is a function dedicated to the learning of keys to Jaguar/ Land Rover vehicles by the On Board Diagnostics port (OBD).

The vehicles currently supported by this function are described below: Land Rover: Evoque (L538) - 2011- 2014 Range Rover Sport (L494) - 2013- 2014 Range Rover (L405) - 2012 – 2014 (incl.long wheel base) Discovery LR4 – 2010-2014 Freelander 2 (L359) - 2006–2014

Jaguar: F-Type Convertible and Coupe 2013-2014 XF (X250) - 2007 – 2014 XJ (X351) -2010 – 2014 XK (X150) - 2010 – 2014

The procedure for key learning should start after a diagnostic connection to the vehicle is established and the icon for it is clicked.

The first step is to select the vehicle and the requested operation:

👫 Key Learning	e laster to an ante form		_ D _ X
Vehicle			
Brand	Land Rover	•	<u>E</u> xecute
Model	2014 Range Rover Sport / L494	•	
Engine	5.0L OHC SGDI SC V8 GAS- AJ133	•	
PATS		1.00	
Operation	(PATS) information	•	
	(PATS) information	<u> </u>	
	Ignition Key Programming		
	Ignition Key Code Erase		
	Module Initialization		
	Program Smart Key		
	Erase All Smart Keys		
	Steering Lock Unit Programming	•	
1			X Close

After that the software will start the on screen guidance. Please follow the steps and place the key in the ignition and set it to the ON position:

	/ 2014 / Range Rover Sport / L494/ (null) - Key learning	
PIC		STOP
	MIPORTANT INSTRUCTIONS	Stop
	Close all vehicle doors Switch the ignition ON.	
	Press OK to continue.	
	ABRI	
	Cancel	
		G aok

Again, the steps are shown in the message boxes on the screen.

Pro	gram Smart Key	STOP
		Stop
	Switch the ignition OFF.	
	Remove key from ignition switch.	
	Press OK to continue.	
	ABK	
N. S.		A Back

The software will perform the key calculation and provide detailed information about all the steps taken:



Once the calculation is completed the software will inform you about that and will ask you if you would like to program the key.



5. Special Function Cluster calibration

Cluster calibration is a function dedicated to the calibration of electronic units after an exchange with a used unit. Please note that the calibration needs to be done in coordination with local laws.

Vehicles supported for cluster calibration include but are not limited to: Land Rover:
Evoque (L538) - LL and HL July 2011- 2014 (2dr and 4dr)
Range Rover Sport (L494) - 2013- 2014
Range Rover (L405) -2012 - 2014 (including long wheel base models)

Jaguar: F-Type Convertible and Coupé 2013-2014 XF (X250) - 2007 – 2014 XJ (X351) -2010 – 2014 XK (X150) - 2010 – 2014

The procedure for cluster calibration should start after a diagnostic connection to the vehicle is established and the icon for it is clicked. Select the Electronic Control Unit that needs to be calibrated and click "read":





Input the appropriate value in the "new" window and press update:







6. Special Function NV DATA

This function is used for reading, saving and updating of the Configuration data of the modules within Jaguar and Land Rover vehicles. It is particularly useful for cases where module exchange is required.

CU (AC	м)	A	ud	io	Co	nti	col	M	odu	le								•	
																	0		*	Read Config
																	0			
																	t.t.t			2
																	**9(N N
																	<.9 (<.9			Update Config
																	(<.96.96.96			
																	LLL			
																			-	
																	pp=Qo=		=	Load from File
																	Qo=Qo.***			
																	.)))~lrxr			
																	~lrxr			Save to File
																	~lrxrm			0010101110
					_				_								.ara.xr.m			
																	m.ara.xr.m			
																	.m.ara.xr.m .BBB			
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40	96	b	yte	S																(N)

7. Special Function Flash

Special Function Flash is used in the cases where the flash file of a module within the vehicle needs to be read, saved or updated. It is used for module replacement as well as flash tuning.

Flash																				
	(PCI	м)	P	OW	ert	ra	in	Co	nt	rol	. м	odı	ıle	•				•	
00000	3F0	80	59	59	59	1A	E6	EC	E2	8F	61	3B	F6	26	23	87	CD	.YYYa;.&#		Read FLASH
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																		;J:,.&#</td><td></td><td>2</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>.;EYYY:</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>cln</td><td></td><td>Write FLASH</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>.l#s.&#</td><td></td><td>1000</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>;EYYY</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>#."P.&#;E</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Load from File</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>;EYYY#</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>.;J:,.&#.</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>;EYYY:</td><td></td><td>Save to File</td></tr><tr><td></td><td></td><td>_</td><td>-</td><td></td><td></td><td>_</td><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td></td><td>_</td><td></td><td></td><td>#.1n</td><td></td><td>Save to File</td></tr><tr><td></td><td></td><td>_</td><td>_</td><td>_</td><td></td><td>_</td><td></td><td></td><td></td><td></td><td>_</td><td>_</td><td></td><td></td><td></td><td></td><td></td><td>.10=45i&#Y</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td><td>_</td><td></td><td>_</td><td></td><td></td><td></td><td></td><td>_</td><td>н2</td><td></td><td></td></tr><tr><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>'j*.j. 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8. Special Function "Immo Advanced"

The "Immo Advanced" special function allows the user to write the transponder ID and the secret key ID in the car's BCM.

After that you the engine can be started with a key and moved to an emergency slot. The keyless start of the engine won't be possible. Writing in the KVM (Keyless Start Module) is also not possible. If the KVM is locked, writing by OBD won't be possible as well.

1. Select the mod

2. Keys scre

Model Selection				
Vehicle				
Brand	Land	Rover	•	
Model	2014	Range Rover Sport / L494	-]
Engine	4.4L	DOHC DITC V8 DIESEL 260PS	-]
		✓		×
		Select		Close

🖁 Key Le	arning					\times
👔 Keys	👫 sк	1 Ignition	1			
	ID Keyl	0000000				
	ID Key2	0000000				
	ID Key3	0000000				
	ID Key4	0000000				
	ID Key5	0000000				
	ID Key6	0000000				
	ID Key7	0000000				
	ID Key8	0000000				
	726 BCM	Read Write				
	731 KVM	Read Write				
\checkmark				Γ	X	
•					Clos	و

3. SK Scre



4. Ignition Scre

👔 Key Learning				×
👔 Кеуз	SK 📲	Ignition		
Touch t	he key at e	mergency slot and press START button.		
\checkmark			× Clos	÷

9. Special Function "Key Learning Special"

The "Key Learning Special" special function is dedicated to all 2012-2021 JLR vehicles equipped with a KVM and allows you to program keys, even if the KVM is locked.

The function requires a PROTAG programmer to be connected to the PC as well as an AVDI interface and a **TA54/TA56/TA57(2018+ vehicles)** Abrites key for JLR. **TA54/TA56/TA57** is the only key supported by the "Key Learning Special" function.

IMPORTANT: If the vehicle is ARMED you will probably need to connect to the internal CAN-H and CAN-L of the vehicle using the either the CB012 Abrites cable set or a Distribution box(the software will let you know if a direct connection is required). The internal CAN-H and CAN-L can be found under the front seats or inside all 4 doors.

CAN-H --> yellow/red CAN-L --> yellow/brown(yellow/purple)



ABRIT	TES Diagnostics for Jaguar / Land Rover 3.3		AMS valid until (01/03/2022	- 🗆 ×
ID	< All Units >	Protocol	VIN	DTC	^
701	(GPSM) Global Positioning System Module	CAN			
702	(SCM-C) Seat Control Module C	CAN			
703	(AWD) All Wheel Drive	CAN			Previous
706	(IPMA) Image Processing Module A	CAN			Tienda
707	(TVM) Television Module	CAN			
710	(CHCM) Chassis Control Module	CAN			C
711	(GSMB)	CAN			
712	(SCMG) Seat Control Module G	CAN			Open
713	(SCMH) Seat Control Module H	CAN			
714	(HSWM) Heated Steering Wheel Module	CAN			
715	(CLM) Column Lock Module	CAN			•
716	(GWM) Gateway Module A	CAN			Next
717	(RLCMA) Rear Lamp Control Module A	CAN			
720 🚔 Ve	(TDC) Instrument Banel Control Module hicle Selection i Special Functions	CAN			~
Serv Funct	rice Live Data Cluster NVData Flash Ki ions Calibration Lear	ey rning Spect	d Advanced	📆 🧊 🛠	Open Options

1. Open the JLR software and select "Key Learning Special" special function

2. Follow the on-screen instructions and press "OK". At this step all existing keys will be disabled and you have to program new Abrites TA54/TA56/TA57 key(s).





3. At this step the software will connect to the vehicle

4. Connect your PROTAG programmer and place an Abrites TA54/TA57 key:

ID	Land Rover	2013 Range Rover /	Protocol	VIN	DTC ^	
710	(CHCM) Chassis Control	Module	CAN HS			
716	(GWM) Gateway Module A		CAN HS			T
720	Emergency Key Programming				×	Previou
722	120.000					
726	Connecting to Abrit	es PROTAG programm	ner			G
730						Open
732						_
734						-
736						14
737						Next
c						
Vel	hick					
>	Stop					-
Serv	ice					1
-						Option
	* 🖊 📟					
Car C	onlig Airbag DPF					\bigcirc

ID	< All Units >	Protocol	VIN	DTC	^	
701	(GP5%) Global Positioning System Module	CAN				
702	(SCM-C) Seat Control Module C	CAN				•
103	(AND) All Wheel Drive	CAN				Previou
06	(IFMA) Image Processing Module A	CAN				Fleviou
107	(TVM) Television Emergency Key Programming				×	
10	(CHCM) Chassis Co					6
11	(GSMB) Place a new Abrites JL	K Key in the p	programmer			•
12	(SCMG) Seat Cont:					Open
13	(SCMH) Seat Cont:					
14	(HSNN) Heated Sta					
15	(CLM) Column Loci					-
16	(GNDE) Gateway Mon					Next
17	(RLCMA) Rear Lam					
20	(TD") Teat romant				~	
Ve	hicle Selection					
X			Q		6	
Serv		Key Key	Immo C:	ar Config Dump Tool Airl	bag	1
unct	-	arning Learni	Advanced		Open	
- 111						Options
DF	Ŧ					
						0

5. At this step you have to place each of the existing car keys(if available) in your PROTAG programmer prior to key programming of the new keys, or place directly a new Abrites TA54/TA56/TA57 JLR key if it is an All Keys Lost situation.

IMPORTANT: Place the keys on top of PROTAG programmer with the buttons facing up as shown in the photo below.





*If there are existing keys and they could be saved, you will see this message:



6. Place a new TA54/TA56/TA57 Abrites key for JLR.



7. Each key will be checked. Keep the key in the PROTAG programmer



ID	Land Rover	2013 Range Ro	ver / 1	Protocol	VIN	DTC ^	
710	(CHCM) Chassis Contro	1 Module	(CAN HS			
716	(GWM) Gateway Module	Α		CAN HS		_	T
720	Emergency Key Programming					×	Previor
722	Louis de la landa de						
726	Leave the key in t	ne PROTAG pro	grammer.				6
730	Programming key						Open
732							
734							-
736							
737							Next
¢							
R Vehi	icl						
X	Stop						-
Servi		1					1
							Option
Car Co							0



8. Remove the key from the PROTAG programmer and press "Stop" to finish the procedure

9. The new TA54/TA56/TA57 key(s) is(are) successfully programmed and ready to start the car. Try to lock and unlock the doors using the remote and start the car.





9.1 EM015 - JLR Ultra-Wide Band Emulator

Abrites UWB Emulator connection

If you ever encounter a car which has a UWB module installed the key learning procedure will end successfully but you will only have a working remote for the car. This is when the UWB emulator will be of use to you. The software will lead you through the procedure. Here is what you need to do in order to complete the task.

1. Connect the emulator to your PC using a random old USB cable which fits the emulator(Micro-USB), format the emulator once you connect it, the format box should pop up immediately after being connected.

1.1 Formatting the emulator prompt



1.2 Quick Format settings

Capacity:		51.05
22,0 KB		~
File system		
FAT (Default)		~
Allocation unit size		
512 bytes		~
Restore device defaults Volume label		
Volume label		
/olume label Format options		

1.3 The warning can be ignored



1.4 The format is complete





2. Go to the log folder of JLR where you have the config file. Copy and paste this file onto the emulator by accessing it just like accessing any regular USB-flash drive. After pasting the config file, the emulator will be automatically disconnected and re-connected to the PC, asking to be formatted. No further formatting is required and the EM015 can be installed in the car.

2.1 The config file pasted onto the emulator

→ Y ↑ 💊 > USB Drive (E:)				~	Ö	,O Search USB Drive (E:)	
	Name	Date modified	Туре	Size			
Quick access	config.bin	25.11.2021 r. 11:15	BIN File	1 KB			
Creative Cloud Files							
iCloud Drive							
iCloud Photos							
OneDrive							
This PC							
3D Objects							
Desktop							
Documents							
Downloads							
Music							
Pictures							
Videos							
Windows (C:)							
] DVD Drive (D:) 16.0.4266.1001							
USB Drive (E:)							
Public (\\10.101.7.230) (Z:)							
USB Drive (E:)							
Network							

3. Connect the B+(yellow) and GND(black) of the EM015 emulator to the B+(red) and GND(black) cables of the KVM connector, the LED on the EM015 lights up in RED: Yellow (EM015) -> Red (KVM) Black (EM015) -> Black (KVM)



4. Cut **any one** of the blue cables(UWB antennas cables) and connect the green cable of the EM015 emulator to **the blue cable end which goes to the UWB antenna** Green(EM015) -> Blue (UWB antenna side)

5. The LED of the EMULATOR goes from RED to GREEN.

6. Once the LED turns GREEN, disconnect the green cable of the EM015 from **the blue cable end which** goes to the UWB antenna.

7. Connect the green cable of the EM015 emulator to **the blue cable end which goes to the KVM module** (switch from UWB antenna side to KVM side). Green(EM015) -> Blue (KVM side)

In this case the emulator replaces one of the UWB antennas as one of the original antennas remains disconnected (one of the blue cables remains cut and can be isolated on the UWB side).

9.2 EM015 - Ultra-Wide Band Emulator update procedure

In order to update the EM015 UWB Emulator the Abrites Diagnositcs for JLR must be opened and the "EMUL update" icon selected. This option automatically saves two files in the LOGS folder (you can find it in the last page of the Abrites Quick Start menu).

Then perform the following steps:

1. Connect the emulator via micro USB to PC > Format > OK > Close > Drag and drop the 1st file "config-gotoboot.bin" from logs folder to the emulator's memory folder.

2. Disconnect the emulator > reconnect it > Format > OK > Close > Drag and drop the 2nd file "Application_2.X.bin" from the logs folder to the emulator's memory folder.

3. Disconnect the emulator > reconnect it > Format > OK > Close > Drag and drop the configuration file "UWB_Emulator_XXXXXXXXXXXXXXX.bin" which is saved automatically during the key programming procedure from logs folder to the emulator's memory folder.

10. Dump tool

Since our November 2021 update we implemented the use of the dump tool where key programming is possible by dump. You can use the Dump Tool in cases where you need (or want) to program OEM keys and:

The car you have is equipped with one of the following KVM types: FK72, DPLA, HPLA The Program flash of the KVM module can be read with a programmer and a dump can be generated

Here are the steps you need to follow in order to operate the Abrites Diagnostics for JLR dump tool:

- 1. Read the KVM Program flash using a capable programmer and save the dump file (e.g. dump.bin)
- 2. Modify e.g. dump.bin using "dump tool" and save it (e.g. dump_modified.bin).
- 3. Write e.g. dump_modified.bin into the KVM using a programmer.
- 4. Program and delete keys using the standard procedure.

The modifications will be done automatically and all you need to do is load the dump, instruct the dump tool to prepare the file and save it when ready.

Here is what it looks like:



Dump Tool	unto la legal (unit floor	u de la companya de la	AND IN ANY ANY ANY	
			able 'Key lea gram flash fi	
Click 1	Next to sele	ct program f	lash file.	
G	0			×
	Next			Close

1. Open the Dump tool and load the flash file

2. Once the file is selected and loaded we can click "next"

0052200			PP	20 D	0 00		22			P P1	PP	22	22			1.1	1 200
																1	· · · · · · · · · · · · · · · · · · ·
																	Load
005E3D0	FF F	FFF	FF	FF F	FFF	FF	FF	FF	FF F	F FF	FF	FF	FF				
0052350	FF F	F FF	FF	FF F	F FF	FF	00	00	00 0	0 00	00	00	00				
005E400	00 0	1 84	05	02 0	2 07	31	22	FF :	FF F	F FF	FF	25	25				
005E410	33 3	3 35	31	31 3	0 31	. 37	38	30	0 00	0 00	00	00	00	3351101780			
005E420	48 5	0 40	41	2D 3	1 34	43	34	38	38 2	D 41	43	00	00	HPLA-140488-AC			
005E430	00 0	0 00	00	00 0	0 00	00	48	50	4C 4	1 20	31	34	43	HPLA-14C			
005E440	32 3	5 30	2D	41 4	3 00	00	00	00	0 00	0 00	00	00	00	250-AC			
005E450	04 F	F FF	FF	FF F	F FF	FF	49	A6 1	44 D	3 70	30	31	37	I			
005E470	C6 0	1 7B	3F	F6 0	6 E4	81	C6	03	/B 3	F F6	06	E4	81				
														=[?			
																=	
																100	
005E4B0	6C A	C 6C	82	B7 4	5 EE	: 04	04	25	33 1	6 F5	14	EE	82	1.1E		Ŧ	
e															3		
File pat File siz KVM type Key lear	e: 1	stat	tus:	3933 HPL	216 I A	byte				p/w	ork	202	1\0	2\2021.02.24\bin_files\test\P_flashre	ad_20.06.bin		

3. Then we can save the generated dump file:



11. KP002 JLR Alarm Unblock Device

KP002 is a tool used to help in key programming procedures, when all keys are lost, for JLR vehicles 2020+

It can be used by OBDII or on bench to unlock the vehicle's BCM module, making the learning of new keys possible .

Main functionalities: Unlocking the BCM module

Supported vehicles: JLR models 2020+

Supported BCM modules (include, but are not limited to): L8B2-14F041-AF (Defender 2020) JPLA-14F041-BG (Evoque 2019)

In order to perform these procedures, you will need the JL006 license.

The procedure may take up to 72 hours.

An AVDI and active AMS are required to complete the process.

The set includes a device with 2 CAN wires, and additional bench connection cable set



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11.1 KP002 by OBDII in the vehicle

When working in the vehicle, you need to plug the device into the OBDII port and use the needle clips to connect to the RFA CAN wires of the vehicle. Vehicle will need power supply. Steps:

- Connect the CAN clips coming out of the device to the internal CAN (RFA) wires (under the driver's seat)
- Plug the device into the OBDII port
- At this point the LED indicator will blick in orange 1 time and it will start fast green light blicking. If all the connections are alright, the LED indicator will start blicking in green slowly, meaning the device is now in operation.
- At the end of the procedure, the device should have solid green light on the LED indicator.
- Now the vehicle's alarm is deactivated and it is ready for the key programming procedure.

*Procedure may take up to 72 hours.

Below you can see an example of connection to the RFA CAN wires under the driver's seat of a Defender 2021

CAN HI (Red wire from device) - connected to the yellow/orange wire CAN LO (Blue wire from device) - connected to the yellow/purple wire





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11.2 KP002 on bench

When working on bench, you need to connect to the pins of the BCM unit, using the additional cable for bench work from the KP002 set as follwos:

- Connect the OBD connectior of the cable to the OBD connector of the device
- Connect the 2 wires (CAN) coming out of the device into the extendor cables that would allow connection to the pins.
- Connect all pins to the BCM unit
- Power up the whole set (ZN063 power adapter can be used)

Bench Connector Legend:

- Male OBDII Port
- Black power cable with a socker (can be used with ZN036)
- Yellow wire (with a split) 12V+
- Black GND
- Blue CAN H
- Red CAN L
- additionally, the 2 wires coming out of device are also Red for CAN H and Blue for CAN L and are used to connect to the RFA CAN pin connectors.

Once everything is connected properly the procedure goes as follows:

- Power up the whole set
- At this point the LED indicator will blick in orange 1 time and it will start fast green light blicking. If all the connections are alright, the LED indicator will start blicking in green slowly, meaning the device is now in operation.
- At the end of the procedure, the device should have solid green light on the LED indicator.
- Now the vehicle's alarm is deactivated and it is ready for the key programming procedure.

*Procedure may take uo to 72 hours



KP002 bench connections:

1. L8B2 BCM



Legend:

Connector F:

PIN 2 - 12V+ PIN 1 - additional 12V+ cabl

Connector G

PIN 1 - GND

Connector C: RFA CAN PIN 36 - CAN L - Blue Wire (comming out of the device) PIN 37 - CAN H - Red Wire (comming out of the device)

Connector E: Diag CAN PIN 51 - CAN L - Blue Wire PIN 50 - CAN H - Red Wire

2. JPLA BCM



Legend:

Connector F:

PIN 2 - 12V+ PIN 1 - additional 12V+ cable

Connector G

PIN1-GND

Connector C: RFA CAN

PIN 36 - CAN L - Blue Wire (comming out of the device) PIN 37 - CAN H - Red Wire (comming out of the device)

PIN 50 - CAN H - Red Wire PIN 51 - CAN L - Blue Wire Legend



Below you can see an example of a **L8B2** BCM connected on bench.



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Operation of the device:

There is a LED indicator on the device, which provides information of the state of the device/procedur:

- Fast Green blinking testing the connections
- Alternating Green and Red blinking wrong connection of the CAN wires.
- Slow Green blinking work in progress
- Solid Green light process finished
- Solid Red light does not operate this would most probably mean you have not made the correct connections

12. Special Function "Abrites Key Restore"

This special function lets you reset an Abrites JLR key that has been programmed to a vehicle (locked)so that you can use the key as a again.

Here are the very important prerequisites for the procedure:

The key has to be reset with the same AVDI and laptop that have been used for the key learning procedure.

Supported keys: TA54, TA56, TA66, TA67

ProTag programmer is required for the procedure as well.

Servi unctio Rirba	ons	Live Data	Cluste Calibrat Updat EM01	ion e	⊘ ₩Data	Gird Flash	Key Learni		Key Learnin		Abrites key restore	lmr Adva	no		onfig	Dump T	·	G Open		Options
vo Veh		Selection	Spi		unctions	Opt	tions	C.7.7	u											
17	(RI	CMA) Rea	ar Lamp C	ontro	l Module	A		CAI	N											
16	(GW	M) Gatev	ay Modul	e A				CAI	N											Next
15	(CI	M) Colum	n Lock M	lodule				CAI	N											4
4			ed Steer			lule		CAL	N											
12			Control					CAL												
11 12		MB)	Control	Madu	10.0			CAL												Open
10			sis Cont	rol M	odule			CAI												6
07			vision Mc					CAI												
06	(IF	MA) Imag	je Proces	sing	Module A			CAI	N											
03	(AW	D) All W	Wheel Dri	ve				CAI	N											Previous
02	(sc	M-C) Sea	t Contro	1 Mod	ule C			CAI	N											
01	(GF	SM) Glob	al Posit	ionin	g System	n Module		CAI	N									 	-1	
	I < A	ll Units	< >					Pro	otocol	VIN			DT	C I						

Once you select the Abrites Key Reset from the special function menu, a screen with information will appear. The procedure is guided, you need to follow the instructions and the key will easily be reset.

In case you put a key that has not been programmed with your AVDI and laptop, or the key is not programmed at all, you will see the message on the second screenshot of this page.

	< All Units >		Protocol	VIN	DTC		
01	(GPSM) Global Positioning S	ystem Module	CAN				
02	(SCM-C) Seat Control Module	c	CAN				
03	(AWD) All Wheel Drive		CAN				
06	(IPMA) Image Processing Mod	ile A	CAN				Previou
07	(TVM) Television Key Learning D	plicator					
10	(CHCM) Chassis Co						6
1				ring program	med ABRITES JLR		6
12	(SCMG) Seat Cont:	0xx) to virgin (r	iew) state				Oper
.3	(SCMH) Seat Cont: When a	key is program	med to the ca	ar, the secret k	ey (SK) of the car is		
.4		to the TA0xx tra					
5					programming the SK is		
					0xx is possible only or	n	
16		into the PC. For PC with which				n	Nex
16 17	(GWM) Gateway Mod the same					n	Nex
16 17 20	(GWM) Gateway Moc (RLCMA) Rear Lami		this TA0xx v	vas programn	ned		Next
16	(GWM) Gateway Moc (RLCMA) Rear Lam		this TA0xx v				Nex
16	(GNN) Gateway Mor (RLCMA) Rear Lam //TDC) Testrumant hicle Selection	∍ PC with which	this TA0xx v	vas programn DK	E <u>x</u> it		
Ve	(GNN) Gateway Mor (RLCMA) Rear Lam //TDC) Testrumant hicle Selection	e PC with which ta Flash	this TA0xx v	Vas programn DK Abrites	Exit		
6 7 Ve	(GNN) Gateway Moo (RLCMA) Rear Lam (TDC) Testrumant hicle Selection	e PC with which ta Flash	this TA0xx v	Vas programn DK Abrites	mmo Car Config Dump Ti		Nex Option
6 7 Ve	(GRUCHA) Gateway Mor (RLCHA) Rear Lam hide Selection	e PC with which ta Flash	this TA0xx v	Vas programn DK Abrites	mmo Car Config Dump Ti		

Key Learning Duplicator	×
Information about this TA0xx is missing. Probably this key is not programmed to the car at all, or it was programmed with another PC.	
For the restore you've to use the same PC, with which the TA0xx was programmed to the car.	
Stop	