

Achieve the impossible

Abrites Diagnostics for Ford/Mazda User Manual

Version: 3.5

www.ABRITES.com

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Body Control Module (BCM) Set Vehicle Power Mode Restraints Control Module (RCM) Clear Restraint Control Module (RCM) Crash Data Memory Restraints Control Module (RCM) Module Central Car Configuration (CCC) Update Passenger Air Bag Deactivation (PAD) Switch Activation 10. Ford OBD-II diagnostic interface pinout and wiring 11. Troubleshooting

12. Abbreviations

13. Contact Information

	List of Revisions									
Date	Date Chapter Description									
24.06.2009		Initial version of the document.	1.0							
01.10.2015	all	Revised, updated, renewed	3.2							
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Overview

ABRITES diagnostics for Ford/Mazda is a professional software for diagnostic of Ford/Mazda vehicles.

Standard diagnostic functions:

- Read Vehicle Identification
- Read Fault Codes (DTC)
- Clear Fault Codes
- Device Scan
- Data Display / Measured values
- Diesel Engine Injectors Programming
- Programmable Module Installation
- Service Functions

Special functions:

- Read/Write EEPROM
- Mileage Recalibration
- Key Learning

Advanced functions:

- Custom Request
- Dump Tool

Supported protocols:

- High Speed CAN 500kb, 6-14
- Mid Speed CAN 125kb, 3-11
- K line 7
- J1850 PWM 2-10 (requires additional adapter)

Note: Depending on the purchased version some of these functions may not be available in your software.

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1.Getting Started

When you run ABRITES diagnostics for Ford/Mazda it will try to automatically detect the appropriate hardware interface and will connect with it. If the connection failed a message box with the explanation of the problem will appear.

A AB	RITES Co	mmander fo	r Ford / Mazd	la 4.9		www.abrit	us72.com				
#	All Un	its				Proto	col VI	N	DTC	-	
00	(BTCM)	Battery	Control M	lodule		CAN					
00	(ESOF)	4WD Elec	ctronic Sh	ift on th	e Fly	CAN					
00	(DSP)	(Audio) I	Digital Si	gnal Proc	essing Mo.	CAN					
00	(FACP)	Front Au	udio Contr	ol Pannel		CAN					Previous
00	(CM) C	ompass/Mi	irror Modu	ıle		CAN					
00	(SOBDM) Seconda	ary OBD Co	ntrol Mod	ule A	CAN					
07	(FCM)	Fuel Cell	L Control	Module		CAN					
08	(CTCM)	Coolant	Temperatu	ire Contro	l Module	CAN					
0B	(FACM)	Fuel Add	ditive Con	trol Modu	le	CAN					
0C	(BECM)	Battery	Energy Co	ntrol Mod	ule	CAN					Open
0D	(PMM)	Powertrai	in Control	Monitor	Module	CAN					
0E	(SGM)	Starter/0	Generator	Control M	odule	CAN					
0F	(AHCM)	Auxilian	ry Heater	Control M	odule	CAN					
0F	(FFH)	Fuel Fire	ed Coolant	Heating	Module	K-Lir	1e				
10	(PCM)	Powertrai	in Control	Module		CAN					
10	(PCM)	Powertrai	in Control	Module		K-Lir	1e				Next
11	(SPCM)	Secondar	ry Powertr	ain Contr	ol Module	CAN					
15	(CCM)	Cruise Co	ontrol Mod	lule		CAN					
120	(2.700)		·	a i i i i	1 1	0.117	,			Ľ	
🖨	Vehicle Sele	ection	👔 Special	Functions	🚷 Options	3					
	9988	\sim	\sim		Q		10	×	6		253
	0000	(1999pu	COOPPU		A 🕅 🥜	862					₩¥ =
M	fileage	EEPROM	Flash	Service	Key Learning	OutIncode	Remote	Car Audio	Open		Options
Rec	alibration			Functions		Laiculator	Keyless Entry	' I			
	ر <u>م</u>	11 ⁻²⁵ -00	3	<u> </u>	•2	01991	03933				
11	╙╲ <u></u> ╺┍┙	الريب ال	≤≤	sq y	~	151	181				
In	njectors	VID	Live Data	Powertrain	Airbag	Snapshots	PMI	Speed Limiter 🚽			Euit
<u> </u>											EXIL

2. Vehicle Context

By default, when ABRITES diagnostics for Ford/Mazda is started in the main list all available electronic control units are displayed. You can reduce the number of displayed units by specifying the vehicle context. To change the vehicle context select a desired model.

Α	ABRITES Commander for Ford / I	lazda 4.9		wv	vw.abritus72.co	m		
#	Fiesta 5	2002-	-		Protocol	VIN	DTC	
1	Fiesta 5 FL	2005-			CAN			
1	Fiesta 6	2008-			CAN			
2	Fiesta	2013-		ractio	K-Line			
5	Focus 1	1998-			K-Line			Previous
5	Focus 2	2004-			K-Line			
6	Focus 2 FL	2008-		.e	CAN			
	Focus 3	2011-						
	Focus Cabriolet							
	Focus Electric							Open
	Focus RS							
	Fusion	2002-						
	Fusion FL	2005-						
	Galaxy 2	2000 -						
	Galaxy 3	2006 -						Neut
	Kuga 1	2008 -						
	Kuga 2	2013 -						
	Mondeo 3	2001 -						
	Mondeo 4	2007 -		(a) 0-1-1-1-1	i i			
	Mondeo 5	2013 -		New Options	I			
Ιг	Ranger	1998 -	-					18 A
	Fiesta 5	2002-	-		\mathcal{P}	- 🍼 📔 🦉	-	\$\$=
				Sca	an for Units	Clear all DTCs Filte		Options
Г	US Ford Models			_				
	<select ford="" model<="" td=""><td>>></td><td></td><td></td><td></td><td></td><td></td><td></td></select>	>>						
	Control a Model							
								Exit



3. Scanning for ECUs

The device scanning function is helpful when you want to perform a quick DTC check of all available device units in a vehicle. When you click on the "Scan all" button on the main screen, a progress window will appear. The bahaviour of the scanning can be chaned by the "Device Scanning" option. Refer to the <u>Configuration</u> section.

A AE	BRITES Commander for Ford / Mazda 4.9			<u>_0×</u>
#	Scanned Units	Protocol	VIN	DTC
	Please Wait K7 Searching 0x58(RCM) Restraints Control	l Module	× Cancel	Open
	Vehicle Selection	ican for Units	Clear all DTCs	r Options



4. Options

The Abrites diagnostics for Ford/Mazda is a diagnostic software application, used together with AVDI (Abrites Vehicle Diangnostics Interface), that allows the user to perform standard and advanced diagnostics for Ford and Mazda vehicles.

Standard diagnostics include functions such as reading, identification and clearing of diagnostic trouble codes, module identification, extended module identification, service interval reset, actuator tests and many others.

The above described functions are standard features of the Abrites diagnostics for Ford/Mazda. They allow the user to determine the cause of an issue as well as provide assistance in repairing problems with the vehicles.

The advanced diagnostic functionality of the Abrites diagnostics for Ford/Mazda allows the user to perform key learning, module exchange and cluster calibration using new and used parts in a quick and comprehensible manner. The list of supported models is constantly being updated and currently includes almost every model.

The software is quick, easy and agile, and by being such it manages to exceed the user's expectations and provide a diagnostic level higher than the main dealer tools every time.

Diagnostic

5. ECU identification

With this function hardware and software variant, calibration level can be seen.

This information is useful when an used ECU is needed to replace damaged original part.

🧕 60 (IPC) Instrumer	t Panel Control Module			<u>_ 🗆 🗙</u>
		ECU identifi	cation	🔺
Part Number Iden	tification Prefix	ĸ	4M5T	
Part Number Iden	tification Base		10849	
Part Number Ider	tification Suffix	ĸ	GM (OCOB)	
Vehicle ID (VIN)			WF0WXXGCDW5B11026	
Module Serial Nu	umber		0020100885	
Software Version	Number		v.0 06/09/2004	
FNOS CAN Driver	Version Number		01.07.01	
FNOS OSEK NM Ver	sion Number		03.39.03	
FNOS NM Junior V	Version Number		01.11.00	
FNOS Interaction	h Layer Version Nu	umber	03.24.03	
FNOS Network Ini	tialization Vers	ion Number	01.12.00	
FNOS Transport I	ayer Version Numb	ber	02.34.02	
FNOS Diagnostics	Version Number		01.25.00	
FNOS Generation	Tool Version Num	ber	03.75.29	
FNOS Bootloader	Version Number		01.02.00	
CAN DB++ Databas	e Version Number		04.07.16	
ECU Hardware Par	t Number		4M5F-14B115-BB	
ECU Strategy Sof	tware Part Number	r	4M51-14C026-BA	
ECU Calibration	Software Part Nur	mber	4M51-14C088-CA	
Module Programmi	.ng & Configuratio	on Design Specifi	.cation v.2001.1	•
			Γ	
Identification	Data Display	Security Access		Clear log
	,			
			· · · · · · · · · · · · · · · · · · ·	
D. JDTC.	Cutor Durant	FOU Dates		Write log
ReadDits	Lustom Request	ELU Reset		
				X
Clear DTCs	PMI			•
				Close



6. Read / Clear DTC

📃 60 (IPC) Instrumen	t Panel Control Module				_ _ ×
9 CMDTCs found! U1900 "CAN Commu No Additic DTC Presen MIL Off fo Test Compl	Status: 60	•			
C1750 "Accelerat No Additic DTC Presen MIL Off fo Test Compl	or Position Sense onal Fault Sympton of at Time of Req or this DTC .ete	Status: 60			
B1202 "Fuel Send No Additio DTC Presen MIL Off fo Test Compl	der Circuit Open" nnal Fault Sympton nt at Time of Req or this DTC .ete	Status: 60			
B1681 "PATS Tran	sceiver Module S	ignal Is Not Rece	ived"	Status: 60	•
Identification	Data Display	Security Access			Clear log
Read DTCs	Custom Request	ECU Reset			Write log
Clear DTCs	РМІ				Close

7. Live Data

📃 Live Data					
🐕 ECU	🚰 List	😨 Graph	1		
Parameter			Value	Units	
Number of Tro	ouble Codes Set (due to Diag	0	DTC(s)	
Electronic Th	hrottle Control	(ETC) Throt	-27.0029	Volts	
Desired RPM :	for Idle Speed Co	ontrol (Hig	900.0	RPM	
Engine Oil Te	emp		20.00	°c	
Vehicle Speed	d - High Resolut:	ion	0.000	KPH	
Sensor supply	y voltage		4.95	Volts	
L					
L					
Stop	New Graph Clo	X Ise Graph			K Close

8. Special Functions

ABRITES diagnostics for Ford/Mazda provide some diagnostic functions, which are specific only to our product or they are not supported by the other similar diagnostic tools. These functions are separated in the Special Functions list.

The list is located in the bottom right corner 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 in the right of the list.



8.1 Memory Read / Write

🛷 Re	ead / W	rite	EEP	ROM	I															
ECU	100	(IPC	C) Ir	nstru	ıme	ent F	an	el C	lust	er									-	<i>i</i>
0.00	,	-0	-0	-0	-0					0.5		0-		_		-				- 1
000	00000	F2	F2	F2	F2	BF	FF	FF	29	05	01	AU	68	FF	FF	3E	16)h>.		Read EEPROM
000	000010	14	06	68	E.E.	11	E.E.	E.E.	F.F.	11	E.E.	E.E.	E.E.	00	E.E.	E.E.	E.E.			6
000	00020	14	5.5.	E.E.	FT.	00	22	00	70	00	500	00	A3	00	OA CR	00	BB	p		
000	00030	00	3A 70	02	DC 7D	00	JA	02 55	BC	00	10	94 101	A6	00	00	17	20			
000	00040	00	00	00	72	03	11	06	11	17	70	00	25	00 55	00 55	11 55	70 55	.p.~p		WITTEEEPRUM
000	00050	50	00 55	50	72 72	망망	DO EE	00 55	77	1/ 55	70 55	500	고고	01	2 2 2 2 2		22 77			
000	00080	01	11		11	10		22 77		01	2 1 121	22 55	11	02	T T T	2 2 2 2 2	11			
000	00070	00	00	C 9	00	10	00	00	2 T T	10	00	00	20	60	00	02	21 27	1		Load from File
000	00080	55	00	05	55	C0	00	00	74	10	00 77	50	AC PP	20	00 55	02 55	EA PP			
000	00030	03	00 90	20	चन्न	03	00 77	00 99	, ਦ ਸ਼ਾਸ਼	00	00	50	C0	00	00	00	64			
000	00080	05	70	02	70	112	40	04	75	46	50	00	02	50	c0	00	9D	1.0		
000	000000	10	UA TTT	20	ন্দ্র	TT TT	ਾਸ	দ। সন্ম	ਦ (ਸ਼ਾਸ਼	01	ਾਹ	<u>स</u> ज	ਦਰ ਸ਼ਾਸ਼	03	ਹ ਸ਼ਾਸ਼	20	ਹਰ ਸ਼ਾਸ਼			Save to File
000	000000	02	ਸੂਸ ਸ਼ਾਸ਼	11	11 77	F7	ਸ਼ਾਸ਼	ਸੂਸ ਸ਼ਾਸ਼	ਸ਼ਾਸ਼	06	27		ਸੂਸ ਸੂਸ	06	27	ਸਾਸ	ਸੂਸ ਸੂਸ	* *		
000	000000	02	E E			02	E D	ਸ਼ਾਸ਼	ਸਾਜ	10	ER.		ਸ਼ਾਸ਼	c0	C0	11	42	в		
000	000000	10	1B	04	07	04	00	00	FQ	04	00	00	00	23	FB	80	00	#		
000	00100	00	05	28	28	28	00	66	01	00	ਹ ਹ ਸ਼ਾਸ਼	- 100	00	DA	00	ac	cn	(() f		
000	00110	07	00	DA	00	07	00	- 10	00	0.0	00	C8	00	10	00	C8	00			
000	00120	11	00	BF	00	10	00	AC.	00	23	00	92	00	217	00	83	00	± /		
000	00120	35	00	60	00	4 ह	00	55	00	66	00	35	00	87	00	27	00	>10Uf> '		
000	00140	9E	00	1B	00	RQ	00	10	00	C3	00	00	00	57	00	00	00			
000	00150	11	08	04	02	01	08	08	0B	11	01	01	01	01	01	01	01			
000	00160	01	01	00	30	00	30	00	30	00	30	0F	28	00	30	00	30	0.0.0.0.0. (.0.0		
000	00170	00	30	00	78	11	08	04	02	01	08	08	0B	11	01	01	01	0 x		
000	001/0							• •	02				010						.	
1																			Þ	
																				~
-	0	κ.																		\wedge
																				Close

8.2 Key Learning

Go to the Special Functions screen. Select Key Learning.

A A	BRITES C	ommander for	Ford / Maz	da 4.4		www.	abritus72.	com				
#	All Ur	nits				P	rotocol	VIN	ſ		DTC	1
00	(BTCM)	Battery	Control 1	Module		C	AN					
00	(ESOF)	Electron	ic Shift	On the Fly	7	C	AN					
00	(DSP)	Audio Dig	ital Sign	nal Process	sing Modul	le Ci	AN					
00	(FACP)	Front Au	dio Cont:	rol Pannel		C	AN					Previous
00	(CM) C	Compass Mo	dule			C	AN					
00	(SOBDM	1) Seconda	ry OBD Co	ontrol Modu	le	C	AN					
07	(FCM)	Fuel Cell	Control	Module		C	AN					
08	(CTCM)	Coolant	Temperatu	ure Control	Module	C	AN					
0B	(FACM)	Fuel Add	litive Con	ntrol Modul	e	C	AN					
00	(BECM)	Battery	Energy Co	ontrol Modu	ıle	C	AN					Open
0D	(PMM)	Powertrai	n Contro	l Monitor M	Iodule	C	AN					
0E	(SGM)	Starter /	Generat	or Control	Module	C	AN					
OF	(AHCM)	Auxiliar	y Heater	Control Mo	dule	C	AN					
OF	(FFH)	Fuel Fire	d Coolant	t Heating M	Iodule	K	-Line					
10	(PCM)	Powertrai	n Contro	l Module		C	AN					Newt
10	(PCM)	Powertrai	n Contro	l Module		K	-Line					
10	(PCM)	Powertrai	n Contro	l Module		J	1850					
11	(SPCM)	Secondar	y Powert	rain Contro	l Module	C	AN					1
	Vehicle Sel	lection	👔 Special	Functions	🔅 Optior	ns						
	8888	00000	00000					()	r	-	6	
Re	Mileage calibration	EEPROM	Flash	Key Learning	OutIncode Calculator	Remo Keyless	ite Ca Entry	r Audio	Injectors		Open	Options
	C)		×	1220	12 Carl	•		Sec.	1			
	VID	Powertrain	Airbag	Snapshots	PMI	Servi Functi	ce C ons	iustom	Dump Tool	T		Exit

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8.3 PATS Information

N Key Learning	
Operation 🚯 Read PATS Info	• 🖌
Read PATS Info	<u>E</u> xecute
PCM: PATS Related	
PCM: PATS Security Access Type: Coded	STOP
PCM: Security Access: Coded	
PCM: Service Module: Yes	i <u>S</u> top
PCM: Spare Key Programming: Enabled	
PCM: Unlimited Keys Mode: Disabled	
PCM: Timed access: 480 sec	
PCM: PATS Security Access: In Progress	
PCM: PATS Number Of Keys: 3	
PCM: ralisate status: Inactive	
PCM: Status: Disabled	
PCM: Master Key Fresent: NO	
PCM. Clear Rey Mode Sho	
PCM: PCM ID Status Stored: No	
PCM: Anti-Scan Function: Disabled	
PCM: PCM Request Received: No	
PCM: Unlimited Transponder Security Key ID: 01000000	
PCM: Session: 87	
PCM: Session: 81	
PCM: PATS Security Access: Denied	
-	
J	
V Ok.	X <u>C</u> lose



8.4 PATS Key Learning

This procedure will add keys to the PATS system memory. Keys already known to the PATS system will not be erased.

Ney Learning	
Operation 🚯 Program PATS Key	4
Program PATS Key PCM: PATS Related PCM: PATS Security Access Type: Coded	Execute
PCM: Security Access: Coded PCM: Service Module: Yes PCM: Spare Key Programming: Enabled PCM: Unlimited Keys Mode: Disabled	Stop
PCM: Timed access: 480 sec PCM: PATS Security Access: In Progress PCM: PATS Number Of Keys: 3 PCM: Failsafe Status: Inactive	
PCM: Status: Disabled PCM: Master Key Present: No PCM: Clear Key Mode Status: Inactive	
PCM: PCM Verify OK: No PCM: PCM ID Status Stored: No PCM: Anti-Scan Function: Disabled PCM: PCM Request Received: No	
PCM: Unlimited Transponder Security Key ID: 01000000 PCM: Session: 87 PCM: Operational Strategy Control: Fail!	
PCM: Set Security Access Switch: Ok! PCM: Executing PATS Coded Access: AA6B5A -> 6A86 Ok! PCM: PATS Security Access: Granted	
Delay remaining 4 sec.	X <u>⊆</u> lose

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*Note: The steps to make keys when the alarm is on are as follows:

- 1. Open the car the alarm will go off (start 15 minutes countdown)
- 2. Open all car doors

3. Counting down on 12th minute the alarm will stop, the hazard lights will continue blinking

4. Wait for the hazard lights to stop blinking and this is another 3 minutes- we have 9 minutes left

5. Wait 9 minutes more and as soon as you hear the double "Beep" sound, you have 1 minute timeframe to program new keys. (You program the keys between the 15th and 16th minute.) Should the 16 minutes pass and you're still not ready, the alarm will go off again and the same method should be applied.

8.5 PATS Erase All Keys

This procedure will erased all stored keys from the PATS system memory. Once completed a minimum of 2 new keys must be programmed,

🐕 Key Learning	
Operation 🚯 Erase All PATS Keys	
FUM: PATS NUMBER OF KEYS: 3	
PCM: Failsafe Status: Inactive	<u>Execute</u>
PCM: Status: Disabled	
PCM: Master Key Present: No	STOP
PCM: Clear Key Mode Status: Inactive	Stop
PCM: PCM Verify OK: No	<u></u>
PCM: PCM ID Status Stored: No	
PCM: Anti-Scan Function: Disabled	
PCM: PCM Request Received: No	
PCM: Unlimited Transponder Security Key ID: 01000000	
PCM: Session: 87	
PCM: Operational Strategy Control: Fail!	
PCM: Set Security Access Switch: Ok!	
PCM: Executing PATS Coded Access: AAAF59 -> AE85 Ok!	
PCM: PATS Security Access: Granted	
PCM: Executing Erase All PATS Keys: Ok!	
PCM: PATS Number Of Keys: 0	
PCM: Set Service Mode: Ok!	
PCM: Security Access: Coded	
PCM: Service Module: No	
PCM: Spare Key Programming: Enabled	
PCM: Unlimited Keys Mode: Disabled	
PCM: Timed access: 480 sec	
PCM: Set Security Access Switch: Ok!	
PCM: Session: 81	
	X
₩ ОК.	Class
	Liose



8.6 PATS Initialization

This procedure is used to match the PCM to IPC (HEC) and/or BCM or FIP as appropriate. It is important that the key in the ignition is programmed to the vehicle, otherwise module initialization is not possible.

PCM - Powertrain Control Module HEC - Hybrid Electrical Cluster (instrument cluster)

FIP - Fuel Injection Pump



8.7 Spare Key Programming Enable / Disable

Enables or disables the spare key programming procedure as listed in the Owners manual.

8.8 Unlimited Key Mode Enable / Disable

Unlimited key mode is intended for use by those customers who need more than 8 keys for their vehicle.

The unlimited key mode is set up by creating a special, unique unlimited transponder security key code and programming this key code into all of the vehicle keys so they contain the same key code.

The customer must choose an 8-digit number (except for 00000000 or 00000001) to be programmed into all of their vehicles keys (or, to all of the keys they want programmed to one vehicle). All customer vehicles keys (or all keys for one vehicle) need to use the same number. Valid digits are 0-9 and the letters A-F.

If the PID UNL_KEY_ID is not available, unlimited key mode is turned on, and must be turned off

before viewing the stored code. At this time, unlimited keys may be programmed to the vehicle. To

view/change the stored code, follow the procedure for disabling the unlimited key mode below.

Monitor the PID UNL_KEY_ID and compare its value against the code chosen in Step 1. It should not be the same key code.

8.9 PATS OUT – IN code Calculator

The special function "PATS INcode Calculator" is commonly used together with Ford/Mazda IDS. Open Special Functions list control and select OutIncode Calculator icon.



Following dialog appears on the display:

Incode Calculator				
Outcode:	0044	000000	000000	Calculate
Incode:				
				Close

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Start Ford IDS and connect to the car. Follow instructions and lets IDS read vehicle data. For example let you have this IDS screen.

ID5-85.01	
Coded Access	
	_
You will be required to enter the following data into TIS.	
TIS will supply an 'Incode' for use on the following screen.	
• <u>VIN</u> :- WF0MXXGBWD1234567	
Reason For Access.:- 3	
• Part Number:- 4M5T 10849 GM	
• Serial Number:- 000020 100885	
• Outcode:- 0040 8EDB43 000000	
• Error Control:- 19844	- 🗸
	V <u>4</u> 💼

The essential here is the line:

Outcode:- 0040 8EDB43 000000

This is "SINGLE" outcode.

It is used during key erasing or programming operation.

If ECU initialization is needed. IDS returns "DOUBLE" outcode:

Outcode:- 0044 8EDB43 ABCDEF

Note that "SINGLE" outcode has xx40 in the first digits group, and "DOUBLE" outcode has xx44. Be sure that you enter xx44 (PATS Outcode Prefix) as it is provided from IDS.

Enter digits from Outcode line in the three edit boxes and press button "Calculate".

After a short time calculated INCode will appear in Incode edit box. Enter calculated value in IDS.





8.10 Vehicle Identification Data (VID) Block

VID block is a array of 128 bytes present in PCM (Powertrain Control Module) in most of Ford/Mazda models.

VID consists of are many configurable vehicle parameters:

VIN

Tyre Size

Axle Ratio

Anti-Lock Brake System

Auxiliary Cabin Heaters

Cooling Pack

Air Conditioning

Transmission

Body Type

Driveline

Speed Control

Generator

Vehicle Speed Output

Vehicle Type

Fuel Type

Octane Of Fuel

Octane Adjust / Spark Retard

Country

Go to the Special Functions screen. Select VID.

A AB	BRITES C	ommander for	Ford / Maz	da 4.3		www.abritu	s72.com					
#	All Ur	nits				Proto	col VIN	1		DTC		
82	(CDP)	Compact D	isc Play	er / Change	r Module	CAN					Ī	
85	(DABM)	Digital	Audio Bro	oadcast Mod	lule	CAN						
86	(AAM)	Audio Amp	lifier M	odule		CAN						
87	(TVM)	Televisio	n Module			CAN						Previous
89	(APIM)	Accessor	y Protoc	ol Interfac	e Module	CAN						
8A	(FEM)	Front Ent	ertainme	nt Control	Moule	CAN						
8B	(REM)	Rear Ente	rtainmen	t Control M	lodule	CAN					l I	
8C	(RACM)	Rear Aud	io Contro	ol Module		CAN						
8D	(DACMO	C) Digital	Audio Co	ontrol Modu	le C	CAN						
90	(TEL)	Telephone	Control	Module		CAN						Open
91	(TCU)	Telematic	Control	Unit Modul	.e	CAN						
92	(SPRM)	Speech R	ecogniti	on Module		CAN						
94	(ACCM)	Air Cond	itioning	Control Mo	dule	CAN						
98	(HVAC)	HVAC Con	trol Mod	ule		CAN						
99	(RHVAC	C) Rear HV	AC Contro	ol Module		CAN						Maut
9C	(SCME)	Seat Con	trol Mod	ule E		CAN						Next
9D	(SCMF)	Seat Con	trol Mod	ule F		CAN						
A0	(DDM)	Driver Fr	ont Door	Module		CAN					Ţ	
	Vehicle Sel	lection	1 B 1 Special	Functions	C Option	1 	1					
										-		
	8883	Connell	00000					КŢ)		6		
M	fileage	EEPROM	Flash	Key Learning	OutIncode	Remote	Car Audio	Injectors		Open		Options
Red	calibration				Calculator	Keyless Entry					- JI	options
	« ^{***}		27	21552	::52	2	2	5				
1. 1		- T	~	- SU	-Cli			- Children				
	VID	Powertrain	Airbag	Snapshots	Custom	Dump Tool	Test J1850 Adaptor	Full Scan	•			Exit

😂 PCM Configuration	
Binary 🕌 Parameters	2
00000000 7 46 30 35 58 57 50 44 35 35 50 30 31 32 32 WF05XXWPD55P0122 00000010 32 FF FF FF FF FF FF FF F7 F7 F7 F8 F7 50 30 31 32 32 WF05XXWPD55P0122 00000000 32 FF FF FF F7 F7 F7 F8 F7	VID Read
00000070 FF 68 9B FF FFh	Load from File
V Ok.	Close

C PCM Configuration		
Binary 🎽 Parameters		2
Parameter	Value	VID Read
VIN	WF05XXWPD55P01222	
Tyre Size	829	
Axle Ratio	3.492	
Anti-Lock Brake System	Equipped	VID Write
Auxiliary Cabin Heaters	Equipped	
Cooling Pack	North Africa / Gulf Coast Countries	
Air Conditioning	Equipped	Load from File
Transmission	Manual	
Body Type		
Driveline	Front Wheel Drive	
Speed Control		Save to File
Generator	120 Amp	
Vehicle Speed Output	Message from ABS via CAN	
Vehicle Type	Focus	
Fuel Type	Gasohol	
Octane Of Fuel	91 RON	
Octane Adjust / Spark Retard	Normal	
Country	European	
<u> • </u>	<u> </u>	
V Ok.		×
		Close

8.11 Programmable Module Installation (PMI)

Step 1

Go to the Special Functions screen. Select PMI.

A A	BRITES Co	mmander for	Ford / Maz	da 4.5		ww	vw.abritus	72.com				
#	All Un	its					Protoc	ol V	IN		DTC -	
00	(BTCM)	Battery	Control 1	Module			CAN					
00	(ESOF)	Electron	ic Shift	On the Fly	,		CAN					
00	(DSP)	Audio Dig	ital Sig	nal Process	ing Modul	le	CAN					
00	(FACP)	Front Au	dio Cont	rol Pannel			CAN					Previous
00	(CM) C	ompass Mo	dule				CAN					
00	(SOBDM) Seconda	ry OBD C	ontrol Modu	le		CAN					
07	(FCM)	Fuel Cell	Control	Module			CAN					
08	(CTCM)	Coolant	Temperat	ure Control	Module		CAN					
0B	(FACM)	Fuel Add	litive Co	ntrol Modul	.e		CAN					
0C	(BECM)	Battery	Energy Co	ontrol Modu	le		CAN					Open
0D	(PMM)	Powertrai	n Contro	l Monitor M	lodule		CAN					
0E	(SGM)	Starter /	Generat	or Control	Module		CAN					
OF	(AHCM)	Auxiliar	y Heater	Control Mo	dule		CAN					
OF	(FFH)	Fuel Fire	d Coolan	t Heating M	lodule		K-Line					
10	(PCM)	Powertrai	n Contro	l Module			CAN					Neut
10	(PCM)	Powertrai	n Contro	l Module			K-Line					Next
11	(SPCM)	Secondar	y Powert:	rain Contro	l Module		CAN					
15	(CCM)	Cruise Co	ntrol Mo	dule			CAN					
	(2.500)		·	<u> </u>	1 1			i				
-	Vehicle Sele	etion	👔 👔 Specia	Functions	🔯 Option	ns						
	8883	Cappin	Carpen						C	-	$\boldsymbol{\varsigma}$	
l p	Vileage	FEPBOM	Flash	Keul eaming	OutIncode	B	emot	Car Audio	n Injectors		Open	v -
Re	calibration			,	Calculator	Keyl	ess Entry					Options
	1 ⁻²⁵ -0			01601				01001	2			
	الس	≤≤ =	X	251	251))	7	250	<u> </u>			0
L	VID	Powertrain	Airbag	Snapshots 🔪	РМІ	Se Fur	ervice nctions	Custom	Dump Tool	J		Exit

Following Dialog Appears. Select ECU from combobox.

1 (PMI) Programm	nable Module Install	ation			
🐕 ECU	🔒 As Built	🔐 Parameter	Hex 👔		Read
👔 0x60 (IPC	C) Instrument Pa	anel Cluster Contro	I Module	•	\$
					Write
					Coad As-Built Data
					Save As-Built Data
11					×
~					Close

If the original ECU is available, you can read PMI data. Use "Read" button.

Step 4

If the original ECU is not available, you can obtain vehicle PMI data from Motorcraft website. Connect to internet and open online form Motorcraft website:

https://www.motorcraftservice.com/AsBuilt

Enter the VIN in the box and press "Submit" button at the bottom.



The "Module Reprogramming" page will open with the "VIN" and "Vehicle Data" at the top. Below this are two columns, the one on the left is PCM data and the one on the right is BCE data. Only programmable modules available in that vehicle will be listed under BCE Modules. Some modules may have more than one line of data.

If a module is not listed, then it is not a programmable module.

Module Reprogramming

```
VIN: WF0WXXGCDW5B01234
Vehicle Data: 3735 FFFF FF69
```

click here if module data required is not available below.

PCM Module	BCE Modules	TSB SSM Instructions
PCM 1 FFFF FFFF 0310	720-01-01 COC0 1152	0C
PCM 2 410D A4FF FF02	720-02-01 5757 5757 5	57DD
PCM 3 7841 FFFF FFC9	720-03-01 5746 3057 5	58A7
PCM 4 FFFF FF26 265D	720-03-02 5847 4344 5	57A9
PCM 5 2020 3727 FFB2	720-03-03 3542 3031 3	3237
PCM 6 FFFF FFFF FF11	720-03-04 3334 95	
PCM 7 FFFF FFFF FF12		
PCM 8 FFFF FFFF FF13	726-01-01 640C 50FE	ED
PCM 9 FFFF FFFF FF14	726-02-01 2704 308B	
	727-01-01 0203 083D	
	730-01-01 5 746 3057 5	5885
	736-01-01 5746 3057 5	58BB
	741-01-01 5746 3057 5	38C6
	760-01-01 5746 3057 5	58E5
	760-01-02 5847 4344 5	57E7
	760-01-03 3542 3031 3	3275
	760-01-04 3334 D3	
	760-02-01 006A	

End of As Built information

Find data for desired ECU by ID.

Enter As-Built vehicle data in diagnostics.

Note that you must enter data without leading spaces, one entry per line.



Another view format.

Here you can see whole PMI data block.

Double-click on data block to see and edit it in binary editor.

🎁 (PMI) Progra	mmable Module Installation	
沿 ECU	🚰 As Built 🚰 Parameter 🚰 Hex	 2
Param	Value	Read
720-00-	C0C01142	
720-01-	575B57575B	- S -
720-02-	5746305758584743445735423031303236	Write
		Coad As-Built Data
		Save As-Built Data
V Ok.		X Close



If needed edit As Built data before writing.

🎁 (PMI) Programmab	le Module Installatio	pn			
🐕 ECU	🚹 As Built	🔒 Parameter	Hex		2
00000000 9 7 46 00000010 36	As Built	47 43 44 57 35	42 30 31 3 3 3 Y	WF0WXXGCDW5B0	Read
Ck.				P	× Close

Turn Ignition OFF and properly connect new ECU. Use "Write" button to enter data in newly installed ECU.

Step 10

During the write process, automatic backup of PMI data is performed. If something going wrong, you can find backup PMI file in AVDI log folder. PMI backup files have format "Backup_yyyymmdd_hh.mm.ss.pmi". Use "Load" and "Write" buttons to restore data.

8.12 Fuel Injector Programming (TDCi Engines)

Fuel Injector Correction Factors

There are 3 common situations that demand this function.

- After Injector replacement.
- Fuel Injection system calibration

- Drivability problems like Lack of power, Black smoke and the presence of DTC's P2336, P2337, P2338 can often be fixed by re-entering the existing 4 injector codes. Support for more than 4 injectors has been added.

Note:

- On earlier model years (pre-2003) it is not possible to read the actual injector codes.

- It is important to check the codes carefully before entering them.

- After entering an injector code the fuel system will initially run without any pilot injector sequence. The car must be driven for a few kilometers.

Engine Type: Duratorq-Turbo Diesel Common Rail Injection

Capacity: 1.6L

Implement this service function if a new fuel injector has been installed.

Each injector has an individual 9 digit code called an injector correction factor.

This code applies individual compensation for each injector as a means of reducing the fuel delivery tolerance.

Perform this procedure to enter the required injector correction factor.

The injector correction factor is located on the head of the injector.

The injector correction factor is 8 digits long.

Ignore the last digit of the 9 digit code printed on the fuel injector.

Enter the injector correction factors in cylinder order.

To update or enter a new code, select the required injector and enter the relevant 8 digit code.

Enter all of the required codes, then press the return key displayed on the screen.

Engine Type: Duratorq-Turbo Diesel Common Rail Injection Capacity: 1.8L Capacity: 2.0L

The data required for each injector can be found on the injector body. It consists of 16 characters - numbers and letters. If you are certain that the original injectors are still fitted to the engine, you may find the data on a lebel on the engine.

Engine Type: Duratorq-Turbo Diesel Common Rail Injection Capacity: 2.2L Capacity: 2.4L

Capacity: 3.2L

Carry out this procedure if the Fuel Injector has been replaced:

Each injector has an individual 16 digit code called an injector correction factor.

This code applies individual compensation for each injector as a means of reducing the fuel delivery tolerance.

Perform this procedure to enter the required injector correction factor.

The injector correction factor is located on the injector body.

To update or enter a new code, select the required injector and enter the relevant 16 digit code.

Enter all of the required codes, then press the return key displayed on the screen.

If a label listing the injector code is still present (on top of the engine), remove it.

Information on the label is no longer correct and could mislead other service technicians

The Pilot Correction Learn procedure must now be performed

Engine Type: Duratorq-Turbo Diesel Common Rail Injection

Capacity: 2.2L

Perform this procedure if the following new component has been installed: Fuel Injector Each injector has an individual 6 digit code called an injector correction factor. This code applies individual compensation for each injector as a means of reducing the fuel delivery tolerance. Perform this procedure to enter the required injector correction factor. The injector correction factor is located on the injector body. Enter the injector correction factors in cylinder order. To update or enter a new code, select the required injector and enter the relevant code. Enter all of the required codes, then press the return key displayed on the screen.

Engine Type: Duratorq-Turbo Diesel Common Rail Injection StgV

Capacity: 2.0L

Perform this procedure if the following new component has been installed: Fuel Injector Each

injector has an individual 20 digit code called an injector correction factor. This code applies individual compensation for each injector as a means of reducing the fuel delivery tolerance. Perform this procedure to enter the required injector correction factor. The injector correction factor is located on the injector body. Enter the injector correction factors in cylinder order. To update or enter a new code, select the required injector and enter the relevant code. Enter all of the required codes, then press the return key displayed on the screen.

This function is required by service centres when an Injector needs to be replaced, or there is a driveability problem.

For 1.6 TDCi engines the each injector has an 8-digit calibration code stamped on the body.

For 1.8, 2.0, 2.2 and 2.4 TDCi engines the each injector has a 16-digit calibration code stamped on the body.

These codes relate to the electrical and structural characteristics of each injector, which are defined during production. The PCM must know the calibration codes for each injector in order to treat and operate the injectors in the correct manner. This helps to reduce emissions and improve performance. The code must be programmed in by communicating and downloading the code into the PCMs memory.

There are three common situations which demand this function.

- 1. After Injector replacement.
- 2. Fuel injection system 'calibration'.
- 3. To cure drivability problems. Lack of power, black smoke and the presence of DTC's:
- P2336 Cylinder 1 Above Knock Threshold
- P2337 Cylinder 2 Above Knock Threshold
- P2338 Cylinder 3 Above Knock Threshold
- P2339 Cylinder 4 Above Knock Threshold
- can often be fixed by re-entering the existing 4 injector codes.

Fuel Injectors Programming is used on the following vehicles:

Model	Engine	MY	•
Fiesta	1.6 TDCi	2004 -	
Focus	1.8 TDCi	2001 - 2005	FFDA/F9DA/F9DB
Focus	2.0 TDCi	2001 - 2005	FIFA
Focus (new shape)	1.6 TDCi	2005 -	
Focus C-Max	1.6 TDCi	2005 -	
Mondeo	2.0 TDCi	2000 - 2006	HJBA/HJBB/HJBC/FMBA/N7BA
Mondeo	2.2 TDCi	2005 - 2006	
Transit	2.0 TDCi	2000 - 2005	
Transit	2.4 TDCi	2000 - 2005	H9FA

Transit Connect	1.8 TDCi	2002 - 2006	
-----------------	----------	-------------	--

NOTE:

On earlier model years (approx pre-2003) it is not possible to read the actual injector codes. On these vehicles you will see '00 00 00 00 00 00 00 00' or 'FF FF in a mixture.
After entering an injector code the fuel system will initially run without any pilot injection sequence. The car must be driven for a few miles to correct this. The codes of the ORIGINAL injectors fitted to vehicle can be found on a label, which is fitted to the side of the engine or on the engine rocker top (if it has not yet been removed).

The codes of the ORIGINAL injectors fitted to vehicle can be found on a label, which is fitted to the side of the engine or on the engine rocker top (if it has not yet been removed).

The codes on the label are in the following format:

(1&2)	X1111111122222222X
(3&4) X333333344444444X	

Where:

11111111 is the code for injector 1,22222222 is the code for injector 2,333333333 is the code for injector 3,44444444 is the code for injector 4.NOTE:The injectors are in the physical order, NOT firing order.

When replacing an Injector the code stamped on the body of the new Injector must be programmed into the PCM, NOT the code on the label.

Duratorq-Turbo Diesel Common Rail Injection 2.4L Carry out this procedure if the following component has been replaced: Fuel Injector Each injector has an individual 16 digit code called an injector correction factor. This code applies individual compensation for each injector as a means of reducing the fuel delivery tolerance. Perform this procedure to enter the required injector correction factor. The injector correction factor is located on the injector body. To update or enter a new code, select the required injector and enter the relevant 16 digit code. Enter all of the required codes, then press the return key displayed on the screen.

WARNING:

Before attempting Injector Programming it is necessary for the vehicle to be left stationary with the Engine off for at least 8 hours. This is to ensure that the engine is stone cold before Injector Programming is performed. Failure to follow these instructions may result in failure of the Injector Programming function and/or drivability problems.

n



😂 Fuel Injectors		
	Injector 1 Cylynder 1	
	4C3DB9D7247CF31D	2
	· · ·	Read
	Injector 2 Cylynder 3	
	61C03C097FAC46B2	
	Injector 3 Cylynder 4	Write
	525182E2EE859F7D	
	Injector 4 Cylynder 2	✓
	E76EF0C102CA8A07	
		×
Delphi		Close



😂 Fuel Injectors					
	Injector	1	Cylynder 1		
			9CC452AA	•	🤣 📗
				-	Read
	Injector	2	Cylynder 3	_	
			6F8656AD		6
				-	S
	Injector	3	Cylynder 4	_	Write
			0C7DF21B	•	
	Injector	4	Cylynder 2	_	\checkmark
			02E48BB5		
					×
Bosch					Close



Remote Keyless Entry

Go to the Special Functions screen. Select Remote Keyless Entry.



Following Dialog Appears

RKE Program	
Slot #1 Program	
Number Of Known Keys: 0	
Read Close	

Turn ignition OFF and press button "Read" to get number of programmed smart keys. Press button "Erase" to erase all of programmed smart keys.

Press button "Program" to program 1 smart key. You will be prompted to remove Key Cover and to place the key in emergency slot in the steering column shroud All of smart key operations must be performed while ignition is OFF.

Ford Mondeo 2016 for an exaple and other models have the following Emergency Key slot position:



Manual reprogram a remote transmitter.

The following procedure has to be used to program the remote control key.

- 1. Turn ignition from OFF to RUN 4 times within 6 seconds with the 4-th time ending in OFF.
- 2. The system will chime to confirm programming mode entry.
- 3. Press any button on the first remote transmitter.
- 4.System will chime to confirm programming.

5.Repeat steps 2 and 4 for all subsequent remote transmitters.

6. Turn ignition to the RUN position to exit the programming mode.

Note:

- All keyfobs for the vehicle must be programmed at the same time. Any of the keyfobs which are not programmed during this procedure will no longer function.

- Up to 4 transmitters can be programmed.

Note: After programming Smart keys in Mazda, you may experience the "**Keyless System Inspection Required**" error message on the dash. This happens when keys that are intended for Mazda3, Mazda6 are programmed on Mazda CX3 and CX5 and vice versa. The only solution is to erase all Smart Keys and use the correct keys for the model. If there is even one wrong key programmed, the same error will show up. It has no effect on the overall performance of the car:



8.13 Dump Tool

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 on 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. For the airbag units the option clear crash data is available. You can modify them by clicking on the parameter value. When complete with modifications click on the OK button. The dump data will be updated accordingly. All necessary check sums will be regenerated.

9. Service Functions

• Powertrain Control Module (PCM)

Reset Keep Alive Memory (KAM)

This procedure will reset the Learned Values stored in the Powertrain Control Module (PCM) such as idle and fuel.

Reset the Diesel Particulate Filter (DPF) Learned Values

This procedure must be carried out if a new diesel particulate filter is installed

The powertrain control module will continually learn the characteristics of certain components over time. There may be differences in the characteristics from the old and new components which will result in differences in the learned values. If a new component is installed the difference in learned values may result in poor driveability or set a diagnostic trouble code. This service function will reset the learned values of the old component. The learning process of the new component may occur immediately or over a number of drive cycles.

Reset the Water in Fuel (WIF) Warning Indicator

Execute this procedure only if water is detected in the fuel. After performing this procedure the WIF warning indicator is extinguished.

Reset the Knock Sensor Learned Values

Execute this procedure only if a full set of replacement injectors has been fitted. The engine must not be running.

Reset the Fuel Metering Valve Learned Values

Execute this procedure if High Pressure Fuel Pump has been renewed.

The engine must not be running.

Reset the Intake Air Throttle Valve Learned Values

Execute this procedure if Intake Air Throttle Valve has been installed.

Reset the Exhaust Gas Recirculation (EGR) Valve Learned Values

Execute this service function if a new exhaust gas recirculation valve has been Installed.

Reset the Differential Pressure Sensor Learned Values

This procedure will return the learned values back to the nominal settings.

Reset the High Pressure Fuel System Learned Values

This service function must be performed if any new components associated with the high pressure fuel pressure system have been installed.

The powertrain control module will continually learn the characteristics of certain components over time. There may be differences in the characteristics from the old and new components which will result in differences in the learned values. If a new component is installed the difference in learned values may result in poor driveability or set a diagnostic trouble code. This service function will reset the learned values of the old component. The learning process of the new component may occur immediately or over a number of drive cycles.

Fuel Injector Correction Factors

Execute this procedure if a Fuel Injector has been replaced.

Relearn Vehicle Data

Execute this procedure to force a previously configured PCM to relearn new configuration data from BCM.

Reset the Mass Air Flow (MAF) Sensor Learned Values

Execute this service function if a new mass air flow sensor has been installed.

Reset the Fuel Pressure Relief Valve Open Count Learned Value

This procedure clears the counters that store the total number of times the fuel rail pressure relief valve has opened.

Reset the Fuel Pressure Relief Valve Open Duration Learned Value

This procedure clears the counters that store the total time the fuel rail pressure relief valve has opened.

Speed Limiter

This procedure sets maximum vehicle speed.

• Transmission Control Module (TCM)

Resolving the U2300 DTC in Ford/Mazda cars

1. Open the ABS Unit and check if the DTC is present:



2. Enter the "Service Functions" menu:



3.Enter the "Allow Central Configuration data parameter (CDP) Learning Menu:



4. Execute the "Reset ECU Central Configuration State/ Data to Not Configured" function

Mazda / 2012 / Mazda CX-5/ 2.0 PE SkyActiv-G - Service Functions	_ <u>_ </u> _ ×
Special Ignition ON	5
ABS Brake Fluid Pressure Sensor	<u>E</u> xecute
ABS Yaw rate sensor	
ABS TPMS Reset	
Allow Central Configuration Data Parameter (CDP) Learning	
Reset ECU Central Configuration State/Data To Not Configured	
SBS/MRCC System initialize	
BSM Radar Test	
BSM Radar Test	
Allow Central Configuration Data Parameter (CDP) Learning	
Reset ECU Central Configuration State/Data To Not Configured	
\checkmark	×
	Close

• Body Control Module (BCM)

• Set Vehicle Power Mode

This application enables the setting of the vehicle power mode.

• Restraints Control Module (RCM)

Clear Restraint Control Module (RCM) Crash Data Memory

This routine will clear the crash data memory in the Restraints Control Module.

Restraints Control Module (RCM) Module Central Car Configuration (CCC) Update

Carry this procedure out if RCM module has been replaced

Tyre pressure measurement system sensors

Ford Focus and C-Max very often have an issue with the Tyre pressure measurement system sensors

that get defective and display an error. There are different types of sensors and people often use a 2nd

set of tyres that have no sensors. The photo below shows the error on the dash on a 2016 Focus:



The issue does not affect the overall driveability of the car, but according to the European regulations, all cars must have these sensors. It is up to the owner of the vehicle whether he will fix the error with replacing the sensors or put tyres without the sensors and clearing the warning.

The function requires the user to enter the CenralCarConfiguration menu and set the parameter value to 100. The module in the list is named "Tyre pressure mode system".

Passenger Air Bag Deactivation (PAD) Switch Activation

The following procedure will activate/deactivate the passenger air bag switch.

10. Ford OBD-II diagnostic interface pinout and wiring

16 pin J1962 OBD-2 car proprietary connector at the Ford car.



Diagnostic interface for all model Ford vehicles.

Pin	Signal	Description
1		
2	J1850 PWM Bus+	
3	LS CAN High	Low speed (125Kb) CAN bus or UBP.
4	CGND	Chassis ground
5	SGND	Signal ground
6	HS CAN High	High speed (500 Kb) CAN bus.
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
8		
9		
10	J1850 PWM Bus-	
11	LS CAN Low	Low speed (125Kb) CAN bus.
12		
13	FEPS	Flash EEPROM Program Signal. +18V
14	HS CAN Low	High speed (500 Kb) CAN bus.
15		
16	+12V	Battery power

Interfaces used:

1996 - 2004 : ISO 9141 1996 - 2007 : UBP 1996 - 2001 : J1850-PWM only 2002 - 2006 : J1850-PWM or CAN

after 2006 : CAN

11. Troubleshooting

Below you can find a list of typical problems and how to solve them:

Problem:

When starting the "ABRITES diagnostics for Ford/Mazda" a message box with the text "Connection Error: Interface not connected!" appear:

Solution:

- Be sure that the USB interface drivers are installed properly. You can look at the device manager, the USB interface should appear as "USB Serial Port (COMxx)" where "xx" is the number of the port.

- Try to reconnect the USB connector of the interface
- Try to reconnect the OBD2 connector of the interface
- Be sure that the interface is connected with the car properly

12. Abbreviations

- CAN Controller Area Network
- **DTC** Diagnostic Trouble Code
- ECM Engine Control Module
- ECU Electronic Control Unit
- IPC Instrument Panel Cluster
- TCM Transmission Control Module
- SLM Shift Lever Module
- **TPMS** Tire Pressure Monitoring System
- ACC Adaptive Cruise Control
- TC Traction Control
- ESP Electronic Stability Program
- **EPS** Electro Power Steering
- EHPS Electro Hydraulic Power Steering
- SAS Steering Angle Sensor
- SADS Semi Active Damping System
- CIM Column Integrated Module
- BCM Body Control Module
- PATS Passive Anti Theft System.
- **DLC** Data Link Connector
- PCM Powertrain Control Module
- **KOEO** Key ON Engine OFF Test
- **KOER** Key ON Engine Running Test
- **RKE** Remote Keyless Entry