FORScan forum

Software scanner for Ford, Mazda, Lincoln, Mercury vehicles

How to program PATS using FORScan v2.3.*

How to program PATS using FORScan v2.3.*

📄 by **FORScan** » Wed Jan 07, 2015 11:33 am

FORScan
Site Admin

Posts: 2748
Joined: Fri Jun 13, 2014 2:21 am

Updated 2017-03-27 (FORScan v2.3.8) - added built-in outcode/incode calculator for pre-2011 PATS

This article describes PATS programming procedure. The article is actual for version 2.3.8 (PATS programming is implemented for Ford, Mazda, Lincoln and Mercury models approximately of 1997-2011 model year, depends on model and market). If PATS programming functions is not available in the list of service functions, it means it is not implemented for this model. If the PATS programming function is available in the Service chapter, it is implemented for this model and must work in full.

There are 2 types of secure access: coded and timed. Coded requires an incode generation by the outcode provided by vehicle. Timed access requires that operator has wait for some period of time (usually 10 minutes) with diagnostic tester connected. Some vehicles support only coded access, some only timed access, some support both. FORScan supports all of these options. If both access types are available, FORScan asks user to select the preferred one. Coded access can be done fast, but requires incode/outcode calculator. Timed access doesn't require any code exchange, but requires signfficant timeframe (at least 10 mins). Module Initialization option (available for some models) may require special Dual coded access. Detailed information about Module Initialization function is available in this article: http://forscan.org/forum/viewtopic.php?f=6&t=1500

So, what do you need in order to program PATS using FORScan:

1. Extended license (http://forscan.org/forum/viewtopic.php?f=5&t=836)
2. At least one valid ignition key (master key) that is known by PATS, except the case when all keys are erased from the PATS memory

Let's review a use case for the following scenario: a vehicle supports coded access. PATS knows 2 master keys, but the owner has only 1 of them. The owner wants to erase the lost key from the PATS memory and program new one (for this purpose a blank key is purchased). There is no way to delete a single key, only all known keys can be erased. So the user has to perform the operation in 2 steps: remove all keys known by PATS and program the old key and the new key. Here we go:
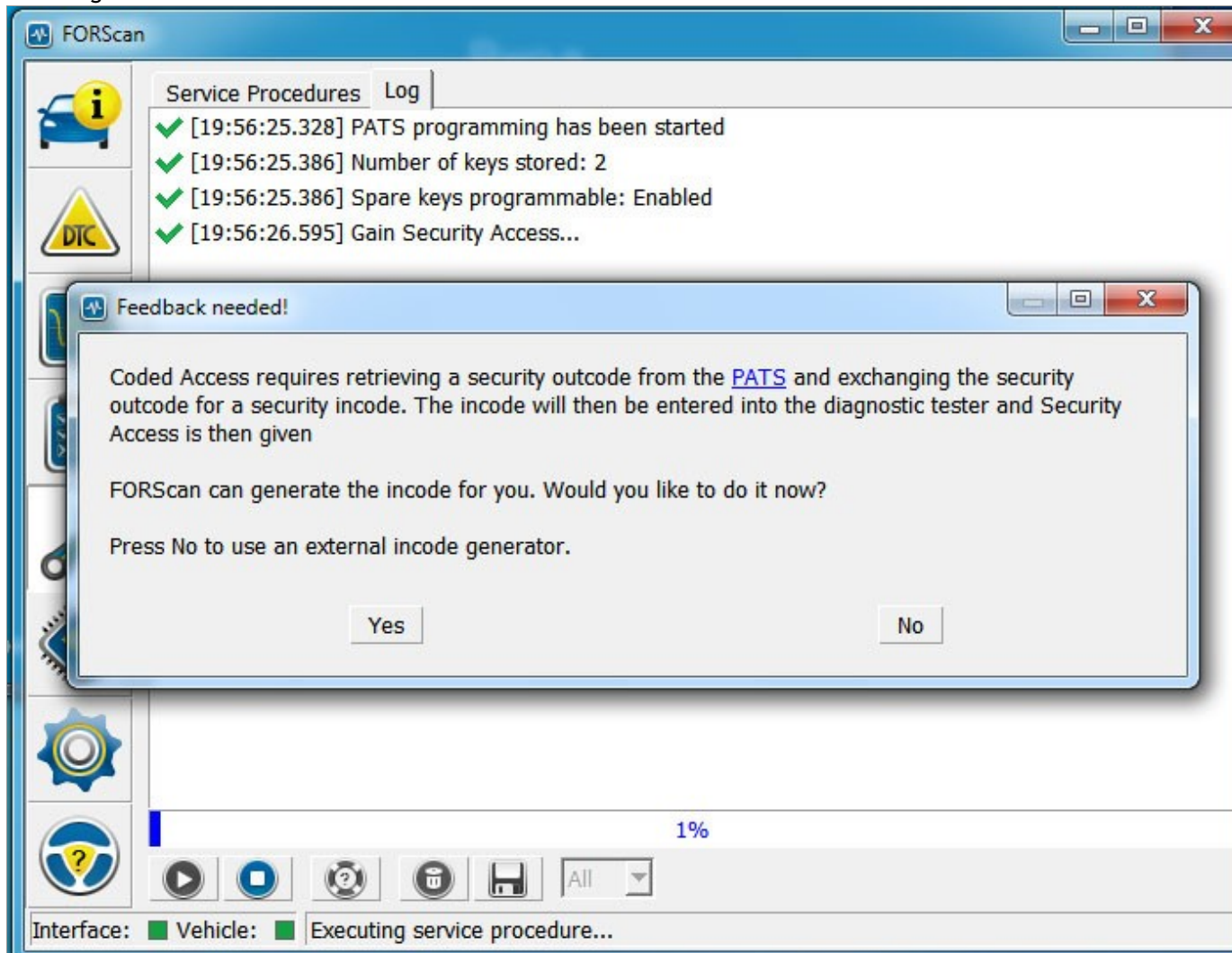
- Run the procedure. We see that PATS knows 2 keys:
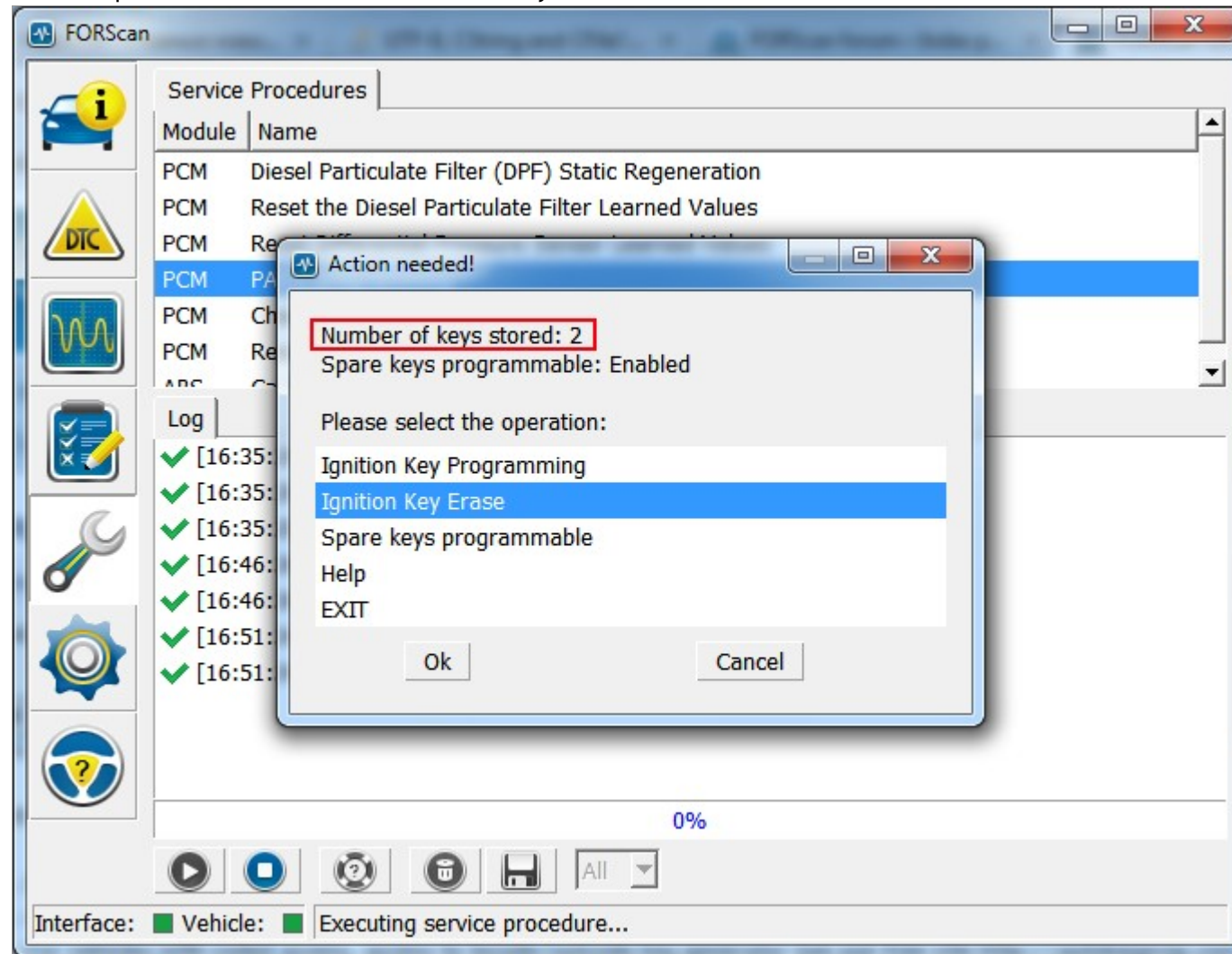
PATS1_en.png (97.31 KiB) Viewed 274295 times

- Select the Ignition Keys Erase option. FORScan will read outcode and suggest you to generate an incode using the

built-in generator:

Feedback needed!

Coded Access requires retrieving a security outcode from the PATS and exchanging the security outcode for a security incode. The incode will then be entered into the diagnostic tester and Security Access is then given

FORScan can generate the incode for you. Would you like to do it now?

Press No to use an external incode generator.

[Yes]   [No]

PATS_calculator.jpg (134.4 KiB) Viewed 227303 times

You can accept and generate incode using built-in generator, or refuse and use an external incode generator. In this case FORScan will show you the outcode and ask to enter the incode:
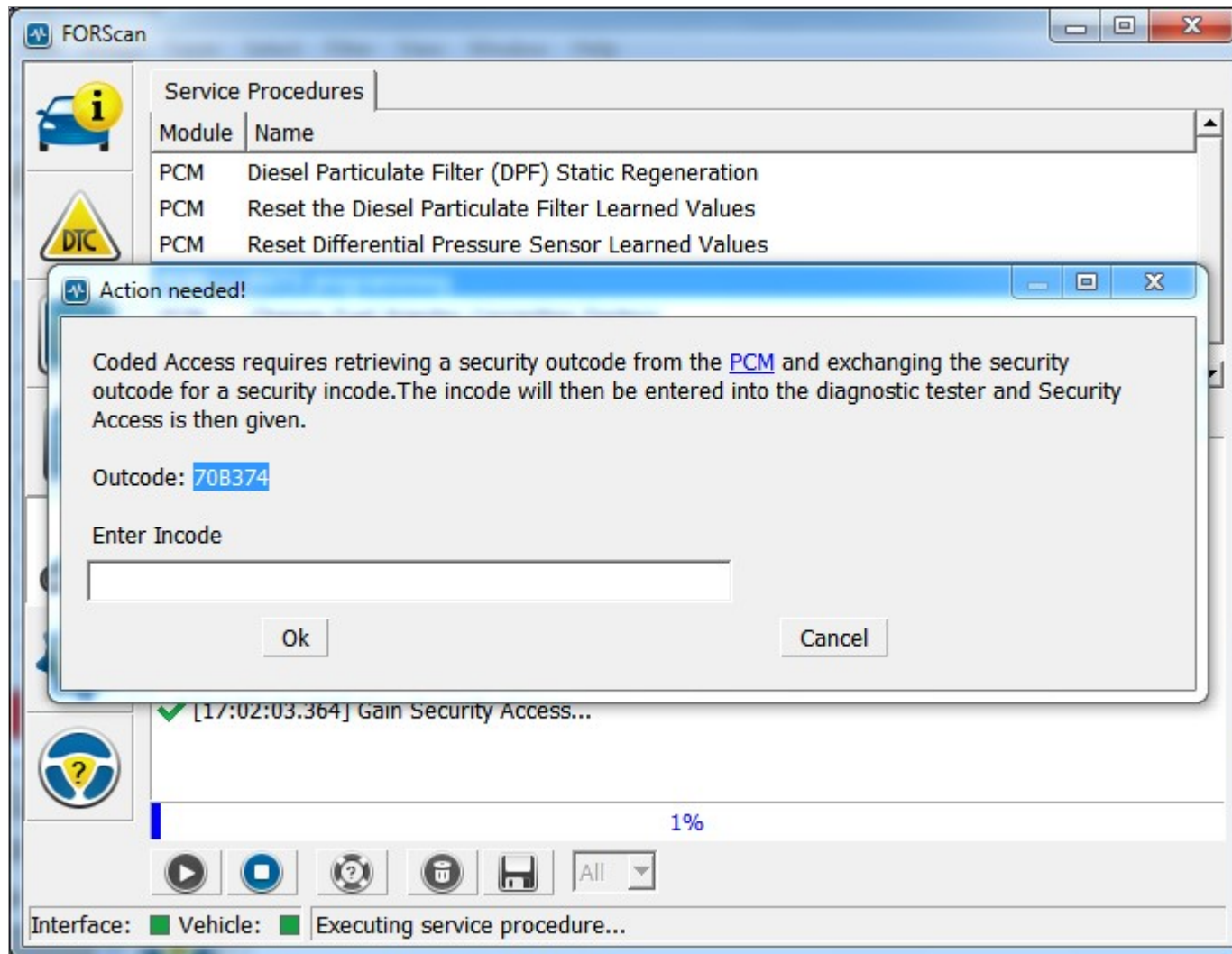
PATS2_en.png (74.11 KiB) Viewed 274294 times

You can use an external service, for example autokeyprog.com to generate the incode:

PATS3_en.png (26.33 KiB) Viewed 274295 times

If incode is accepted by PATS and if everything is OK, FORScan will request confirmation on the Erase operation. If confirmed, the operation is executed and user is returned back to the main menu. User should see now zero keys known by PATS.

It is important to do not Exit from the menu, otherwise the security access will be lost, and user will have to obtain the coded/timed access again.

- Now, user should program 2 keys. For this purpose the Ignition Key Programming option must be used. User will be suggested to program the key:

FORScan

Service Procedures

Module	Name
PCM	Diesel Particulate Filter (DPF) Static Regeneration
PCM	Reset the Diesel Particulate Filter Learned Values

Action needed!

⚠ Ignition Key Programming

Security Access may be lost if the following actions are not completed in 10 seconds. The time starts as the ignition is switched off.

- Set ignition switch to OFF (Position 0).

- Insert a new key into the ignition

- Set the ignition switch to ON.

and press OK

Ok

✔ [17:16:40.000] Spare keys programmable: Enabled

0%

All

Interface: ■ Vehicle: ■ Executing service procedure...

- User should follow the instruction displayed by FORScan, so turn the ignition key to OFF, then back to ON and click OK. FORScan will confirm the operation and ask to turn on/off again.
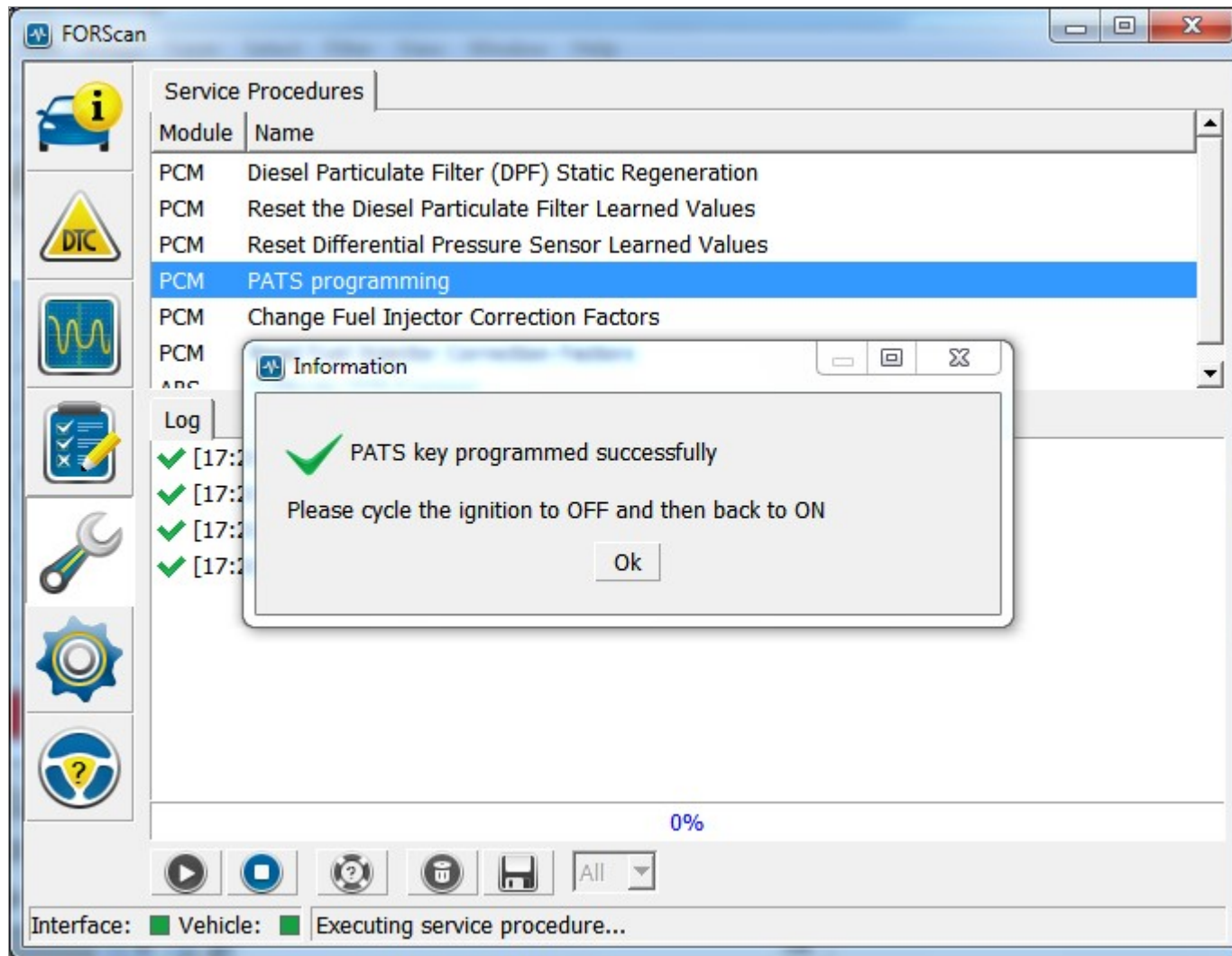
PATS5_en.png (78.96 KiB) Viewed 274294 times

It is important to leave the programmed key in the ignition lock, because number of known keys is non-zero and FORScan will look for a master key.

- program the second key in the same way, except that when FORScan asks to insert new key, the first key has to be removed and the second key has to be inserted.

- When returned back to the main menu, user should see 2 known keys again. But this time these 2 keys are in hands.

Note: some models for Australian and American markets have no stand-alone Ignition Key programming function. The

function is available in the PATS menu but PATS doesn't support it. So on these models it is not possible to add a key to th PATS memory. The only way is to use Erase and Program keys function (added in FORScan v2.2.5). This function erases all keys and switches PATS to a special learning mode. In this mode user can program 2 keys one by one.

We also recommend to read this article to study Module Initialization procedure and use cases:
http://forscan.org/forum/viewtopic.php?f=6&t=1500

WARNING:
Experience shows that 90% of problems with using this function are caused by blank key problems (not-original/china clone, incompatible transponder etc). Consdering this experiene, it must be counted that the Erase function is potentially dangerous, because **engine will not start until you program at least 2 keys**. So it is **STRONGLY RECOMMENDED** to check the blank keys (and correct work of the program with your specific vehicle) before executing the Erase function. Just programm it as the 3rd key and if it has been programmed successfully and engine runs using this key, you may execute the Erase function.

Here is a dedicated article about how to check the blank PATS key:

http://forscan.org/forum/viewtopic.php?f=6&t=1581

Re: How to program PATS using FORScan v2.2.*

by **Wod** » Mon Apr 11, 2016 3:21 pm

Good information!
I'm wandering if Forscan will perform this on my brother fiesta st150 2005 as he only has one key?
I'm slightly confused as it states programming blank keys,
Does this mean the original working key cannot be resused?

Also wondering if the key has to be blank, I.e is a second hand key programmable?
Many thanks
Good work!

Wod

Posts: 16
Joined: Mon Jan 12, 2015 5:04 pm
Vehicle: Ford Fiesta 1.6 tdci

Re: How to program PATS using FORScan v2.2.*

by **jar17** » Mon Apr 18, 2016 3:29 pm

Hi, I used this module to review a Fiesta mk5 (Ford Fiesta Zetec RoCam 1.6L 2009 MY), that had the PCM locked with the code DTC **P1260** because it had two other codes **B2139** and **B1600**, did not know that one of the keys was damaged, the transponder key had communication failures betwen the PCM and the PATS this asset.

jar17

Posts: 2
Joined: Thu Nov 19, 2015 3:02 pm
Vehicle: Fiesta 1.6L Zetec Rocam 94HP 2009

The DTC B1600 code (No PATS key read by the PATS control) was the cause of the failure, so it had to determine whether the fault was not sent transceiver information, the key with transponder damaged or PCM had PATS problems. In testing it was determined that the fault was the key. I tried with other unprogramed key in the PATS and it generated code DTC **B1601**, checking every thing in PATS module was ok.

Using FORScan v2.3.0 with PATS programing module, I tried to delete memoriezed keys but it show me an error:

(OK) [19:42:43.982] Número de llaves memorizadas: 2
(OK) [19:42:43.983] Llaves de repuesto programables: Desactivado
(OK) [19:42:51.812] Entrar a acceso de seguridad...
(ERR) [19:43:41.417] Module returns incorrect outcode. It means the module is out of normal state.
(ERR) [19:43:41.418] Recommendations:
- Make sure there are no wire/connection problems between modules
- Try to reset module using service function "Module Reset" (if available), or by disconnecting the battery for 20-30 minutes
- Try timed access (if available)

Wire/connection betwen module was checked then I started the inicialization module:

(OK) [19:48:28.959] Programacion del PATS se ha iniciado
(OK) [19:48:29.106] Número de llaves memorizadas: 2
(OK) [19:48:29.107] Llaves de repuesto programables: Desactivado
(OK) [19:48:44.107] Por favor, espere...15 segundos
(OK) [19:49:08.302] Entrar a acceso de seguridad...
(OK) [19:51:12.309] Acceso de seguridad concedido
(WARN) [19:51:12.319] Inicializacion del modulo. Por favor, espere...
(OK) [19:51:20.806] Por favor, espere...15 segundos
(WARN) [19:51:47.322] La inicializacion del modulo no esta completa
(OK) [19:52:09.456] Por favor, espere...15 segundos
(WARN) [19:52:34.458] La inicializacion del modulo no esta completa
(OK) [19:54:39.615] Por favor, espere...15 segundos
(WARN) [19:55:05.885] La inicializacion del modulo no esta completa
(OK) [19:55:56.294] Por favor, espere...15 segundos
(OK) [19:56:24.627] La inicializacion del modulo del PATS ha terminado

After that PCM was unblocked and car started.
Thanks FORScan Team!!
Excelent tool

Re: How to program PATS using FORScan v2.2.*

by **capriceclassic1** » Sat Jun 18, 2016 10:55 am

I was successful at programming my 2001 Mercury Grand Marquis keys! Worked great! Thank you FORScan.

capriceclassic1

Posts: 5
Joined: Sat Jun 18, 2016 1:17 am
Vehicle: 2001 Mercury Grand Marquis 4.6L engine

Re: How to program PATS using FORScan v2.2.*

by **Stevecvo** » Sun Jun 26, 2016 10:56 am

I am new to FORScan but have experience with BMW diagnostics and coding programmes. I need to use FORScan because I have lost the original key to my car and the spare has stopped working due to a transponder fault. The car is a Portuguese registered 1999 Ford Puma 1.4 LHD. I have the special licence but when I open the PATS programming I get the warning message with options of OK or Cancel. If I press OK the service procedure is shown as interrupted and if I press cancel the procedure is cancelled. Am I doing something wrong? How to I get the PATS programming to proceed? Any advice gratefully received.

Stevecvo

Posts: 5
Joined: Wed Jun 22, 2016 1:25 pm
Vehicle: Ford Puma 1.4 1999

Re: How to program PATS using FORScan v2.2.*

by **cr08** » Sat Oct 01, 2016 1:38 am

Just wanted to say thanks for the great program and saving me a boatload of money. Got a North American Ford Focus, 2007. I've only ever had one key since I've owned it and been putting off getting spares due to the programming needed. Finally broke down and bought 2 extra keys off Amazon: https://www.amazon.com/gp/product/B00KH ... =UTF8&th=1 . Confirmed via the DTC method that they showed up for the PATS module. What surprised me from reading some other posts is my car allowed coded access which saved a lot of time and headache not having to wait on the timed access method. Once I was in it was straightforward to erase and get the initial 2 keys programmed and then the third I was able to do using the key cycle method. Confirmed all 3 were able to start the car no problem.

All in about $25 for the 2 keys (Spent a little extra to overnight them even with my Prime sub), around $3 at the local hardware store to cut them both, and the $13 ELM327 BT adapter I had on hand.

cr08

Posts: 3
Joined: Mon Jul 28, 2014 12:01 pm
Vehicle: US 2007 Ford Focus 2.0 Duratec

Re: How to program PATS using FORScan v2.2.*

by **rez2981** » Mon Oct 10, 2016 7:13 pm

autokeyprog.com still a valid website as of 10/10/2016? thanks

rez2981

Posts: 2
Joined: Sat Oct 08, 2016 3:56 pm
Vehicle: 2006 Taurus SE 3.0

Re: How to program PATS using FORScan v2.2.*

by **pearlydougy** » Sun Oct 16, 2016 11:00 am

Hi; i have never used this pats option, but i would like to say "BIG THANKS" to forscan in order to have this possibility to users. Sincerely many many thanks. It's a poweful tool. I have already an obdlink sx, but no mscan option; so I have just ordered a ford modified elm; do you think that interace from james simpson will be good for me? 100000000000000000000 thanks for that.

pearlydougy

Posts: 6
Joined: Sat Oct 15, 2016 1:57 pm
Vehicle: FocST2.5MK2

Re: How to program PATS using FORScan v2.2.*

by **king kong** » Sat Oct 22, 2016 8:55 pm

> **rez2981 wrote:**
> autokeyprog.com still a valid website as of 10/10/2016? thanks

Yes it is valid

king kong

Posts: 8
Joined: Mon Oct 26, 2015 3:35 pm
Vehicle: Ford 1.8 tdci

Re: How to program PATS using FORScan v2.2.*

by **sorinj80** » Thu Oct 27, 2016 3:08 pm

Hello everyone, the program works well for keys and module initialization. I used it for a HEC change/upgrade on a Ford Focus MK2 with succes, but be carefull so your keys are not clones.

sorinj80

Posts: 8
Joined: Wed Mar 30, 2016 9:39 am
Vehicle: Ford Focus 1.6 tdci/66 kw 2006

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267 posts

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