



i flash.

2534 GLOBAL PROGRAMMER

**FORD PATS (PASSIVE ANTI THEFT SYSTEM)
INITIALIZATION WITH THE
2534 GLOBAL PROGRAMMER**



There are five types of PATS implementations from Ford (A, B, C, D, E). Refer to *Table 1* (page 11) to identify what type of PATS your vehicle is equipped with. PATS initialization is generally performed after programming.

The A or D version of PATS does not store the key information in the PCM, therefore ***NO PATS KEY RELEARN IS REQUIRED*** after programming.

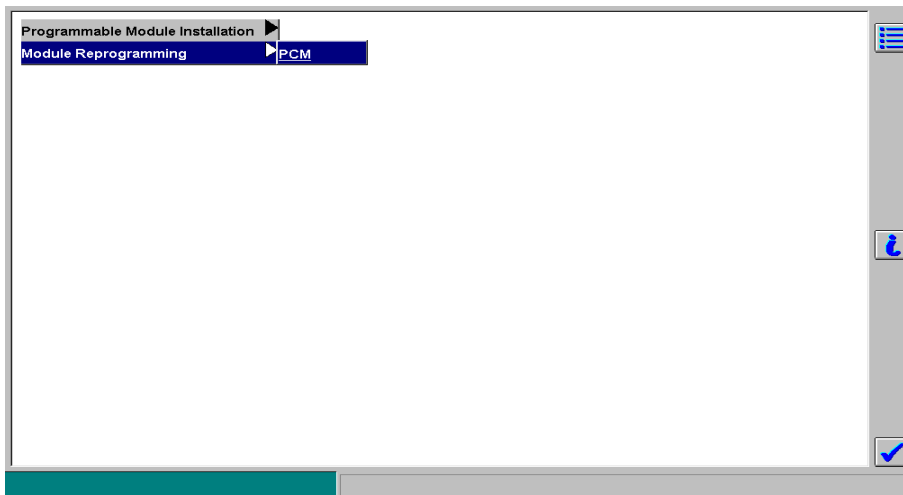
The B or C versions of PATS store the key information within the PCM and ***MUST*** be transferred to the new PCM, or relearned on the vehicle after the new PCM is installed.

The E version of PATS also stores the key information within the PCM, but ***CANNOT*** be transferred to the new PCM. This type ***MUST*** be relearned on the vehicle after the new PCM is installed.

Note: If you are just updating the existing PCM calibration with an update calibration, you must select the **MODULE REPROGRAMMING** function (not Programmable Module Installation). Doing this will insure you retain the existing PATS key information.

IF REPROGRAMMING AN UPDATED CALIBRATION TO AN EXISTING PCM (ALL PATS TYPES)

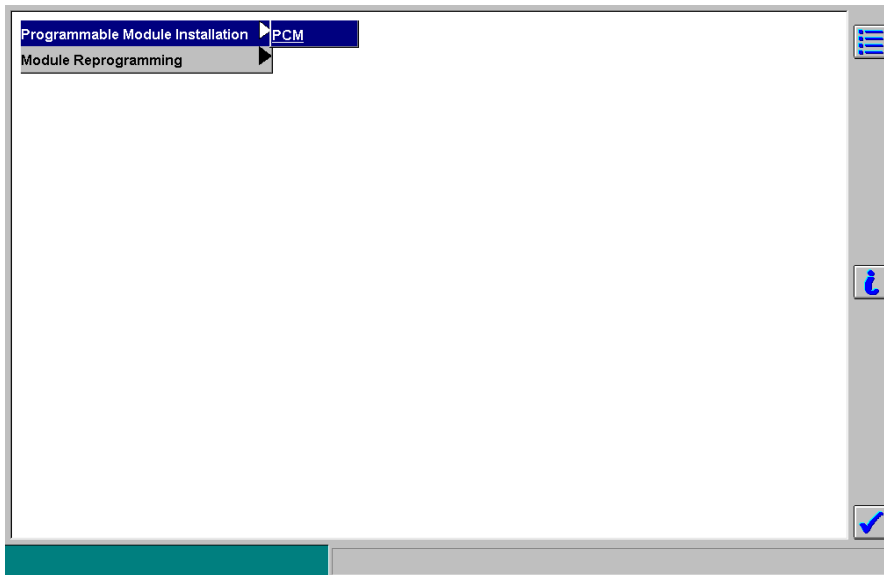
The Module Reprogramming selection ***MUST*** be selected, not reprogram and install (this will avoid a key relearn procedure).



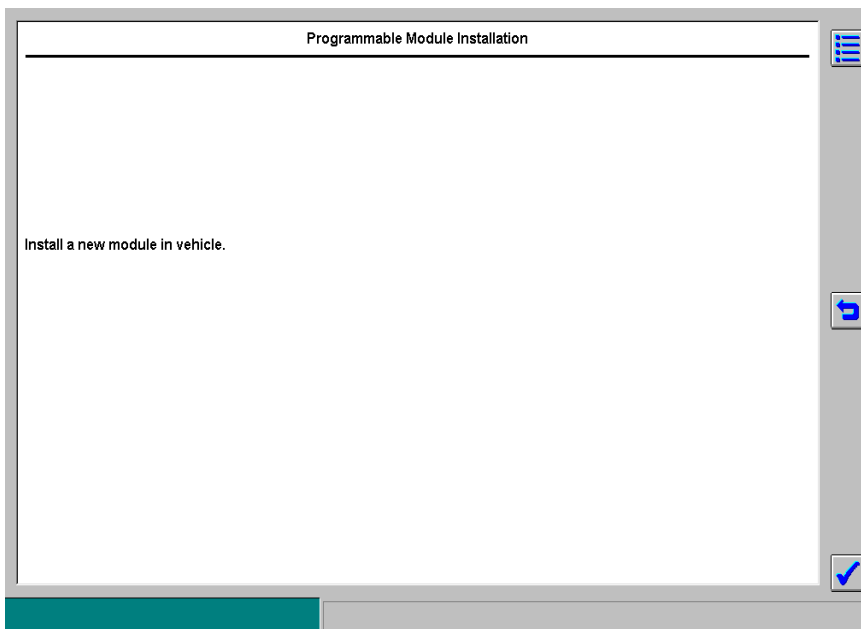


If REPLACING OR INSTALLING A NEW PCM (B, C TYPES ONLY)

The Programmable Module Installation selection **MUST** be selected. To transfer your PATS key information to the new PCM, your **original** PCM must be connected to the global programmer first. This must be done to avoid a key relearning procedure. If the original is unavailable, a **PATS key relearn** procedure must be performed after the PCM is installed on the vehicle.



Please disconnect your old PCM and install your new PCM when this screen appears.



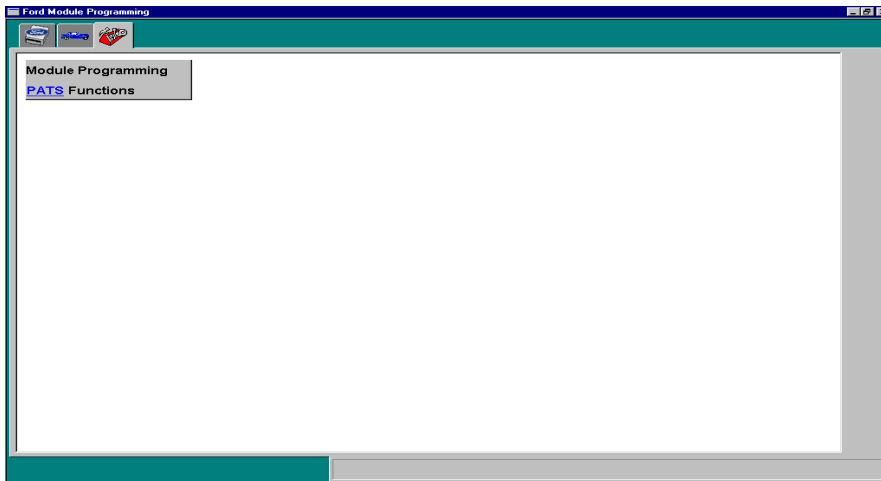


PATS KEY RELEARN (B, C TYPES)

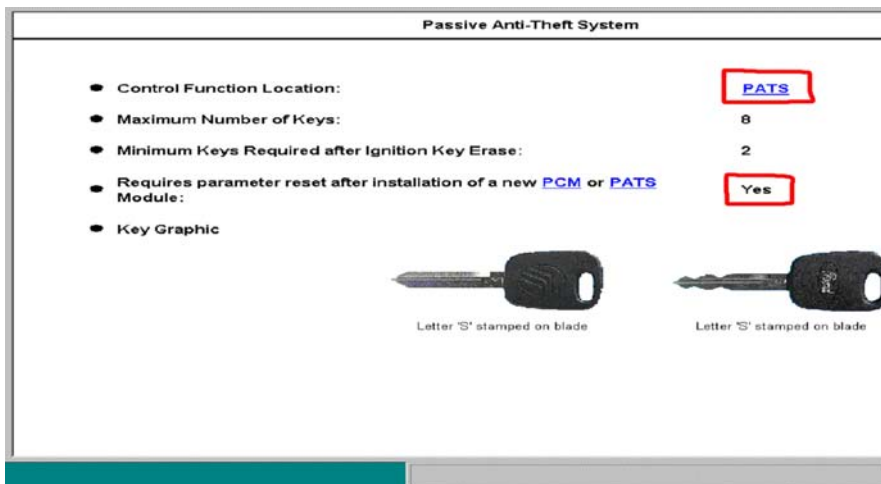
A key relearn procedure for PCMs containing B or C type PATS systems is completed by performing a **PARAMETER RESET** function. This function must be performed **ON THE VEHICLE** and cannot be performed off board. This function is performed by using a scan tool with PATS capability or via the FORD website using the PATS feature.

The FORD website feature is detailed below. The scan tool feature will be similar. Please refer to your scan tool operation manual for instructions.

Select **PATS Functions** from the Module Programming screen.



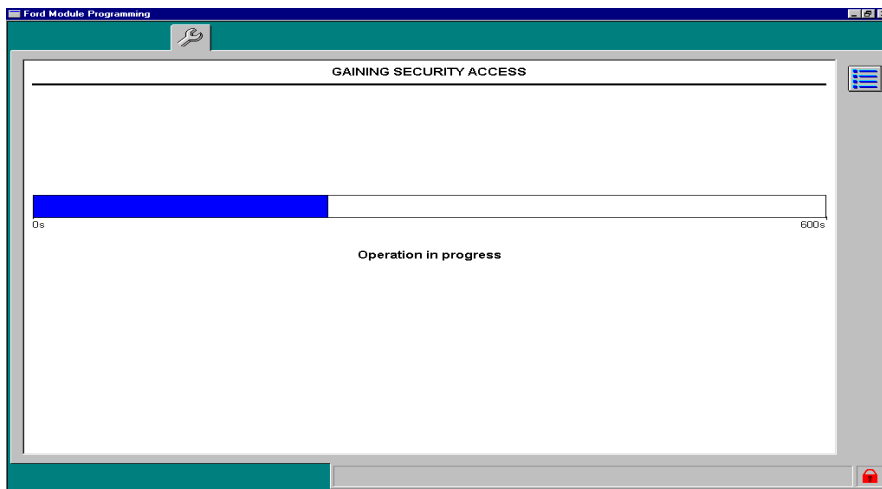
The boxes in red indicate the vehicle contains the B or C implementation of PATS:



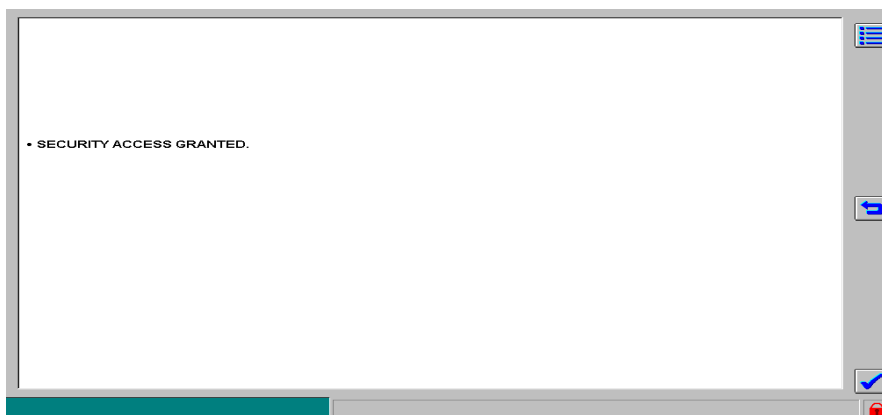


In some cases the **PATS Control Function Location** may have another entry other than PATS, for example: ICM, IC, HEC, EC, etc. If this lists PCM, then it is a PATS type E system. Refer to the PATS E type key relearn procedure in the following section.

There is a mandatory 10 minute security access delay. Please wait 10 minutes.



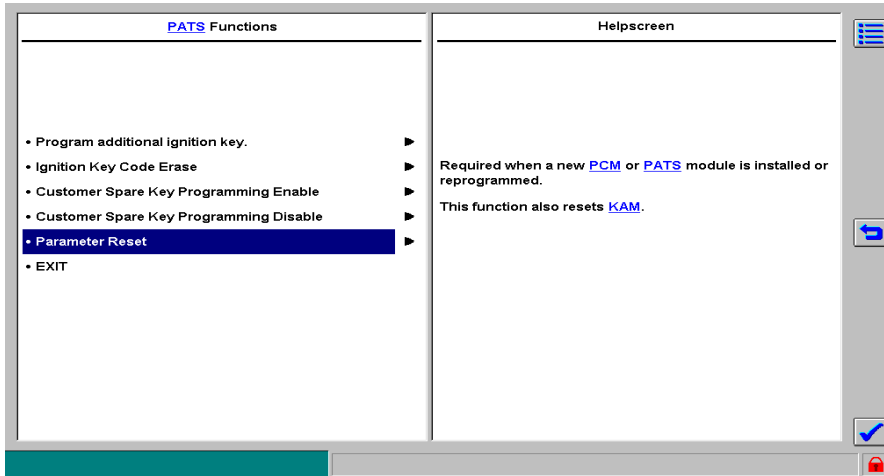
A Security Access confirmation screen will appear. Click on the check mark to continue.



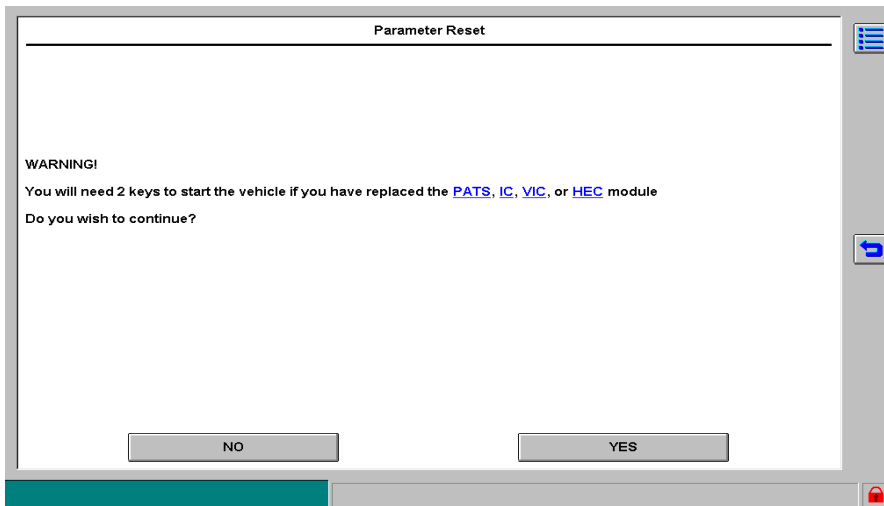


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Select **PARAMETER RESET**.



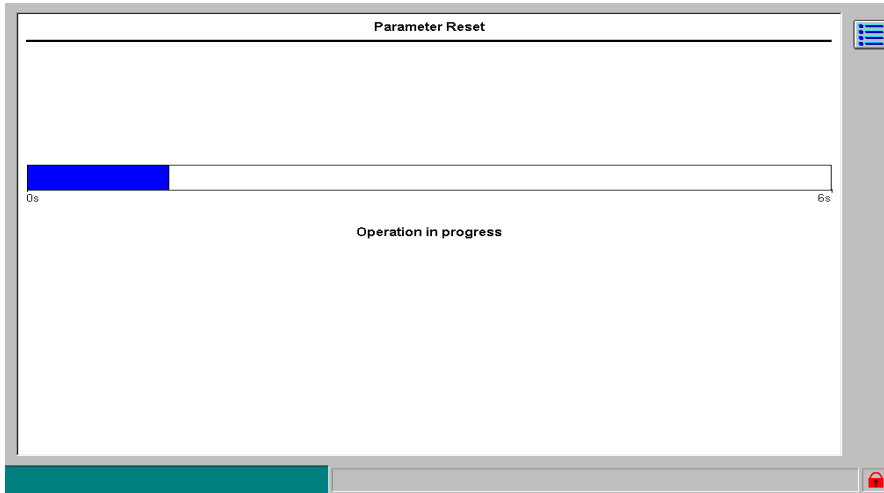
Select **YES** to continue.



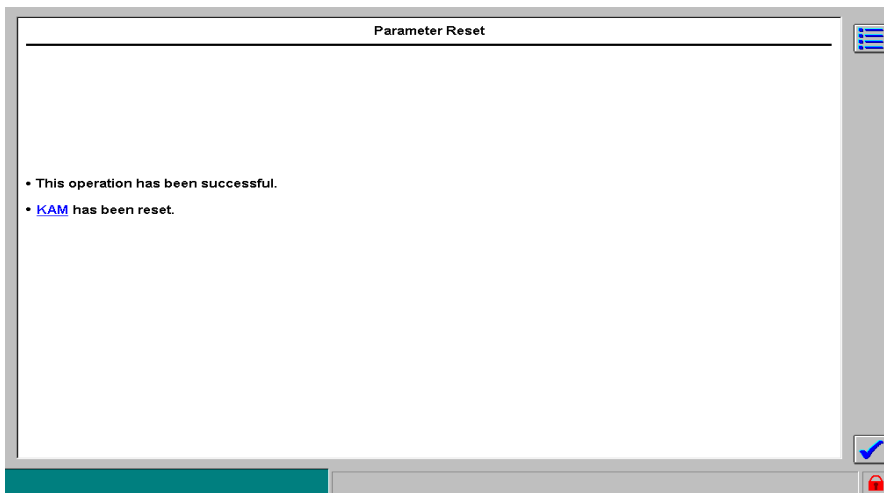


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The Parameter Reset will be performed. This function only takes a few seconds.



Click the check mark once the Parameter Reset function is completed successfully.





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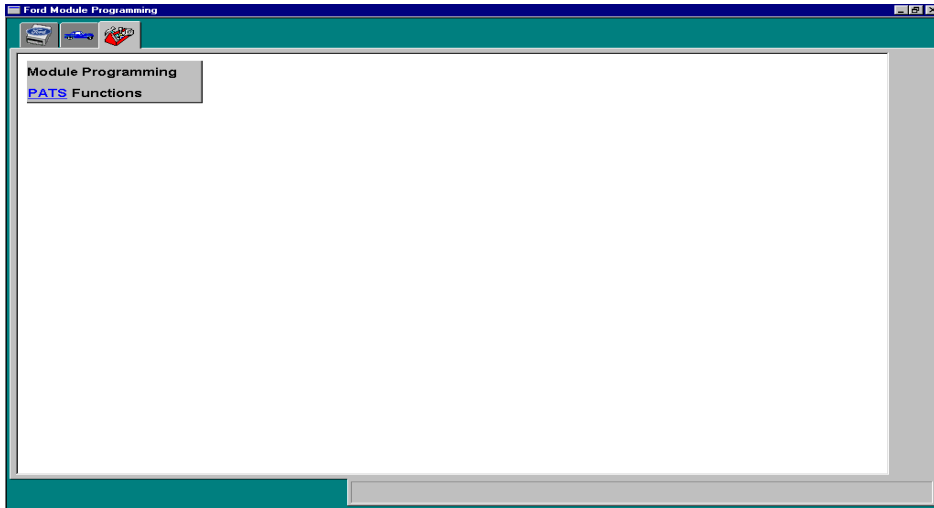
Select PCM and follow the instructions to start the vehicle.

The screenshot shows a software window titled "Which module have you replaced?". On the left, there is a list of modules: PATS, IC, VIC, HEC, PCM (highlighted in blue), and None. On the right, there are instructions: "An Ignition Key Code Erase is not necessary", "Turn the ignition key to position 0", "Disconnect DLC from the diagnostic unit. Wait 10 seconds.", "Cycle key 3 times to initialize the PCM", and "Start Engine". The interface includes a list icon, a back arrow, a checkmark, and a lock icon.

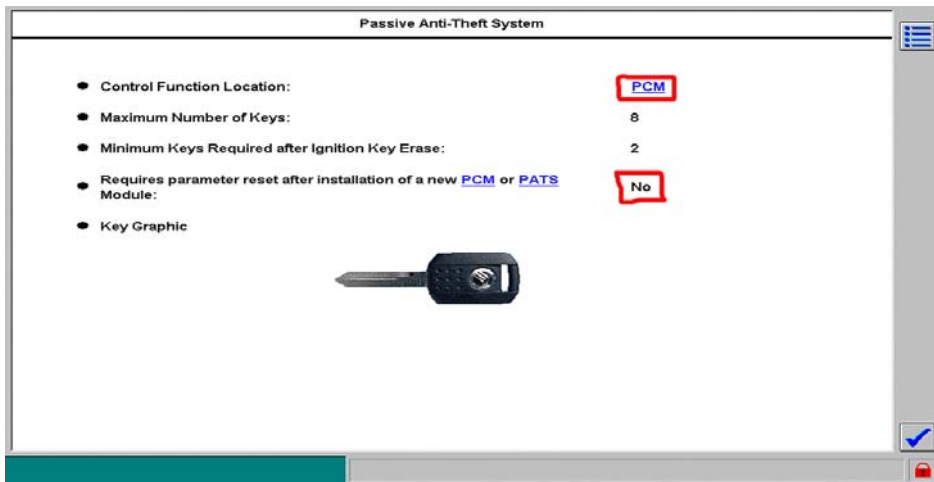


PATS KEY RELEARN (E TYPE)

!IMPORTANT! Two keys will be needed to start the vehicle. If two keys are not available, you will not be able to start the vehicle.

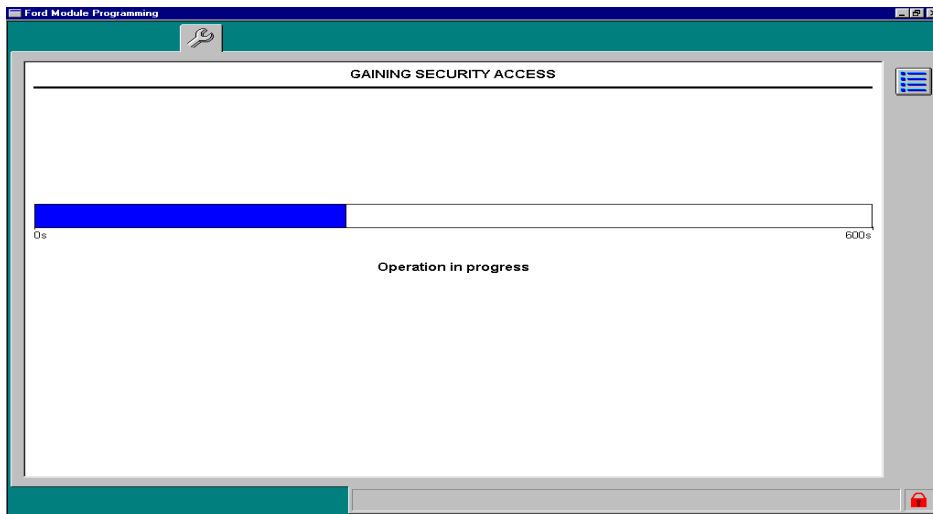


The boxes in red indicate an 'E' type PATS implementation:

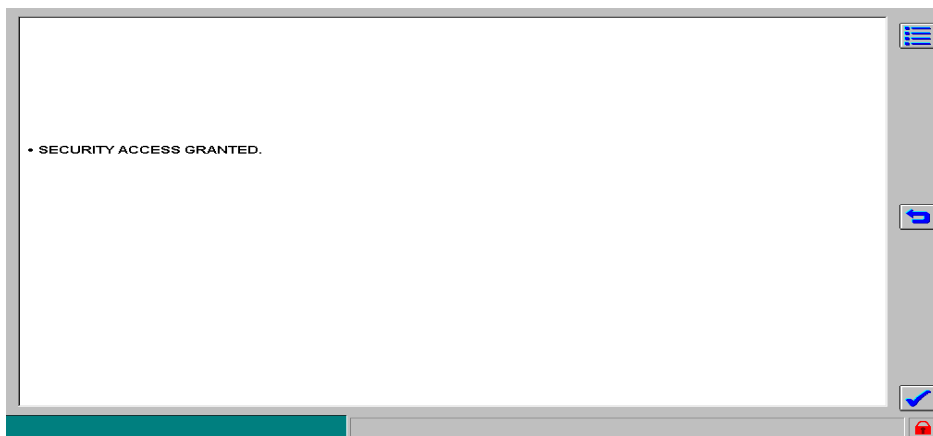




There is a mandatory 10 minute security access delay. Please wait 10 minutes.



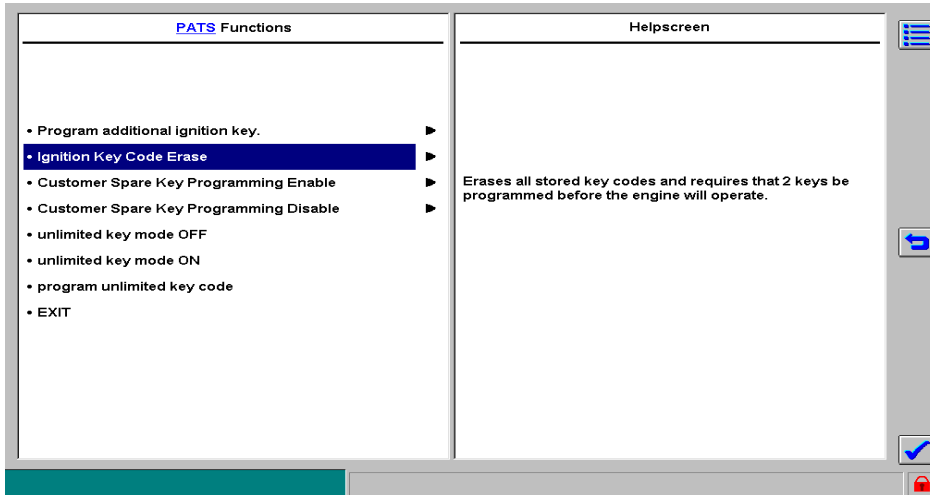
A Security Access confirmation screen will appear. Click on the check mark to continue.



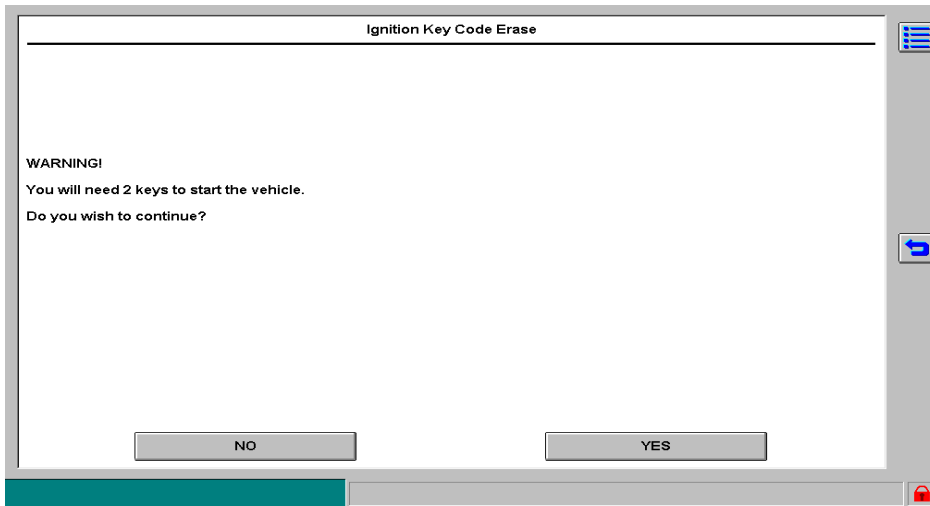


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Select Ignition Key Code Erase.



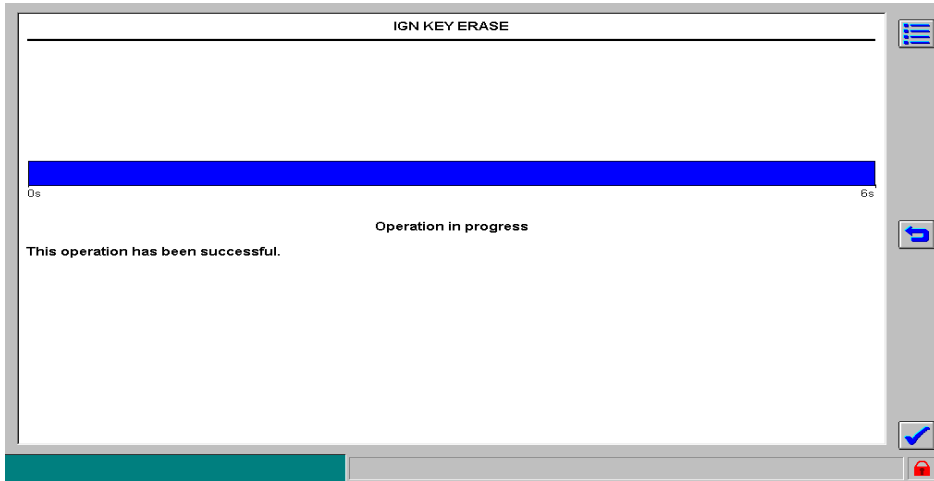
!IMPORTANT! Two keys will be needed to start the vehicle. If two keys are not available, you will not be able to start the vehicle.



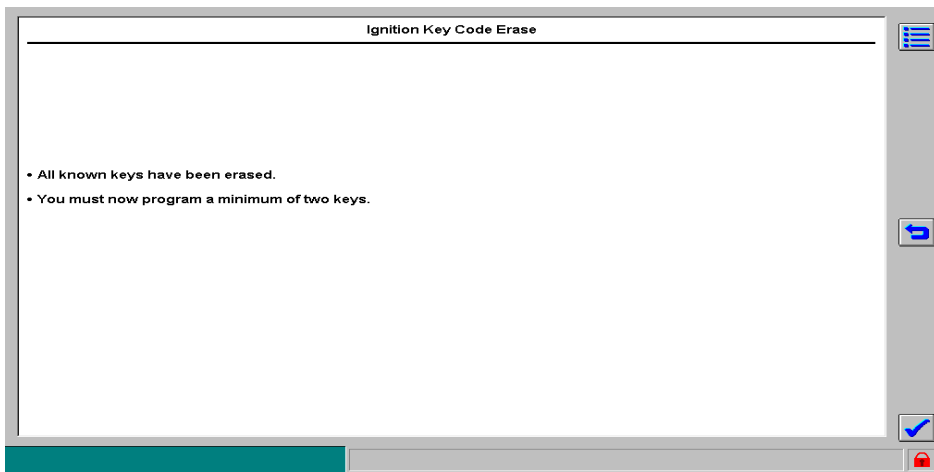


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The Ignition Key Code Erase function will be performed. This function only takes a few seconds.



Click the check mark once the Ignition Key Code Erase function is completed successfully.





Follow the instructions to start the vehicle.

Key programming procedure

- Turn the ignition to the OFF position.
- Disconnect [DLC](#) from the diagnostic unit. Wait 10 seconds.
- Cycle key1 in the ignition from OFF to RUN for at least 3 seconds.
- Cycle key2 in the ignition from OFF to RUN for at least 3 seconds.
- Cycle key1 in the ignition from OFF to RUN for at least 3 seconds.
- Two keys are now programmed.

The image shows a software window titled 'Key programming procedure'. It contains a list of five steps for programming keys. The window has a standard Windows-style interface with a title bar, a list icon in the top right, a back arrow icon, a checkmark icon, and a red lock icon at the bottom right.

Make	Vehicle	Model Year	PATS Type	Max Keys	Max Keys Required	Starter Interrupt Present	Requires Parameter Reset	Theft Indicator Flashes at Ignition OFF	Spare Key Programming Using Diagnostic Tools	Spare Key Programming Using Programmed Keys
FORD	Contour (V6 Only)	98 98 (2/2/98 Build or Later) - 00	A	16	1	Y	N	Y	N/A	#2
			E	8	2	Y	N	Y	#1	#3
	Crown Victoria	98-02 03-04	B	8	2	N	Y	Y	#1	#3
			E	8	2 OR 3	Y	N	Y	#1	#3
	Escape	01-04	E	8	2	Y	N	Y	#1	#3
	Excursion	00-04	B	8	2	N	Y	Y	#1	#3
	Expedition	98-98 99-02 03-04	A	16	1	N	N	N	N/A	#2
			C	8	2	N	Y	Y	#1	#3
			E	8	2	Y	N	Y	#1	#3
	Explorer (4dr)	98-01 02-04	B	8	2	N	Y	Y	#1	#3
			E	8	2	Y	N	Y	#1	#3
	Explorer 2dr/sport	98-01(Before 7/24/00) 01 (7/24/00 Build or Later)-03	B	8	2	N	Y	Y	#1	#3
			E	8	2	Y	N	Y	#1	#3
	Explorer Sport Trac	01(Before 7/24/00) 01(7/24/00 Build or Later)-04	B	8	2	N	Y	Y	#1	#3
			E	8	2	Y	N	Y	#1	#3
	F-150 Classic	99-04	C	8	2	N	Y	Y	#1	#3
	F-150 Harley Davidson	01-03	C	8	2	N	Y	Y	#1	#3
	F-150	04	E	8	2	Y	N	Y	#1	#3
	F-250 (Under 8500#GVW)	99-00	C	8	2	N	Y	Y	#1	#3
	Focus	00-04	E	8	2	Y	N	Y	#1	#3
	Freestar	04	E	8	2	Y	N	Y	#1	#3
	Mustang	96-97 98 99-04	A	16	1	N	N	N	N/A	#2
			B	8	2	N	Y	N	#1	#3
			C	8	2	N	Y	Y	#1	#3
	Ranger (3. OL & 4.OL Only)	99-00	B	8	2	Y	Y	Y	#1	#3
	Ranger (2.3L, 3.OL &4.OL)	01-04	E	8	2	Y	N	Y	#1	#3
Taurus (Duratec Only)	96-97	A	16	1	N	N	N	N/A	#2	
Taurus (All Engines)	98-99 00-04	B	8	2	Y	Y	Y	#1	#3	
		E	8	2	Y	N	Y	#1	#3	
Thunderbird	02 03-04	C	8	2	Y	Y	N	#1	#3	
		C	8	2	Y	Y	N	#1	#3	
Windstar	99-00 01-03	C	8	2	Y	Y	Y	#1	#3	
		E	8	2	Y	N	Y	#1	#3	
LINCOLN	Aviator	03-04	E	8	2	Y	N	Y	#1	#3
	Blackwood	02-03	C	8	2	N	Y	Y	#1	#3
	Continental	98-02	C	8	2	N	Y	Y	#1	#3
	LS	00-02 03-04	C	8	2	Y	Y	N	#1	#3
			C	8	2	Y	Y	N	#1	#3
	Mark VII	97-98	D	16	2	Y	N	N	N/A	#2
	Navigator	98 99-02 03-04	A	16	1	N	N	N	N/A	#2
C			8	2	N	Y	Y	#1	#3	
E			8	2	Y	N	Y	#1	#3	
MERCURY	Cougar	99-02	E	8	2	Y	N	Y	#1	#3
	Grand Marquis	98-02 03-04	B	8	2	N	Y	Y	#1	#3
			E	8	2 OR 3	Y	N	Y	#1	#3
	Marauder	03	E	8	2 OR 3	Y	N	Y	#1	#3
	Monterey	04	E	8	2	Y	N	Y	#1	#3
	Mountaineer (4dr)	98-01 02-04	B	8	2	N	Y	Y	#1	#3
			E	8	2	Y	N	Y	#1	#3
	Mystique (V6 Only)	98 98 (2/2/98 Build or Later)-00	A	16	1	Y	N	Y	N/A	#2
			E	8	2	Y	N	Y	#1	#3
Sable (Duratec Only)	96-97 98-99	A	16	1	N	N	N	N/A	#2	
		B	8	2	Y	Y	Y	#1	#3	
Sable (All Engines)	00-04	E	8	2	Y	N	Y	#1	#3	
Spare Key Programming Using Diagnostic Tools		Procedure #1	Cycle an unprogrammed key in ignition to RUN. Enter Security Access. Select "Ignition Key Code Program." Disconnect Tools and leave key in RUN for 20 seconds.							
Spare Key Programming Using Programmed Keys		Procedure #2	1 key required. Cycle key 1 to RUN, then OFF. Cycle new key to RUN.							
		Procedure #3	2 keys required. Cycle key 1 to RUN, then OFF. Cycle key 2 to RUN, then OFF. Cycle new key to RUN.							

PATS DTC CHART

DTC	DESCRIPTION
B1213	Less than 2 (or 3 if equipped w/Valet key) keys programmed to the system.
B1232/B2103	Transceiver internal antenna damaged. Replace transceiver.
B1342	ECU is defective (EEPROM in PCM is not working- replace PCM). PATS related when stored in PCM only.
B1600	Non-PATS key or damaged key.
B1601	Unprogrammed encoded ignition key detected (leave ignition on for 20 seconds before trying a programmed key, in Anti-Scan Mode).
B1602	Partial detection of encoded ignition key.
B1681	Transceiver signal not detected.
B2141	Non-Volatile Memory (NVM) configuration failure - No PCM ID stored in PATS.
B2139	PCM ID does not match between the PCM and PATS control (PATS/ICM/VIC/HEC/SCIL).
B2431	Key programmed failure (defective key or transceiver)
U1147/U1262	Communications issue, SCP (J1850), between PCM and PATS control (PATS/ICM/VIC/HES/SCIL).
P1260	PCM disabled the vehicle because of a PATS concern. Retrieve DTC'S from applicable PATS control function (PATS/ICM/VIC/HES/SCIL).

It is not a PATS Issue, if:

- The "Service Engine Soon" light is illuminated. (Investigate PCM system)
- There is no communications with PCM ; PCM will always communicate on the diagnostic link regardless of theft status. (Investigate PCM system)
- Engine stalls on road: Once the engine runs for one second, PATS *CANNOT* disable the engine. Running stalls are not PATS issues.
- Alarm goes off: PATS is completely separate from the perimeter alarm system (if installed). PATS will not cause the alarm to go off.
- Remote Entry/Keyless Entry problems: PATS is completely separate from the Remote Entry/Keyless Entry systems.
- There is a no-crank problem on vehicles without PATS starter disable. Check Table 1, for presence of Starter Interrupt.
- PATS Theft Indicator flashes every 2 seconds at Ignition OFF. This is normal operation for PATS to act as a visual theft deterrent. (See chart on reverse side for applicable system.)
- PATS Theft Indicator stays on for 2 or 3 seconds (depending on system type) at Ignition RUN or START and then off. This is normal operation for PATS proveout.

Basics

- Erasing and reprogramming ignition keys does not cure any known intermittent PATS no-start issues. Do not reprogram keys if a fault cannot be identified.
- Always verify that there are no aftermarket devices causing interference, such as alarms, remote starters or other devices utilizing transponders. Devices that power up the PCM without powering up the PATS Control module can experience no-start concerns.
- Items such as foil stickers, brass key tags, other PATS keys, and other transponders used to purchase gasoline or other metallic objects can cause interference with the PATS key.
- Make sure you have all of the customer's keys when doing reprogramming, PATS Control module replacing, or diagnosis.
- When replacing ignition keys, make sure the customer throws out all old keys or programs them as spare keys.
- Reprogramming the PCM does not have any impact on PATS operation.
- Disconnect battery cables when replacing the PATS modules, (ICM, VIC, HEC, SCIL, or PCM)
- If the engine does not crank on vehicles that have PATS providing a ground to the starter relay, verify the PATS output to the starter relay.
- If the PCM has a P1260, look for additional codes in the PATS control module.
- Systems B, C and E have an anti-scan function. If you attempt to start the vehicle with an unprogrammed key, the theft indicator will flash rapidly and the vehicle will not start. Leave the key in the RUN position for 30 seconds for the anti-scan feature to time out. The vehicle will fail to start during this 30-second time period even if a correctly programmed key is used.
- Some aftermarket audio equipment have been found to keep the run/start circuit active for over 5 seconds past ignition off. This can prevent pats from properly reading ignition keys during key programming. Remove or disable this aftermarket equipment if problems with any key programming sequence occur.