

General Service Bulletin (GSB):	Passive Anti Theft System(PATS) Key Programming
GSB Overview:	This General Service Bulletin will cover the proper tool usage along with what programming procedure to use and tips on how to perform these procedures
NOTE: This information is not intended to replace or supersede any warranty, parts and service policy, Work Shop Manual (WSM) procedures or technical training or wiring diagram information.	

This General Service Bulletin covers the following topics

1. Key Types & Verifying You Have the Correct Key
2. Security Access
 - 2A) Timed Security Access
 - 2B) Coded Security Access
3. Parameter Resets
4. Key Programming Methods
5. CAN Protection Strategy
6. Handling Errors During Security Access, Key Programming and Parameter Resets
7. Helpful Hints and FAQs

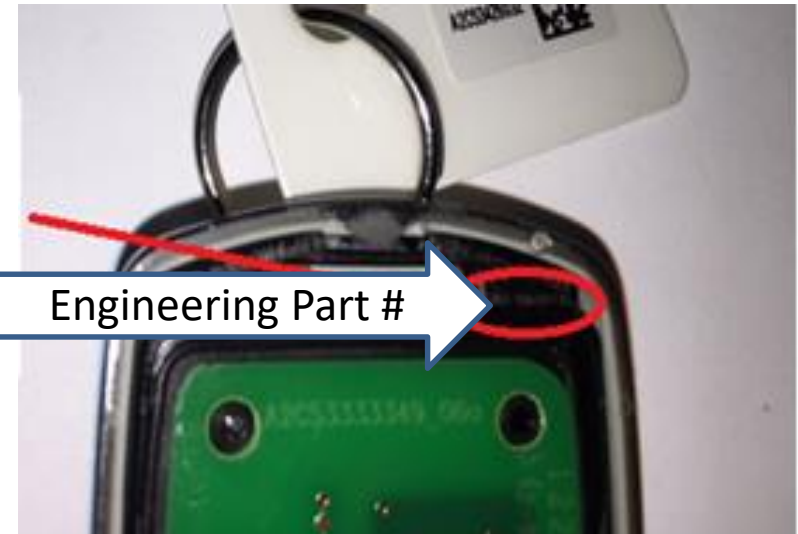
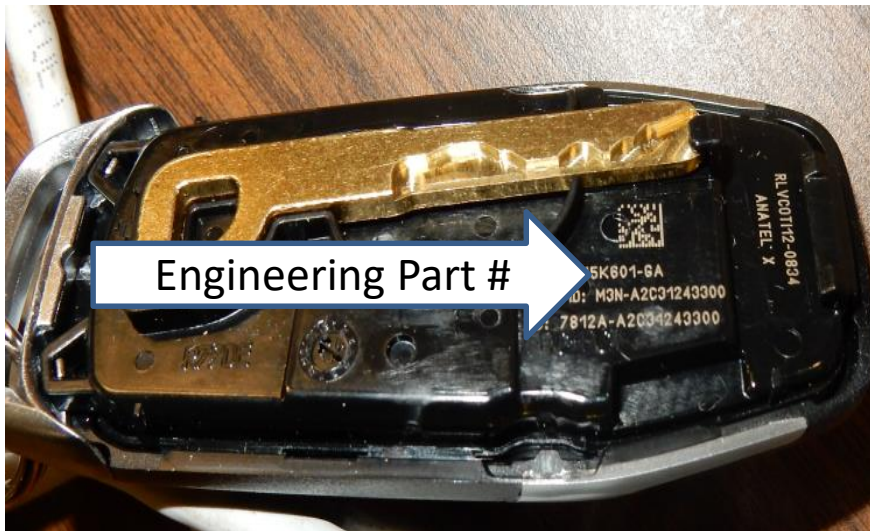
Verifying and Ordering the Correct Key

- Verifying and ordering the correct keys for the vehicle is critical any time keys are being added or replaced.
 - It is possible that incorrect keys can be programmed to the vehicle, allowing the vehicle to start. However, this will typically result in inoperative Remote Keyless Entry (RKE)/Intelligent Access and/or the vehicle only starting when the key is in the back-up slot (push-button start vehicles).
- Keys must be ordered via www.onerotunda.com using the Rotunda Key Part Number (Ex: 164-R8092).
- Rotunda key part numbers can be verified within the key fob itself, searching the key basic part number (15K601) in the Historical Vehicle Bill of Material (HVBoM) and/or entering the Service Part Number found in the Ford Parts Catalog Advantage (FCAT) and/or by contacting Rotunda at 1-800-ROTUNDA.

Key Fob Programming Guide

Verifying the Correct Key

- When programming keys, verify the correct key is being used if errors or functionality concerns arise during programming.
- You can do this by finding the engineering part number in the key. The number is small and may be in a different location based on key design for your vehicle. The base part number is always **15K601**. This number can be checked against the parts catalog and HvBOM for verification.



Key Fob Programming Guide

Verifying the Correct Key

2017 F-150
1FTEW1CP1HKD54533

PTS Professional Technician Society Ford LINCOLN

Home Vehicle ID OASIS TSB/GSB/SSM Workshop Wiring PC/ED Service Tips Owner Info PDI SLTS ToolBox

HVBoM - Historical Vehicle Bill of Material

Language: English Region: NA

VIN: 1FTEW1CP1HKD54533 Find Vehicle

VCIS Features Help FMCDealer.com Window Sticker ©Copyright 2015 Ford Motor Company

2017 FORD F-150 SUPER CREW STYLES!

Please select an area of the vehicle below, before proceeding. You may select a part number to limit the search. If you have questions or comments, please email us by clicking on the link below.

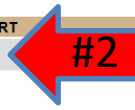
General Information
 Chassis
 Powertrain
 AI
 Electrical
 Body and Paint
 DSO

View BoM Print Reset Limit to Base: 15K601



Ford Catalog Advantage VIEW Categories: ALL - BASE PART NUMBER: 15K601 Back Print Sel Print Reset

ENGINEERING PART	SERVICE PART	MTRCRAFT	QTY	DESCRIPTION
BT4T15K601HC	<input type="checkbox"/> BT4Z15K601M		2	REMOTE CONTROL SYSTEM



Vehicle Area Description

VEHICLE MODULES AND SENSORS

ENGINEERING PART : BT4T15K601HC

Service Part	Handling Code	Regional Identifier	OSI
BT4Z-15K601-M		NA	OSI

Close

Key Fob Programming Guide

Verifying the Correct Key

- The Ford Parts Catalog Advantage (FCAT) is accessed through PTS > Workshop > Parts Catalog, after a VIN is entered into the Vehicle ID page.

Search TB7 Expedition

Base Description SPN Motorcraft Associated Part No.

Search:

Cross Reference Search

EPN: - -



VIN Results

Search Results

Results 1- 3 out of 3

Result Pages: [1]

Callout No.	Description	Section
15K601	Remote Control System	20N Remote Starting Kit, Accessory, Scalable, One Way, 2015/ From: 08/11/2014
15K601	Remote Control System	20P Remote Starting Kit, Bi-Directional Remote Start, Accessory, Scalable, 2015/ From: 08/11/2014
15K601	Remote Control System	05B Vehicle Lock Sets and Repair Kits, 2015/ From: 08/11/2014

Service Part Number per HVBoM

Rotunda Key P/N

Results 1- 1 out of 1	Result Pages: [1]	SPN	Commodity No.	Motorcraft	Application Info	Model Year	Price	Qty
<input type="checkbox"/>		<u>BT4Z-15K601-M</u>	15K601B		164-R8092, Must Be Ordered Via www.onerotunda.com Using The Rotunda Part Number, From: 08/11/2014 2015/ ; Frequency - 315MHZ, Keyless Entry/Start - Passive	2015/	0.00	2

Key Fob Programming Guide

PATS Security Access

When performing a parameter reset, erasing and programming keys or programming an additional key using IDS, security access must first be obtained.

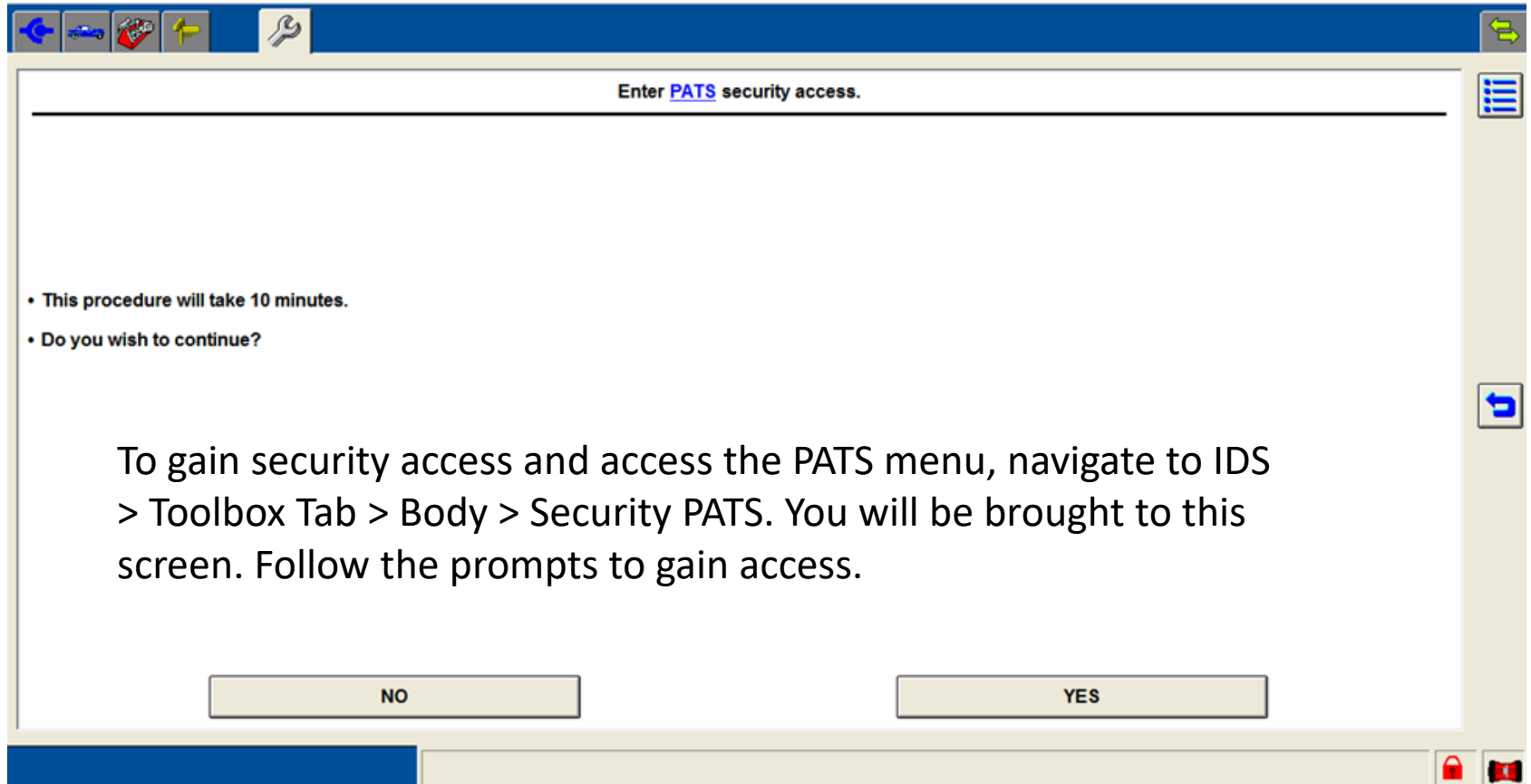
There are two styles of Security Access:

- **A 10 minute Timed Access**
- **Coded Security Access**

The Security Access routine helps prevent unauthorized key programming routines from being performed. The following pages will outline these routines and corrective actions should you encounter difficulty completing them. IDS will automatically chose which style is required based on the vehicle you're working on.

Key Fob Programming Guide

10 Minute Timed Security Access



Key Fob Programming Guide

Coded Security Access

Newer vehicles no longer require a 10 minute timed security access. Coded Security Access was introduced in 2013 on the Ford Fusion and has been steadily added to more vehicle lines since then.

- Reference section 419-01 General Procedures in the vehicle WSM

Using your PTS login information, you can quickly enter the PATS menu and program keys, perform parameter resets or any other needed PATS function.

To enter Security Access, navigate to IDS > Toolbox Tab > Body > Security > PATS. Follow the on screen prompts and you will be brought to the following login page on Internet Explorer. Once you enter your credentials in the image below, you will be directed to return to IDS to complete the PATS Function you're attempting.

Please ensure that your browser is properly configured, failure to do this may cause issues. [Click here for instructions on how to configure Internet Explorer.](#)

In order to continue with this procedure, you must now log into an online Security Authorization system.

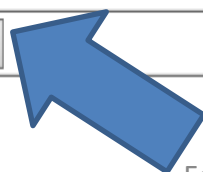
Ford and Lincoln dealerships must have a valid WSLx login.

Aftermarket users of Integrated Diagnostic Software (IDS) or Ford Module Programming (FMP) must be automotive security professionals that are registered with the National Automotive Service Task Force (NASTF) Vehicle Security Professionals Registry.

You must have a valid username and password for the NASTF Registry to complete this procedure.

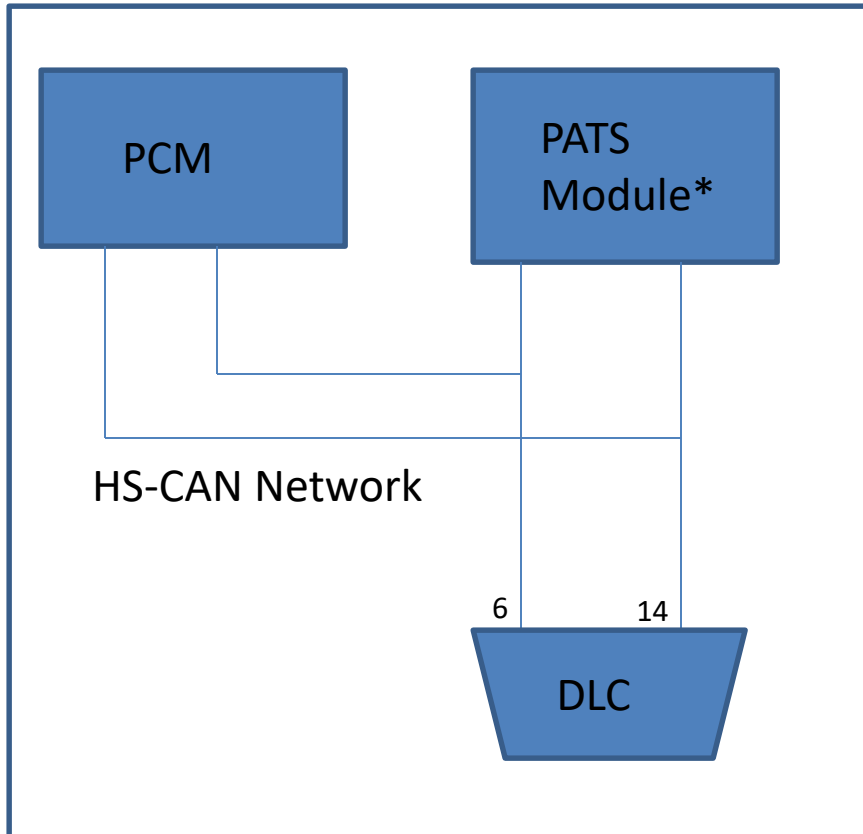
Login via WSLx

Login via NASTF Registry



Key Fob Programming Guide

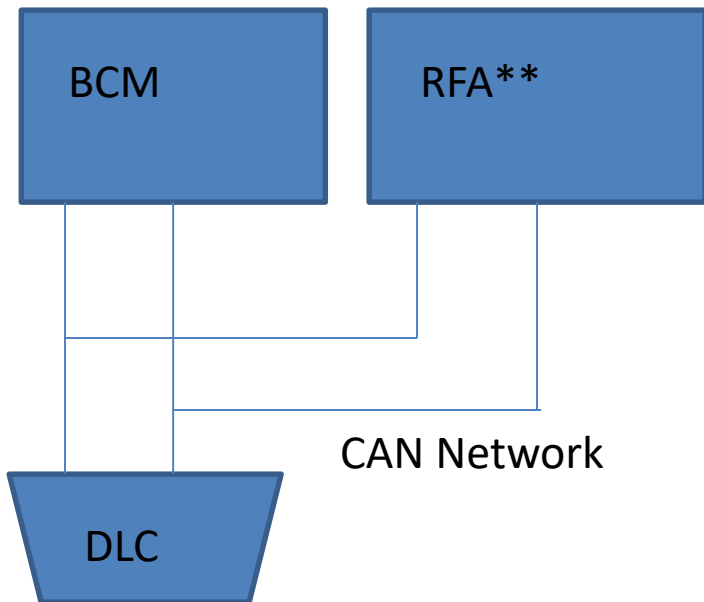
Security Access and Parameter Reset Errors During 10 Minute Timed Access-Key Start vehicles



- On Key Start Vehicles using standard Key Blades or Integrated Key head Transmitter (IKT) style keys, the ignition must be on during the 10 minute Security Access.
 - During 10 minute and Coded Security Access the IDS will be communicating with the PATS Module and the Powertrain Control Module (PCM) over the High-Speed CAN network.
 - The PATS is typically the Body Control Module (BCM) or the Instrument Panel Cluster (IPC). Always refer to Workshop Manual Section 419-01 > Description and Operation to verify which module is the PATS Module.
- * On Hybrid vehicles, the Transmission Control Module (TCM) and ABS Module may also be apart of the Security Access and Parameter Reset Routines. These modules will need to be programmed and capable of communicating on the network before the Security Access or Parameter Reset completes.

Key Fob Programming Guide

Security Access and Parameter Reset: 10 Minute Timed Access and Coded Access-Push Button Start Vehicles



- During the 10-minute wait or when gaining Coded Security Access, the IDS is communicating with the BCM and RFA module (if equipped) over the CAN networks.
- Some vehicles may require more than one parameter reset. Always refer to Removal and Install procedures to verify which module(s) require a parameter reset after module replacement.
- If more than one parameter reset is required, the order in which they are performed is critical and will be outlined in the Workshop Manual (Example Below).

BCM to RFA: This must be performed after BCM or RFA replacement. This turns the ignition on.

BCM to PCM: This must be performed after the BCM to RFA reset. This is what allows the vehicle to start.

Key Fob Programming Guide

Errors when gaining Security Access or Performing a Parameter Reset

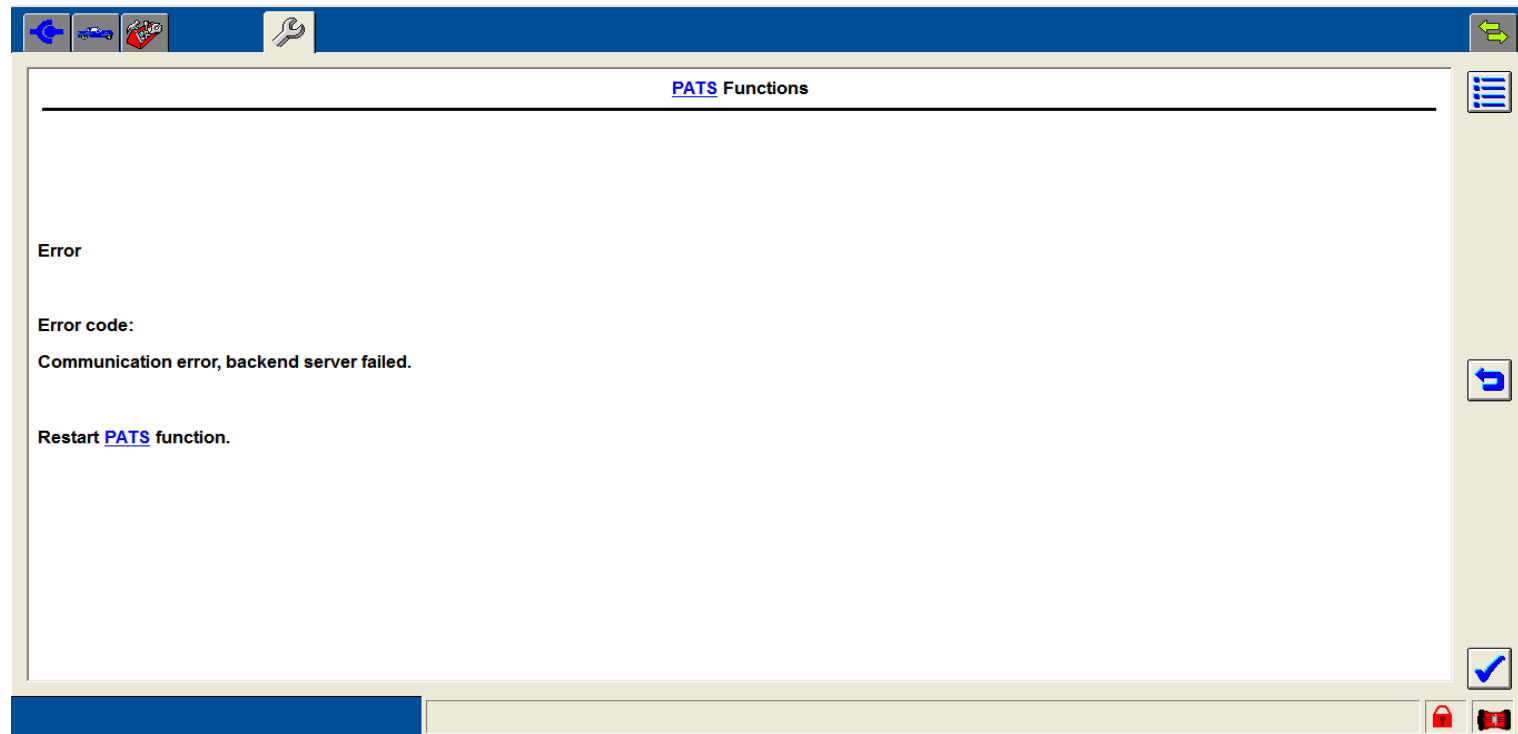
If errors are encountered when Gaining Security Access or Performing a Parameter Reset verify the following:

- On vehicles equipped with a standard ignition key or Integrated Key head Transmitter (IKT), verify the PATS Module and the PCM pass the network test with the key on.
- On vehicles equipped with Intelligent Access or Push Button start, if you're having trouble getting the security access, verify the BCM and RFA (If equipped) pass the network test.
 - Push-Button Start Vehicles: The BCM and RFA (if equipped) will pass a network test even with the ignition off. If they do not, refer to workshop manual section 418-00 > Diagnosis and Testing
- If you cannot complete a parameter reset, verify the modules you're performing the reset on pass a network test.
- 12 volt battery is fully charged (Between 12 and 14 volts).
- The Datalink Connector (DLC) pins are not spread.
- Inspect for and remove any aftermarket electronics installed on the CAN network.
- Attempt gaining Security Access with a different VCM and laptop.
- If the BCM to PCM parameter reset fails, verify the BCM to RFA reset has been done (when applicable) and that the PCM passes a network test.
 - If the vehicle is a Hybrid/Energi Model, the TCM and/or ABS module may also be part of the Parameter Reset and will need to pass a network test before the parameter reset will complete.

Key Fob Programming Guide

Additional Coded Security Access Failures

- Requires a strong Internet Connection (Hard-Wired Preferred) and a valid PTS logon ID and password.
- Battery voltage should be between 12 and 14 volts.
- The Internet Security settings must be set accordingly on the computer being used to gain access. Refer to page 15 for more information regarding Internet Security setting requirements.



Key Fob Programming Guide

Coded Security Access Errors(Continued)

The laptop and Internet Security Settings being used are critical in this procedure. If receiving error messages during this routine, verify the items from page 11 and the below items.

- 1) Laptop , hardware and internet connection meet Ford Requirements. Refer to System Requirements list on PTS > Rotunda > Diagnostic Tool Support > IDS Support > System Requirements.
- 2) Verify all Internet security settings are properly set up per the “PTS Requirements” Document shown below.

The screenshot shows the Professional Technician Society (PTS) website interface. At the top, there are navigation tabs: 'Vehicle Tips', 'Owner Info', 'PDI', 'SLTS', and 'ToolBox'. A 'Help Logout' link with a US flag icon is in the top right. A 'Frequently Asked Questions' window is open, displaying several links. A red arrow labeled '#1' points to the 'Help Logout' link. Another red arrow labeled '#2' points to the 'PTS Requirements' link, which is highlighted in yellow. Other links in the 'Need to know' section include 'Acrobat Reader 9.0 or Higher', 'IE9/Wiring Diagram Concerns', 'Report a Vehicle Concern', 'VCM Troubleshooting', and 'View multiple vehicles on PTS'. The 'PTS Website Contacts' section at the bottom includes 'IDS Issues /' and 'OASIS Support'.

Key Fob Programming Guide

Key Programming Frequently Asked Questions (FAQ)

Keys programmed but only work in the backup slot

There are two portions to PATS Keys- the PATS functionality and the Remote Keyless Entry Functionality. A key that works only in the back up slot likely had its PATS chip programmed to the vehicle but the frequency the key is sending lock/unlock commands with may be wrong for the vehicle. Refer to page 2 to verify you have the correct key.

Replacement Key or additional key will not program

If a single replacement key or additional key is being programmed to the vehicle but the key programming fails, it's likely the replacement key is not correct for the vehicle. Because the vehicle started and ran with the original keys, this likely proves the PATS module, wiring and antennas are okay. Refer to page 2 to verify the key you have is correct for the vehicle.

Security Access, Parameter Reset or key programming fails with a “Back End Server” error message

The back end server error message encountered indicates that your computer was not able to verify your login or vehicle security credentials with the IDS server. This is likely caused by the computers internet security settings not being set correctly. Refer to page 15 for information on correcting the internet settings.

Key Fob Programming Guide

Helpful Hints with Key Programming and PATS

Things to Avoid:

- Do not use aftermarket keys that are not Ford qualified.
- Do not reprogram keys unless a defective key or control module has been replaced.
 - Modules will not lose key programming or the TIC ID's stored during a parameter reset without the "Key Erase" procedure being performed or control module/key replacement.

The Vehicle Concern is not PATS related if:

- The Service Engine Soon light is illuminated.
- There is no communication with the PCM, BCM or RFA.
- Remote Keyless Entry concerns such as lock/unlock are not PATS related.
- If the vehicle is a crank no start or no crank no start, determine if PATS has a starter interrupt through workshop manual section 419-01 before determining it's PATS related.