



### Procedures:

#### Procedure IA #1

- 2 IA keys required
- Enter Security Access on the PATS control function module
- Select "Ignition Key Code Erase" (not needed if replacing BCM)
- Insert IA key #1 in back-up pocket
- Press Start Stop Button (SSB) once
- Verify door locks cycle and Message in Instrument Cluster displays: Key Programming Success
- Insert IA key #2 in back-up pocket
- Press Start Stop Button (SSB) once; remove IA key from pocket
- Verify door locks cycle and Message in Instrument Cluster displays: Key Programming Success
- Press a button in each programmed IA key to verify RKE works and each one starts the engine by placing one of them outside the vehicle and pressing SSB+Brake pedal with the other one inside the vehicle

#### Procedure IA #2

- 2 IA keys required
- Enter Security Access on the PATS control function module
- Select "Ignition Key Code Erase"
- Insert IA key #1 in back-up pocket
- Select "Ignition Key Code Program"
- Verify Message in Instrument Cluster displays: Key Programming Success
- Insert IA key #2 in back-up pocket
- Select "Ignition Key Code Program"
- Verify Message in Instrument Cluster displays: Key Programming Success
- Press a button in each programmed IA key to verify RKE works and each one starts the engine by placing one of them outside the vehicle and pressing SSB+Brake pedal with the other one inside the vehicle

## Procedure IA #2a

### 1. Key learning

- Delete all keys in BCM and RFA
- Set BCM and RFA to B&A mode
- Hold first key close to back-up slot and start ignition
- Hold second key close to back-up slot and start ignition
- Put both keys in cupholder in the centre console (ensure ignition is still on)
- Start RFA key learning routine
- Wait 30 seconds
- Check whether keys are learned by pressing lock/unlock buttons

## Procedure IA #3

- With one programmed IA key inside the vehicle, place the new unprogrammed IA key in the back up pocket
- Enter Security Access on the PATS control function module
- Select "Ignition Key Code Program"
- Verify Message in Instrument Cluster displays: Key Programming Success
- Press a button in the programmed IA key to verify RKE works and verify that it starts the engine by placing the previously programmed IA key outside and pressing SSB+Brake pedal with the newly programmed IA key inside the vehicle

## Procedure IA #3a

### 1. Spare key learning

- Switch on ignition with learned key
- Set RFA and BCM into PATS Security Access
- Hold key to back-up slot
- Start BCM key learning routine
- Wait 10 seconds
- Put key in cupholder in the centre console (ensure ignition is still on)
- Start RFA key learning routine
- Press unlock button on RKE for 1 second
- Check whether key is learned by pressing lock/unlock buttons

Spare Key Programming Using Programmed Keys (this procedure will not work if 4 IA keys are already programmed; use Diagnostic Tool Method to erase keys first)

#### Procedure IA #4

- 2 programmed IA keys required to be inside the vehicle while programming a new IA key, one of which is an ADMIN key (not programmed as MyKey)
- Do not press brake pedal, do not lock - unlock vehicle during procedure
- Ignition Switch is in OFF
- Place PK to be programmed into the back-up pocket
- Toggle the interior Lock/Unlock Switch to UNLOCK three times
- Press and release the brake switch
- Toggle the interior Lock/Unlock Switch to LOCK three times
- Press and release the brake switch. Start/stop switch RUN LED flashes at a 4 Hz rate
- Press and release the start/stop switch. Instrument cluster displays "Key PROGRAMMED 3 (or 4) Keys TOTAL" for 4 seconds
- Press and release the brake switch
- Start/stop switch RUN LED stops flashing. Customer Key Programming mode exited
- Verify passive start, passive entry, and RKE functions with all programmed PK's

## Procedures: *continued*

Spare Key Programming Using Programmed Keys (this procedure will not work if 4 IA keys are already programmed; use Diagnostic Tool Method to erase keys first)

### Procedure IA #5

- 2 programmed IA keys required to be inside the vehicle while programming a new IA key
- Place a programmed IA key in the back-up pocket and push Start/Stop button once (IGN = RUN)
- Wait 5 sec, push Start/Stop button (IGN = OFF) and remove IA key from back-up pocket
- Place a second programmed IA key in Back/Up pocket and push Start/Stop button (must be within 10 sec of the Ignition off from previous step)
- Wait 5 sec, push Start/Stop button and remove IA key from back up pocket
- Wait 5 sec then place unprogrammed IA key in back-up pocket and push Start/Stop button once
- Locks cycle and Instrument cluster displays "Key PROGRAMMED 3 (or 4) Keys TOTAL" for 4 seconds
- The IA key is now programmed, verify Passive Entry and RKE works and it starts the engine

Parameter Reset when Replacing Control Module

### Procedure IA #6

- Program 2 IA keys before attempting to do parameter reset
- With an IA key inside the vehicle, press the Start Stop button (push the ignition switch) to RUN
- Enter Security Access on the PATS control function module and the PCM or TCM
- Select "Parameter Reset" and then Exit Security Access

### Procedure IA #7

- Program 2 IA keys before attempting to do parameter reset
- Enter Security Access on the PATS control function module (RFA) and the BCM. (Security access can be granted even with ignition off)
- Select "BCM and RFA Parameter Reset" and then Exit Security Access

<b>Parameter Reset When Replacing PCM</b>	<p><b>Procedure IA #8</b></p> <ul style="list-style-type: none"> <li>- With an IA key inside the vehicle, press the Start Stop Button (push the ignition switch) to RUN</li> <li>- Enter Security Access on the PATS control function module and the PCM</li> <li>- Select "Parameter Reset" and then Exit Security Access</li> </ul> <p><b>Procedure IA #9</b></p> <ul style="list-style-type: none"> <li>- With an IA key inside the vehicle, press the Start Stop Button (push the ignition switch) to RUN</li> <li>- Enter Security Access on the BCM and the PCM</li> <li>- Select "BCM /PCM Parameter Reset" and then Exit Security Access</li> </ul>
<b>Parameter Reset When Replacing BCM</b>	<p><b>Procedure IA #10</b></p> <ul style="list-style-type: none"> <li>- 2 IA keys must be programmed to the RFA module before Parameter Reset is attempted</li> <li>- Enter Security Access on the PATS control function (RFA) module and the BCM</li> <li>- Select "Parameter Reset BCM/RFA" and then Exit Security Access</li> <li>- With a programmed IA key inside the vehicle, press the Start Stop Button (push the ignition switch to RUN)</li> <li>- Enter Security Access on the BCM and the PCM</li> <li>- Select "Parameter Reset BCM/PCM" and then Exit Security Access</li> </ul>

## Troubleshooting NOTES:

1. If No Key Detected displayed in Message Center and engine does not start: Disconnect any phone/ laptop chargers and/or move the IA key to a different location within the vehicle, attempt to restart engine, or insert IA key in back-up location (varies per vehicle) and attempt to start engine; then follow WSM procedures to diagnose further
2. Electronically unlock the vehicle before attempting to program keys
3. If vehicle battery depleted, remove spare key from inside the IA key to mechanically unlock the vehicle through the driver door lock cylinder, then open the hood and connect a battery charger if necessary
4. Do not press Brake Pedal during key programming procedure
5. IKTs and IA Keys do NOT need to be reprogrammed if battery is replaced
6. Reprogramming IKTs or IA keys will NOT correct RKE range performance issues
7. If any of the RKE buttons functions correctly, the IKT or IA key is correctly programmed to the vehicle, so do NOT reprogram it, refer to WSM for correct diagnosis of customer complaint
8. Most vehicles only allow for 4 remote transmitters (including RF keypad) to be programmed for RKE functionality
9. If both transmitters stopped working, refer to WSM for further diagnosis
10. If IGNITION can go to RUN, then key is programmed and authenticated; do not reprogram key



## Procedures:

### Key Programming Using Diagnostic Tools

#### Procedure PATS #1

- 2 keys required
- Cycle key 1 to RUN
- Enter Security Access on the PATS control function module
- Select "Ignition Key Code Erase"
- Disconnect tool and leave key in RUN for 20 seconds
- Cycle key 1 to OFF, then RUN, wait 10 seconds, and back to OFF. Cycle key 2 to RUN, wait 10 seconds. In some vehicles, locks will cycle to confirm keys have been programmed successfully;

#### Procedure PATS #1.5

- 2 keys required
- Cycle key 1 to RUN
- Enter Security Access on the PATS control function module
- Select "Ignition Key Code Erase"
- Select "Ignition Key Code Program"
- Remove key 1 from ignition. Cycle key 2 to RUN
- Select "Ignition Key Code Program"

### Spare Key Programming Using Diagnostic Tools

#### Procedure PATS #2

- Cycle an unprogrammed key in ignition to RUN
- Enter Security Access on the PATS control function module
- Select "Ignition Key Code Program"
- Disconnect Tool and leave key in RUN for 20 seconds

Spare Key Programming Using Programmed Keys	<p><b>Procedure PATS #3</b></p> <ul style="list-style-type: none"> <li>- 2 programmed keys required</li> <li>- Cycle key 1 to RUN, wait at least 3 sec but not longer than 10 sec, then OFF</li> <li>- Cycle key 2 to RUN, wait at least 3 sec but not longer than 10 sec, then OFF</li> <li>- Cycle new key to RUN, wait at least 3 sec</li> </ul>
Parameter Reset When Replacing PATS Control Module or PCM	<p><b>Procedure PATS #4</b></p> <ul style="list-style-type: none"> <li>- Cycle a key in ignition to RUN</li> <li>- Enter Security Access on the PATS control function module and the PCM/TCM</li> <li>- Select "ICM/PCM" or "BCM/PCM Parameter Reset" and then Exit Security Access</li> </ul>

This information is also available on the Professional Technician Society (PTS) and FMCDDealer.com Web sites.

## PATS Troubleshooting Notes:

It is **NOT** a PATS/Immobilizer issue if:

- Check Engine Light is ON
- There is no communication with PCM/TCM
- Engine stalls on the road; PATS/Immobilizer system cannot shut down an engine once it had started
- There are no PATS-related DTCs

## Procedure RKE #1 (Fiesta, Focus, 2013+ Escape, C-Max, Transit Connect/Transit)

### Reprogramming Your Remote Control

**Note:** *You can only manually program integrated keyhead transmitters. See the chart on the front page to program intelligent access transmitters.*

You must have all remote controls available before beginning this procedure. If all remote controls are not present during programming the ones missing will no longer operate the vehicle.

#### To program the remote control:

1. Turn the ignition switch from off to run four times in rapid succession (within six seconds), with the fourth turn ending in off. If the program mode is successfully entered, a chime will sound.

**Note:** *If no action is taken within 10 second after transmitter has been programmed, the programming sequence ends.*

2. Within 10 seconds, press any button on the transmitter to be programmed. A chime will sound to confirm that the transmitter is programmed. Repeat this step for each transmitter.

**Note:** *There is no chime or any other confirmation upon exiting the programming mode.*

3. Exiting the programming mode is accomplished if one of the following occurs:

- The ignition is turned on
- Ten seconds have passed since entering the programming mode or since the last transmitter was programmed
- The maximum number (eight) of transmitters has been programmed

## Procedure RKE #2 (Econoline)

Do not press brake pedal during Remote Entry programming procedure as it will immediately exit you from that mode. Electronically unlock the vehicle prior to attempting to enter Remote Entry Programming Mode. Turn ignition from OFF to RUN 8 times within 10 seconds, with the 8th time ending in RUN. All doors will lock then unlock to confirm programming mode. Within 20 seconds, press any button on 1st remote transmitter. Door locks will cycle to confirm programming. Within 20 seconds, press any button on 2nd transmitter (up to 4 transmitters total possible). Turn ignition to OFF. Locks will again cycle to indicate end of programming mode.



## RKE Troubleshooting Notes:

Program all remote controls during the same programming procedure, otherwise, customer's transmitters that are not available will no longer work with the vehicle. **NOTE:** upon successful programming of transmitters, all previously stored transmitter IDs in memory get erased, thus, all transmitters need to be programmed at the same time.

- Do not press brake pedal during programming
- Vehicle must be electronically unlocked/alarm disarmed to enter programming mode
- Avoid cross programming of transmitters by entering program mode on a single vehicle at a time  
**WARNING:** Transmitters functioned within 50m of a vehicle in program mode may inadvertently get programmed to that vehicle
- No need to reprogram transmitters that require battery replacement
- No need to reprogram transmitters if any of the buttons operate properly
- No need to reprogram transmitters if vehicle is experiencing poor range performance
- If only one transmitter needs to be added or replaced, this can be accomplished via the diagnostic programming procedure, using service tools (if supported) instead of erasing all transmitters from memory using the manual key method.

### Remove and Replace Batteries

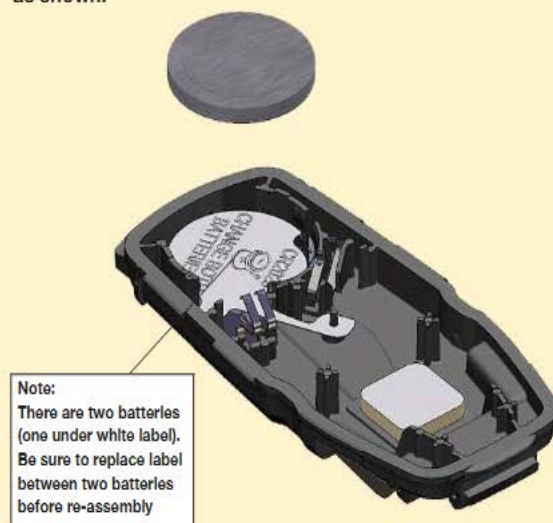
#### Example of Battery Replacement

Use CR2032 Battery. Replace with + side up.  
Do not wipe battery terminals.



#### 2013 Fusion/MKZ Intelligent Access *ONLY*

Remove and reinstall two CR 2025 Batteries with "+" symbol facing each other separated by white label as shown.



							Procédurés						
Vehicle	Model Year	PATS Control Function Type	Max PATS Keys	Minimum Keys Required	Starter Interrupt Present	Theft Indicator Flashes at Ignition OFF	Parameter Reset	Key Programming Using Diagnostic Tools	Spare Key Programming Using Diagnostic Tools	Spare Key Programming Using Programmed Keys	Device Type Example (*)	External Antenna needed if RS	Max Number of RKE devices
C-MAX HEV	2013	B	8	2	NO	N/A	PATS #4	PATS #1.5	PATS #2	PATS #3; RKE #1	7	n/a	
ECONOLINE	2011-2013	A	8	2	YES	10 seconds	PATS #4	PATS #1	PATS #2	PATS #3; RKE #2	8, 17	n/a	6
EDGE	2007-2010	A	8	2	YES	YES	PATS #4	PATS #1	PATS #2	PATS #3	2	n/a	6
EDGE	2011-2013	B	8	2	YES	N/A	PATS #4	PATS #1	PATS #2	PATS #3	3,5	YES	4
ESCAPE	2008-2012	A	8	2	YES	YES	PATS #4	PATS #1	PATS #2	PATS #3	2	n/a	6
ESCAPE (CS20)	2013	B	8	2	YES	N/A	PATS #4	PATS #1.5	PATS #2	PATS #3; RKE #1	7	n/a	
ESCAPE HEV	2008-2012	A	8	2	NO	YES	PATS #4	PATS #1	PATS #2	PATS #3	2	n/a	6
EXPEDITION	2009-2013	A	8	2	YES	10 seconds	PATS #4	PATS #1	PATS #2	PATS #3	3	n/a	6
EXPLORER	2011-2013	B	8	2	YES	N/A	PATS #4	PATS #1	PATS #2	PATS #3	3,5	NO	4
F-150	2011-2013	B	8	2	YES	N/A	PATS #4	PATS #1	PATS #2	PATS #3	3,4	YES	4
"F-SERIES Super Duty"	2011-2013	B	8	2	YES	N/A	PATS #4	PATS #1	PATS #2	PATS #3	3,4	YES	4
FIESTA	2011-2013	A	8	2	YES		PATS #4	PATS #1.5; RKE #1	PATS #2; RKE #1	PATS #3; RKE #1	6	n/a	
FLEX	2009-2011	A	8	8	YES	YES	PATS #4	PATS #1	PATS #2	PATS #3	2	n/a	6
FLEX	2012	A	8	2	YES	YES	PATS #4	PATS #1	PATS #2	PATS #3	3	n/a	6
FLEX	2013	B	8	2	YES	N/A	PATS #4	PATS #1	PATS #2	PATS #3	3,5	YES	4
FOCUS	2013	A	8	2	YES	N/A	PATS #4	PATS #1.5	PATS #2	PATS #3; RKE #1	7	n/a	

FUSION	2010-2012	A	8	2	YES	YES	PATS #4	PATS #1	PATS #2	PATS #3	2	n/a	6
FUSION HEV	2010-2012	A	8	2	NO	YES	PATS #4	PATS #1	PATS #2	PATS #3	2	n/a	6
FUSION	2013	B	8	2	YES	N/A	PATS #4	PATS #1	PATS #2	PATS #3	1	NO	8
FUSION HEV	2013	B	8	2	NO	N/A	PATS #4	PATS #1	PATS #2	PATS #3	1	NO	8
MUSTANG	2010-2013	A	8	2	YES	YES	PATS #4	PATS #1	PATS #2	PATS #3	3	n/a	6
TAURUS	2010-2011	A	8	2	YES	YES	PATS #4	PATS #1	PATS #2	PATS #3	2	n/a	6
TAURUS	2012	A	8	2	YES	YES	PATS #4	PATS #1	PATS #2	PATS #3	3	n/a	6
TAURUS	2013	B	8	2	YES	N/A	PATS #4	PATS #1	PATS #2	PATS #3	3,5	NO	4
TRANSIT CONNECT	2010-13	A	8	2	YES	YES	PATS #4	PATS #1.5; RKE #1	PATS #2; RKE #1	PATS #3; RKE #1	6,9	n/a	8
TRANSIT	2013	B	8	2	YES	YES	PATS #4	PATS #1.5; RKE #1	PATS #2; RKE #1	PATS #3; RKE #1	7	n/a	8
MKS	2010-2012	A	8	2	YES	YES	PATS #4	PATS #1	PATS #2	PATS #3	2	n/a	6
MKZ	2010-2012	A	8	2	YES	YES	PATS #4	PATS #1	PATS #2	PATS #3	2	n/a	6
Navigator	2009-2013	A	8	2	YES	10 seconds	PATS #4	PATS #1	PATS #2	PATS #3	3	n/a	6



# IA with Push-Button Start – PEPS Dealer Aid Report

							Procedures						
Vehicle	Model Year	PATS Control Function Type	Max Keys	Minimum Keys Required	Starter Interrupt Present	Theft Indicator Flashes at Ignition OFF	Parameter Reset	Key Programming Using Diagnostic Tools	Spare Key Programming Using Diagnostic Tools	Spare Key Programming Using Programmed Keys	IA Device Type Example(*)	External Antenna needed if RS	Starting Back-up location
Ford	C-MAX HEV	C	8	2		N/A	IA#7, IA#9, IA#10	IA#2a	IA#3a	N/A	14, 11	n/a	steering column
	EDGE	C	4	2	YES	N/A	IA#7, IA#9, IA#10	IA#2	IA#3	IA#4	11	YES	center console
	ESCAPE	C	8	2	YES	N/A	IA#7, IA#9, IA#10	IA#2a	IA#3a	N/A	11	n/a	steering column
	EXPLORER	C	4	2	YES	N/A	IA#7, IA#9, IA#10	IA#2	IA#3	IA#4	10, 11	NO	center console
	FIESTA	C	8	2	YES	N/A	IA#8, IA#8	IA#2a	IA#3a	N/A	14	n/a	steering column
	FLEX	C	4	2	YES	N/A	IA#7, IA#9, IA#10	IA#2	IA#3	IA#4	11	YES	center console
	FOCUS	C	8	2	YES	N/A	IA#7, IA#9, IA#10	IA#2a	IA#3a	N/A	14, 11	Yes	steering column
	FOCUS EV	C	8	2	NO	N/A	IA#7, IA#9, IA#10	IA#2a	IA#3a	N/A	14, 11	Yes	steering column
	FUSION	B	4	2	YES	N/A	IA#8, IA#8, IA#9	IA#1, IA#2	IA#3	IA#5	12	NO	center console
	FUSION HEV	B	4	2	YES	N/A	IA#8, IA#8, IA#9	IA#1, IA#2	IA#3	IA#5	12	NO	center console
	FUSION EV	B	4	2	YES	N/A	IA#8, IA#8, IA#9	IA#1, IA#2	IA#3	IA#5	12	NO	center console
	TAURUS	C	4	2	YES	YES	IA#8, IA#8	IA#2	IA#3	IA#4	16	n/a	center console
Lincoln	TAURUS	C	4	2	YES	N/A	IA#7, IA#9, IA#10	IA#2	IA#3	IA#4	11	NO	center console
	MKS	C	4	2	YES	YES	IA#8, IA#8	IA#2	IA#3	IA#4	15	n/a	glove box
	MKS	C	4	2	YES	N/A	IA#7, IA#9, IA#10	IA#2	IA#3	IA#4	11	NO	glove box
	MKT	C	4	2	YES	YES	IA#8, IA#8	IA#2	IA#3	IA#4	15	n/a	center console
	MKT	C	4	2	YES	N/A	IA#7, IA#9, IA#10	IA#2	IA#3	IA#4	11	NO	center console
	MKX	C	4	2	YES	N/A	IA#7, IA#9, IA#10	IA#2	IA#3	IA#4	11	YES	center console
	MKZ	B	4	2	YES	N/A	IA#8, IA#8, IA#9	IA#1, IA#2	IA#3	IA#5	13	NO	bottom of cup holder/ remove rubber mat

## Key Types



FK V1 Valeo - 4 Button  
(L, U, P, DR) Flip Key



IKT H1 Huf 3 button (L, U, P), edge cut  
IKT H3 Huf 4 button (L, U, P, DR), edge cut



IKT S1 Strattec 3 button (L, U, P)  
IKT S2 Strattec 4 button (L, U, P, DR)



IKT S4 Strattec 4 button  
(L, U, P, RS)



IKT - S5 Strattec 5 button  
(L, U, P, DR, RS)



IKT-C1 Continental 3 button  
(L, U, DR), side milled







PATS Key 2



PK C2 Continental 4 button (L, U, P, RS) Passive Key



PK C3, C11 Continental 5 button (L, U, P, DR, RS) Passive Key



PK C4 Continental 5 button (L, U, P, DR, RS) Passive Key (2-Way 902MHz)



PK C5 Continental 5 button (L, U, P, DR, RS) Passive Key (2-Way 902MHz)



PK C10 Continental 433MHz 3B



PK H1 Huf 4 button  
(L, U, P, DR)



PK H2 Huf 4 button  
(L, U, P, DR)



L - Lock      U - Unlock      P - Panic  
DR - Trunk/Lift Gate      RS - Remote Start

"For MyKey service procedures reference appropriate MYKEY service Literature"

## PATS - PEPS Control Function Type

- A: Instrument Cluster Module (ICM)
- B: Body Control module (BCM)
- C: Remote Function Actuator Module (RFA) or Keyless Vehicle Module (KVM)