9

FORD

FORD MANUAL

ADVANCED DIAGNOSTICS

CONTENTS

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ADVANCED DIAGNOSTICS

APPLICATIONS

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VEHICLE	TYPE	KEYS	YEAR	SYSTEM	CABLE
KA	PETROL	3 KEYS & 2 KEYS	96/97 97/98 99> 2002 >	PATS 2 ISO PATS 3 ISO PATS 3 SCP PATS 3 CAN	ADC110-B ADC110-B ADC110-B ADC110-B
FIESTA/ COURIER	PETROL	3 KEYS & 2 KEYS	93 > 96 96/97 97/98 98 >	PATS 1 ISO PATS 2 ISO PATS 3 ISO PATS 3 SCP	ADC111 ADC110-B ADC110-B ADC110-B
FIESTA/ COURIER	DIESEL	3 KEYS & 2 KEYS	95 > 97 97 >	PATS 2 ISO PATS 3 ISO	ADC111 ADC110-B
FIESTA (NEW)	ALL	2 KEYS	2002 >	PATS 3 CAN	ADC110-B
PUMA	PETROL	2 KEYS 2 KEYS	1.7 ZETEC 96> 1.4 ZETEC 97 >	PATS 3 ISO PATS 3 ISO	ADC110-B ADC110-B
ESCORT/ ORION	PETROL	3 KEYS 3 KEYS	93 > 97 97 >	PATS 1 ISO PATS 2 ISO	ADC111 ADC110-B
ESCORT/ ORION	DIESEL	3 KEYS	94 > 97	PATS 2 ISO	ADC111 ADC110-B
FALCON	PETROL/ LPG	2 KEYS	ALL	PATS 2.5	ADC110-B
FOCUS	PETROL	2 KEYS	98 >	PATS 3 SCP	ADC110-B
FOCUS	DIESEL	2 KEYS	98 >	PATS 3 SCP	ADC110-B
MONDEO	PETROL (MANUAL)	3 KEYS 3 KEYS 2 KEYS 2 KEYS	94 > 96 96/97 97/98 98 >	PATS 1 ISO PATS 2 ISO PATS 3 ISO PATS 3 SCP	ADC111 ADC110-B ADC110-B ADC110-B
MONDEO	PETROL (AUTO)	3 KEYS 2 KEYS 2 KEYS	94 > 96 96/97 97 >	PATS 1 ISO PATS 2 ISO PATS 3 SCP	ADC111 ADC111 ADC110-B
MONDEO	DIESEL	3 KEYS 2 KEYS 2 KEYS	96/97 97/98 98 >	PATS 2 ISO PATS 3 ISO PATS 3 SCP	ADC110-B ADC110-B ADC110-B
COUGAR	PETROL	2 KEYS	ALL	PATS 3 ISO	ADC110-B
GRANADA/ SCORPIO	PETROL (MANUAL)	3 KEYS 2 KEYS	> 97 97 >	PATS 2 ISO PATS 3 ISO	ADC110-B ADC110-B
GRANADA/ SCORPIO	PETROL (AUTO)	3 KEYS 2 KEYS	> 97 97 >	PATS 2 ISO PATS 3 SCP	ADC110-B ADC110-B
GRANADA/ SCORPIO	DIESEL	3 KEYS 2 KEYS	95/96 96/97 97 >	PATS 2 ISO PATS 3 ISO PATS 3 SCP	ADC110-B ADC110-B ADC110-B

APPLICATIONS

VEHICLE	TYPE	KEYS	YEAR	SYSTEM	CABLE
GALAXY	PETROL V6 TYPE 1 TYPE 2	3 KEYS 2 KEYS 2 KEYS	> 97 97 > 00 00 >	PATS 2 PATS 3	ADC110-B ADC110-B ADC110-B ADC110-B
GALAXY	DIESEL	2 KEYS 2 KEYS 2 KEYS	> 97 97 > 00 00 >	PATS 2 PATS 3 PATS 3	ADC110-B ADC110-B ADC110-B
WINDSTAR	ALL	2 KEYS 2 KEYS 2 KEYS	> 97 97/98 98 >	PATS 2 PATS 3 PATS 3	ADC110-B ADC110-B ADC110-B
EXPLORER	ALL	2 KEYS	00 >	PATS 3	ADC110-B
TRANSIT	PETROL	3 KEYS 2 KEYS 2 KEYS	94 > 97 97 > 00 00 >	PATS 2 PATS 3 PATS 3	ADC110-B ADC110-B ADC110-B
TRANSIT	DIESEL	3 KEYS 3 KEYS 3 KEYS 2 KEYS 2 KEYS 2 KEYS 2 KEYS	94/95 95/96 96/97 97 > 00 00 > TYPE 1 TYPE 2	PATS 2 PATS 2 PATS 2 PATS 3 PATS 3 PATS 3 PATS 3	ADC110-B ADC110-B ADC110-B ADC110-B ADC110-B ADC110-B ADC110-B
TRANSIT	EPIC	3 KEYS 3 KEYS 2 KEYS	95 > 97 97 > 97.5 97.5 >	PATS 2 PATS 2 PATS 3	ADC110-B ADC110-B ADC110-B
MAVERICK	PETROL	NA	ALL	NATS	ADC110-B
MAVERICK	DIESEL	NA	ALL	NATS	ADC110-B

SYSTEM	TYPE	KEYS	YEAR	VEHICLE	GENERAL
LDV	DIESEL	3 KEYS	TO 2000	CONVOY	BOSCH DIESEL DSM SYSTEM
LDV	EPIC	3 KEYS	TO 2000	CONVOY TURBO	LUCAS EPIC DIESEL SYSTEM
LDV	LPG	2 KEYS	2000 ON	CONVOY LPG/ PETROL ENGINE	FORD EECV EFH SYSTEM
LDV	DIESEL	2 KEYS	2002 ON	CONVOY DIESEL	DURATORQUE

GENERAL OPERATION

INTRODUCTION

The FORD PATS systems were introduced on Ford vehicles on 94.5 M.Y. vehicles , and was available from March 1994.

There have been many variations on the original system fitted. This system has a separate PATS Amplifier, however on subsequent systems the PATS module was incorporated into the Engine Management ECU.

SYSTEM OPERATION

The PATS system is a PASSIVE Anti-theft system which requires no special procedures for the driver to arm or disarm the system. The system is operated by a transponder fitted within the ignition key's body, which communicates with the PATS module ignition transceiver mounted around the lock barrel.

The easy method of identifying a PATS vehicle is if the key has a small imprint showing where the transponder is fitted. The code for the transponder is stored in memory within the PATS amplifier or the Engine Management ECU.

The PATS system reads the code when the ignition key is turned from position 0 to position 1. If the correct code is received then the engine will start.

When vehicles are fitted with Diesel Smart Modules or EPIC, the PATS code is stored in these systems as well, and requires clearing when new keys are programmed.

KEY OPERATION - UP TO 98 ¼ MY

Three keys are allocated to each vehicle, the first key which is inserted is known as the master and is usually identified by it's RED colour. The other keys that are used are known as slave keys and are usually BLACK with a RED insert. Up to 16 keys can be programmed into the PATS system.

GENERAL OPERATION

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KEY OPERATION - 98¼ MY ONWARDS

The newer systems are only supplied with 2 keys. Both keys are required to program further slave keys. Up to a maximum of 8 keys can be programmed to this PATS system.

KEY PROGRAMMING - UP TO 98 ¼ MY

NOTE : Clear ALL Fault codes before programming.

A new master key can only be programmed using the FDS2000 or the AD PROGRAMMING systems. Further slaves can be added without any specialist equipment as follows :-

1. Insert master key, and turn to Position 2. PATS LED should illuminate.

2. Turn ignition from Position 2 to Position 0, and remove key. PATS LED will illuminate for 2 seconds. PATS system is now in programming mode for 10 seconds.

3. Insert the new slave key, and turn from Position 0 to Position 2. PATS LED will flash once if successful.

4. Repeat for all new slave keys.

NOTE : The Immobiliser receiver does not need reprogramming when replaced.

GENERAL OPERATION

KEY PROGRAMMING - 98¼ MY ONWARDS

NOTE : Clear ALL Fault codes before programming.

Master keys can only be programmed using the 2 PATS keys (A and B) the FDS2000 or the AD PROGRAMMING SYSTEM system.

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NOTE : In some cases the vehicle doors must be closed to perform the re-programming sequence.

Further slaves can be added without any specialist equipment as follows :-
1. Insert key A, and turn to Position 2.
2. Turn back to Position 0, and remove key A.
3. Insert key B, and turn to Position 2.
4. Turn back to Position 0, and remove key B.
5. Insert the new slave key and turn to Position 2.
6. Remove new key. Key is now programmed.
7. Procedure can be repeated after 20 seconds, for up to 8 slave keys.

NOTE : If programming is unsuccessful, the PATS LED will flash when the key is inserted.

PATS LED INDICATOR

The LED indicator is used for the PATS system and also other Anti-theft systems fitted to the Ford vehicle range. When the ignition is switched ON, the PATS LED will illuminate for 3 seconds while it performs a self-test, after which it extuingishes. When the PATS system is armed and immobilised the vehicle, the PATS LED will flash quickly.

If there is a fault on the PATS system, and the engine can start, the PATS LED will illuminate for 60 seconds continuously, and then flash the PATS fault code 10 times. If the engine is unable to start and disabled by the PATS system, then the PATS LED will FLASH for 60 seconds and then flash the PATS fault code 10 times. PATS LED is mounted either in the front headlining or next to the heater controls/clock.

PATS SYSTEM - PROBE ONLY

The PATS system fitted to the Probe is unlike the other systems. The main difference is the system cannot be diagnosed with the FDS2000 or the AD PROGRAMMING SYSTEM. Additional keys and re-programming of new keys are performed in a different procedure as well.

PROGRAMMING NEW/ADDITIONAL KEYS (2 or more keys available)

1. Using one of the existing keys (This becomes KEY 1), insert into ignition switch.
 NOTE : When requested to turn the key ON or OFF, the time should not be less than 1 Second or more than 2 Seconds between operations. Unless stated otherwise.
2. Turn the Key to IGNITION ON and then OFF five times, stopping at the OFF position.
NOTE : PATS LED Should remain ON with the key in the OFF position.
3. Turn the IGNITION ON using KEY 1., within 15 seconds of step 2.
4.. Turn the IGNITION OFF and remove KEY 1.
5. Insert KEY 2 within 60 seconds of PATS LED illuminating.
6. Turn IGNITION ON and start engine with KEY 2. PATS LED will extinguish after 1-2 seconds and engine remain running if key is accepted.
7. Turn IGNITION OFF and remove KEY 2.
8. Insert KEY 3 within 15 seconds of removing KEY 2.
9. Turn IGNITION ON and start engine with KEY 3. PATS LED will extinguish after 1-2 seconds and engine remain running if key is accepted.
10. Turn IGNITION OFF and remove KEY 3. Repeat as necessary for additional keys.

PROGRAMMING NEW/ADDITIONAL KEYS (No keys available)

Programming new key(s) when no keys are available can only be completed by a FORD dealer.

CLEARING/PROGRAMMING PATS 1 & 2 SYSTEM (PETROL)

9

```
  DIAGNOSTIC MENU

 ECU IDENTIFICATION
 FAULT CODES
 SPECIAL FUNCTIONS



  PRESS ENTER KEY
```

Using the **UP** and **DOWN** keys select the
SPECIAL FUNCTIONS.

```
  DIAGNOSTIC MENU

 > CLEAR PATS 1 SYSTEM
   KEYS PROGRAMMED




  PRESS ENTER KEY
```

Using the **UP** and **DOWN** keys select the **CLEAR PATS SYSTEM.**

```
  CLEAR PATS 1 SYSTEM

  SWITCH IGNITION ON
  IGNITION STATUS OFF



```

Follow the screen instructions to clear the PATS system.

```
  CLEAR PATS 1 KEY

 TIME ELAPSED    0:50
 TIME REQUIRED   8:00

  WAITING TO CLEAR
  BACK TO ABORT
```

The TESTER will now start to clear the PATS system key codes from memory.

NOTE : If WAITING TO CLEAR is not displayed this indicates the incorrect system has been selected.

```
  CLEAR PATS 2 SYSTEM

  ALL KEYS CLEARED

  KEYS PROGRAMMED : 1


  PRESS ENTER KEY
```

If successful the TESTER will display all keys cleared and how many keys are programmed.

CLEARING/PROGRAMMING PATS 1 & 2 SYSTEM (PETROL)

PROGRAM KEYS

3 KEYS REQUIRED

PRESS ENTER KEY

The key in the ignition is now programmed as the master key.

After the Master key has been programmed additional keys can be added in the normal manual procedure as described in the previous section

SPECIAL FUNCTIONS

C

CLEARING/PROGRAMMING PATS 1 & 2 SYSTEM (DIESEL)

9

```
DIAGNOSTIC MENU

ECU IDENTIFICATION
FAULT CODES
SPECIAL FUNCTIONS


PRESS ENTER KEY
```

Using the **UP** and **DOWN** keys select the **SPECIAL FUNCTIONS**.

```
DIAGNOSTIC MENU

> CLEAR PATS 2 SYSTEM
  KEYS PROGRAMMED



PRESS ENTER KEY
```

Using the **UP** and **DOWN** keys select the **CLEAR PATS SYSTEM.**

```
CLEAR PATS 2 SYSTEM

SWITCH IGNITION ON
IGNITION STATUS OFF



```

Follow the screen instructions to clear the PATS system.

```
CLEAR PATS 2 KEY

TIME ELAPSED     0:50
TIME REQUIRED    8:00

  WAITING TO CLEAR
   BACK TO ABORT
```

The TESTER will now start to clear the PATS system key codes from memory.

NOTE : If WAITING TO CLEAR is not displayed this indicates the incorrect system has been selected.

```
CLEAR DSM KEY

TIME ELAPSED     0:50
TIME REQUIRED   15:00

  WAITING TO CLEAR
   BACK TO ABORT
```

After Clearing the PATS module, the TESTER will automatically switch over to clearing the DSM (Diesel Smart Module) which takes 15 minutes.

ADVANCED DIAGNOSTICS

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CLEARING/PROGRAMMING PATS 1 & 2 SYSTEM (DIESEL)

```
CLEAR PATS 2 SYSTEM

ALL KEYS CLEARED

KEYS PROGRAMMED : 1
```

PRESS ENTER KEY

```
PROGRAM KEYS

3 KEYS REQUIRED
```

PRESS ENTER KEY

NOTE : If CONDITIONS INCORRECT is displayed then check the connection to the diesel pump, and clean the connections.

NOTE : If the time continues after 15 minutes and does not clear, then check to ensure the system selected is correct or check the connection to the diesel pump, and clean the connections.

NOTE : If WAITING TO CLEAR is not displayed this indicates the incorrect system has been selected.

If successful the TESTER will display all keys cleared and how many keys are programmed.

The key in the ignition is now programmed as the master key.

After Master key has been programmed additional keys can be added in the normal manual procedure as described in the previous section

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ADVANCED
DIAGNOSTICS

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CLEARING PATS 3 SYSTEM (PETROL & DIESEL ENGINES)

```
   CLEAR PATS 3 SYSTEM
  MIN KEYS REQUIRED : 2
       TIMED ACCESS
 CLEAR TIME  10:00
   KEYS PROGRAMMED : 2


     PRESS ENTER KEY
```

```
    CLEAR PATS 3 KEY
 GAINING ACCESS
 TIME ELAPSED     0:50
 TIME REQUIRED    10:00
    ACCESS STATUS
     IN PROGRESS
     BACK TO ABORT
```

Follow the screen instructions to clear the PATS system.

The TESTER will now start to clear the PATS
system key codes from memory.

NOTE : If ACCESS STATUS IN PRO-GRESS is not displayed this indicates the incorrect system has been selected.

After clearing, the PATS system will automatically read the key in the ignition.

Follow on screen instruction to program the keys.

After programming, disconnect TESTER leave vehicle for 1 minute and then insert both keys and switch IGNITION ON to exit programming mode.

After 2 minutes try starting with both keys.

NOTE : If an error is made, leave the ignition on for 20 seconds, and then insert both keys and turn ignition ON. Then try starting again.

NOTE : If the Diagnostic session is called before the other systems are not allowed to settle, ie. The dashboard to finish all the relevant checks are made the counter will show 0.00 and access denied or coded access.

ADVANCED DIAGNOSTICS

SPECIAL FUNCTIONS

CLEARING PATS SYSTEM (FALCON)

```
DIAGNOSTIC MENU

> B.E.M.
  P.C.M.



PRESS ENTER KEY
```

NOTE : Minimum 2 keys required.

NOTE : Ensure all vehicle doors remain closed at all times.

Connect TESTER to vehicle diagnostic connector, select Ford Falcon.

```
FALCON B.E.M. PATS




PRESS ENTER KEY
```

Select BEM first and press **ENTER**.

DO NOT TURN IGNITION ON when screen requests to.

Press **ENTER** and continue.

```
DIAGNOSTIC MENU

SPECIAL FUNCTIONS




PRESS ENTER KEY
```

Select SPECIAL FUNCTIONS and press ENTER.

Select CLEAR PATS 3 SYSTEM and press **ENTER** key.

```
DIAGNOSTIC MENU

> CLEAR PATS 3 SYSTEM
  PARAMETER RESET



PRESS ENTER KEY
```

NOTE : Doors locks will automatically lock.

Within 5 seconds insert the first key to be programmed and turn the IGNITION ON.

The door locks will UNLOCK and LOCK. Remove the first key from the ignition.

```
DIAGNOSTIC MENU

  B.E.M.
> P.C.M.




PRESS ENTER KEY
```

Within 5 seconds insert the second key to be programmed and turn the IGNITION ON.

The doors will UNLOCK and LOCK. Remove second key from ignition.

SPECIAL FUNCTIONS

CLEARING PATS SYSTEM (FALCON)

FALCON P.C.M. PATS
PRESS ENTER KEY

Wait for door locks to cycle and then press **ENTER** key.

Disconnect TESTER from vehicle.
Wait 30 seconds after disconnecting TESTER

DIAGNOSTIC MENU
SPECIAL FUNCTIONS
PRESS ENTER KEY

Insert one of the keys into the ignition and turn IGNITION ON.

Wait a further 30 seconds and the connect TESTER to vehicle again.

Continue to the same screen as previously but select P.C.M. And press **ENTER**.

DIAGNOSTIC MENU
CLEAR PATS 3 SYSTEM >**PARAMETER RESET**
PRESS ENTER KEY

Screen will display PCM PATS system.

Select SPECIAL FUNCTIONS and Press **ENTER** key. Select PARAMETER RESET and press **ENTER** key.

Follow on screen instructions, as the system will take the required Ford Timed access security wait time.

At the end of the time, the doors will cycle from LOCKED to UNLOCKED.

Disconnect TESTER.
Switch Ignition to the OFF position, and then switch IGNITION to the ON position with the same key.

The door locks will again cycle from LOCKED to UNLOCKED.

SPECIAL FUNCTIONS

CHECKING KEYS PROGRAMMED

DIAGNOSTIC MENU

CLEAR PATS 1 SYSTEM
> **KEYS PROGRAMMED**

PRESS ENTER KEY

Using the **UP** and **DOWN** keys select the **KEYS PROGRAMMED.**

KEYS PROGRAMMED 3

PRESS ENTER KEY

The number of keys stored in the Immobiliser ECU will be displayed.

PATS SYSTEM CLEARING TIMES

SYSTEM	CLEAR TIME
PATS 1	8:00 MINUTES
PATS 2	8:00 MINUTES
PATS 2 DSM/EPIC	23:00 MINUTES
PATS 3	10:00 MINUTES
PATS 3 DSM/EPIC	10:00 MINUTES

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ADD KEY FUNCTION

```
   DIAGNOSTIC MENU

    CLEAR PATS 1 SYSTEM
    KEYS PROGRAMMED
  > ADD KEY


    PRESS ENTER KEY
```

```
    CLEAR PATS 3 KEY
   GAINING ACCESS
 TIME ELAPSED     0:50
 TIME REQUIRED   10:00
    ACCESS STATUS
     IN PROGRESS
   BACK TO ABORT
```

NOTE : On some vehicles a function is available to add a key without deleting the old keys. This takes the normal 10 minutes security access time.

Using the UP and DOWN keys select the ADD KEY FUNCTION.

After 10 minutes, security access is gained and the key in the ignition will be added.

NOTE : Do not start the car after procedure.

Remove key, disconnect TESTER from vehicle and wait 2 minutes.

Insert key to ignition ON and the remove key from ignition.

Test key for starting.

If this procedure is not followed then a further security access time of 10 minutes will be required.

NOTE : Some vehicles, especially fleets and hire companies have this feature disabled, and the normal clear down procedure will be required.

TIPS & HINTS

D

SYSTEM TYPES

3 KEY SYSTEM—RED CHIP MASTER KEY SYSTEM (4C GLASS TRANSPONDERS)

For this system, connect TESTER before switching ignition ON.

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2 KEY SYSTEM—2 RED CHIP KEY SYSTEM (4C GLASS TRANSPONDERS)

For this system, connect TESTER before switching ignition ON

---

2 KEY SYSTEM—2 BLUE CHIP KEY SYSTEM (4D GLASS TRANSPONDER)

For this system switch IGNITION ON, and wait until the RED Security LED has finished Flashing Fast (Approx 20 seconds) before connecting TESTER

---

2 KEY SYSTEM—2 CARBON CHIP KEY SYSTEM (4D CARBON TRANSPONDER)

For this system switch IGNITION ON, and wait until the RED Security LED has finished Flashing Fast (Approx 20 seconds) before connecting TESTER

GALAXY SYSTEMS

When Galaxy systems are cleared, the time allowed to cycle the keys after the 10 Minutes clear down is very quick.

MAKE SURE YOU HAVE THE SECOND KEY AVAILABLE AND READY TO CYCLE

YOU HAVE ONLY 5 SECONDS AFTER CLEARING TO PROGRAM THE SECOND KEY

GENERAL

If communication is made with the vehicle, and then no communication is experienced later or the communication is random, check battery voltage and ensure it is at least 12.2 volts. This is particularly important on the SCP vehicles, and all Transit models.

A new function has been introduced on the WDS which enables the dealer to disable the additional key function. This is mainly used on fleet vehicles and hire companies to stop unauthorized key's being added. If a system will not accept additional keys, it may be because this has been enabled.

Fleet mode (unable to add a key) can be removed by clearing the PATS and DSM (diesel only) and reprogramming all keys.

When Programming on SCP Systems, turn IGNITION ON before connecting TESTER or ADC110B to Diagnostic socket, then wait for the dashboard lights to settle, then connect TESTER.

Intermittent start with fault code 12- replace faulty aerial pick up

If an incorrect key is used to try and start the engine, the correct key must be inserted and left in the IGN position for at least 20 seconds, then switched OFF then back ON before the vehicle starts.

Fault Code 0 is an ECU trouble code, if this is set and cannot be cleared, then there is a problem with the ECU. Normally the only way to fix this is to return the ECU for testing or replace it.

Fault Code 1000 is an ECU trouble code. This code can be set automatically if the vehicle has not been driven. The code refers to the OBD drive cycle. In some instances it is not possible to program new keys if this code is set. Please follow the following instructions if the code cannot be cleared or the keys cannot be programmed.

The OBD drive cycle code P1000 is the monitor code which monitors a number of the OBD parameters. This code can be cleared by driving the vehicle or running the engine for around 5 minutes at a steady RPM and acceleration cycles. The smoother the driving condition the quicker the code will be cleared.

If no keys are available, then the ECU can be disconnected for 30-45 minutes, which will also reset the system.

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TIPS & HINTS

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Example Code : 31
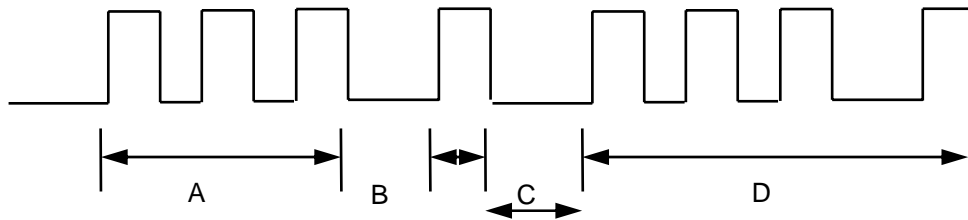
The PATS system has it's own self diagnosis test procedure which flashes codes. The PATS LED will flash quickly for 1 minute, and then start flashing the fault code as follows:-

A = 3 Flashes B = 1 Flash C = Three seconds delay
D = Repeat of code for 10 times

Code 11 Transceiver not connected
Code 12 Transceiver
Code 13 No key data received
Code 14 Part of the transponder code received
Code 15 Wrong transponder key
Code 21 Less than the minimum keys required programmed
Code 22 Failed diesel pump control unit identification
Code 23 The response code between pump control unit & powertrain
Code 31 DSM Communication
Code 32 DSM Communication
Code 34 DSM Communication

LED = Always ON or OFF
Check the fuse 15 (5 amp)

NOTE : If there are no fault codes, **DO NOT** clear fault codes as this can cause fault 1000 to be enabled.

Ford Escort, no communication with TESTER, switched Ignition OFF and ON very quickly, and communication gained. Conclusion was bad connection on ignition switch.

DO NOT insert a blue chip transponder key into a red key system.

REMOTE CONTROL PROGRAMMING

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Fiesta 96> & Escort 98> (Radio 3 Button)

Procedure
1. Insert Key and turn to II, then Turn Key from II to I and back to II four times within 3 seconds
2. The PATS LED should light. Turn Key to Position 0.
3. Press the Unlock button and keep it pressed until the PATS LED flashes 4 times.
4. Add additional fobs the same way. Turn to II and back to 0 to end.

Focus (Radio 3 Button)

Procedure
1. Switch Ignition **On/Off (II/0) 4 times within 6 seconds** until a sound is made.
2. Press any button on Remote until a sound is made.
3. To program additional Remotes, repeat after 2 seconds after the sound.
4. Turn Ignition On/Off to exit.
5. A maximum of 4 remotes can be programmed.

Mondeo 96> Scorpio > 98 (Radio 2 Button)

Procedure
1. Turn Ignition to II, then turn ignition from II to I and back 4 times within 3 seconds.
2. The PATS LED on dash should light.
3. Turn Ignition to 0. Then press Unlock button and keep it pressed until the PATS LED flashes 4 times (new fob first, then old)
4. Turn Ignition to II, then back to 0 to end.

Transit (2000.5MY)

Procedure
1. Close all the doors.
2. Turn Ignition key from position 0 to II eight times within 10 seconds.
3. Make sure the vehicle locks and unlocks the doors.
4. Press the remote transmitter button within 20 seconds., and make sure the vehicle locks and unlocks all the doors.
5. Up to 20 seconds is allowed to programme the next remote transmitter.
6. To programme additional remote transmitters, repeat steps 4 and 5.
7. Turn the ignition key to position 0 to exit the programming mode.

Note : Maximum 4 remote transmitters may be programmed.
Note : . Ensure the vehicle battery is fully charged and the anti-theft alarm system is not armed or triggered.

Note : If programming ends with no new remote transmitters, the originals are retained.

Note : The anti-theft alarm and double locking module will exit programming mode automatically if four new remote transmitters have been programmed or if no new remote transmitters been programmed within the 20 second programming mode.

ADVANCED DIAGNOSTICS

REMOTE CONTROL PROGRAMMING

Fiesta 96, Puma (Infrared 2 Button)

Procedure
1. Turn Ignition switch to Position I and back to 0 as soon as the PATS LED in the clock lights (The system is now ready for programming, to a maximum time limit of 30 seconds)
2. Remove Key from Ignition, hold the FOB towards the Interior Light, and press and hold the Single Arrow. Wait until the light on the Key flashes, then press the Double Arrow **3** times., release the Single Button
3. Both LEDs (Key & Clock) should flash to acknowledge programming is successful
4. To exit learn Mode, turn Ignition to II and then 0
5. A Maximum of **4** Remotes are possible

Mondeo 93> Mondeo 96> (Infrared 2 Button)

Procedure
1. Unlock Vehicle, and turn ignition to position 1.
2. Wait until the PATS LED illuminates (app 10 seconds)
3. Switch Ignition to 0 – within 5 seconds – LED will remain on
4. Point the Remote at one of the front Receivers
5. Press a button and keep pressed – within 20 seconds of step 3
6. When the LED on the Key lights press the other button 3-5 times
7. Release both buttons while still aiming at the receiver
8. If successful, both LED's will flash 5 times
9. Repeat 5—9 for additional transmitters (within 30 seconds)
10 .When completed, Turn Ignition to II then 0 to store the Keys

Mondeo 98½> Scorpio 95> (Radio 3 Button):

Procedure
1. Turn Ignition **4** times from 0 to I, ending at position I. A tone should sound.
2. Press the Remote Unlock button – another tone should sound.
3. Additional Remotes can be added by repeating Step 2, within ten seconds of each remote.
4. To exit turn Ignition to 0 – another audible sound should be made.

Cougar (Radio 3 Button)

Procedure
1. Turn Ignition On (II) and Off (0) **4** times within **6 seconds**
2. With the Ignition at 0 the PATS LED should light continuously.
3. Press any button on the Radio Remote **within 10 seconds**
4. The LED should flash to acknowledge
5. Further Remotes (max. 4) can be added by pressing any button.
6. Program mode will end if Ignition turned on, or no new Remote Detected within 10 seconds

NOTE : The first Cougars were 3 seconds instead of 6, and 20 seconds instead of 10.

REMOTE CONTROL PROGRAMMING

Scorpio 95> (Radio 3 Button)

1. Turn Ignition **4** times from 0 to I, ending at position I. An audible tone should be heard
2. Press the Remote Unlock button – there should be another audible tone
3. If more than one Remote then Step 2 should be repeated for each remote in turn, within ten seconds of each other.
      To End turn Ignition to 0 – there should be another audible tone.

Galaxy (Radio 2 button)

1. Make sure all doors and windows are closed.
2. Turn the key in the drivers door lock, 3 times to the unlock position for at least half a second and within a total of 5 seconds.
3. The system should now enter programming mode, this is shown by the LED illuminating continuously for the next 15 secs- during which the key should be programmed as follows.
4. Press one of the buttons on the key and whilst holding it pressed, simultaneously press the other button 3 times.
5. Release both buttons.
The key should now flash 5 times and the LED in the door should also flash, six times.

Additional Information

A maximum of four keyless entry remote transmitters can be programmed to the central security module (CSM). Programming must be done at the same time for all the transmitters.

Note:To enter programming mode, make sure that the vehicle battery is fully charged and the anti-theft system is not armed or triggered (if equipped).

1. Close all doors and fasten the safety belts to make sure conflicting chimes do not sound during programming.
2. Turn the ignition switch from position I to position II at least four times in six seconds.
3. Turn the ignition switch to position I.
4. The CSM is now in the learning mode.
5. Press and hold one of the buttons on the remote transmitter until a chime sounds. This indicates a new transmitter code has successfully received.
6. After each successful programming is completed, another 10 second learning mode is automatically entered, up to a maximum of four times.
7. To program additional transmitters, repeat from step 5.
8. The system will leave the learning mode after the ignition switch is turned to position III, or if no new transmitter is programmed during the 10 seconds, or if four remote transmitters have been programmed.
Note:An incorrect programming procedure does not effect the stored codes.
9. After successful programming, only the new programmed transmitters will be accepted.
10. Test all the programmed transmitters, by activating and deactivating the locking/ unlocking functions.

REMOTE CONTROL PROGRAMMING

Focus Built from 12.2000 Onwards

Note:The ignition must be turned off before attempting to reprogram the key fob.

11. The unlocking mode can be changed by pressing the locking and unlocking buttons on the remote transmitter simultaneously for a minimum of four seconds.

12. The change is indicated by the turn signal lamps flashing twice.

13. The mode can be carried out as often as required by repeating step 11.

Mondeo 2001 onwards

Note:The ignition must be turned off before attempting to reprogram the key fob.

14. The unlocking mode can be changed by pressing the locking and unlocking buttons on the remote transmitter simultaneously for a minimum of four seconds.
15. The change is indicated by the turn signal lamps flashing twice.
16. The mode can be carried out as often as required by repeating step 14.

Programming the transmitters.

1. Insert the ignition key and turn it from position II to position 0 and back four times within three seconds.

2. Remove the ignition key. The module remains in learning mode for 20 seconds and the anti-theft warning system light stays on continuously.

3. Press one of the transmitter buttons. The signal is learned by the module and indicated by a flashing anti-theft warning system light. If necessary, repeat the procedure for other transmitters after two seconds.

4. Wait until the module programming is complete, or switch the ignition to ON.
Note:A maximum of four keyless entry remote transmitters can be programmed to the central security module. Programming must be done at the same time for all the transmitters.

Note:To enter programming mode, make sure that the vehicle battery is fully charged and the anti-theft system is not armed or triggered (if equipped).

Note:Close all doors and fasten the safety belts to make sure conflicting chimes do not sound during programming.

5.Turn the ignition switch from the OFF position to the ON position four times within three seconds to enter the learning mode. Turn the ignition switch from the OFF position. The central security module will remain in the learning mode for 20 seconds indicated by the LED in the instrument panel being illuminated continuously.

6. Press any button on the remote transmitter being programmed. When the signal from the remote transmitter is accepted by the central security module, the LED will flash.

7. To program additional transmitters, repeat from step 6, with a two second delay after the LED flashes.

8. To exit the learning mode, turn the ignition switch to the ON position. If no transmitter signal is received by the central security module for 20 seconds, the system will automatically exit the learning mode.

9. Test all the programmed transmitters, by activating and deactivating the locking functions.

FORD CODED ACCESS

INTRODUCTION

The Ford coded access system was introduced in the year 2002, and the first vehicle that had this system was the FORD KA.

The system replaces the TIMED ACCESS, which was first used in 1994.

The new system replaces the TIMED ACCESS countdown timer with a security algorithm which will display an outcode when you try to program keys. This outcode needs converting and an incode is required.

Advanced Diagnostics have developed a system which uses this incode and outcode system, however the way the system works means that it is not 100% accurate and some vehicles cannot be programmed until the codes have been checked.

The system uses an internet system as described on the following pages, and requires web access when you are at the vehicle, Advanced Diagnostics Forum access and a valid AD100, MVP, TCODE, Codeseeker or DM100 serial number and passcode to use the system.
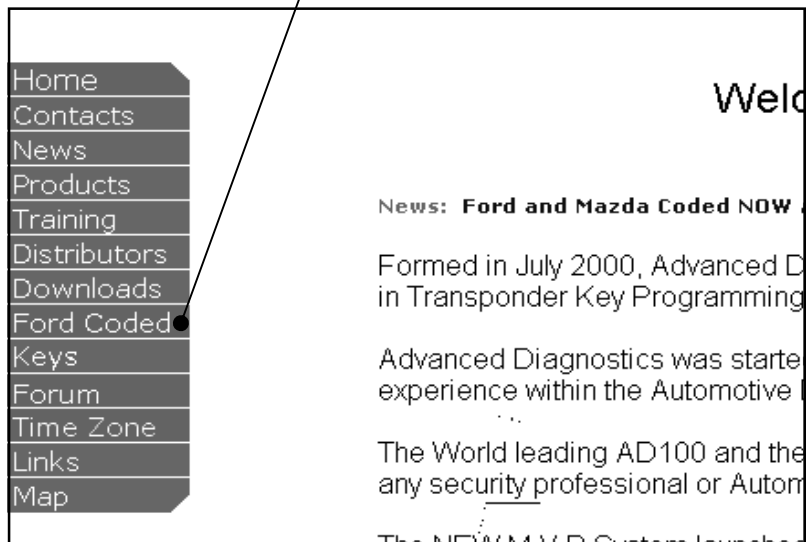
FORD CODED ACCESS

ADVANCED DIAGNOSTICS

Ford & Mazda Coded System
WWW.ADVANCED-DIAGNOSTICS.CO.UK
(Quick User Guide)

PLEASE FOLLOW THESE INSTRUCTIONS CAREFULLY ….

1. PLEASE FIRST ENSURE YOU HAVE YOUR FORUM USERNAME AND PASSWORD BEFORE YOU START.
2. PLEASE ENSURE YOU HAVE FORD/MAZDA CODED SOFTWARE ENABLED AND LOADED ON YOUR TESTER.
3. PLEASE SELECT 'FORD CODED' FROM THE MAIN MENU

Home
Contacts
News
Products
Training
Distributors
Downloads
Ford Coded
Keys
Forum
Time Zone
Links
Map

Welc

News: **Ford and Mazda Coded NOW**

Formed in July 2000, Advanced D
in Transponder Key Programming

Advanced Diagnostics was starte
experience within the Automotive
…

The World leading AD100 and the
any security professional or Autom

The NEW M.V.P. System launched

4. THE FOLLOWING FORD & MAZDA CODED PAGE WILL BE SHOWN …

Advanced Diagnostics

AD Forum Username _____

AD Forum Password _____

Tester Serial Number _____

Tester Passcode _____

VIN Number _____

Model [Please Select ▼]

Calc Value _____

Calc Type ____ - ____

OutCode _____

[Submit]

F

9

ADVANCED DIAGNOSTICS

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(Quick User Guide)

5. INSERT FORUM USER NAME
6. INSERT FORUM PASSWORD
7. INSERT TESTER SERIAL NUMBER
8. INSERT TESTER PASSCODE
9. INSERT VEHICLE VIN NUMBER
10. SELECT VEHICLE MODEL

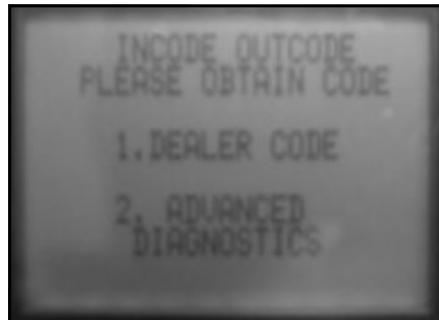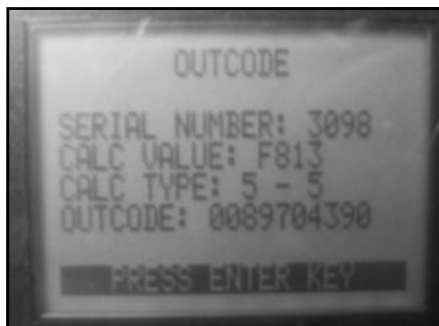|	
AD Forum Username	
AD Forum Password	
Tester Serial Number	
Tester Passcode	
VIN Number	
Model	Please Select
Calc Value	
Calc Type	☐ - ☐
OutCode	
	Submit

11. USING THE AD100, MVP, TCODE, DM100 OR CODESEEKER CONNECT TO THE VEHICLE AS DESCRIBED IN THE MANUAL.
12. AFTER YOU HAVE SELECTED 'ADD KEY' OR 'CLEAR PATS SYSTEM' FOLLOW THE ON SCREEN INSTRUCTIONS UNTIL YOU GET TO THE FOLLOWING SCREEN :-

```
INCODE OUTCODE
PLEASE OBTAIN CODE

1.DEALER CODE

2. ADVANCED
   DIAGNOSTICS
```

13. SELECT THE NUMBER 2. ADVANCED DIAGNOSTICS.
14. THE FOLLOWING EXAMPLE INFORMATION WILL NOW BE DISPLAYED.

```
OUTCODE

SERIAL NUMBER: 3098
CALC VALUE: F813
CALC TYPE: 5 - 5
OUTCODE: 0089704390

PRESS ENTER KEY
```

FORD CODED ACCESS

F

ADVANCED DIAGNOSTICS

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(Quick User Guide)

15.   INSERT THE DETAILS FROM THE TESTER INTO THE WEB PAGE AS FOLLOWS ...


```
AD Forum Username  [              ]
AD Forum Password  [              ]
                   _____
Tester Serial Number [            ]
Tester Passcode    [              ]
                   _____
VIN Number         [              ]
Model              [ Please Select    ▼]
Calc Value         [              ]
Calc Type          [   ] - [   ]
OutCode            [              ]
                   [ Submit ]
```

16.   ONCE ALL DETAILS HAVE BEEN ENTERED CORRECTLY PRESS THE SUBMIT BUTTON.
17.   THE SYSTEM WILL THEN TRY AND CALCULATE THE INCODE.

NOTE : THIS WILL TAKE 5 MINUTES TO CALCULATE.

```
AD Forum Username  greg
AD Forum Password  ●●●●●●
                   _____
Tester Serial Number 905
Tester Passcode    ●●●●●
                   _____
VIN Number         12111111111111111
Model              C_MAX           ▼
Calc Value         F813
Calc Type          5   - 5
OutCode            0089704390
                   _____

              CALCULATING
           PLEASE BE PATIENT
   THE SCREEN WILL REFRESH EVERY 30 SECONDS
```

18.   PLEASE CHECK THE PAGE DISPLAYS THIS MESSAGE ...

ADVANCED DIAGNOSTICS

ADVANCED DIAGNOSTICS

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19.   AFTER 5 MINUTES THE FOLLOWING SCREEN WILL BE DISPLAYED ...

20.   INSERT THE CODE FROM OPTION 1 INTO THE TESTER.

21.   THE TESTER SHOULD EITHER ACCEPT THE CODE AND SAY 'ACCESS GRANTED' OR 'INCORRECT INVALID'
22.   IF THE CODE FAIL'S, DISCONNECT THE TESTER.
23.   CYCLE THE IGNITION ON AND OFF FOR 6 TIMES, TO RESET THE SYSTEM.
24.   CONNECT TESTER AND REPEAT THE PROCEDURE AGAIN.

NOTE : THE INCODES ABOVE CANNOT BE USED AGAIN, YOU MUST START FROM THE BEGINNING IF THESE DO NOT WORK.

25.   WHEN THE NEXT BATCH OF OPTIONS ARE DISPLAYED, THIS TIME USE OPTION 2.
26.   IF OPTION 2 FAILS, THEN REPEAT THE WHOLE PROCEDURE AGAIN, BUT USE OPTION 3.
27.   IF OPTION 3 FAILS, THEN REPEAT THE WHOLE PROCEDURE AGIN, BUT USE OPTION 1.
28.   IF THIS FAILS, THEN REPORT THE CODE USING THE 'SEND THIS CODE AS A WRONG ANSWER' BUTTON.

ADVANCED DIAGNOSTICS