Passive Anti-Theft Security (PATS) Chart

Vehicle	Model Year (1996-2007)	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	PATS Key Type
Ford											
Contour (V6 Only)	98 (before 2/2/98)	A	16	1	Yes	Yes	N/A	#1	N/A	#5	23
	98 (2/2/98 build or later)-00	E	8	2	Yes	Yes	N/A	#2	#4	#6	23
Crown Victoria	98-02	B	8	2	No	Yes	#7	#2	#4	#6	1,19
	03-07	E	8	2 or 3	Yes	Yes	N/A	#2	#4	#6	9,14,15
Edge	07	C	8	2	Yes	Yes	#8	#2	#4	#6	IKT
Escape	01-04	E	8	2	Yes	Yes	N/A	#2	#4	#6	3
	05-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	15
Escape HEV	06-07	F	8	2	No	Yes	#8	#2	#4	#6	15
Excursion	00-05	B	8	2	No	Yes	#7	#2	#4	#6	1
Expedition	97-98	A	16	1	No	No	N/A	#1	N/A	#5	1
	99-02	C	8	2	No	Yes	#7	#2	#4	#6	1
	03-06	E	8	2	Yes	Yes	N/A	#2	#4	#6	9,15
	07	C	8	2	Yes	Yes	#8	#2	#4	#6	9
Explorer (4-dr)	98-01	B	8	2	No	Yes	#7	#2	#4	#6	1
	02-05	E	8	2	Yes	Yes	N/A	#2	#4	#6	9,15
	06-07	C	8	2	Yes	Yes	#8	#2	#4	#6	15
Explorer Sport (2-dr)	98-01 (before 7/24/00)	B	8	2	No	Yes	#7	#2	#4	#6	1
	01 (7/24/00 build or later)-03	E	8	2	Yes	Yes	N/A	#2	#4	#6	9,15
Explorer Sport Trac	01 (before 7/24/00)	B	8	2	No	Yes	#7	#2	#4	#6	1
	01 (7/24/00 build or later)-05	E	8	2	Yes	Yes	N/A	#2	#4	#6	9,15
	07	C	8	2	Yes	Yes	#8	#2	#4	#6	15
F-150	04-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	9,15
F-150 Harley-Davidson	01-03	C	8	2	No	Yes	#7	#2	#4	#6	18
	06-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	26
F-150 Heritage	99-06	C	8	2	No	Yes	#7	#2	#4	#6	1
F-250 (under 8500# GVW)	99-00	C	8	2	No	Yes	#7	#2	#4	#6	1
Five Hundred	05-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	15
Focus	00-05	E	8	2	Yes	Yes	N/A	#2	#4	#6	3
	06-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	15
Freestar	04-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	15
Freestyle	05-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	15
Fusion	06-07	C	8	2	Yes	Yes	#8	#2	#4	#6	IKT
GT	05-06	B	8	2	No	No	#7	#2	#4	#6	25
Mustang	96-97	A	16	1	No	No	N/A	#1	N/A	#5	1,23
	98	B	8	2	No	No	#7	#2	#4	#6	1
	99-04	C	8	2	No	Yes	#7	#2	#4	#6	1
	05-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	15
Ranger (3.0L & 4.0L only)	99-00	B	8	2	Yes	Yes	#7	#2	#4	#6	1
	06	E	8	2	Yes	Yes	N/A	#2	#4	#6	15
Ranger (2.3L, 3.0L, & 4.0L)	01-04	E	8	2	Yes	Yes	N/A	#2	#4	#6	9,15
	07	G	N/A	N/A	Yes	Yes	#8	N/A	N/A	N/A	27
	07	C	8	2	Yes	10 sec.	#8	#2	#4	#6	15
Taurus (Duratec & SHO only)	96-97	A	16	1	No	No	N/A	#1	N/A	#5	1
	98-99	B	8	2	Yes	Yes	#7	#2	#4	#6	1
Taurus	00-06	E	8	2	Yes	Yes	N/A	#2	#4	#6	9,15
Thunderbird	02	C	8	2	Yes	Yes	#7	#2	#4	#6	17
	03-06	C	8	2	Yes	No	#7	#2	#4	#6	9
Windstar	99-00	C	8	2	Yes	Yes	#7	#2	#4	#6	1
	01-03	E	8	2	Yes	Yes	N/A	#2	#4	#6	9
Lincoln											
Aviator	03-05	E	8	2	Yes	Yes	N/A	#2	#4	#6	12,13
Blackwood	02-03	C	8	2	No	Yes	#7	#2	#4	#6	6,7
Continental	98-02	C	8	2	No	Yes	#7	#2	#4	#6	6,7
LS	00-02	C	8	2	Yes	No	#7	#2	#4	#6	5,16
	03-07	C	8	2	Yes	No	#7	#2	#4	#6	12,13
Mark LT	06-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	12
Mark VIII	97-98	D	16	2	Yes	Yes	N/A	#3	N/A	#5	21
MKX	07	C	8	2	Yes	Yes	#8	#2	#4	#6	IKT
Navigator	98	A	16	1	No	No	N/A	#1	N/A	#5	6
	99-02	C	8	2	No	Yes	#7	#2	#4	#6	6
	03-06	E	8	2	Yes	Yes	N/A	#2	#4	#6	12,13
	07	C	8	2	Yes	Yes	#8	#2	#4	#6	12
Town Car	98-02	C	8	2	No	Yes	#7	#2	#4	#6	4,6,7
	03-07	E	8	2 or 3	Yes	Yes	N/A	#2	#4	#6	12,13
Zephyr	06	C	8	2	Yes	Yes	#8	#2	#4	#6	IKT
Mercury											
Cougar	99-02	E	8	2	Yes	Yes	N/A	#2	#4	#6	24
Grand Marquis	98-02	B	8	2	No	Yes	#7	#2	#4	#6	2,20
	03-07	E	8	2 or 3	Yes	Yes	N/A	#2	#4	#6	10,11
Marauder	03	E	8	2 or 3	Yes	Yes	N/A	#2	#4	#6	10
Mariner	05-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	10
Milan	06-07	C	8	2	Yes	Yes	#8	#2	#4	#6	IKT
Montego	05-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	10
Monterey	04-07	E	8	2	Yes	Yes	N/A	#2	#4	#6	10
Mountaineer (4-dr)	98-01	B	8	2	No	Yes	#7	#2	#4	#6	2
	02-05	E	8	2	Yes	Yes	N/A	#2	#4	#6	10
	06-07	C	8	2	Yes	No	#8	#2	#4	#6	10
Mystique (V6 Only)	98 (before 2/2/98)	A	16	1	Yes	Yes	N/A	#1	N/A	#5	24
	98 (2/2/98 build or later)-00	E	8	2	Yes	Yes	N/A	#2	#4	#6	24
Sable (Duratec only)	96-97	A	16	1	No	No	N/A	#1	N/A	#5	2
	98-99	B	8	2	Yes	Yes	#7	#2	#4	#6	2
Sable	00-05	E	8	2	Yes	Yes	N/A	#2	#4	#6	10

PATS Key Type

All keys are 8-cut unless otherwise noted.

- 1
- 2
- 3 (#1 stamped on blade)
- 4 Gold Emblem
- 5 Silver Emblem (#1 stamped on blade)
- 6
- 7
- 9
- 10*
- 11*
- 12*
- 13*
- 14*
- 15*
- 16
- 17
- 18 (front and back)
- 19
- 20
- 21 (M8 stamped on blade)
- 23 (10-cut)
- 24 (10-cut)
- 25 (front and back)
- 26* (front and back)
- 27*
- IKT* Integrated Keyhead Transmitter

* Keys in Model Year 2007 production

Control Function Type

- **A&B:** Stand Alone Module (PATS)
- **C:** Instrument Cluster
  - Virtual Image Cluster (VIC)
  - Hybrid Electronic Cluster (HEC)
  - Instrument Cluster Module (ICM)
- **D:** Steering Column Ignition Lock Module (SCIL)
- **E:** Powertrain Control Module (PCM)
- **F:** Powertrain Control Module (PCM)
- **G:** Instrument Cluster Module (ICM)

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Passive Anti-Theft Security

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/U2510	PCM ID does not match between the PCM and PATS control (PATS/ICM/VIC/HEC/SCIL).
B2431	Key program failure (defective key or transceiver).
U1147/U1262	Communications issue, SCP (J1850), between PCM and PATS control (PATS/ICM/VIC/HEC/SCIL).
U1900/U0100 U2511/B2009	Communications issue, CAN (J2284), between PCM and PATS control (ICM).
P1260	PCM disabled the vehicle because of a PATS concern. Retrieve DTCs from applicable PATS control function (PATS/ICM/VIC/HEC/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 related issues.

- 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 chart, on reverse side, 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 on all vehicles except LS and Thunderbird.

Procedures:

Key Programming Using Diagnostic Tools

Procedure #1

1 key required. Cycle key to RUN. Enter "Ignition Key Code Erase." Disconnect Tool and leave key in RUN for 20 seconds. Cycle key to OFF and then RUN.

Procedure #2

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, and back to OFF. Cycle key 2 to RUN.

Procedure #3

2 keys required. Cycle key 1 to RUN. Select "Ignition Key Code Erase." Disconnect Tool and leave key in RUN for 20 seconds. Cycle key 1 to OFF, then RUN, and back to OFF. Cycle key 2 to RUN.

Spare Key Programming Using Diagnostic Tools

Procedure #4

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

Procedure #5

1 key required. Cycle key 1 to RUN, then OFF. Cycle new key to RUN.

Procedure #6

2 keys required. Cycle key 1 to RUN, then OFF. Cycle key 2 to RUN, then OFF. Cycle new key to RUN.

Replacing PATS Control Module or PCM

Procedure #7

Cycle a key in ignition to RUN. **Enter Security Access on the PATS control function module.** Select "Parameter Reset" and then Exit Security Access. Perform a PCM Keep Alive Memory (KAM) reset.

Procedure #8

Cycle a key in the ignition to RUN. **Enter Security Access on the PATS control function module.** Select "ICM /**PCM** Parameter Reset." Select "PCM /**TCM** Parameter Reset" and then Exit Security Access. (for **type F**)

Things to do:

- Review Service Procedures and Technical Service Bulletins (TSBs) for latest information.

- Disconnect the diagnostic tool for 20 seconds before cycling ignition to OFF, ACC, or RUN.

- When replacing ignition keys, make sure the owner throws out **ALL** old keys.

- Disconnect battery cables when replacing PATS module, ICM, VIC, HEC, SCIL, PCM, or EEC.

- Look for fault codes in PATS. The PATS function will store fault codes when the PCM records a P1260.

- Be certain of the vehicle model year. Use only parts & keys specified for the appropriate model year.

- Check to make sure the issue is not with multiple PATS keys, small electronic devices that can be used to purchase gasoline, or other items on same key ring.

- Check to ensure vehicle does not have an aftermarket remote starter. Disable any Remote Starter equipment, especially anything nearby the PATS Transceiver. Ford FCSD Dealer installed Remote Starter systems are approved for use in Ford vehicles.

- Check to ensure vehicle does not have an aftermarket engine immobilizer. The Ford FCSD aftermarket remote entry system comes with a starter interrupt that should be disabled on PATS equipped vehicles.

- If the Alarm sounds when the ignition is turned to RUN or START, refer to the Perimeter Alarm section of the workshop manual.

Things *NOT* to do:

- Do not reprogram keys unless a defective key or control function has been replaced. Reprogramming keys does not fix any known problem by itself.

- Do not perform more Security Access functions than required: Perform only the functions specified in the Shop manual for this repair. Selection of extra functions may continue the no-crank condition.

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