



# CARDONE™ ProTech®

Supporting Today's Vehicle Technician

## 2005-06 Ford Escape/Mercury Mariner ECM Problem

Passive Anti-Theft Systems (PATS), also called Ford Securilock, is a vehicle security feature introduced on 1996 and later Ford vehicles. When replacing the Powertrain Control Module (PCM) on a PATS-equipped vehicle, a parameter reset or relearn procedure must be performed after the PCM is installed. Vehicles with PATS will not start until this on-car procedure is successfully performed.

This ProTech helps identify what type of PATS your vehicle may have and what steps and equipment are needed to perform the procedures.

Before attempting a PATS relearn, the replacement PCM must be calibrated to current vehicle specification, the Flash2 All-Makes Reprogrammer can be used for this purpose. In addition to flashing, Vehicle Identification Block programming may be required for some applications.

Ford provides an excellent document describing the different PATS control function types. The document includes a vehicle-to-PATS cross-reference chart, an ignition key identification photo-guide, a list of PATS DTC descriptions, and many PATS hints, tips, and relearn procedures. The document, found at the link that follows, is a must have:  
[https://www.motorcraftservice.com/vdirs/PCMflash/pats\\_job\\_aid.pdf](https://www.motorcraftservice.com/vdirs/PCMflash/pats_job_aid.pdf)

The following simplified descriptions explain the PATS procedure required when installing a replacement PCM. Please refer to the Ford PATS Guide for detailed procedures.

### **Replacing PCM only – A or D type PATS**

If only the PCM is being replaced on a PATS control function type A or D vehicle, no relearn is required (please refer to the Ford PATS chart to determine PATS type). Simply put the original key in the ignition, turn to ON or RUN and wait for 20 seconds. Then turn the key off and start vehicle.

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## Replacing PCM only – B, C, F or G type PATS

If only the PCM is being replaced on a PATS control function type B, C, F or G vehicle, the Parameter Reset function must be performed. This requires a scan tool with the Parameter Reset function, or the J2534 CARDONE Flash2 All-Makes Reprogrammer with Ford license and a subscription to Ford Module Programming (FMP). The FMP program can be purchased from Ford at [www.motorcraftservice.com](http://www.motorcraftservice.com). The tool and software used will give specific instructions to follow. The general steps are listed below.

1. Cycle a key in ignition to RUN.
2. Enter Security Access on the PATS control function module. For type B, it will be the PATS module, for type C, the Instrument Cluster, for type F, the PCM, for type G, the Instrument Cluster Module. (This takes 10 minutes).
3. Select "Parameter Reset" and exit Security Access.
4. Select a PCM Keep Alive Memory (KAM) reset.
5. Start vehicle.

## Replacing PCM only – E type PATS

If only the PCM is being replaced on a PATS control function type E vehicle, two keys need to be programmed into the PCM. This requires a scan tool with capability to program PATS type E keys, or a CARDONE Flash2 All-Makes Reprogrammer with Ford license and subscription to [www.motorcraftservice.com](http://www.motorcraftservice.com). The tool and software used will give specific instructions to follow. The general steps are listed below.

1. Cycle key 1 to RUN.
2. Enter Security Access on PATS control function module. (This takes 10 minutes).
3. Select "Ignition Key Code Erase."
4. Disconnect tool and leave key in RUN position for 20 seconds.
5. Cycle key 1 to OFF, then RUN, and back to OFF.
6. Cycle key 2 to RUN, then OFF.
7. Start vehicle.

Identifying the type of security system your application may or may not have, before replacing the PCM, will avoid the disappointment of a no-start after the replacement PCM is installed. And, if your vehicle does have PATS security, you will know ahead of time what procedures and equipment may be required to get the vehicle down the road.