

2004 Ford Mustang V8-4.6L SOHC VIN X

Vehicle > Technical Service Bulletins

ENGINE CONTROLS - GENERAL PCM PROGRAMMING PROCEDURES

TSB 04-24-14

12/13/04

FORD:

1997 Thunderbird

1997-2000 Contour

1997-2002 Escort

1997-2005 Crown Victoria, Mustang, Taurus

2000-2003 Escort ZX2

2000-2005 Focus

2002-2005 Thunderbird

2005 Five Hundred, Freestyle

1997 Aerostar

1997-2003 Windstar

1997-2005 E-Series, Expedition, Explorer,

F-150, F-250, F-Super Duty, Ranger

2000-2005 Explorer USPS

2001-2003 Explorer Sport

2001-2005 Escape, Explorer Sport Trac

2004-2005 Freestar

1997-1999 F and B Series

LINCOLN:

1997-1998 Mark VIII

1997-2002 Continental

1997-2005 Town Car

2000-2005 LS

1997-2005 Navigator

2003-2005 Aviator

MERCURY:

1997-1999 Tracer

1997-2000 Mystique

1997-2002 Cougar

1997-2005 Grand Marquis, Sable

2005 Montego

1997-2002 Villager

1997-2005 Mountaineer

2004-2005 Monterey

This article supersedes TSB 04-21-07 to update the service procedure and to clarify this TSB applies to all powertrain control module (PCM) reprogramming, with or without PCM replacement.

ISSUE

PCMs may need to be reprogrammed or replaced as part of a repair. Additional vehicle concerns may be caused if proper programming procedures are not followed.

ACTION

Use the following procedure to reprogram PCMs.

Verify repair after reprogramming.

SERVICE PROCEDURE**PRELIMINARY STEPS - Existing PCM****Reprogramming Or PCM Replacement**

1. Connect a battery charger to vehicle.
2. Use WDS if available.
 - a. Make sure WDS is docked or attached to vehicle battery supply.
 - b. Verify WDS software is at the latest release level.
3. If there is a communication error, attempt to communicate with a different diagnostic scan tool, such as NGS, NGS+, VCM or another WDS.

NOTE

IF COMMUNICATION STILL CANNOT BE ESTABLISHED, VOLTAGE DROP PCM POWERS, GROUNDS, AND CHECK VREF.

PCM REPLACEMENT - STANDARD

1. Open WDS vehicle session with original PCM installed in vehicle. If the original PCM is not able to communicate, to open a session, proceed to the Blank Path Programming procedure.
2. Install the new PCM.

NOTE

IF WDS NEEDS TO BE USED ON A DIFFERENT VEHICLE WHILE THE NEW PCM IS BEING INSTALLED, PLACE THE VEHICLE SESSION ON "HOLD" FOR USE LATER.

3. Attempt to start the vehicle.
4. Run KOEO Self Test to check for diagnostic trouble codes (DTCs) in PCM.
5. Check for DTC P0602/P0605/P1639.

- a. If DTC P0602/P0605/P1639 is present then Programmable Module Installation (PMI) procedure must be performed. Use the WDS session opened at Step 1.
 - b. If DTC P0602/P0605/P1639 is not present, then verify Programmable Parameters are properly set such as tire size, axle ratio, etc.
6. Check for DTC B2900.
- a. If DTC B2900 is present, perform PMI on the ABS module. Do Not replace ABS module for this procedure when directed. You may be prompted to enter the 9 lines of PCM As-Built data during this procedure.
 - b. If DTC B2900 is not present proceed to Step 7.
7. Diagnose all other DTCs following normal diagnostic procedures.

REPROGRAMMING DOES NOT COMPLETE OR FAILS - Existing PCM Reprogramming Or PCM Replacement

1. Verify all cables are properly connected.
2. Verify vehicle battery is at proper charge level.
3. Verify scan tool battery is at proper charge level.
4. Attempt reprogramming procedure again.
5. If reprogramming still does not complete properly, save current session, reboot WDS, open previous session, and attempt reprogramming again.
6. If reprogramming still does not complete or you are now unable to communicate with PCM, proceed to the Blank Path Programming procedure.

BLANK PATH PROGRAMMING - Existing PCM Reprogramming Or PCM Replacement

Perform this procedure prior to PCM replacement if a vehicle comes in with a PCM that will not communicate, or if steps earlier in this TSB directed you to this procedure.

1. Verify powers and grounds to PCM by loading and voltage drop testing circuits.
2. Follow Pin Point Tests to verify network integrity.

NOTE

IGNITION MUST REMAIN IN THE OFF POSITION UNTIL PERFORMING STEP 8. DO NOT TURN THE KEY ON WHEN WDS IS INITIALLY CONNECTED TO THE DLC.

3. Connect WDS to vehicle.
4. Select "16 pin", select "All others, except those below", press TICK.

5. Screen shows installation of cable, press TICK.
6. Screen shows to turn ignition ON. DO NOT TURN IGNITION ON. Press TICK.
7. Screen shows progress bar, then screen tells you "No communication can be established with the PCM" and asks you if you want to retry? Select "NO". With the ignition key still OFF, press TICK.
8. Screen shows to turn ignition ON. Turn ignition on, press TICK.
9. Screen shows "The PCM installed to this vehicle is blank". You will be prompted to select VIN from a list of previous sessions. Press TICK.
10. When previous sessions are shown select "None of the above".
11. Screen shows "To enable WDS to reprogram the PCM with the correct calibration", enter one of the following: Vehicle Calibration # (7 digits), Tear Tag # (4 digits), or PCM part #, press TICK.
12. Highlight the box next to the selection chosen, and enter ONLY ONE of the selections listed above. Press TICK.
13. Follow and answer correctly all remaining screens.
14. Once PCM is reprogrammed communication should be reestablished and PATS system can be reset (if necessary) as per Section 419-01 of the Workshop Manual.

WARRANTY STATUS: Information Only

NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle.

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