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