



ProCal II INSTRUCTION SHEET

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD RACING PERFORMANCE PARTS.

Please contact the Techline for the most current instruction information (800) FORD788.

!!! PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION !!!

ProCal II Calibration Flash Tool Instructions:

Read the instructions below in their entirety prior to beginning the flash procedure. If you have questions or concerns after reading these instructions, call the Ford Racing Techline at 1-800-FORD788.

CAUTION: Unless directed by Ford Racing Technical Support, NEVER operate the engine until programming of your performance calibration has completed successfully. Operation while using the wrong calibration may result in permanent engine damage and will void the warranty.

This ProCal II tool has been designed to deliver a performance calibration to your vehicle and will preserve a copy of your vehicle's stock calibration, should you decide to remove the performance pack for any reason. The tool will be locked to your vehicle until the original stock calibration has been restored. Once the original calibration has been restored to your vehicle, the performance calibration and corresponding hardware can be installed on another vehicle of the same year, make, model and PCM part number.

Carefully follow each of the steps below.

RECALIBRATION PROCEDURE

Before you begin, verify your Vehicle Identification Number (VIN):

Verify your vehicle's VIN matches the VIN recorded on the label of the ProCal II box (VIN is located directly above your name on a 1.25" wide x 1" tall label on the box).

If the VIN is not correct, contact the Ford Racing Techline at 1-800-FORD788. **DO NOT REPROGRAM YOUR PCM.**

Verify Package Contents:

Multi Media Card (MMC): Housed within small plastic case, packed in cardboard tote at end of ProCal II box opening

ProCal II Unit: Installed in plastic bag

J1962 Cable: DB25 connector on one end, OBDII connector on opposite end

If your package contents do not consist of the above items, contact the Ford Racing Techline at 1-800-FORD788 for resolution.

Techline (800) FORD788

Factory Ford shop manuals are available from Helm Publications, 1-800-782-4356

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Prepare ProCal II:

STEP 1: Remove the ProCal II from its plastic bag. Peel back the rubber boot from the lower portion of the ProCal II to expose the MMC socket.

Remove the MMC from its plastic case. Insert the MMC into the socket of the ProCal II. Return the rubber boot to its original position to cover the MMC.

STEP 2: Remove the J1962 cable from its plastic packaging. Insert the DB25 connector of the cable into the top of the ProCal II. Finger-tighten the retaining screws of the DB25 so that it is firmly fastened to the ProCal II.

Prepare Vehicle:

STEP 3: Make sure your vehicle's battery is fully charged (at least 12.0 volts) and all accessories (radio, interior fan, headlights, etc.) are off. If you are unsure if your vehicle's battery is fully charged, connect a battery charger prior to beginning the programming process.

CAUTION: If your ProCal II aborts programming due to low voltage, you may be required to have an authorized Ford Dealer reprogram your PCM to its original stock calibration in order to regain PCM functionality.

STEP 4: Locate the onboard diagnostic link connector (DLC) beneath the driver side dashboard. The exact location of the DLC will vary with vehicle model and year but will always be on the driver's side.

STEP 5: Connect your ProCal II tool to the vehicle diagnostic connector.

Note: For first time power-up of your ProCal II, you may receive a message indicating BootLoader firmware is updating. The RED error light will be on while the firmware is updating. This is normal for first time power-up.

STEP 6: Turn the ignition key of your vehicle to the ON position.

STEP 6A: If the vehicle you are working on is a Ford GT or Lightning truck, you must make a change inside the ProCal II tool.

1. Scroll down to "DIAGNOSTICS" and press ENTER.
2. Highlight "SELECT PROTOCOLS" and press ENTER.
3. Scroll to "SCP - 24 BIT" and press ENTER.

You are now ready to reprogram your Ford GT or Lightning truck with the Ford Racing calibration.

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STEP 7: Use the Down arrow key to highlight “DIAGNOSTICS” and press ENTER to select. Highlight “READ DTCs” and press ENTER to select.

Diagnostic Trouble Codes that exist for your vehicle are displayed.

Causes of all existing Trouble Codes (other than P1000) must be resolved prior to proceeding with installation of your performance calibration. Contact the Ford Racing Techline at 1-800-FORD788 for assistance with resolution of existing Trouble Codes.

STEP 8: Press the ESC key to return to the previous menu.

STEP 9: Resolve causes of all existing Trouble Codes and clear DTCs.

STEP 10: Repeat download of DTCs to verify all issues resolved.

Reprogram PCM:

STEP 11: Verify no Trouble Codes exist as explained in the previous section.

STEP 12: Switch ignition key to OFF position.

STEP 13: Select “PROGRAMMING” by pressing ENTER.

STEP 14: Select “PERFORMANCE CAL” by pressing ENTER.

STEP 15: Press ENTER a second time. “TURN KEY ON” will be displayed.

STEP 16: Turn ignition key to the ON position.

STEP 17: Select ENTER to View/Edit the Configuration Data.

STEP 18: Use the Up/Down arrow keys to change revolutions per mile and press ENTER when desired revolutions per mile is obtained.

Note: Calculate revolutions per mile by dividing 63360 inches/mile (5280 feet/mile x 12 inches/foot) by the circumference of your tire (in inches).

For example, if the circumference of your tire is 84 inches, revolutions per mile for your tire size would be 754.

You can also calculate revolutions per mile from one of the following websites:

<http://www.gtsparkplugs.com/TireCalculator.html>

<http://www.gordan-glasgow.org/tirecalc.html>

<http://swatt.j.porter.name/tech-center/tool/tire-calculator>

STEP 19: Use Down arrow key to highlight “AXLE” and press ENTER to select.

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STEP 20: Use Up/Down arrow keys to obtain desired axle ratio and press ENTER when complete.

STEP 21: Use Down arrow key to highlight "OCTANE ADJUST" and press ENTER to select.

STEP 22: Use Up/Down arrow keys to toggle between Y or N and press ENTER to complete.

Note: Always set this parameter to N. If you experience audible knock after programming your PCM with this setting, reprogram your PCM and change this parameter to Y.

STEP 23: Use Down arrow key to highlight "SAVE CHANGES" and press ENTER to select and initiate programming.

ProCal II will initiate programming and display % complete for each reprogramming step. "UPDATE COMPLETE" will be displayed for successful programming.

STEP 24: Press ENTER once "UPDATE COMPLETE" is displayed.

ProCal II will display "The performance calibration install is done!"

STEP 25: Press ENTER to return to the main menu.

Changing Tire Size, Axle Ratio or Octane Adjust:

STEP 26: Repeat STEPS 3 – 24 above. Enter changes to Tire Size, Axle Ratio or Octane Adjust as required.

Returning to Original Stock Calibration:

STEP 27: Repeat STEPS 3 – 24 above. At STEP 14, select "RESTORE ORIGINAL" instead of "PERFORMANCE CAL."

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