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MUSTANG CHALLENGE

MUSTANG CUP

February 24, 2025

Technical Service Bulletin – 34

Mustang Dark Horse R Engine Calibration

Issue: A revised calibration has been released (2025DarkHorseR_V8) to address the new hardware for the 2025 race season.

> **Attention:** If this update is being done in conjunction with the 2025 clutch hardware update, the "Crank Relearn" process will need to be completed. As with any removal or replacement of any Engine/driveline rotating component, failure to do this may result in erroneous misfire failure codes. Please see the owner's manual for those instructions.
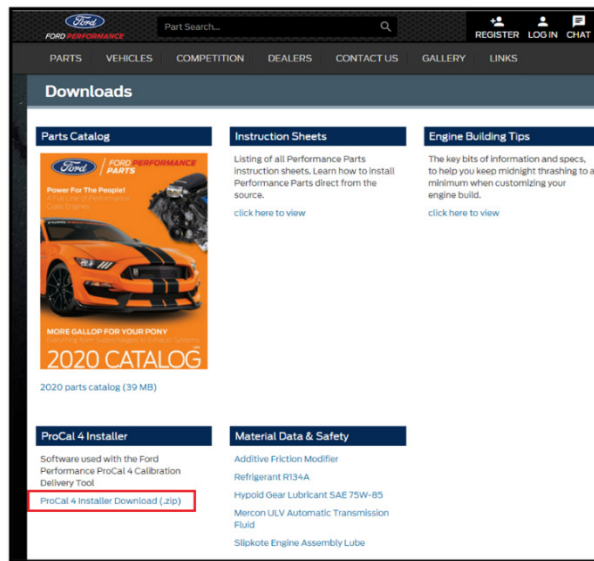
Action:

- Follow the procedure to update your PCM calibration

Procedure: Follow the flashing procedure from your Owner's Manual

Install ProCal Software on Computer
- Navigate your browser to https://performanceparts.ford.com/download/ and click on "ProCal 4 Installer Download (.zip)"
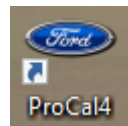
- Extract the files to your computer in a memorable location and run the "setup" file. Follow the prompts to install ProCal.
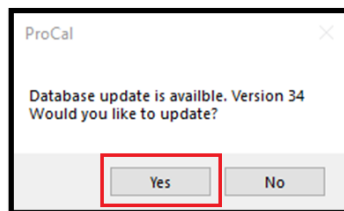
Updating ProCal Firmware

- Connect the ProCal tool with the USB cable provided and plug it into the computer.
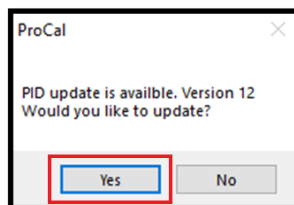- Open ProCal with the desktop icon (or from the start menu).

> **Attention:** Some company networks may have security set to block access to downloads. Please contact your network's IT administrator if you have problems connecting.

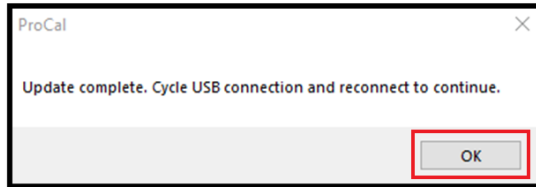

- If database version updates are available, select "Yes."
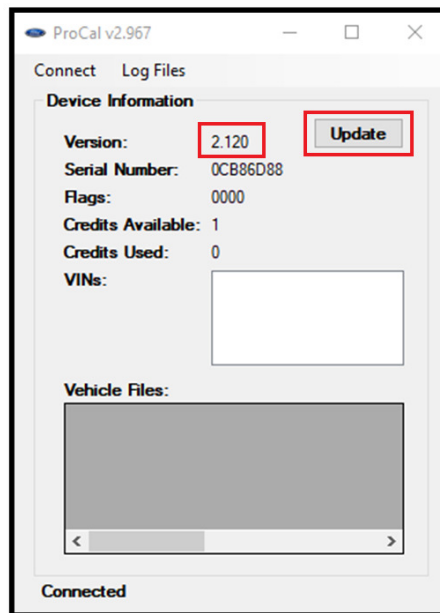

- If PID updates are available, select "Yes."

- When prompted Disconnect the USB cable and plug it back in to power cycle the ProCal. Press "O.K."
  - o Note: The ProCal tool may take a minute to load.

- The ProCal Device Information should populate. The software version will have to be updated to at least a 2.204 version to flash the calibration to the Dark Horse PCM. If this is not a high enough version press the "Update" button to update the firmware. Follow the prompts to update.

Flashing Calibration into the Vehicle

Note: The Dark Horse R requires a "Force Flash" be done when updating the PCM calibration. This does require a special procedure and unlock code.

- Plug the ProCal into the OBDII port of the vehicle.

- After the PROCAL loads, press and hold "ABOUT DEVICE" for 5 seconds.

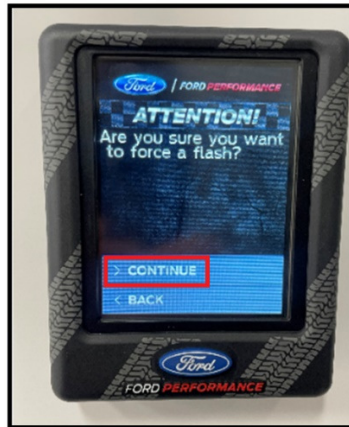- Enter the code "1, 2, 3, 4, 5, 6, 7, 0, 0, 0"

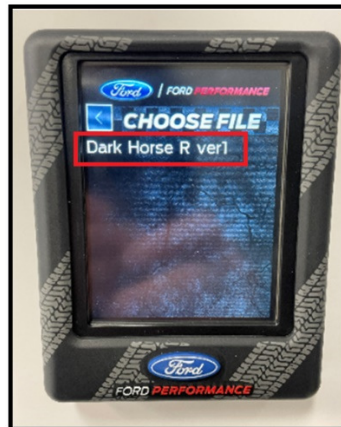- Press "PROGRAMMING."

- Press and hold "CONTINUE" for 5 seconds.

- Press "CONTINUE."

- Select the file to flash. [2025DarkHorseR_V8] The picture is for illustrative purposes.

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- When prompted, turn the ignition switch off, the flash is complete.