



GDP COMMANDER USER MANUAL

**2017-2023 L5P Duramax
2020-2022 Ford Powerstroke**

**December 2023
Version No. 3.1**

Disclaimer	4
Commander Credit System	5
Credit Check:	5
Commander Device Functions	5
Autoflasher/Commander Menu Options	5
OEM Menu	5
Service Mode	6
OBD	7
File	8
Credits	9
Voltage When Working With Commander	9
2020-2021 6.7L Powerstroke	10
Retrieving ECU/TCU/Cable Serial Numbers	10
Retrieving info for the TCU	10
Retrieving info from the ECU	11
Flashing 2020-2021 ECU/TCU	12
WITH THE AUTOFLASHER/COMMANDER CONNECTED UNDER THE HOOD TO THE NEW ECM WITH THE ECM HARNESS:	12
WITH THE AUTOFLASHER/COMMANDER STILL CONNECTED AT THE OBD2 PORT:	13
KAM Reset Process	13

Ford Commander 20-22 KAM Reset Process	13
2022 6.7L Powerstroke	14
ECM Replacement and Flashing Process	14
WITH THE STOCK 2022 ECM STILL INSTALLED:	14
WITH THE AUTOFLASHER/COMMANDER CONNECTED UNDER THE HOOD TO THE NEW ECM WITH THE ECM HARNESS:	15
WITH THE AUTOFLASHER/COMMANDER CONNECTED AT THE OBD2 PORT WITH THE NEW ECM INSTALLED:	15
WITH THE AUTOFLASHER/COMMANDER STILL CONNECTED AT THE OBD2 PORT:	16
KAM Reset Process	17
Ford Commander 20-22 KAM Reset Process	17
2017-2023 6.6L L5P Duramax	18
L5P Retrieve Info Via OBD2 Port For Filling Out The Form	18
Flashing 2017-2023 L5P ECM	19
WITH THE AUTOFLASHER/COMMANDER STILL CONNECTED AT THE OBD2 PORT:	19
L5P ECM Unlock	19
Connecting to The Vehicle	19
FOR 2017-2019 L5P	21
FOR 2020-2023 L5P	22
Unlock Process:	23

Data Logging	23
Troubleshooting Commander Device	26
Commander not connecting to the Autoflasher program.	26
Commander not identifying ECM in service mode	28
P0610 after 2022 Powerstroke ECM Swap	29

Disclaimer

- By installing this product onto your vehicle, you assume all risk and liability associated with its use.
- GDP Tuning, LLC. is not responsible for misuse of its products. By installing this product, you release GDP Tuning, LLC. of any and all liability associated with its use.
- The purchaser and end user releases, indemnities, discharges and holds harmless GDP Tuning, LLC. from any and all claims, damages, causes of action, injuries, or expenses resulting from or relating to the use or installation of this product that is in violation of the terms and conditions on this page, the product disclaimer, and/or the product installation instructions. GDP Tuning, LLC. will not be liable for any direct, indirect, consequential, exemplary, punitive, statutory, or incidental damages or fines caused by the use or installation of this product.

BEFORE BEGINNING:

Download AND Install the Autoflasher Software (and Drivers) from
<https://gdpproducts.com/pages/software>

Commander Credit System

20-22 Powerstroke Flash: 8 Credits

L5P E41 ECM Unlock: 4 Credits

L5P E41 ECM Flash: 8 Credits

Credit Check:

1. Go to **Credits > Check Credits**
2. If you're needing to purchase more credits go to www.dieselrcorp.ca

Commander Device Functions

Autoflasher/Commander Menu Options

OEM Menu

The **OEM Menu** is used to select the vehicle you are working with and will change the options available in the software.

→ **Ford**

- ◆ **Supported Years:** 2020-2022 6.7L Powerstroke

→ **GM**

- ◆ **Supported Years:** 2017-2023 6.6L Duramax

Service Mode

Service Mode is used **ONLY** when communicating with a **2020-2022 Ford** through the bench/ECU cable at the ECU.

→ **Identify**

- ◆ Display ECU Serial Number

→ **Read**

- ◆ Read ECU Stock File from ECU

→ **Write**

- ◆ Write ECU File to ECU

→ **Power On**

- ◆ Power on ECU that has been connected to the Commander Device

→ **Power Off**

- ◆ Power off ECU that has been connected to the Commander Device

→ **Read EE**

- ◆ Read EEPROM from ECU (Used when swapping 2022 Ford ECU to 2020-2021 ECU)

OBD

OBD is used when communicating via OBD cable with a **2022 Ford STOCK ECU & 2020-2022 TCU OR 2017-2023 L5P.**

→ Identify

- ◆ Display ECU Serial Number

→ Read

- ◆ Read Stock File from Selected ECU/TCU (**NOTE:** A file read from the **OBD** cannot be written through [Service Mode](#))

→ Write

- ◆ Write file to ECU/TCU

→ Codes

◆ Read

- Display Active DTC's

◆ Clear

- Clear Active DTC's

→ Get VIN

- ◆ Display Current VIN on ECU

→ AsBuilt

◆ Read

- Read AsBuilt file from ECU (Used during Swap from 2022 Ford ECU to 2020-2021 ECU)

◆ Write

- Write AsBuilt file to ECU (Used during Swap from 2022 Ford ECU to 2020-2021 ECU)

→ Misc Routines

◆ Configuration Relearn

- Clear Trans Adaptive Learn

◆ Speed Limiter

- PATs
 - BCM EEPROM Read
 - PATs Reset

WARNING: Once the PATs Reset has been done the vehicle will not start if you reinstall the 2022 ECM. In order to use the 2022 ECM again, you must use a Ford Scan tool to reset the PATs with the 2022 ECM in.

→ Data Logging

- ◆ Opens a new window used for recording and saving data logs

→ Power On

- ◆ Power on L5P ECU when Connected via ECU Harness

→ Power Off

- ◆ Power off L5P ECU when Connected via ECU Harness

File

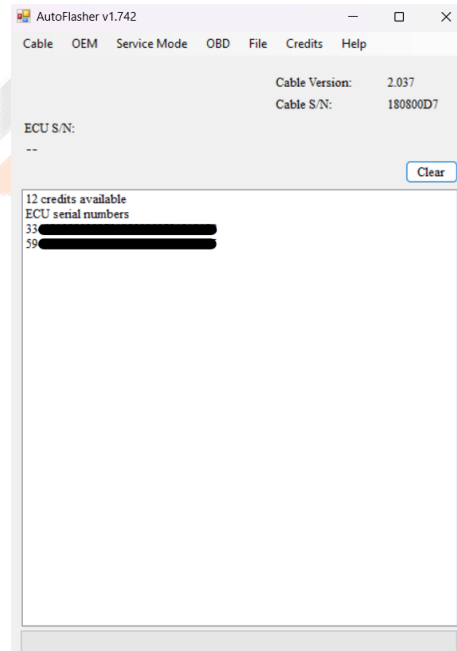
→ Encrypt

- ◆ Encrypt a stock file pulled from the vehicle

Credits

→ Check Credits

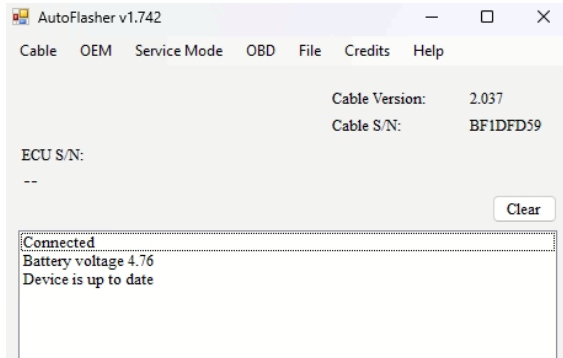
- ◆ Displays details of the amount of credits remaining as well as previous vehicle serial numbers that have used credits.



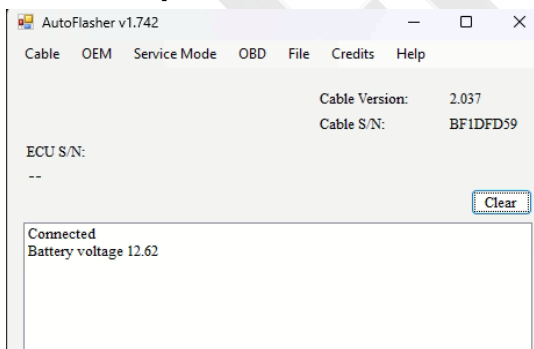
Voltage When Working With Commander

When connecting to the Autoflasher/Commander there will be two voltage levels that will show. This is important to know because if you are attempting to communicate with the ECM and it is only displaying **4.5v** you are not connected properly or there is an issue with your connection.

1. **≈ 4.5v** - This voltage (Shown Below) shows when the device is only picking up voltage through usb connected to the computer.



2. **≈ 12v** - This voltage shows when connected to the vehicle either through the OBD2 port **OR** connected at the ECU via the ECU harness.



2020-2021 6.7L Powerstroke

Retrieving ECU/TCU/Cable Serial Numbers

1. Connect Autoflasher/Commander Device Via OBD2 port in the vehicle. Then connect the other end of the device to the computer with the provided USB Cable.

2. Open up a note/document that can be used to copy and paste the vehicle/device information to. Then type in a location for each of the following:
 - a. Cable Serial Number:
 - b. ECU Serial Number:
 - c. TCU Serial Number:
 - d. VIN:
3. Turn Key on

Retrieving info for the TCU

4. In the Autoflasher Software Click: **Cable > Connect**
IMPORTANT NOTE: Double clicking info in the Autoflasher software will copy it to your clipboard
5. **Double click** the info under **Cable S/N**, and paste into the corresponding area in your note.
6. In the Autoflasher Software Click: **OBD > Identify > TCU**
7. **Double click** the info under **ECU S/N** (The number will change when double clicked, that is fine as long as the number you paste into your notes begins with 59), and paste into the corresponding area in your note.
8. In the Autoflasher Software Click: **OBD > Get VIN**
9. Copy the VIN from the white box and paste into the corresponding area in your note.
10. In the Autoflasher Software Click: **Cable > Disconnect**

Retrieving info from the ECU

Disconnect all connections in the cab of the vehicle and we will be working in the engine bay from here.

1. Go to the engine bay and locate the ECU then disconnect all 3 cables connected to the ECU.
2. Connect the provided Battery Harness to the vehicle's battery.
3. Connect the provided ECU Harness to the Connector marked 'Vehicle' on the ECU. (the harness will only fit in the correct location)
4. Connect the Autoflasher/Commander Device to the ECU Harness and the Laptop. Then open the Autoflasher Software
5. In the Autoflasher Software Click: **Cable > Connect**
IMPORTANT NOTE: Double clicking info in the Autoflasher software will copy it to your clipboard.
6. In the Autoflasher Software Click: **Service Mode > Identify > ECU**
7. **Double click** the info under ECU S/N (The number will change when double clicked, that is fine as long as the number you paste into your notes begins with 40), and paste into the corresponding area in your note.
8. In the Autoflasher Software Click: **Cable > Disconnect**
9. Use the copied information to fill out the form

Flashing 2020-2021 ECU/TCU

WITH THE AUTOFLASHER/COMMANDER CONNECTED UNDER THE HOOD TO THE NEW ECM WITH THE ECM HARNESS:

1. **CABLE > CONNECT**
2. **SERVICE MODE > READ EE**
3. **SAVE AS** ECM_EE_READ
4. WRITE TUNE FILE - **SERVICE MODE > WRITE > SELECT TUNE FILE NAME**
5. **CABLE > DISCONNECT**

Disconnect ALL cables between laptop, Autoflasher, and the ECM. Then connect ALL ECU harnesses to the ECM and install it to the vehicle if you have not yet.

Plug the Autoflasher back into the OBD2 port. This is where we will be for the rest of the process.

WITH THE AUTOFLASHER/COMMANDER STILL CONNECTED AT THE OBD2 PORT:

1. **CABLE > CONNECT**
2. **OBD > IDENTIFY > TCU**
3. Read the TCM Stock File - **OBD > READ > TCU**
4. Rename the file to have the VIN in the name (for reference if needed later) and **SAVE**

5. **OBD > MISC ROUTINE > CLEAR TRANS ADAPTIVE LEARN (KAM RESET)**
6. Write the TCM file to the vehicle - **OBD > WRITE > TCU > SELECT TCM FILE FROM YOUR FOLDER**
7. **CABLE > DISCONNECT**
8. Follow The KAM Reset Process Detailed Below

KAM Reset Process

Ford Commander 20-22 KAM Reset Process

1. Read ECM and TCM Stock File **BEFORE** proceeding.
2. Load ECM file.
3. Load Kam reset file (do **NOT** drive vehicle).
4. Load TCM file.
5. Start the vehicle and let it idle until operating temperature (about 10-15 minutes).
6. Do relearn procedure below immediately do after loading TCM file:

Make sure throttle valve is unplugged Do the relearn starting at 1/4 throttle, let it shift through all of its gears then pull over put it in park shut the truck off and open the drivers door, then do same at 1/2 throttle, 3/4 throttle and full throttle. If it doesn't hold power at that throttle position then do the previous throttle position again.

2022 6.7L Powerstroke

ECM Replacement and Flashing Process

WITH THE STOCK 2022 ECM STILL INSTALLED:

1. Connect via OBD2 Port with the Autoflasher/Commander also connected to the computer.
2. **CABLE > CONNECT**
3. **OBD > IDENTIFY > ECU**
4. **OBD > ASBUILT > READ > ECU**
5. **SAVE 'didsRead.txt' AS 'didsRead.bin'** (place in your folder created earlier)
6. **CABLE > DISCONNECT**

Turn off the key, then remove the stock 2022 PCM. We will be using the 2020-2021 ECM from here on out. Connect the Autoflasher/Commander ECM Harness to the furthest outside connector (it will only fit that connector on the ECM).

Once completed, connect the autoflasher to the ECM harness and back to the computer.

WITH THE AUTOFLASHER/COMMANDER CONNECTED UNDER THE HOOD TO THE NEW ECM WITH THE ECM HARNESS:

6. **CABLE > CONNECT**
7. **SERVICE MODE > READ EE**

8. **SAVE AS** ECM_EE_READ
9. WRITE TUNE FILE - **SERVICE MODE > WRITE > SELECT TUNE FILE NAME**
10. **CABLE > DISCONNECT**

Disconnect ALL cables between laptop, Autoflasher, and the ECM. Then connect ALL ECU harnesses to the new ECM and install to the vehicle if you have not yet.

Plug the Autoflasher back into the OBD2 port. This is where we will be for the rest of the process.

WITH THE AUTOFLASHER/COMMANDER CONNECTED AT THE OBD2 PORT WITH THE NEW ECM INSTALLED:

1. **CABLE > CONNECT**
2. **OBD > IDENTIFY**
3. **OBD > AS BUILT > WRITE > SELECT 'didsRead.bin' FILE**
4. **OBD > MISC ROUTINES > PATs > BCM EEPROM READ > SAVE BCM EEPROM READ**
5. **OBD > ROUTINES > PATs > PATs RESET > CLICK 'YES'**
6. **IMPORTANT:** There will be two windows that pop up, click the EEPROM files in this order:
 - a. BCM EEPROM
 - b. ECM EEPROM
7. **CYCLE KEY**
8. **CABLE > DISCONNECT**

Confirm the vehicle starts and runs.

Turn the Key back to the run position with the engine off to continue programming the TCU.

WITH THE AUTOFLASHER/COMMANDER STILL CONNECTED AT THE OBD2 PORT:

9. **CABLE > CONNECT**

10. **OBD > IDENTIFY > TCU**

11. Read the TCM Stock File - **OBD > READ > TCU**

12. Rename the file to have the VIN in the name (for reference if needed later) and SAVE

13. **OBD > MISC ROUTINE > CLEAR TRANS ADAPTIVE LEARN (KAM RESET)**

14. Write the TCM file to the vehicle - **OBD > WRITE > TCU > SELECT TCM FILE FROM YOUR FOLDER**

15. **CABLE > DISCONNECT**

16. Follow The KAM Reset Process Detailed Below

KAM Reset Process

Ford Commander 20-22 KAM Reset Process

1. Read ECM and TCM Stock File **BEFORE** proceeding.

2. Load ECM file.
3. Load Kam reset file (do **NOT** drive vehicle).
4. Load TCM file.
5. Start the vehicle and let it idle until operating temperature (about 10-15 minutes).
6. Do relearn procedure below immediately do after loading TCM file:

Make sure throttle valve is unplugged Do the relearn starting at **1/4 throttle**, let it shift through all of its gears then pull over put it in park shut the truck off and open the drivers door, then do same at **1/2 throttle, 3/4 throttle and full throttle**. If it doesn't hold power at that throttle position then do the previous throttle position again.

2017-2023 6.6L L5P Duramax

L5P Retrieve Info Via OBD2 Port For Filling Out The Form

1. Connect Autoflasher/Commander Device Via **OBD2** port in the vehicle. Then connect the other end of the device to the computer with the provided USB Cable.
2. Open up a note/document that can be used to copy and paste the vehicle/device information to. Then type in a location for each of the following:
 - a. **Cable Serial Number:**
 - b. **ECU Serial Number:**

c. VIN:

3. Turn Key on
4. In the Autoflasher Software Click: **Cable > Connect**
5. **OEM > GM** (Switches device from communicating with a Ford to GM)
IMPORTANT NOTE: Double clicking info in the Autoflasher software will copy it to your clipboard
6. **Double click** the info under Cable S/N, and paste into the corresponding area in your note.
7. In the Autoflasher Software Click: **OBD > Identify > ECU**
8. **Double click** the info under ECU S/N (The number will change when double clicked, that is fine as long as the number you paste into your notes begins with 33), and paste into the corresponding area in your note.
9. In the Autoflasher Software Click: **OBD > Get VIN**
10. Copy the VIN from the white box and paste into the corresponding area in your note.
11. Use the copied information to fill out the form!

Flashing 2017-2023 L5P ECM

WITH THE AUTOFLASHER/COMMANDER STILL CONNECTED AT THE OBD2 PORT:

1. **CABLE > CONNECT**
2. **OBD > IDENTIFY > ECU**
3. Read the ECU Stock File - **OBD > READ > ECU**

4. Rename the file to have the VIN in the name (for reference if needed later) and SAVE
5. Write the ECU file to the vehicle - **OBD > WRITE > ECU > SELECT TCM FILE FROM YOUR FOLDER**
6. Once File has flashed: **CABLE > DISCONNECT**

L5P ECM Unlock

Connecting to The Vehicle

1. Connect the unlock cable (cable with the RED wire)



2. to the MyDiag and connect the OBD cable
3. to the other end of the unlock cable.



4. Open the hood of your vehicle.
5. Locate the fuse box and remove the cover (continued on next page)

FOR 2017-2019 L5P

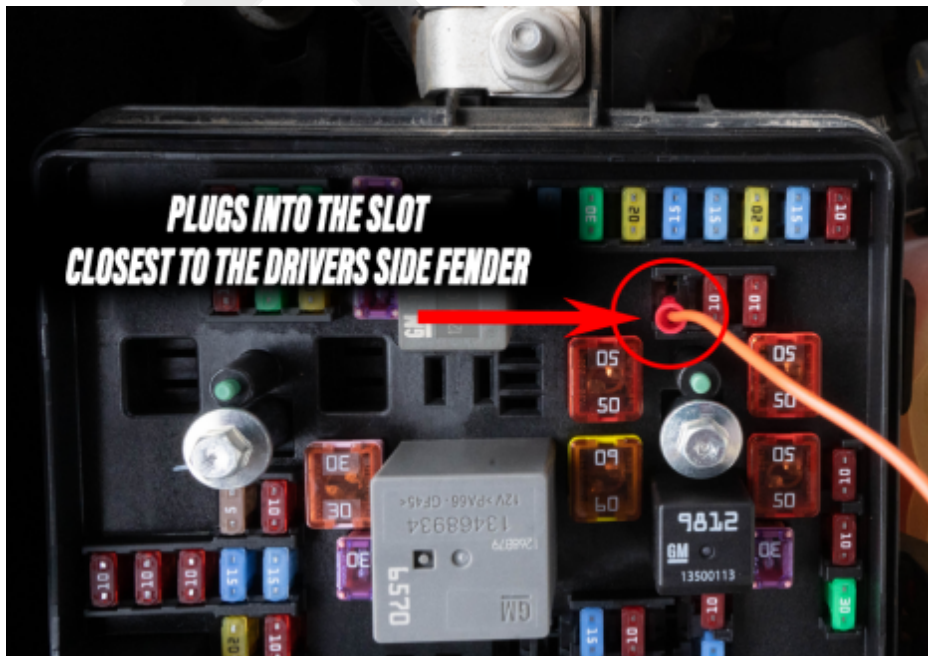
1. Plug the MyDiag into the OBD.
2. Locate Fuse #57 and remove. (Refer to picture below or the fuse cover diagram)



3. Once the fuse is removed you should see 3 slots, plug the RED WIRE from the unlock cable into the slot closest to the fire wall. (Refer to picture below)

FOR 2020-2023 L5P

1. Plug the MyDiag into the OBD.
2. Locate the fuse #78 and remove. (Refer to the picture below or the fuse cover diagram)



3. Once the fuse is removed you will see two slots, plug the RED WIRE from the unlock cable into the slot closest to the driver's side fender. (Refer to picture below)

Unlock Process:

1. Turn key ON (Not Running)
2. On your Computer, open AutoFlasher
3. Click **Cable > Connect**
4. Click **OEM > GM**
5. Click **OBD > Unlock**

From here on, it'll walk you through the process. Do NOT unplug any cables during this process.

Once the unlock is complete, you should see “Unlock Completed”.

1. Turn the key OFF and unplug the MyDiag and unlock the cable.
2. Replace the Fuse you removed prior to this and close the fuse box cover.
Your L5P E41 ECM is now Unlocked

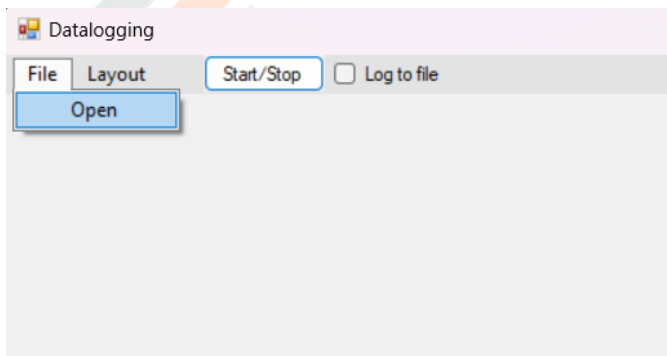
Data Logging

1. Plug the Commander/Autoflasher device into the OBD port and to the computer
2. Open the Autoflasher software: Click **Cable > Connect**
3. **OBD > Datalogging**

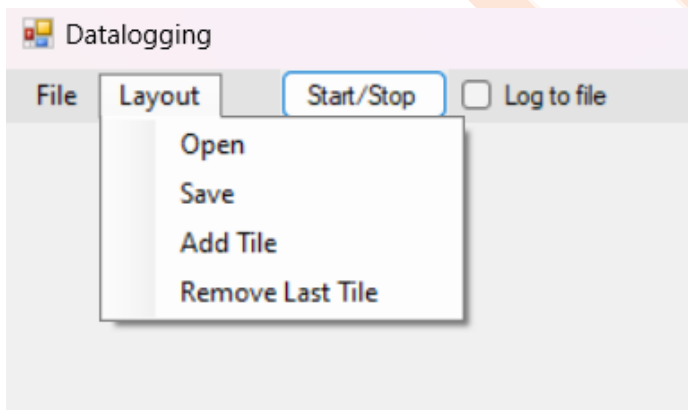
4. Download the PID's list and Powerstroke Layout below:

- a. [2020+ Powerstroke PID's](#)
- b. [2020+ Powerstroke Layout](#)

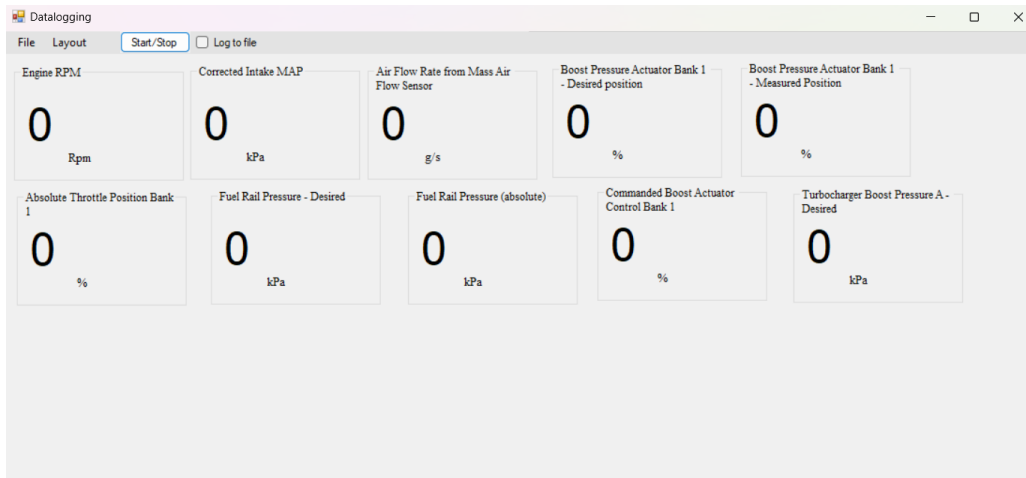
5. **File > Open** (Shown Below) - Select "2020_Superduty_Diesel_PIDs.csv"



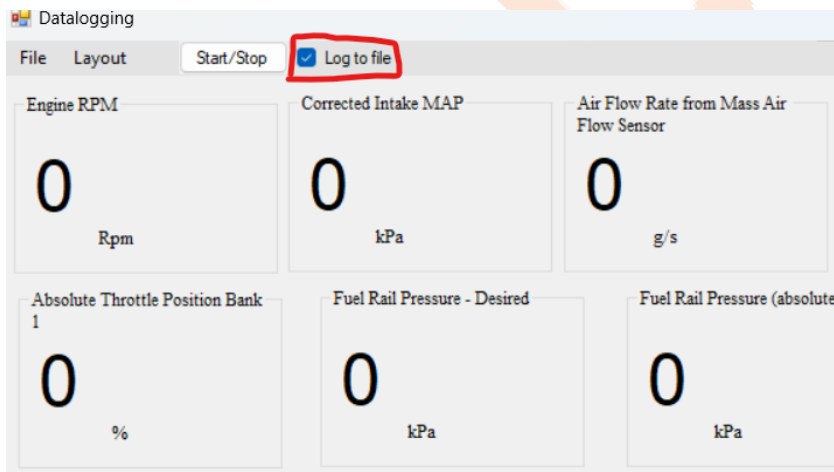
6. **Layout > Open** (Shown Below) - Select "2020+ ps layout.lay"



7. Once the PID's are displayed (Shown Below) and you are ready to log the vehicle.



8. You will **click on log to file checkbox** and then **Click Start/Stop** and do a 0-60 WOT (Wide open throttle) log



9. Once done with the log you will click on stop and file explore with pop up to save the log please save it with the vin number

10. Once saved please email it to commander.orders@gdptuning.com with the following information:

- a. VIN
- b. Order/Preorder number
- c. Detailed description of what the issue is. The more detailed the description, the faster we will be able to help you.

Troubleshooting Commander Device

Commander not connecting to the Autoflasher program.

1. If the commander will not connect to autoflasher verify that you are using the latest version of Autoflasher.
2. Verify that the PC recognizes that the Commander is plugged in, there should be an audible noise from the PC and a device available under “universal serial bus controllers” in the device manager as well as showing about 4.5v when you click **Connect**.
3. IF no USB device is detected uninstall and reinstall Commander drivers.
4. If no device is detected by the PC and Drivers have been reinstalled, swap USB cables to verify that the USB connection is not faulty. (The usb cable

is a typical USB A to USB B cable otherwise known as a printer cable, or cable used with an HP Tuners MPVI1 or EFI Live Autocal)

5. IF the commander is connecting to the PC but not the autoflasher program unplug the commander from the vehicle's OBD2 port then unplug the usb and reconnect it (this may take 3 or 4 attempts).



Commander not identifying ECM in service mode

IMPORTANT: On **2020-2022 Powerstroke**, when connecting to the ECU
Directly this cable below with the orange wire should **NOT** be connected:



1. Verify all cables are connected properly before continuing.

2. Leave everything connected.
3. Disconnect the positive terminal from the battery and hook the Commander alligator clip directly to the positive battery post.

P0610 after 2022 Powerstroke ECM Swap

1. Use the Commander/Autoflasher software to do a reconfiguration that should clear your code.