



Black Bear Performance
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Please Note: This equipment is in high demand and the viability of our business depends on its expeditious use and return. If you are unable to promptly follow these directions and complete your tune, please inform me at sales@blackbearperformance.com so that we can discuss the possibility of rescheduling for a time that will be better suited.

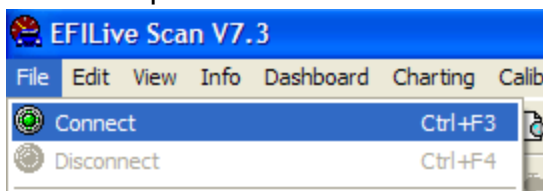
Effective 4/15/2010: Any equipment that is held beyond a reasonable period of time will result in the partial or full forfeiture of your security deposit. This time period is defined as 2 weeks after the completion of the process or 45 days from the date the equipment is shipped from our facility, whichever comes first. Exceptions can be made for extenuating circumstances, however prior approval is necessary. For more details, please see our [Terms and Conditions](#).

EFILive Scan and Tune Tool Instructions

To begin, download and install version 7.5.x from <https://www.efilive.com/additional-downloads>

Connect the supplied OBD-II to Serial cable to the Flashscan unit, and the USB cable to your laptop. Plug the OBD-II cable into your vehicle's OBD-II port, just above the parking brake pedal and turn the key to the run position.

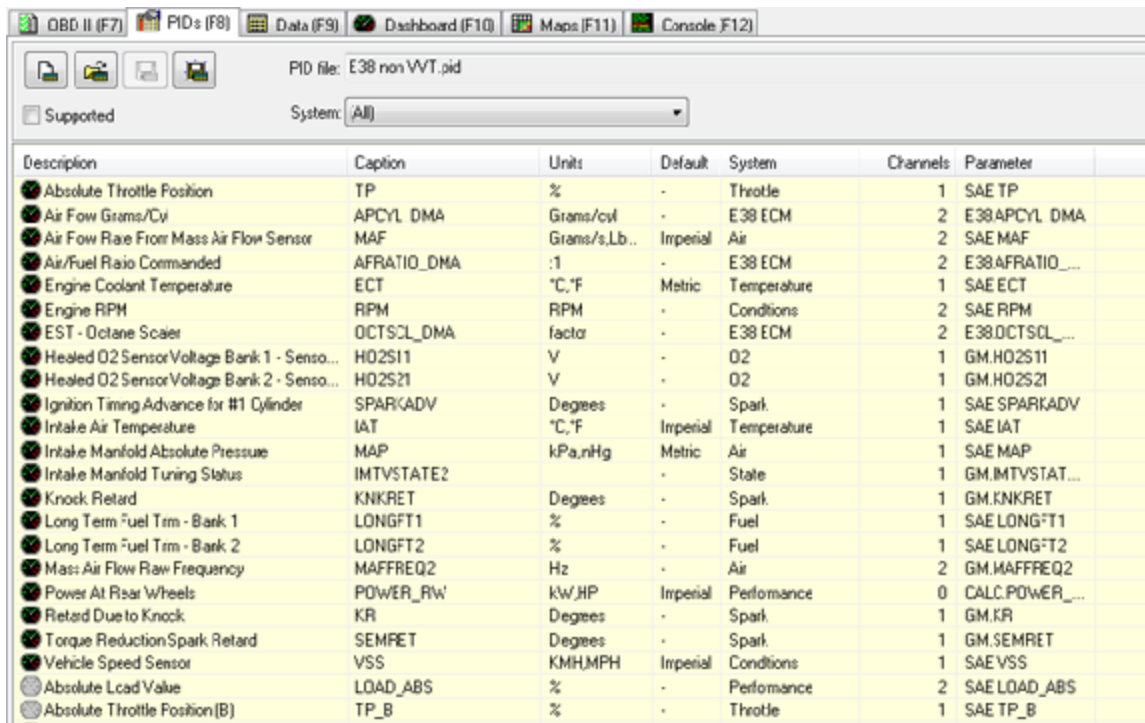
Open up the EFILive Scan tool. If prompted for VIN and vehicle information, leave blank and press "Ok". Select File and then Connect.



When prompted to select a controller, select GEN-IV V8, V6 E38 ECM (or similar). After a few seconds, you will be connected, and it may prompt you to enter your details, go ahead and enter your name and an approximate weight of the vehicle with you in it. If you have problems connecting, please check your cigarette lighter fuse under the hood to ensure that the OBD-II port is receiving power.

Next, you'll need to validate available parameters now by hitting Shift+F2. The process will take about 30 seconds to complete and may initiate automatically.

Once complete, hit F8 to pull up your PIDs list and make sure that the following items are selected. Please ensure that both the description and parameter field match. If you are unable to locate some of the parameters that begin with CALC.* in the parameter column, do not worry about them, they will be available after the log has been created and saved.



Description	Caption	Units	Default	System	Channels	Parameter
Absolute Throttle Position	TP	%	-	Throttle	1	SAE TP
Air Flow Grams/Cyl	APCYL_DMA	Grams/cyl	-	E38 ECM	2	E38APCYL_DMA
Air Flow Rate From Mass Air Flow Sensor	MAF	Grams/s,Lb...	Imperial	Air	2	SAE MAF
Air/Fuel Ratio Commanded	AFRATIO_DMA	:1	-	E38 ECM	2	E38AFRATIO_...
Engine Coolant Temperature	ECT	"C,"F	Metric	Temperature	1	SAE ECT
Engine RPM	RPM	RPM	-	Conditions	2	SAE RPM
EST - Octane Scaler	OCT_SCL_DMA	factor	-	E38 ECM	2	E38OCT_SCL_...
Heated O2 Sensor Voltage Bank 1 - Senso...	HO2S11	V	-	O2	1	GM.HO2S11
Heated O2 Sensor Voltage Bank 2 - Senso...	HO2S21	V	-	O2	1	GM.HO2S21
Ignition Timing Advance for #1 Cylinder	SPARKADV	Degrees	-	Spark	1	SAE SPARKADV
Intake Air Temperature	IAT	"C,"F	Imperial	Temperature	1	SAE IAT
Intake Manifold Absolute Pressure	MAP	kPa,mHg	Metric	Air	1	SAE MAP
Intake Manifold Tuning Status	IMTVSTATE2		-	State	1	GM.IMTVSTAT...
Knock Retard	KNKRET	Degrees	-	Spark	1	GM.KNKRET
Long Term Fuel Trim - Bank 1	LONGFT1	%	-	Fuel	1	SAE LONGFT1
Long Term Fuel Trim - Bank 2	LONGFT2	%	-	Fuel	1	SAE LONGFT2
Mass Air Flow Raw Frequency	MAFFREQ2	Hz	-	Air	2	GM.MAFFREQ2
Power At Rear Wheels	POWER_RW	kW,HP	Imperial	Performance	0	CALC.POWER_...
Retard Due to Knock	KR	Degrees	-	Spark	1	GM.KR
Torque Reduction Spark Retard	SEMRET	Degrees	-	Spark	1	GM.SEMRET
Vehicle Speed Sensor	VSS	KMH,MPH	Imperial	Conditions	1	SAE VSS
Absolute Load Value	LOAD_ABS	%	-	Performance	2	SAE LOAD_ABS
Absolute Throttle Position(B)	TP_B	%	-	Throttle	1	SAE TP_B

You're now ready to make some logs. Press the red record button at the bottom of the screen and then start your vehicle. It will now record pertinent data as you drive around. I'd like to see at least 15-20 minutes worth of data including part throttle cruising, idle and a couple of heavy throttle pulls.

Once finished with your drive, hit the square stop button at the bottom, save the file and select "Disconnect" from the file menu. At that point, you will need to attach the data collected to an email and send it on over to us at tuning@blackbearperformance.com to be analyzed. Please do not send the scan cable back to us until the entire process is completed.

If you'd like to make another log, just connect to the vehicle, select the same PIDs as above and start recording, you will no longer need to validate your parameters.

If you have any questions or run into any hiccups, please shoot an email to tuning@blackbearperformance.com.

Driver Installation Instructions

Most software installations will automatically install drivers. If yours does not, please connect the USB cable from the Flashscan device to your laptop.

To install the drivers, Go to your start menu, then control panel. For Windows 8, type "Control Panel" from the home screen. Click the "switch to classic view" link in the left pane or change the "View By:" option from "Category" to "Large Icons", then click System. If you're using Vista, click the device manager link in the left window. If XP, go to the hardware tab, then click device manager. Look for the EFILive cable entry. Right click on it and select "Update Driver". When prompted, do not have windows search Windows update for a driver. Take the advanced option when offered and browse a specific location. Browse to C:\program files\EFILive\Drivers\EFILive\win-2k-xp-vista (or C:\program files (x86)\EFILive\Drivers\EFILive\win-2k-xp-vista on some computers) and click continue. If prompted regarding windows logo testing, click to continue anyway.

Once complete, you are ready to begin the data-logging process.

After you receive your new ECM/TCM

Your controllers are located just behind and to the inside of the driver's side headlight. The ECM has two harnesses attached to it, the TCM is located on the backside of the ECM and has only one. Before starting, ensure that the key is not in the ignition and disconnect the negative battery cable.

There are two tabs holding each controller in place. Depress the tabs and the controller should tilt forward, allowing you access to remove it. Pull the red harness locks out ¼" to unlock the harness. The locking lever should now be movable, allowing you to disconnect the harness.

To install the new controller, simply reverse the removal instructions.

Once you receive and install, you may run into an issue where the vehicle will not start. If this is the case, then the security relearn procedure must be performed. This process will take approximately 40-45 minutes to complete

Security Relearn

Step 1: Attempt to start vehicle. If it starts up, then no relearn is needed. If it does not

start or if it starts and immediately dies, then the relearn procedure is needed.

Step 2: Leave the key in the run position for 10-12 minutes (until the security light shuts off). Make sure that no accessories are on and that your headlights are switched to the off position.

Step 3: Remove the key from the ignition for 45 seconds.

Step 4: Repeat steps 1-3 three times. On the fourth start attempt, the vehicle should start and the relearn is complete.

Performing a Crank Re-learn

With an ECM that has never been run in your vehicle, you will need to perform a crank re-learn procedure. This is a very simple procedure that should only take a couple of minutes to complete.

Warm the vehicle up to full operating temperature, then open the scan tool and connect to the vehicle, making sure to select Gen-IV, V8, V6 E38 as the controller type. Go to the DVT tab (F12) and select the E38 controller from the drop down list and press activate. Switch to the ECM setup tab within that window and you'll see the Learn crank angle sensor error button.

Engage the parking brake and place your left foot on the brake pedal. Press the C.A.S.E. button in the software and the word "OK" will appear just beneath the de-activate button above. Proceed to rev the truck up to 4k rpm over the course of about 2-3 seconds. Once it hits 4k, fuel will be cut off for approximately 1/2 second and the engine light should go out. Shut the truck off for about 30 seconds and the procedure is complete.

Last Steps

Before sending back the Flashscan cable, I'd like to see a log of the new ECM to be sure that everything is running as expected. Follow the log creation procedure at the beginning of this document and send me the resulting file. If all is well, I'll give you the go ahead to send back the cable and you can safely enjoy your newly tuned ECM.

Once logging has been completed, please contact us for the correct return address. Failure to do so could result in the equipment being mis-delivered and a delay in your refund.

When packaging the scan cable for shipment, please unplug both the USB and OBD2 plug from the Flashscan cable. Failure to do so can result in damage to the equipment and a forfeiture of your

deposit.

When shipping computers, package them in a way that protects them from damage. Broken plastic or connectors will result in a forfeiture of deposit