

DIABLOSPORT

5.9L 24V CUMMINS

# PREDATOR

**TUNABLE  
PERFORMANCE  
PROGRAMMER**

ENGINEERED TO RAISE HELL

## User Manual



DiabloSport, LLC.

## Predator Satisfaction Guarantee/ Return Policy

All DiabloSport products have a guarantee of satisfaction. If in the first 30 days from date of purchase you are not satisfied with the results the Predator generates in your vehicle, simply restore the factory tune to your vehicle and return the Predator to the selling dealer. Pending examination of the tool by DiabloSport, you will receive a refund from your selling dealer. Under no circumstances will DiabloSport accept the return of a Predator unit that does not have a performance tune remaining in it.



## Predator Revisions:

In an effort to keep the Diablosport Predator at the forefront of technology, Diablosport will offer revisions to the Predator when necessary. Updates are available via the web or you can return the Predator for a revision update. Please contact Diablosport for a Return Merchandise Authorization Number (RMA) and an address to ship to. Predators shipped without an RMA number clearly on the outer box will be refused. The updates will be provided free of charge. The customer is responsible for all freight expenses.

## Predator Reflash Policy

The Predator will marry to the vehicle upon upload of the factory tune and cannot be reflashed for any reason, back to a blank tool. This marrying of the Vin# to the tool is what makes it possible for the vehicle to be reflashed by GM, and still be reprogrammed again by the Predator. Reflashing of the Predator is not possible without the complete disassembly, replacement and reprogramming of critical components of the Predator tool.

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# End User License Agreement, Warranty and Disclaimer

**THIS END USER LICENSE AGREEMENT** (the "Agreement") is an agreement between you, as the purchaser (the "Purchaser") of either the Diablo Module (the "Module") or the ToolRama hand-held computer unit (the "Unit"), and , DiabloSport, LLC or ToolRama, LLC (collectively, "ToolRama"), as the manufacturer of the Product. The Product and the Unit shall be referred to collectively herein as the "Product."

1. **Acknowledgment And Acceptance Of Agreement.** If you do not agree to the terms and conditions of this Agreement, do not use the Product. Instead, promptly contact the distributor from which you purchased the Product in writing, requesting a refund of the purchase price. Any use of the Product by you will constitute your agreement to the terms and conditions contained herein.

2. **Grant Of License.** The parties hereto acknowledge that ToolRama is granting a non-transferable restricted license to Purchaser to use the Product for the sole purpose of installation in Purchaser's vehicle. ToolRama shall retain all title, ownership rights and intellectual property rights in and to the Product. Purchaser agrees that Purchaser shall not, directly or indirectly, modify, translate, reverse engineer, decompile, disassemble, or create derivative works based on the Product. Purchaser further agrees not to permit any third parties to modify, translate, reverse engineer, decompile, disassemble, or create derivative works based on the Product.

3. **Disclaimer.** The Product is being sold with no warranties of any kind, express or implied. The Product is not endorsed by the manufacturer of your vehicle and there is no affiliation between ToolRama and the manufacturer of your vehicle. Installation of the Product in your vehicle or use of the Product with your vehicle may limit or void your rights under any warranty provided by the manufacturer of your vehicle, and ToolRama assumes no responsibility in such event. Any warranty not provided herein, and any remedy which, but for this provision, might arise by implication or operation of law, is hereby excluded and disclaimed. The implied warranties of merchantability and of fitness for any particular purpose herein are expressly disclaimed.

4. **No Liability For Damages, Injuries Or Incidental, Special Or Consequential Damages.** Under no circumstances shall ToolRama, Inc., DiabloSport, LLC or ToolRama, LLC, or any other party related to ToolRama, be liable to Purchaser or any other person for any damage to Purchaser's vehicle, loss of use of Purchaser's vehicle, or for personal injuries suffered by any person, or for any incidental, special or consequential damages, whether arising out of negligence, breach of warranty, breach of contract, or otherwise. ToolRama's liability for any damages, loss and/or claims associated with the Product shall be limited to the price of the Product paid by purchaser. Purchaser hereby releases ToolRama from all

liability, claims and damages associated with the Products, with the sole exception of ToolRama's liability for the refund of the purchase price of the Product to Purchaser in the event that a court of competent jurisdiction determines the Purchaser suffered damages directly resulting from the malfunction of the Product.

5. **Warranty.** Notwithstanding the provisions of the End User License Agreement, DiabloSport warrants the Product to be free from all defects in material and workmanship for the life of the Product. This limited warranty applies only to the original Purchaser of the Product. This limited warranty does not cover damage caused by modification, alteration, repair or service of the Product by anyone other than DiabloSport, physical abuse, misuse, use in a manner contrary to the instructions, which accompany the Product, or any damage caused by acts of God. Contacting your Distributor or Dealer may make claims for repair service or replacement of the Product pursuant to this limited warranty. The Chip will either be repaired or replaced, at the option of DiabloSport, at no cost to Purchaser, if the defective Product is covered by this limited warranty. DiabloSport's liability pursuant to this limited warranty and for any damages, loss and/or claims associated with the Product shall be limited to the price of the Product paid by Purchaser, or, at DiabloSport's option, repair or replacement of the Product.

6. **State Law.** Some states do not allow limitations of implied warranties, or the exclusion or limitation of incidental, special or consequential damages, so the above limitations may not apply to you. In such states, liability shall be limited to the greatest extent permitted by applicable law.

7. **Governing Law & Venue.** This Agreement shall be governed by and construed in accordance with the laws of the State of Florida, and venue for any legal proceeding or action at law arising out of or construing this Agreement shall lie in the state or federal courts of Orange County, Florida, and the parties specifically waive any other venue.

**DISCLAIMER Not legal for sale or use on any pollution controlled motor vehicles. Legal in California only for racing vehicles which may never be used upon a highway.**





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Preparing to install  
the Diablosport  
Performance Tune

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## OBD II Diagnostic Port Location

Please read through the manual before installing any tune into your vehicle - failure to follow proper instructions can result in a damaged or disabled ECU (Engine Control Unit).

User must ensure that the original Dodge Factory Tune is in the vehicle's ECU before installing the DiabloSport tune. (Dodge dealer reflashes are the same as Factory Tune).

Serious engine damage can occur if the Predator tune is installed over a non-factory/aftermarket performance tune.

### **Dodge Ram 2500/3500 Cummins 5.9L Turbo diesel**

Driver side underneath dash, above the gas pedal.



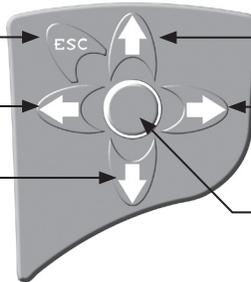
# Display and keypad description



**ESC Key:** Jump back to previous menu or jump to top of menu selection.

**Left arrow:** Set gauge value left

**Down arrow:** Scroll down the menu



**Up arrow:** Scroll up the menu

**Right arrow:** Set gauge value right

**Enter Key/Continue:** Select the highlighted item



## Preparing the vehicle for tune installation

### **Very important!**

**Do not perform any operations on Predator (except live data diagnostics) while vehicle is running. The vehicle must be parked and engine OFF.**

- Always have all the doors closed while installing the DiabloSport Performance Tune, and keep them closed until the process is complete.
- Do not activate any electrical accessories while installing the DiabloSport Performance Tune. Ensure that there are no electronic Aftermarket accessories\* wired or plugged into the vehicle that can cause a substantial voltage drop. Please contact DiabloSport if you are uncertain about the effect of devices that are on your vehicle.
- Certain cellular phones or radio equipment might also cause interference. Please remove or turn such devices off.
- Do not try to install any tune on a vehicle with a low battery voltage - charge your battery if necessary.
- Unless instructed, never turn the ignition key OFF while the Predator is plugged into diagnostic port.
- Do not unplug the Predator while it is installing the DiabloSport Performance Tune or the Original Backup.

### **\*Important Note:**

**All electronic aftermarket add-on parts can create a potential power draw.**

- **tachometer**
- **electrical fans**
- **shift light**
- **audio/video equipment.**
- **gauges**
- **trailer/ tow accessories.**

Any change in voltage during flash programming procedures WILL interrupt the writing process.

Please disconnect or disable any such add on part.

In the event of such an occurrence, unplug the tool, wait 5 seconds and then plug it back in. The tool will recognize that a interrupted writing error has occurred and will automatically install the original back up. The vehicle is now in its original state. Please attempt to locate the voltage draw before Predator is used again.

Please feel free to contact DiabloSport directly at any time with questions related to this process. 561-908-0040

**IT IS NOT NECESSARY TO CONTACT THE VEHICLE MANUFACTURER SHOULD SUCH ERRORS OCCUR. ANY AND ALL COSTS RELATED TO SUCH ACTIONS ARE THE RESPONSIBILITY OF THE END USER - NOT DIABLOSPORT OR ITS DEALERS.**



Installing  
the Diablosport  
Performance Tune

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## Installing the Performance Tune

Predator contains several predefined DiabloSport Tunes. These are thoroughly tested and approved by DiabloSport.

Before you install any tune into your vehicle, when you use the Predator for the first time, the Predator becomes 'married' to, and only to, your vehicle until original backup is restored.

If there is ever a need to send the Predator back to DiabloSport, for any reason, the Original Backup must be put back into your vehicle, as described in the section 'Reinstalling the Original Factory Backup', otherwise your Predator will not be accepted back by the reseller. To find out, which tune was last written to your vehicle, go to 'Predator Options / Show Last Tune Written' in the Predator.

## Performance Tunes For Cummins

**DiabloSport Tow**, is designed to add power and torque specifically for towing, weight limitations are the same as stock tune, and inclines must also be factored in.

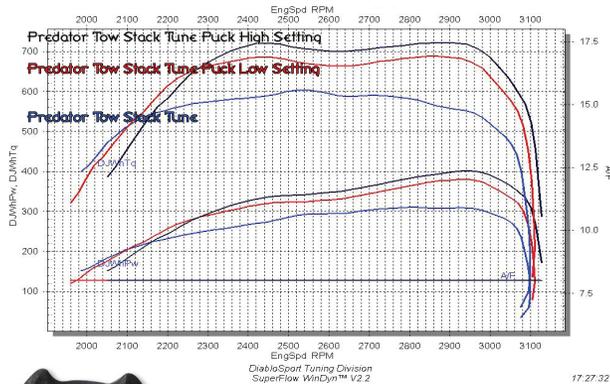
**DiabloSport Performance** (Economy Performance Tune) is designed to add power and torque, but with fuel economy in mind. Fuel mileage is always subject to driving style and may vary from vehicle to vehicle. towing can be done with this tune with weight limitation of 8,000 lbs. Inclines must also be factored in.

**DiabloSport Extreme** (Extreme Performance Tune) is designed to add power and torque. Towing is NOT recommended with this tune. Exhaust gas temperature gauge is recommended using this tune to ensure safe operation during various conditions.

**DiabloSport Extreme RKL (U7131 only)** (Extreme Performance Tune) is designed to add power and torque. Towing is NOT recommended with this tune. Exhaust gas temperature gauge is recommended using this tune to ensure safe operation during various conditions. Transmission upgrades are highly recommended for this tune as well.

# Stacker Tunes For Cummins

**DiabloSport Stacker Tunes**, are designed to be used with the DiabloSport PowerPuck to add power and torque with the ability to switch between 3 power settings on the fly. Leave switch for PowerPuck in the middle position to turn the PowerPuck off, flip the switch towards the notch for the most power and opposite the notch for a medium increase in power.



**DiabloSport Stacker Tow**, is designed to add power and torque specifically for towing, weight limitations are the same as stock tune, and inclines must also be factored in.

**DiabloSport Stacker Performance(U7131 only)** (Economy Performance Tune) is designed to add power and torque, but with fuel economy in mind. Fuel mileage is always subject to driving style and may vary from vehicle to vehicle. towing can be done with this tune with weight limitation of 8,000 lbs. Inclines must also be factored in.

**DiabloSport Stacker Extreme** (Extreme Performance Tune) is designed to add power and torque. Towing is NOT recommended with this tune. Exhaust gas temperature gauge is recommended using this tune to ensure safe operation during various conditions.

**DiabloSport Stacker Extreme RKL (U7131 only)** (Extreme Performance Tune) is designed to add power and torque. Towing is NOT recommended with this tune. Exhaust gas temperature gauge is recommended using this tune to ensure safe operation during various conditions. Transmission upgrades are highly recommended for this tune as well.

## Installing the Performance Tune U7130

The very first time the Predator is used on a vehicle it will automatically create a backup of the original factory tune.

### **(Installing the DiabloSport Performance Tune,U7130)**

1. Plug the Predator into the Diagnostic Port of the vehicle, located under the driver's side dash.
2. The first screen you will see is the startup screen with the name of the vehicle the predator supports (i.e.:cummins )
3. Performance tune should be three choices:
  - **Performance Tune**
  - **Diagnostics**
  - **Options**
4. Select "Performance Tune" by pressing the "Continue" key
5. Disclaimer will appear, - read & press "Continue"
6. Turn engine ON. DO NOT START Vehicle- press "continue"
7. Highlight the tune you would like to install by using arrow keys. Press "enter" to continue

8. Press "enter" on install tune.

9. Follow the prompts to turn on & off the ignition (do not start the car at any time) press "enter" if prompted.

10. The tune should now be writing. Do not interrupt this process or PCM damage can occur.

11. When the Process is complete, the Message " {xxxxx} tune is now in vehicle. You may drive it now. Please unplug the tool"

Unplug the predator from the Diagnostic port. Cycle the key, and start the vehicle. You are now able to enjoy the force of the Predator!!

NOTE: The ABS and Parking Brake lights may stay on for approximately 1-2minutes after vehicle has been programmed, this is normal and will turn off within 1-2 minutes.

# Installing the Performance Tune U7131

The very first time the Predator is used on a vehicle it will automatically create a backup of the original factory tune.

## **(Installing the DiabloSport Performance Tune,U7131)**

1. Plug the Predator into the Diagnostic Port of the vehicle, located under the driver's side dash.
2. The first screen you will see is the startup screen with the name of the vehicle the predator supports (i.e.:cummins )
3. Performance tune should be three choices:
  - **Performance Tune**
  - **Diagnostics**
  - **Options**
4. Select "Performance Tune" by pressing the "Continue" key
5. Disclaimer will appear, - read & press "Continue"
6. Turn engine ON. DO NOT START Vehicle- press "continue"
7. Select "Tune on the fly". Press "enter" to continue
- 8 . Select "Install tune", actual tune choices will appear after the initial flash. Allow 10 minutes to program vehicle. Once completed follow the on screen prompts for the key on/off procedures.

NOTE: This is the only time aside from restoring the original backup when engine needs to be turned off and ignition turned on, after this step the engine can stay running while changing the tunes.

8. The initial flash will set STOCK tune as default. Once 10 minute flash is complete and key cycles are complete you will see the main Predator screen.

9. The engine can now be running. Select "Performance Tune", follow on screen prompts and select desired tune, the tunes will install within a few seconds. Once install is complete the Predator will go back to main screen, you can unplug it at anytime after that.

Changing tunes can be done anytime, just plug Predator into OBD-II port and follow the above instructions to select a different tune, once complete it is ok to unplug the Predator.

NOTE: DiabloSport recommends that tune installs and tune changes to be done while vehicle is not moving as it may distract user from driving hazards.

## Tire size adjustment U7131

Tire size adjustment:

NOTE: It is recommended to perform this when the vehicle is not moving as it may distract user from driving hazards.

To modify tire size:

1. Select Performance Tune from the main menu and follow on screen prompts.
2. Select Tune on the fly from the tune selection menu and follow on screen prompts.
3. Select desired tune, then select Modify parameters. There will be two options to adjust tire size.

Tire size by sidewall #: When using this selection user must enter the metric sidewall tire size, ex. 245-80-17. NOTE: The default values does not represent your factory tire size.

Tire size by tire height: When using this selection user must measure the physical tire height and enter the height in inches.

Once desired tire size is selected highlight apply and follow on screen prompts.

The tire size change will be applied upon the next key cycle(key on/off).

## Idle up feature U7131

Idle up feature:

NOTE: The Predator DOES NOT need to be plugged into vehicle for this to work once enabled through modify parameters.

1. With vehicle running and in Park(neutral, park brake on for manual transmissions), press the cruise ON button to enable cruise control, then press SET.
2. Use the accel/decel buttons to increase or decrease idle speed, the ranges are between 1000-1500 rpms.
3. To disable, press the cruise OFF button.

To enable idle up in Predator:

1. Select Performance Tune from the main menu and follow on screen prompts.
2. Select Tune on the fly from the tune selection menu and follow on screen prompts.
3. Select desired tune, then select Modify parameters. Then select idle up. Turn it on to enable and turn off to disable.

NOTE: This feature will only work when you select Modify parameters AFTER the initial 10min flash, once enabled it will stay enabled until disabled or the Original backup is restored.



Reinstalling  
the Stock Tune  
& Trial Feature

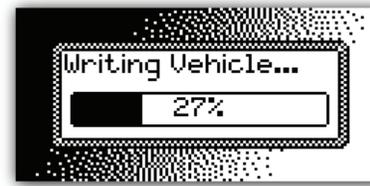
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There are three occasions when one needs to re-install the Original Factory Tune back into the vehicle:

- Going to the dealer for vehicle maintenance or repair.
- Returning the Predator to an Authorized Diablosport Dealer.
- Using the Predator on another vehicle.

To restore Original Backup go to Performance Tune and then select Original Backup.

## Putting-back the Stock Tune



When the Predator starts to write the Original Backup into your vehicle, a progress bar will indicate the status of writing. Follow all instructions on the Predator screen. The complete process will take about 2 to 4 minutes(U7130), 10 minutes(U7131). Once backup is restored the Predator can be used on another vehicle

### Trial feature:

The trial feature will allow user to use an already locked Predator on a friends vehicle to flash a time limited tune of choice. Time limit is 5hours of engine run time. The trial feature can only be used once per vehicle, i.e. User cannot reflash a vehicle which has had the trial feature installed and the trial time has expired.

NOTE: Once the trial tune has expired it is recommended to put the vehicle back to stock using the Original backup option in the Predator, this way there will be no traces of a tune being in the vehicle.

### To install trial tune:

1. Select Performance Tune from main menu and follow on screen prompts.
2. Select Tune on the fly, trial from the tune selection menu and follow on screen prompts.
3. Select Install Tune. Actual tune selection will appear after initial flash. Allow 10minutes for the initial flash to complete, ensure to follow on screen prompts for the key on/off procedures.

This is the only time aside from restoring the original backup when engine needs to be turned off and ignition turned on, after this step the engine can stay running while changing the tunes.

4. The initial flash of tune on the fly, trial will install STOCK tuning, to change the tune just select desired tune and follow on screen prompts, the tune installs in less than a second.
5. Changing tunes can be done anytime, just plug Predator into OBD\_II port and go to Performance Tune >> Tune on the fly, trial, and select desired tune, once Predator installs the new tune it is ok to unplug it.

NOTE: Whenever using the trial tune the message "This vehicle has trial tune" will come up, this is normal.



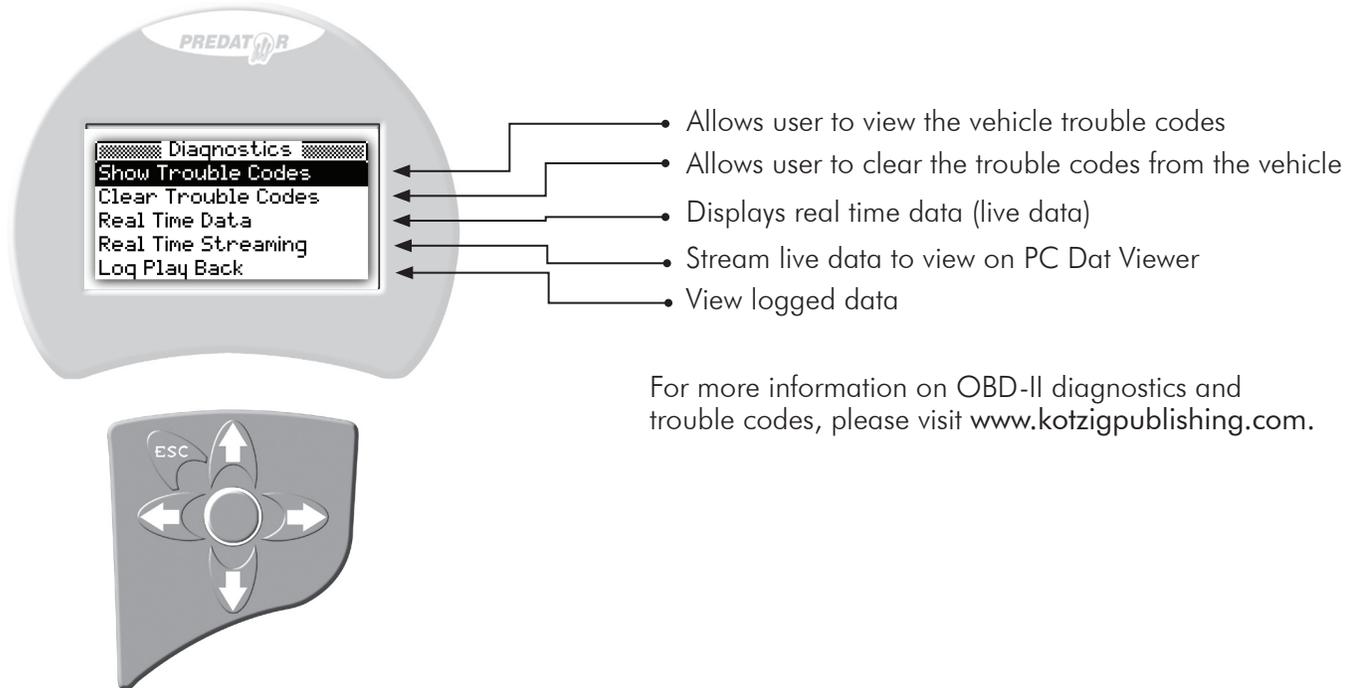


Vehicle diagnostics  
&  
Predator options

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## Vehicle diagnostics

Select the “Diagnostics” item from the main menu of the Predator, then press the Enter key.



For more information on OBD-II diagnostics and trouble codes, please visit [www.kotzignpublishing.com](http://www.kotzignpublishing.com).

**Show Trouble Codes** = Display any current trouble codes

**Clear Trouble Codes** = Delete any current trouble codes

**Real Time Data** = View real time data, this section is set up in groups of parameters to view.

**NOTE:** When switching tool from one vehicle to another vehicle you must go into the options menu and press live table reset

Each group (when selected) allows user to show specific values or all values in the group, to see specific values choose "Show Select" then based on what sample rate you would like choose "Slow" or "Fast" the next screen will show all parameters available, highlight and press the enter button next to value you would like to display, once completed press "ESC" button.

You will now be asked if you wish to data log (record data) or just view the parameters without data log.

### Data Logging

All live data groups can be data logged.

When specifying parameters to view you will be asked to choose "Slow" or "Fast" rate.

Fast rate will sample the values at a higher rate and will be able to log data for about 45min, the more parameters you select the lower the granularity for values will be, we recommend no more than 8 for best sample rate.

Slow rate will sample at a slower rate and will be able to log data for about 1hr 30min, when choosing to view all values the default rate is slow.

Once the proper sample rate is selected, the next screen will ask "DATALOG" yes or no, select "YES" and the data logging will start.

To stop data logging, press the "ESC" button.

### Log Playback

To view the logged values, go back to main diagnostic menu and select "Log Play Back".

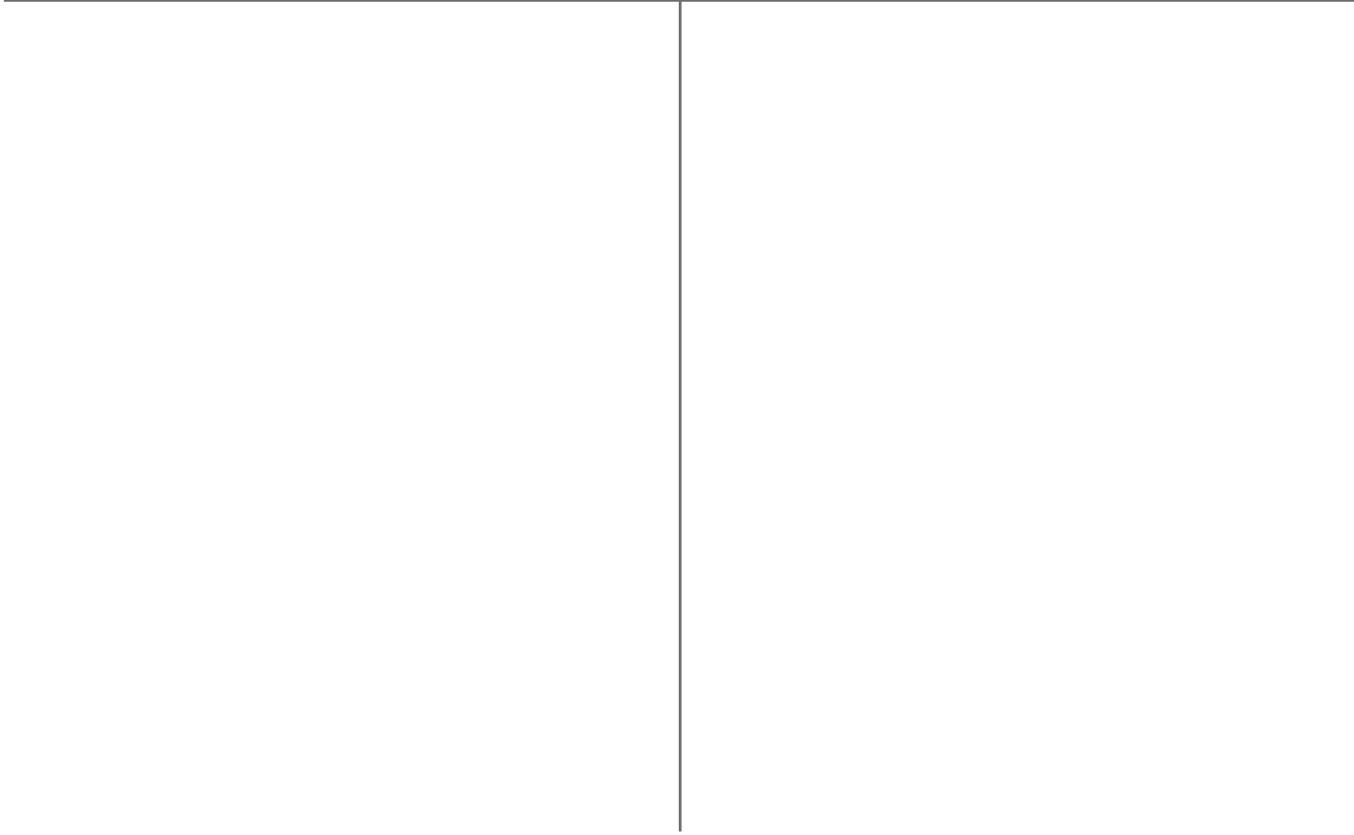
Top right hand corner will display the total time data logged

Top left hand will display elapsed time.

Top Center will display progress bar and mode of view.

To start viewing data press the enter button, to pause press enter button.

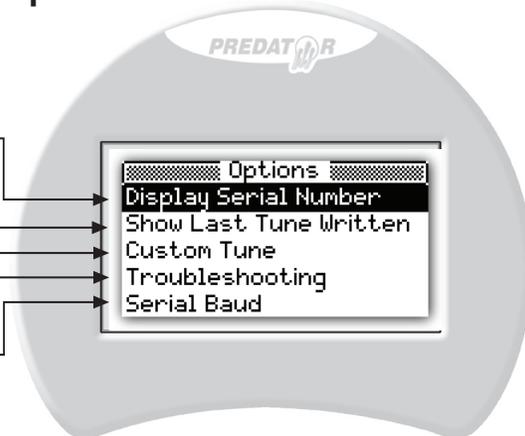
While paused you can use the left and right arrow keys to move forward or backward in the log file, once desired point is reach press enter key to start displaying values from that specific point. To exit out of the data log press the "ESC" button.



### The options menu is mainly for use by your DiabloSport Dealer.

When you select "Options" the following screen will be displayed:

- This option shows the Predator serial number
- Displays the name of the last tune written to the vehicle
- Brings up the submenu for Custom Tunes from DiabloSport
- Brings up the Troubleshooting submenu
- Alter the serial port baud rate



### Options Menu

Display Serial Number = Show the Predators serial number

Show Last tune Written = Display the last tune written to vehicle

Custom Tune = Custom tune menu, see Custom Tunes section

Troubleshooting = See Troubleshooting section

Serial Baud = Set the serial baud rate of communications for Predator.

**NOTE:** When switching tool from one vehicle to another vehicle you must go into the options menu and press live table reset.

### Troubleshooting Menu

Show Calibration ID = Display the hex code on the vehicle

Show VIN = Show vehicles VIN number

Read Extra Tune = Reads the tune in the vehicle for export to PC

Restore Original Backup = Restores the original tune and resets the tool for use on another vehicle.

Log Upload = Upload data log file to PC, see Diagnostics section.

Live Table Reset = Reset this when Predator is used on a different vehicle.

Verification = This is a troubleshooting feature and should only be used with the supervision of Diablosport tech support.

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