

DIABLOSPORT

6.0L POWERSTROKE

PREDATOR™

**TUNABLE
PERFORMANCE
PROGRAMMER**

ENGINEERED TO RAISE HELL

User Manual





DiabloSport, LLC.

***Predator Satisfaction Guarantee/
Return Policy***

If in the first 30 days from the date of purchase you are not satisfied with the Predator results in your vehicle, simply ***re-install the Original Backup back into your vehicle***, return the Predator to the reseller, and pending examination of the tool by DiabloSport, you will receive a refund from your reseller.

***Under no circumstances
will DiabloSport accept the return of a
Predator that didn't re-install the Original
Backup back into your vehicle.***

PREDATOR

End User License Agreement, Warranty and Disclaimer

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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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Attention Customers:

Visit our web site www.diablosport.com for information on how to receive the latest updates.



*Before installing
the Performance Tune*

PREDATOR™

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 Ford Factory Tune is in the vehicle's ECU before installing the DiabloSport tune. (Ford dealer re-flashes are the same as Factory Tune).*

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

Very important!

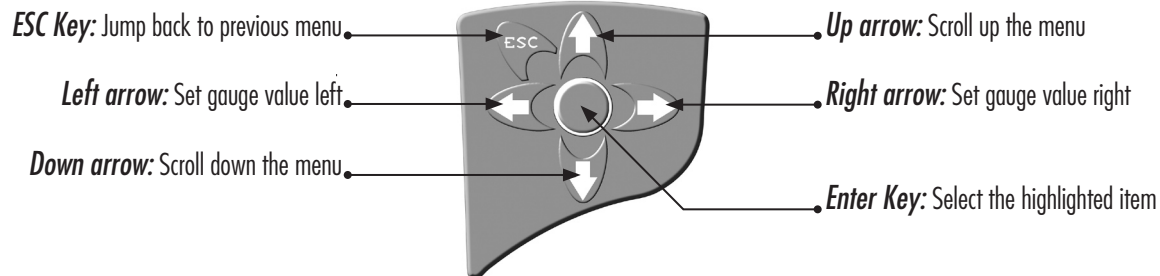
Do not perform any operations on Predator (except live data diagnostics) while vehicle is running. The vehicle must be parked and engine OFF.

OBD II diagnostic port location

2003-04 Ford Powerstroke 6 Liter Turbo diesel

Driver side underneath dash,
above the gas pedal.





Preparing the vehicle for tune installation

- Apply parking brake to deactivate daytime running lights.
- 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 add on parts* wired or plugged into the vehicle that can cause a substantial voltage drop when activated during installation of the DiabloSport Performance Tune.
Please contact DiabloSport if you are uncertain about 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 in 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,

- tach
- shift light
- gauges
- electrical fans
- audio/video equip.
- trailer/ tow accy.

Can create a potential power draw.

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, it 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 VEHICLE MANUFACTURER SHOULD SUCH ERRORS OCCUR. ALL AND ANY COSTS RELATED TO SUCH ACTIONS ARE NOT THE RESPONSIBILITY OF DIABLOSPORT OR ITS DEALERS.



*Installing
the Performance Tune*

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Predator contains several predefined DiabloSport Tunes. They are thoroughly tested and approved by DiabloSport. DiabloSport strongly recommends the use of larger diameter performance exhaust components and exhaust temperature gauges to any vehicles using their Performance Tunes. You have a choice of either installing the DiabloSport Tune "as-is" into your vehicle, or customizing it to your personal taste.

Both cases are described in the following sections.

Before you install any tune into your vehicle, when you use the Predator for the first time, it will read the Original Factory Tune out of your vehicle and permanently store it in its memory. This process takes a minute or two. For safety reasons, there is no way to overwrite this backup memory and therefore the Predator becomes 'married' to, and only to, your vehicle.

If there is ever a need to send the Predator back to DiabloSport, for any reason, the Factory Tune must be put back into your vehicle, as described in the section 'Putting-back 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, see the section 'Predator Options / Show Last Tune Written'

About DiabloSport Performance Tunes

DiabloSport Towing Tune 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 65 HP (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 100 HP designed for maximum performance, requires complete exhaust and down pipe also gauges EGT - boost. Depending on probe location there will be different temperature samples - pre turbo(not on exhaust manifold) expect 1300-1500 degrees, on down pipe 1100-1200 degrees, this will change depending on load conditions as well as location. Tip in low RPM. Towing may not be done while running this Performance Tune.

Installing the tune for the first time

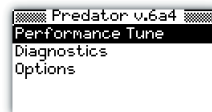
NOTE: During the install process you will be prompted to cycle key (turn ignition on/off), please follow these prompts carefully as failure to do so can cause PCM failure.

NOTE: After each tune has been installed the transmission has to undergo an adaptive period which usually consists of 5 cold starts, in the mean time the transmissions shift action will be compromised thus erratic and hard shifts can occur. Please allow for the transmission to adapt before running the vehicle hard.

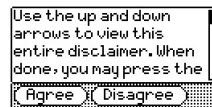
NOTE: Tow/Haul light might flash during the adaptive period, to reset, cycle the key (turn ignition off and then back on).

NOTE: Diablosport does not recommend "stacking" our performance tunes with other aftermarket inline electronic power add ons. We have never tested these combinations therefore we do not recommend doing so. If done it is at your own risk.

When you select the Performance Tune item from the main menu of the Predator *for the first time*, the tool will read your Original Factory Tune out of your vehicle and store it in its memory:

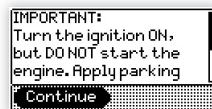


When you select the Performance Tune item from the main menu of the Predator, a disclaimer will be shown:



Please read and continue by pressing "agree"

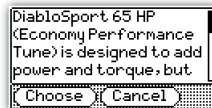
Next, follow instructions on screen.



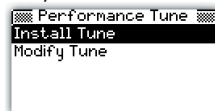
Select desired tune to install.



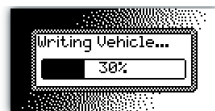
The following screen will display a description of tune selected.



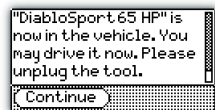
You will now be asked to install or modify the tune selected.
(see modify parameters section on how to modify tune)



Select install tune and follow prompts on screen and allow for about one minute to program vehicle (unmodified tune)



Once completed and the following screen appears the vehicle is tuned and ready to go.



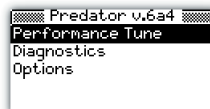
Congratulations! You have programmed the DiabloSport Tune into your vehicle!

There is NO need to return the vehicle to the stock calibration before switching performance tunes. Simply pick the new tune you wish to use and install it.

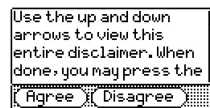
Installing the DiabloSport Tune

Installing another HP tune.

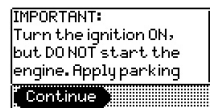
Select "Performance Tune".



Please read and understand disclaimer.



Turn ignition ON.



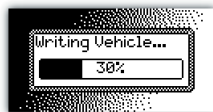
Select desired tune.



Next you will be offered a choice, whether you want to install the DiabloSport Tune "as-is", or customize it to your personal taste:

Install Tune
Modify Tune

For now, just select Install Tune and press the Enter key. The Predator will skip the tune customization and proceed with installing the predefined DiabloSport Tune.



At this point the Predator starts to write the new tune into your vehicle. A progress bar will indicate the status of writing. Follow all instructions on the Predator screen - the whole process will take about 1 minute.

Once completed and the following screen appears the vehicle is tuned and ready to go.

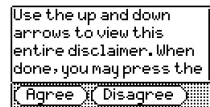


Congratulations! You have programmed the DiabloSport Tune into your vehicle!

(The procedure described in this section is similar to 'Installing the DiabloSport Tune' section except it has one additional step involved: you have to modify parameters of your choice. This will alter the predefined DiabloSport Tune before it gets written to your vehicle. Feel free to repeat this procedure as many times as you wish.

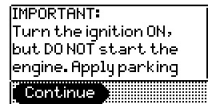
Please keep in mind, that DiabloSport is not present while you are modifying the parameters, and therefore cannot be held responsible for incorrect settings! If you are dissatisfied with the results of your modifications, you can always go back and write the predefined DiabloSport Tune, as described in the section 'Installing the DiabloSport Tune'.

When you select the Performance Tune item from the main menu of the Predator, a disclaimer will be shown:



There are two buttons below the disclaimer, 'Agree' and 'Disagree'. A blinking 'Agree' button indicates that if you press the Enter key, the Predator will continue. In the case you disagree with the disclaimer and do not want to continue, just press the Right Arrow key. Now the 'Disagree' button will become the active button and will be blinking, indicating that if you press the Enter key, the Predator will cancel the procedure of installing the tune and return back to Main Menu.

Next, a note will be displayed:



A blinking 'Continue' button indicates that if you press the Enter key, the Predator will continue.

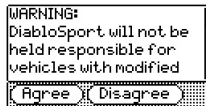
Next you will have to select tune you wish to modify.



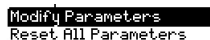
You will be offered a choice, whether you want to install the DiabloSport Tune "as-is", or customize it to your personal taste:

Install Tune
Modify Tune

A disclaimer will be shown:



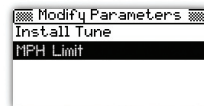
Scroll down to `Modify parameters` and press the Enter key.



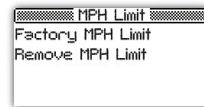
(TIP: If you want to discard ALL the modifications you have previously made, select `Reset All Parameters`)

To enter the parameter modification procedure, you have to 'Agree' (since the 'Agree' button is blinking on the display, just press the Enter key).

The predator will allow for speed limiter extension.
Select MPH limit.



Then select remove MPH Limit to extend the speed limiter



Note: If you get "MPH limit not supported" when trying to adjust the MPH Limit, you most likely have an older calibration in your PCM. Please visit your local Ford dealer and have them update your PCM calibration to the latest one.

When completed select "install tune"

(TIP: There is a shortcut available to jump to the first line of any menu: instead of pressing the 'Up Arrow' key several times, just hit the 'Esc' key once).

Press the 'Enter' key.

At this point the Predator starts to write the new tune into your vehicle. A progress bar will indicate the status of writing. Follow all instructions on the Predator screen - the whole process will take about 4 minutes.

Congratulations! You have programmed the customized DiabloSport Tune into your vehicle!



*Re-installing
the Original Backup*

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

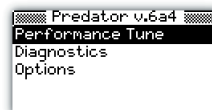
- Going to the dealer for vehicle maintenance or repair
- Returning the Predator for any reason.

(If you are satisfied with your factory tuned vehicle and only have a desire to modify a parameter or two (example: to make firmer shifting of 2nd gear), read the section 'Customizing the Original Factory Tune').

When you select the Options item from the main menu of the Predator, then Troubleshooting / Restore Original Backup, note will be displayed:

Putting-back the Original Backup

Select "Performance Tune" from main menu.



Select "Restore Original Backup"



The Predator starts to write the Original Factory Tune back into your vehicle. A progress bar will indicate the status of writing. Follow all instructions on the Predator screen - the whole process will take about 1 minute for unmodified tunes and 4 minutes for modified tunes.

Note: The Predator will automatically reset itself after restoring back up, it is no longer locked to that specific vehicle after this procedure.

Congratulations! You have successfully put back the Original Factory Tune into your vehicle!

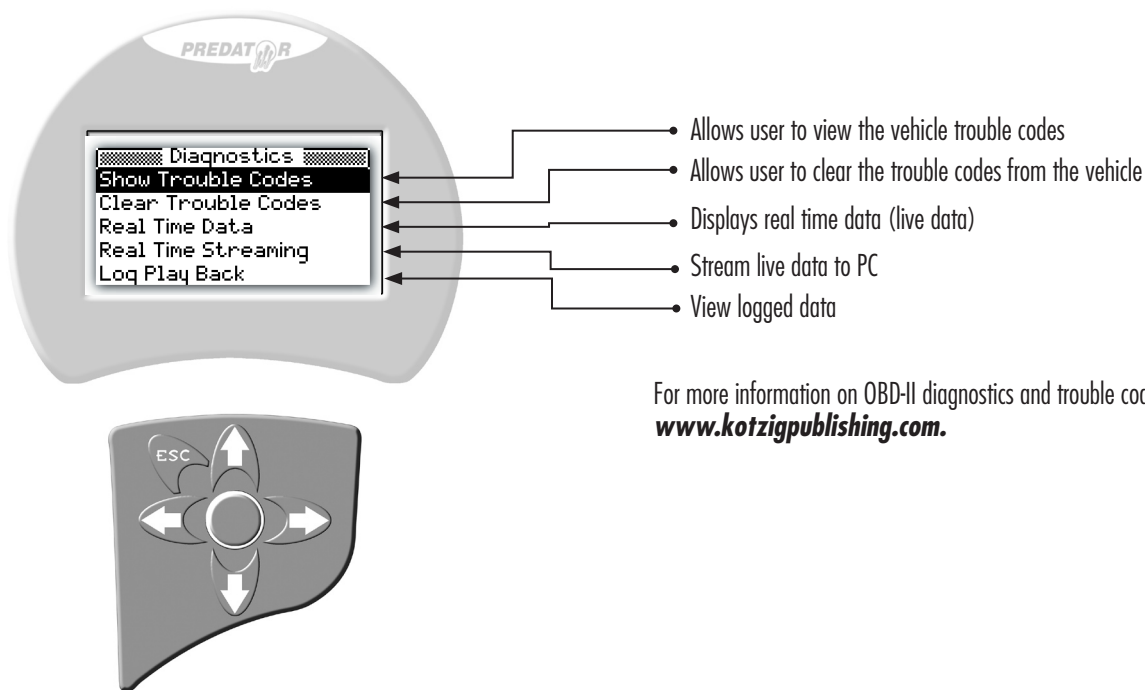


*Vehicle diagnostics
&
Predator options*

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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.kotzigpublishing.com.

Diagnostic Section

Show Trouble Codes = Display any current trouble codes

Clear Trouble Codes = Delete any current trouble codes

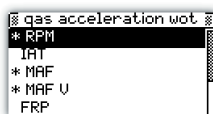
Real Time Data = View real time data, this section is set up in groups of parameters to view.

Real Time Streaming = view real time streaming on PC

Log Play Back = View logged data



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.

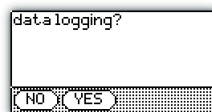
When specifying parameters to view you will be asked to choose "Slow" or "Fast" rate.

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



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.

Vehicle Diagnostics

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.

Log Upload to PC.

You can also upload the log file into PC and view it with our live streaming data viewer.

To upload the log file to pc you must have the data view software to upload and to view the data.

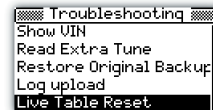
Real Time Streaming

This option allows you to stream live data directly to your PC into the data view software.

Set up the software on your PC and ensure that you have the right COM port enabled then press "Real Time Streaming" button to view the values.

To obtain a copy of our data viewer, please visit our web site www.diablosport.com or e-mail us at general@diablosport.com.

Live Data Groups



Diesel EGR = EGR related parameters

Diesel Evap = Evap related parameters

Diesel Fuel = Fuel related parameters

Diesel Pats = Passive anti-theft system related parameters

Diesel Speed Control = Vehicle speed related parameters

Diesel Trans = Transmission related parameters

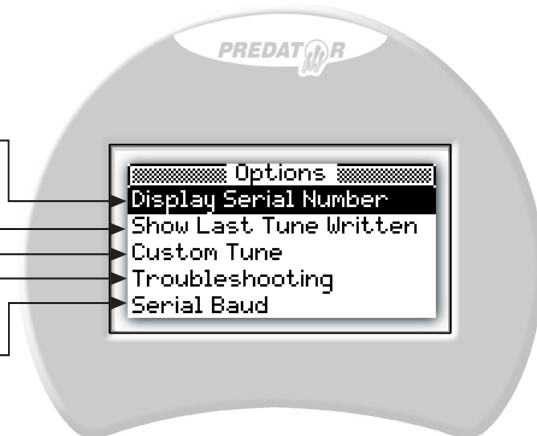
Live Table Reset = Use this option to reset the live data table for use on another vehicle

For further information on the live data parameter please consult Ford service manuals.

The options menu is mainly for the DiabloSport Predator 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.

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

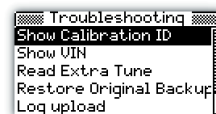
Restore Original Backup = Restores the original tune and resets the tool for use on another vehicle.

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 = On/Off(default On) This is a troubleshooting feature and should only be used with the supervision of Diablosport tech support.

Failsafe = Last resort. Password required. Allows user to put original file back into vehicle. This is a troubleshooting feature and should only be used with the supervision of Diablosport tech support.



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