

# BRING ON THE POWER



# **XRT PRO**

## **INSTALLATION MANUAL**

**FORD | GM | DODGE**

## Revision Date

These instructions are current as of 01/23/12. Revisions may apply, and are available at [www.hsperformance.com](http://www.hsperformance.com)

# WARNING!

### *THIS IS A HIGH PERFORMANCE PRODUCT TO BE USED AT YOUR OWN RISK!*

Do not install this product until you have read and fully understand the following disclaimer of liability. The following disclaimer of liability sets forth the terms and conditions for the installation and/or use of this product. By installing this high performance product, the buyer acknowledges that they have read and fully understand this disclaimer and accepts its terms and conditions.

### *DISCLAIMER OF LIABILITY*

H&S Performance, LLC and their successors, distributors, jobbers, dealers, and retailers (SELLER) shall in no way be responsible for any direct, indirect, or consequential damage resulting from improper installation and/or use of this product. The BUYER/USER assumes all responsibility for any damage resulting from the use or misuse of this product **The buyer hereby waives all liability claims for the use of this product.**

The BUYER acknowledges that he/she is not relying on the SELLER's skill or judgment to select or furnish goods suitable for any particular purpose and that there are no liabilities which extend beyond the description herein, and the BUYER hereby waives all remedies or liabilities, expressed or implied, arising by law or otherwise, (including without any obligations of the SELLER with respect to fitness, merchantability and consequential damages) or whether or not occasioned by the SELLER's negligence.

The SELLER disclaims any warranty and expressly disclaims any liability for personal injury or damages. The BUYER acknowledges and agrees that the disclaimer of any liability for personal injury is a material term for this agreement and the BUYER agrees to indemnify the SELLER and to hold the SELLER harmless from any claim related to the product purchased. Under no circumstances will the SELLER be liable for any damages or expenses by reason of use or sale of any such products.

The SELLER assumes no liability regarding the improper installation, misuse, or misapplication of its products. It is the buyer and/or installer's responsibility to check for proper installation.

### *LIMITATION OF WARRANTY*

H&S Performance, LLC ("SELLER") gives Limited Warranty as to the description, quality, merchantability, fitness for any product's purpose, or any other matter of SELLER's product sold herewith. The SELLER shall be in no way responsible for the product's use and service and the BUYER hereby waives all rights other than those expressly written herein. This Warranty shall not be varied except by a written agreement signed and dated by SELLER and BUYER.

The Warranty is Limited to one (1) year from the date of sale and limited solely to the parts contained within the product's original packaging. All products that are in question of Warranty must be returned shipping prepaid to the SELLER and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by H&S Performance, LLC.

Under no circumstances shall the SELLER be liable for any labor charges incurred, or travel time incurred in diagnosis for defects, removal, or re-installation of this product, or any other contingent expenses. Any product deemed defective and consequently repaired or replaced by SELLER, shall retain the remainder of the warranty period from date of purchase, as the warranty period shall not be extended due to repair or replacement. Under no circumstances will the SELLER be liable for any damage or expenses incurred by reason of the use or sale of any such product.

If the buyer does not agree to the terms of this limited warranty or the disclaimer of liability, the buyer may return this product to the SELLER in a new and unused condition, along with dated proof of purchase, within 30 days of purchase, for a full refund.

This warranty is null and void for any new products purchased through unauthorized dealers.

This warranty is null and void for any products sold as USED or REFURBISHED.

This warranty is null and void for any products purchased below the H&S UNILATERAL PRICING POLICY

## **EMISSIONS WARNING!**

This H&S product may be capable of disabling all or part of the emissions system on certain vehicle applications, when selected by the end user to do so. **EMISSIONS REMOVAL IS NOT LEGAL ANYWHERE WITHIN THE USA, UNLESS THE VEHICLE IS NOT REGISTERED WITH THE DIVISION OF MOTOR VEHICLES, AND IS BEING USED SOLELY AS A COMPETITION RACE VEHICLE. BY SELECTING ANY SETTINGS THAT CAN ALLOW REMOVAL OF EMISSIONS EQUIPEMNT, YOU ACCEPT ALL RISK AND LIABILITY ASSOCIATED WITH ITS USE, AND AGREE TO THE FOLLOWING TERMS AND CONDITIONS.**

1. All settings or calibrations that may allow emissions removal are intended and developed for off-highway, organized, sanctioned, closed-course RACE/COMPETITION USE ONLY! Any other use, on ANY road, public or private, within the USA, is STRICTLY PROHIBITED.
2. H & S Performance insists that you do not select any calibrations or settings if this vehicle has been registered or certified for highway use within the USA.
3. This product when used incorrectly may violate local, state, and federal laws pertaining to emissions, traffic, registration, and safety.
4. Use of this product may damage or destroy mechanical and/or electrical components of this vehicle.
5. Use of this product may void or nullify the vehicles factory warranty.
6. User understands that motorsports are dangerous, and that installation of this product may subsequently require special driving skills or techniques to safely operate the vehicle.
7. User assumes sole responsibility for the safe, proper, and legal use of the vehicle at all times.
8. The purchaser and end user releases, indemnifies, discharges, and holds harmless H&S Performance, 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. H&S Performance will not be liable for any direct, indirect, consequential, exemplary, punitive, statutory, or incidental damages or fines cause by the use or installation of this product.

### **WARNING!**

Before allowing you to access any settings or calibrations that may allow emissions removal, you will be asked by the tuner to electronically agree to the terms and conditions listed above. By electronically agreeing to the terms and conditions, you are certifying that you are aware of and assume all risk, liability, and consequences that may arise from its use.

### **USE AT YOUR OWN RISK!**

### **INTERNET UPDATES:**

H&S Performance regularly issues free internet updates and custom tunes for the XRT Pro. Please check to see if there are any available for your truck by going to the downloads section at:

[www.hsperformance.com](http://www.hsperformance.com)

### **TROUBLESHOOTING:**

Please read and understand all installation instructions before proceeding with the installation.

If you have questions during the installation of this product, please call H&S Performance support at 1-888-628-1730

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**BILL OF MATERIALS**

The list below includes by name the major parts included in your XRT Pro package.

1. XRT Pro
  - Micro SD Card (in XRT Pro)
2. OBDII Adapter Harness
3. USB Adapter

**1.****2.****3.**



## PARTS DESCRIPTION

*This section describes each of the parts in the Bill of Materials, the descriptions provide a physical set of attributes and a purpose for each part. The parts descriptions also list everything that is included in each assembly.*

### **The XRT Pro Head Unit**

*The main component is the XRT Pro Head Unit. The Head Unit is the interface in which you control vehicle performance parameters. Notice that the head unit has: seven total buttons, five on the left side and two on the right, a large color screen, and an electronic plug for docking on the back.*



**Note: XRT Pro includes a micro SD card inserted in the side of the Head Unit.**

### **OBDII Adapter Harness**

*The OBDII Adapter is a communication hub for the XRT Pro. The OBD II Adaptor plugs directly into the vehicle OBD II port and connects to the XRT Pro.*



### **USB to Micro SD Adapter**

*The USB to Micro SD Adapter is what you will use to update your XRT Pro. You will take the Micro SD card out of the XRT Pro and insert it into the adapter, then insert the adapter into your personal computer.*





## XRT PRO OPERATING INSTRUCTIONS

These operating instructions are split into sections:

- **SECTION 1:** Button Navigation
- **SECTION 2:** Install Download
- **SECTION 3:** Changing Power Levels
- **SECTION 4:** Exploring the Menu System
- **SECTION 5:** Other XRT Pro Features
- **SECTION 6:** Vehicle Specific Features

### SECTION 1: BUTTON NAVIGATION



Press any of the five buttons on the left to select items on the screen that are adjacent to the button position.

In general these buttons work as up and down buttons, they may also be used to select items on the screen adjacent to these buttons.

## SECTION 2: INSTALL DOWNLOAD

The *Install Download* option is used to install tuning onto a vehicle, or return a vehicle to stock.

### 1. Plug in XRT Pro

2. **Select Install Download:** If the vehicle is stock and you enter the install download menu, simply follow the screen prompts to install a download on the vehicle. This is the point in which you may come across the DPF selection menu, tire size calibration menu, and the vehicle speed limiter menu.



Before installing the download:

- Make sure that the XRT Pro is properly plugged in.
- Make sure that the harness is properly installed.
- The vehicle battery is fully charged.
- The vehicle is warmed up to operating temperature.

**THE MICRO SD CARD MUST BE INSERTED IN THE SIDE OF THE XRT PRO TO DOWNLOAD TO A VEHICLE.**



### SECTION 3: CHANGING POWER LEVELS

#### Dodge Vehicles:

Select "Change Power Level" from the main menu and follow the on-screen prompts. You will get to a screen as pictured below with two options.

**Change Settings:** This will install the new tuning onto the truck, for times when your H&S Product has been updated on the H&S website. This is also how you can adjust the speed limiter, tire size, and other options.

**Return to Stock:** This function will completely return your truck's computer to its stock form and unlock the XRT Pro from the vehicle.



#### Ford and GM vehicles:

Select "Change Power Level" from the main screen. Follow the on-screen prompts to change your power level, this should only take a few seconds.

To return to stock, select "Install download" from the main screen. Select "Return to Stock" when prompted to return to factory settings and unlock the XRT Pro from the truck.

## SECTION 4: EXPLORING THE MENU SYSTEM

The diagram below shows all of the Main Menu items and explains the Main Menu navigation.

Navigation through the main menu: Use the large Up ▲ Down ▼ Buttons to page up and page down through all the Main Menu options.



These buttons are used to enter into the sub menus from the main menu and may also be used to select additional items when in the sub menus.

## SECTION 5: OTHER XRT PRO FEATURES

### DIAGNOSTICS

This functions allows you to check vehicle diagnostics codes. Some models you will have an option to check Engine or Transmission diagnostics. Please select the desired module. Upon entering this menu, the XRT Pro will automatically begin to check the vehicle for DTCs and it will then display those DTCs on the XRT Pro screen. Once it displays the DTCs value and description on the screen it will allow you to erase the DTCs from the vehicle.



If no DTCs are displayed you can simply press the Go Back button to return to the main menu. For a complete list of DTC descriptions, please visit the Tech section of our website [www.hsperformance.com](http://www.hsperformance.com)



**THE MICRO SD CARD MUST BE INSERTED IN THE SIDE OF THE XRT PRO TO READ AND ERASE DTCs**

## SHOW SETTINGS

The Show Settings menu will allow you to see Vehicle Information and System Information.



### T.V. #

This number is the Tuning Version. It will change as H&S updates the tuner software. To see the latest tuner version on your XRT Pro go to "Show Settings" and scroll down.

### MICRO SD CARD

The Micro SD card should only be taken out of the XRT Pro to perform internet upgrades. It is the primary means of performing internet upgrades for the XRT Pro.

In case a Micro SD Card is lost or broken, a new Micro SD Card can be purchased from H&S Performance.

### WEB UPDATES

Remove the Micro SD from your XRT Pro. Connect your Micro SD to your personal computer with the included Micro SD to USB adapter to install software updates. Visit [www.hsperformance.com](http://www.hsperformance.com) in the downloads section for product updates. Please find your product application and follow the posted instructions there to update your XRT Pro.

## SECTION 6: VEHICLE SPECIFIC FEATURES/INFO

### 2003 - 2007 5.9L DODGE CUMMINS

#### Power Levels

Power Levels can be adjusted on-the-fly at the touch of a button after Installing the Download to the vehicle. To adjust the Power Level, select **Change Power Level** from the Main Menu.

**NOTE:** The Power Level ratings listed may not be exact for your particular vehicle. The listed ratings apply to the out-of-the-box tuning that H&S tuning devices are shipped with. Any custom downloads may result in different ratings and can be found at [www.hsperformance.com/xrt-pro-downloads](http://www.hsperformance.com/xrt-pro-downloads).

#### POWER LEVELS

No Power.....	0 HP
Mild.....	60 HP
Wild.....	120 HP
Hot.....	200 HP

#### Low Boost Fueling

This option allows for adjustment of the amount of fuel injected under low boost conditions. There are 5 different settings for Low Boost Fueling:

##### 0 - Lowest Fueling (Default)

##### 1 - Low Fueling

##### 2 - Medium Fueling

##### 3 - Moderate Fueling

##### 4 - High Fueling

**NOTE:** The low boost fueling adjustment will affect ALL power levels. This option can only be adjusted during the Install Download process.

#### Injection Timing

This option allows for the adjustment of the maximum allowed injection timing. There are 5 different settings for the Injection Timing:

##### 0 - 18 degrees

##### 1 - 24 degrees

##### 2 - 26 degrees (Default)

##### 3 - 28 degrees

##### 4 - 32 degrees

**NOTE:** The injection timing adjustment will affect ALL power levels. This option can only be adjusted during the Install Download process.

## Speed Limiter

This option allows for the adjustment of the factory speed limiter. Most 5.9L Cummins trucks have a 106 MPH speed limiter from the factory. The limiter can be adjusted from 50 MPH to 200 MPH. This option can only be adjusted during the Install Download process.

## Rev Limiter

This option allows for the adjustment of the factory rev limiter. Most 5.9L Cummins trucks have a 3500 RPM rev limiter from the factory. The limiter can be adjusted from 3000 RPM to 5000 RPM. This option can only be adjusted during the Install Download process.

## Torque Management (Automatic Transmission Only)

This option allows for the disabling of the vehicles torque management for those equipped with automatic transmissions. This is recommend for those running standalone aftermarket TCM/transmission packages but will also slightly improve throttle response on a stock truck.

**NOTE:** *By turning the torque management OFF, the PRNDL display will be lost.*

## Tire Size Calibration

This option allows for the re-calibration of the factory speedometer to adjust for non-stock sized tires. For the most accurate speedometer reading when using non-stock sized tires, it is best to measure the diameter of the tire using a tape measure rather than going by the printed tire size. In addition, using a GPS is a great way to dial in your factory speedometer. Entering a larger tire size will cause the factory speedometer to read higher while entering a smaller tire size will cause the factory speedometer to read lower. The tire size can be adjusted from 24" to 42". This option only takes a few seconds to change and can be adjusted at any time from the Tire Size Calibration menu.

## Overdrive Transmission Software

Did you know that your H&S tuning device also has the capability of tuning your transmission? If your 5.9L Cummins is equipped with the 48RFE automatic transmission, you may want to check out our Overdrive Transmission Software. Custom tailored to mate with H&S engine tuning, the 5.9L Overdrive software includes modified torque converter lock/unlock strategies that will command the TC to lock in 3rd gear under wide open throttle and hold it locked through 4th gear. Light throttle torque converter strategies have also been changed to lock-up sooner, keeping more power directed to the road instead of wasted in heat and friction. Shift points are modified to take advantage of the available horsepower and torque output. On a 2006 Cummins with a stock 48RFE, we have seen 0.2 to 0.3 second quicker 1/4 mile times JUST from the addition of the H&S Overdrive tuning! An additional unlock fee may apply, see [www.hsperformance.com](http://www.hsperformance.com) for details.

## 2007.5 - 2009 6.7L DODGE CUMMINS

### Power Levels

To adjust the Power Level, select **Change Power Level** from the Main Menu and follow the on-screen instructions.

**NOTE:** *The Power Level ratings listed may not be exact for your particular vehicle. The listed ratings apply to the out-of-the-box tuning that H&S tuning devices are shipped with. Any custom downloads may result in different ratings and can be found at [www.hsperformance.com/xrt-pro-downloads](http://www.hsperformance.com/xrt-pro-downloads).*

### DPF Selection

The DPF or Diesel Particulate Filter is part of the factory exhaust system on the 6.7L Cummins. H&S offers tuning that allows the DPF to be left in place, or removed completely.

If you are planning on leaving the exhaust system stock with the DPF in place, you will select PRESENT.

If you have already removed the DPF or if you plan on removing the DPF immediately after installing your H&S tuning device, you will select REMOVED. If you select REMOVED, you must Accept our DPF Disclaimer in order to continue with the Install Download process.

### DPF / Exhaust Sensors

When running DPF PRESENT tuning, it is required that all sensors located in the exhaust system stay in place and plugged in, otherwise you may experience a Check Engine Light (CEL) and even a loss of power (limp mode).

When running DPF REMOVED tuning, it is recommended that all sensors located in the factory exhaust system be unplugged from the electrical harnesses. These sensors can also be removed completely with the factory exhaust if desired. On the 2007.5 - 2009 6.7L Cummins, there are usually 3 EGT Sensors, 2 O2 Sensors, and 1 Pressure Sensor.

### EGR Unplug / Delete

If you are installing H&S DPF REMOVED tuning, you must unplug the EGR system on your 2007.5 - 2009 6.7L Cummins if not installing an EGR delete. Failing to do so may result in erratic engine operation and loss of power. Please follow these instructions carefully to unplug and disable the EGR system:

#### POWER LEVELS DPF PRESENT

No Power.....	0 HP
Mild.....	40 HP
Wild.....	80 HP
Hot.....	120 HP

#### POWER LEVELS DPF REMOVED

No Power.....	0 HP
Mild.....	60 HP
Wild.....	120 HP
Hot.....	175 HP

1. Locate the EGR Throttle Control Valve Assembly (Fig.1). Assembly is located between the inter-cooler and intake manifold on the drivers side of the engine compartment.
2. Unplug the EGR Throttle Control Valve wiring harness. The harness is LIGHT GRAY in color and is located on the back side of the Throttle Control Valve Assembly. It is not directly visible when looking at the assembly from above. On some vehicles, it may be easier to see and unplug the harness from underneath the vehicle. Note: There is a red locking tab that must be moved sideways on the harness in order for it to be unplugged.
3. Locate the EGR solenoid on top of the intake manifold (Fig.2). It is directly visible when looking at the intake manifold and faces towards the front of the vehicle.
4. Unplug the EGR solenoid wiring harness. The connector is BROWN in color.



## Speed Limiter

This option allows for the adjustment of the factory speed limiter. Most 6.7L Cummins trucks have a 106 MPH speed limiter from the factory. The limiter can be adjusted from 55 MPH to 200 MPH. This option can only be adjusted during the Install Download process.

## Tire Size Calibration

This option allows for the re-calibration of the factory speedometer to adjust for non-stock sized tires. For the most accurate speedometer reading when using non-stock sized tires, it is best to measure the diameter of the tire using a tape measure rather than going by the printed tire size. In addition, using a GPS is a great way to dial in your factory speedometer. Entering a larger tire size will cause the factory speedometer to read higher while entering a smaller tire size will cause the factory speedometer to read lower. The tire size can be adjusted from 25.5" to 45". This option only takes a few seconds to change and can be adjusted at any time from the Tire Pressure Calibration menu.

## Special Functions / Features

Your H&S tuning device has the capability of Enabling / Disabling factory vehicle features. These features can be found in the Special Functions Menu. Below is a short description of each feature:



**NOTE:** If any special feature is already listed as Enabled but is not functioning correctly, you may need to disable the feature, cycle the key, and re-enable the feature to make it function properly. **If it still does not work, your vehicle may not be equipped with the hardware required for the special feature.** The previous selection will NOT be saved. If the Special Functions/Features Menu is exited and returned into, it will not display your previous selection. This is normal and the Enable/Disable function is still working properly.

**TPMS:** Enable / Disable the Tire Pressure Monitoring System.

**Optical Chirp on Lock:** Enable / Disable the parking lights flashing when locking the vehicle.

**Horn Chirp on Lock:** Enable / Disable the horn chirp when locking the vehicle.

**Set Headlamp Delay:** Enable / Disable the headlamp delay.

**Accessory Delay:** Enable / Disable the shut-off delay of your radio and accessory system after the key has been turned off.

**Fog Lights W/High:** Enable / Disable the fog lights staying on when high beams are being used.

**Daytime Lights:** Enable / Disable the daytime running lights.

**Seat Belt Minder:** Enable / Disable the chime for the drivers seat belt system. This feature will not disable the seat belt light.

**Auto Door Lock:** Enable / Disable the automatic door locking when the vehicle reaches certain speeds.

**Unlock Driver Door:** Enable / Disable unlocking only the driver door when pushing the unlock button the key-fob. When enabled, the unlock button on the key fob will need to be pressed twice in order to unlock all doors.

**Idle Up (Auto Only):** Enable / Disable the use of the cruise control buttons to control idle RPM. Follow your vehicle owners manual to use this feature

## Overdrive Transmission Software

Did you know that your H&S tuning device also has the capability of tuning your transmission? If your 6.7L Cummins is equipped with the 68RFE automatic transmission, you may want to check out our Overdrive Transmission Software. Custom tailored to mate with H&S engine tuning, the 6.7L Overdrive software includes boosted line pressures, modified full and part throttle torque converter lock/unlock strategies, adjusted full and part throttle shift points, adjusted full and part throttle shift firmness, modified torque management tables, and much more! All changes are designed to keep more power directed to the road instead of wasted in heat and friction. On our test trucks, we have seen 0.2 to 0.3 second quicker 1/4 mile times JUST from the addition of the H&S Overdrive tuning! An additional unlock fee may apply, see [www.hsperformance.com](http://www.hsperformance.com) for details.

## Power Levels

To adjust the Power Level, select **Change Power Level** from the Main Menu and follow the on-screen instructions.

**NOTE:** *The Power Level ratings listed may not be exact for your particular vehicle. The listed ratings apply to the out-of-the-box tuning that H&S tuning devices are shipped with. Any custom downloads may result in different ratings and can be found at [www.hsperformance.com/xrt-pro-downloads](http://www.hsperformance.com/xrt-pro-downloads).*

## DPF Selection

The DPF or Diesel Particulate Filter is part of the factory exhaust system on the 6.7L Cummins. H&S offers tuning that allows the DPF to be left in place, or removed completely.

If you are planning on leaving the exhaust system stock with the DPF in place, you will select PRESENT.

If you have already removed the DPF or if you plan on removing the DPF immediately after installing your H&S tuning device, you will select REMOVED. If you select REMOVED, you must Accept our DPF Disclaimer in order to continue with the Install Download process.

## DPF / Exhaust Sensors

When running DPF PRESENT tuning, it is required that all sensors located in the exhaust system stay in place and plugged in, otherwise you may experience a Check Engine Light (CEL) and even a loss of power (limp mode).

When running DPF REMOVED tuning, it is recommended that all sensors located in the factory exhaust system be unplugged from the electrical harnesses. These sensors can also be removed completely with the factory exhaust if desired. On the 2010 - 2011 Pickup, there are usually 3 EGT Sensors, 2 O2 Sensors, and 1 Pressure Sensor.

## 2011 Cab & Chassis UREA System

On the 2011 Cab & Chassis, there is usually an additional NOX sensor as well as a UREA system that needs to be unplugged when running DPF REMOVED tuning. The UREA system

### 2010-2012 PICKUP POWER LEVELS DPF PRESENT

No Power.....	0 HP
Mild.....	40 HP
Wild.....	80 HP
Hot.....	120 HP

### 2011 CAB & CHASSIS POWER LEVELS DPF PRESENT

No Power.....	0 HP
Mild.....	20 HP
Wild.....	40 HP
Hot.....	60 HP

### 2010-2012 PICKUP POWER LEVELS DPF REMOVED

No Power.....	0 HP
Mild.....	60 HP
Wild.....	120 HP
Hot.....	175 HP

### 2011 CAB & CHASSIS POWER LEVELS DPF REMOVED

No Power.....	0 HP
Mild.....	25 HP
Wild.....	50 HP
Hot.....	75 HP

must at least be unplugged but can be completely removed from the vehicle if desired. Failure to unplug the UREA system may result in a check engine light and/or dash messages. Follow these instructions to unplug the UREA system:

1. Locate the wiring harness with the YELLOW sliding lock-tab on the Urea pump assembly. The pump assembly is located near the bottom of the filler neck support.



2. Slide the yellow lock-tab DOWN to dis-engage the lock and unplug the harness.



For complete UREA System Removal instructions, visit [www.hsperformance.com/tech/CCUrea.pdf](http://www.hsperformance.com/tech/CCUrea.pdf).

### **EGR Unplug / Delete**

Unlike the previous years, it is no longer mandatory to unplug the EGR system when installing H&S DPF REMOVED tuning. You may still unplug the EGR system if desired, or the EGR system may be left plugged in without any ill effects. The entire EGR system can also be completely removed with an H&S EGR Delete Kit when running H&S DPF REMOVED tuning.

### **Torque Management (Manual Transmission Only)**

This option allows for the disabling of the vehicles torque management for those equipped with manual transmissions. This option increases pedal sensitivity and throttle response when REMOVED.

### **Tire Size Calibration**

This option allows for the re-calibration of the factory speedometer to adjust for non-stock sized tires. For the most accurate speedometer reading when using non-stock sized tires, it is best to measure the diameter of the tire using a tape measure rather than going by the printed tire size. In

addition, using a GPS is a great way to dial in your factory speedometer. Entering a larger tire size will cause the factory speedometer to read higher while entering a smaller tire size will cause the factory speedometer to read lower. The tire size can be adjusted from 25.5" to 45". This option can only be seen/changed after the Download is Installed to the vehicle. This option only takes a few seconds to change and can be adjusted at any time from the Tire Size Calibration menu.

## Special Functions / Features

Your H&S tuning device has the capability of Enabling / Disabling factory vehicle features. These features can be found in the Special Functions Menu. These features can only be seen/changed after the Download is Installed to the vehicle. Below is a short description of each feature:

**TPMS:** Enable / Disable the Tire Pressure Monitoring System.

**Optical Chirp on Lock:** Enable / Disable the parking lights flashing when locking the vehicle.

**Horn Chirp on Lock:** Enable / Disable the horn chirp when locking the vehicle.

**Set Headlamp Delay:** Enable / Disable the headlamp delay.

**Accessory Delay:** Enable / Disable the shut-off delay of your radio and accessory system after the key has been turned off.

**Fog Lights W/High:** Enable / Disable the fog lights staying on when high beams are being used.

**Daytime Lights:** Enable / Disable the daytime running lights.

**Seat Belt Minder:** Enable / Disable the chime for the drivers seat belt system. This feature will not disable the seat belt light.

**NOTE:** *If any special feature is already listed as Enabled but is not functioning correctly, you may need to disable the feature, cycle the key, and re-enable the feature to make it function properly. If it still does not work, your vehicle may not be equipped with the hardware required for the special feature.*

## Stationary Idle Adjust:

The Stationary Idle Adjust Menu will allow you to adjust the idle speed of your vehicle while in Park or Neutral using your H&S tuning device. Choose the desired idle speed and select **Set** to set the idle speed to the chosen RPM. Idle speed can be adjusted from 700 RPM to 1500 RPM.

## Overdrive Transmission Software

Did you know that your H&S tuning device also has the capability of tuning your transmission? If your 6.7L Cummins is equipped with the 68RFE Automatic Transmission, you may want to check out our Overdrive Transmission Software. Custom tailored to mate with H&S engine tuning, the 6.7L Overdrive software includes boosted line pressures, modified full and part throttle torque converter lock/unlock strategies, adjusted full and part throttle shift points, adjusted full and part throttle shift firmness, modified torque management tables, and much more! All changes are designed to keep more power directed to the road instead of wasted in heat and friction. On our test trucks, we have seen 0.2 to 0.3 second quicker 1/4 mile times JUST from the addition of the H&S Overdrive tuning! An additional unlock fee may apply, see [www.hsperformance.com](http://www.hsperformance.com) for details.

## Video In Motion

This feature will allow customers with a factory installed Chrysler 730N DVD/Navigation unit to unlock all features that are normally blocked while driving. Full destination input into the navigation system is now available, even while the vehicle is moving, as well as DVD playback on the front screen. May require additional unlock fee. For more info see [www.hsperformance.com/store/dodge-video-in-motion-unlock-code.html](http://www.hsperformance.com/store/dodge-video-in-motion-unlock-code.html)

## 2003 - 2007 6.0L FORD POWERSTROKE

### Power Levels

Power Levels can be adjusted on-the-fly at the touch of a button after Installing the Download to the vehicle. To adjust the Power Level, select **Change Power Level** from the Main Menu.

**NOTE:** *The Power Level ratings listed may not be exact for your particular vehicle. The listed ratings apply to the out-of-the-box tuning that H&S tuning devices are shipped with. Any custom downloads may result in different ratings and can be found at [www.hsperformance.com/xrt-pro-downloads](http://www.hsperformance.com/xrt-pro-downloads).*

### POWER LEVELS

No Power.....	0 HP
Mild.....	40 HP
Wild.....	80 HP
Hot.....	120 HP

### EGR Delete

With H&S tuning installed, the EGR system on the 6.0L Powerstroke can be completely removed with an EGR Delete Kit while remaining code free.

### Speed Limiter

This option allows for the removal of the factory speed limiter. Most 6.0L Powerstroke trucks have a 95 MPH speed limiter from the factory. The limiter can be removed completely or left stock (*this may change so be sure to visit [www.hsperformance.com](http://www.hsperformance.com) for product updates*). This option can only be changed during the Install Download process.

### Tire Size Calibration

*(Not currently available for the 2003 - 2007 6.0L Powerstroke. This may change so be sure to visit [www.hsperformance.com](http://www.hsperformance.com) for product updates)* This option allows for the re-calibration of the factory speedometer to adjust for non-stock sized tires. For the most accurate speedometer reading when using non-stock sized tires, it is best to measure the diameter of the tire using a tape measure rather than going by the printed tire size. In addition, using a GPS is a great way to dial in your factory speedometer. Entering a larger tire size will cause the factory speedometer to read higher while entering a smaller tire size will cause the factory speedometer to read lower. This option can only be adjusted during the Install Download process.

## 2008 - 2010 6.4L FORD POWERSTROKE

### Power Levels

Power Levels can be adjusted on-the-fly at the touch of a button after Installing the Download to the vehicle. To adjust the Power Level, select **Change Power Level** from the Main Menu.

**NOTE:** *The Power Level ratings listed may not be exact for your particular vehicle. The listed ratings apply to the out-of-the-box tuning that H&S tuning devices are shipped with. Any custom downloads may result in different ratings and can be found at [www.hsperformance.com/xrt-pro-downloads](http://www.hsperformance.com/xrt-pro-downloads).*

### DPF Selection

The DPF or Diesel Particulate Filter is part of the factory exhaust system on the 6.4L Powerstroke. H&S offers tuning that allows the DPF to be left in place, or removed completely.

If you are planning on leaving the exhaust system stock with the DPF in place, you will select PRESENT.

If you have already removed the DPF or if you plan on removing the DPF immediately after installing your H&S tuning device, you will select REMOVED. If you select REMOVED, you must Accept our DPF Disclaimer in order to continue with the Install Download process.

### DPF / Exhaust Sensors

When running DPF PRESENT tuning, it is required that all sensors located in the exhaust system stay in place and plugged in, otherwise you may experience a Check Engine Light (CEL) and even a loss of power (limp mode).

When running DPF REMOVED tuning, it is recommended that all sensors located in the factory exhaust system be unplugged from the electrical harnesses. These sensors can also be removed completely with the factory exhaust if desired. On the 6.4L Powerstroke, there are usually 2 EGT Sensors and 1 Pressure Sensor.

**NOTE:** *The vehicle will not run with sensors removed unless DPF REMOVED tuning is installed.*

### EGR Unplug / Delete

When running H&S DPF REMOVED tuning, it is not required to unplug or block-off the EGR system on your 6.4L Powerstroke to disable it. The EGR system is already disabled in the tuning and will not function under any conditions. If desired, the entire EGR system can be unplugged, blocked-off, or completely removed when running H&S DPF REMOVED tuning.

#### POWER LEVELS DPF PRESENT

No Power.....	0 HP
Mild.....	40 HP
Wild.....	80 HP
Hot.....	120 HP

#### POWER LEVELS DPF REMOVED

No Power.....	0 HP
Mild.....	80 HP
Wild.....	160 HP
Hot.....	250 HP

## Low Boost Fueling Adjustment

This adjustment allows you to limit the amount of fuel delivered based upon turbo boost levels. 0 will have the least smoke output, 5 will have the most. By skipping this feature, the tuning will default to level 2.

## Speed Limiter

This option allows for the adjustment of the factory speed limiter. Most 6.4L Powerstroke trucks have a 95 MPH speed limiter from the factory. The limiter can be adjusted from 55 MPH to 200 MPH. This option can only be adjusted during the Install Download process.

## Tire Size Calibration

This option allows for the re-calibration of the factory speedometer to adjust for non-stock sized tires. For the most accurate speedometer reading when using non-stock sized tires, it is best to measure the diameter of the tire using a tape measure rather than going by the printed tire size. In addition, using a GPS is a great way to dial in your factory speedometer. Entering a larger tire size will cause the factory speedometer to read higher while entering a smaller tire size will cause the factory speedometer to read lower. The tire size can be adjusted from 25" to 45". This option can only be adjusted during the Install Download process.

## TPMS Adjustability / Disable

Many 2008 - 2010 6.4L Powerstrokes are equipped with a TPMS or Tire Pressure Monitoring System from the factory. This system is designed to alert the driver of a problem with the vehicles tire pressures but is often a nagging inconvenience for those individuals wanting to run lower pressures or get rid of the TPMS sensors altogether.

H&S Performance has a designed solution for those individuals. By using your H&S tuning device and a 6.4L Powerstroke TPMS Adapter (Part #709913), you will have full control of the TPMS. Front and rear tire pressures will be independently adjustable from 0 - 100 PSI as well as the option to Disable the TPMS completely if removing the TPMS sensors from the vehicle. All changes to the TPMS must be done with the 6.4L Powerstroke TPMS Adapter in place and the Adapter must be removed after changes are made to resume normal tuner function.

## Transmission Relearn

The 5R110 automatic transmission on the 2008 - 2010 6.4L Powerstroke has what is called **Adaptive Memory** and is constantly learning and adapting to different horsepower levels, temperatures, driving habits, etc. After completing the Install Download process on the 6.4L Powerstroke, the Transmission Adaptive Memory is automatically reset. We highly recommend performing a Transmission Relearn procedure after installing H&S tuning to help the transmission perform correctly with the added horsepower. The 5R110 automatic transmission will eventually learn over time on its own, but the relearn procedure gives a good baseline for the adaptive learning and helps to speed up the learning process. To perform

the relearn procedure, please follow these instructions:

**When re-training the transmission, ALWAYS follow posted speed limits. Do NOT attempt runs in adverse weather conditions such as snow, ice, rain, wind, or any other conditions that may affect your vehicles traction or impair your visibility!**

1. After H&S tuning is installed, perform each of the following 0-80 MPH runs while in the **HOT** power level. During this relearn process, you may experience hesitation during shifts, hard shifts, or defuel patterns, all of which are normal:
  - **0-80 MPH @ 25% throttle position, then slow down and come to a complete stop.**
  - **0-80 MPH @ 50% throttle position, then slow down and come to a complete stop.**
  - **0-80 MPH @ 100% throttle position, then slow down and come to a complete stop.**

**The Transmission Relearn procedure is complete.**

**NOTE:** On any vehicle using 3" or larger lift blocks under the rear leaf pack, it is **HIGHLY RECOMMENDED** to install traction bars. With any added horsepower, failure to do so may result in harsh shifting and may cause premature transmission and/or driveline damage.

## 2011-2012 6.7L FORD POWERSTROKE

\*All tuning for this model requires \$100 Unlock fee (part #111005) to function.

### Power Levels

To adjust the Power Level, select **Change Power Level** from the Main Menu and follow the on-screen instructions.

**NOTE:** The Power Level ratings listed may not be exact for your particular vehicle. The listed ratings apply to the out-of-the-box tuning that H&S tuning devices are shipped with. Any custom downloads may result in different ratings and can be found at [www.hsperformance.com/xrt-pro-downloads](http://www.hsperformance.com/xrt-pro-downloads).

### DPF Selection

The DPF or Diesel Particulate Filter is part of the factory exhaust system on the 6.7L Powerstroke. H&S offers tuning that allows the DPF to be left in place, or removed completely.

If you are planning on leaving the exhaust system stock with the DPF in place, you will select PRESENT.

If you have already removed the DPF or if you plan on removing the DPF immediately after installing your H&S tuning device, you will select REMOVED. If you select REMOVED, you must Accept our DPF Disclaimer in order to continue with the Install Download process.

**POWER LEVELS**  
**DPF PRESENT**

No Power.....	0 HP
Mild.....	40 HP
Wild.....	80 HP
Hot.....	120 HP

\*An additional unlock fee may apply for DPF Present tuning.

**POWER LEVELS**  
**DPF REMOVED**

No Power.....	0 HP
Mild.....	50 HP
Wild.....	100 HP
Hot.....	150 HP

\*An additional unlock fee may apply for DPF Removed tuning.



## DPF / Exhaust Sensors

When running DPF PRESENT tuning, it is required that all sensors located in the exhaust system stay in place and plugged in, otherwise you may experience a Check Engine Light (CEL) and even a loss of power (limp mode).

When running DPF REMOVED tuning, it is recommended that all sensors located in the factory exhaust system be unplugged from the electrical harnesses. These sensors can also be removed completely with the factory exhaust if desired. On the 6.7L Powerstroke, there are usually 3 EGT Sensors, 1 NOX Sensor, 1 UREA Injector, and 1 Pressure Sensor.

**NOTE:** *The vehicle will not run with sensors removed unless DPF REMOVED tuning is installed.*

## UREA / SCR System

On the 2011 - 2012 6.7L Powerstroke, there is a UREA system that can be unplugged or removed completely when running DPF REMOVED tuning. The UREA system may also be left plugged in with no ill effects.

## EGR Unplug / Delete

If you are installing H&S DPF REMOVED tuning, you must unplug the EGR system on your 2011-2012 6.7L Powerstroke if not installing an EGR delete. Failing to do so may result in damage to your EGR parts.

Please follow these instructions carefully to unplug and disable the EGR system:

1. Unplug Orange EGR harness found on top of the EGR cooler assembly. The yellow lock tab must be slid out before the harness can be unplugged.



2. Unplug the EGR Butterfly Valve located near the radiator fan shroud.



### Speed Limiter

This option allows for the adjustment of the factory speed limiter. Most 6.7L Powerstroke trucks have a 98 MPH speed limiter from the factory. The limiter can be changed to 75 MPH or removed completely (*this may change so be sure to visit [www.hperformance.com](http://www.hperformance.com) for product updates*). This option can only be changed during the Install Download process.

### Tire Size Calibration

This option allows for the re-calibration of the factory speedometer to adjust for non-stock sized tires. For the most accurate speedometer reading when using non-stock sized tires, it is best to measure the diameter of the tire using a tape measure rather than going by the printed tire size. In addition, using a GPS is a great way to dial in your factory speedometer. Entering a larger tire size will cause the factory speedometer to read higher while entering a smaller tire size will cause the factory speedometer to read lower. The tire size can be adjusted from 31" to 34" (*this may change so be sure to visit [www.hperformance.com](http://www.hperformance.com) for product updates*). This option only takes a few seconds to change and can be adjusted at any time from the Tire Size Calibration menu.

### TPMS Adjustability / Disable

Many 2011 - 2012 6.7L Powerstrokes are equipped with a TPMS or Tire Pressure Monitoring System from the factory. This system is designed to alert the driver of a problem with the vehicle's tire pressures but is often a nagging inconvenience for those individuals wanting to run lower pressures or get rid of the TPMS sensors altogether.

With your H&S tuning device, you have full control of the TPMS. Front and rear tire pressures are independently adjustable from 0-120 PSI as well as the option to disable the TPMS completely if removing the TPMS sensors from the vehicle. This option only takes a few seconds to change and can be adjusted at any time from the Tire Pressure Calibration menu.

**NOTE:** TPMS adjustments will not take full effect on a stationary vehicle. Once adjustments have been made, it can take up to 5 miles of driving before changes take effect.

## Transmission Tuning

Did you know that your H&S tuning device also has the capability of tuning your transmission? Our transmission tuning for the 6R140 automatic transmission is custom tailored to mate with H&S engine tuning. Some features include: boosted line pressures, modified full and part throttle lock/unlock strategies, adjusted full and part throttle shift points, adjusted full and part throttle shift firmness, and modified torque management tables. All changes are designed to keep more power directed to the road instead of wasted in heat and friction. On our test trucks, we have seen 0.2 to 0.3 second quicker 1/4 mile times JUST from the addition of H&S transmission tuning! An additional unlock fee may apply, see [www.hsperformance.com](http://www.hsperformance.com) for details.

## Transmission Relearn

The 6R140 automatic transmission on the 2011 - 2012 6.7L Powerstroke has what is called **Adaptive Memory** and is constantly learning and adapting to different horsepower levels, temperatures, driving habits, etc. If you selected to tune the transmission during the Install Download process, the Transmission Adaptive Memory is automatically reset when the download completes. We highly recommend performing a Transmission Relearn procedure after installing H&S transmission tuning to help the transmission perform correctly with the added horsepower. The 6R140 automatic transmission will eventually learn over time on its own, but the relearn procedure gives a good baseline for the adaptive learning and helps to speed up the learning process. To perform the relearn procedure, please follow these instructions:

**When re-training the transmission, ALWAYS follow posted speed limits. Do NOT attempt runs in adverse weather conditions such as snow, ice, rain, wind, or any other conditions that may affect your vehicles traction or impair your visibility!**

3. After H&S tuning is installed, perform each of the following 0-80 MPH runs while in the **HOT** power level. During this relearn process, you may experience hesitation during shifts, hard shifts, or defuel patterns, all of which are normal:
  - **0-80 MPH @ 25% throttle position, then slow down and come to a complete stop.**
  - **0-80 MPH @ 50% throttle position, then slow down and come to a complete stop.**
  - **0-80 MPH @ 100% throttle position, then slow down and come to a complete stop.**

**The Transmission Relearn procedure is complete.**

**NOTE:** *On any vehicle using 3" or larger lift blocks under the rear leaf pack, it is HIGHLY RECOMMENDED to install traction bars when adding additional horsepower.*



## 2007.5-2010 6.6L LMM DURAMAX

### Power Levels

Power Levels can be adjusted on-the-fly at the touch of a button after Installing the Download to the vehicle. To adjust the Power Level, select **Change Power Level** from the Main Menu.

**NOTE:** *The Power Level ratings listed may not be exact for your particular vehicle. The listed ratings apply to the out-of-the-box tuning that H&S tuning devices are shipped with. Any custom downloads may result in different ratings and can be found at [www.hsperformance.com/xrt-pro-downloads](http://www.hsperformance.com/xrt-pro-downloads).*

### DPF Selection

The DPF or Diesel Particulate Filter is part of the factory exhaust system on the 6.6L LMM Duramax. H&S offers tuning that allows the DPF to be left in place, or removed completely.

If you are planning on leaving the exhaust system stock with the DPF in place, you will select PRESENT.

If you have already removed the DPF or if you plan on removing the DPF immediately after installing your H&S tuning device, you will select REMOVED. If you select REMOVED, you must Accept our DPF Disclaimer in order to continue with the Install Download process.

#### POWER LEVELS DPF PRESENT

No Power.....	0 HP
Mild.....	40 HP
Wild.....	80 HP
Hot.....	120 HP

#### POWER LEVELS DPF REMOVED

No Power.....	0 HP
Mild.....	60 HP
Wild.....	120 HP
Hot.....	175 HP

## DPF / Exhaust Sensors

When running DPF PRESENT tuning, it is required that all sensors located in the exhaust system stay in place and plugged in, otherwise you may experience a Check Engine Light (CEL) and even a loss of power (limp mode).

When running DPF REMOVED tuning, it is recommended that all sensors located in the factory exhaust system be unplugged from the electrical harnesses. These sensors can also be removed completely with the factory exhaust if desired. On the 6.6L LMM Duramax, there are usually 2 EGT Sensors and 1 Pressure Sensor.

## EGR Unplug / Delete

When running H&S DPF REMOVED tuning, it is not required to unplug or block-off the EGR system on your 6.6L LMM Duramax to disable it. The EGR system is already disabled in the tuning and will not function under any conditions. If desired, the entire EGR system can be unplugged, blocked-off, or completely removed when running H&S DPF REMOVED tuning.

## Speed Limiter

This option allows for the adjustment of the factory speed limiter. Most 6.6L LMM Duramax trucks have a 98 MPH speed limiter from the factory. The limiter can be adjusted from 50 MPH to 95 MPH or removed completely. This option can only be adjusted during the Install Download process.

## Tire Size Calibration

This option allows for the re-calibration of the factory speedometer to adjust for non-stock sized tires. For the most accurate speedometer reading when using non-stock sized tires, it is best to measure the diameter of the tire using a tape measure rather than going by the printed tire size. In addition, using a GPS is a great way to dial in your factory speedometer. Entering a larger tire size will cause the factory speedometer to read higher while entering a smaller tire size will cause the factory speedometer to read lower. The tire size can be adjusted from 25" to 60". This option can only be adjusted during the Install Download process.

**NOTE:** *On some vehicles, entering a tire size larger than 35" may cause the ABS light to illuminate.*

## Transmission Reset / Relearn

The automatic transmission on the 2007.5 - 2010 6.6L LMM Duramax has what is called **Adaptive Memory** and is constantly learning and adapting to different horsepower levels, temperatures, driving habits, etc. We highly recommend performing a Transmission Reset / Relearn procedure after installing H&S tuning to help the transmission perform correctly with the added horsepower. The transmission will eventually learn over time on its own, but

the relearn procedure gives a good baseline for the adaptive learning and helps to speed up the learning process. To perform the relearn procedure, please follow these instructions:

**When re-training the transmission, ALWAYS follow posted speed limits. Do NOT attempt runs in adverse weather conditions such as snow, ice, rain, wind, or any other conditions that may affect your vehicles traction or impair your visibility!**

1. After you have installed the H&S tuning, turn the key to the **ON** position. From the Main Menu, scroll down until you see the **Reset Transmission option**. Select **Reset Transmission** and follow the on-screen instructions to reset the transmission adaptive memory.
2. After the transmission reset is complete, it is recommended to perform each of the following 0-80 MPH runs while in the **HOT** power level:
  - **0-80 MPH @ 25% throttle position, then slow down and come to a complete stop.**
  - **0-80 MPH @ 50% throttle position, then slow down and come to a complete stop.**
  - **0-80 MPH @ 100% throttle position, then slow down and come to a complete stop.**

**The Transmission Relearn procedure is complete.**

**NOTE:** *On any vehicle using 3" or larger lift blocks under the rear leaf pack, it is HIGHLY RECOMMENDED to install traction bars when adding additional horsepower.*

## 2011-2012 6.6L LML DURAMAX

**\*DPF Removed tuning for this model requires \$100 Unlock fee (part #111006) to function.**

### Power Levels

Power levels are not currently shift-on-the-fly for the 2011 - 2012 6.6L LML Duramax. To adjust the Power Level, select **Change Power Level** from the Main Menu and follow the on-screen instructions (*this may change so be sure to visit [www.hsperformance.com](http://www.hsperformance.com) for product updates*).

**NOTE:** *The Power Level ratings listed may not be exact for your particular vehicle. The listed ratings apply to the out-of-the-box tuning that H&S tuning devices are shipped with. Any custom downloads may result in different ratings and can be found at [www.hsperformance.com/xrt-pro-downloads](http://www.hsperformance.com/xrt-pro-downloads).*

### DPF Selection

The DPF or Diesel Particulate Filter is part of the factory exhaust system on the 6.6L LML Duramax. H&S offers tuning that allows the DPF to be left in place, or removed completely.

If you are planning on leaving the exhaust system stock with the DPF in place, you will select PRESENT.

#### POWER LEVELS DPF PRESENT

Mild .....	40 HP
Wild .....	80 HP

#### POWER LEVELS DPF REMOVED

No Power .....	0 HP
Mild .....	50 HP
Wild .....	100 HP
Hot .....	150 HP

**\*An additional unlock fee may apply for DPF Removed tuning.**

If you have already removed the DPF or if you plan on removing the DPF immediately after installing your H&S tuning device, you will select REMOVED. If you select REMOVED, you must Accept our DPF Disclaimer in order to continue with the Install Download process.

### DPF / Exhaust Sensors

When running DPF PRESENT tuning, it is required that all sensors located in the exhaust system stay in place and plugged in, otherwise you may experience a Check Engine Light (CEL) and even a loss of power (limp mode).

When running DPF REMOVED tuning, it is required that all sensors located in the factory exhaust system be unplugged from the electrical harnesses **EXCEPT FOR THE PRESSURE SENSOR WHICH MUST REMAIN PLUGGED IN**. All sensors other than the Pressure Sensor can be removed completely with the factory exhaust if desired. On the 6.6L LML Duramax, there are usually 3 EGT Sensors, 1 NOx Sensor, 1 UREA Injector, and 1 Pressure Sensor.



The DPF Pressure Sensor is located under the bed in front of the axle on the inside of the passenger side frame rail. You may pull the two rubber lines off of the sensor but **DO NOT UNPLUG THIS SENSOR!** Unplugging of the Pressure Sensor may result in erratic engine operation and loss of power.

### UREA / SCR System

On the 2011 - 2012 6.6L LML Duramax, there is a UREA system that needs to be unplugged when running DPF REMOVED tuning. The UREA system must at least be unplugged but can be completely removed from the vehicle if desired. Failure to unplug the UREA system may result in a check engine light and/or dash messages, erratic engine operation, and loss of power. Follow these instructions to unplug the UREA system:

1. The urea injector is located between the CAT and DPF above the torsion bar crossmember. Unplug the electrical connection and the urea line.





2. The main urea harness is the large black harness located near the urea injector above the urea tank. Flip the large gray locking tab to disconnect the harness.

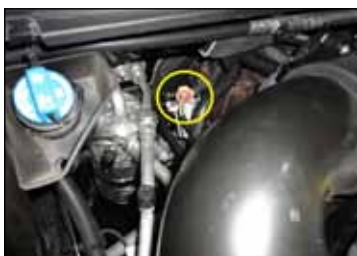


For complete UREA System Removal instructions, visit [www.hsperformance.com/tech](http://www.hsperformance.com/tech)

### EGR Unplug / Delete

If you are installing H&S DPF REMOVED tuning, you must unplug the EGR system on your 6.6L LML Duramax if not installing a complete EGR delete. Failing to do so may result in erratic engine operation and loss of power. Please follow these instructions carefully to unplug and disable the EGR system:

1. Unplug 3 EGR harnesses - two are brown with a yellow locking tab, one is black with a red locking tab (see pictures for locations).



### Speed Limiter

This option allows for the removal of the factory speed limiter. Most 6.6L LML Duramax trucks have a 98 MPH speed limiter from the factory. The limiter may be removed completely but WILL result in a loss of cruise control and exhaust brake function. (*this may change so be sure to visit [www.hsperformance.com](http://www.hsperformance.com) for product updates*). This option can only be changed during the Install Download process.

## Tire Size Calibration

(Not currently available for the 2011 - 2012 6.6L LML Duramax. This may change so be sure to visit [www.hperformance.com](http://www.hperformance.com) for product updates). This option allows for the re-calibration of the factory speedometer to adjust for non-stock sized tires. For the most accurate speedometer reading when using non-stock sized tires, it is best to measure the diameter of the tire using a tape measure rather than going by the printed tire size. In addition, using a GPS is a great way to dial in your factory speedometer. Entering a larger tire size will cause the factory speedometer to read higher while entering a smaller tire size will cause the factory speedometer to read lower. This option can only be adjusted during the Install Download process.

**NOTE:** On some vehicles, entering a tire size larger than 35" may cause the ABS light to illuminate.

## Transmission Reset / Relearn

The automatic transmission on the 2011 - 2012 6.6L LML Duramax has what is called **Adaptive Memory** and is constantly learning and adapting to different horsepower levels, temperatures, driving habits, etc. We highly recommend performing a Transmission Reset / Relearn procedure after installing H&S tuning to help the transmission perform correctly with the added horsepower. The transmission will eventually learn over time on its own, but the relearn procedure gives a good baseline for the adaptive learning and helps to speed up the learning process. To perform the relearn procedure, please follow these instructions:

**When re-training the transmission, ALWAYS follow posted speed limits. Do NOT attempt runs in adverse weather conditions such as snow, ice, rain, wind, or any other conditions that may affect your vehicles traction or impair your visibility!**

1. After you have installed the H&S tuning, turn the key to the ON position. From the Main Menu, scroll down until you see the **Reset Transmission** option. Select **Reset Transmission** and follow the on-screen instructions to reset the transmission adaptive memory.
2. After the transmission reset is complete, it is recommended to perform each of the following 0-80 MPH runs while in the **HOT** power level:
  - **0-80 MPH @ 25% throttle position, then slow down and come to a complete stop.**
  - **0-80 MPH @ 50% throttle position, then slow down and come to a complete stop.**
  - **0-80 MPH @ 100% throttle position, then slow down and come to a complete stop.**

**The Transmission Relearn procedure is complete.**

**NOTE:** On any vehicle using 3" or larger lift blocks under the rear leaf pack, it is **HIGHLY RECOMMENDED** to install traction bars when adding additional horsepower.

**Q: How do I know if my tuner is at the latest software level?**

A: Go to [hspower.com](http://hspower.com) in the “downloads” section to see what level of software is currently released by H&S. REFER TO THE T.V. # under “show settings” to see what version your tuner is on.

**Q: I am getting a check engine light and have an H&S tuner, what do I do?**

A: Any time you see a check engine light, the first thing you should do is use your H&S product to check the codes. It will give you a read-out of what the code is. Then you may use our online DTC lists, or call us to figure out what the problem may be.

**Q: I am running H&S tuning with the DPF still on the truck and having problems with the DPF, what should I do?**

A: The factory DPF system is problematic in stock form, so when adding more fuel with a tuning device you are likely going to have more problems. If you encounter problems, it may be time to look into doing a DPF delete kit from H&S Performance.

**Q: I am doing a DPF delete with an H&S tuner, what do I do with all the sensors?**

A: With H&S tuning NO exhaust emissions sensors need to be plugged in, or mounted in the exhaust stream. Leave ALL sensors in your factory exhaust and remove them from the vehicle.

**Q: My transmission shifts different with H&S engine tuning installed, why?**

A: When horsepower / torque output is modified on a motor, the transmission will act very different at times. H&S has designed an “Overdrive” software package to remedy many of the downfalls that come with engine tuning. Please see [hspower.com](http://hspower.com) for more details.



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LATE MODEL DIESEL TUNING**

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## ***EGR KITS***

When used with the XRT Pro, Mini Maxx, or Black Maxx, this kit will allow the complete code free removal of the EGR system.



## ***EXHAUST PRODUCTS***

H&S Performance carries a full line of mandrel bent exhaust. Whether you desire 4" or 5" we have a kit to suit your needs. We also carry a full selection of stainless tips to finish it off with some style.

## ***H&S Newsletter***

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# BRING ON THE POWER



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