



Part #2000

2015-2016 FORD F-150 3.5L EcoBoost

Reference Guide and Step by Step Installation Manual

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PLEASE READ BEFORE USING PROGRAMMER!

The installation process is very easy and should not take long for programming and installation to be accomplished. To avoid problems with installation, observe the following recommendations:

- **It is very important in the programming process that the vehicle’s battery is fully charged and there is no drain on the battery. DO NOT program with a battery charger connected to the vehicle.**
- **Close and keep all doors shut. (This eliminates interior lights and alarms from sounding.) If it’s hot, roll the window(s) down BEFORE programming the vehicle.**
- **TURN OFF all electrical accessories (radio, heater/AC blower, wipers, etc.) that will power up when the key is in the “Run” position. Do not operate any electrical accessories during the programming process.**
- **Non-factory electronics, such as stereo amplifiers, CB radios, and aftermarket alarms should be disabled before programming.**
- **Unplug all accessories from cigarette lighter or any other auxiliary power port on the vehicle BEFORE programming (cell phone chargers, GPS, etc.)**
- **Disconnect any mobile devices from the entertainment system BEFORE programming (Bluetooth, USB chargers, smart phones, etc.)**
- **Daytime running lights should be disabled before programming. See vehicle owner’s manual for information on how to turn off.**

After inspecting the vehicle and disconnecting power from any non-factory electronics, continue with the installation of the programmer.

Once the programmer cable has been connected to the vehicle’s diagnostic port and to the programmer, DO NOT remove or disturb the cable during the ENTIRE programming process. Only remove the cable from the diagnostic port when prompted by the programmer at the end of the installation process.

DO NOT leave the vehicle unattended during programming. The programmer screen will display instructions for you to follow i.e., turning the key to the ON position (but NOT starting the engine), and you will be asked to select certain engine tuning and vehicle adjustment features.

During the installation and programming if an error should occur, an error code and/or message will be displayed on the programmer screen, along with a phone number. Write down the error code or message and

contact the Hypertech tech support department on the provided telephone number from 8am-5pm, Central Time, Monday-Friday. Have the part number and serial number off of the programmer, and your vehicle's VIN # ready when you call.

Most programming errors are caused by electrical interruptions. Please see Section 3 with more information for troubleshooting programming problems.

SECTION 1: PROGRAMMING INSTRUCTIONS

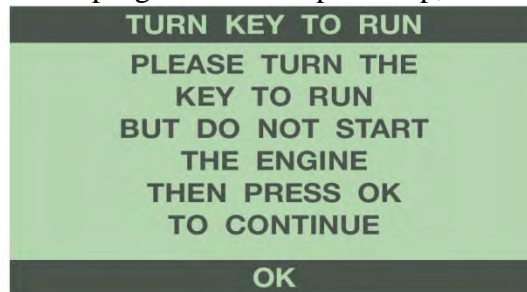
Set the parking brake. Connect one (1) end of the provided cable to the programmer.



Locate the diagnostic port under the driver's side of the dash. Plug the programmer cable into the diagnostic port.



Make sure the cable is plugged in completely to ensure a good connection. **DO NOT disturb the cable once it is connected to the diagnostic port.** The programmer will power up, and display the startup screen.



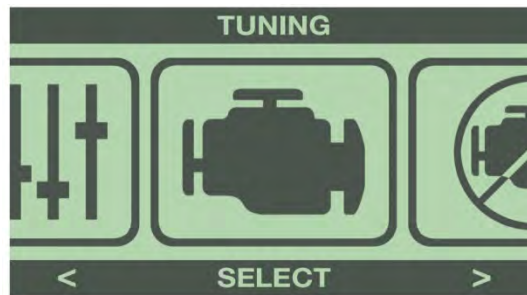
Turn the key to the Run position, and select “OK” using the middle bottom button. The Run position is the last key click before the engine will start. **DO NOT START THE ENGINE AT ANY TIME DURING THE PROGRAMMING PROCESS!** You should hear your seat belt chime and warning light on the instrument panel when the key is in this position. For keyless ignition/push button start vehicles, press the ignition button once to enter the Start/Run mode. **DO NOT PRESS THE BRAKE PEDAL WHEN PRESSING THE START BUTTON!** The programmer will then read out the VIN number, and after a few seconds, display the Main Menu.

1-1: MAIN MENU

Use the left and right buttons at the bottom of the screen to scroll through the menu options. Press the middle button to ‘Select’ an option. Press the left button to go ‘Back’ to the last menu screen.

TUNING:

This is the main option in the programmer. It has selections for the Hypertech Power Tuning, and other adjustable features.



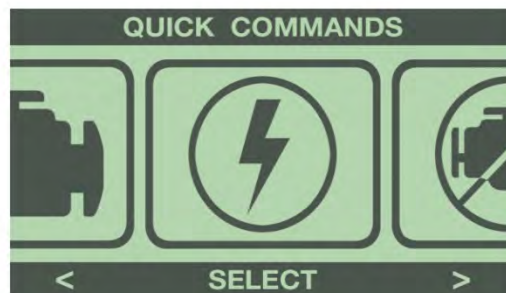
DTC's (All Vehicles):

This option checks for Diagnostic Trouble Codes (DTC's).



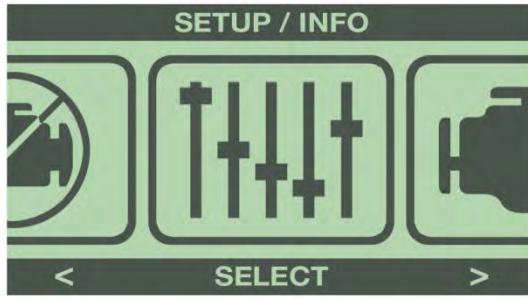
QUICK COMMANDS:

This option has selections for adjustable features that don't require programming.



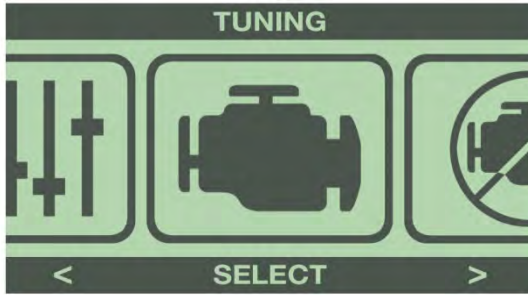
SETUP INFO (All Vehicles):

This option displays various information about the programmer and your vehicle. It also allows adjustments to the display screen.



1-2: TUNING MENU

Press 'Select' to enter the Tuning menu from the Main Menu.

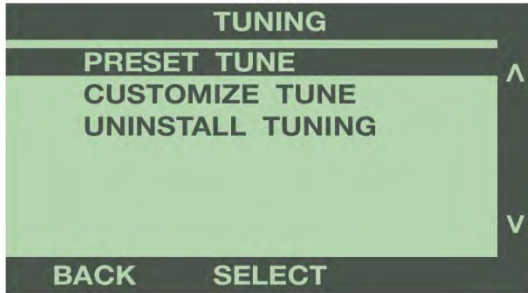


The programmer will display 3 tuning options:

PRESET TUNE- Select a previously saved tune for installation.

CUSTOMIZE TUNE- Select all Power Tuning and adjustable features available for the vehicle.

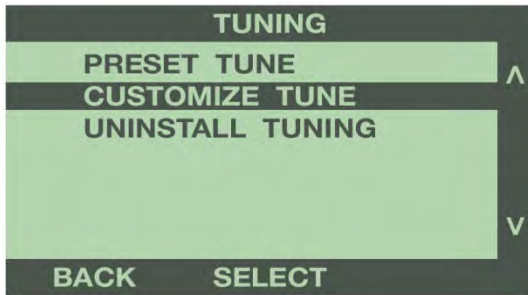
UNINSTALL TUNING- Select to reprogram all options back to factory stock settings.



When using the programmer for the first time, select the **CUSTOMIZE TUNE** option.

CUSTOMIZE TUNE

Use the buttons to the right of the screen to highlight Customize Tune. Press the 'Select' button to display the Tuning Menu.



SUGGESTED SETTINGS

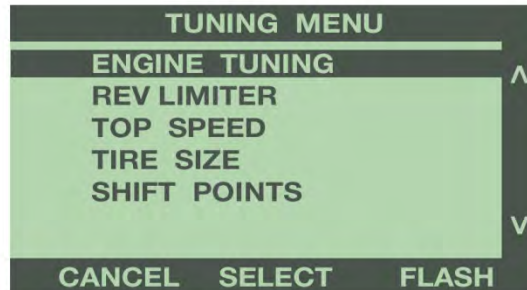
The following chart lists some Hypertech suggested custom tuning selections for different driving situations: Mileage, Tow, Street, and Performance.

	MILEAGE	TOW	STREET	PERFORMANCE
ENGINE TUNING	CHOOSE HYPERTECH TUNING FOR OCTANE YOU USE			
REV LIMITER	STOCK	+100	+100	+200
SHIFT POINTS	STOCK	+100	+100	+200
SHIFT FIRMNESS	TOW	TOW	STREET	SPORT
THROTTLE RESPONSE	STOCK	TOW	STREET	PERFORMANCE
FANS	STOCK	STOCK	STOCK	STOCK
SHIFT RESPONSE	MILEAGE	TOW	STREET	PERFORMANCE

You can choose the options above, or select your own combination of features. Detailed explanations for each feature are listed below.

ENGINE TUNING

Use the buttons to the right of the screen to highlight Engine Tuning. Press the ‘Select’ button to install optimized engine tuning.



This option installs the Hypertech Power Tuning, based on the octane of fuel your vehicle is using. Hypertech Power Tuning is a rigorous procedure that maximizes performance by optimizing the engine’s air/fuel ratio, spark timing, boost, and other parameters. Hypertech Power Tuning doesn’t just focus on the power you’ll gain at wide-open throttle. The engine performance under normal driving is also optimized. This means that there is no need to switch between a performance, economy, or tow tune.

OCTANE LEVELS

87 Octane, 89 Octane, 91 Octane, 93+ Octane

See the dyno chart on page 30 for specific power gains for each octane level.

PERFORMANCE

Hypertech’s engine tuning for the F-150 3.5L EcoBoost engines has been thoroughly optimized for maximum performance and reliability. Our tuning optimization routine netted the most powerful boost curve possible without pushing the turbochargers out of their ideal efficiency curve, which will ensure longevity and durability of the turbocharger. The factory boost curve the stock tune is around 13 PSI. Peak boost with the Hypertech tune is 16 PSI.

The same optimization routine was used to perfect the settings for each tuning variable: spark, fuel, cam timing, injection timing, fuel pressure, etc. In the end, these variables were all combined and re-tested to ensure the best combination of alterations was found. This routine is repeated for each octane level.

TORQUE MANAGEMENT

The torque management system monitors many different systems of the vehicle to ensure the power does not exceed the capacities of the vehicle as a whole. It is constantly regulating power output by closing the throttle blade, regardless of what your right foot does. We worked through all of the torque nannies and tuned some parameters to match what the true output of the engine is. The optimized engine tuning is integrated with the intricate torque management system to ensure the maximum power output is applied safely. There were physical limits that the tune could exceed, which caused the need for some finessing of the tune to prevent exceeding those limits.

FUEL ECONOMY

The power gains developed tuning at wide open throttle are blended into the part throttle areas where the truck is normally driven. The optimized Hypertech engine tuning is more efficient, and the added torque during normal driving gives an even better throttle response. With the engine creating more torque, you use less throttle to maintain cruising speeds, which can lead to better fuel economy. With the optimization focused on the specific fuel octane for each tune, you should see fuel mileage increases with all octane levels.

TOWING

All Hypertech tunes are optimized for towing. The Max Energy tuning is the only tuning on the market that doesn't have to offer limited power tunes for fuel economy or towing levels. Our tuning is safe for hauling and towing the maximum weight designated by the vehicle's manufacturer. We focus on efficiency rather than a certain power output, so there are no towing restrictions other than the vehicle manufacturer's maximum allowed capacity.

E-85/FLEX FUEL VEHICLES

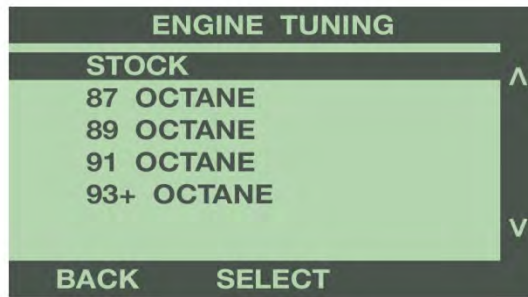
We recommend the 91 & 93 octane tuning when running E-85 fuel in flex fuel vehicles that are factory equipped to use E-85. The improved engine tuning will increase the part-throttle efficiency and wide-open throttle performance compared to the factory tuning.

Warning: Do not attempt to use higher octane tunes with lower octane fuel. This could result in severe engine damage.

AFTERMARKET PARTS

Our tuning works well with popular bolt-on aftermarket parts. No custom tuning for bolt-ons is necessary. If you install an aftermarket air intake or exhaust system, Hypertech's Power Tuning will automatically adjust the engine control parameters to take advantage of the fact that the engine is less restrictive. Any significant power adders, like larger turbochargers, bigger injectors, or larger camshafts would definitely require a custom tune. For reference, any racing parts that would set a DTC with the stock tune would also set the same DTC with the Hypertech tunes.

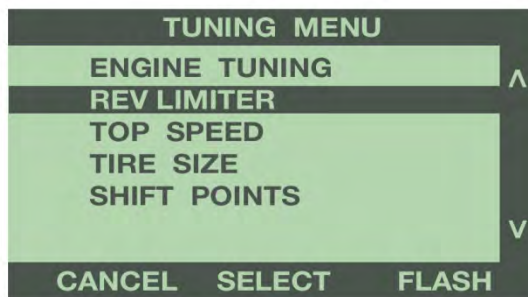
Use the buttons to the right of the screen to highlight the tune for the octane fuel being used.



Press 'Select' to save the chosen tune. By selecting 'Stock', the programmer will install any additional features selected, but keep the stock engine tuning.

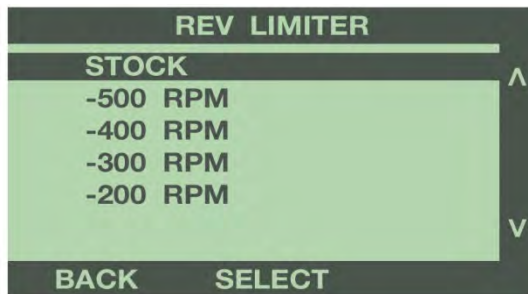
REV LIMITER

Use the buttons to the right of the screen to highlight Rev Limiter. Press the 'Select' button to adjust the engine rev limiter.



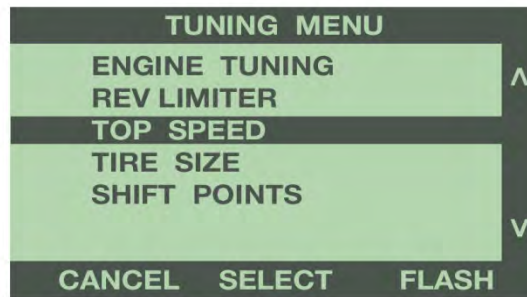
This option raises or lowers the maximum RPM limiter of the engine, in 100 RPM increments. The key to faster acceleration is to use more of your engine's horsepower. The Max Energy 2.0 lets you adjust your engine's rpm limiter to improve performance and driving fun. The stock computer is programmed to shut down the engine when it reaches the redline. But if you have modified your vehicle to increase its high-speed performance, more rpm means more power. When you shift gears at the stock rpm limit, the engine falls back to below the peak of its horsepower curve. When you extend the engine's rpm range with the Max Energy 2.0, your engine has more power available after gear changes. And by keeping the engine in the "sweet spot" of its power curve, you can increase the average horsepower that accelerates the vehicle.

Use the buttons to the right of the screen to scroll up or down, and highlight the value to increase or decrease the engine rev limiter. Press 'Select' to save the chosen value.



TOP SPEED

Use the buttons to the right of the screen to highlight Top Speed. Press the 'Select' button to adjust the top speed limiter. This feature lets you electronically raise your vehicle's top speed limiter to match the speed rating of factory-approved high-performance tires, or lower the top-speed limiter from 25 to 75 MPH.

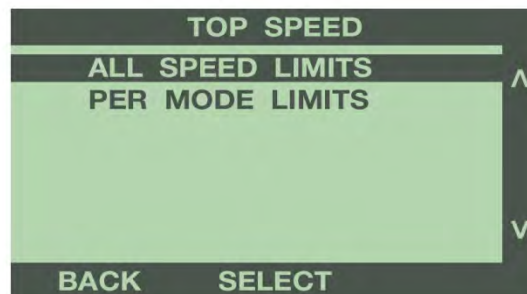


The maximum speed of many modern vehicles is governed by the onboard computer. The stock computer is programmed to shut down the engine when the vehicle exceeds the speed rating of the original equipment tires. But if you have installed tires with a higher speed rating for off-highway competition in sanctioned events, your vehicle may be able to achieve a higher top-speed. A tire's maximum safe speed under perfect conditions is marked on its sidewall. Codes for popular high-performance tires are: T=118 mph, U=124 mph, H=130 mph, V=149 mph, Z=149+ mph. This feature may only be used with OEM approved speed rated tires.

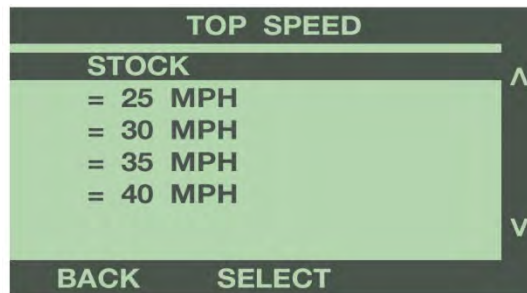
The option to lower the top speed limiter is available to restrict the driver to a maximum speed limit. Some examples of the use of this feature are to limit the speed of inexperienced drivers or fleet vehicle management. The top speed can be limited from 25 MPH to 75 in 5 MPH increments.

NOTE: Always obey Federal Traffic Laws. Do not raise the vehicle top speed limiter above the speed rating of the tires installed on the vehicle. Raising the vehicle top speed limiter above the speed rating of the tires installed on the vehicle may lead to a serious or fatal accident.

To adjust the Top Speed limit the same in all driving modes, select All Speed Limits, and press 'Select'.

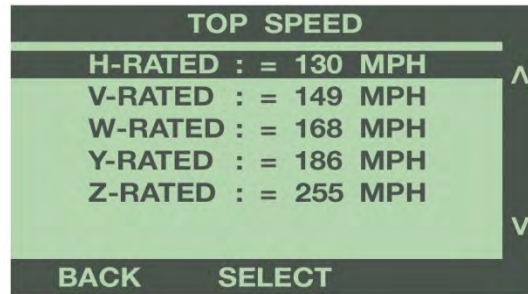


Use the buttons to the right of the screen to scroll up or down, and highlight the desired MPH. Press 'Select' to save the chosen value.



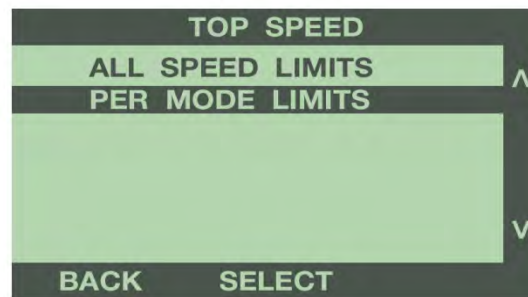
The top speed limiter can be lowered from the factory setting. The initial top speed settings that appear on the programmer will LOWER the factory top speed limiter. This feature is selectable from 25 to 75 MPH. Selecting one of these options will keep the vehicle from exceeding the selected speed.

To raise the top speed limiter, scroll down and highlight and select the speed that matches the speed rating of your tires.

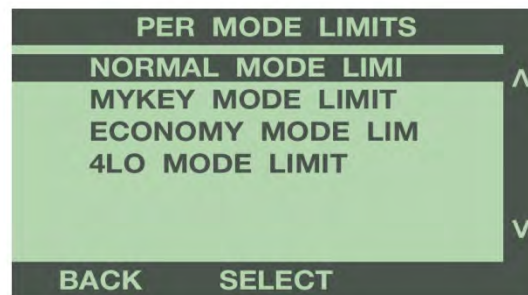


Note: Raising the top speed limiter is not recommended for vehicles equipped with load rated tires. Serious damage or injuries could occur. Once you have completed your selection, press the 'Back' button to exit back to the tuning options menu.

To adjust different Top Speed limits based on driving modes, highlight Per Mode Limits, and press 'Select'.



Scroll down and highlight the driving mode that you want to adjust the top speed limit, and press 'Select'.

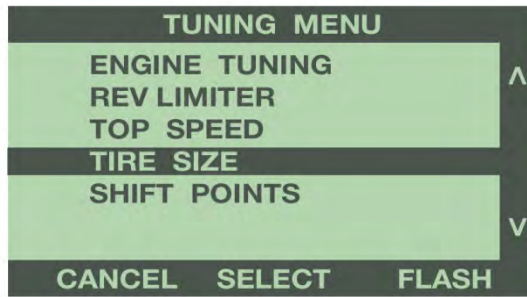


Follow the procedure shown above for All Speed Limits to adjust the top speed limit in each mode.

Once you have completed your selection, press the 'Back' button to exit back to the Per Mode Limits menu. You can then select another mode to adjust the top speed, or press the 'Back' button to return to the Top Speed menu.

TIRE SIZE

Use the buttons to the right of the screen to highlight Tire Size. Press the 'Select' button to adjust the speedometer and odometer for non-stock tire size.



This feature recalibrates the speedometer and odometer, and the part throttle shifting for auto transmissions, if non-stock tires have been installed on the vehicle. This option is adjustable between 24 and 54 inches, in ¼ inch increments.

It is critical to measure the actual tire height. This is the total diameter of the wheel and tire together, as measured distance from the ground to the top of the tire, at the centerline of the wheel. Make sure the tires have proper air pressure. Compare your settings to a GPS, and adjust the height up or down as needed to dial in the exact calibration.

Another method of measuring the tire diameter:

1. Place a chalk mark on the tire where it contacts the pavement and also mark the pavement. These marks should be at the center of the tire footprint pointing straight down to the pavement.
2. Roll the vehicle in a straight line until the chalk mark makes one revolution and is pointing straight down at the pavement again. Mark the pavement again at this new spot.
3. Measure (in inches) the distance between the two (2) marks on the pavement. Divide the measurement by 3.1416. This will give you the tire height in inches.

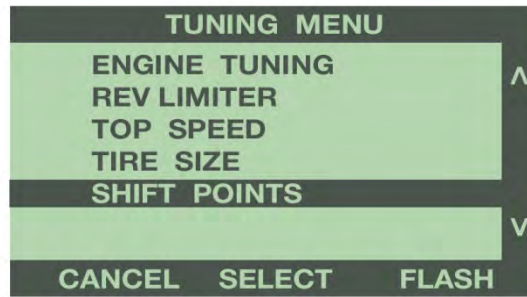
Use the buttons to the right of the screen to scroll up or down, and highlight the desired tire size, in ¼ inch increments. Press 'Select' to save the chosen value.



Note: Only select this feature if the vehicle has a different size tire than what was installed from the factory.

SHIFT POINTS

Use the buttons to the right of the screen to highlight Shift Points. Press the 'Select' button to change the RPM at which the transmission shifts at wide open throttle.



This feature allows adjustment of the wide open throttle shift RPM for each gear, up or down, in 100 RPM increments. This setting does not affect part throttle shifting. To determine the factory shift point in each gear, accelerate the throttle wide open while in Drive, and hold it until the transmission shifts. Note the RPM when the gear change occurs.

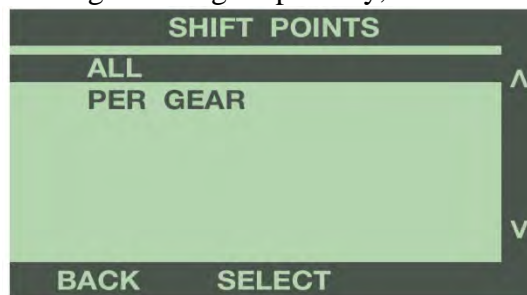
These settings are totally subjective, and based on user feel, or by comparison using the time slip at the track.

For shift point optimizing, test only one (1) shift point at a time until the best RPM shift point is found for each. The shift point adjustment range is +/-500 RPM in 100 RPM increments for each of the shift points for the vehicle. If changes are made to the shift points, the engine rev limiter must also be adjusted accordingly (See chart below). Not doing so may result in damage to the engine or powertrain.

Rev Limit	Shift Points	Rev Limit	Shift Points
-500	-500	+100	+100 or lower
-400	-400 or lower	+200	+200 or lower
-300	-300 or lower	+300	+300 or lower
-200	-200 or lower	+400	+400 or lower
-100	-100 or lower	+500	+500 or lower
Stock	Stock or lower		

To adjust the shift points in all gears the same, select ALL from the Shift Points menu.

To adjust the shift points for each gear change separately, select PER GEAR from the Shift Points menu.



ALL SHIFT POINTS: Use the buttons to the right of the screen to scroll up or down, and highlight the value to increase or decrease the shift points, in 100 RPM increments. Press ‘Select’ to save the chosen value.

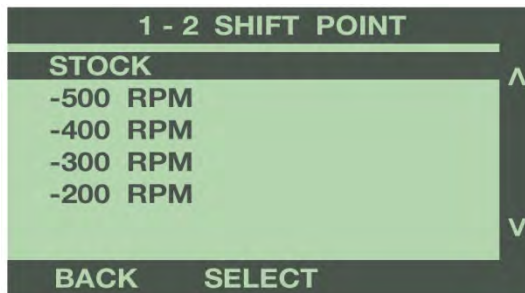


Press the 'Back' button to go back to the Tuning Menu.

PER GEAR SHIFT POINTS: Use the buttons to the right of the screen to scroll up or down, and highlight the gear change to adjust.



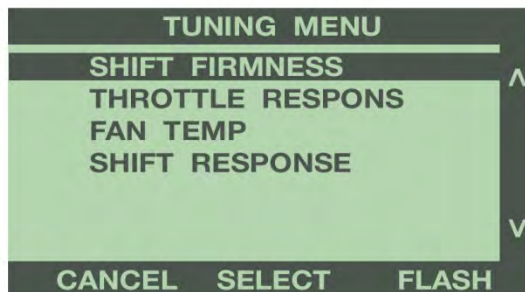
Press the 'Select' button, and then use the buttons to the right of the screen to scroll up or down, and highlight the value to increase or decrease the shift points, in 100 RPM increments. Press Select to save the chosen value.



Press the 'Back' button to go back to the Gear Shift menu. Repeat the procedure above for each gear change. Once you have made the desired changes for each gear, press the 'Back' button to return to the Tuning Menu.

SHIFT FIRMNESS

Use the buttons to the right of the screen to highlight Shift Firmness. Press the 'Select' button to adjust the firmness at which the transmission shifts.



This feature electronically increases the automatic transmission line pressure for firmer shifts, reducing clutch slippage and transmission oil temperatures, and prolonging transmission life. These settings are totally subjective, and based on user preference.

Stock- Factory setting for Shift Firmness

Tow- Slightly firmer than stock; reduced slippage decreases trans temps.

Street- Slightly firmer than Tow; great for all around drivability.

Sport- Firm, aggressive shift; good feel under moderate to heavy acceleration.

Performance- Most aggressive shifting feel; best setting for full throttle acceleration.

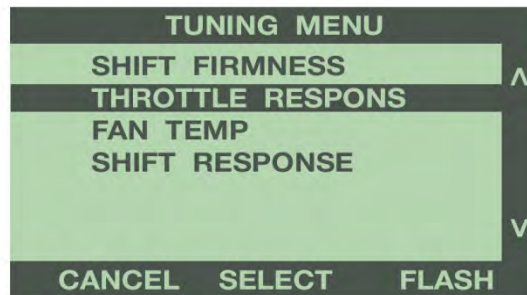
Use the buttons to the right of the screen to scroll up or down, and highlight the desired shift firmness. Press 'Select' to save the chosen value.



Once you have selected an option, press the 'Back' button to return to the Tuning Menu.

THROTTLE RESPONSE

Use the buttons to the right of the screen to highlight Throttle Response. Press the 'Select' button to adjust the throttle response settings based on the driving mode of the vehicle.



The ME 2.0 allows adjustment of the throttle response independently for each driving mode. You can tune Normal Mode to one setting, and have another setting for when the vehicle is in Sport Mode.

Stock - Factory settings for Throttle Response

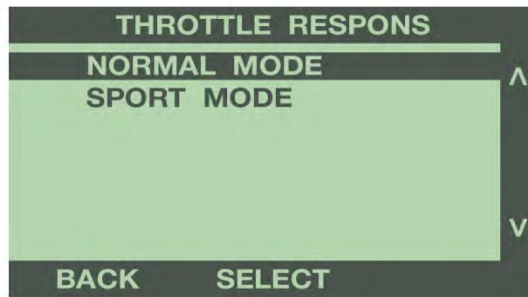
Tow - Increased throttle response for additional power during take-off and for maintaining speed up hills to minimize downshifting.

Street- Greatly improved power delivery for improved drivability for everyday performance.

Sport - Quicker throttle response that delivers power much quicker than the factory settings.

Performance - Aggressive throttle response for maximum power and acceleration.

Highlight the driving mode to adjust throttle response, and press 'Select'.



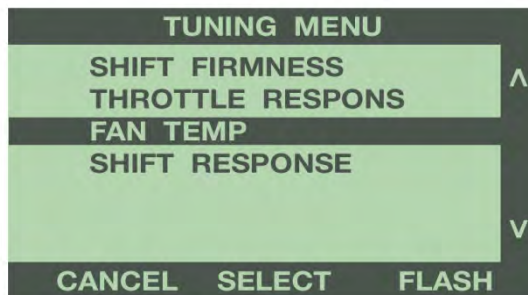
Scroll up or down to highlight a throttle response setting. Press the 'Select' button to save the selected option. Once you have selected an option, press the 'Back' button to return to the previous menu.



Repeat the procedure above for each mode.

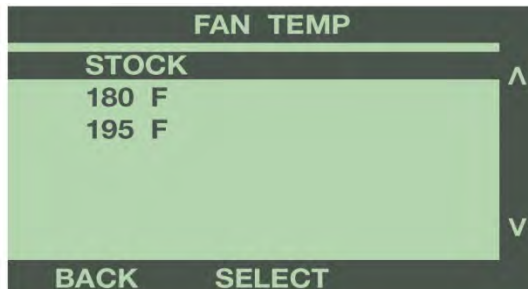
FAN TEMP

Use the buttons to the right of the screen to highlight Fan Temp. Press the 'Select' button to adjust the temperature that the electric cooling fans turn on and off.



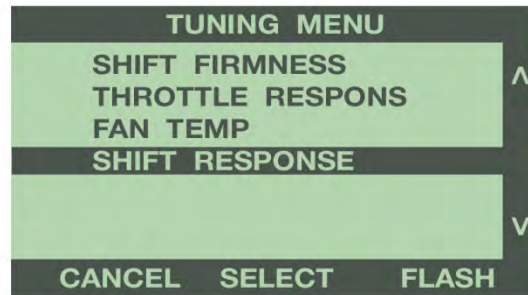
This feature allows adjustment of the temperatures of the vehicle's auxiliary cooling fan to match a lower temperature thermostat. The fan will turn on when the engine reaches the programmed temperature. Note this feature will not control the actual engine temperature. It only controls when the fan turns on and off.

Use the buttons to the right of the screen to scroll up or down, and highlight the temperature to turn on the cooling fan. Press 'Select' to save the chosen value.



SHIFT RESPONSE

Use the buttons to the right of the screen to highlight Shift Response. Press the 'Select' button to adjust this feature.



Shift Response tailors the transmissions upshift and downshift response time to better fit your driving style and conditions.

Hyper-mileage & Mileage- The HYPER-MILEAGE and MILEAGE tunes focus the transmission on a more economic style of driving by preventing unnecessary downshifts. The HYPER-MILEAGE tune is more for the aggressively fuel conscious drivers.

Tow- The TOW tune prevents excessive shifting when towing or hauling.

Street- The STREET tune dials in responsive upshifts and downshifts that are perfect for normal driving.

Sport- The SPORT tune responds with lively shifts that respond almost naturally.

Performance- The PERFORMANCE tune ensures eager shifts when the need arises.

Track- The TRACK tune creates shifting that is eager to show off the extra power of the Hypertech engine tuning!

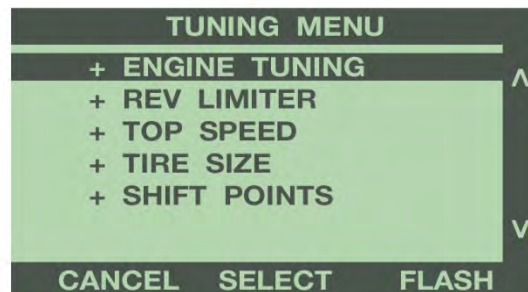
Press the 'Select' button, then use the buttons to the right of the screen to scroll up or down, and highlight the desired shift response. Press 'Select' to save the chosen value.



Once you have selected an option, press the 'Back' button to return to the previous menu. For more information on the Shift Response option, see Programming Features explanation in Section 3.3.

1-3: SELECTION REVIEW & PROGRAMMING

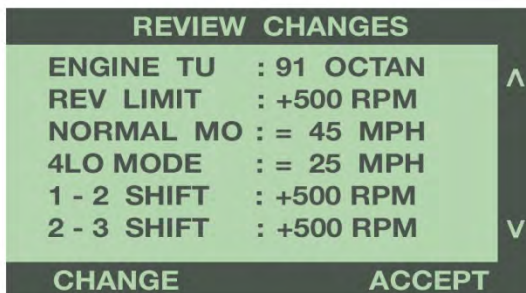
The Tuning Menu will display a + sign next to each option that you selected to change. Once you have completed your selections from the Tuning Menu, the programmer is now ready to flash the vehicle's computer.



Press the 'Flash' button to continue.

REVIEW CHANGES

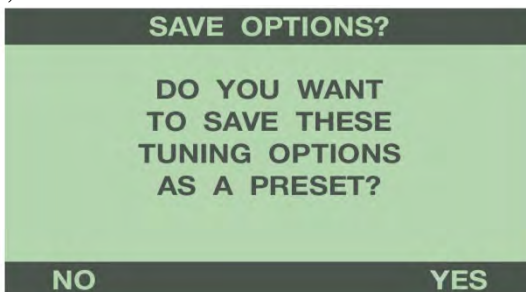
The next screen displays all of the Tuning Options for your vehicle, and the options selected. Use the buttons to the right of the screen to scroll up or down, and review your selections.



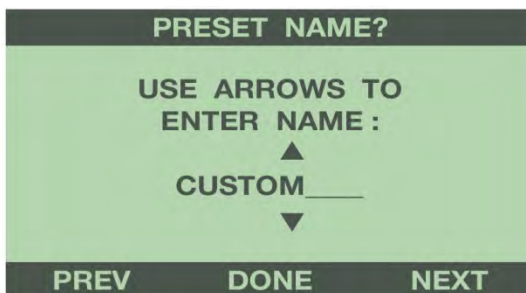
To accept all tuning options, press 'Accept' to begin the programming process. To make changes to any option, select 'Change'.

PRESET TUNE

The programmer allows you to save up to 5 preset tunes. This feature will save a specific selection of programming options in the programmer memory. The preset tune can be selected from the Tuning Menu. If you wish to save the currently selected tuning options as a Preset Tune, select 'Yes'. If you don't want to save the selected options as a preset tune, select 'No'.



To save the currently selected tuning options, use the buttons to the right of the screen to scroll up or down and select any combination of letters or numbers. The 'Prev' and 'Next' buttons move the cursor left and right. Once you have selected a name, press 'Done' to continue.



PROGRAMMING

Follow all of the messages on the programmer screen during the entire programming process for the vehicle. The programmer will prompt you to turn the key to the 'RUN' and 'OFF' position during this process. When turning the key to the 'RUN' position, it is important to make sure that you turn the key to the most forward position possible WITHOUT starting the vehicle.

IMPORTANT NOTE:

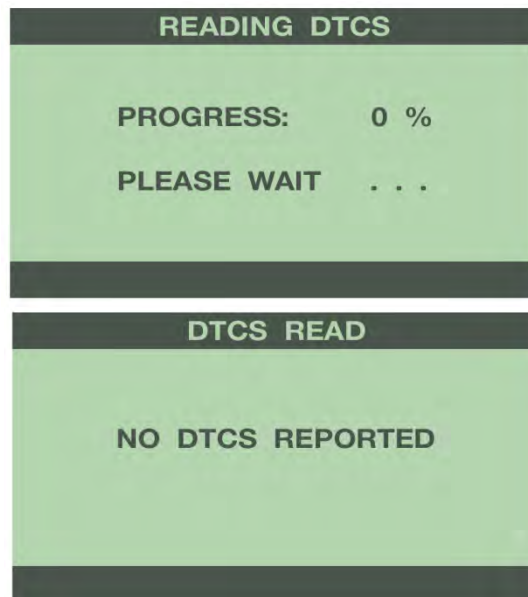
While the unit is programming, the following is **EXTREMELY IMPORTANT: DO NOT** leave the vehicle while programming is in process. **DO NOT** unplug or disturb the cable, or turn the key off (unless instructed to by the programmer). **DO NOT START THE VEHICLE AT ANY TIME WHILE THE PROGRAMMER IS CONNECTED!** If the unit stops programming or is interrupted, please make a note of any message(s) that appear on the programmer screen and call the provided tech service line.

IMPORTANT NOTE:

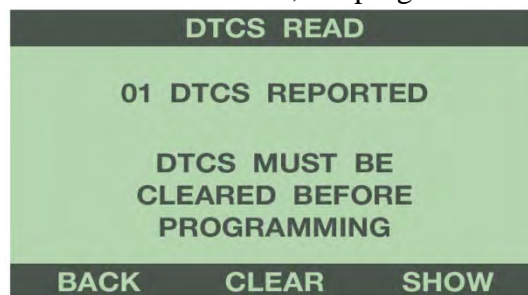
On certain applications, the instrument panel message center may light up, and random messages and other warning lights may display. This is completely **NORMAL** during the programming process. All of the vehicle function and settings will return to normal once the programming session is complete.

DIAGNOSTIC TROUBLE CODES (DTC'S)

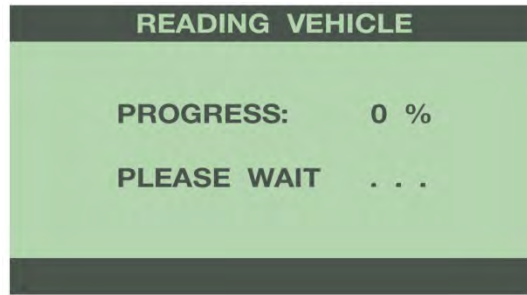
Prior to starting the programming process, the programmer will check for any Diagnostic Trouble Codes (DTC's). If any DTC's are present, the programmer will display them. You can review the DTC's before clearing.



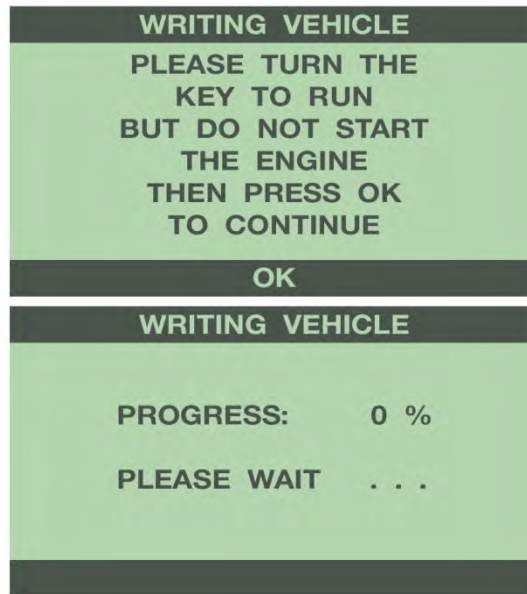
If the vehicle has any DTC's, the programmer will display the number of DTC's reported from the vehicle's computer. You can review the DTC's by pressing the 'Show' button. Before the programming process can begin, all DTC's must be cleared. To clear any DTC's, press the 'Clear' button. For more information on this feature, see the DTC section. Once the DTC's are cleared, the programmer will proceed to Reading Vehicle.



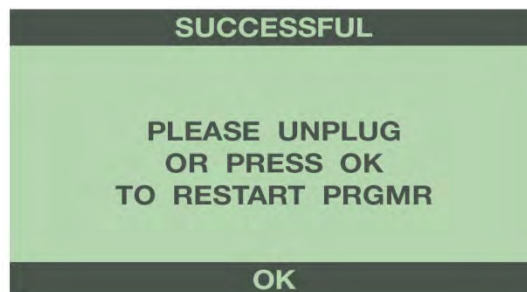
If the vehicle has no DTCs, the programmer will proceed immediately to Reading Vehicle mode.



Once the programmer has completed the reading process, it will proceed to the Writing Vehicle mode. Continue to follow the messages on the screen. You may be prompted to turn the key to the 'RUN' and 'OFF' position during this process.



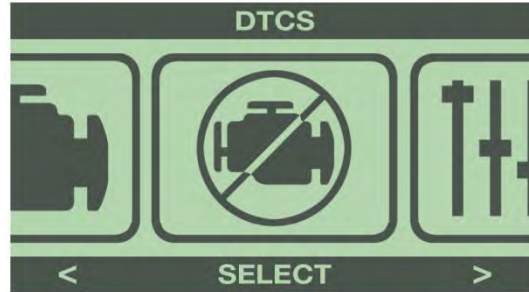
After the programmer has successfully programmed the vehicle, follow the instructions on the screen until you see the Successful screen.



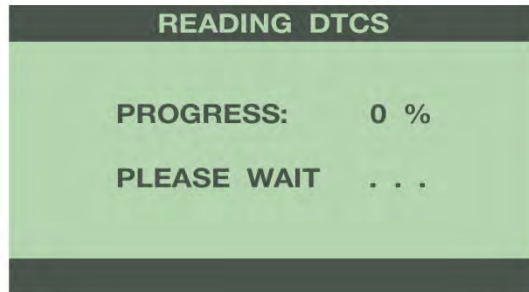
It is now safe to unplug the programmer from the vehicle and start the engine. Make sure the “Check Engine” light on the instrument cluster goes out (If it stays on or flashes, read out the DTC’s, and contact Hypertech tech support). Warm up the engine and make sure it is running smoothly.

1-4: DTC MENU

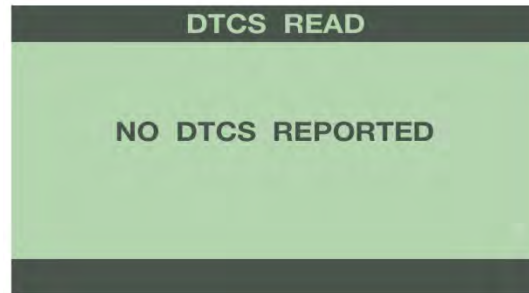
From the Main Menu, press the left or right arrow buttons to scroll for the DTC menu. Press ‘Select’ to enter the DTC menu from the Main Menu.



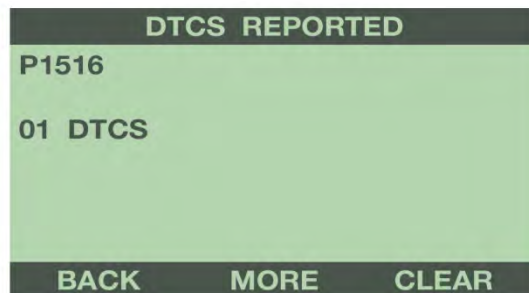
The programmer will immediately begin reading out the DTC’s from the vehicle’s computer.



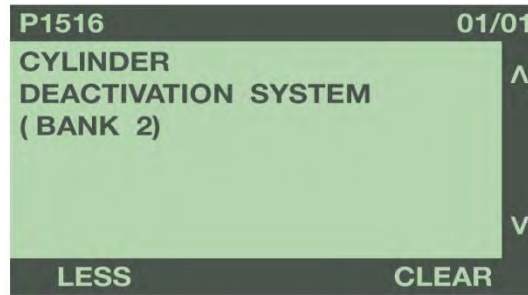
If no DTC’s are present, the programmer will display the following message.



If the vehicle has any DTC’s, the programmer will display all DTC’s, and the total number of DTC’s reported from the vehicle’s computer. To clear all DTC’s, press the ‘Clear’ button. To see a definition of each DTC, press the ‘More’ button.



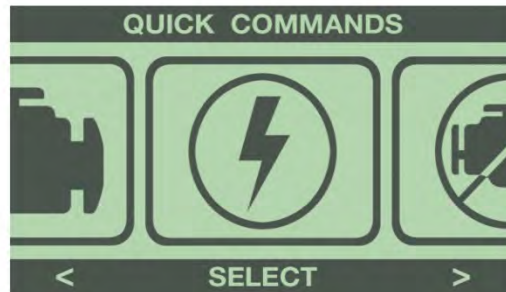
Use the buttons to the right of the screen to scroll up or down and review each DTC. The programmer will display a description of the DTC.



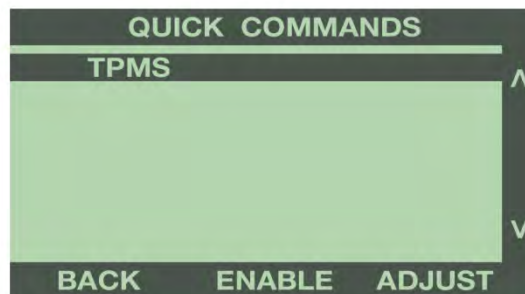
Once you have reviewed each DTC, you can clear them by selecting 'Clear'.

1-5: QUICK COMMANDS

From the Main Menu, press the left or right arrow buttons to scroll for the Quick Commands menu. Press 'Select' to enter Quick Commands menu from the Main Menu.

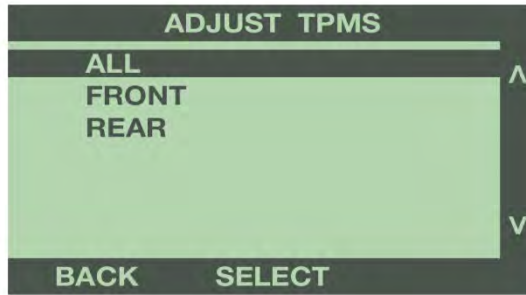


The programmer will display the following menu.

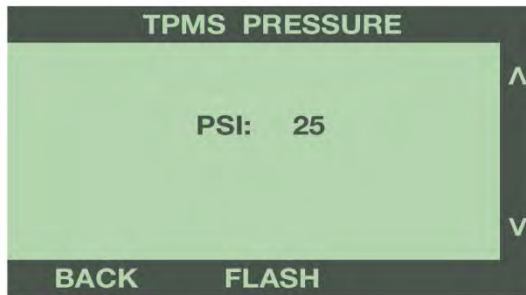


TPMS ADJUST

This feature allows instant adjustment of the minimum pressure for tire pressure monitor sensor (TPMS) alarm. Select 'Adjust' to display the Adjust TPMS menu. Use the buttons to the right of the screen to scroll up or down, and highlight the wheels to adjust. Press the 'Select' button to adjust the TPMS alarm minimum pressure.

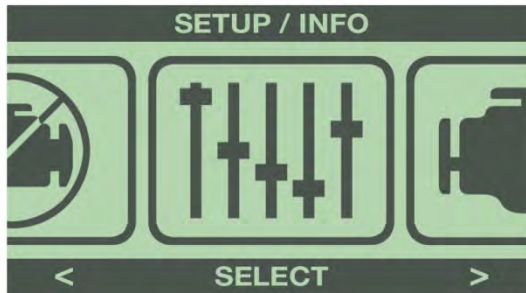


Use the buttons to the right to raise or lower the minimum tire pressure to activate the TPMS alarm. Select 'Flash' to program the change.



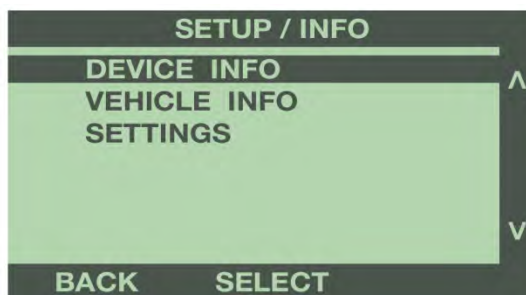
1-6: SETUP/INFO

From the Main Menu, press the left or right arrow buttons to scroll for the Setup/Info menu. Press 'Select' to enter the Setup/Info menu from the Main Menu.

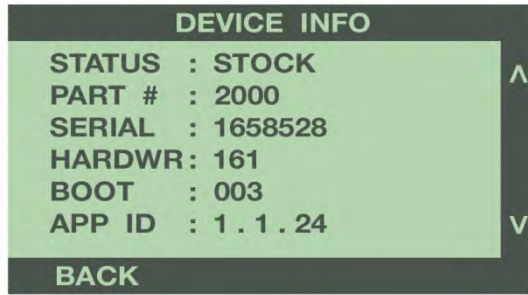


DEVICE INFO

Use the buttons to the right of the screen to highlight Device Info. Press the 'Select' button to display the Device Info menu.



Use the buttons to the right of the screen to scroll up or down and review the device info.



VEHICLE INFO

Use the buttons to the right of the screen to highlight Vehicle Info. Press the ‘Select’ button to display the Vehicle Info menu.



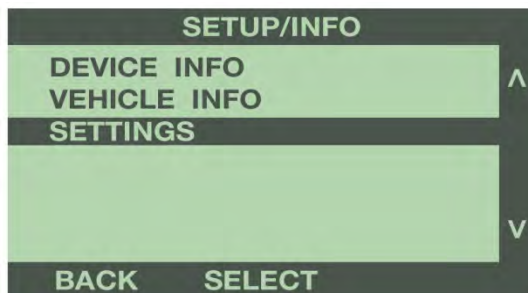
The Vehicle Info menu displays the VIN number of the vehicle that the programmer was last connected to, and the current status of the programmer.



Select ‘Setgs’ to view the current options that are programmed in the vehicle. Select ‘Back’ button to return to the previous menu.

SETTINGS

Use the buttons to the right of the screen to highlight Settings. Press the ‘Select’ button to display the current tuning selections that are programmed to the vehicle.

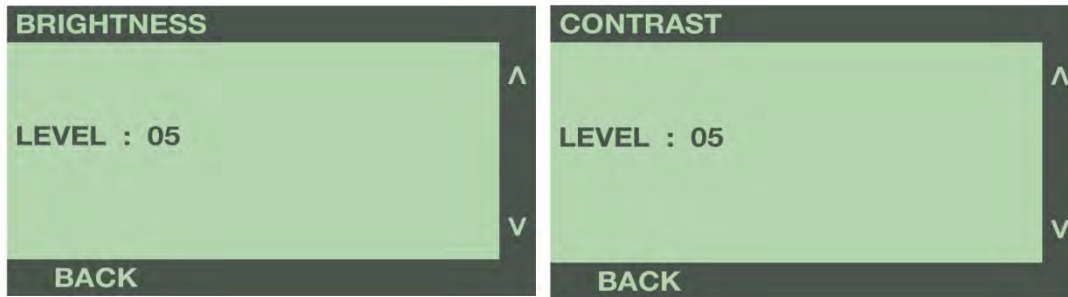


BRIGHTNESS & CONTRAST

Use the buttons to the right of the screen to highlight the setting to adjust. Press the 'Select' button to display the selected setting.

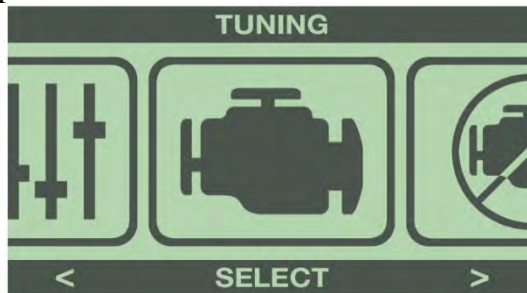


Use the buttons to the right of the screen to adjust the brightness or contrast of the display screen, from 1 to 10. Press the 'Back' button to return to the previous menu.



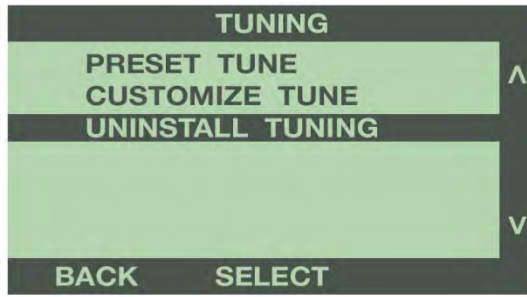
SECTION 2: PROGRAMMING VEHICLE BACK TO STOCK, CHANGING TUNING OPTIONS, AND SELECTING PRESET TUNES

Reconnect the programmer to the vehicle as in Section 1, and follow the messages on the screen until the Main Menu appears. Select the Tuning option from the Main Menu.



BACK TO STOCK

To return the vehicle completely to factory stock settings, select 'Uninstall Tuning' from the Tuning menu. Follow the Programming instructions from Section 1.

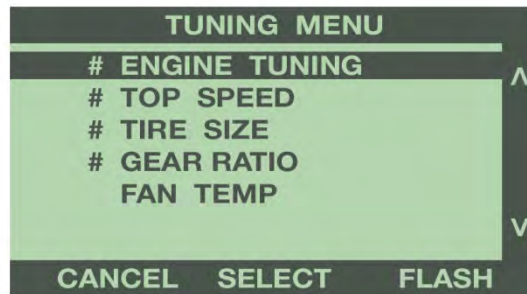


CHANGING OPTIONS

To change tuning options, select Customize Tune from the Tuning menu.



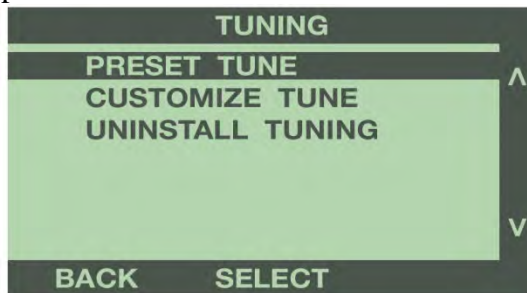
The Tuning Menu will display a hashtag ‘#’ next to the options that were selected for the previous programming session. To make changes, follow the Tuning instructions from Section 1.



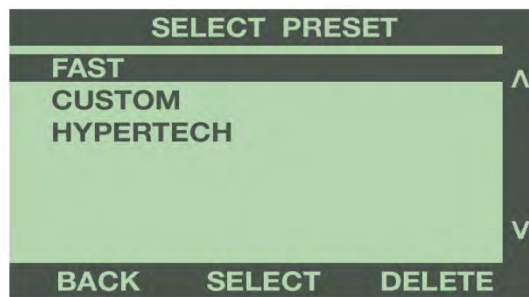
Note: All tuning options default to ‘Stock’ settings, regardless of what tuning options are currently programmed in the vehicle. You will need to select each option again, even if you aren’t making a change from the current setting.

PRESET TUNE

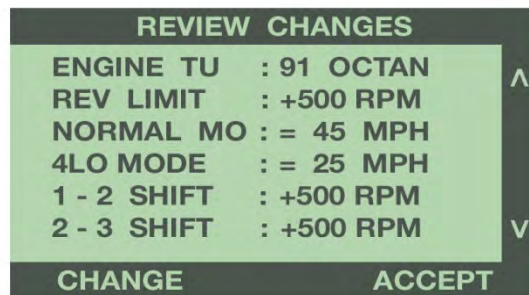
To flash a previously saved tune, use the buttons to the right of the screen to highlight Preset Tune. Press the ‘Select’ button to bring up a list of preset tunes.



Use the buttons to the right of the screen to highlight a Preset Tune, and press 'Select'.



Use the buttons to the right of the screen to review the Preset Tune options.



Select 'Change' to make changes to the tuning options. Select 'Accept' to continue with programming.

SECTION 3: TECHNICAL INFORMATION & TROUBLESHOOTING

3-1: What To Do Before Taking Your Vehicle In For Service

Return Vehicle To The Stock Programming.

When the vehicle is taken to a dealership or repair shop for any service, the vehicle's computer must be returned to the original stock calibrations, prior to taking the vehicle for service. To do this, follow the Back To Stock instructions in Section 2. This allows the original factory calibrations to be transferred from their stored location in the programmer and reinstalled into the vehicle's computer. This process returns the computer to factory stock and resets the programmer to allow the user to reprogram the vehicle AFTER repairs or service.

Why Is It Necessary To Return To The Stock Tuning?

Depending on the type of service, the vehicle's computer may require an update. The factory diagnostic equipment will automatically update the vehicle's computer to the original calibrations or to the most recent updated version, erasing the Hypertech optimized tuning and other adjustable features that were installed by the programmer.

Reprogramming The Vehicle After Service Or Repair

After the vehicle has been serviced or repaired, you may retune your vehicle. If the factory has reprogrammed the vehicle with a calibration that is new and not recognized by the programmer, the programmer will display an "Update Required" message. If this occurs, the user will be instructed on how to update the programmer. This is a safety feature of the programmer. We do not want to rewrite any information if it is different from the calibrations currently stored in the vehicle. Following the instructions will allow the vehicle to have the latest and most current performance calibration that will match the updated factory version. Call the tech service line that appears on the screen for instructions on how to update the programmer. Due to the factory update of the computer, the programmer will have to be upgraded to match the new calibrations that have been installed in the vehicle's computer. There is no charge for calibration updates.

3-2: TROUBLESHOOTING GUIDE

VEHICLE NOT SUPPORTED

The following message is displayed when the programmer does not recognize the vehicle, along with an error code: **“THIS VEHICLE IS NOT SUPPORTED FOR PROGRAMMING; CALL HYPERTECH AT (800) 532-3351”**; Code 0137, Code 027B, Code 0300

Verify that the vehicle year/make/model/engine shows to be supported with the programmer part number. The part number is located on the label on the back of the programmer, and on the end of the box. If the vehicle is supported, the programmer may need to be updated to the latest revision to work on your vehicle. See Section 5 for instructions on how to update your tuner.

LOSS OF COMMUNICATION

The following message will appear if the programmer is unable to communicate with the vehicle’s computer. **“AN ERROR OCCURRED DURING VEHICLE PROGRAMMING; CALL HYPERTECH (800) 532-335”**

Take these steps to correct the problem:

1. Make sure that the ignition key is in the RUN position and that the engine is not running.
2. Make sure that both ends of the cable are securely attached.
3. Wait at least five (5) minutes for the programmer to re-establish communication before restarting the programming process.
4. If the three (3) steps above do not correct the problem, call Hypertech tech service line on the phone number that appears on the programmer screen.

CABLE REMOVED WHILE PROGRAMMING

The programmer will lose power during programming if the cable is removed for any reason. If this happens, simply reconnect the cable, and follow the messages on the programmer.

ATTEMPTING TO PROGRAM A DIFFERENT VEHICLE

Code 0125: VIN Mismatch will appear if attempting to program the computer in another vehicle without first programming the last vehicle it was used on back to stock. Return the previous vehicle back to stock, following the Back To Stock procedure in Section 2.

UPDATE REQUIRED

There are several instances where an update may be required to use the programmer. The following codes require an update. The programmer will display a message that it needs to be updated. The programmer can be updated via the internet using the Hypertech Tuner Update Software, and the supplied USB cable. See Section 5 for instructions on how to update your tuner.

Code 01C8: Stock calibrations not supported in programmer

Code 0128: Needs preloaded tune (2011- up GM Duramax diesels)

BLANK SCREEN

If the programmer does not power up, make sure that both ends of the cable are fully inserted. If the programmer still does not turn on, check for a blown fuse in the vehicle fuse panel for either the cigarette lighter or the accessory circuit. Replace with the proper amperage fuse.

SECTION 4: UPDATING YOUR PROGRAMMER

The Max Energy 2.0 may need to be updated if support for the vehicle was added after the manufacture date of the programmer, or if the vehicle has a calibration that is not supported by the programmer. Follow the steps below to update your programmer.

1. Install the Tuner Update Software.

The Tuner Update Software can be installed on any Windows based PC from the same CD that these instructions are located, or it can be downloaded from the Hypertech website at the link below. Note: The Tuner Update Software is not compatible on Apple/MAC operating systems.

<http://www.webservice99.com/downloads/tunerupdateapplication/V2/Current/UpdateInstallV2.exe>

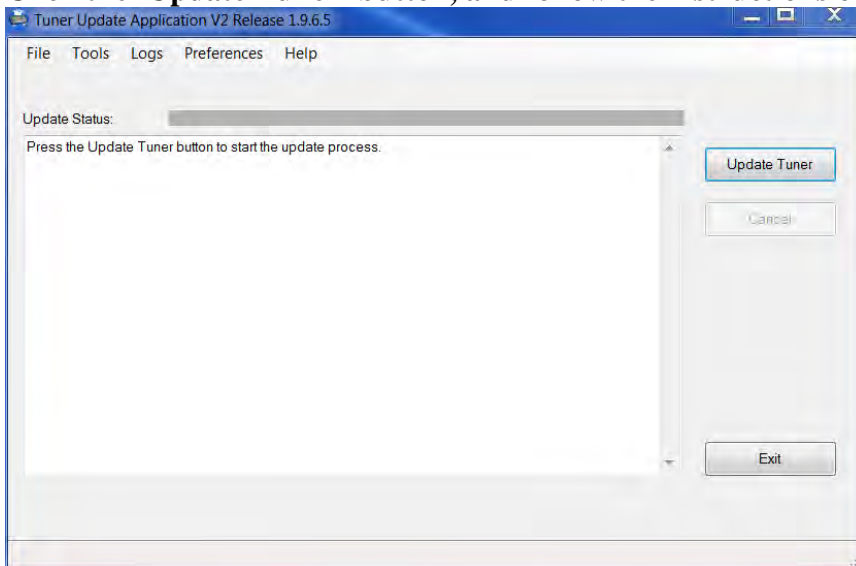
2. Connect the programmer to the PC with the supplied USB cable.

3. Open the Tuner Update Application software from the PC.

Once the update software is installed, there will be a shortcut installed on your desktop. Double click the shortcut to start the program.



4. Click the 'Update Tuner' button, and follow the instructions on the screen.



SECTION 5: PRODUCT WARRANTY & CONTACT INFO

5-1: Factory Direct Limited 1 Year Warranty

PRODUCT WARRANTY Factory Direct Limited 1 Year Warranty.. Effective January 1, 2020 replaces and supersedes previous product warranty policy.

Hypertech products are warranted against defects in materials or workmanship for one year from the date of purchase. Hypertech’s liability under this warranty shall be limited to the prompt correction or replacement of any defective part of the product which HYPERTECH determines to be necessary. This Limited 1 Year Warranty is to the original purchaser providing all the information requested is furnished. You must retain a copy of your original sales invoice or receipt. Without proper documentation, a service fee will be applied. Third Party Resellers and Resold units are NOT covered under this warranty.

Note: The Max Energy 2.0 is designed to use on only one vehicle at a time. In order to use the programmer on another vehicle, the vehicle it is currently being used on must be returned to stock by following the Back To Stock procedure in Section 2. Once the programmer has been returned to stock, it can then be used on another vehicle, if that vehicle is supported by the programmer.

The Max Energy 2.0 is limited for use on a maximum of three (3) vehicles. Each time the programmer is connected to a vehicle, the VIN number is stored in the programmer memory. Once the programmer has a third VIN number stored, it will no longer be able to be reused on another vehicle. Warranty coverage is only for the original purchaser, and on the original vehicle the programmer was used on.

Additional licenses for new vehicles can be purchased from Hypertech. To order, call our Tech Department at 901-382-8888, or email techsupport@hypertech.com, with the serial number off of the programmer.

5-2: Emissions Legality Statement

Max Energy 2.0, part #2000, for the 2015-2016 Ford F-150 3.5L EcoBoost is NOT legal for sale or use in California. If you have purchased this product for use on a vehicle that is registered in the State of California, return it immediately to the place of purchase for a full refund.

5-3: Contact Info

Tech Department

901-382-8888 Phone

901-373-5290 Fax

techsupport@hypertech.com

Office Hours: Monday-Friday, 8AM-5PM Central Time

Hypertech, Inc.

3215 Appling Rd.

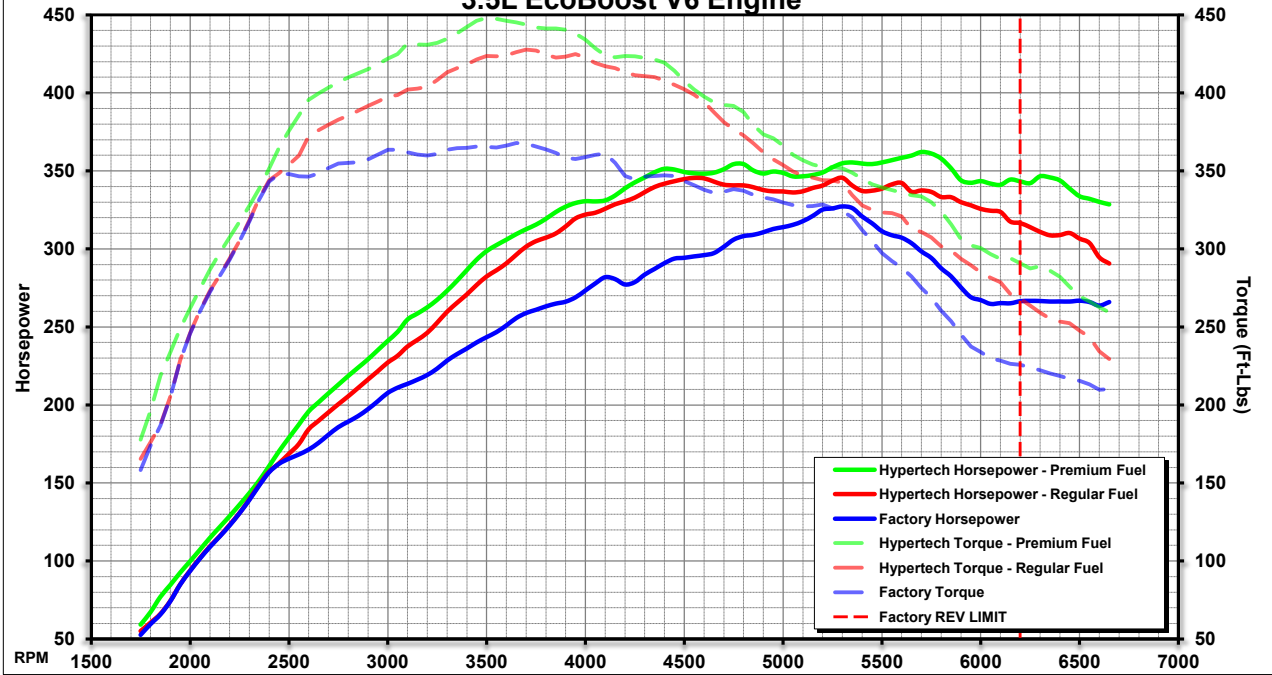
Bartlett TN 38133

www.hypertech.com

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HYPERTECH DYNAMOMETER TEST RESULTS

2015-2016 Ford F150
3.5L EcoBoost V6 Engine



Tuning	Horsepower		Torque	
	Maximum	Gain	Maximum	Gain
Hypertech Tuning 93 Octane Fuel	362 HP @ 5700 RPM	+79 HP @ 6150 RPM	448 Ft-Lbs @ 3500 RPM	+83 Ft-Lbs @ 3500 RPM
Hypertech Tuning 91 Octane Fuel	351 HP @ 4700 RPM	+66 HP @ 6200 RPM	444 Ft-Lbs @ 3600 RPM	+78 Ft-Lbs @ 3600 RPM
Hypertech Tuning 89 Octane Fuel	346 HP @ 5300 RPM	+66 HP @ 6200 RPM	429 Ft-Lbs @ 3700 RPM	+68 Ft-Lbs @ 3950 RPM
Hypertech Tuning 87 Octane Fuel	346 HP @ 5300 RPM	+59 HP @ 6000 RPM	428 Ft-Lbs @ 3700 RPM	+67 Ft-Lbs @ 3950 RPM
Factory Stock Tuning	327 HP @ 5300 RPM	—	368 Ft-Lbs @ 3700 RPM	—

RPM	Horsepower		
	Factory HP	Hypertech Regular Fuel HP (Gain)	Hypertech Premium Fuel HP (Gain)
1750	53	55 (+2)	59 (+6)
2000	94	94 (+0)	100 (+6)
2500	166	169 (+3)	179 (+13)
3000	208	227 (+19)	241 (+33)
3500	243	282 (+39)	299 (+56)
3700	259	301 (+42)	313 (+54)
3950	269	319 (+50)	329 (+60)
4000	273	322 (+49)	331 (+58)
4500	294	345 (+51)	349 (+55)
5000	314	337 (+23)	349 (+35)
5300	327	346 (+19)	355 (+28)
5500	311	339 (+28)	355 (+44)
5700	298	337 (+39)	362 (+64)
6000	267	326 (+59)	343 (+76)
6150	265	317 (+52)	344 (+79)
6200	266	316 (+50)	343 (+77)
6300	267	311 (+44)	346 (+79)
6400	266	309 (+43)	344 (+78)
6500	267	307 (+40)	334 (+67)
6600	264	294 (+30)	330 (+66)
6650	266	291 (+25)	328 (+62)

RPM	Torque		
	Factory Torque	Hypertech Regular Fuel Torque (Gain)	Hypertech Premium Fuel Torque (Gain)
1750	158	166 (+8)	178 (+20)
2000	246	246 (+0)	262 (+16)
2500	348	354 (+6)	376 (+28)
3000	364	398 (+34)	422 (+58)
3500	365	424 (+59)	448 (+83)
3700	368	428 (+60)	444 (+76)
3950	358	425 (+67)	438 (+80)
4000	359	423 (+64)	434 (+75)
4500	343	402 (+59)	408 (+65)
5000	330	354 (+24)	366 (+36)
5300	324	342 (+18)	352 (+28)
5500	297	323 (+26)	339 (+42)
5700	275	311 (+36)	334 (+59)
6000	234	285 (+51)	301 (+67)
6150	226	271 (+45)	294 (+68)
6200	226	268 (+42)	291 (+65)
6300	222	259 (+37)	289 (+67)
6400	219	253 (+34)	282 (+63)
6500	216	248 (+32)	270 (+54)
6600	210	234 (+24)	263 (+53)
6650	210	229 (+19)	259 (+49)

Red Shaded Area Denotes Power Measured Above Factory REV Limiter of 6200 RPM

11 Fully Customizable Tuning Features

- **ENGINE TUNING:** 4 Optimized Tunes for 87, 89, 91, & 93+ Octane Fuels
- **TIRE SIZE:** Correct Speedometer & Odometer for 24"-54" Tires
- **TPMS:** Quick Command Adjustable Warning Pressure for 20-115psi
- **SHIFT POINTS:** Raise or Lower Full Throttle Shift Points Per Gear
- **SHIFT FIRMNESS TUNES:** Stock, Tow, Street, Sport, Performance
- **SHIFT RESPONSE:** Hyper-Mileage, Mileage, Stock, Tow, Street, Sport, Performance, Track
- **DTC'S:** Read, Display Codes With Full Definition, and Clear Codes
- **REV LIMIT:** Raise or Lower up to +/-500RPM
- **TOP SPEED LIMITER:** Lower, or Raise to Match Speed Rate Tires
- **FANS:** Adjust On/Off Temperatures
- **THROTTLE RESPONSE:** Normal/Sport Modes*: Stock, Tow, Street, Sport, Performance

* Drive Mode Specific Features Only Applicable If Equipped



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(901) 385-1888 © Hypertech, Inc. 2016

Vehicle Tested: 2016 Ford F-150
Engine: 3.5L EcoBoost V6
Transmission: 6-Speed Auto (6R80)
Gear Ratio: 3.31:1
Tire Size: 275/55R20
Test Date: 5/3/2016

