

PPF2

HYPERTECH® POWER PROGRAMMER III™



**FOR FORD TRUCK/SUV
WITH 4.2/4.6/5.4/6.8L ENGINE**

STEP-BY-STEP INSTALLATION INSTRUCTIONS

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IMPORTANT

- The Power Programmer for Ford 4.6/5.4/6.8L trucks and SUVs is legal for sale or use on California pollution-controlled motor vehicles according to the CARB Executive Order process. In the interest of improved air quality, the California Air Resources Board (CARB) requires new vehicle and manufacturers of aftermarket parts to develop engine and emissions equipment that either reduce or maintain specific air pollutants affected by vehicle use. Both the California Vehicle Code (section 27156) and Federal Clean Air Act (administered by the Environmental Protection Agency) prohibit modifications that increase vehicle emissions. Aftermarket parts manufacturers, particularly in the high-performance segment, are required to obtain CARB approval in the form of executive Orders (E.O.s) for any product not qualifying as a direct replacement for an original equipment part. **Hypertech includes meeting all E.O. requirements in its product development process. This guarantees that users of Hypertech “Power Tuning” products will meet certification requirements when registering, selling, or needing to pass various emissions tests or Inspection and Maintenance (I&M) programs administered by state or local enforcement agencies.** Make sure that any emissions-related product you buy and install carries an E.O. number or is pending an E.O. **Without this verification you are at risk, in potential violation of regulations and may incur unnecessary financial obligations during vehicle inspections or emissions tests.** A CARB E.O. sticker is supplied. Keep this sticker in your vehicle or attach it inside the door jam as proof that the Power Programmer is street legal.
- Your vehicle’s computer will not be programmed at the end of the programming menus until you select “TO CONTINUE, PRESS ‘Y’” on page 17. Feel free to experiment with the programming choices without the fear of accidentally programming the wrong information into your vehicle computer. You can make any choice that you want, change it again and again, without programming it into your vehicle’s computer until you are absolutely ready.
- While the programmer is programming:
 - * **DO NOT leave the vehicle while programming is in process.**
 - * **DO NOT program your vehicle without a fully charged battery. If, after you have programmed your vehicle’s computer with the Hypertech Power Programmer, you decide to change the tuning, It is recommended that you recharge your vehicle’s battery. You may either drive the vehicle to charge the battery or use a battery charger. But either way, **MAKE SURE** the battery holds a full charge.**
 - * **DO NOT disturb the cable while programming.**
 - * **The ONLY time you may remove the programmer cable from the DLC safely is **PRIOR** to pressing ‘Y’ to program your entries. However, any programming choices you have made **WILL NOT** be saved. *NOTE: It is **NOT** safe to unplug the programmer cable any time **AFTER** you have pressed ‘Y’ to program.***
 - * **DO NOT turn the key off UNLESS instructed by the programmer.**
 - * **DO NOT start the engine.**

Any of these actions will interrupt the programming process. The programmer is designed to recover from these actions, but they should be avoided.

HYPERTECH POWER PROGRAMMER III INSTALLATION INSTRUCTIONS OVERVIEW

Congratulations! You are the owner of the Power Programmer III, the latest in high-performance tuning technology. Now you can optimize your engine's tuning, as well as adjust other vehicle parameters (see table of contents), all at the touch of a button.

Your vehicle has an onboard computer that controls the engine and transmission. Inside your vehicle's computer is a FLASH memory chip which contains the vehicle's programming. The programmer actually reprograms this FLASH computer chip, according to your specifications, with Hypertech's Power Tuning. This is the only way an individual can reprogram some 1994-1995 and all 1996 and newer vehicles sold in the United States.

To reprogram your vehicle's computer, simply plug the programmer cable into the vehicle's diagnostic connector located under the dash panel on the driver's side. Set the parking brake. Next, turn the ignition key to RUN but do not start the engine. Press the ▲ arrow on the programmer. It will then identify your vehicle and display a series of options on its screen. When completed, turn the key to OFF and disconnect the cable from the diagnostic connector. Now you're ready to ***Feel the Power!***

Hypertech's Power Tuning can be stored in only one (1) vehicle at a time. The Power Programmer can be reconnected to remove the Power Tuning and return the vehicle to the factory programming at any time. After you have performed this step, your vehicle will be in its stock configuration.

You may also reconnect your programmer at any time to change the programming. For example, if you have replaced your factory tires with different diameter tires, you will want to correct your speedometer, odometer, and automatic transmission shift points. Simply reconnect your programmer, answer the necessary option(s), and reprogram your vehicle. You do not have to return to stock first.

SECTION 1: POWERSTAT INSTALLATION

To complete your performance package, you may choose to use a low-temp thermostat. Replacing the factory thermostat with a Hypertech PowerStat will allow the engine to run cooler, increasing power, and reducing the engine's tendency to detonate.

Tools needed for 4.6/5.4L 2-Valve (old body style) Truck/SUV

8mm and 10mm socket

Ratchet

Flathead screwdriver

Antifreeze

- **WARNING: NEVER ATTEMPT TO CHANGE A THERMOSTAT ON A HOT ENGINE.**
- **SERIOUS INJURY CAN OCCUR IF THE RADIATOR CAP IS REMOVED WHILE THE COOLING SYSTEM IS HOT.**
- **THE ENGINE SHOULD ALWAYS BE COLD WHEN INSTALLING THE POWERSTAT.**

NOTE: After installing the PowerStat, if any coolant needs to be added to the vehicle, **make sure you put the same color coolant back into the vehicle.** If your vehicle has orange coolant, replace with orange coolant. If green, replace with green.

Part #1025 - 180° PowerStat

1. Drain the coolant from the vehicle.

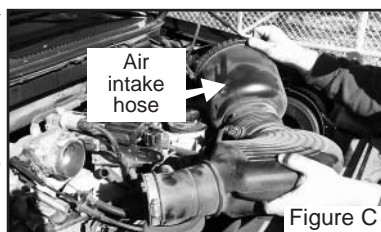
2. See Figure A. Using the 10mm socket and ratchet, remove the intake manifold cover.



3. See Figure B. Loosen the clamp that fastens the air intake hose to the throttle body.



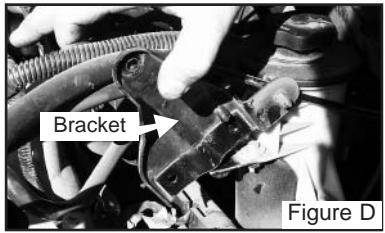
4. See Figure C. To gain access to the factory thermostat, remove the air intake hose.



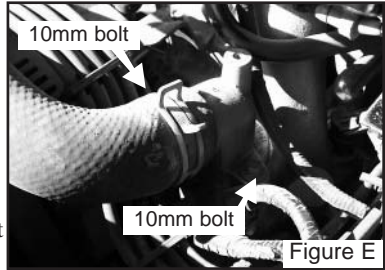
5. See Figure D. Using the 8mm socket and ratchet, remove the three (3) bolts that hold the power steering reservoir bracket to the factory thermostat.

6. See Figure E. Remove the two (2) 10mm bolts that hold the factory thermostat in place.

7. Lift out the stock thermostat. Use a screwdriver to gently pry, if necessary. Clean all the sealing surfaces.



8. Install the PowerStat, making sure that it's positioned correctly (spring end facing down into the intake manifold). Then, place the rubber O-ring of the factory thermostat onto the top of the new PowerStat.



9. Reinstall the thermostat housing and bolts.

10. Reinstall the power steering reservoir bracket, air intake hose, and intake manifold cover.
11. Remove the radiator cap and fill the cooling system with the proper water/coolant mixture (antifreeze).
12. Start the vehicle and allow it to warm up to normal operating temperature.
13. Check the coolant level in the radiator overflow/fill reservoir and fill as needed.

Tools needed for 6.8L Truck/SUV installation:

10mm socket and ratchet

Flathead screwdriver

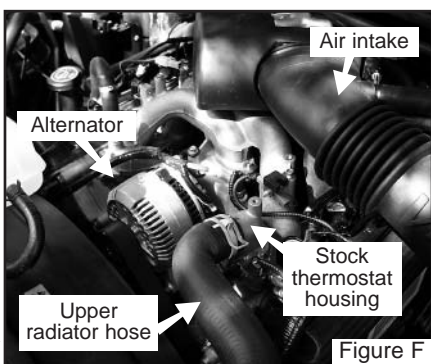
Antifreeze

- **WARNING: NEVER ATTEMPT TO CHANGE A THERMOSTAT ON A HOT ENGINE.**
- **SERIOUS INJURY CAN OCCUR IF THE RADIATOR CAP IS REMOVED WHILE THE COOLING SYSTEM IS HOT.**
- **THE ENGINE SHOULD ALWAYS BE COLD WHEN INSTALLING THE POWERSTAT.**

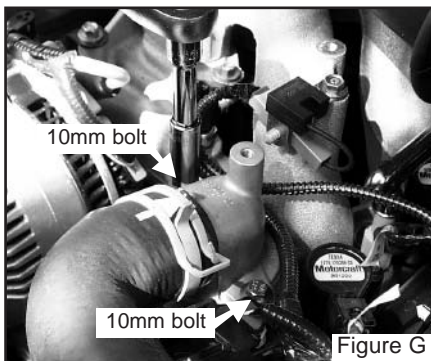
NOTE: After installing the PowerStat, if any coolant needs to be added to the vehicle, **make sure you put the same color coolant back into the vehicle.** If your vehicle has orange coolant, replace with orange coolant. If green, replace with green.

Part #1025 - 180° PowerStat

1. Drain the coolant from the vehicle.
2. See Figure F. Locate the stock thermostat housing on top of the intake manifold on the driver's side.



3. See Figure G. Remove the two (2) 10mm bolts that hold the factory thermostat housing in place.

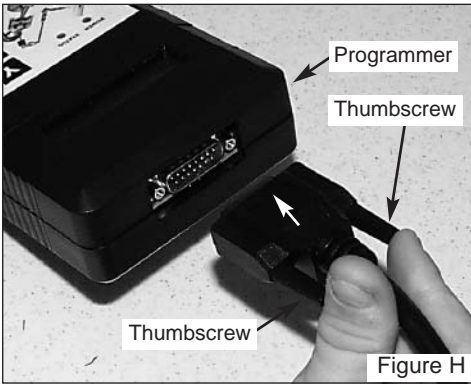


4. Lift out the stock thermostat. Use a screwdriver to gently pry, if necessary. Clean all the sealing surfaces.

5. Install the PowerStat, making sure that it's positioned correctly (spring end facing down into the intake manifold). Then, place the rubber O-ring of the factory thermostat onto the top of the new PowerStat.
6. Reinstall the thermostat housing and bolts (Step 3).
7. Remove the radiator cap and fill the cooling system with the proper water/coolant mixture (antifreeze).
8. Start the vehicle and allow it to warm up to normal operating temperature.
9. Check the coolant level in the radiator overflow/fill reservoir and fill as needed.

SECTION 2: PROGRAMMING INSTRUCTIONS

- Connect one (1) end of the provided cable to the programmer as in Figure H and tighten the two (2) thumbscrews.



- See Figure I. Locate the Data Link Connector (DLC) under the driver's side of the dash panel near the right knee position.



- Plug the programmer cable into the DLC. Make sure the cable is plugged in completely to ensure a good connection.
- Set the parking brake and turn the ignition key to the RUN position but do not start the engine.

IMPORTANT:

- DO NOT LEAVE THE VEHICLE WHILE PROGRAMMING IS IN PROCESS.**
- MAKE SURE THE VEHICLE BATTERY IS FULLY CHARGED BEFORE PROGRAMMING.**
- DO NOT OPERATE ELECTRICAL ACCESSORIES (RADIO, WINDOWS, WIPERS, ETC.), AND DISCONNECT ANYTHING PLUGGED INTO THE CIGARETTE LIGHTER OR ACCESSORY PLUGS UNDER THE DASH WHILE PROGRAMMING.**
- DO NOT ATTEMPT PROGRAMMING WHILE THE VEHICLE IS CONNECTED TO A BATTERY CHARGER.**

- Press the ▲ arrow on the programmer. The programmer will perform a system test. If the POWER and STATUS LEDs do not come on and the programmer does not perform the system test, make sure both ends of the cable are securely attached and press the the ▲ arrow again. These screens will now appear:

HYPERTECH
POWER PROGRAMMER

XXXX-XXXX FORD
X.XL TRUCK

- Next, the programmer will show copyright information. Then, this screen should appear:

COMMUNICATING
WITH THE VEHICLE

- The programmer will check to see if any diagnostic trouble codes (DTCs) are found in the vehicle computer. This screen will now appear:

CHECKING FOR DIAGNOSTIC TROUBLE CODES (DTCs)

- If no DTCs are found, this screen will appear:

NO DTCs REPORTED

- If no DTCs are found, the Power Programmer will then go to Step A (Engine Tuning). If any DTCs are found, this screen will appear:

"X" DTCs REPORTED

- "X" represents the number of DTCs found in the vehicle. This screen will now appear:

VIEW DTCs = Y
CLEAR DTCs = N

- Press 'Y' to view the DTCs found in the vehicle. Press 'N' to clear the DTCs without viewing them. If you press 'Y', these screens will appear:

WRITE DOWN THE FOLLOWING DTCs AND REFER TO
FACTORY MANUALS FOR EXPLANATION

DTC #1 --- PXXXX
NEXT DTC = N

IMPORTANT NOTE

Hypertech, Inc. recommends proper diagnosis and repair of reported DTCs prior to programming. For Diagnostic Trouble Code (DTC) interpretations, refer to factory manuals, see your local parts dealer, or visit internet sites that provide this type of information. An example of such a website is:

www.bentleypublishers.com/tech/vw/vw.dtc.table.htm

- Press the 'N' button to view the next DTC (if any). Once you have viewed all the DTCs, this screen will appear:

NO MORE DTCS, TO VIEW AGAIN, PRESS Y
TO CONTINUE, PRESS N

- Press 'Y' to view the DTCs again. Press 'N' to continue. If you press 'N', this screen will appear:

DTCS MUST BE CLEARED BEFORE CHANGING PROGRAM. TO CLEAR DTCS PRESS Y
TO KEEP DTCS AND EXIT PROGRAM PRESS N

- Press 'N' to exit the program. This screen will appear:

TURNING POWER
PROGRAMMER OFF

- Press 'Y' for the Power Programmer to clear the DTC(s). These screens will now appear:

CLEARING DTCS

ALL DTCS HAVE
BEEN CLEARED

- The Power Programmer has now successfully cleared the DTCs found in the vehicle's computer. This screen will now appear:

TO ENTER POWER PROGRAMMER MODE, PRESS Y
TO EXIT PROGRAM, PRESS N

- This screen shows if the VIN number is recognized as the VIN of the vehicle programmed.
- **The programmer will display a series of options available for your particular application.** For each option, press the 'Y' button to make a change. Press the 'N' button to make no change and proceed to the next option. For some options, you will use the ▲ and ▼ arrows to point to a particular selection. Pressing the 'Y' button will then lock in your selection.

A. ENGINE TUNING

TO INSTALL HYPERTECH POWER TUNING, PRESS Y
TO KEEP FACTORY ENGINE TUNING, PRESS N

- If you press ‘Y’, you will see the following screen:

USE UP/DOWN ARROWS TO CHOOSE PERFORMANCE TUNING, THEN PRESS Y TO SELECT OR N TO EXIT.
__ OCTANE

- After pressing ‘Y’ to install Hypertech Power Tuning, use the ▲ and ▼ arrows to select either regular or premium octane Power Tuning. Press ‘Y’ to lock in the desired Power Tuning program.

B. REV LIMITER

TO ADJUST ENGINE REV LIMIT, PRESS Y
TO KEEP STOCK ENGINE REV LIMIT, PRESS N

- Press ‘N’ to keep the stock engine rev limit. Making this choice will skip to the next option.
- Press ‘Y’ to adjust the engine rev limit to a value other than stock. The stock rev limit may vary depending on year and engine size of the vehicle. Please refer to the owner’s manual for the stock engine rev limit. This screen will now appear:

USE UP/DOWN ARROWS TO ADJUST ENGINE REV LIMIT, THEN PRESS Y TO SELECT OR N TO EXIT.
__ __ RPM

- Press the ▲ and ▼ arrows to increase or decrease the engine rev limit. The rev limit can be increased or decreased in 100 RPM increments. Press ‘Y’ to lock in the desired value.

NOTE: If you are changing your RPM “rev” limiter, you must also adjust your shift points accordingly (See chart above or Section G on page 17). Not doing so may result in damage to your engine or powertrain.

<u>Rev Limit</u>	<u>Shift Points</u>	<u>Rev Limit</u>	<u>Shift Points</u>
-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		

C. TOP-SPEED LIMITER

TO ADJUST THE TOP SPEED LIMITER TO MATCH THE SPEED RATING OF HIGH-PERFORMANCE TIRES, PRESS Y
TO KEEP THE STOCK TOP SPEED LIMITER, PRESS N

- Press the 'N' button to keep your vehicle's stock top-speed limiter and skip to the next option.
- If you have installed factory-approved high-performance tires, press the 'Y' button to change your vehicle's top-speed limiter to match the speed rating of those tires. The speed rating or speed symbol will be found on the sidewall of your tires. Pressing 'Y' will display this screen:

UP/DN TO CHANGE
H-128 MPH = Y

- Use the ▲ and ▼ arrows to see the top-speed limits available for your vehicle. Press 'Y' to lock in the correct top-speed limit. Here are the corresponding symbols and maximum top-speed limits (depending on model) that can be programmed into your vehicle:

M - 81 MPH	U - 124 MPH
N - 87 MPH	H - 130 MPH
P - 93 MPH	V - 149 MPH
Q - 99 MPH	W - 168 MPH
R - 106 MPH	Y - 186 MPH
S - 112 MPH	Z - 255 MPH
T - 118 MPH	

IMPORTANT NOTE: Changes to top-speed limiter is not recommended for load rated tires. Serious damage or injuries could occur. Also, for safety reasons, the actual top-speed limit set in the vehicle is two (2) miles-per-hour less than the selected tire's speed rating.

D. TIRE SIZE

IF TIRE HEIGHT HAS BEEN CHANGED FROM ORIGINAL, PRESS Y
IF TIRE HEIGHT HAS NOT BEEN CHANGED, PRESS N

- Press 'Y' if you have installed tires with an overall height that is different than the original factory tires. This feature will allow you to adjust your speedometer and part-throttle shifting (for automatic transmissions) for the new tire height. Pressing 'Y' will display this screen:

USE UP/DOWN ARROWS TO SELECT CORRECT TIRE HEIGHT. THEN PRESS Y TO SELECT OR N TO EXIT
XX.XX IN

- Use the ▲ and ▼ arrows to adjust the tire height in 1/4" increments. Below are the tire size limits that are available for specific year and model Ford vehicles:

2004-2007 5.4L 3-valve F150/Expedition – 24"-54"

2005-2007 4.2/4.6L 2-valve F150 – 24"-54"

1999-2003 5.4L 2-valve F150/Expedition – 24"-34"

1999-2003 5.4L 2-valve F250 – 29"-34"

1999-2004 4.6L 2-valve F150/Expedition – 24"-34"

1999-2004 6.8L F250/Excursion– 29"-34"

HOW TO DETERMINE TIRE HEIGHT

If you do not know your tire height, ask your tire dealer or measure a tire as follows:

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.

E. REAR GEAR RATIO

IF REAR AXLE HAS BEEN CHANGED FROM ORIGINAL, PRESS Y

IF REAR AXLE RATIO HAS NOT BEEN CHANGED, PRESS N

- Press 'Y' if you have changed the rear gear ratio. Press 'N' if the vehicle's rear gear ratio has not been changed from stock. If you press 'Y', this screen will appear:

USE UP/DOWN ARROWS TO SELECT CORRECT REAR AXLE RATIO, THEN PRESS Y TO SELECT OR N TO EXIT

._ _ :1

- Use the ▲ and ▼ arrows to see all of the gear ratios available for your vehicle. This choice will allow you to adjust your speedometer and part-throttle shifting (for automatic transmissions) for the new rear gear ratio. Then, press the 'Y' button to lock in the desired rear gear ratio. Pressing 'N' will skip to the next option.

F. TRANSMISSION

IF VEHICLE HAS AN AUTOMATIC TRANSMISSION, PRESS Y

IF VEHICLE HAS A MANUAL TRANSMISSION, PRESS N

- Press 'Y' if you have an automatic transmission or Press 'N' if you have a manual transmission.

G. TRANSMISSION SHIFT POINT RPM

Be sure to read and understand this entire section before attempting to re-program your shift points.

The shift point option allows you to change the RPM at which your transmission shifts at wide-open throttle, to find the very best shift points for maximum acceleration. You can *try* optimizing the shift points using the seat-of-your-pants technique, but how will you know if your e.t.'s improved? The only accurate method for this optimization is at the track with timing slips as the measuring device.

In order to optimize the performance of any vehicle, consistent test results are necessary. If a vehicle varies plus or minus 1/10th of a second in the quarter-mile, run to run, with *no* changes, it is impossible to test any product (shift point, starting line RPM, etc.) that has the potential to gain 1/10th or 2/10ths of a second, because the gains or losses on any one (1) run could be due to inconsistency rather than the variable being tested. Therefore, before testing *anything*, make the vehicle consistent.

If present, wheel-spin is the overwhelming cause of inconsistency. You *must* develop a starting-line technique that gives you the best repeatable elapsed times. Tires are the most important product you need to cure wheel-spin. For street-driven vehicles, we recommend D.O.T. approved street slicks as large as you can fit under the wheel wells of your vehicle. In any case, before testing shift points, arrive at the starting line technique that gives you the best repeatable results, with or without slicks.

Throw out *any* run with excessive wheel-spin, and try to get at least three (3) runs that repeat within 4 or 5 hundredths of a second. Then average them and **use this average value (not just your best run) for all testing comparisons.** Your best e.t.'s will occur when you leave as hard as you can without wheel-spin. Confirm this by practicing and observing the results.

And finally, a very important point for any and all high-performance testing: always test only one (1) variable at a time until it is optimized. For shift point optimization, this means test only one (1) shift point at a time until the best RPM is found, leaving all other shift points alone. Once the best 1-2 shift point is found, program it in and leave it. Then repeat the same optimization procedure for the 2-3 shift point.

It is not usually necessary to optimize the 3-4 shift point (unless the gearing in the vehicle causes the shift to occur during the 1/4-mile run) because it will occur at a speed so high that it is out of range, even on a race track. However, if gearing is causing either the 2-3 or the 3-4 shift to occur *just before the end of the 1/4-mile*, you should try raising the shift point enough to allow the vehicle to cross the finish line without making that last shift.

The highest shift point RPM you can use must always be less than the rev limit RPM. If you do hit the rev limit, the computer will shut the fuel off until RPM drops sufficiently, so let off the throttle and abort that test run. The rev limiter is there to protect your valve-train and the engine from damage. Even if you went quicker every time you raised the shift point RPM, stop at 100 RPM below the rev limit. That's the *most* RPM you can use safely for that shift point.

- This is the first screen you will see:

```
TO ADJUST TRANSMISSION SHIFT POINTS, PRESS Y
TO KEEP STOCK SHIFT POINTS, PRESS N
```

- If you press 'Y', you will see the following screen:

```
USE UP/DOWN ARROWS TO ADJUST SHIFT POINT. THEN PRESS Y TO SELECT OR N TO EXIT
1-2 SHIFT  _ _ _ RPM
```

The automatic transmission shift point adjustment range is:

1-2 shift: +/-500 RPM (In approximately 100 RPM increments)

2-3 shift: +/-500 RPM (In approximately 100 RPM increments)

3-4 shift: +/-500 RPM (In approximately 100 RPM increments)

Press the ▲ arrow once for 100 RPM, twice for 200 RPM, etc. and then press the 'Y' button to enter your 1-2 shift point choice. If you don't want to change the 1-2 shift point, choose "stock", and press 'Y'.

After downloading the 1-2 shift point you want to test, disconnect the programmer and make your test runs (At least three (3), but as many as needed to get three (3) good runs for averaging.). If you've seen a gain, continue moving in that direction until you begin to slow down or until you are within 100 RPM of the rev limit. You can now review all of your test results, select the best 1-2 shift point for your vehicle, and program it in.

If two (2) different shift points run the same average e.t.'s, use the lower RPM to save wear and tear on the vehicle. Once optimized, repeat the same procedure for the 2-3 shift and the 3-4 shift.

NOTE: If you are changing your engine rev limit, you must also adjust your shift points accordingly (See chart below or Section B on page 11). Not doing so may result in damage to your engine or powertrain.

<u>Rev Limit</u>	<u>Shift Points</u>	<u>Rev Limit</u>	<u>Shift Points</u>
-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		

H. TRANSMISSION SHIFT FIRMNESS (AUTOMATICS ONLY)

IF YOU HAVE INSTALLED AN AFTERMARKET SHIFT KIT, PRESS Y
IF THERE IS NO AFTERMARKET SHIFT KIT INSTALLED, PRESS N

- Press ‘Y’ if you have installed an aftermarket shift kit into your automatic transmission. The shift kit has already firmed up your shifts. **You DO NOT want your programmer to make them even firmer because transmission damage may occur.**
- Press ‘N’ if you have not installed an aftermarket shift kit into your automatic transmission. Pressing ‘N’ will give you the option of installing increased transmission shift firmness. This screen will now appear:

TO INCREASE TRANSMISSION SHIFT FIRMNESS, PRESS Y
TO KEEP STOCK SHIFT FIRMNESS, PRESS N

I. REPORT

- After your last choice has been made, this screen will appear and list all of your choices:

YOU HAVE CHOSEN: TUNING: 93 OCTANE.....TO CONTINUE PRESS Y
TO CANCEL, PRESS N

PLEASE WAIT...

- Press ‘Y’ to continue with programming, Press ‘N’ to return to Step A (Engine Tuning).

J. READING

PLEASE TURN OFF IGNITION AND PRESS Y

PLEASE TURN
IGNITION BACK ON

- The programmer will now read the calibration of your vehicle's computer. This screen will appear:

READING COMPUTER
X%

NOTE: This Step may take up to twenty (20) minutes to complete.

K. PROGRAMMING

- This screen will now appear:

PLEASE TURN OFF IGNITION AND PRESS Y

- Next, this screen will appear:

PLEASE TURN
IGNITION BACK ON

- The programming will begin. This display will show percentage completion while the programming is taking place:

WRITING COMPUTER
X%

NOTE: Programming may take up to thirty (30) minutes to complete.

- While the unit is programming, the following is **EXTREMELY IMPORTANT**:
 - * **DO NOT LEAVE THE VEHICLE WHILE PROGRAMMING IS IN PROCESS.**
 - * **DO NOT DISTURB THE CABLE.**
 - * **DO NOT TURN THE KEY OFF.**
 - * **DO NOT START THE ENGINE.**
- Any one of these actions will disturb the programming process. The programmer is designed to recover from these actions, but they should be avoided.

- When programming reaches 100%, the following screens will appear:

PLEASE TURN OFF IGNITION AND PRESS Y

PLEASE WAIT...

PLEASE TURN KEY TO RUN POSITION, BUT DO NOT CRANK ENGINE
WHEN FINISHED, PRESS Y

- **NOTE:** If the vehicle is equipped with a factory-installed anti-theft system (PATS), the following screen will appear:

RESETTING PCM

X%

- Press ‘Y’ and the programmer will turn itself off. Turn the ignition key to OFF for at least ten (10) seconds. Remove the programmer cable from the DLC under the dash panel.
- Start the engine and make sure the Check Engine light on your instrument cluster goes out (If it stays on or flashes, call Hypertech at 901-382-8888). Warm up the engine and make sure it is running smoothly.
- **CHECK FOR DETONATION.** Whether you have selected Power Tuning for premium (the highest octane rating available in your area) or regular octane gasoline, you need to check for detonation. This is a “pinging” sound heard during heavy throttle acceleration, indicating the presence of detonation. Make certain you are using gasoline intended for the Power Tuning you have installed. If any “pinging” sound is heard, you should immediately back off the throttle. To discuss, call Hypertech at 901-385-1888.

SECTION 3: PROGRAMMING BACK TO STOCK OR CHANGING OPTIONS

You may return your vehicle's computer to the stock programming at any time after using your programmer. Follow these steps to return your vehicle to the stock tuning or change your option settings.

- Reconnect the programmer to the DLC. Next, turn the ignition key to RUN but do not start the engine. Press the ▲ arrow and wait for the programmer to identify your vehicle, just as before. Since the programmer has programmed your vehicle's computer, this screen will appear:

POWER PROGRAMMER
HAS BEEN USED

- The programmer will then check again for any diagnostic trouble codes in the vehicle's computer (see Section 2 on page 9). Then, this screen will appear:

TO ACCESS POWER PROGRAMMER FEATURES, PRESS Y
TO RETURN VEHICLE TO FACTORY SETTINGS, PRESS N

- If you press 'Y', the programmer will return to Step A (Engine Tuning). If you press 'N', the following screen will appear:

RETURNING TO THE STOCK CALIBRATION TO CONTINUE, PRESS Y.
TO CANCEL, PRESS N

- If the 'Y' button is pressed, programming back to stock will begin. The screens shown will be just like those shown in Section E (Programming). After the programmer reaches 100%, press the 'Y' button to quit and remove the DLC cable as before. (See **NOTE on page 19.**)
- Your vehicle's computer will be in a completely stock tuning configuration.

SECTION 4: TROUBLESHOOTING GUIDE

The programmer will notify you of incidents that are out of the ordinary. Here are some of the screens that may be encountered.

1. CABLE REMOVED WHILE PROGRAMMING

- The programmer will lose power during programming if the cable is removed for any reason. If this happens, leave the ignition in the OFF position, reconnect the cable and press the ▲ arrow. The programmer will identify your vehicle and then display:

POWER PROGRAMMER
HAS PROGRAMMED.

- The programmer will then check for any diagnostic trouble codes (DTCs), then ask if you wish to enter programming mode. If you enter programming mode, these screens will appear:

TURN IGNITION ON
AND PRESS Y.

PROGRAMMING WAS INTERRUPTED!
TO CONTINUE, PRESS Y.

RETURNING TO STOCK CALIBRATION. PRESS Y TO CONTINUE.
TO CANCEL, PRESS N.

PLEASE TURN OFF IGNITION AND PRESS Y.

PLEASE TURN THE
IGNITION BACK ON.

- The programmer will then program the vehicle back to stock. The following screen will appear:

WRITING COMPUTER

NOTE: If the programmer was interrupted during the Reading stage, programming will NOT be considered interrupted.

2. ATTEMPTING TO PROGRAM A DIFFERENT VEHICLE

- If you attempt to program the computer in another vehicle without first programming the original vehicle back to stock, the following screen will appear:

ERROR: 93
PRESS Y

- The VIN number of the vehicle does not match the VIN number that is stored in the programmer from the last vehicle programmed.

3. CALIBRATION NOT FOUND

- If your vehicle has a factory program that is not recognized by the programmer, it cannot continue. This screen will appear:

ERROR: 6D
PRESS Y

- Call Hypertech at the provided phone number on the programmer screen. Please have your vehicle VIN number ready. The Hypertech technical staff will instruct you what to do.

4. SOMEONE REPROGRAMS YOUR COMPUTER

- If a service facility reprograms your vehicle's computer with an update, your Hypertech Power Tuning will be erased. However, all you need to do is reconnect the programmer and press the ▲ arrow. The following screen will appear:

**WARNING: HYPERTECH WARRANTY WILL BE VOIDED IF THIS POWER PROGRAMMER IS NOT BEING USED ON THE ORIGINAL VEHICLE IT WAS PURCHASED AND YOU PROCEED.
TO CONTINUE, PRESS Y.**

- If you press 'N', the programmer turns itself off. If you press 'Y', you get the following screen:

IF THE VEHICLE'S CALIBRATION HAS BEEN UPDATED BY A SERVICE FACILITY, PRESS Y
IF VEHICLE HAS NOT BEEN UPDATED, PRESS N

- Press 'Y' and the programmer will read the new calibration and then go through the programming options in Section 2.
- If the service facility does not load a VIN number into the calibration, after the programmer reads the calibration this screen will appear:

ERROR: 95
PRESS Y

- Call Hypertech at the provided phone number on the programmer screen. The programmer will need to be sent in to evaluate the new calibration of the vehicle.

5. BLANK SCREEN

- If the programmer does not turn on when the ▲ arrow is pressed, make sure that both ends of the cable are fully inserted. Press the ▲ arrow again. 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. Call Hypertech at 901-382-8888, if this does not correct the problem.

**IF YOU HAVE ANY PROBLEMS OR QUESTIONS,
PLEASE CALL OUR TECHNICAL STAFF AT 901-382-8888**

HOURS: 8AM - 5PM Central Time, Monday - Friday
Hypertech, Inc. 3215 Appling Road
Bartlett, TN. 38133-3999

Visit our website at www.hypertech.com
or e-mail us at sales@hypertech.com

SPECIALTY AUTO PARTS CONSUMER'S BILL OF RIGHTS

Your Rights To Personalize Your Vehicle

- Article 1: You have the **Right** to buy high-quality, reliable aftermarket performance and specialty parts, accessories, and styling options.
- Article 2: You have the **Right** to use high-quality aftermarket parts and know that your new vehicle warranty claims will be honored. In fact, your vehicle dealer may not reject a warranty claim simply because an aftermarket product is present. A warranty denial under such circumstances may be proper only if an aftermarket part caused the failure being claimed.
- Article 3: You have the **Right** to install and use emissions-legal aftermarket performance parts without incurring hassles and onerous procedures during state vehicle emissions inspections.
- Article 4: You have the **Right** to actively oppose any proposed (or existing) laws or regulations that will reduce your freedom to use aftermarket automotive parts and service or will curtail your ability to take part in the automotive hobbies of your choice.
- Article 5: You have the **Right** to patronize independent retail stores and shops for vehicle parts and service. The U.S. aftermarket offers the world's finest selection of performance and specialty parts, accessories, and styling options. These aftermarket products satisfy the most discriminating customers seeking personalized vehicles for today's lifestyle.

The Consumer's Bill Of Rights courtesy of
Specialty Equipment Market Association (SEMA)

What To Do Before Taking Your Vehicle In For Service

If you take your vehicle to a dealer or mechanic for service, you must first remove the Hypertech Power Tuning and restore the stock programming. This is because diagnostic devices expect to find stock calibrations and will often overwrite the program if the latest calibration is not found in the computer memory. This will result in the loss of your Hypertech Power Tuning data. The Hypertech Power Programmer has an internal security system that allows its Power Tuning program to be installed in only one vehicle at a time. In order to maintain the most current stock calibrations for your vehicle, the Power Programmer is designed to allow you to restore the stock tuning before you take your vehicle in for service so that the service technician can upgrade your stock calibrations. After the service is complete, you can reinstall your Hypertech Power Tuning. If you have any questions related to service issues, please call Hypertech at 901-382-8888.

PRODUCT WARRANTY

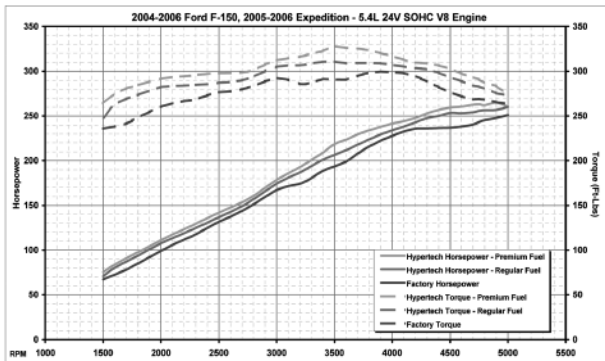
Factory Direct Limited Lifetime Warranty

All HYPERTECH Power Tuning Products* are warranted against defects in materials or workmanship. 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 Lifetime Warranty is to the original purchaser for as long as he or she owns the vehicle on which the product is originally installed, 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. **Resold units are NOT covered under this warranty.**

* Power Tuning products are Power Chips, Power Modules, Power Tuning Modules, HyperPACs, and Power Programmers.

Typical Performance Gains

NOTE: All dynamometer tests are performed under controlled conditions. Results may vary, depending on the specific vehicle, altitude, temperature, fuel used, and various other conditions that affect vehicle performance. Power gains shown are specific to the vehicle tested and representative of the average gains verified. For a color, printable power graph of your particular application, check out our website at www.hypertech.com.



RPM	Horsepower		
	Factory	Hypertech Regular Fuel	Hypertech Premium Fuel
1500	67	71 (+4)	75 (+8)
1700	78	87 (+9)	91 (+13)
1750	82	90 (+8)	94 (+12)
2000	99	108 (+9)	111 (+12)
2250	115	122 (+7)	126 (+11)
2500	132	137 (+5)	142 (+10)
2750	147	153 (+6)	157 (+10)
3000	167	174 (+7)	178 (+11)
3250	177	190 (+13)	197 (+20)
3500	194	206 (+12)	219 (+25)
3750	212	221 (+9)	232 (+20)
3900	222	229 (+7)	238 (+16)
4000	228	234 (+6)	241 (+13)
4250	236	245 (+9)	250 (+14)
4500	237	253 (+16)	259 (+22)
4750	243	256 (+13)	263 (+20)
4900	248	257 (+9)	266 (+17)
5000	251	265 (+14)	280 (+29)

RPM	Torque		
	Factory	Hypertech Regular Fuel	Hypertech Premium Fuel
1500	238	248 (+10)	254 (+16)
1700	241	260 (+20)	281 (+40)
1750	245	271 (+26)	283 (+38)
2000	260	282 (+22)	292 (+32)
2250	267	284 (+17)	295 (+28)
2500	277	287 (+10)	298 (+21)
2750	282	292 (+10)	300 (+18)
3000	293	305 (+12)	312 (+19)
3250	286	307 (+21)	318 (+32)
3500	291	311 (+20)	323 (+37)
3750	297	309 (+12)	325 (+28)
3900	300	309 (+8)	326 (+26)
4000	299	307 (+8)	317 (+18)
4250	292	303 (+11)	309 (+17)
4500	277	293 (+16)	303 (+26)
4750	269	293 (+14)	291 (+22)
4900	265	275 (+10)	284 (+18)
5000	264	273 (+9)	273 (+9)

MAX Horsepower	MAX Torque	Hypertech Premium Fuel	MAX Horsepower Gain	MAX Torque Gain
265 HP @ 4900 RPM	328 Ft-Lbs @ 3500 RPM	265 HP @ 4900 RPM	+25 HP @ 3500 RPM	+40 Ft-Lbs @ 1700 RPM
260 HP @ 5000 RPM	311 Ft-Lbs @ 3600 RPM	Hypertech Regular Fuel	+18 HP @ 4500 RPM	+28 Ft-Lbs @ 1700 RPM
251 HP @ 5000 RPM	300 Ft-Lbs @ 3600 RPM	Factory	—	—

Tuning Features:

- Regular and Premium Fuel Power Tuning
- Adjustable Rev Limiter (+/- 500 RPM in 100 RPM increments)
- Transmission Shift Firmness
- Adjustable Transmission Shift Points: (+/- 500RPM in 100RPM increments)
- Adjustable Top Speed Limiter for speed rated tires: M-31, N-87, P-83, Q-99, R-106, S-112, T-118, U-124, V-148, W-168, Y-181, Z-255mph
- Reads and Clears Factory Diagnostic Trouble Codes (DTC's)
- Axis Ratio correction for 2.73, 3.06, 3.27, 3.31, 3.55, 3.73, 4.10, 4.30 & 4.56
- Tire Size correction for 34"-34"

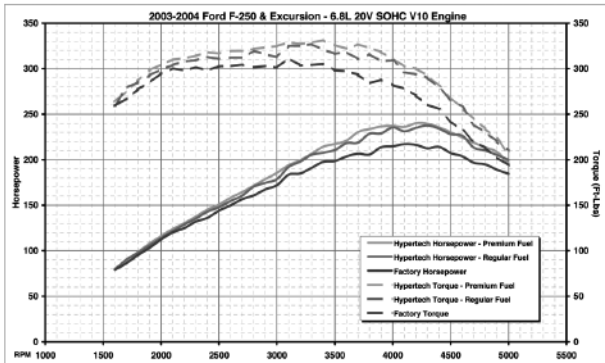
HYPERTECH
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Vehicle Tested: 2004 Ford F-150
Engine: 5.4L 24V SOHC V8
Transmission: 4R75W Auto O/D
Gear Ratio: 3.55:1
Tire Size: 265/70/17
Test Date: 10/6/2004

Hypertech Part Number:
Power Programmer
41043

Typical Performance Gains

NOTE: All dynamometer tests are performed under controlled conditions. Results may vary, depending on the specific vehicle, altitude, temperature, fuel used, and various other conditions that affect vehicle performance. Power gains shown are specific to the vehicle tested and representative of the average gains verified. For a color, printable power graph of your particular application, check out our website at www.hypertech.com.



RPM	Horsepower		Torque	
	Factory	Hypertech Premium Fuel (Gain)	Factory	Hypertech Premium Fuel (Gain)
1600	79	79 (+75)	90	(+80)
1700	86	90 (+4)	99	(+3)
1800	90	94 (+3)	98	(+3)
2000	112	114 (+2)	116	(+4)
2200	125	129 (+4)	130	(+5)
2400	136	143 (+7)	145	(+8)
2500	144	148 (+4)	151	(+7)
2600	150	155 (+5)	158	(+8)
2800	161	170 (+9)	171	(+10)
3000	172	179 (+7)	186	(+14)
3200	185	198 (+13)	199	(+14)
3400	196	208 (+12)	214	(+16)
3500	199	211 (+12)	217	(+16)
3600	204	218 (+14)	221	(+17)
3800	206	228 (+22)	234	(+28)
4000	215	235 (+20)	237	(+22)
4100	217	231 (+14)	236	(+19)
4200	218	235 (+17)	240	(+24)
4300	213	238 (+25)	240	(+27)
4400	214	234 (+20)	236	(+22)
4500	207	228 (+21)	230	(+23)
4600	204	225 (+22)	224	(+20)
4800	195	210 (+15)	214	(+19)
5000	184	200 (+16)	195	(+12)

RPM	Horsepower		Torque	
	Factory	Hypertech Regular Fuel (Gain)	Factory	Hypertech Premium Fuel (Gain)
1600	259	259 (+3)	264	(+5)
1700	267	279 (+12)	275	(+8)
1800	278	285 (+7)	287	(+9)
2000	295	299 (+4)	305	(+10)
2200	298	308 (+10)	311	(+13)
2400	298	313 (+15)	318	(+20)
2500	303	311 (+8)	317	(+14)
2600	303	312 (+9)	320	(+17)
2800	302	319 (+17)	322	(+20)
3000	301	313 (+12)	325	(+24)
3200	304	325 (+21)	327	(+23)
3400	305	321 (+16)	331	(+26)
3500	298	316 (+18)	328	(+28)
3600	297	318 (+21)	322	(+25)
3800	284	318 (+32)	323	(+38)
4000	282	309 (+27)	311	(+33)
4100	278	296 (+18)	303	(+24)
4200	271	294 (+23)	300	(+29)
4300	261	290 (+29)	292	(+31)
4400	256	279 (+23)	281	(+25)
4500	242	266 (+24)	268	(+26)
4600	233	258 (+25)	258	(+23)
4800	213	250 (+17)	234	(+21)
5000	194	210 (+16)	206	(+12)

MAX Horsepower	MAX Torque
240 HP @ 4200 RPM	331 Ft-Lbs @ 3400 RPM
238 HP @ 4300 RPM	327 Ft-Lbs @ 3300 RPM
217 HP @ 4100 RPM	311 Ft-Lbs @ 3100 RPM

Hypertech Premium Fuel	Hypertech Regular Fuel	Factory
+28 HP @ 3600 RPM	+39 Ft-Lbs @ 2800 RPM	
+25 HP @ 4300 RPM	+32 Ft-Lbs @ 2800 RPM	
—	—	

Power Programmer Features

Regular and Premium Fuel Power Tuning
Adjustable Rev Limiter: +/- 500 RPM in 100 RPM Increments
Adjustable Tiv Size - 25"-34"

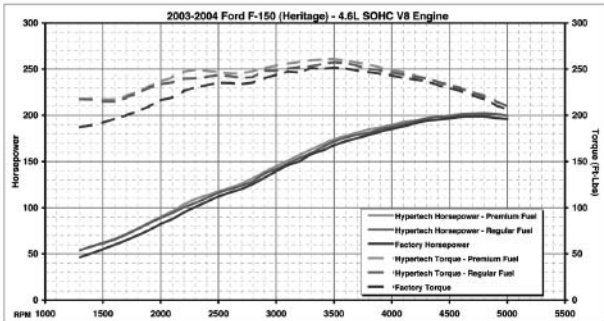
Reads and Clears Factory Diagnostic Trouble Codes (DTC's)
Adjustable Transmission Shift Points: +/- 500RPM in 100RPM Increments
Transmission Shift Firmness

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Vehicle Tested: 2004 Ford F-250
Engine: 6.8L 20V SOHC V10
Transmission: Automatic with O/D
Gear Ratio: 3.73: 1 non limited slip
Tire Size: 235/65R16
Test Date: 3/24/2004

Power Programmer Part #: 41034

41034



RPM	Horsepower			
	Factory HP	HyperTech Regular Fuel HP (Gain)	HyperTech Premium Fuel HP (Gain)	
1300	46	54 (+8)	54 (+8)	
1400	51	58 (+7)	58 (+7)	
1600	60	65 (+5)	66 (+6)	
1800	70	77 (+7)	78 (+8)	
2000	82	89 (+7)	90 (+8)	
2100	86	94 (+8)	97 (+9)	
2200	95	100 (+5)	103 (+8)	
2400	106	110 (+4)	113 (+7)	
2600	116	120 (+4)	121 (+5)	
2800	126	129 (+3)	132 (+6)	
3000	139	142 (+3)	145 (+6)	
3200	150	154 (+4)	157 (+7)	
3400	162	166 (+4)	169 (+7)	
3500	168	172 (+4)	174 (+6)	
3600	172	176 (+4)	178 (+6)	
3800	179	181 (+2)	185 (+6)	
4000	185	186 (+3)	190 (+5)	
4200	191	193 (+2)	194 (+3)	
4400	195	196 (+1)	198 (+3)	
4600	198	201 (+3)	201 (+3)	
4700	199	201 (+2)	202 (+3)	
4800	199	201 (+2)	203 (+4)	
5000	196	200 (+4)	200 (+4)	

RPM	Torque			
	Factory Torque	HyperTech Regular Fuel Torque (Gain)	HyperTech Premium Fuel Torque (Gain)	
1300	187	218 (+31)	218 (+31)	
1400	190	217 (+27)	218 (+28)	
1600	196	215 (+19)	217 (+21)	
1800	205	225 (+20)	220 (+21)	
2000	216	234 (+18)	236 (+20)	
2100	220	236 (+16)	241 (+21)	
2200	226	240 (+14)	247 (+21)	
2400	233	242 (+9)	248 (+15)	
2600	236	242 (+7)	245 (+10)	
2800	236	241 (+5)	248 (+12)	
3000	244	248 (+4)	254 (+10)	
3200	248	252 (+4)	258 (+10)	
3400	250	256 (+6)	260 (+10)	
3500	252	257 (+5)	261 (+9)	
3600	251	257 (+6)	259 (+8)	
3800	247	250 (+3)	255 (+8)	
4000	243	247 (+4)	249 (+6)	
4200	239	242 (+3)	243 (+4)	
4400	233	236 (+3)	237 (+4)	
4600	226	229 (+3)	230 (+4)	
4700	222	225 (+3)	226 (+4)	
4800	217	220 (+3)	222 (+5)	
5000	206	210 (+4)	210 (+4)	

MAX Horsepower	MAX Torque
203 HP @ 4900 RPM	261 Ft-Lbs @ 3500 RPM
201 HP @ 4900 RPM	257 Ft-Lbs @ 3500 RPM
199 HP @ 4700 RPM	252 Ft-Lbs @ 3500 RPM

HyperTech Premium Fuel
HyperTech Regular Fuel
Factory

MAX Horsepower Gain	MAX Torque Gain
+9 HP @ 2100 RPM	+31 Ft-Lbs @ 1300 RPM
+8 HP @ 1200 RPM	+21 Ft-Lbs @ 1300 RPM
—	—

Power Programmer Features

Regular and Premium Fuel Power Tuning

Adjustable Rev Limiter: +/- 500RPM in 100RPM increments

Adjustable Top Speed Limiter for speed rated tires: 116, & 126 MPH

Transmission Shift Firmness

Adjustable Transmission Shift Points: (+/- 500RPM in 100RPM increments)

Reads and Clears Factory Diagnostic Trouble Codes (DTC's)

Adjustable Gear ratio for 2.73, 3.08, 3.27, 3.31, 3.55, 3.73, 4.10, 4.30 & 4.56

Adjustable Tire Size - 24"-34"

HYPERTECH
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Vehicle Tested: 2003 Ford F-150
Engine: 4.6L V8
Transmission: 4-Speed Auto
Gear Ratio: 3.58: 1 non limited slip
Tire Size: 225/70R15
Test Date: 2/13/2003

Power Programmer Part #: 41036

41036

Hypertech Merchandise

T-Shirts

Available in long or short sleeve, these T-shirts are high-quality, printed in full-color and display the Hypertech Power Tuning logo. Available in sizes ranging from Small to XXX-large.



Polo Shirts

These short-sleeve polo shirts available in blue, red, white, or black are high-quality 100% cotton and have a full-color Hypertech logo embroidered on the left chest. Available in sizes ranging from medium to XX-large.

T-Shirts	Part #	T-Shirts (cont'd)	Part #
Short Sleeve - Small	600	Long Sleeve - Medium	606
Short Sleeve - Medium	601	Long Sleeve - Large	607
Short Sleeve - Large	602	Long Sleeve - X-Large	608
Short Sleeve - X-Large	603	Long Sleeve - XX-Large	609
Short Sleeve - XX-Large	604	Long Sleeve - XXX-Large	610
Short Sleeve - XXX-Large	605	Polo Shirts (Order part# & color)	
Long Sleeve - Medium	606	Medium	638
Long Sleeve - Large	607	Large	639
Long Sleeve - X-Large	608	X-Large	640
Long Sleeve - XX-Large	609	XX-Large	641
Long Sleeve - XXX-Large	610		

Baseball Caps

Hypertech baseball caps are available in three styles and come with a full-color Hypertech logo embroidered on the front. All baseball caps are one-size-fits-all.

	Part #
Solid Navy Blue	633
Denim w/Khaki Bill	634
Khaki w/Navy Blue Bill	635



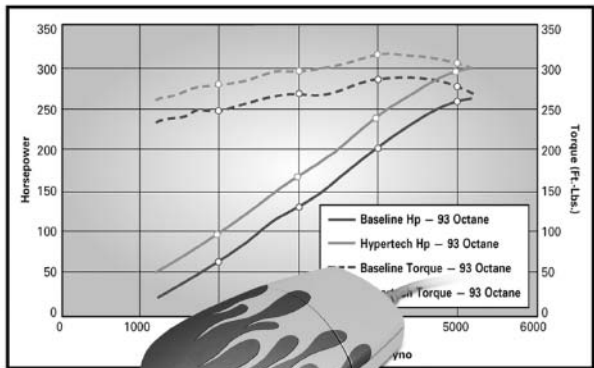
Coffee Mugs

Enjoy your morning coffee with the Hypertech coffee mug, displaying the Hypertech logo and engine icon in full color on both sides - **Part #626**.



To Place An Order, Call Hypertech at 901-385-1888.

Notes



Make Tracks To Our Website

If you'd like to see how much horsepower and torque Hypertech Power Tuning™ can deliver for your car or truck, visit our website for the latest dyno charts for the most popular Dodge, Ford, & GM vehicles. If you don't find the dyno chart for your application listed on our website, please send us an email (sales@hypertech.com) for the horsepower and torque gains of your particular application.

www.hypertech.com

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