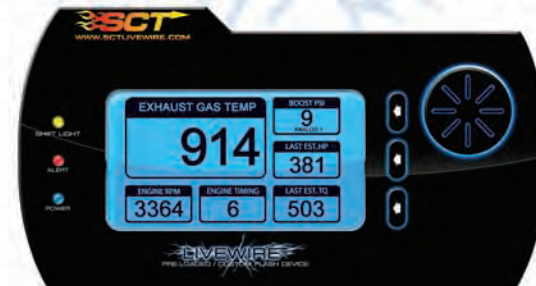


LIVEWIRE

PRE-LOADED / CUSTOM FLASH DEVICE



6.4L ENABLED LIVEWIRE USER GUIDE

PART NUMBER 9621 / 9623



975 FLORIDA CENTRAL PARKWAY SUITE 1900
LONGWOOD FLORIDA 32750 407.774.2447
WWW.SCTFLASH.COM

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PROGRAMMING YOUR 6.4L DIESEL

To program your vehicle, scroll to the Program Vehicle menu and press the jog wheel.

Using the jog wheel, scroll to the Program Vehicle Pre-Loaded Tune option and press the jog wheel.

Livewire will display some general information about the programming of your 6.4L Diesel. Once you have read the information, press the jog wheel to continue.

Livewire will then need to identify your truck's PCM before proceeding. When prompted, turn the Key to the ON position (do not start the vehicle) and press the jog wheel. Within a few seconds, Livewire will identify your vehicle, prompt you to turn the key to the OFF and press the jog wheel.

Using the jog wheel, select the 6.4L tune file you wish to load. Once selected, press the jog wheel to continue.

Livewire will display an overview / warning screen of the tune file you have selected. Once you have read / accept the information, press the jog wheel to continue.

LIVE WIRE 6.4L DIESEL

PROGRAM VEHICLE
To program vehicle, push the wheel.

Scroll, Turn Wheel / To Select, Push Wheel

PROGRAM VEHICLE MENU

PROGRAM VEHICLE:
Pre-Loaded Tune

PROGRAM VEHICLE:
Custom Tune

Return To Stock

6.4L General Information
The first time you Flash your vehicle's Livewire uploads the stock files from the engine and transmission computers. The stock file Upload takes about 25 minutes. The stock PCM/TCM files are stored so your vehicle can be restored back to stock.

Press Wheel to continue

Read Strategy

Turn Key On
Push wheel to Begin

Select Custom Type

6.4L Towing Tune

Use Wheel to scroll to next custom type select tune.

6.4L Towing Tune
Gains 45hp/106 Torque
DO NOT TOW over 6000lbs with this tune.
The Towing Tune is designed to be used to tow up to 6000# Towing additional weight may damage your Particular Filter. SCT is not responsible for any damage due to DPF failure.

Press Wheel to accept/continue.

OTHER EXCITING SCT PRODUCTS!!



SCT 6.4L EXTREME RACE PACKAGE!



SCT LIVEWIRE FLASH DEVICE!



SCT XCALIBRATOR 2 FOR GM VEHICLES!

EXTREME 6.4L RACE PACKAGE

NEED MORE POWER & TORQUE?

Want the ultimate in 6.4L Twin Turbo Diesel Horsepower & Torque? The SCT EXTREME Race Package will instantly add +120 Rear Wheel Horsepower & +230lbs of Torque to your 6.4L Diesel!

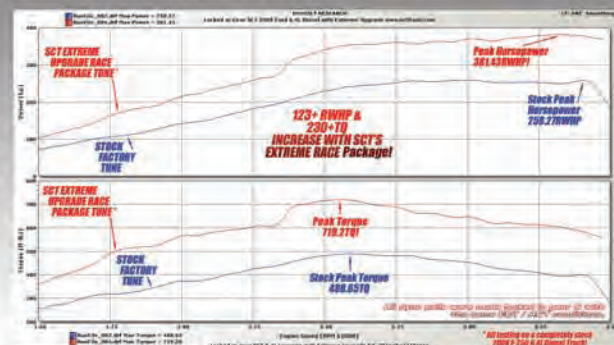
On May 25th, 2007 SCT's stock 2008 6.4L 4dr F-250 ran an INSANE 14.67@88.87MPH with just the addition of this package!

Only SCT offers an EXTREME Race Package! Instantly ADD +120RWHP & +230ft-lbs of Torque!

Package Includes:

- ✓ SCT EXTREME Tune
- ✓ SCT EGT Sensor Kit

Actual Dyno Sheet from SCT EXTREME Tuned 6.4L Testing!



6.4L DIESEL QUESTIONS & ANSWERS

Can I datalog or view my 6.4L trucks PCM Parameters?

Yes. SCT's 6.4L Enabled Livewire is the ONLY flash device on the market that can both datalog and display your truck's PCM parameters in real time!

I race my 6.4L Truck, do you offer a race tune?

Yes. SCT offers an upgrade package for race use only. Our EXTREME Race Upgrade Package includes our EXTREME Race Tune & an EGT Sensor Kit. For more info on this package visit our website at www.sctflash.com

I have an EGT Gauge. Can I buy just the EXTREME Race Tune?

No. At the present time SCT only offers our EXTREME Tune in our EXTREME Upgrade Race Package.

Can I adjust parameters such as shift points etc. on my 6.4L truck?

Yes, the 6.4L Enabled Livewire has the ability to adjust your truck's shift points.

Is the 6.4L Enabled Livewire able to be updated via the Internet?

Yes. Like previous Livewire units, SCT offers firmware & tune file updates via the internet as they become available.

Does SCT offer a Fuel Economy Tune for the 6.4L?

SCT is currently researching & testing a fuel economy tune for the 6.4L. When this tune file is available, it will be offered as an update.

What if the OBDII Cable accidentally gets unplugged while uploading the stock PCM/TCM file(s) from the vehicle?

The truck will not start unless you perform the following procedure:

- 1) Turn the KEY OFF for 10 seconds.
- 2) Turn the KEY ON and wait for the security light to go out on the dash.
- 3) Start the truck.

What if the OBDII Cable accidentally gets unplugged while downloading modified PCM/TCM tune file(s) into the vehicle?

- 1) Go to page 2 of this manual and follow the instruction on Returning the Vehicle to stock.
- 2) Once returned to stock, restart the programming of the vehicle.

ADDITIONAL INFORMATION

SCT Support Options

Your first option for support is your SCT dealer. SCT also offers several other support options after you have purchased Livewire. SCT maintains a support forum which is available at: <http://www.sctflash.com/forum>. SCT employees, SCT dealers and knowledgeable SCT customers are always there and ready to help with any problem. You can also contact SCT via phone, FAX or US postal service.

SCT LLC

975 Florida Central Parkway Suite 1900, Longwood Florida, 32750

Phone: 407.774.2447 Fax: 407.260.6275

www.sctflash.com / www.sctlivewire.com

PROGRAMMING CONT'D

Using the jog wheel, select the 6.4L transmission tune file you wish to load. Once selected, press the jog wheel to continue.

Livewire will display an overview / warning screen of the transmission tune file you have selected. Once you have read / accept the information, press the jog wheel to continue.

To continue without adjusting the User Adjustable Options, scroll and select Skip Option Adjustment using the wheel. If you wish to adjust the User Adjustable Options, use the wheel to scroll to the Adjust User menu option and push the wheel to select it. For more information on using the User Adjustable Options, please see the section called "Adjusting User Adjustable Options" in the full Livewire Manual.

To begin programming your vehicle, press the jog wheel and follow the on-screen instructions.

NOTE: DO NOT TURN THE KEY OFF UNTIL INSTRUCTED TO DO SO OR PCM DAMAGE CAN OCCUR.

RETURNING YOUR 6.4L DIESEL TO STOCK

To return your vehicle to the stock program select the Program Vehicle menu and press the jog wheel.

Using the jog wheel scroll to the Return To Stock option and press the jog wheel.

Once prompted, press the jog wheel and follow the on screen prompts to return your vehicle to the stock program.

Select Custom Type

6.4L Race Shift Pts

Use Wheel to scroll
to next custom type
select tune.

6.4L Race Shift Points

Improves transmission shifts.
Shift points have been raised
in this tune for additional
performance.

Use the user options to raise
or firm the shift pressure.

Press wheel to accept/continue

Program Menu

Adjust User Options

Skip Option Adjustment

← Scroll

Push Wheel to select

CAN Programming

10%

PROGRAM VEHICLE MENU



PROGRAM VEHICLE:
Pre-Loaded Tune



PROGRAM VEHICLE:
Custom Tune



Return To
Stock

← Scroll

Return to Stock

Push Wheel to program vehicle
back to stock.

6.4L MONITORING SETUP

Note: If using an SCT EGT Sensor Kit please proceed to page 6 to setup your EGT Sensor for display first.

Setup Procedure

To setup the performance monitoring feature, Livewire must be connected to the vehicle. Use the jog wheel to scroll to the Performance Data menu, press the jog wheel to select, next scroll to the Performance Monitor Setup and press the wheel to select. After the .DLF file list is displayed, use the jog wheel to scroll through the list. Press the jog wheel to select a particular file.

Each .DLF file contains different common PID's / Items that you may datalog. For a list of PID's / Items each file contains, see page 5 of this manual.

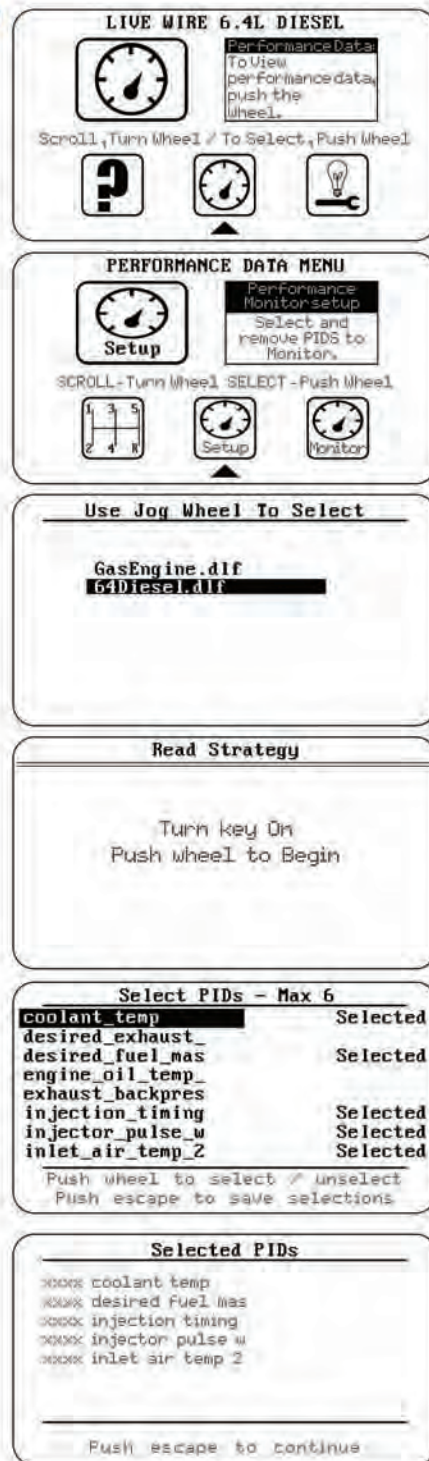
NOTE: You can select / view / datalog up to 6 PID's / Items including SCT's EGT Sensor Kit.

Once a file has been selected, Livewire will then need to identify your truck's PCM before proceeding.

When prompted, turn the Key to the ON position (do not start the vehicle) and press the jog wheel. Within a few seconds, Livewire will identify your vehicle, prompt you to turn the key to the OFF and press the jog wheel.

A list of PID's / Items based on the .DLF file you have selected will be displayed. Select a parameter you wish to monitor, scroll using the jog wheel. To select / deselect a parameter simply press the wheel. When you have finished selecting the parameters, press the ESC button.

To confirm your selections, Livewire will display the list of selected PID's / Items on the screen. Press the ESC button to continue.



6.4L DIESEL QUESTIONS & ANSWERS

Can I put my truck into Manual Regeneration in the event of a Regeneration DTC?

SCT is currently researching adding the ability to perform a Manual Regeneration to Livewire. At this time, it does not appear to be needed.

What exhaust gas temps are normal with your tuner on each setting?

Exact EGT temperatures will vary from vehicle to vehicle depending on the following three factors: Exact EGT probe placement in the exhaust, Exact EGT probe installation depth in the pipe and load on the vehicle. Due to various placement positions giving an exact reading is very difficult.

Where is the best location to install your EGT probe?

In the exhaust pipe, about 1" from the Drivers side exhaust port in the bottom of the pipe. Detailed location/installation instructions are included in the Extreme 6.4L EGT installation kit (punch installation is recommended in pipe).

How much can I tow with each tune setting?

Transmission Only Tune (stock vehicle tow rating, varies by vehicle) Towing Tune (up to 6000#), Performance Tune (towing is NOT recommended) Extreme Tune (towing is NOT recommended, this file is only recommended for intermittent offroad/track use)

Do I need to flash my truck back to stock before going into the dealer for warranty work or oil changes?

SCT recommends that you return your vehicle to stock before any service work is performed. After flashing, the diagnostic trouble code P1000 will be set in the PCM, this is normal. P1000 means that the OBD diagnostic tests are incomplete. Note: the same P1000 code is set by disconnecting the vehicles battery.

How long does it take to flash?

Initial use (upload/program the stock engine/transmission file): 23 minutes. Subsequent use (download engine/transmission tune file): 9 minutes.

How do I get more smoke from my truck?

Vehicles with a particle trap are designed to produce very little smoke/soot. An SCT Extreme Tune Race File combined with an off-road exhaust system that eliminates the particle trap will provide maximum smoke/soot.

If I install an offroad exhaust with the SCT product will any Codes get set?

If the PCM is Stock, when you install an offroad exhaust (no Diesel Particulate Filter) after a few miles several codes may be displayed. SCT is currently testing several offroad only calibrations that are designed to properly eliminate the resulting codes. As soon as these calibrations are complete they will be available as an Extreme Tuner Update. Note: When the codes are triggered you can read and clear them via Livewire, typically they will only appear after a few thousand miles.

What are the power/torque gains from each tune option?

Towing: 45rwhp/106ftlbs
Performance: 85rwhp/151ftlbs
Extreme (if equipped): 125rwhp/200ftlbs
Transmission Only (Stock power/torque)

What should I do if my livewire fails during a flash?

In the unlikely event of a flash failure, write down any error codes and what options you selected. Contact a SCT Technical Support Representative at 407-774-2447, tech support is available M-F 8:30am-5:30pm EST.

Can I use my friends Livewire on my truck?

Yes, you can use Livewire to clear diagnostic trouble codes, monitor and datalog your friend's truck. At this time the SCT 6.4L Livewire is designed to lock to one VIN and flash ONE VIN / vehicle. In the future it will be possible to return your vehicle to stock and allow your friend to test your tuner but at this time it is not possible.

6.4L DIESEL QUESTIONS & ANSWERS

Is my 6.4L truck supported by SCT's Livewire?

Your truck needs to have the latest OEM calibration update that is available from Ford.
NOTE: Very early 6.4L calibration releases are not supported in Livewire (pre-warranty recall).

How does the SCT flasher affect the warranty on my truck?

According to the Magnuson Moss Warranty Act (15 U.S.C 2302 (C)) a vehicle manufacturer cannot legally void your warranty unless they can prove that the aftermarket part caused or contributed to the vehicle failure. For more information on aftermarket parts and vehicle warranty, visit the SEMA consumer website at www.sema.org

I have heard that there is a reflash counter on the 6.4L truck; does your programmer get around this?

At this time we have not seen evidence of a PCM "flash counter" in use on the 6.4L trucks.

Do I need to remove my particulate trap to run your power tuning?

No, both the Towing and Performance files are designed to work with the stock particulate trap. The current SCT 6.4L test vehicle has been tested with the Towing/Performance files for thousands of miles with no current adverse side affects.

NOTE: The Extreme file is designed for intermittent use only with the stock particle trap in place (Drag Strip Use Only) or it should be used with an offroad exhaust system.

How does aftermarket exhaust effect the tuning, and is it recommended to add to my truck?

At this time we have very limited aftermarket exhaust data and can not make a recommendation either way. After we have valid data it will be posted on the SCT website.

What is the Particulate Trap?

A Diesel Particulate Filter or Trap is a device installed in the exhaust that is designed to remove diesel soot or particulate matter (smoke). Typically a working diesel particulate filter removes between 85% and 100% of the soot/smoke that is visible from the exhaust pipe.

What is Regeneration?

Regeneration is the process of removing the soot that has accumulated in the Particulate Filter. Ford regenerates the 6.4L Diesel Particulate Filter via an active process. An active process injects additional fuel into the exhaust and this additional fuel is used to combust the diesel particulate matter/soot from the trap. Typical combustion temperatures are 600-700 degree Celsius.

How often does the vehicle go into regeneration mode?

This will depend on the way your vehicle is driven and the file that is installed in the vehicle. If you have the Performance tune installed and you run your vehicle at Wide Open Throttle frequently, it will go into Regeneration more often than if you occasionally run it at Wide Open Throttle.

Regeneration is typically triggered by a high Diesel Particulate Exhaust Pressure. Soot tries to clog the Particulate Trap and this increases the pressure inside the Trap which triggers regeneration. Both the Towing and Performance files are balanced to give increased performance without unnecessary regeneration. The Extreme file is designed to give maximum performance and therefore produces more "soot" and regeneration.

Regeneration Side Affects?

- 1) Increased fuel consumption
- 2) Increased exhaust heat
- 3) Possible reduced top end power.

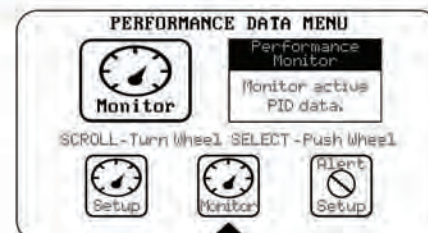
In all SCT programs, while in regeneration mode, you will have normal increased power up to 85mph. Depending on the exhaust temperatures while in regeneration you may automatically have reduced power above 85mph (this reduced power is to protect the turbo and the engine).

How do I know my vehicle is in Regeneration?

If you are in Neutral or Park you will notice an increase idle ~ 1200rpm. Typically regeneration lasts 10 minutes. You can also use Livewire to datalog/monitor regeneration status, when regeneration is inactive it will display 00. Livewire can also be used to datalog/monitor the Diesel Particulate Filter Pressure and the three EGT sensors that monitor the temperature of the regeneration combustion process.

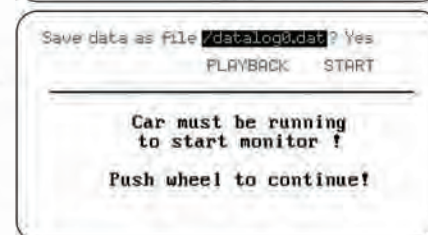
6.4L MONITORING SETUP

Use the jog wheel to scroll to the Performance Monitor Menu and press the jog wheel to select the Performance Monitor option.

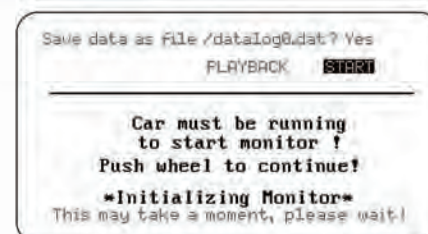


Once you have selected the Performance Monitor Menu, you must select the file name the data will be saved to. To change the file name press one of the top two buttons located to the left of the jog wheel.

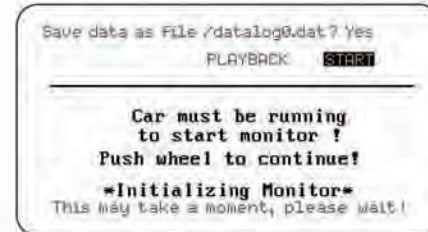
NOTE: Selecting a file name is not required to start the datalogging / PID's / Item's monitoring session.



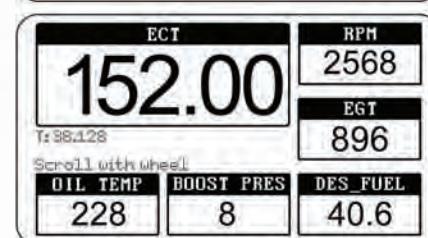
Once you have chosen a file name, use the jog wheel to scroll to the "START" option. To begin datalogging, start the vehicle and press the jog wheel to begin.



Livewire will display the "Initializing Monitor" screen and then switch to the PID / Item monitoring screen.



While monitoring the PID's / Items you have selected, you can move PID's / Items to different boxes. To move the PID's / Items use the jog wheel to scroll.



6.4L MONITORING SETUP

To end the datalogging / PID's / Item's monitoring session, press the ESC button.

Now that you have recorded a datalogging session, it can be viewed on the Livewire using the "Playback" option within the Performance Monitor Menu.

Use the jog wheel to scroll to the Performance Monitor Menu and press the jog wheel to select the Performance Monitor option. When the Livewire displays the "PLAYBACK / START" screen, use the jog wheel to scroll to the "PLAYBACK" option and press the jog wheel to begin displaying the recorded data. While displaying the recorded data, you can use the jog wheel to Stop / Start playback at any time.

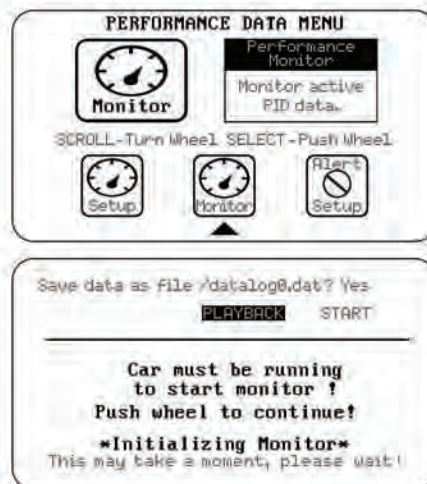
DLF File PID's / Item's Listings

64DIESEL.DLF:

Coolant temp
Desired exhaust backpressure
Desired fuel mass
Engine oil temp
Exhaust backpressure
Injection timing
Injector pulsewidth
Inlet air temp 2 (degree C)
Intake air temp (degree F)
Manifold absolute pressure (Mpa)
RPM
Vehicle speed
Boost pressure gauge (PSI)
Dpf pressure (Kpa)
Dpf regen status
Egt 1 (degree C)
Egt 2 (degree C)
Egt 3 (degree C)
Frp desired (Mpa)
Frp (Mpa)
Pedal position
Torque into torque converter

GASengine.DLF:

Battery voltage
Coolant temp
Intake air temp
Load
Long term fuel trim bank1
Long term fuel trim bank2
Maf counts
Rpm
Short term fuel trim bank1
Short term fuel trim bank2
spark



SCT EGT SENSOR KIT SETUP

This procedure will show you how to setup your Livewire to display / monitor your SCT Livewire EGT Sensor Kit.

Using the jog wheel, scroll to the Performance Data Menu and press the jog wheel.

Scroll to the External Input icon and press the jog wheel. After reading the next screen that is displayed, press the jog wheel.

Using the jog wheel scroll down to the Setup Channel 2 selection and press the jog wheel.

Once the Channel 2 Setup screen is displayed, scroll to the EGT selection and press the jog wheel.

Scroll to the "SCT EGT KIT" selection and press the jog wheel. When finished, press the ESC button to return to the main menu.

Goto page 4 and follow the setup procedure for 6.4 Monitoring Setup to monitor and view the enabled EGT.

