

## **What can you tell me about this custom PHP Programming?**

The custom PHP FICM programming takes all of the best things from all of the various FORD OEM programming strategies, rolls them together, and then adds in its own secret sauce to provide better drivability and the possibility of better fuel economy. On an 05 Excursion, we noted gains of about 2.5mpg in mixed highway/driving and much decreased turbo spool-up times with the 'Atlas 40' tune on top of the SCT 'street tune' that was already loaded. With the tune in place, when the light turns green, you go and go almost immediately now. The truck drives more like a gas truck than a diesel. Crazy spool-up times are a thing of the past!

Of course, everyone drives their truck differently. **About 4 of 5 are noting better fuel economy numbers (2-3mpg seems to be the norm) regardless of which tune they elect (fuel economy benefits are the same regardless of tune selected), but nearly everyone tips their hat to the better drivability.**

Given the same driving style, there won't be any real differences in fuel economy between the various tunes - the power tunes (Atlas 40, Atlas 80, and Hercules) just provide some extra ponies with the option of the better fuel economy and that decreased turbo lag that you get from the Eco tune alone. Some have seen a VERY slight mileage gain from the Atlas 40 over the Eco tune.

Note that those experiencing the highest mileage gains are coming from the latest version of Ford's software. Those using earlier software strategies report mixed results. While most still report some gain, perhaps 1 in 10 indicate no mileage gain at all.

## **How much are these tunes?**

Regardless of the tune you select, the price is \$150 in addition to the cost of the base repair that you elect.

## **My FICM is fine, but I want a tune. Can I send my FICM in for just the tune?**

Absolutely! The charge for this service is \$150 plus \$15 shipping back to you. Just fill out our [Intake Form](#) and go.

## **Should I be concerned with my head gaskets with these tunes?**

The FICM tunes do not derive their power by advancing the timing like ECM-based tuners do. This advancing of the timing is what causes cylinder head pressures to increase.

The Atlas 40, Atlas 80, and Hercules tunes get their power by prolonging the burn. Basically, fuel is added to the fire already going as a result of the explosion in the cylinder. Testing performed by PHP confirmed that the tunes do not increase the pressure that the cylinders are under, but rather increase the amount of time that the cylinders are under pressure.

The result is increased exhaust gas temperatures with the Atlas 40, Atlas 80, and Hercules tunes. Exhaust gas temperatures do not differ from stock with the Eco tune.

A quick shout out goes to David Lott with [Diesel Innovations](#) for pointing out the common misconception that the 2003, 2004 (and some say even 2005) model years somehow have less clamping force on the cylinder heads due to the use of 18mm head bolts. Actually, motors produced prior to January 11, 2006 use 18mm locating *dowel pins* - the actual head bolt size and resultant clamping force is identical between these earlier motors and the ones [following that came with 20mm locating dowel pins](#). The reason for the dowel pin size was in preparation for the creation of the new 6.4L motors.

**What PHP tune is right for me?**

Eco tune	Useful for all vehicles, whether they tow or not and whether they have an ECM (Bully Dog, Edge Evolution, etc) tune or not, regardless of truck model year, regardless of exhaust system. This tune will make your truck drive with responsiveness similar to a gas truck while maintaining all the benefits of a diesel.
Atlas 40	<p>This is our most popular tune and comes with all the benefits of the Eco tune, but with more oomph available to you just generally, even with an ECM programmer. If you are not set up to monitor your exhaust gas temperatures and run stock exhaust, this could also be an option if you tow less than 8000#. Gains of up to 40 horse power to the rear wheels can be seen.</p> <p>If you tow over 8,000 pounds, though, this option is only recommended if you have a way to measure your exhaust gas temperatures or if you have upgraded exhaust as the power added results in higher exhaust gas temperatures. The higher EGT's are largely caused as a result of a decreased need to downshift to maintain speed up a grade, thereby loading up the engine without an increase in airflow. Note that there is up to an about 75% overlap in the power adding capability of this tune with an ECM programmer, meaning that the power benefit will run close to 'just' 10 additional horsepower.</p>

	Will you still 'feel' the difference, though? You bet!
Atlas 80	This tune comes with all the benefits of the Eco tune and is okay with or without an ECM programmer, but only if you are running upgraded (4" or better) exhaust and have a way to measure your exhaust gas temperatures to ensure that they stay under the all-important 1500 degrees Fahrenheit (at which point you run the risk of burning exhaust valves). Gains of up to 80 horse power to the rear wheels can be seen. Note that there is up to an about 75% overlap in the power adding capability of this tune with an ECM programmer, meaning that the power benefit will run close to 'just' 20 additional horsepower.
Hercules	This tunes comes with all the benefits of the Eco tune, but is only recommended if you plan on never towing above 8,000 pounds, regardless of model year and exhaust.  If you DO tow heavy, have upgraded exhaust, and STILL want to go with this tune, just recognize a need to CLOSELY monitor your EGT's and manually downshift the vehicle as necessary to maintain the airflow required to keep the exhaust gas temperatures low enough to not do damage to the exhaust valves. Note that there is up to an about 75% overlap in the power adding capability of this tune with an ECM programmer, meaning that the power benefit will run close to 'just' 25-40 additional horsepower.

The big thing to consider is that with whichever tune you elect, that's the one you have. In other words, there is no changing between tunes without going the option of picking up a dedicated programmer directly from PHP (available for \$400). You can have the benefit of any of these tunes for \$150 - just check the box for whichever tune you want on our [Intake Form](#).

Ultimately, heavily consider sticking with the Eco or Atlas 40 tune to not take away from the flexibility of the truck for towing use. If, however, you aren't doing any towing and are looking for a more aggressive base power level, the Atlas 80 might be good.

If you are looking for all-out performance, have an after-market and therefore larger exhaust system along with a way to measure your EGT's, the Hercules tune might well be a fit.

**I already have a tuner from SCT, Bully Dog, Spartan, etc. Is this FICM tune compatible?**

Yes! These other tuners tune only the ECM, not the FICM. The ECM, among other things, provides instructions to the FICM. When the FICM is programmed with a PHP tune, your ECM tune is not impacted. Rather, having the FICM tuned in many ways removes the limitations that the ECM has to live within!

### **I am running non-stock injectors. Is this a concern?**

Running larger than stock injectors is not a concern for the Eco tune or for the Atlas 40 tune, but some have noted that their truck 'lopes' and 'hunts' to find a good idle with the Atlas 80 or Hercules tunes. Some with larger injectors have also noted that the truck does not run smoothly until warm and/or dumps black smoke until warm with the Hercules tune.

### **I have to pass a smog test. Should I be concerned?**

We have yet to hear anyone indicate to us that they failed a smog test due to one of our tunes and have sold countless tunes to people in places like California that have stringent smog testing requirements.

### **What if I don't see the benefits of the tune I elect?**

We maintain records of the software loaded on each customer's module before we replace it with a PHP tune. If you don't like the result of the tune you've selected, just ship the module back to us and we'll change it back to your original tune and refund you your money. We've yet to have even one customer take us up on this offer, but will update this FAQ if that changes.

### **Is there any reason that I \*need\* to change out of my current software?**

Possibly. There is one particular tune revision available from Ford for only a short time that killed FICM's and did so in short order. This software used an aggressive heat induction (think short circuit) out to all eight injectors at the same time to warm up the motor oil in each of the fuel injector heads when the key is turned to the 'on' position as part of the starting process.

The trouble is, much like your toaster, this pulls a tremendous amount of current - current that your module is just not rated to handle. The software is known as a 'FICM killer' for a reason! If you don't elect an aftermarket tune at the time of your order and we discover that you have one of these software revisions on your module, we'll reach out to you to discuss the benefits of moving to alternate software revisions.

The problematic FICM software is: ARZ2AL00 (2003-2004), ARZ2AL00 (04.5), and ARZ2AL01 (05 on up).

The 'latest' Ford software revisions (ARZ2AH10, ARZ2AL10, and ARZ2AL11) have a more 'mild' induction strategy, but these result in significant power losses. Most that have the 'latest' versions still love their 6.0's, but complain of horrible turbo lag (off the line performance), poor throttle response just generally, and poor fuel economy.