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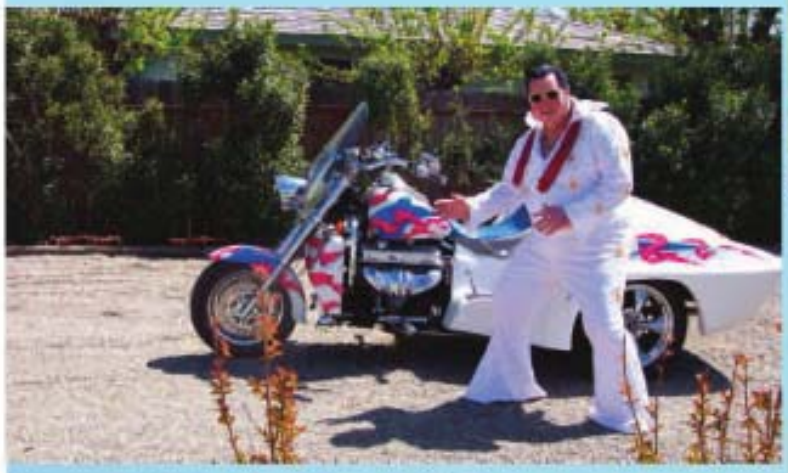
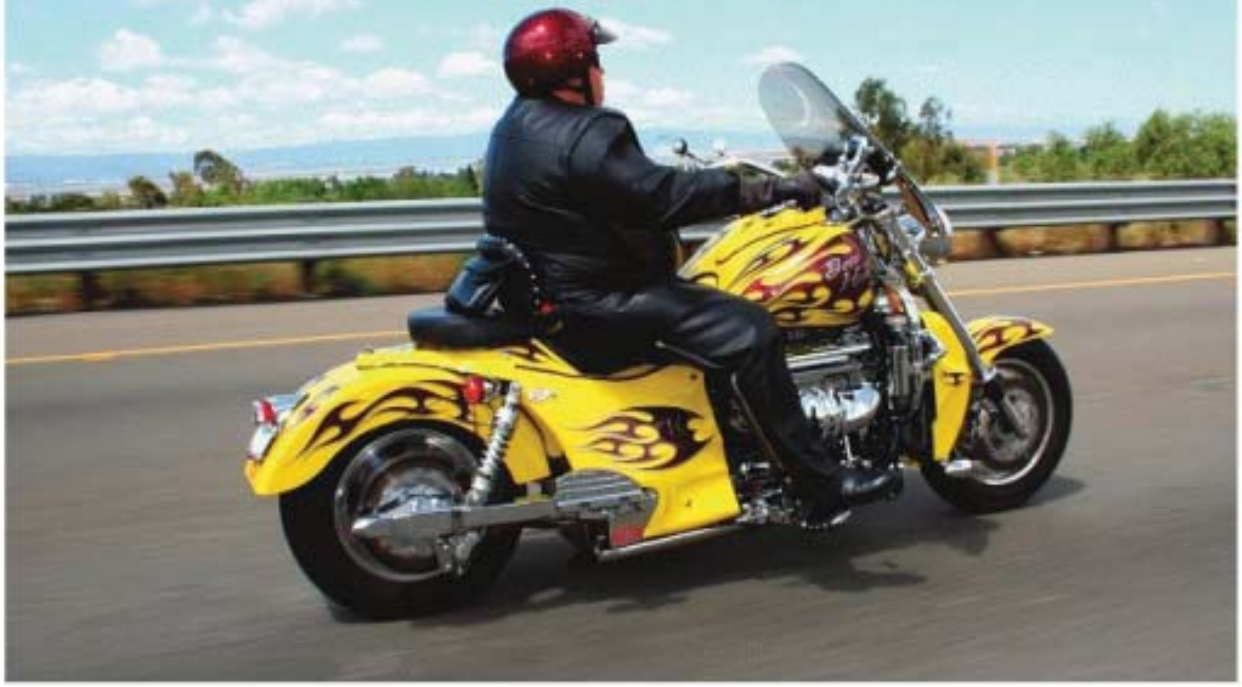
FOR THE TOURING AND SPORT-TOURING RIDER

August

2010

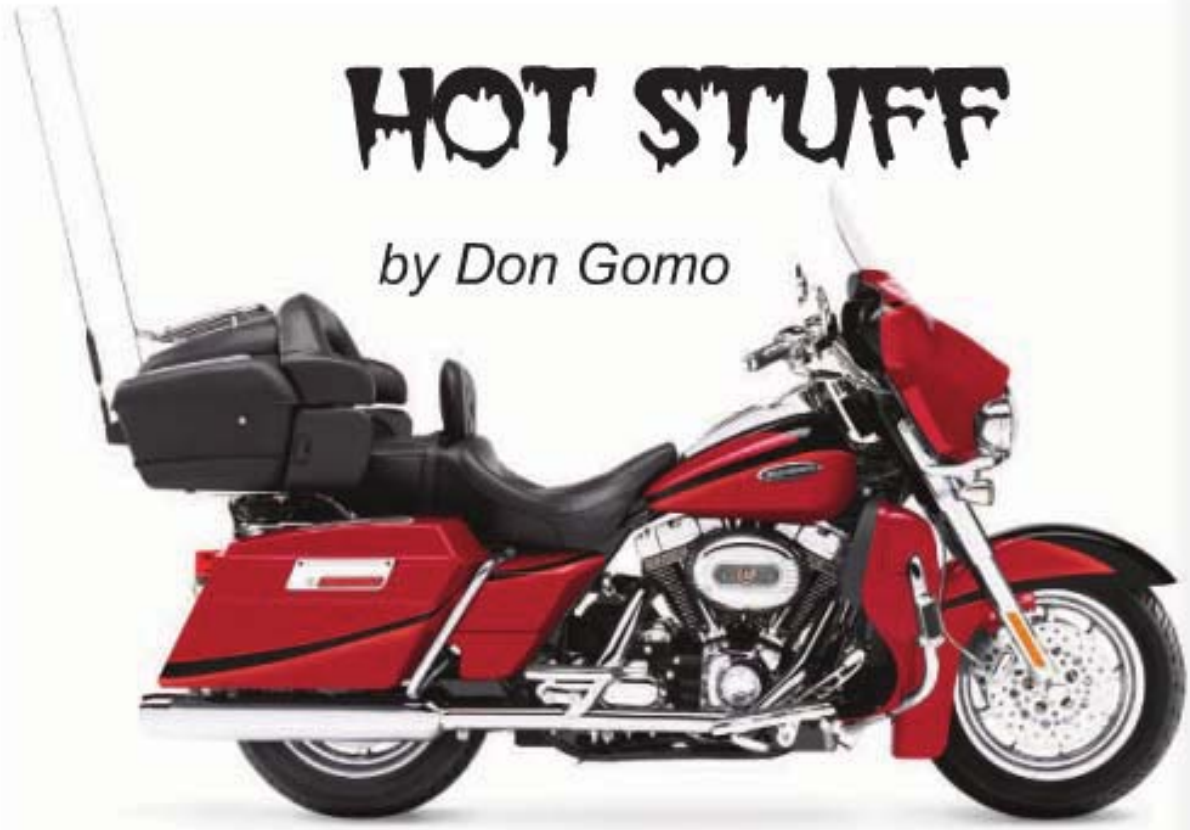


20 Years of Boss Hoss



HOT STUFF

by Don Gomo



Making your big-inch Harley a "cooler" ride.

Anyone that owns or has ridden a 2007 or newer H-D can tell you that the infamous V-Twin power plant that was pumped up to 96 c.i. certainly throws out some high-temp BTU's that can make your ride a bit of a toaster in hot weather, and especially in heavy traffic. Now, pump up that motor to the Screaming Eagle 110 c.i. version on an Ultra Classic, plus slap on those lower fairings and you have one HOT machine...

and that would be hot in a bad way.

Though the bigger powerplant was a nice upgrade, the EPA regulations for the motors required them to be choked down to a point where they run very hot due to less fuel and air being dumped into the jugs. I wanted to do something with my 2007 SE Ultra to help reduce the excessive heat, so as to enjoy my riding a lot more during those dog days of summer. I checked out a bunch of website message boards and tech reviews, and spoke with many H-D technicians to get some information for my task.

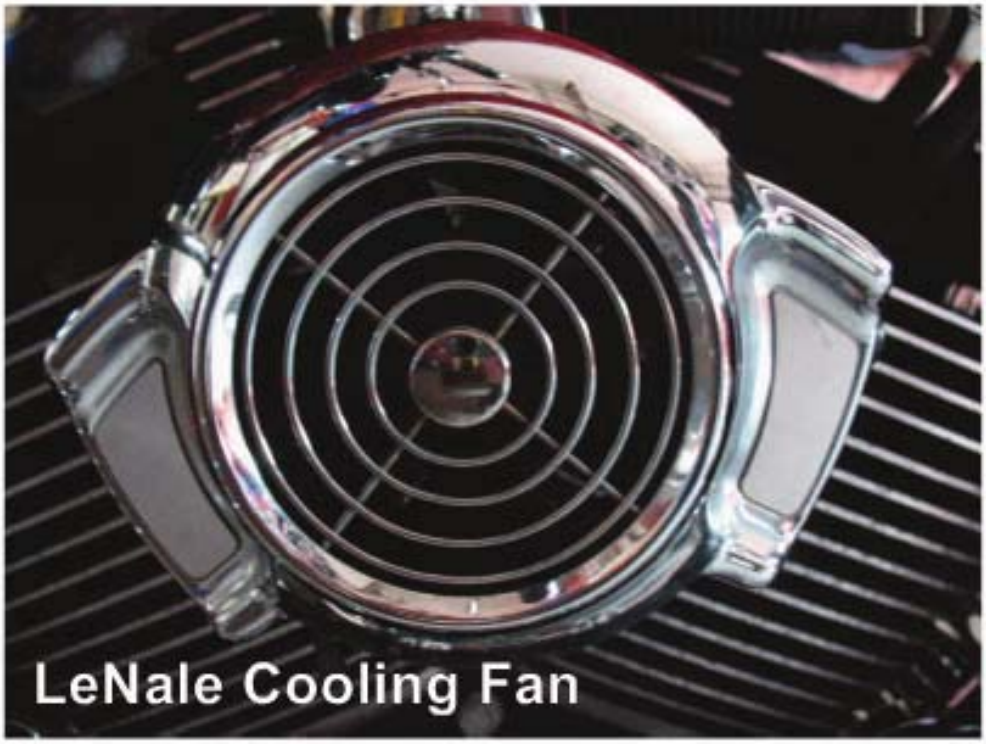
First, I want you to know that besides wanting a reduction in heat, I was looking to keep the costs down as much as possible. We all know that low dollar amounts combined with Harley upgrades is a bit of an oxymoron, but I was determined to try achieving my goal.

Most of the information I gathered pointed to the need to change the fuel injector ratio settings for more fuel, plus increase the airflow in and out. Along with this info I found and reviewed a few other items that I decide to incorporate into my project to help

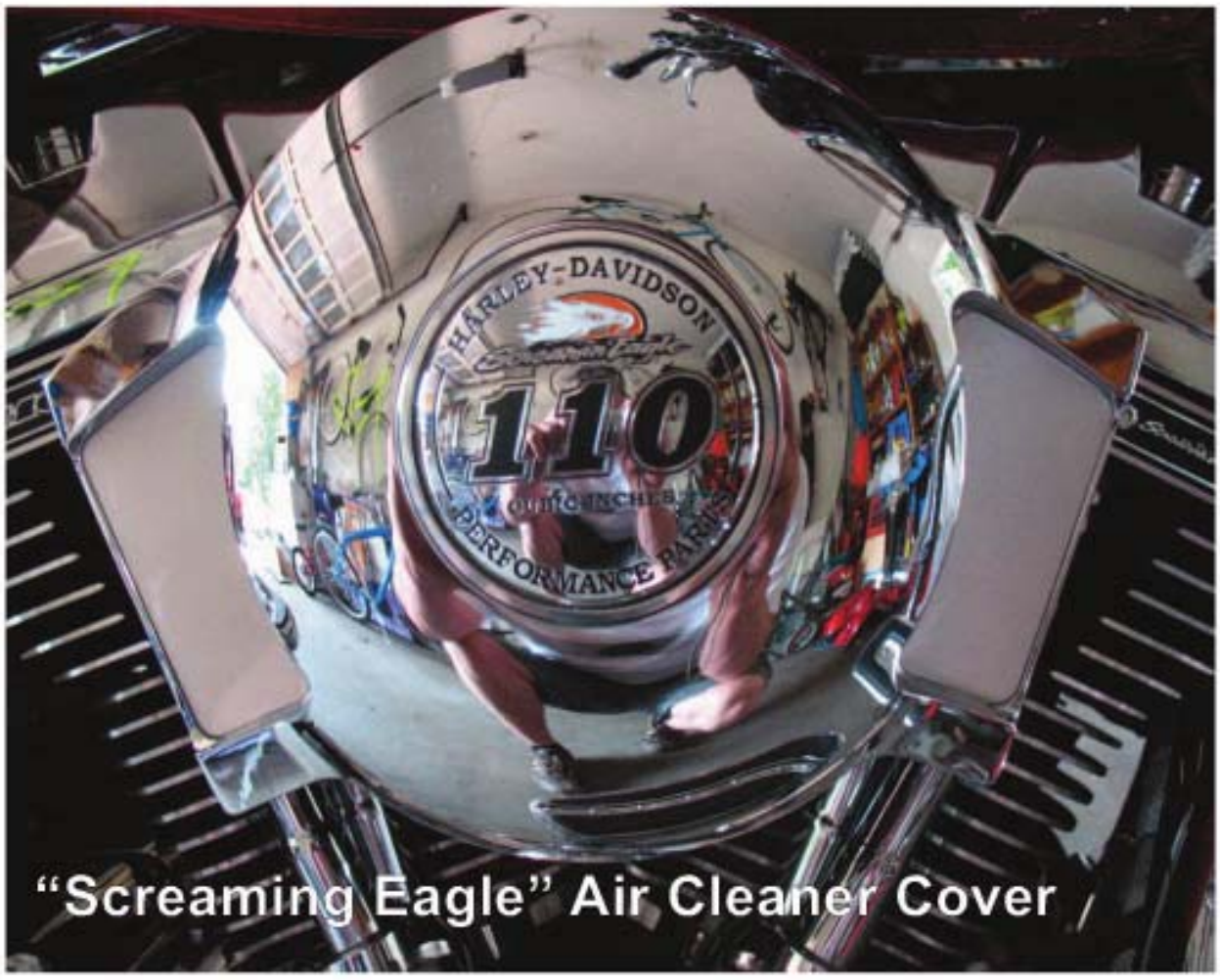
manage the heat issues. I also wanted to do as much of the work as possible myself, to help minimize the labor costs, which in some cases can cost more than the accessories themselves. So, after a bit of searching, reading, going back and forth with emails and phone calls, I narrowed my choices of additions to the following:

*** Cooling Fan from LeNale - $219 (Ebay)**
*** AirMaster Saddle Shields from Kuryakyn - $69.99**
*** Stage 1 upgrade and Air Cleaner/Cover from Harley- Davidson – Stage 1 upgrade approx $139; Forged Billet Air Cleaner Cover - $219.95; Billet Screaming Eagle 110" cover Insert $38.95**
*** Fuel Injection changes using XiED from Nightrider.com - $99.99**
*** 2" Muffler cores inserts from Fullsac.com - $119**
*** Exhaust header heat wrap - $29.95**
*** Detachable fairing lower hardware kit from H-D - $99.99**
*** Total = $1035.82**

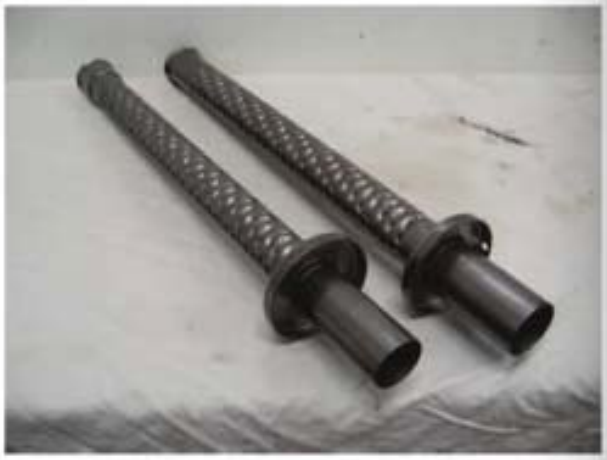
Add some shipping and taxes and we'll round it to **$1075.00**

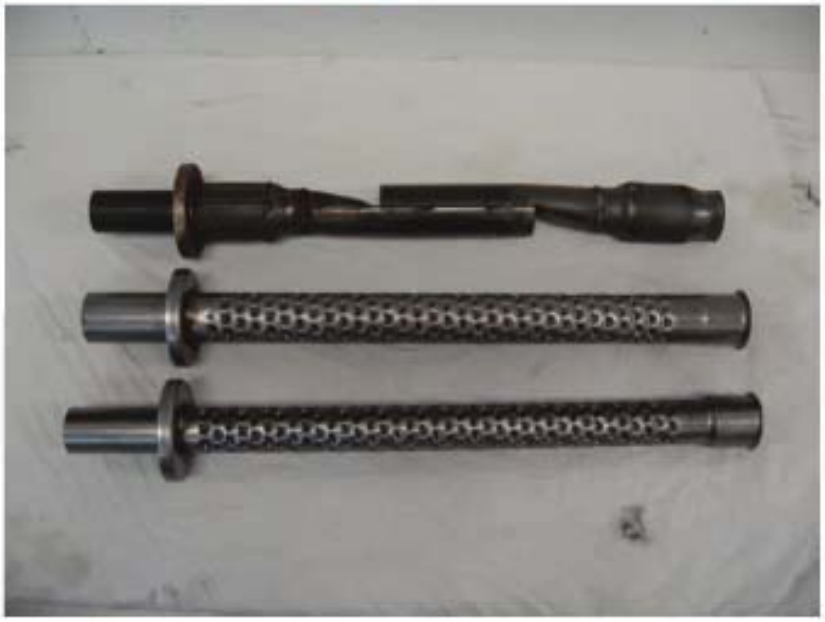


LeNale Cooling Fan



"Screaming Eagle" Air Cleaner Cover





Replacing the muffler core inserts was cheaper and easier than buying aftermarket pipes.

You may think that the dollar amount seems high to start with, considering the only "labor" costs involved were for a H-D tech to recalibrate the stock ECM for the Stage 1, but in the world of Harley, the total cost is fairly low. I understand that a

counterpoint would be that it seems a bit excessive to spend just over a grand to make a new bike more tolerable to ride, but that's the monster I'm dealing with, and I enjoy the bike. So for me to spend additional funds to make my ride more pleasurable is somewhat justifiable to me, and besides, there are plenty of folks that have spent two to three times that amount and either gained the same results or less.

The first two items I put on as soon as I purchased my bike new in 2007. The cooling fan from Lenale was found easiest on Ebay. The instructions included photos that were easy to follow and a kit to relocate your existing horn since the fan location used that point. Once you removed the horn, the fan mounted directly to that support. The wiring was easily described for both the fan installation and horn relocation. You can either use the on/off switch located on the fan or wire the unit to the bike's accessory switch (found on touring models). I just opted to use the switch on the fan since it was no problem to reach and operate. Even with the time to

remove the seat to get at the wires and relocated the fan, the total time for me to completely install the product was 35 minutes. Not too bad.

The AirMaster Saddle Shields took almost as much time to install, but I figured out a shortcut for mounting them which saved a minute or two. Once I had the fan and shields installed I did notice a definite difference of temps to my inner thigh area and some important parts above them. The shields help deflect the heat from rising straight up and the fan is manually controlled so you do not have to wait for any sensors to click on (which usually turn things on when it's too late and *really* hot). There are times that I just keep the fan on to help manage the temps. One downside is if the outdoor temps are high so is the engine (darned air cooling), and since the fan draws the air from the left side of the bike to over the cylinders, you can get some added heat on your right leg, but to date it hasn't been too bad.

I left the technical labor to the H-D dealership for the Stage 1 upgrade and opted to go with the more ex-

pensive air cleaner cover (hey, it matched the style of the fan). Once again I did notice a decrease in heat when the work was done, but I knew I still had more to do to get a better flow of air and exhaust through the engine.

Now, getting more exhaust to flow smoother required changing the mufflers, which in most cases meant more sound to boot. But I was happy with the sound level of the stock pipes. Don't get me wrong - I enjoy the rumble of a good set of pipes that don't scream "look at me" - but I wanted to find something that would work more to my liking. Also, with the increase of motorcycle "safety" checkpoints in New York State I didn't want to wind up with a ticket for non-compliance with my mufflers. So after a little research I was lead to a company call Fullsac for my exhaust choice.

Fullsac specializes in core replacements for the Harley CVO touring bike, plus a few more items. They offer a range of core replacements from 1.75" to 2.25". I choose the 2" replacement, figuring they would get the flow I wanted with a little less sound than the

2.25". Installation of the cores did not take too many technical and/or mechanical skills to complete on my part. I needed a die grinder or Dremel tool to grind down two spot welds inside the stock muffler to remove the stock cores and then drill a hole to secure the new Fullsac cores within the housing. Once again, as with the LeNale fan, the instructions included with the muffler cores were easy step-by-step that included photos. Besides that, if you had any questions the folks at Fullsac were reachable and extremely helpful. To help reduce some of the exhaust decibels I wrapped the cores with some high-temperature-resistant fiberglass wrap prior to installing them. The final result included not only a sound I was pleased with, plus a bit more HP & torque, but the fact that the muffler shells were still the stock ones with the EPA stamping. Okay, I might be borderline with the allowable decible rating, but at least most officers wouldn't question the pipes once you show them that they are "stock." Besides, they really didn't increase much in sound, but the increased benefits I got

from installing them were great. Plus, when you consider the cost of the Fullsac replacement cores vs. new slip-on mufflers, you can't beat the savings.

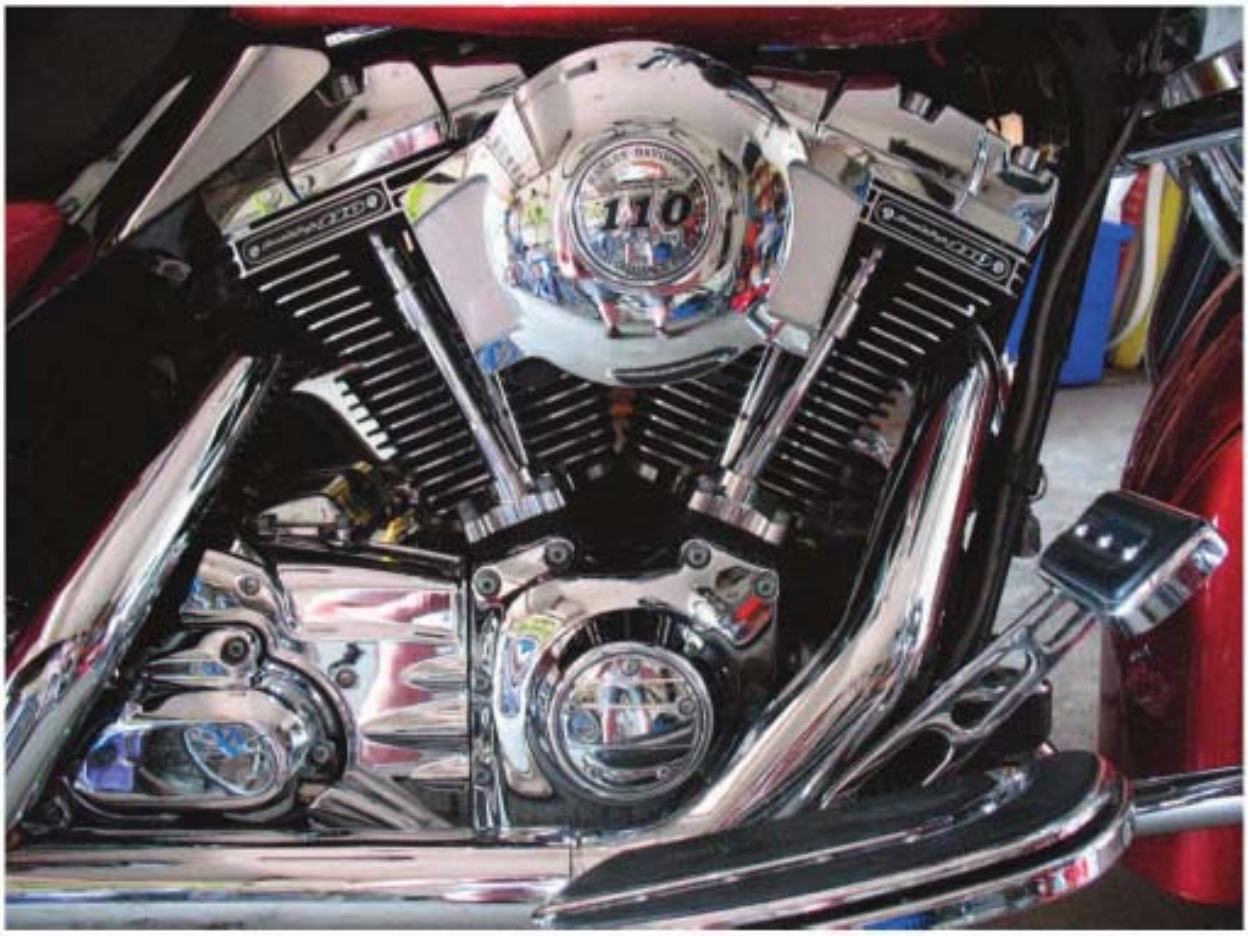
The detachable kit for the fairing lowers I purchased from H-D was for those really hot days of riding when removing the lowers meant an obvious increase of airflow not only to the motor but to me and my passenger. The kit took minutes to install and the time it now takes to remove or install the lowers is less than five minutes.

The exhaust heat wrap was from an auto parts store and required me to remove the exhaust system to install. The wrap I purchased had marked lines on it for you to follow so the wrapping looked even and neat. The time for me to install the wrap was actually the longest out of all the tasks. Between removing the exhaust system, dampening the wrap so it would stretch and shrink when dry on the headers, and reinstalling the exhaust, took me almost three hours from start to finish. The results for the installation were just as everything else added; each time I did a modification, there was a noticeable

The exhaust heat wrap was a generic-type purchased from an auto parts store. It may not look too classy, but it is efficient and cheap, and as you can see from the photo on the opposing page, isn't normally visible.

decrease in discomforting heat. And each time I was happy with the results.

Finally, the addition of the XiED from Nightrider.com helped round out all the previous modifications. Nightrider's unique



"patent pending" design approximates richer fuel mixtures to quickly and simply improve the closed loop fuel mixture on your TC96/103/110 engine from 14.6:1 to 13.8:1. This results in cooler exhaust temperatures. It is recommended for stock bikes and those with upgraded exhaust or intake. The XiEDs took less than five minutes to install. They are pretty much a plug-and-go design. They “interrupt” the wiring from the O^2 sensors and once installed give immediate results. The

throttle response was smoother and quicker, gone were the pinging sounds associated with the hot motor, and even though I did not do a before and after dyno reading, there was an undoubtedly noticeable increase in power. Nightrider.com has other products available for fuel injection management and power increase and their website is a plethora of technical information and specifications. When you consider all the additional work to install a Power Commander, SE Race Kit or the like, plus the required adjustments and mapping; just plugging in a device that works is great for what I wanted. No downtime, mapping, dynos, or confusing information, etc. Definitely a great device that delivered great results.

So with all this work did I really achieve my goal? Well, I took readings after normal riding conditions with a digital laser thermometer before any work was addressed, then again with all the installed accessories, and the difference was approximately *84 degrees F*. That's a lot of heat no longer finding its way to me. My difference in fuel con-

sumption from the stock setup is about 2% decreased. So, with the overall cost of approximately $1075, labor time for me to be around a total of 5-6 hours of work and a decrease in mileage per tank to be 2% or less; to lose that amount of heat plus a small percentage gain of HP and torque was worth the cost and time. Add the fact that I did not have to do any major motor work to get to this goal is even better.

So, if the discomfort from the heat of your newer H-D keeps you from enjoying a day's ride, perhaps you should check out one or a combination of these products to keep you on the cool side, no matter if it's a 96-inch, 103-inch or 110-inch, there's help for you at a cost most can easily live with.

Hey, you may look cool riding your bike, but wouldn't it be better to feel that way too?

Websites:
www.nightrider.com
www.fullsac.com
www.kuryakyn.com
www.harley-davidson.com

-- Gomo