

Hay Seed Engineering 120 FLH

Heart transplant for Evo baggers

story by Paul Holdsworth • photos by Dain Gingerelli

I was running about 90 MPH, chasing my buddy John through Florida's back roads, and not thinking twice that the bike I was on shouldn't be doing those speeds. We were zig-zagging a route made on the fly, on our way back to his

place in Cocoa Beach. As you might guess, we were slightly behind schedule. John was aboard his late-model (read: Twin Cam) Road King, and we were returning from the AMCA Vintage Motorcycle Meet in Eustis. It was the eve of Daytona

Bike Week, and I was feeling high as a kite. See, I was on a 1990 FLH Electra Glide that could easily run with John's newer King. And everybody knows that Evos aren't supposed to do that.

My bike actually belonged to Mike



**105 HARLEY-DAVIDSON
LANDMARKS**

1981 - The Thirteen



Dolecki, one of the crew from HSE, Inc. South. The ol' bag had a lot of get up and go, though, for an 18-year-old bike. That's because recently it had a heart transplant, in this case replacing its aging 80-cubic-inch, 45-horsepower, single-cam Evo (remember them?) for a new HSE 120. That's 120 as in 120 cubic inches, and that big mill served up a nice dose of roll-on power, too.

My midnight ride also confirmed what I already knew: the H-D Twin Cam motor is the standard by which all other Harley engines are measured. The Twin Cam as we know it was initially an 88-inch motor, and recently The Motor Company stretched its stroke to bump displacement to a cool 96 cubic inches.

But just as the Twin Cam motor is gaining popularity, in some riders' circles there is a corresponding increase in affection for the simplicity and the proven reliability of the old single-cam motor that earned the moniker, Evo, short for The Motor Company's official name, Evolution. The engine powering the Ultra Classic I rode today is one such engine. Enter Frank Aliano and Steve Pfaf—aka Posie—with their HSE 120 crate motor. Frank has a long history as a motorcycle rider, racer, and shop mechanic, and diesel engine/heavy equipment mechanic. Posie, also a long-time rider and motorcycle

wrench, had spent considerable time at H-D's York facility on their quality audit team until the late '90s. Together Frank and Posie comprise HSE, Inc. As for their engines that fall under the HSE nomenclature, that story is a spin-off from an episode they experienced when they set up their company about 10 years ago. The story goes like this:

Posie and Frank crossed paths with the movers and shakers from the former Indian motorcycle company headquartered in Gilroy, California. Frank and Posie had been hired as outside consultants to assist in addressing failure issues related to the Power Plus 100 engine. The main culprit was the crankshaft. Indian's engineers at the time were not interested in implementing the fix that Posie and Frank suggested. The people from Gilroy collectively shook their heads at Posie and Frank's ideas, and even went so far as to imply that the two men from the east were a couple of hayseed engineers. Long story short, that Indian company folded, while Frank and Posie soldiered onward to become reputable sources and service providers for abandoned Indian customers who have relied on them to repair the broken Power Plus 100 engines in their respective locations: Pennsylvania for Posie and Florida for Frank. The reference to them as hayseed engi-

neers became a long-standing joke with Frank and Posie, and the seed was planted for the company the two had formed. Hayseed Engineering became the moniker for their big-inch engine kit, the HSE 120 square-block engine.

Word spread of HSE's knowledgeable fix for the Power Plus 100 engine, and today more than 1,000 engines have been repaired. In between fixes, Frank and Posie used their engineering savvy to take an otherwise rocking single-cam billet 120 motor from Delkron, and transform it into a really rocking HSE 120. Not that, in its "stock" form, the Delkron single cam billet 120" motor doesn't offer power, but what these two "hay seed engineers" came up with was one badass engine that, as I discovered during this year's Bike Week, makes any Electra Glide haul the hay. I should point out, too, that nothing else in the bike's drive train had been modified, so this was a straight transplant—a tired, wheezing Evo making way for a fresh HSE 120 engine that felt as though it were on steroids. To borrow a line from Hans and Franz, "this engine is going to pump you up!"

Frank and Posie envisioned their HSE 120 to be a plug-and-play engine that bolts into virtually any stock Evo based Harley. It *continued*



**1986
Harley made
RVs, too!**

**1993
90th Anniversary
Celebration**



comes equipped with HSE's single-fire ignition, S&S Super G carburetor and cam. Bore and stroke are 4.25 inches squared.

And because it's based on the Delkron package, the HSE 120 uses first-class materials in its construction: 356-T6 aluminum crank cases, cylinder heads, intake manifold and air cleaner are matched with 6061-T6 materials for the cam cover, oil pump and rocker housings.

With 10.3:1 compression ratio, the HSE 120 relies on a pair of compression release buttons for fire-up. Give each button a gentle press, thumb the starter button as you normally would, and the grizzly engine barks to life. HSE, Inc. rates horsepower at 121, and torque is claimed to be 138 ft.-lbs., certainly more than enough to get that old bag running like a new model.

The real fun begins when you snick the 5-speed transmission into first, then tap through the gears. The big engine effortlessly pulls the big bike up to speed, easily sustaining

cruise speeds of 90 MPH over interstates and Florida's long, straight backroads. And when we encountered stop-and go traffic in town, the big engine behaved like a kitten: no fuss, no muss, no overheating or ping-pong.

The clutch was stone stock of H-D origin, and we had no slippage. Moreover, the lever pull was easy, just like the stock setup (which it is).

I generally logged 36 or so miles per gallon, which isn't bad for a big-block motor. Hell, those figures aren't bad even for a small-bore motor! And it all comes at a cost that, when you consider what you get, is palatable. HSE charges \$6950 for the black finish, and the natural satin motor retails for \$100 less.

Installation time? Someone knowledgeable should be able to do the swap in six hours. The hayseeds can do it in four hours, although they've got a lot of practice from their R&D time making this package right.

With so many used Evo baggers

and FXRs available on the market today—and being sold for pennies—engines like the HSE 120 make practical sense. You spend a few bucks to freshen up the bike, drop that new single-cam engine in it, and you're off the races, or, at least you're off to join the ride with your buddies on their Twin Cams. And there'll never be any doubt in their minds, either, about your bike's ability to keep the pace. ■

Resource

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