

89 inch Evo build up completion

Hey all, Mikey here from Knucklehead Motorworks again. We are going to get this 89 inch Evo project finished up this month, (actually we had it done earlier on in the spring) but ya know how publishers go we have to run it out a bit longer.

When I left you last we were putting the intake manifold on, we have since went thru the carburetor that has been on this engine, which just happens to be a S&S Super E series. The jet sizes are determined to be a good starting point and the sizes are recorded. The color on the plugs that were in the engine before the build up were ideal and with the changes we are making I feel that we will be pretty close after the engine has been broken in.

I had mentioned in the first article that the goal of this build up was to create an engine that could/would run with or out run most of the stock Twin Cam powered Harleys out there, and as a byproduct increase the fuel economy. I have been building a highly efficient engine combination here using moderate compression and with parts that I have found to be highly reliable but more powerful than are used in the stock construction Harley used. But to cap it off we will change the final drive ratio slightly by installing an Andrews 34 tooth transmission pulley in place of the stock 32 tooth. This change will help out in the fuel mileage increase and the "stroked motor" we now have will easily be able to pull the taller gearing. The customer should see mid to upper forties on the highway loaded down with a passenger. This fuel mileage is similar maybe a bit better than my wife's stock 96 inch Ultra Classic, I don't complain about that a bit but that Ultra is just a bit slow, this Evo won't be.

We will also install new clutch plates from Barnett Industries that provide about 30% more in friction area to help hold the extra torque we will be putting to the ground. If we had a 1987 or later we could increase the clutch spring pressure and change the clutch release mechanism to reduce the clutch lever effort. Because it is a 86 though if we increase the clutch spring we risk breaking the clutch release arm, and when that breaks ya don't have a clutch. No one makes a better one than Harley that I know of, so I ordered a spare for the customer to throw in his saddle bags. I can imagine that if out on the road you were to pull into either a dealer or a shop the chances would be against you that the store would have one of these levers on the shelf.



When we get engines that are brought into our shop over the counter for re building or whatever, it is our preference to test run them before we hand them back to the customer, and we do have a test stand made up for exactly this purpose. If it is a air cooled Harley V Twin 36 to present, we can run it including the K and XL models. Because we have the complete bike we are going to forego this step and bolt the engine in, set the timing and adjust the carb and take her out for a test ride. It was a cold day out so I certainly had the cover on the new oil cooler. Too cold to say that we are rich or lean with the jetting but after the engine was hot it's manners were very good, after the engine breaks in and the roads are warmer this will be one fun motorcycle for the customer.

I hope that you enjoyed the article and the build up, I know that this is not a new Twinkie engine, but there are a hell of a lot of them still out on the roads and S&S felt pretty strongly about the combination, enough that it is offered as a suggested upgrade for the 80" Evo that is tired. We just put our own little spin on the build up and it has worked extremely well for me for years. Thanks for your interest and reading of this series, who knows I might be asked to build up a Pan or Knuck for ya all to read about, or we may write about the cool Bobber that Fred finished up this spring, who knows. If you are in the area stop on in, the coffee is always on, or I might see you on the road. Mikey

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