

THE PRACTICAL FLATHEAD by Ron Holleran

A great day was had by all. On Saturday, Oct 13, 2001, six beautiful street rods showed up in my driveway, led by the Blown Flathead of Ed Bergquist and a group of New England Street Rodders . No sooner did the engines shut down, we were buzzed by Bill Batesole and his beautifully restored 1953 Cessna 180. After he landed I gathered them up for a group picture, just in case you doubted.



We bench-raced for awhile, went to lunch and I gave them a tour of the Stone Village in Chester, VT. This is what freedom is all about, only in America.

Four of the above vehicles were powered by Flathead Ford engines (guess which ones). My goal in life is to make the flathead Ford engine a viable street engine, with more than adequate reliability and performance. In an effort to do this we have to dispel some of the myths surrounding this engine. Thanks to Jack Wegman, who coined a new phrase "***The Practical Flathead***" we've been challenged to come up with answers to a number of questions - the big one is costs. How much does it cost to build a reasonable engine? What's reasonable? How much power does it produce? And last, but not least, how long will last?

The Basic Engine

Starting a project of this magnitude we must have a basic engine to start with and this has an effect on the total costs. I use only engines with 24 stud heads. These were produced from 1939 to 1953. There are three versions of these: 1939-41, 1942-48, and 1949-53. For various reasons the least expensive to rebuild are the later 49-53.

8BA Best Choice?

I believe the 49-53 or 8BA engine to be the least expensive engine to rebuild with reliability in mind. All of the 24 stud engines will produce about the same amount of power in the Street Engine configuration. The 8BA is more plentiful and contains all of the latest improvements the Ford Motor Co. made to these engines. This includes the oiling and cooling systems as well as converting to lock-in bearings for the connecting rods. These changes, as well as others, make this engine the most desirable for modifications.

4 Inch Crankshaft Myth??

The 1949 through 1953 Mercury engines had a 4 inch stroke crankshaft as opposed to the Ford 3 3/4 inch stroke. This added 16 cubic inches and approximately 9 ft/lbs of torque to the stock engine. It has become a status symbol in the world of modified Flatheads. Its added torque is deemed beneficial in heavier cars. Like hot cams, high compression heads, etc., it is one way of increasing the power of this engine, and its added cost must be compared to its benefits. In a fully modified street engine it is doubtful that the addition of a Mercury crankshaft would add more than 10-15 HP.

Reliability

Regardless of what year engine you choose to build, reliability is probably more important than power. How much power can you produce from one of these engines without reducing reliability?? I'm not sure. There are many engine builders out there that have experience in what works and what doesn't and I'm

just one of them. In my experience using stock clearances is the best route to go. This, along with a full flow oil system of some kind, will keep the bottom end happy for a long time. Stock clearances require 10W-30 oil as the use of the 20W-50 is hard on the oil pump drive and the relief valve. When the relief valve opens it induces heat into the oil. This grade of oil has become very popular among street rodders without good research. In this case I would increase the connecting rod side clearance to .012-.015 ' to relieve the pressure at the fillet radius of the crankshaft. Remember, this engine was designed to use a lighter weight oil and run at 35 ± 40 lbs pressure-more is not better. The last part of this reliability question is oil consumption-here I use a 4 ring street piston set tight (.002). As you can see, no tricks here. Keep it simple.

Power Output ?

This is one of those questions that can't be answered with a definite number. Like, do this and you get so much power. There have been a number of dynamometer tests of racing Flatheads but the milder street versions get left out. I once spent considerable time testing a stock 239cid engine, (which I rebuilt). The best output I could get out of this engine was 171 ft/lbs of torque @2100 rpm and 80 hp @3200 rpm. This without generator or fan. Stock single exhaust. My numbers may not be very accurate, but this gives you some idea of what you can expect from one of these engines. I once built a 3 3/8 X 4 engine for a guy in Bridgeport CT. It had the usual hi-compression heads, three carbs. Big valves (DeSoto). And a 400 jr. cam. This ran the quarter mile at 16.8 sec. In a 3800lb 48 Ford coupe. This comes out to about 170 hp. My 258CID stock car engine produced 127 hp on a chassis dyno. Both engines were racing engines with light weight 3 ring pistons.

Costs,How Much?

The big question: how much does it cost to build this beauty. Using an 8BA or 1CM and a Patrick's engine rebuilding kit (500), bore and fit pistons (150),valve job (100),cam & adj lifters (300), magged and reground crank (150). Get your hands dirty and put it together yourself. You've now spent approx.1300 dollars on the short block. Now you can add the sizzle, and how much you spend on heads intake and carbs depends on how good a trader you are. 2 grand is possible.

FLATHEAD CHILI

I like chili, and in the fall and winter, I make it quite often. Sometimes I don't have all the necessary ingredients so I have to improvise. It's a lot like building a flathead. The first thing I do is get out my Dutch oven, sometimes you need special tools to do a job right. Next, I have to come up with some venison, pound and a half will do.

Living in Vermont that's not too hard to do. But you may have to substitute something like hamburger or diced beef. Some even like to mix in a little pork. It's a lot like deciding what block to use, 59A, 8BA or even a 99T. I put his into the Dutch oven and simmer it. I then add the spices this is important to get he flavor into the meat.

First, I add two tablespoons of ground cumin, this should be fresh ground. I get mine from the health food store. Good components make good flatheads or chili.

Next, come two tablespoons of chili powder. The next thing you add is the cayenne pepper, this is like installing a cam. You have to get the timing and lift just right or you may spoil the brew. I mix this in with the meat to give it flavor.

Now, while the meat is simmering I dice up some peppers and onions. I dump these into a saucepan with a little water and cook em up until they're soft. About his time, the meat is ready, so dump the peppers and onions in and stir em up. Now we have the basics, like a short block.

Now, I add some crushed tomatoes and last, but not least two large cans of kidney beans. Simmer this for a few hours and you've got a pot of Flathead Chili!

As you can see, we have the opportunity to modify this in many ways and we usually come up with a good chili, but some chili is better than others.

But I'd rather have so-so chili than plain ol' stew. (SBC) . . . Keep 'em runnin - Ron