TINKERIN TIPS

By
Ted Aschman

Tinkerin Tips *is a regular feature section of hints and tips for the restorer. The newcomer to the hobby will find much of importance; the old-timer may learn a bit.* ***This feature can only be continued if YOU help to write it. Send to: Ted Aschman, 214 Morningside Drive, Elizabethtown, KY 42701 or E-mail: Ted@kvnet.org***

ENGINE HOP UP

Hardly a week goes by that someone doesn't inquire as to what they can do to give their Model T a little more 'umph' so they can keep up with the freeway traffic, or how they can give the old mill a little more low speed torque to help boost them over hills and dales.

The best thing, perhaps, would be to stay off of the freeways and don't climb hills, but that is almost impossible. Back in their days, the Model T did best in the flat areas (like around Detroit and the plains of Kansas) and with everything in order, could cruise all day at 30-35 miles per hour with no problems.

The lower end of a Model T engine is, admittedly, quite frail and with a crankshaft diameter of 1.248 inches, there is not much there for "doggin'." One of the worst enemies of any internal combustion engines is reciprocating mass.

With a Model T, this can be helped some by installing aluminum pistons. The balance, or perhaps the unbalance, of reciprocating and rotating parts is another serious problem and couple this with an engine speed in excess of 1500 rpms, and one has a disaster in the making.

Theoretically, an internal combustion engine must have a compression ratio of about 3.8 to 1. A person rebuilding a T engine, normally must mill a few thousandths from the block deck and maybe a like amount from the head—maybe a total of .010 to .015" altogether, just to clean up the two mating surfaces. This much does not seem to harm a well rebuilt T engine and does bring the compression ratio up to a more respectable 4.2 (or more) to 1.

For the average family fun car, light weight pistons, a shaved deck and head, properly adjusted coils and a good carburetor are all that are necessary. Anything else that is done to increase power, pep or speed, adds just that much more that can go wrong.

The next step can be a Ricardo, Simmons, Z-head, or some other "high compression" head (high compression is really a misnomer, as these heads have a ratio under 6:1). These heads require under thirty minutes to install and do have a more efficient combustion chamber. The torque and horsepower are altered somewhat, and while the top speed is just a bit more than a standard head, the hill climbing ability is greatly improved. Because of the design of these heads, a secondary flame front (spark knock) that often occurs in a stock head and cause a severe strain on the rod bearings, is not likely to be present.

The next step is to OHV or OHC heads, and these can and often do cause trouble. They change a Model T from a docile (?) beast to a pseudo-racing machine. Unless one goes all the way and rebuilds the engine from the bottom up (to handle all the extra stress and strain), things can start flying apart.

One thing that many do not realize—the wider open the throttle, the higher the pressure on the top of the piston, which works down through the rods to the babbitt bearings. Avoid full throttle as much as possible and maybe avoid problems.

PEDAL SHAFT OIL SEALS

Oil leaking out through the pedal shafts can be easily solved by the use of "O" rings. Using an abrasive stone in a quarter-inch drill, grind a radius on the shaft hole and the hole in the pedal support or cam, just deep enough to hold a neoprene "O" ring. When the ring and the cam are installed on the case, the ring fits snugly and will prevent oil leaks.