

Basic Principles of **Motor Building**, never to lose sight of:

- 1) An engine is an air compressor
- 2) An engine produces slightly more power than the power it consumes
- 3) The only way to increase power is to increase torque or increase engine speed
- 4) An engine is a system, that is, the variables are interdependent
- 5) Everything is a compromise
- 6) More is not necessarily better or just because you can doesn't mean you should
- 7) Never copy anything you don't understand

Basic Principles of **Motor Tuning**, never to lose sight of:

- 1) Oil is cheaper than parts
- 2) Always start tuning from the conservative setting and work toward optimum, that is, start with low timing and rich jetting and work down one step at a time
- 3) Octane is not horsepower, octane is resistance to detonation. To exceed the motor's octane requirement is a waste of money. To greatly exceed the octane requirement loses power.
- 4) Never run jetted to the lean side of optimum. It damages the motor, sometimes fatally. Running slightly rich makes good power, accelerates better and is easy on the motor. Running way rich, as in break-in, runs badly, but doesn't damage the motor. Rich runs cooler and carries more lubricant.