

THE EXTRA MILE

Engine Building and Power Techniques

BY SCOTT SEHR



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STREET or STRIP?

Building the correct engine for the correct use

Street and strip built engines can look alike but that is mostly the only similarity. Both engines can feature many of the same outer cosmetic components. But internally there are many differences and by choosing the wrong style of engine for the intended use will result in disappointment. A strip engine is a fine tuned high-engineered power plant with the intention to make a ton of power for a short period at high RPM. A street engine is a unit capable of cruising around town for miles but still making great reliable horsepower. With the popularity of "Street Outlaws" many are dreaming of building a radical high horsepower ultimate street engine to cruise around the town for miles and miles and then to go to the track once in a while to lay down some impressive bewildering numbers. The engines used on TV are purpose engineered competition engines. These cars are towed to the race site and only run long enough to make a burnout and a pass. Most can only make one run then are loaded on the trailer. Building an ultra high-powered street driven car is possible, but it is an expensive and daunting venture. Lets examine the two types of engines to clarify some of the misunderstandings of the two.

Engines built for street driven purposes are usually required to use an easy available fuel. These fuels most commonly require the compression ratio to be lower so engine damage does not occur. Street engines are required to make power and torque on a much broader RPM range because the average cruising RPM is much lower than peak power RPM. The bearing and piston clearances are held to a tighter tolerance because of the extra heat built by a street vehicle, the more power the engine makes the greater possibility of heat build-up and more attention to engine maintenance is required.

Competition engines are engineered to make as much power and torque as possible. This requires the engine to be spun to high RPM and to run exotic fuels because of high effective compression ratios. These engines have a narrower power band to move the vehicle as quick as possible. Engine clearances and components are specialized to reduce drag and friction to gain power and torque but competition engines are designed to run only for a short period of time. Higher engine heat is a competition engines enemy.

Street engines can be run on the strip but may not run as fast as a strip engine and a strip engine can be run on the street but only for

a short distance before engine damage occurs, and will mostly be driven below the intended power band. Finding the happy medium is the challenge. Whichever type vehicle we run, lets always be respectful of our engine power and our surroundings to always stay safe.



Competition built drag engine 1300+hp



Purpose built street engine 500+hp

At Sehr Performance we always travel the
"EXTRA MILE"
for our customers and we are always up
for the challenge.

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