

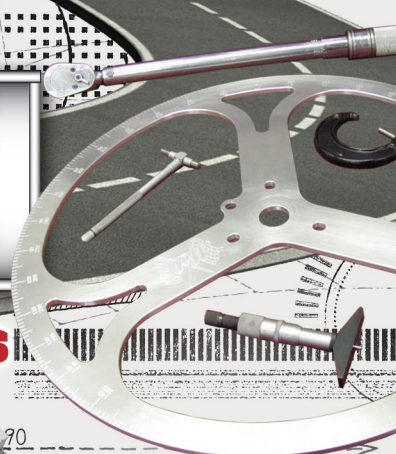
THE EXTRA MILE

Engine Building and Power Techniques

BY SCOTT SEHR



Absolutely, The Most Motor For Your Money! *Guaranteed*



The Factory Stock Ring Package

Last month we discussed the difference in piston ring packages and the potential of making horsepower when the right ring package is chosen. Today we'll delve into the stock rings and why they were redesigned.

When the internal combustion engine was developed the main job of the piston rings was to seal in the combustion pressures just as it is today. These engines were low power, low compression pieces and the ring material was much softer in order to conform to the cylinder walls. High mileage and durability were not an expectation. In fact these engines had an expected service life of about 20,000 miles before a rebuild was needed. Some of the causes of this short useful life were improper fueling, excessive heat, inadequate materials and poor lubrication to name a few. The garage innovators were born from a need of a better way to do things.

The factory engine of fifty years ago was expected to go 100,000 miles before a rebuild was needed. This was possible in part through the use of a better ring package. This new package included compression rings of 5/64" instead of 1/8" and going from up to 4 compression rings down to only two. Ring material was made better through the introduction of chrome rings and a moly surface material. The ring tension was still quite high in order to conform to the cylinder walls, which were not always round or straight. This was the age of an engine that was "Built Tight" to make power. Problem was they also made a boat-load of heat which causes failure.

Today's factory engines are designed to run at higher temperatures and have computer engine management and high tech fuel and ignition systems in order to burn fuel more



Left to Right are 5/64" cast, 5/64" Moly and 1.2mm Chrome rings

efficiently. The rings aren't relied upon as heavily but still have the same job and have been reduced to 1.2 to 1.5mm and radial tensions are lower. This reduced heat, helps engine power and should go hundreds of thousands of miles, with proper care, before it needs to be rebuilt.

The factory ring package can keep you going with a factory engine but for increased performance let the pros at Sehr Performance create a package that will get the

"EXTRA MILES"
and performance out of your next engine.

Next month we will talk about a Performance Ring Package.