

THE EXTRA MILE

Engine Building and Power Techniques

BY SCOTT SEHR



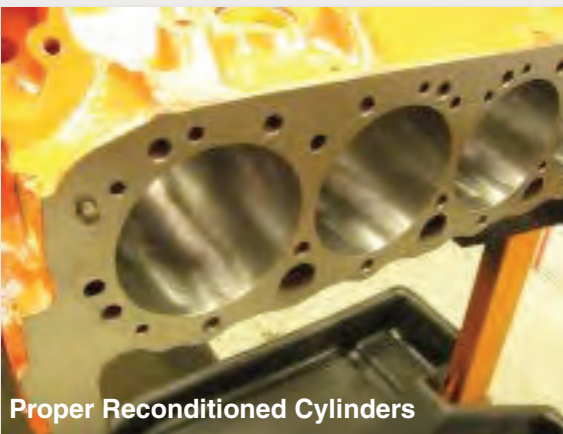
Absolutely, The Most Motor For Your Money! *Guaranteed*

So, Let's Just Freshen It Up

This is a phrase that I hear often with my customers who are requesting an engine built economically. This idea came from hot rodders years ago when the engine parts would wear out and cause the engine to have less power and increased oil consumption. The freshen up would consist of disassembling the engine, cleaning, deglazing the cylinders, checking the valve seal, and installing new rings, bearings, and gaskets. This type of rebuild was common years ago and had to be done quite often because the proper machine work was not performed to make the engine run as it was initially intended to. The racers made this phrase very common in the hot rodding industry because the engine would most commonly have already been previously properly built with all the engine correcting procedures like cylinder boring, new pistons, new camshaft, all surface correction, and complete cylinder head and valve conditioning so the engine freshen up would be more successful for the intended use.

When I get into an engine that is 30-40 years old, has been sitting for years, and has over 70K miles on it, an intended economical freshen up is not the best option for an engine build today. As the years have gone by the engine parts and quality have changed dramatically, the rings of today require a precise round and straight cylinder bore with a particular cylinder finish. The bearings, valves, camshafts and lifters, gaskets, and springs are made with very different materials that require very specific specifications and require much closer tolerances. Commonly the engine wear will be greater than what is allowed.

When I am developing a custom engine build plan, the cost of the build is what seems to be the main concern, instead of what is the best plan for the best desired outcome and use of the engine. The cost difference between the freshen up and a proper engine build usually is not worth the disappointment of the less expensive option. What is not realized is that the freshen up option includes many hours of extra cleaning and custom machining techniques that use labor time that could be traded for machine shop time to correctly build a quality engine. Often the used engine parts are too worn out to use, so purchasing new parts are required. At the end of the day the total cost difference may only be \$500.



Proper Reconditioned Cylinders



Freshened Up Cylinders

I have always had my customers best interest in mind to build them a quality engine that will provide them with reliability and the best desired performance. All of us here at Sehr

Performance go the

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to accomplish this for our customers.

722 E. 8th St. | Sioux Falls, SD | 605-334-4191 | sehrpower.com | sehr@sehrpower.com