THE EXTRA MILE

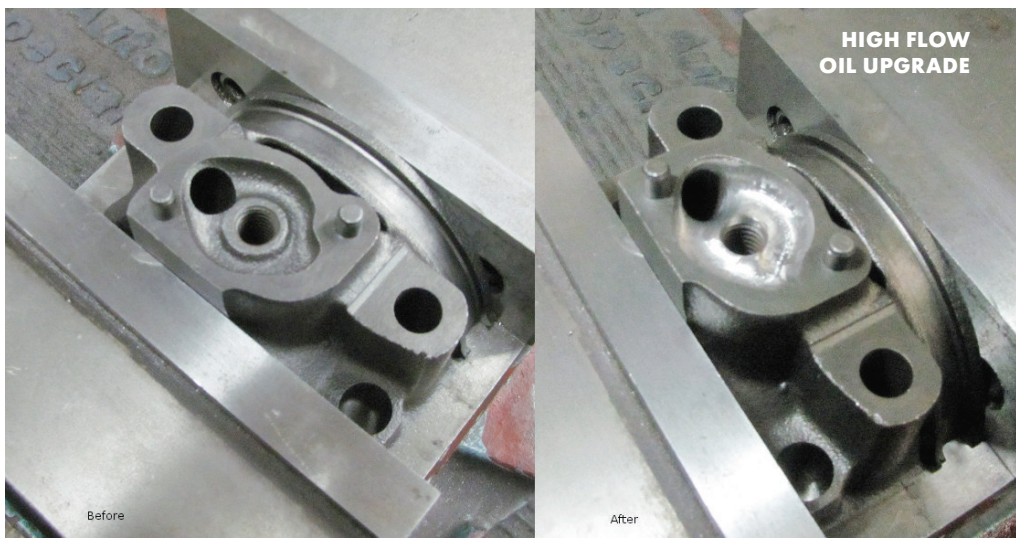
with Scott Sehr

OIL GALLEY CORRECTION

GOING WITH THE FLOW FOR A BETTER ENGINE BLOCK

In the last several months, we have discussed many of the critical factors of machining a better engine block and why we pay such close attention to these factors. One of the more overlooked aspects by many is the oil flow characteristic of the engine block. The engine block houses the oil galleys that direct and deliver the critical engine oil to the necessary components in the engine. It is imperative that the engine oil is delivered with the correct pressure and volume to the components so that there is proper lubrication and heat dissipation in your performance engine. When the cylinder block is cast and machined at the factory, it is designed for a specific use, power, and RPM range. Many engine blocks that we use are required to exceed the original design expectations so we must machine the engine block accordingly to ensure reliable results. Our oil system modifications are an area that we often focus on and will improve.

The first thing that many builders will do is install a high-volume oil pump on the engine. This is an acceptable oil system upgrade if other aspects are changed to be compatible with the engine. An extra capacity oil pan is a must when using a high-volume oil pump, otherwise the oil pan could be sucked dry at higher RPM in a wet sump oil system. It is also critical that there are minimal oil system deflections and oil port misalignment. These factors can decrease oil volume to critical areas and cause unwanted oil aeration that can lead to premature engine bearing wear and premature engine component failure. One of the most common things we will see is that the oil galleys in the engine block will not be completely drilled and matched to the mating galley, or that there is a flaw in the galley itself that creates a restriction. These flaws can be corrected or enhanced by drilling through and reaming the galleys to the correct size that will correct the flaws and restore oil flow. Another correction that can be done is to port the oil galleys in certain areas and to port match the oil galleys in other areas. We have done testing and have found up to a 10% increase in oil flow by properly using these proven techniques. It is critical, however, that care is taken because if the incorrect procedure is performed then flow and volume can be decreased and hurt engine reliability.



HIGH FLOW OIL UPGRADE

Here at Sehr Performance, we always look deeper and harder at all aspects of our engine builds. That is another reason people come to us because we are always traveling the **EXTRA MILE** for our customers.

Sehr PERFORMANCE MACHINE

722 E. 8TH ST. | SIOUX FALLS, SD | 605-334-4191 | SEHRPOWER.COM | SEHR@SEHRPOWER.COM