WHAT IS THE DIFFERENCE BETWEEN TWO-CYCLE OILS AND FOUR-CYCLE OILS?

Two-cycle oils (2T) differ from four-cycle lubricants (4T) in the fact that 2T lubricants must combust or burn and are chemically altered to do so. 4T oils are designed not to burn or combust and have different chemistry profiles that inhibit consumption by the engine. It is therefore for those unique and completely opposite operating requirements that a classification needed to be assigned to differentiate the oils based on the engine design cycle (2-stroke vs. 4-stroke). Most of today's oils meet strict requirements, however snowmobile engines require different chemistry than other two-stroke applications to provide the higher Brake Mean Effective Pressures and horsepower output the modern snowmobiles are capable of producing. Snowmobile engines generate a higher specific power output per cubic centimeter (cc) than most engines and at a higher sustained rpm. Cold operating temperatures and air-cooled vs. liquid-cooled adds to the fray as to which formulation will provide the best protection and low temperature fluidity. As you can see, our beloved snowmobiles challenge reliable operation by operating in a severe environment that most two-strokes don't have to deal with.

WHY ALL THE HYPE ABOUT SYNTHETICS? AND WHY DO THE MANUFACTURERS URGE YOU TO USE THEM?

Manufacturers insist on using synthetics because they don't trust conventional technology to blend a petroleum two-stroke oil that burns clean and does not cause premature power valve sticking. Cleaning power valves is a drag and the OEM's realize most people would rather ride than spend time doing maintenance caused by a poor grade of oil. Blending oil is an art, a skillful balance of chemistry and component selection along with additives that perform in a predetermined manner. This art is referred to as chemical engineering.

WHAT WOULD BE THE PREFERRED TWO-CYCLE LUBRICANT?

It's combining the best features of both petroleum and synthetic oils, while altering or removing the undesirable traits. The Hybrid 2T formula would be an ultra-pure, highly refined, superior based oil combined with an additive package that would offer all the benefits in film strength and the cleanliness of a synthetic yet still be classified as a mineral oil. The good new is this technology exists and we have a handle on how to make it a reality.

WHERE CAN SNOWMOBILERS BUY LEGEND OILS?

Our oil is currently available in Canada through Sled Pro Distributing (905) 898-8003, in the USA through Legend Performance & Technologies, Inc. (231) 943-4132 and our existing dealer network. You can visit our new website, legendperformance.com that has current dealers listed as well as technical info about our lubricants.

WHY SHOULD SNOWMOBILERS BUY THIS OIL?

As the technical article pointed out, the 'oil is just oil' mentality no longer applies. We have today the technology and wisdom of years of experience to blend oils that not only provide the best protection, but maintain the performance integrity of your engine. People spend a lot of hard-earned money when they invest in a new sled. It makes good sense to protect that investment with superior lubricants and consistent preventative maintenance. Our technology and philosophy is "Provide the protection and performance without the compromise!"

SO, WHAT'S NEXT FOR LPI? YOU BUILD AWESOME ENGINES, YOU BLEND OILS, YOU'RE "WELL CONNECTED" WITH AN AEROSPACE/MILITARY BACKGROUND, ARE YOU THINKING ABOUT BUILDING YOUR OWN BRAND OF SLEDS?

(Laughs...)Well not quite, but cutting-edge technology never rests at Legend Performance. We are continually striving to advance ourselves, our products and services. When technology advances, we apply it to our entire product line including our lubricants. I seriously doubt you will find a snowmobile company more committed to advanced technology than Legend Performance! All I can say at this time is keep an eye on our website come March/April 2004 and the pages of this fine magazine. Ontario Snowmobiler will be one of the first to feature our new product(s) that will debut in the Spring of '04. The goal of our new product(s) will be to redefine the term "Fast and Fun". I'm confident your readers will have plenty to be excited about!!

OSM FINDINGS

After removing the muffler, pipe and Y pipe, we then removed the RAVE valves. These had not been removed all season. The first thing that was noticed was how clean the valves were and how little build-up there was. Some oils OSM has used in the past were gummed up after just 1,000 miles. And those were good synthetic oils! This is a noticeable improvement.

The removal of the heads was next and once again there was noticeably very little carbon build-up in the combustion chamber. To say the least, it was very clean. When we removed the cylinder, there was very little wear and still plenty of cross hatch showing from the factory hone.

The pistons had absolutely no carbon build-up and even a light film of oil on the side. Again, impressive! This is how pistons should appear. Some might think that depends on how it was ridden, but as mentioned before, all the test riders here at OSM rode this sled.

In the future, with more stringent protocol for lower global emissions from our venerable two-stroke powerplants, governing entities will dictate the acceptable emission levels. Manufacturers are now responding with Direct Injection and four-stroke engines to help lower exhaust pollution. At Legend Performance, they've taken steps to do their part in developing state of the art hybrid lubes that will contribute to lower exhaust emissions and boost performance while providing maximum engine protection.