

Why use racing oil instead of street car oil?

Street car oils are designed to protect production engines that run in non-extreme conditions over a long period of time, i.e. - your passenger car over 5,000 miles. Racing engines experience the exact opposite, high temp, high rpm, extreme conditions for 500 miles. To meet these extreme needs, we have been using custom blended oils for six years, but these products have not been available to other racers until now.

What is the purpose of racing oil?

I wouldn't use stock pistons in a racing engine, and the same goes for oil. Racing only oils contain high levels of anti-wear and friction reducing additives that the API won't allow in modern street car oils. That's why many engine builders have seen increased valve-train wear, especially in flat-tappet engines, over the last 6 years.

Aren't all synthetic oils equal?

No, there are many blends of synthetic oil, and most are not specifically designed for racing. Like I mentioned before, true racing oils contain anti-wear and friction reducing additives that don't conform to the American Petroleum Institute's (API) standards. The extra anti-wear additive and the extra friction reducing additives provide superior valve train component protection and a performance increase compared to even the best synthetic API licensed oil. Anti-wear additives like (Zinc) and friction reducers like (Moly) combined with superior synthetic base stocks along with other proprietary additives yield a formula that provides the best protection for our engines without robbing any power. Joe Gibbs Racing oil handles a flat-tappet, push-rod V8 turning more than 9000 RPM and seeing temperatures above 240 degrees F.

What is API?

API, the American Petroleum Institute develops standards for passenger car oils, and one of the two main considerations for street car oils are emissions regulations and equipment. All current production cars feature catalytic converters for cleaner emissions. Unfortunately, the best anti-wear additive, Zinc, harms catalytic converts. As a result, the API has been reducing the amount of Zinc it allows for the last 10 years.

The other consideration the API looks at is engine set-up. Prior to 1986, almost all small block GM engines featured flat-tappet, push rod style valvetrains. Those engines have been replaced with roller follower or overhead cam engines. As a result, the API standards have changed to keep up with this change in engine configuration. That is good news for your street car, but bad news for your race car, especially if you have a flat-tappet race engine.

What are the results of using racing oil for a Saturday night racer?

Most racers who don't already use a racing oil, tend to use a 15W50 synthetic. These higher viscosity synthetics do a good job of preventing bearing wear, but it comes at a cost.

In addition to seeing an increase in power, racers that use our oil see prolonged camshaft life, decreased bore wear, improved valve spring life and reduced operating oil temp.

What is the cost difference vs. performance advantage?

Just like racing pistons cost more than stock pistons because the material is better, racing oils feature materials that perform better in race engines, and the increase in cost is off-set by an increase in performance. Typically you can expect power gains of three or more horsepower, and we've also seen an increase in part life for critical engine parts like rocker arms, lifters, valve springs and camshafts (none of which are cheap!). It all adds up to an inexpensive horsepower gain - under \$10 per HP. The bottom line is that racing oils provide affordable power gains and pay for themselves down the road by extending the life of the most expensive valve-train components.

Is there anything I need to be careful of?

Yes, our racing oils are designed for engines with specific tolerances and surface finishes. Be sure to consult our product data sheets to determine which oil is right for your engine, or contact our technical support line for more guidance.