

THE EXTRA MILE

Engine Building and Power Techniques

BY SCOTT SEHR



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

What is ZDDP and do you need it?

An issue that has been around since 1994 when refineries were required to begin removing ZDDP from motor oils commonly used in our gasoline engines.

To paraphrase Wikipedia:

The main use of ZDDP is in anti-wear additives to lubricants such as greases, gear oils and motor oils, which often contain less than 1% of this additive. It has been reported that zinc and phosphorus emissions may damage catalytic converters and standard formulations of lubricating oils for gasoline engines now have reduced amounts of the additive, though diesel engine oils remain at higher levels. Crankcase oils with reduced ZDDP have been cited as causing damage to, or failure of, classic/collector car flat tappet camshafts and lifters which undergo very high boundary layer pressures and/or shear forces at their contact faces, and in other regions such as big-end/main bearings, and piston rings and pins. Roller camshafts are more commonly used to reduce camshaft lobe friction in modern engines. There are additives, and some racing oils which are available in the retail market with the necessary amount of ZDDP for engines using increased valve spring pressures. The same ZDDP compounds serve also as corrosion inhibitors and antioxidants.

This is not to say that switching to Rotella diesel oil is going to solve the problem because it is design to function at higher operating temperatures and pressures than a healthy gasoline engine will develop.

We have been preaching this gospel since we first became aware of it several years ago but we still meet people every week that weren't aware of the need to replace this additive. The best way we know how to replace it is with either Brad Penn or Driven racing oils. We stock Brad Penn at our shop and use it along with COMP Cams Camshaft and Engine Break In Additive for the initial start up and break in on all of our dyno tune engine builds.

We have also talked to several people who have not been following the recommended procedures and haven't suffered a failure yet. I believe the operative word here is yet. If you have an older flat tappet engine with a bunch of miles on it and a mild cam grind the milder spring pressures and cam profile may be extending your driving time without a failure, but it will happen. It's kind of like that guy who says 'I've never had an accident'. Guess what, everyday that it has not happened puts you one day closer to the day that it does happen.

Spend a few extra dollars for each oil change and make sure your baby is around for years to come. I think that you will agree that it's cheaper than a rebuild.

We are here to help you get
"THE EXTRA MILE"
out of your pride and joy.

