

Oil is Killing Our Cars!

Keith Ansell

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About a year ago I read about the reduction of zinc dithiophosphate (ZDDP) in the oils supplied with API approval that could affect sliding and high pressure (EP) friction in our cars. The reduction of these chemicals in supplied oil was based on the fact that zinc, manganese and/or phosphates reduce the effectiveness and eventually damage catalytic converters and introduce minute amounts of pollutants into our atmosphere.

A month or so ago I had a member of the Columbia Gorge MG Club bring a totally failed camshaft and lifters back to me that had only 900 miles on them!! I immediately contacted the camshaft re-grinder and asked how this could happen. They were well aware of this problem as they were starting to have many failures of this type. In the past, the lack of a molybdenum disulfide camshaft assembly lubricant at assembly was about the only thing that could create this type of problem. My customer has assembled many engines and had lubricated the camshaft properly.

This got me on the phone to Delta Camshaft, one of our major suppliers. Then the bad news came out: It's today's "modern" API (American Petroleum Industry) approved oils that are killing our engines.

Next call: To a major camshaft supplier, both stock and performance (Crane). They now have an additive for whatever oil you are using during break-in so that the camshaft and lifters won't fail in an unreasonably short period of time. They also suggest using a diesel-rated oil on flat tappet engines.

Next call: To a racing oil manufacturer that we use for the race cars (Redline). Their response: "We are well aware of the problem and we still use the correct amounts of those additives in our products." They continued to tell me they are not producing API approved oils so they don't have to test and comply. Their oils were NOT the "new, improved and approved" ones that destroy flat tappet engines! "We just build the best lubricants possible." Sounds stupid, doesn't it, "New-Approved" but inferior products, but it seems to be true for our cars.

To top this off, our representative from a major supplier of performance and street engine parts (EPWI) stopped by to "warn us" of the problem of the NEW oils on flat tappet engines. This was a call that the representative was making only because of this problem to warn their engine builders! "The reduction of the zinc, manganese and phosphate are causing very early destruction of cams and followers." They are recommending that, for now at least, there must be a proper oil additive put in the first oil used on new engines, beyond the liberal use of molydisulfide assembly lube. They have been told that the first oil is the time the additives are needed but remain skeptical that the first change is all that is necessary. Their statement: Use diesel-rated oils such as Delo or Rotella that are usually available at auto stores and gas stations.

This problem is BIG! American Engine Rebuilder's Association (AERA) Bulletin #TB2333 directly addresses this problem. I had a short discussion with their engineer and he agreed with all that I had been finding.

Next phone call was to a retired engineer from Clevite, a major bearing and component manufacturer. First surprise was that he restored older British Motor bikes, The second surprise was that he was "VERY" aware of this problem because many of the old bikes had rectangular tappets that couldn't rotate and are having a very large problem with the new oils. He has written an article for the British Bike community that verify all the "bad news" we have been finding.

Comp Cams put out "#225 Tech Bulletin: Flat Tappet Camshafts." They have both an assembly lube and an oil additive. The telling sentence in the bulletin was "While this additive was originally developed specifically for break-in protection, subsequent testing has proven the durability benefits of its long term use. This special blend of additives promotes proper break-in and protects against premature cam and lifter failure by replacing some of the beneficial ingredients that the oil companies have been required to remove from the shelf oil."

Next question: Now what do we do?

From the camshaft re-grinders (DeltaCam): "Use oils rated for diesel use," Delo (Standard Oil Product) was named. About the same price as other quality petroleum-based oils. They are not API formulated and have the zinc dithiophosphate we need in weights we are familiar with.

From the camshaft manufacturer (Crane): "Use our additive" for the first 500 miles.

From General Motors (Chevrolet): add EOS, their oil fortifier, to your oil; it's only about \$14.00 for each oil change for an 8-ounce can (this problem seems to be something GM has known about for some time!).

From Redline Oil: Use our street formulated synthetics. They have what we need! [Malcolm Buffum note: recommend 10W-40]

From Castrol: We are beginning to see a pattern emerging on older cars. It may be advantageous to use a non-approved lubricant, such as oils that are diesel-rated, 4-cycle motorcycle oils and other specified diesel oils. [Malcolm Buffum note: or GTX 20W-50]

Last question: So what are we at Foreign Parts Positively going to do? After much research we are switching to Redline Street rated oils and stocking the Castrol products that are diesel-rated. This is a difficult decision as we have been a dealer and great believer in all Castrol products for over 40 years. We have been using Castrol Syntech oil in new engines for about three years so the cost difference is minimal on new engines. The actual cost in operation is also less as the additive package in Redline makes a 1-year or up to 18,000 mile change recommended! Yes, it is a long change interval but with lowered sulphur levels and the elimination of lead and many other chemicals in the fuels there are less contaminants in our oil from the fuel which is the major contributor to oil degradation. We will continue to offer the Castrol products but will now only stock the suggested diesel oils that they produce.

Too many things are starting to show up on this subject and it has cost us money and time. Be aware that "New and Improved," or even products we have been using for many years, destroys our cars as it isn't the same stuff we were getting even a year ago.

If you have any additional input let us know. We need to let every flat tappet engine owner, i.e. every British car owner, know that things are changing and we MUST meet the challenge.

Oil is Killing Our Cars, Part 2

Last month's report on this subject is turning out to be just the tip of the iceberg! Many publications have had this subject of zinc-dialkyl-dithiophosphate (ZDDP) covered in varying depths over the last few months. Some publications have even had conflicting stories when you compare one month's article with

their next month's article! They are all ending up supporting our report.

I have had the good fortune to have the ear of quite a few leaders in the industry including some wonderful input from Castrol. We have been very reluctant to "dump" Castrol as it has been such a great supporter of our cars and industry over the years. Castrol hasn't really abandoned our cars, just shifted to a more mass marketing mode. Many Castrol products are not appropriate for our cars today, some still are.

Now for the latest report:

#1 Castrol GTX 20W-50 is still good for our cars after break-in! 10W-40, 10W-30 and other grades are NOT good. Absolute NOT GOOD is any oil (any brand) that is marked "Energy Conserving" in the API "Donut" on the bottle; these oils are so low with ZDDP or other additives that they will destroy our cams. Virtually all diesel-rated oils are acceptable.

#2 Castrol HD 30 is a very good oil for break-in of new motors. This oil has one of the largest concentrations of ZDDP and moly to conserve our cams and tappets.

#3 Only an unusual Castrol Syntec 20W-50 approaches the levels of protection we need when we look to the better synthetic lubricants. We are attempting to get this oil but will be using Redline 10W-40 or 10W-30 as these are lighter weights for better performance, flow volume, less drag and has the additive package we need.

#4 The trend today is to lighter weight oils to decrease drag which increases mileage. Most of these seem to be the "Energy Conservation" oils that we cannot use.

#5 Redline oil and others are suggesting a 3,000 mile break-in for new engines! Proper seating of rings, with today's lubricants is taking that long to properly seal. Shifting to synthetics before

that time will just burn a lot of oil and the engine won't run as well as hoped.

#6 The "Energy Conservation" trend was first lead by automakers to increase mileage numbers and secondly because the ZDDP and other chemicals degrade the catalytic converter after extended miles, increasing pollution. We don't have catalytic converters and the mileage gains are not that significant for most of us.

For you science buffs: ZDDP is a single polar molecule that is attracted to Iron based metals. The one polar end tends to "Stand" the molecule up on the metal surface that it is bonded to by heat and friction. This forms a sacrificial layer to protect the base metal of the cam and tappet from contacting each other. Only at very high pressures on a flat tappet cam is this necessary because the oil is squeezed/wiped from the surface. This high pressure is also present on the gudgeon pin (wrist pin) in diesel engines, therefore the need for ZDDP in diesel engines.

The second part of the equation is molybdenum disulfide (moly). The moly bonds to the zinc adding an additional, very slippery, sacrificial layer to the metal. I found out that too much of the moly will create problems, lack of this material reduces the effectiveness of the ZDDP. The percentage by weight is from .01% to .02% (not much, but necessary).

Latest conclusions:

> Running our older, broken-in engines on Castrol GTX 20W-50 is OK.

> Break-in a new engine for 3,000 miles on Castrol HD 30.

> New engines (after break-in) and fairly low mileage engines will do best with the Redline 10W-40 or 10W-30 synthetic.

We'll keep you apprised of any new findings. Happy motoring for now!

THE START OF THE 2007 MOGNW CALENDAR

A complete 2007 Calendar may be available in the March NWMogazine. Please send updates and corrections to sphutchens@hotmail.com.

Colour code (if you get this digitally - otherwise everything is black): Island Midlands Northern Southern All MOGNW

Jan 16	Tue	Southern Pod Social @ Portland Brewing's Tap Room			
Jan 20	Sat	Midlands Pod Social @ Claim Jumper, Redmond	Mike Amos	425-881-2054	meamos@gte.net
Jan 28	Sun	Northern Pod Robbie Burns Run	Mike Powley	604-542-0921	mpowley@telus.net
Meet at 11:30 AM at McDonald's, 5776 Ladner Trunk Road (just west of Hwy 17), Ladner; Lunch, 12:30, at the Tidewaters Pub & Grill, 10190 River Road, Delta.					
Feb 17	Sat	Midlands Pod Social @ Claim Jumper, Redmond	Mike Amos	425-881-2054	meamos@gte.net
Feb 18	Sun	Northern Pod Hearts and Tarts Run	Steve & Liz Blake	604-943-6416	steveliz@telus.net
Meet at 11:00 AM at the old Fantasy Gardens at No. 5 Road and Steveston Highway. We will do a drive followed by lunch, location TBA.					
Feb 20	Tue	Southern Pod Social @ Portland Brewing's Tap Room			
Mar 17	Sat	Midlands Pod Social @ Claim Jumper, Redmond	Mike Amos	425-881-2054	meamos@gte.net
Mar 20	Tue	Southern Pod Social @ Portland Brewing's Tap Room			
Mar 24-25	Sat-Sun	MOGNW Winter Banquet, La Conner, WA	Mike Amos	425-881-2054	meamos@gte.net
This is a biennial celebration, so you won't want to miss it. Enjoy a weekend getaway in scenic La Conner with your MOGNW friends. See page 1 for details!					
Jun 21-24	Thu-Sun	Devil's Punch Bowl XI (let's make this the best ever!)	Heinz Stromquist	503-224-9576	heinzal@pacifier.com

Mike Powley Receives Award!

Ken Miles



Eight members of the Morgan Sports Car Club of Canada (MSCCC) were among the 38 MOGNW members present at the

Northern Pod's Christmas Party on December 9 at Bob and Judy McDiarmid's home in Langley when I presented the 2006 Doug Price Award on behalf of MSCCC.

The Doug Price Award is presented annually by MSCCC to the member who is most enthusiastic and who best resembles the dedication of Doug Price to the Morgan fraternity. Nominations are held at large and endorsed by the executive of MSCCC in December of each year.

I was pleased to have nominated the person receiving the award this year because I felt this person was well overdue for this recognition.

As I read the nomination and was about half way through the narrative, Mike Powley was heard to say, "By God, it's me!" Mike was taken by surprise and was very appreciative of the Award.

Welcome A New Member

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