



MODEL A CLUB NEWS

JANUARY, 2009

www.CedarCreekAs.org

PRESIDENT'S MESSAGE

Wow! Where did 2008 go? It seems like it was only three or four months ago that Walt was hosting his first monthly meeting as President and already we are looking forward to 2009. What is it they say, "Time flies when you are having fun?"

If you missed our Christmas Party you missed out. It was a party filled with fun, friends, and tons of delicious food. Start your plans to attend the 2009 party now.

We closed out our 2008 activities at the Malakoff Christmas Parade, with twelve cars from the Club in attendance. I believe we had more participants in the parade than spectators, but it was fun, and the visit to the Bartlett home led by O. V. Cliver (that Cliver boy) was extremely interesting.

As we look forward to our 2009 activities let me give you the names of our activity directors. These are the individuals you should contact with your thoughts and ideas for Club activities throughout the year.

Walt Hellebrand has agreed to be our Tech Session Director and will organize rebuild and repair sessions this year. If you have a project for your car or a repair process that you would like help with, you should ask Walt to set up a tech session covering that topic. I feel sure Walt will appreciate your suggestions.

Wanda Bell has volunteered to be our Social Director for another year. As such, she will be responsible for our breakfast or dinner socials, any evening activities such as attending local plays or special shows. She will also plan our 2009 Christmas Party in-

cluding venue, menu and decorations. I am quite confident that Wanda will happily accept your ideas and assistance with these functions.

Ola Powell very graciously volunteered to act as Tour Director for 2009. Ola will be responsible for planning our monthly tours, scheduling our parade participation, and other activities involving touring with our Model A's. If you have knowledge of some "back roads" and "pig trails" you would like us to travel over then you should contact Ola. I am not sure he knows all the back roads, but I am sure that he has some exciting trips in mind for us.

Sue Capps has agreed to continue as our Sunshine Reporter for this year. If you hear or know of someone who is ill or having some health problems, please contact Sue and give her the information. She will prepare and send a card or other appropriate acknowledgements.

In closing let me say thank you to these folks for stepping up and helping to ensure we have another good year for the Cedar Creek Model A Ford Club. With your and my help we can make this a banner year.

Don

CLUB OFFICERS

DON DYESS

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• **BILL WITTNER**

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• **JOE CREECY**

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NEWSLETTER EDITOR

JOE CREECY

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IT'S TIME TO PAY YOUR 2009 CCMAFC DUES
\$15.00

HAPPY BIRTHDAY

BILL CAPPS 1/02

JOE CREECY 1/06

JIM BELLAH 1/25

CONGRATULATIONS
DECEMBER raffle Winner
Dr. ROBERTO LOAR

GET WELL WISHES

JIM BELLAH

JUDY CLAY

JIMMY REYNOLDS

COMING EVENTS

Jan. 6th CCMAFC Meeting
5:30 pm Seven Points
Dairy Queen

Jan 26-27 Swap meet
LaGrave Field-Ft Worth

Feb 20-22 Swap Meet
Decatur, TX

March 19-21 Swap Meet
Chickasha, OK

March Poor Boy Tour

TEXAS TOUR COMING IN JUNE

START MAKING PLANS FOR
THIS EVENT

WILL BE IN WACO, TEXAS

Cedar Creek Model A Ford Club _____ Minutes of December 6, 2008

President Hellebrand called the December 6, 2008 CCMAFC meeting to order at 10:55 AM in the Oran White Civic Center in Tool, Texas. The President thanked everyone for coming and commented on the number of members and guest in attendance. It was announced that thirty-one people had come and was the most ever for a Christmas Meeting. Walt then led the group in reciting the Pledge of Allegiance.

The President asks if everyone had gotten the Newsletter and read the November Minutes. He then asks if there were any changes that needed to be made to the minutes, there were none. President Hellebrand asks and received a motion to except from Johnny Bell and second from Don Dyess.

Joe Creecy announced the November Treasurer's report: CCMAFC had income of \$83.00 and expenditures of \$125.00. Joe announced that he was receiving 2009 club dues.

Sunshine Report: Jimmy Reynolds is better and out walking around and going out to eat. Judy Clay will have surgery on December the 16th. Jim Bellah continues to receive chemotherapy. Gene Tregre is well, but did not feel like getting out for the Christmas Meeting.

Sue announced that Clark and Judy Clay have a new **first granddaughter**.

Announcements: Malakoff Christmas Parade December 16th. Line up 9:30 AM at the school with parade starting 10:00 AM. Mary Worman announced that she had decorations for cars if anyone needed some. This year's parade theme is RING OUT THE SOUND OF CHRISTMAS.

President Hellebrand told the group about the thank you letter CCMAFC had received from Jan Woods of Break the Chain of Domestic Violence. Jan reported in the letter that a family with nine children had received the food items CCMAFC had donated. (*Wanda Bell has placed the letter in the Club's scrapbook.*) It was Determined that the toys collected would be donated to Break the Chain of Domestic Violence.

President Elect Don Dyess addressed to group, thanking the Club for electing him 2009 CCMAFC President. Don thanked Walt Hellebrand for his leadership in 2008 and expressed his hopes to do as good a job. Don announced that he was looking for members to serve as Tour Director, Tect Session Director and Social Director for 2009.

Mr. Shorty Johnson was presented an award of recognition by the President for his help to CCMAFC members keeping their Model A's running. Shorty has helped members work on their cars, answered questions and taken phone calls from members with Model A problems. Be it at your place, his place or on the side of the road Shorty is ready to help. Walt said "that he could honesty say that his car is not on Jack Stands today were it not for Shorty. If you had a problem on the road, Shorty will call to making sure you got home OK." (*The group applauded as Shorty received his award*).

Joe Creecy announced that he has Free MAFCA membership applications and Shirley Dyess announced that she had received requests for another printing of the CCMAFC Directory and was planning to.

O.V. Cliver announced that after the Malakoff Christmas Parade he wanted the Club to visit a house built in 1930 located in Malakoff. OV thought that there may be an opportunity to tour the house and photograph the Model A's.

President Hellebrand wished everyone a Merry Christmas and Happy New Year.

The President asks and received a motion to adjourn from Dr. Roberto Loar with a second from Ed Cliver.

The December CCMAFC meeting was adjourned.

Joe Creecy, Secretary/Treasurer

Oil Alert for Antique Auto Engines

There have been changes made to the formulation of motor oils that have a negative effect on our Model A engines. This article is intended to provide an overview of the problem and present possible solutions to prevent damage and to extend the life of our engines.

Until the late 1980's, oils contained significant amounts of an Extreme Pressure (EP) additive called ZDDP, which is zinc-dialkyl-dithiophosphate, a phosphorous-zinc additive that resists wear and galling at high pressure points in the engine; particularly at the cam lobe and flat-faced tappet, used in our Model A engines. The basic principle of lubrication is to maintain an oil film between moving surfaces. As long as an oil film is present, wear is not possible. The oil film will only be absent in one of the following two circumstances:

- * An improperly designed engine with high pressure loading that breaks the oil film,
- * During start up, before the oil has had enough time to reach every moving part;

If these circumstances didn't exist, anti wear additives wouldn't be required. Whenever the oil film is broken, the moving surfaces rub against each other and heat up. The components of ZDDP react to heat and stick to the heated surfaces, building up a protective film. Until then, it stays in suspension.

Within the last few years, problems with cam and flat-faced tappet wear are becoming increasingly more common in antique engines of many car manufacturers as the concentration of ZDDP has been gradually diminished.³ Modern engines use roller cams with lower contact pressures and reduced sliding friction than our flat-faced tappets and therefore can tolerate lower concentrations of ZDDP in the oil.

Oil Formulation Issues

The API (American Petroleum Institute) oil classification SH, obsoleted several years ago, was the last oil formulation that included adequate levels of ZDDP for our engines. Because of negative effects on catalytic converters, the EPA has mandated gradual reductions of ZDDP in oil classifications SJ, SL and SM such that these oils no longer provide the protection required to prevent cam, and tappet damage to our antique engines. [The API classification can be found on the cans or bottles of motor oils in the Starburst insignia]. Further, the current API oil classification SM, established in late 2004, is also formulated to produce less drag on the moving parts of the engine to increase gas mileage. This is accomplished by degrading the viscosity modifiers so that oil viscosity decreases within a relatively short time in use. As a consequence, this thinner oil can cause more wear than the older oil formulations.

The API classification SM is intended for passenger automobiles with catalytic converters. However, specialty oils such as racing oils are not required by the EPA to have lower levels of ZDDP. These oils typically include 1200-1600 ppm of ZDDP vs. 400-800 ppm, in the API-SM oils. Additionally, racing oils typically include more anti-wear additives and anti-foaming additives – the latter being an important oil additive for our Model A engines that have connecting rod dipper oiling that can be a foam generator.

What is the solution?

So, what oil can we use to provide the protection needed in our engines? Torco TR-1 50W racing oil has been successfully used in Model A engines for several years. It is a petroleum-based oil with various polymers and additives, including MPZ; a phosphorus-zinc-molybdenum additive for resisting wear at high pressure points and providing excellent sealing of the wide Model A rings. Even though it is an expensive oil at about \$7 per quart, with this oil we can increase our oil change interval from the usual 500 miles to about 2,000 miles.² This fact then makes it more price competitive with the standard oils that we have been using. But, also consider what a cam and set of tappets is worth.

In addition to sources on-line, this oil is recommended and sold by Piranio's Antique Automotive in Denton. Dennis and Beth Piranio are members of CCMAFC and can be contacted at (940) 382-2742.

There are other specialty oils such as Redline, Royal Purple, Penrite and Amsoil that appear to provide ZDDP in the proper quantities.⁵ Castrol has, within recent months, released their Syntec oil in 20W50 which is labeled "For Classic Cars" and contains the necessary amount of ZDDP. But the investigation of various alternative oils was not made for this article, primarily due to the lack of available information to analyze.

Also, it has been reported that some auto parts stores can obtain the older API formulations of oil that contain adequate levels of ZDDP.³ Some engine builders suggest the use of diesel oils such as Shell Rotella since it has, at least to date, maintained an adequate concentration of ZDDP. However, there have been reports of piston skirt scuffing and heavy sludge release when changing to this oil, because of its high detergent content. So, it appears that racing oils and older street-legal formulations prior to API-SJ are the safer oils to use.

Additives

There are also a number of ZDDP additives available to be used with your customary oil. Each will claim to have just what your car needs, and only time will tell if they solve the problem or amount to nothing more than modern day snake oil. Without a performance rating system, there is really no way to substantiate the claims of the manufacturers' marketing departments until your engine lives another 10,000 miles or packs it in. Additionally, there is the danger of getting too much phosphorous if the oil that you are using already has some ZDDP. Based on oil manufacturers test work, high phosphorous concentrations caused increased wear, and in some cases caused attack at the grain boundaries in the metal that resulted in camshaft spalling on the

lobes⁴.

So, putting an additive in your oil could be solving the problem or could be adding to the problem.

It would seem that using properly formulated oil is the safer route to take for your engine.

New Engine Issues

The availability of ZDDP in the oil is particularly critical on a new engine build. When an engine is first re-assembled, even with the most careful machining of the cam and use of the best-quality tappets, the rubbing surfaces are still pretty rough. Under a microscope, you would see high peaks and deep valleys in the metal surfaces. As the engine is broken in, those high peaks wear down from rubbing. But at the start, all of the pressure is concentrated on a very small part of the surface area -- the peaks. In addition, if the rebuild process is done properly, assembly lube containing molybdenum coats the cam and tappet tips. This lubricates the surfaces until the high points can be removed, resulting in an extremely smooth surface.

And there, literally, is the rub. The process, which takes place primarily during the first few hours of the break-in period, but continues to take place for several thousand miles or hundred hours after that, requires one other ingredient. That ingredient is the ZDDP in the oil used during the break-in period which, in combination with the molybdenum-disulfide in the assembly lubricant, creates a continuously renewing metal surface in the low spots that helps spread the pressure. No ZDDP in the break-in oil, and/or the lack of an assembly lube, and instead of a smooth surface after break-in, the peaks on the surface of the tappet can literally weld themselves to the cam, causing pieces of the tappet surface to flake off, and making the lobe surface of the cam shaft ruinously rough.⁵ Early engine rebuild failures are now being reported, which are likely attributable to the lack of adequate ZDDP in the current API oil formulations.

Summary

There is no doubt that the problem of cam and tappet wear exists. It is also known that some percentage of the wear and failures can be attributable to the reduced levels of ZDDP in modern oil formulations. But, because of other factors related to the assembly and maintenance of an engine, no reliable statistics can be generated to truly define the severity of the problem that is related to reduced ZDDP. But, knowing that the potential for engine damage exists from oil formulation changes, it seems prudent to take the precautions that are readily available to us.

Bill R. Wittner
Cedar Creek Model A Ford Club
Mabank, TX
December 10, 2008

References:

² Piranio's Antique Automotive catalog

³ <http://www.macysgarage.com/myweb6/ZDDP.htm>

⁴ <http://www.zddplus.com/TechBrief2>

⁵ <http://healey.org/content/view/269/168/>