

(Cont from page 10) Later the ZDDP was further increased but at levels above 0.14% longer term wear increased and levels above 0.20% attacked the grain boundaries in iron and resulted in camshaft spalling. (More is not always better.) In the 70's the level of ZDDP was about 0.10%. The level in today's Starburst oils is now down to a maximum level of 0.08%.

General Motors Powertrain Fuels and Lubrication Group published a report in December 2007 about the reduction of ZDDP. The report says that along with the reduction in ZDDP other things have been added to compensate oil thickening problem which the ZDDP had resolved. Oil companies have run tests on older type engines with the new oils and no problems were uncovered. The GM report also points out that the new Starburst oils (SM rating) contain about the same level of ZDDP that solved the camshaft scuffing and wear issues back in the 1950's.

A March 2008 article in Skinned Knuckles, a journal of car restoration, concluded that the modern oils, including SM oils, are not harmful to yesterday's engines manufactured up through the 1950's and early 60's. However if you have a hot-rod or souped-up older engine it may be wise to use an additive to boost the level of ZDDP.

I recently had a '28 Chevy cam refurbished by Delta Cam in Tacoma Washington. Delta believes that the modern oils are compatible with the mechanical characteristics of this engine, ie., low valve spring pressure but recommends an additive that contains ZDDP during break-in.

In summary, tests show and the experts believe, new oils should be just fine for the older stock engines but if in doubt, you can use an additive to boost the level of ZDDP. Both Delta Cam and Egge Machine sells an additive which they recommend. Also, it is my understanding by talking to Valvoline that their racing oil contains a higher level of ZDDP than regular oil and is acceptable for flat tappet cam engines. Roller cams in modern day engines are not in question because the lifter rolls over the cam lobe, whereas in a flat tappet cam, the lifter slides over the cam lobe.

Bob Hughes is a long time VCCA member who was once on the national Board and an employee of The Jet Propulsion Laboratory in Los Angeles.. He owns a '26 Touring and a '32 Coupe

Puget Sound Classified

For Sale

1928 Chev coupe complete parts car. \$2000

Dick Olson 425 222-5798

chain hoist, \$40. Dick Olson 425 222-5798

1954 Chev automatic transmission, 2 speed powerglide. It is a good running transmission.

The car that it was in was modified to a manual transmission. The owner is Chuck Adler. Please contact him on cell phone 253-405-0520

1928 Ford 2 Dr, Hot Rod \$18500; **1955** Ford-Crown Victoria \$12000; **1955** Ford Victoria HT project \$4,500; **1953 Chev PU** V8 \$4500; **1949** Jeep 4x4 new motor \$4500; **1962** lambretta

Scooter \$2500 ; **1934** Ford Truck \$2000; **1944** Dodge COE on Chev Chassis \$2500; **1958**

GMC 1 ton Chassis and cab \$ 1200; **1972** Chev PU 4x4 project \$1000; **440 Holmes**

Wrecker bed \$800; **1948-52** Dodge COE Cab \$500; **1967 Chev PU** Project \$500. These were submitted by Jerry Brownell for Jeep Entwistle, 509-584-5417

1967 Impala Sport Coupe 283 / PG. Very nice straight car. Good driver. \$7500 obo Don Comstock 253-863-0420 d.comstock@att.net

PotterTrunk with Rack probably for 30's Cadillac \$100. Bill Barker (425) 643-0698 bill@barkerville.net

1938 Grill Gene Sovar (206) 3262-2491 esovar@msn.com

1937 Generator, Pair rear lever shocks, Under Dash '37 Radio. David White 206-999-8138 Davidwhite@comcast.net

WANTED

Early 50's Pick Up Project. David White, 206-999-0138. Davidwhite@comcast.net

1962-67 327 Chevrolet Engine Core, Dave Roberts, (425) 822-6831

1937 Grill, Gene Sovar 206.362,2491, esovar@msn.com

Chevrolet Rim- one 6-hole 15" with hub cap clips - Jon 253-841-4137 or 253-380-5086