



Be careful of Aftermarket Zinc treatments and products claiming additional Zinc in their Engine oils
(www.synforce.com.au/tech-note_downloads/)

Zinc dithiophosphate, or commonly referred to as ZDDP is the key anti-wear component used in crankcase engine oils.

There are various types of ZDDP – primary, secondary and aryl types- and these have various applications and specific benefits depending upon how the oil is formulated.

Effective mid 1986 the government brought in emissions regulations requiring the use of unleaded fuels and in gasoline fuelled cars, and the use of catalytic converters was required in conjunction with the use of unleaded fuels to meet the emissions regulations.

Oil crankcase formulations used in cars post production 1986 models where fitted with catalytic converters needed to be of a controlled ZDDP content.

Too much ZDDP will lead to the poisoning of the catalyst which was predominantly Platinum, Palladium and Rhodium type metals imbedded in a ceramic substrate.

Thus ZDDP levels were controlled to 0.12 % mass maximum. This was later in mid 1990's reduced to 0.10% as the catalysts got smaller and engine oils were upgraded to the then latest API, ACEA and other categories.

Thus the addition of ZDDP as an aftermarket application needs to be cautioned such that the 'misapplication' to post 1986 manufactured cars could lead to poisoned catalysts.

Most if not all reputable oil companies engine oil formulations come with the correct or maximum amount of Zinc whilst still passing the specific requirements above (and others) but some engine oil manufacturers claim their products have additional Zinc, in this case one must also be cautious when choosing an engine oil, except in the case of race engine oils the correct Zinc levels should not be exceeded when it comes to PCMO products.