

ENGINE OIL FORMULATIONS FOR LOW TIMING CHAIN STRETCH

ABSTRACT

5 A lubricating oil composition and method for controlling timing chain stretch, wherein the composition contains greater than 50 wt.% of base oil, zinc dialkyl dithiophosphate(s) to provide 350-2200 ppm zinc, molybdenum-containing compound(s) to provide >1-3000 ppm molybdenum, and magnesium-containing detergent(s) to provide <2050 ppm magnesium, all based on the total weight of the composition. The composition has a total TBN of less than 7.5 mg KOH/g, measured
10 by ASTM D-2896 and a weight ratio of ppm of zinc from zinc dialkyl dithiophosphate(s) to ppm of molybdenum from molybdenum-containing compound(s) of <10. The method employs the lubricating oil composition to control timing chain stretch to a level of 0.1 % or less.

[Figure 1]