

LONG-LIFE ENGINE OIL COMPOSITION WITH LOW OR NO ZINC CONTENT

Abstract

A lubricating oil especially useful as a natural gas engine lubricating oil that has extended life as evidenced by reductions in viscosity increase, oxidation and nitration relative to current commercial and reference oils is provided. The oil comprises a major amount of a base oil of lubricating viscosity and a mixture of metallic detergents comprising: (i) a neutral calcium alkylsalicylate detergent and (ii) a second neutral or overbased metallic detergent or mixture of detergents other than neutral calcium alkylsalicylate selected from the group consisting of calcium and barium sulfonates, phenates and alkylsalicylates. The composition is further characterized as having low or no zinc.

(no figure)