

OLEFIN COPOLYMER VI IMPROVERS AND LUBRICANT COMPOSITIONS AND USES THEREOF

Abstract

A lubricating oil composition and methods of operating an internal combustion engine to provide improved engine operation. The lubricating composition includes a major amount of oil of lubricating viscosity and a minor amount of at least one olefin copolymer having a number average molecular weight greater than about 10,000 up to about 300,000. The olefin copolymer is grafted with (A) a vinyl-substituted aromatic compound, and (B) a compound selected from the group consisting of a C₅-C₃₀ olefin, a polyalkylene compound, and mixtures thereof. A mole ratio of A/B in the reaction mixture ranges from about 0.25:1 to about 5:1. The lubricating composition optionally includes a minor amount of at least one non-grafted olefin copolymer, styrene-isoprene copolymer, methacrylate copolymer, or styrene butadiene copolymer have number average molecular weight greater than about 50,000 up to about 300,000.

(No suitable figure)