CLAIMS

1. A lubricating oil composition comprising (a) greater than 50 wt. % of a base oil of lubricating viscosity; (b) 0.1 to 20 wt. % of an alkyl-substituted hydroxyaromatic carboxylic acid, wherein the alkyl substituent of the alkyl-substituted hydroxyaromatic carboxylic acid has from 12 to 40 carbon atoms; and (c) a metal detergent;
wherein the lubricating oil composition is a monograde lubricating oil composition meeting specifications for SAE J300 revised January 2015 requirements for a SAE 20, 30, 40, 50, or 60 monograde engine oil, and has a TBN of 5 to 200 mg KOH/g, as determined by ASTM D2896.

2. The lubricating oil composition of claim 1, wherein the alkyl substituent of the alkyl-substituted hydroxyaromatic carboxylic acid is a residue derived from an alpha-olefin having from 14 to 28 carbon atoms per molecule.

3. The lubricating oil composition of claim 1, wherein the alkyl substituent of the alkyl-substituted hydroxyaromatic carboxylic acid is a residue derived from an alpha-olefin having from 20 to 24 carbon atoms per molecule.

4. The lubricating oil composition of claim 1, wherein the alkyl substituent of the alkyl-substituted hydroxyaromatic carboxylic acid is a residue derived from an alpha-olefin having from 20 to 28 carbon atoms per molecule.

5. A lubricating oil composition as in any one of claims 2, 3, and 4, in which the alpha-olefin is a normal alpha-olefin, an isomerized normal alpha-olefin, or a mixture thereof.

6. The lubricating oil composition of claim 1, wherein an amount of the alkyl-substituted hydroxybenzoic acid is in a range of 1.0 to 5.0 wt. % of the lubricating oil composition.

7. The lubricating oil composition of claim 1, wherein the lubricating oil composition has a TBN in one of the following ranges: 5 to 10 mg KOH/g, 15 to 150 mg KOH/g, 20 to 80 mg KOH/g, 30 to 100 mg KOH/g, 30 to 80 mg KOH/g, 60 to 100 mg KOH/g, 60 to 150 mg KOH/g.

8. The lubricating oil composition of claim 1, further comprising one or more of a dispersant, an antiwear agent, an antioxidant, a friction modifier, a corrosion inhibitor, a rust inhibitor, a demulsifier, a foam inhibitor, a viscosity modifier, a pour point depressant, a non-ionic surfactant, and a thickener.

9. The lubricating oil composition of claim 1, wherein the metal detergent comprises oil-soluble neutral and overbased sulfonates, phenates, sulfurized phenates, thiophosphonates, salicylates and naphthenates and other oil-soluble carboxylates of an alkali metal or an alkaline earth metal.

10. The lubricating oil composition of claim 1, wherein said metal detergent is present in an amount from 0.5 to 20 wt.% based on the lubricating oil composition.

11. A method of lubricating an internal combustion engine comprising supplying to the internal combustion engine the lubricating oil composition of claim 1.

12. The method of claim 11, wherein the internal combustion engine is a compression-ignited engine.

13. The method of claim 12, wherein the compression-ignited engine is a 4-stroke engine operated at 250 to 1100 rpm.

14. The method of claim 12, wherein the compression ignited engine is a 2-stroke engine operated at 200 rpm or less.

15. The method of claim 12, wherein the compression-ignited engine is fueled with a residual fuel, a marine residual fuel, a low sulfur marine residual fuel, a marine distillate fuel, a low sulfur marine distillate fuel, a high sulfur fuel, or a gaseous fuel.