## CLAIMS

1. A lubricating oil composition comprising (a) greater than 50 wt. % of a base oil of lubricating viscosity; and (b) 0.1 to 40 wt. % of an overbased alkaline earth metal alkyl-substituted hydroxyaromatic carboxylate having a basicity index of at least 8 and a TBN, on an actives basis, of at least 600 mg KOH/g, as determined by ASTM D2896; wherein the alkyl substituent is a residue derived from an isomerized alpha-olefin having an isomerization level of 0.1 to 0.4, wherein the isomerization level is a relative amount of methyl groups attached to methylene backbone groups as determined by $^{1}$H NMR spectroscopy; 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 overbased alkaline earth metal alkyl-substituted hydroxyaromatic carboxylate has from 12 to 40 carbon atoms.

3. The lubricating oil composition of claim 1, wherein the alkyl substituent of the overbased alkaline earth metal alkyl-substituted hydroxyaromatic carboxylate is a residue derived from an alpha-olefin having from 14 to 28 carbon atoms per molecule.

4. The lubricating oil composition of claim 1, wherein the alkyl substituent of the overbased alkaline earth metal alkyl-substituted hydroxyaromatic carboxylate is a residue derived from an alpha-olefin having from 20 to 24 carbon atoms per molecule.

5. The lubricating oil composition of claim 1, wherein the alkyl substituent of the overbased alkaline earth metal alkyl-substituted hydroxyaromatic carboxylate is a residue derived from an alpha-olefin having from 20 to 28 carbon atoms per molecule.

6. The lubricating oil composition of claim 1, wherein the overbased alkaline earth metal alkyl-substituted hydroxyaromatic carboxylate has TBN, on an actives basis, of 610 to 900 mg KOH/g.

7. The lubricating oil composition of claim 1, further comprising one or more of other detergents, 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.

8. A method of lubricating a compression-ignited internal combustion engine comprising supplying to the internal combustion engine the lubricating oil composition of claim 1.

9. The method of claim 8, wherein the compression-ignited internal combustion engine is a 4-stroke engine operated at 250 to 1100 rpm.

10. The method of claim 8, wherein the compression-ignited internal combustion engine is a 2-stroke engine operated at 200 rpm or less.

11. The method of claim 8, 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 gaseous fuel, a low sulfur marine distillate fuel, a high sulfur fuel, or a gaseous fuel.