WHAT IS CLAIMED IS:

1. A trunk piston engine lubricating oil composition comprising (a) a major amount of an oil of lubricating viscosity; (b) one or more carboxylate-containing detergents comprising a salt of an alkyl-substituted hydroxyaromatic carboxylic acid, wherein at least about 50 % of the alkyl moiety of the alkyl-substituted hydroxyaromatic carboxylic acid comprises C_{26+} alkyl groups derived from one or more normal alpha olefins; and (c) one or more zinc dithiophosphates in an amount of about 0.02 to about 0.12 wt. % in terms of phosphorus content.

2. The trunk piston engine lubricating oil composition according to Claim 1, having a total base number of at least about 10.

3. The trunk piston engine lubricating oil composition according to Claim 1, having a total base number of from about 20 to about 60.

4. The trunk piston engine lubricating oil composition according to any one of Claims 1-3, wherein at least about 50% of the alkyl moiety of the alkyl-substituted hydroxyaromatic carboxylic acid comprises C_{26} to C_{28} alkyl groups derived from one or more normal alpha olefins.

5. The trunk piston engine lubricating oil composition according to any one of Claims 1-3, wherein at least about 90% of the alkyl moiety of the alkyl-substituted hydroxyaromatic carboxylic acid comprises C_{26+} alkyl groups derived from one or more normal alpha olefins.

6. The trunk piston engine lubricating oil composition according to any one of Claims 1-3, wherein at least about 95% of the alkyl moiety of the alkyl-substituted hydroxyaromatic carboxylic acid comprises C_{26+} alkyl groups derived from one or more normal alpha olefins.

7. The trunk piston engine lubricating oil composition according to any one of Claims 1-6, wherein the one or more carboxylate-containing detergents comprise an overbased alkaline earth metal salt.

8. The trunk piston engine lubricating oil composition according to Claim 7, wherein the overbased alkaline earth metal salt is an overbased calcium salt.

9. The trunk piston engine lubricating oil composition according to any one of Claims 1-8, wherein the composition contains no detergent that does not contain a salt of an alkyl-substituted hydroxyaromatic carboxylic acid.

10. The trunk piston engine lubricating oil composition according to any one of Claims 1-9, further comprising less than about 2 wt. % of a polyalkylene succinimide.

11. The trunk piston engine lubricating oil composition according to any one of Claims 1-10, further comprising less than about 1 wt. % of an oxidation inhibitor.

12. The trunk piston engine lubricating oil composition according to any one of Claims 1-11, wherein the one or more zinc dithiophosphates are present in an amount of about 0.02 to about 0.06 wt. % in terms of phosphorus content.

13. The trunk piston engine lubricating oil composition according to any one of Claims 1-12, further comprising one or more trunk piston engine lubricating oil composition additives selected from the group consisting of an ashless dispersant other than a polyalkylene succinimide, anti-wear agent other than a zinc dithiophosphate, rust inhibitor, dehazing agent, demulsifying agent, metal deactivating agent, friction modifier, pour point depressant, antifoaming agent, co-solvent, package compatibiliser, corrosion-inhibitor, dye, extreme pressure agent and mixtures thereof.

14. A method for reducing black sludge and deposit formation in a trunk piston engine, the method comprising lubricating the trunk piston engine with a trunk piston engine lubricating oil composition according to any one of Claims 1-13.

15. Use of a trunk piston engine lubricating oil composition according to any one of Claims 1-13 for reducing black sludge and deposit formation in a trunk piston engine.

CLAIMS

1. A trunk piston engine lubricating oil composition comprising (a) at least 40 wt. %, based on the total weight of the trunk piston engine lubricating oil composition, of an oil of lubricating viscosity; (b) 0.3 wt. % to 15 wt. %, based on the total weight of the trunk piston engine lubricating oil composition, of one or more carboxylate-containing detergents comprising a salt of an alkyl-substituted hydroxyaromatic carboxylic acid, wherein at least 90 % of the alkyl moiety of the alkyl-substituted hydroxyaromatic carboxylic acid comprises C_{26} to C_{28} alkyl groups derived from one or more normal alpha olefins and the remainder being derived from one or more C_{24} and C_{30} normal alpha olefins; and (c) one or more zinc dithiophosphates in an amount of 0.02 to 0.12 wt. % in terms of phosphorus content.

2. The trunk piston engine lubricating oil composition according to Claim 1, having a total base number of at least 10.

3. The trunk piston engine lubricating oil composition according to Claim 1, having a total base number of from 20 to 60.

4. The trunk piston engine lubricating oil composition according to any one of Claims 1-3, wherein at least 95 % of the alkyl moiety of the alkyl-substituted hydroxyaromatic carboxylic acid comprises C_{26+} alkyl groups derived from one or more normal alpha olefins.

5. The trunk piston engine lubricating oil composition according to any one of Claims 1-4, wherein the one or more carboxylate-containing detergents comprise an overbased alkaline earth metal salt.

6. The trunk piston engine lubricating oil composition according to Claim 5, wherein the overbased alkaline earth metal salt is an overbased calcium salt.

7. The trunk piston engine lubricating oil composition according to any one of Claims 1-6, wherein the composition contains no detergent that does not contain a salt of an alkyl-substituted hydroxyaromatic carboxylic acid.

8. The trunk piston engine lubricating oil composition according to any one of Claims 1-7, further comprising less than 2 wt. % of a polyalkylene succinimide.

9. The trunk piston engine lubricating oil composition according to any one of Claims 1-8, further comprising less than 1 wt. % of an oxidation inhibitor.

10. The trunk piston engine lubricating oil composition according to any one of Claims 1-9, wherein the one or more zinc dithiophosphates are present in an amount of 0.02 to 0.06 wt. % in terms of phosphorus content.

11. The trunk piston engine lubricating oil composition according to any one of Claims 1-10, further comprising one or more trunk piston engine lubricating oil composition additives

selected from the group consisting of an ashless dispersant other than a polyalkylene succinimide, anti-wear agent other than a zinc dithiophosphate, rust inhibitor, dehazing agent, demulsifying agent, metal deactivating agent, friction modifier, pour point depressant, antifoaming agent, co-solvent, package compatibiliser, corrosion-inhibitor, dye, extreme pressure agent and mixtures thereof.

12. A method for reducing black sludge and deposit formation in a trunk piston engine, the method comprising lubricating the trunk piston engine with a trunk piston engine lubricating oil composition according to any one of Claims 1-11.

13. Use of a trunk piston engine lubricating oil composition according to any one of Claims 1-11 for reducing black sludge and deposit formation in a trunk piston engine.