WHAT IS CLAIMED IS:

1. A natural gas engine lubricating oil composition comprising (a) a major amount of an oil of lubricating viscosity, (b) one or more phosphorus-containing anti-wear additives other than a zinc dithiophosphate, wherein the one or more phosphorus-containing anti-wear additives is a mixture containing a hydrocarbyl phosphate and a hydrocarbyl phosphite (c) one or more ashless dispersants, (d) one or more metalcontaining detergents, and (e) one or more antioxidants, wherein the natural gas engine lubricating oil composition has a sulfated ash content of 0.1 to 1.25 wt. % as determined by ASTM D 874 and contains no more than 0.03 weight percent of phosphorus, based on the total weight of the natural gas engine lubricating oil composition, and further wherein the natural gas engine lubricating oil composition is substantially free of any zinc compounds.

2. The natural gas engine lubricating oil composition of Claim 1, wherein the hydrocarbyl phosphate is selected from the group consisting of a trialkyl phosphate, a triaryl phosphate and mixtures thereof and the hydrocarbyl phosphite is selected from the group consisting of a trialkyl phosphite, a triaryl phosphite and mixtures thereof.

3. The natural gas engine lubricating oil composition of Claim 1, wherein the hydrocarbyl phosphite is selected from the group consisting of tributyl phosphite, trihexyl phosphite, trioctyl phosphite, tridecyl phosphite, trilauryl phosphite, trioleyl phosphate, triphenyl phosphite, tricresylphosphite, and mixtures thereof, and the hydrocarbyl phosphate is selected from the group consisting of tributyl phosphate, trihexyl phosphate, trioctyl

phosphate, tridecyl phosphate, trilauryl phosphate, trioleyl phosphate, t-butylphenyl diphenyl phosphate, bis(t-butylphenyl) phenyl phosphate, tri(t-butylphenyl) phosphate, triphenyl phosphate, propylated triphenyl phosphate and mixtures thereof.

4. The natural gas engine lubricating oil composition of Claim 1, wherein the one or more ashless dispersants is a bissuccinimide.

5. The natural gas engine lubricating oil composition of Claim 1, wherein the one or more metal-containing detergents is an overbased alkaline earth metal salt detergent having a BN of 10 to 450.

6. The natural gas engine lubricating oil composition of Claim 1, wherein the one or more metal-containing detergents comprises two metal-containing detergents.

7. The natural gas engine lubricating oil composition of Claim 8, wherein the two metal-containing detergents comprise a first metal-containing detergent which is an overbased alkaline earth metal phenate detergent having a base number (BN) of 100 to 450 and a second metal-containing detergent which is an overbased alkaline earth metal sulfonate detergent having a BN of 10 to 50.

8. The natural gas engine lubricating oil composition of Claim 1, wherein the one or more antioxidants is a hindered phenol compound.

9. The natural gas engine lubricating oil composition of Claim 1, having a sulfated ash content of 0.15 to 0.3 wt. % as determined by ASTM D 874.

10. The natural gas engine lubricating oil composition of Claim 1, comprising:

0.25 to 1.5 wt. % of one or more phosphorus-containing anti-wear additives,

1 wt. % to 8 wt. % of the one or more ashless dispersants,

0.5 wt. % to 8.5 wt. % of the one or more metal-containing detergents, and

0.1 wt. % to 3 wt. % of the one or more antioxidants, based on the total weight of the natural gas engine lubricating oil composition.

11. A method for preventing or inhibiting exhaust valve seat recession in a natural gas fueled engine, the method comprising lubricating the engine with a natural gas engine lubricating oil composition comprising (a) a major amount of an oil of lubricating viscosity; (b) one or more phosphorus-containing anti-wear additives other than a zinc dithiophosphate, wherein the one or more phosphorus-containing anti-wear additives is a mixture containing a hydrocarbyl phosphate and a hydrocarbyl phosphite, (c) one or more ashless dispersants, (d) one or more metal-containing detergents, and (e) one or more antioxidants, wherein the natural gas engine lubricating oil composition has a sulfated ash content of 0.1 to 1.25 wt. % as determined by ASTM D 874 and contains no more than 0.03 weight percent of phosphorus, based on the total weight of the natural gas engine lubricating oil composition, and further wherein the natural gas engine lubricating oil composition is substantially free of any zinc compounds.

12. The method of Claim 13, wherein the hydrocarbyl phosphate is selected from the group consisting of a trialkyl phosphate, a triaryl phosphate and mixtures thereof and the hydrocarbyl phosphite is selected from the group consisting of a trialkyl phosphite, a triaryl phosphite and mixtures thereof.

13. The method of Claim 13, wherein the hydrocarbyl phosphite selected from the group consisting of tributyl phosphite, trihexyl phosphite, trioctyl phosphite, tridecyl phosphite, trilauryl phosphite, trioleyl phosphate, triphenyl phosphite, tricresylphosphite, and mixtures thereof, and the hydrocarbyl phosphate is selected from the group consisting of tributyl phosphate, trihexyl phosphate, trioctyl phosphate, tridecyl phosphate, trilauryl phosphate, trioleyl phosphate, t-butylphenyl diphenyl phosphate, bis(t-butylphenyl) phenyl phosphate, tri(t-butylphenyl) phosphate, triphenyl phosphate, propylated triphenyl phosphate and mixtures thereof.

14. The method of Claim 13, wherein the natural gas engme lubricating oil composition comprising:

0.25 to 1.5 wt. % of the one or more phosphorus-containing anti-wear additives,

1 wt. % to t 8 wt. % of the one or more ashless dispersants,

0.5 wt. % to t 8.5 wt. % of the one or more metal-containing detergents, and

0.1 wt. % to 3 wt. % of the one or more antioxidants, based on the total weight of the natural gas engine lubricating oil composition.

19. The method of Claim 13, wherein the one or more ashless dispersants is a bissuccinimide.

20. The method of Claim 13, wherein the one or more metal-containing detergents is an overbased alkaline earth metal salt detergent having a base number (BN) of 10 to 450.

21. The method of Claim 13, wherein the one or more metal-containing detergents comprises two metal-containing detergents.

WHAT IS CLAIMED IS:

1. A natural gas engine lubricating oil composition comprising (a) a major amount of an oil of lubricating viscosity, (b) one or more phosphorus-containing anti-wear additives other than a zinc dithiophosphate, wherein the one or more phosphorus-containing anti-wear additives is a mixture containing a hydrocarbyl phosphate and a hydrocarbyl phosphite (c) one or more ashless dispersants, (d) one or more metalcontaining detergents, and (e) one or more antioxidants, wherein the natural gas engine lubricating oil composition has a sulfated ash content of 0.1 to 1.25 wt. % as determined by ASTM D 874 and contains no more than 0.03 weight percent of phosphorus, based on the total weight of the natural gas engine lubricating oil composition, and further wherein the natural gas engine lubricating oil composition is substantially free of any zinc compounds.

2. The natural gas engine lubricating oil composition of Claim 1, wherein the hydrocarbyl phosphate is selected from the group consisting of a trialkyl phosphate, a triaryl phosphate and mixtures thereof and the hydrocarbyl phosphite is selected from the group consisting of a trialkyl phosphite, a triaryl phosphite and mixtures thereof.

3. The natural gas engine lubricating oil composition of Claim 1, wherein the hydrocarbyl phosphite is selected from the group consisting of tributyl phosphite, trihexyl phosphite, trioctyl phosphite, tridecyl phosphite, trilauryl phosphite, trioleyl phosphate, triphenyl phosphite, tricresylphosphite, and mixtures thereof, and the hydrocarbyl phosphate is selected from the group consisting of tributyl phosphate, trihexyl phosphate, trioctyl

phosphate, tridecyl phosphate, trilauryl phosphate, trioleyl phosphate, t-butylphenyl diphenyl phosphate, bis(t-butylphenyl) phenyl phosphate, tri(t-butylphenyl) phosphate, triphenyl phosphate, propylated triphenyl phosphate and mixtures thereof.

4. The natural gas engine lubricating oil composition of Claim 1, wherein the one or more ashless dispersants is a bissuccinimide.

5. The natural gas engine lubricating oil composition of Claim 1, wherein the one or more metal-containing detergents is an overbased alkaline earth metal salt detergent having a BN of 10 to 450.

6. The natural gas engine lubricating oil composition of Claim 1, wherein the one or more metal-containing detergents comprises two metal-containing detergents.

7. The natural gas engine lubricating oil composition of Claim 6, wherein the two metal-containing detergents comprise a first metal-containing detergent which is an overbased alkaline earth metal phenate detergent having a base number (BN) of 100 to 450 and a second metal-containing detergent which is an overbased alkaline earth metal sulfonate detergent having a BN of 10 to 50.

8. The natural gas engine lubricating oil composition of Claim 1, wherein the one or more antioxidants is a hindered phenol compound.

9. The natural gas engine lubricating oil composition of Claim 1, having a sulfated ash content of 0.15 to 0.3 wt. % as determined by ASTM D 874.

10. The natural gas engine lubricating oil composition of Claim 1, comprising:

0.25 to 1.5 wt. % of one or more phosphorus-containing anti-wear additives,

1 wt. % to 8 wt. % of the one or more ashless dispersants,

0.5 wt. % to 8.5 wt. % of the one or more metal-containing detergents, and

0.1 wt. % to 3 wt. % of the one or more antioxidants, based on the total weight of the natural gas engine lubricating oil composition.

11. A method for preventing or inhibiting exhaust valve seat recession in a natural gas fueled engine, the method comprising lubricating the engine with a natural gas engine lubricating oil composition comprising (a) a major amount of an oil of lubricating viscosity; (b) one or more phosphorus-containing anti-wear additives other than a zinc dithiophosphate, wherein the one or more phosphorus-containing anti-wear additives is a mixture containing a hydrocarbyl phosphate and a hydrocarbyl phosphite, (c) one or more ashless dispersants, (d) one or more metal-containing detergents, and (e) one or more antioxidants, wherein the natural gas engine lubricating oil composition has a sulfated ash content of 0.1 to 1.25 wt. % as determined by ASTM D 874 and contains no more than 0.03 weight percent of phosphorus, based on the total weight of the natural gas engine lubricating oil composition, and further wherein the natural gas engine lubricating oil composition is substantially free of any zinc compounds.

12. The method of Claim 11, wherein the hydrocarbyl phosphate is selected from the group consisting of a trialkyl phosphate, a triaryl phosphate and mixtures thereof and the hydrocarbyl phosphite is selected from the group consisting of a trialkyl phosphite, a triaryl phosphite and mixtures thereof.

13. The method of Claim 11, wherein the hydrocarbyl phosphite selected from the group consisting of tributyl phosphite, trihexyl phosphite, trioctyl phosphite, tridecyl phosphite, trilauryl phosphite, trioleyl phosphate, triphenyl phosphite, tricresylphosphite, and mixtures thereof, and the hydrocarbyl phosphate is selected from the group consisting of tributyl phosphate, trihexyl phosphate, trioctyl phosphate, tridecyl phosphate, trilauryl phosphate, trioleyl phosphate, t-butylphenyl diphenyl phosphate, bis(t-butylphenyl) phenyl phosphate, tri(t-butylphenyl) phosphate, triphenyl phosphate, propylated triphenyl phosphate and mixtures thereof.

14. The method of Claim 11, wherein the natural gas engine lubricating oil composition comprising:

0.25 to 1.5 wt. % of the one or more phosphorus-containing anti-wear additives,

1 wt. % to t 8 wt. % of the one or more ashless dispersants,

0.5 wt. % to t 8.5 wt. % of the one or more metal-containing detergents, and

0.1 wt. % to 3 wt. % of the one or more antioxidants, based on the total weight of the natural gas engine lubricating oil composition.

15. The method of Claim 11, wherein the one or more ashless dispersants is a bissuccinimide.

16. The method of Claim 11, wherein the one or more metal-containing detergents is an overbased alkaline earth metal salt detergent having a base number (BN) of 10 to 450.

17. The method of Claim 11, wherein the one or more metal-containing detergents comprises two metal-containing detergents.

18. The method of Claim 17, wherein the two metal-containing detergents comprise a first metal-containing detergent which is an overbased alkaline earth metal phenate detergent having a BN of 100 to 450 and a second metal-containing detergent which is an overbased alkaline earth metal sulfonate detergent having a BN of 10 to 50.

19. The method of Claim 18, wherein the first metal-containing detergent is present in an amount of 0.5 wt. % to 5 wt. % and the second metal-containing detergent is present in an amount of 0.1 wt. % to 1 wt. %, based on the total weight of the lubricating oil composition.

20. The method of Claim 11, wherein the one or more antioxidants is a hindered phenol compound.