CLAIMS:

1. A method for enhancing the corrosion resistance of lubricating oil formulations comprising base oil additized with one or more anti-corrosion additive(s), said method comprising employing as the base oil for the lubricating oil formulation a base oil comprising one or more hydrodewaxate or hydroisomerate base stock(s) and/or base oil(s), GTL base stock(s) and/or base oil(s), or mixtures thereof, boiling in the lube oil boiling range.

2. A method for enhancing the metal corrosion resistance of lubricating oil formulations comprising base oil additized with one or more anti-corrosion additive(s) and one or more corrosive anti-wear additives, said method comprising employing as the base oil for the lubricating oil formulation a base oil comprising one or more hydrodewaxate or hydroisomerate base stock(s) and/or base oil(s), GTL base stock(s) and/or base oil(s), or mixtures thereof, boiling in the lube oil boiling range.

3. A method for reducing the rate of corrosion in an apparatus lubricated using a lubricating oil formulation containing one or more anti-corrosion additive(s) during use by lubricating the apparatus using a lubricating oil containing one or more anti-corrosion additive(s) and a base oil comprising one or more hydrodewaxate or hydroisomerate base stock(s) and/or base oil(s), GTL base stock(s) and/or base oil(s), or mixtures thereof, boiling in the lube oil boiling range.

4. A method for reducing the rate of corrosion in an apparatus lubricated using a lubricating oil formulation containing one or more anti-corrosion additive(s) and one or more corrosive anti-wear additive(s) by lubricating the apparatus using a lubricating oil containing the one or more anti-corrosion additive(s), the one or more corrosive anti-wear additive(s) and a base oil comprising one or more hydrodewaxate or hydroisomerate base stock(s) and/or

base oil(s), GTL base stock(s) and/or base oil(s), or mixtures thereof, boiling in the lube oil boiling range.

5. A method for enhancing the corrosion resistance of lubricating oil formulations comprising mineral oil base oil and/or polyalpha olefin base oil additized with one or more anti-corrosion additive(s), and, optionally, one or more corrosive anti-wear additive(s) by replacing all or part of the mineral oil base oil and/or polyalpha olefin base oil with one or more hydrodewaxate or hydroisomerate base stock(s) and/or base oil(s), GTL base stock(s) and/or base oil(s) or mixtures thereof, boiling in the lube oil boiling range.

6. The method of claims 1, 2, 3, 4 or 5 wherein the one or more hydrodewaxate or hydroisomerate base stock(s) and/or base oil(s), GTL base stock(s) and/or base oil(s), or mixtures thereof, comprise 5 to 100% by weight of the base oil.

7. The method of claims 1, 2, 3, 4, or 5 wherein the one or more anti-corrosion additive(s) is/are present in an amount of about 0.001 to 5 wt% active ingredient, relative to the weight of the total lubricant composition.

8. The method of claims 2, 4 or 5 wherein the one or more corrosive anti-wear additive(s) and the one or more anti-corrosion additive(s) is/are present in a weight ratio of about 45:1 to 1:1.

9. The method of claim 7 wherein the one or more anti-corrosion additive(s) is/are present in an amount of about 0.01 to 1.5 wt% active ingredient relative to the weight of the total lubricant composition.

10. The method of claim 8 wherein the corrosive anti-wear additive(s) and the anti-corrosion additive(s) are present in a weight ratio of about 30:1 to 1:1.

11. The method of claim 10 wherein the corrosive anti-wear additive and the anti-corrosion additive(s) are present in a weight ratio of about 30:1 to 3:1.

12. The method of claim 11 wherein the corrosive anti-wear additive(s) and the anti-corrosion additive(s) are present in a weight ratio of about 15:1 to 3:1.

13. An aviation piston engine oil comprising

(i) a base oil comprising:

(a) at least 10 wt% based on the total weight of the base oil of one or more hydrodewaxate or hydroisomerate base stock(s) and/or base stock(s), GTL base stock(s) and/or base oil(s), or mixtures thereof, having a kinematic viscosity at 100°C in the range of about 3 to 25 mm^2/s;

(b) about 20 to 90 wt% based on the total weight of the base oil of one or more mineral oils having a kinematic viscosity at 100°C in the range from about 4 to 40 mm^2/s ;

(c) about zero to 30 wt% based on the total weight of the base oil of polyalpha olefin having a kinematic viscosity at 100°C in the range from about 4 to 40 mm^2/s;

(ii) an effective amount of additive comprising one or more of viscosity index improver, anti-oxidant, anti-foam agent, dye, ashless dispersant, anti-wear additive, extreme pressure additive;

(iii) about 0.001 to about 5 w% active ingredient anti-corrosion additive.

14. The aviation piston engine oil of claim 13 wherein the additive (ii) comprises at least 2 wt% ashless dispersant.

15. The method of claims 1, 2, 3, 4 or 5 wherein the base oil is hydrodewaxate or hydroisomerate base stock(s) and/or base oil(s) or mixture thereof.

16. The method of claims 1, 2, 3, 4 or 5 wherein the base oil is a GTL base stock(s) and/or base oil(s).

17. The aviation piston engine oil of claim 13 or 14 wherein the one or more hydrodewaxate or hydroisomerate base stock(s) and/or base oil(s), GTL base stock(s) and/or base oil(s), or mixtures thereof, is a mixture of at least two of said base stock of (i)(a) wherein one of the base stock(s) has a KV of about 10 to 25 mm^2/s.

18. The aviation piston engine oil of claim 17 wherein the mixture of at least two of the said base stock(s) and/or base oil(s) of (i)(a), one of the base stock(s) and/or base oil(s) has a KV of about 12 to 25 mm^2/s.

19. The aviation piston engine oil of claim 13 or 14 wherein the base stock and/or base oil (i)(a) constitutes at least 25 wt% of the total base oil.

20. The aviation piston engine oil of claims 13 or 14 wherein the base stock and/or base oil (i)(a) constitutes at least 40 wt% of the total base oil.

CLAIMS

1. An aviation piston engine oil comprising

(i) a base oil comprising:

(a) from about 30.27 to 56.95 wt% based on the total weight of the base oil of one or more GTL base stock(s) and/or base oil(s), having a kinematic viscosity at 100°C in the range of about 10 to 14 mm^2/s;

(b) about 30 wt% based on the total weight of the base oil of Bright Stock;

(c) about zero to 26.6 wt% based on the total weight of the base oil of polyalpha olefin having a kinematic viscosity at 100°C of about 6 mm^2/s; and

(d) with the proviso that the base oil is essentially free of Solvent Paraffinic Neutral (SPN) 600 mineral oil;

(ii) about 11 wt% of additive comprising one or more of viscosity index improver, anti-oxidant, anti-foam agent, dye, ashless dispersant, extreme pressure additive;

(iii) both an anti-wear additive and an anti-corrosion additive in the weight ratio of from about 30:1, wherein the anti-wear additive comprises tricresyl phosphate at about 1.50 wt.% based on the total weight of the engine oil and wherein the anti-corrosion additive comprises tolytriazole at about 0.05 wt.% based on the total weight of the engine oil; and

(iv) wherein said oil is formulated with additives to meet SAE-J 1966 and SAE-J 1899 specifications for nondispersant and ashless dispersant oils respectively, and wherein the humidity cabinet rust test rating (ASTM D 1748 at 120°F, 100% relative humidity for 72 hours) of said oil is about 0.5 or less.

2. The aviation piston engine of claim 1 wherein the additive (ii) comprises at least 2 wt% ashless dispersant based on the total weight of the engine oil.

3. The aviation piston engine oil of claim 1 or 2 wherein the one or more GTL base stock(s) and/or base oil(s) is a mixture of at least two of said base stock of (i)(a) wherein one of the base stock(s) has a KV of about 6 to 14 mm^2/s.

4. The aviation piston engine oil of claim 3 wherein the mixture of at least two of said base stock(s) and/or base oil(s) of (i)(a), one of the base stock(s) and/or base oil(s) has a KV of about 12 to 14 mm^2/s.

5. The aviation piston engine oil of claim 1 or 2 wherein the base stock and/or base oil (i)(a) constitutes at least 50 wt% of the total base oil.

6. The aviation piston engine oil of claim 1 or 2 wherein the base stock and/or base oil (i)(a) constitutes at least 40 wt% of the total base oil.

7. The aviation piston engine oil of claim 1 wherein the oil has improved rust performance as measured by ASTM D 1748 when compared to a piston oil further including SPN 600 mineral oil base stock.