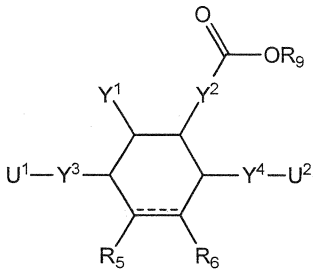
CLAIMS:

1. A composition comprising:

at least one estolide compound; and

at least one compound selected from compounds of Formula II:



Formula II

wherein

Y^1 is an unsubstituted C_5 to C_{10} alkyl that is saturated or unsaturated, and unbranched;

Y^2, Y^3, and Y^4, independently for each occurrence, are selected from unsubstituted C_4 to C_{10} alkylene that is saturated or unsaturated, and unbranched;

U^1 and U^2, independently for each occurrence, are selected from hydrogen and $-C(=O)OR_{10}$;

R_9 and R_{10}, independently for each occurrence, are selected from optionally substituted alkyl that is saturated or unsaturated, and branched or unbranched; and

R_5 and R_6 are hydrogen, or R_5 and R_6, taken together with the carbons to which they are attached, form an optionally substituted cycloalkyl,

wherein the dashed line represents a single bond or a double bond, and

wherein at least one of U^1 or U^2 is $-C(=O)OR_{10}$.

2. The composition according to claim 1, wherein Y^1 is selected from C_5 alkyl and C_8 alkyl.

~~3. The composition according to claim 1, wherein Y^1 is saturated.~~

4.3. The composition according to claim 1, wherein Y^2 is selected from C_7 alkylene and C_{10} alkylene.

5.4. The composition according to claim 1, wherein Y^3 is selected from C_5 alkylene and C_6

alkylene.

~~6.~~5. The composition according to claim ~~5~~4, wherein U^1 is hydrogen.

~~7.~~6. The composition according to claim 1, wherein Y^3 is selected from C_7 alkylene and C_8 alkylene.

~~8.~~7. The composition according to claim ~~7~~6, wherein U^1 is $-C(=O)OR_{10}$.

~~9.~~8. The composition according to claim 1, wherein Y^4 is selected from C_5 alkylene and C_6 alkylene.

~~10.~~9. The composition according to claim ~~9~~8, wherein U^2 is hydrogen.

~~11.~~10. The composition according to claim 1, wherein Y^4 is selected from C_7 alkylene and C_8 alkylene.

~~12.~~11. The composition according to claim ~~11~~10, wherein U^2 is $-C(=O)OR_{10}$.

~~13.~~12. The composition according to claim 1, wherein R_9 and R_{10}, independently for each occurrence, are selected from unsubstituted C_1 to C_{20} alkyl that is saturated or unsaturated, and branched or unbranched.

~~14.~~13. The composition according to claim 1, wherein R_9 and R_{10}, independently for each occurrence, are selected from unsubstituted C_6 to C_{12} alkyl that is saturated and branched.

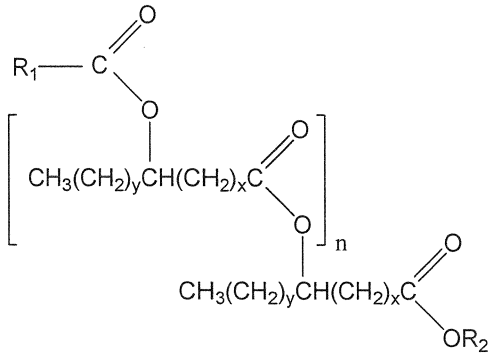
~~15. The composition according to claim 14, wherein R_9 and R_{10} are 2-ethylhexyl.~~

~~16.~~14. The composition according to claim 1, wherein R_5 and R_6 are hydrogen.

~~17.~~15. The composition according to claim 1, wherein R_5 and R_6, taken together with the carbons to which they are attached, form a substituted C_6 cycloalkyl.

~~18.~~16. The composition according to claim 1, wherein the dashed line represents a single bond.

~~19.~~17. The composition according to claim 1, wherein the at least one estolide compound is selected from compounds of Formula V:



Formula V

wherein

x is, independently for each occurrence, an integer selected from ~~1 to 10~~ 0 to 20;

y is, independently for each occurrence, an integer selected from ~~1 to 10~~ 0 to 20;

n is an integer selected from 0 to 8;

R_1 is an optionally substituted C_1 to C_{22} alkyl that is saturated or unsaturated, and branched or unbranched; and

R_2 is an optionally substituted C_1 to C_{22} alkyl that is saturated or unsaturated, and branched or unbranched,

wherein each fatty acid chain residue of said at least one estolide compound is unsubstituted.

~~20.~~18. The composition according to claim ~~19~~17, wherein R_2 is an unsubstituted C_6 to C_{12} alkyl that is saturated or unsaturated, and branched.

~~21.~~19. The composition according to claim ~~20~~18, wherein R_2 is saturated.

~~22. The composition according to claim 21, wherein R_2 is 2-ethylhexyl.~~

~~23.~~20. The composition according to claim ~~19~~17, wherein R_1 is an unbranched C_1 to C_{20} alkyl that is unsubstituted~~,~~ and saturated ~~or unsaturated~~.

~~24. The composition according to claim 23, wherein R_1 is saturated.~~

~~25. A method of decreasing the pour point and increasing the kinematic viscosity of composition, comprising:~~

selecting a composition comprising at least one estolide compound, said composition having an initial pour point and an initial kinematic viscosity; and

contacting the composition with at least one additive, wherein the resulting composition exhibits a pour point that is lower than the initial pour point, and a kinematic viscosity that is higher than the initial kinematic viscosity.

26. A method of preparing a composition, comprising:

providing a composition comprising an estolide base oil and at least one ene compound or Diels Alder compound, wherein the composition exhibits an initial EN; and

removing at least a portion of the estolide base oil from the composition, said portion exhibiting an EN that is less than the initial EN,

wherein the resulting composition exhibits an EN that is greater than the initial EN, and wherein EN is the average number of estolide linkages for compounds comprising the estolide base oil.

27. The composition according to claim 19, wherein y is, independently for each occurrence, an integer selected from 7 and 8.

28. The composition according to claim 19, wherein x is, independently for each occurrence, an integer selected from 7 and 8.