CLAIMS:

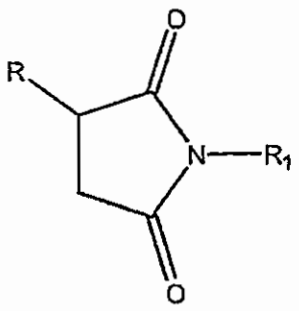
1. A lubricating oil composition comprising a base lubricating oil, at least one oil soluble phosphorus containing compound and at least one polyalkylene polyamine-based friction modifier comprising at least one hydrocarbyl substituent wherein the, or each, hydrocarbyl substituent comprises between 6 and 30 carbon atoms, and wherein at least one secondary amino group present in the polyamine chain of the friction modifier has been acylated to the corresponding amide group.

2. A composition comprising :

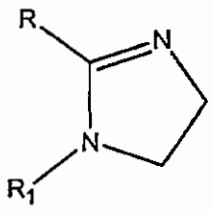
(a) a major amount of a base lubricating oil; and

(b) a friction stability improving effective amount of an additive combination comprising:

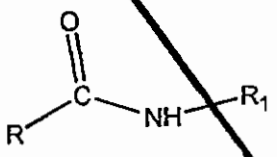
(i) at least one friction modifier comprising the reaction product of an acylating agent R_3COX (wherein R_3 is a hydrocarbyl group and X is a leaving group) with one or more compounds selected from the group of compounds (I), (II) and (III), where (I), (II), and (III) are represented by the structures :



(I)

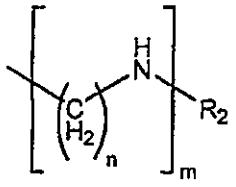


(II)



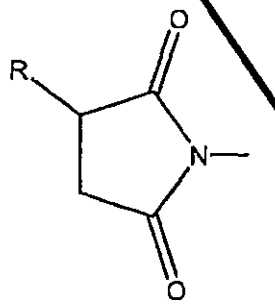
(III)

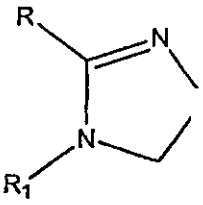
wherein R is a C_6 to C_{30} alkyl or alkenyl group; R_1 is a polyalkylene polyamine group represented by structure (IV):

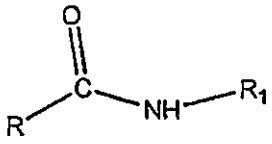


(IV)

wherein n and m are each independently integers from 1 to 6; and R_2 is an alkyl or aryl group or their heteroatom containing derivatives, or is selected from the structures V, VI and VII below ; and



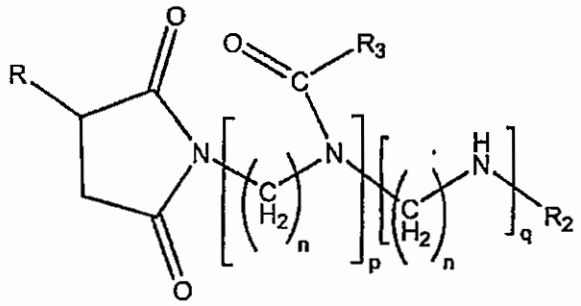




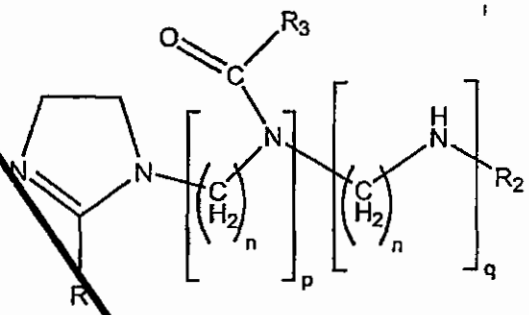
(V) (VI) (VII)

(ii) at least one oil-soluble phosphorus-containing compound.

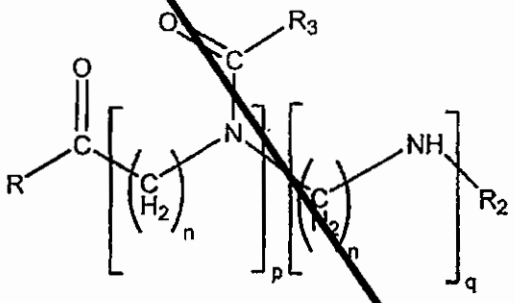
3. The composition according to claim 2 wherein the friction modifier (b)(i) comprises the reaction product represented by one or more of the structures (VIII), (IX) and (X) :



(VIII)



(IX)



(X)

wherein R, R_2, R_3, n and m are as defined in claim 2 and wherein p + q = m, with the proviso that p ≥ 1.

4. The composition according to claim 1 wherein the composition is a power transmission fluid.

5. An additive composition comprising a friction modifier comprising at least one hydrocarbyl substituent wherein the, or each, hydrocarbyl substituent comprises between 6 and 30 carbon atoms, and wherein at least

one secondary amino group present in the polyamine chain of the friction modifier has been acylated to the corresponding amide group in combination with an oil soluble phosphorus containing compound.

6. A method of imparting friction stability to lubricating oils, comprising adding a friction modifier comprising at least one hydrocarbyl substituent wherein the, or each, hydrocarbyl substituent comprises between 6 and 30 carbon atoms, and wherein at least one secondary amino group present in the polyamine chain of the friction modifier has been acylated to the corresponding amide group to a lubricating oil.

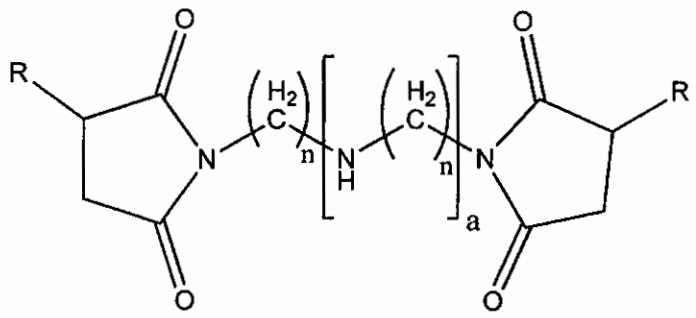
CLAIMS:

1. A composition comprising :

(a) a base lubricating oil; and

(b) an additive combination comprising:

(i) at least one friction modifier comprising the reaction product of acetic anhydride with a compound (XIII) represented by the structure:



(XIII)

wherein R is a C_6 to C_{30} alkyl or alkenyl group; a is an integer from 1 to 5; and each n is independently an integer from 1 to 6; and

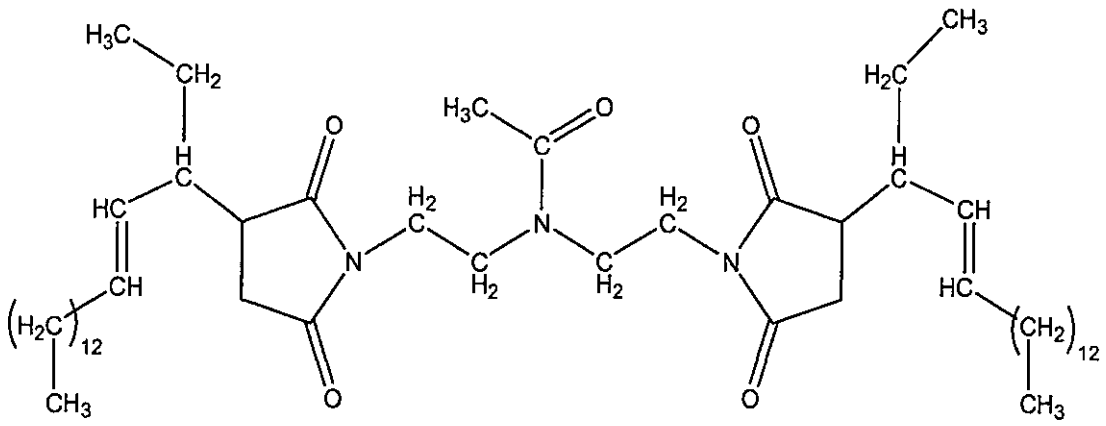
(ii) an oil-soluble mixture of thioalkyl phosphite esters,

wherein the composition comprises 0.1 to 10 weight percent of the at least one friction modifier and the oil-soluble mixture of thioalkyl phosphite esters provides the composition with phosphorus at a concentration of 5 to 5000 ppm.

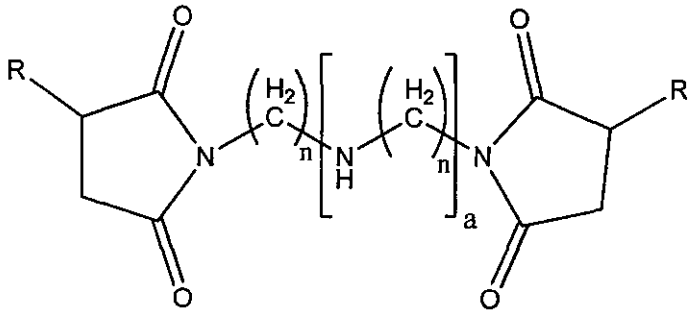
2. The composition according to claim 1 wherein the composition is an automatic transmission fluid, a continuously variable transmission fluid or a double clutch transmission fluid.

3. The composition according to claim 1 wherein the treat rate of the friction modifier from about 0.1 10 weight percent of the composition.

4. The composition according to claim 1 wherein the friction modifier has the structure:



5. A method of imparting friction stability to lubricating oils, the method comprising adding an additive combination to a lubricating oil, wherein the additive combination comprises a friction modifier and an oil-soluble mixture of thioalkyl phosphite esters, wherein the friction modifier comprises the reaction product of acetic anhydride with a compound (XIII) represented by the structure:



(XIII)

wherein R is a C_6 to C_{30} alkyl or alkenyl group; a is an integer from 1 to 5; and each n is independently an integer from 1 to 6, and wherein the additive combination provides the lubricating oil with 0.1 to 10 weight percent of the at least one friction modifier and the oil-

soluble mixture of thioalkyl phosphite esters provides the provides the lubricating oil with phosphorus at a concentration of 5 to 5000 ppm.

6. A method according to claim 6 wherein the friction modifier has the structure:

