What we claim:

1. A method of providing ~~improved~~ detergency in the fuel system of a~~n~~ direct injection diesel engine wherein the method comprises the steps of:

I. adding to the fuel composition a nitrogen-free additive comprising a substituted hydrocarbon with at least two carboxy functionalities in the form of acids or at least one carboxy functionality in the form an anhydride; and

II. supplying said fuel composition to an internal combustion engine, wherein the engine operates with a fuel injector pressure of greater than 35 MPa.

2. The method of claim 1 wherein the method provides a combination of improved detergency and improved corrosion inhibition.

3. The method of ~~any preceding~~ claim1 or claim 2 wherein the nitrogen free additive is selected from the group consisting of:

(a) hydrocarbyl substituted succinic anhydrides;

(b) hydrolyzed hydrocarbyl substituted succinic anhydrides;

(c) combinations thereof.

4. The method of any one of the preceding claimswherein the substituted hydrocarbon is a hydrocarbyl substituted acylating agent with di-acid functionality.

5. The method of claim 4 wherein the hydrocarbyl group of the substituted acylating agent comprises a polyisobutylene group.

6. The method of claim 4 wherein the hydrocarbyl group of the substituted acylating agent is derived from a hydrocarbon which has a number average molecular weight from 500 to 2000.

7. The method of any one of the preceding claimswherein the fuel composition further comprises less than 1,000 ppm of any basic nitrogen and/or amine nitrogen containing fuel detergent additives.

8. The method of any one of the preceding claimswherein the fuel composition further comprises: an additional fuel detergent, a cetane improver, a petroleum dye and/or marker, an antioxidant, a lubricity improver, a corrosion inhibitor, a cold flow improver, a metal deactivator, a demulsifier, an antifoam agent, a drag reducing agent, or combinations thereof.

9. The method of any one of the preceding claimswherein the fuel composition is free of nitrogen-containing dispersants and/or detergents.

10. The method of any one of the preceding claimswherein the fuel composition contains no other fuel dispersants and/or detergents other than said substituted hydrocarbon.

11. The method of any one of the preceding claimswherein the fuel composition comprises diesel fuel, biodiesel or combinations thereof.

12. The method of any one of the preceding claimswherein the engine is a ~~high~~-pressure direct injection diesel engine and the method results in the reduction of injector deposits.

~~13. The method of any preceding claim wherein the engine operates with a fuel injector pressure of greater than 35 MPa.~~

~~14~~13. A direct injection diesel engine fuel composition for use in an engine that operates with a fuel injector pressure of greater than 35 MPa comprising:

(a) a fuel;

(b) a nitrogen-free additive comprising a hydrocarbon substituted with at least two carboxy functionalities in the form of acids or at least one carboxy functionality in the form an anhydride; and

(c) one or more optional additional performance additives.

~~15~~14. The use of a nitrogen-free fuel additive comprising a hydrocarbon substituted with at least two carboxy functionalities in the form of acids or at least one carboxy functionality in the form an anhydride in a fuel composition to provide detergency to the fuel system of a direct injection diesel engine to which the fuel is supplied, wherein the engine operates with a fuel injector pressure of greater than 35 MPa.