

FUEL ADDITIVES TO MAINTAIN OPTIMUM INJECTOR PERFORMANCE

ABSTRACT

A diesel fuel additive package, diesel fuel containing the additive and methods for operating an engine on the diesel fuel and additive. The fuel additive includes a reaction product of (a) a hydrocarbyl substituted dicarboxylic acid or anhydride, and (b) an amine compound or salt thereof of the formula



wherein R is selected from hydrogen and a hydrocarbyl group containing from about 1 to about 15 carbon atoms, and R¹ is selected from hydrogen and a hydrocarbyl group containing from about 1 to about 20 carbon atoms. The reaction product contains at least one amino triazole group. Component (2) of the additive is a hydrocarbyl succinimide dispersant. The additive also includes (3) a C₂ to C₁₀ alkyl alcohol; and (4) optionally, a lubricity additive. In the additive, a weight ratio of component (1) to component (2) in the fuel ranges from about 1:3 to about 1:5.

(no suitable figure)