

FUELS FOR MODERN AGRICULTURAL MACHINERY

Tkachuk Valentyna

Luts'k National Technical University, Ukraine

E-mail: v.tkachuk@lntu.edu.ua

Environmental and sustainability experts agree: The world needs to take quick action on climate change and accelerate our transition to clean energy. And with rising costs and fuel shortages, in part driven by the war in Ukraine, the urgency around securing a reliable, affordable energy source is of the utmost importance to all planet now.

In my view, now is using bio additives for fuels, also in agricultural machinery. So, there are results of several experiments with adding biocomponents into diesel fuel. Additionally, the effectiveness of the additive for cleaning was tested. At the same time, contaminated injectors are installed in the engine after running on basic diesel fuel and determining the flow limit without cleaning the resulting carbon deposits. Then the engine was run on a standard cycle already on the tested fuel with a Keropur DP ENERGY additive package in a dosage of 150 mg/kg. In this case, the flow limit is reduced from 79.4 % (basic diesel fuel) to 68.2%, i.e. more than half of the resulting deposits are removed in just one run within 10 hours. This result of this test is considered acceptable for European fuels.

The use of multifunctional additive packages for diesel fuel allows you to maintain the cleanliness of the engine fuel injection system at the required technical level. Consequently, the optimal composition of the fuel-air mixture is ensured and the most complete and efficient combustion is guaranteed.

Keywords: additives, corrosion, diesel fuel, standard.