Product Bulletin

Klenz ID® Lubricity Testing

Over the past years, there have been federal mandates requiring the removal of sulfur from diesel fuel.

The sulfur level has gone from high sulfur, which before 1993 was on average 3,000 ppm of sulfur in diesel fuel, to low sulfur in 1993, containing no more than 500 ppm of sulfur in diesel fuel. By 2010 all the diesel, referred to as ultra low sulfur diesel (ULSD), in the United States (US) was mandated to contain no more than 15 ppm of sulfur.

Are you wondering why this matters? Well, this matters because removing sulfur from diesel fuel stripped the diesel of much needed lubricity. Lubricity is defined as the principle of supporting a sliding load on a friction reducing film. Therefore, as lubricity decreases the potential of damage to the fuel components increases. There have been talks of moving the US diesel fuel to 5-10 ppm of sulfur. That would make alternative sources of lubricity even more needed.

HFRR Wear Scar testing, ASTM D 6079 – is used to check diesel fuel lubricity properties. The lower the wear scar number achieved utilizing ASTM D 6079 testing the better; offering more protection for fuel injectors, fuel pumps and engines.

The United States uses ASTM D975 specification for No. 2 and No. 1 diesel fuels; the maximum allowable wear scar in this specification for No. 2 and No. 1 diesel fuel is a 520 mm wear scar. Europe uses a max limit of 460 mm wear scar.

Primrose's exclusive Klenz ID® Series of products will address your lubricity concerns by adding a much needed insurance to your diesel fuel. This helps prevent fuel injector and pump failure, aids in reducing engine and fuel injector wear and reduces your maintenance costs.

Check out the HFRR wear scar results of Primrose's "slick" Klenz ID® Series, which shows the insurance level provided for your fuel equipment and engines:

Type	HFRR Wear Scar	% Better Than Baseline	% Better Than "Regular" Diesel Fuel Additive
Baseline Diesel Fuel with No Additives	610		
"Regular" Diesel Fuel Additive	460	24.6%	
Klenz ID® Series of Products	200 mm - 340 mm	44.3% - 67.2%	26.1% - 56.5%