



## **X-1R Global Ltd**

To: All X-1R distributors From: Nigel (Mac) McKenzie

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Cc: Date 3<sup>rd</sup> May 2021

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**Subject:** Revised Diesel Treatment Formulation

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### **Our new Five in One Diesel Treatment goes the extra mile..**

Diesel Engines have changed enormously over the years and we are now looking at Tier 4 Diesel Engines becoming the norm across all of Asia. WE needed to update our product to take into account the changes to the fuels and the demands the engines are making of them. In accordance with the changes we made to the Petrol product we have designed a Five-in-One product that is already the one to beat.

The Claims we will publicize are very much along the lines of the Petrol Treatment; being;

- Removes Carbon deposits and cleans fuel injectors
- Improves Fuel Economy and power delivery
- Lubricates upper cylinder and reduces wear
- Stabilizes fuel
- Eliminates moisture from the fuel tank and lines.

but there are some areas that I will bring to your attention

### **Keeping Fuel Injectors in Good condtion.**

Our new product will ensure consistently high engine performance by cleaning dirty injector nozzles and then keeping them free from deposits, more commonly called Clean-Up and Keep-Clean effects



At Start: Deposits in Injectors



After 2 tank fills with fuel additized with X-1R

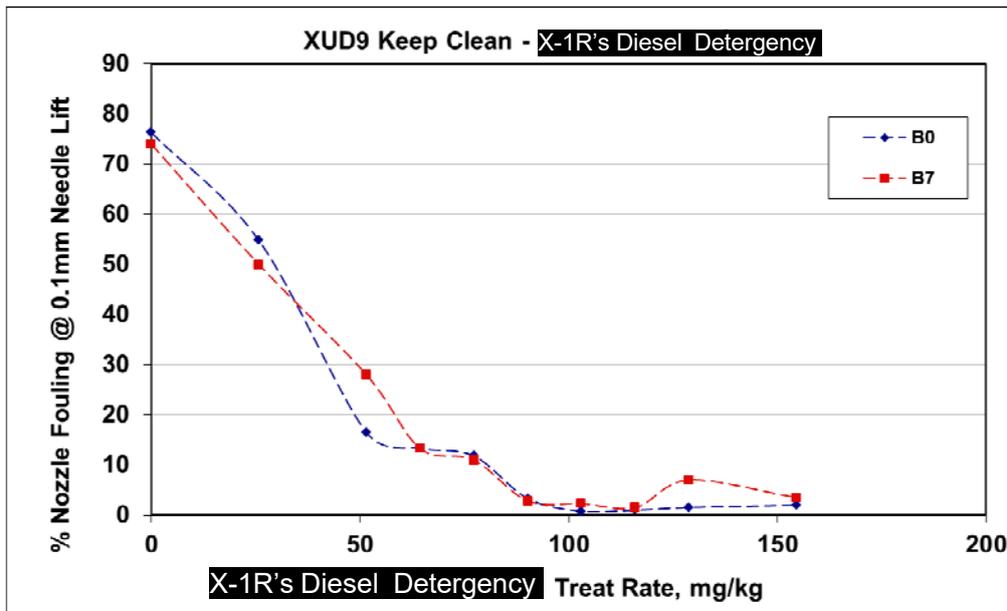


After 5 tank fills with fuel additized with X-1R Diesel Treatment

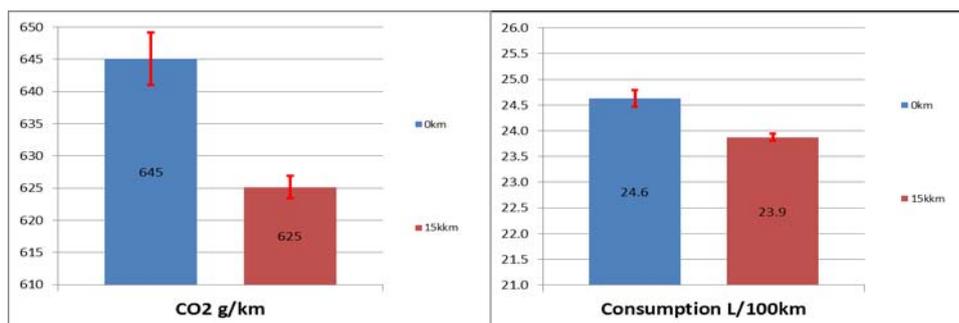
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Nozzle fouling tests, performed using the Peugeot XUD9 1.9 litre engine according to the CEC F-23-01 test procedure, demonstrate the detergency performance of the X1R Diesel Treatment. Detergent performance is measured as percent fouling of an injector at 0.1mm needle lift, with 0% being equal to a clean, as- new injector, and 100% is complete fouling. The results shown below are typical of X1R DIESEL TREATMENT's detergent in ultra-low sulphur fuels, with and without biodiesel

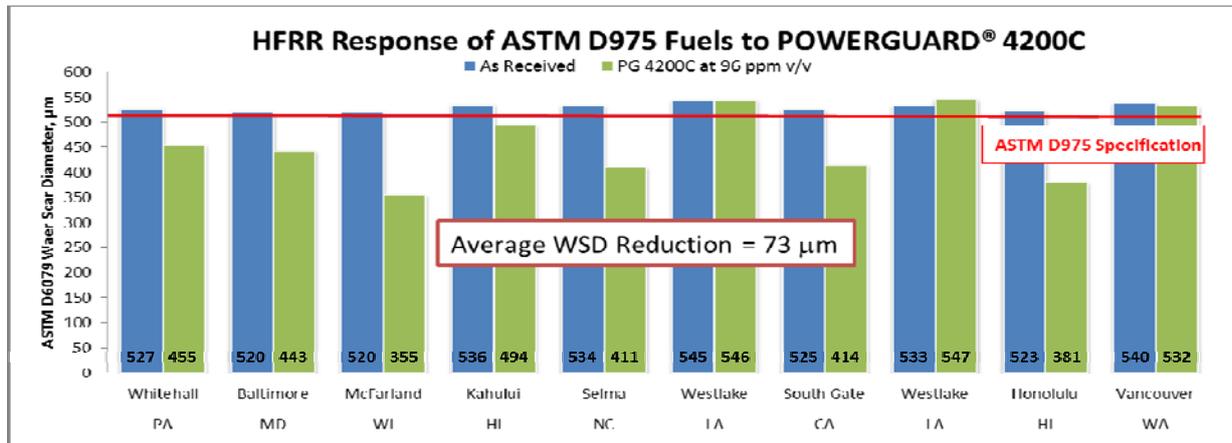


Heavy duty chassis dynamometer testing was performed with a SCANIA R420 Euro V truck within CEE1 provisions and CO2 charter by the UTAC- CERAM Group in Monthéry, France. The aim was to determine how DIESEL DETERGENT technology impacts EN 590 B7 reference fuel consumption, CO2 emissions, and levels of regulated pollutants emitted by a truck. These were measured after a 15000km test track run with DIESEL DETERGENT. An additional study was performed to determinate the impact of DIESEL DETERGENT on injector performance, measuring injector flow and a spray imaging before and after the 15,000km running cycle. The treated fuel produced a 3.1% decrease in fuel consumption and carbon dioxide emissions via carbon balance calculation, demonstrating the injector clean-up performance of DIESEL DETERGENT. The carbon balance calculation method is based on directive 2004/03/CE, which uses the CO2, CO, and total HC emission measurements.

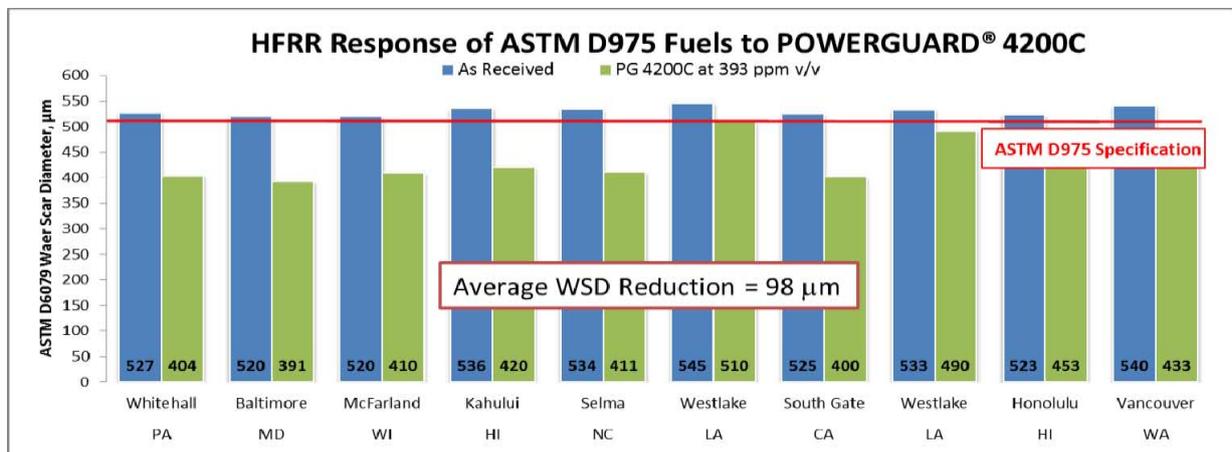


## Improving Lubricity.

We took ten representative fuels from across the USA and using a treat rate of 96ppm we conducted tests using the ASTM D6079 test protocol. At this treat rate we saw a reduction in Wear Scar Diameter (WSD) of 73µm from the D975 target of 520µm making all of the fuels EN590 compliant and proving our Diesel Treatment Technology leads to improved lubricity.

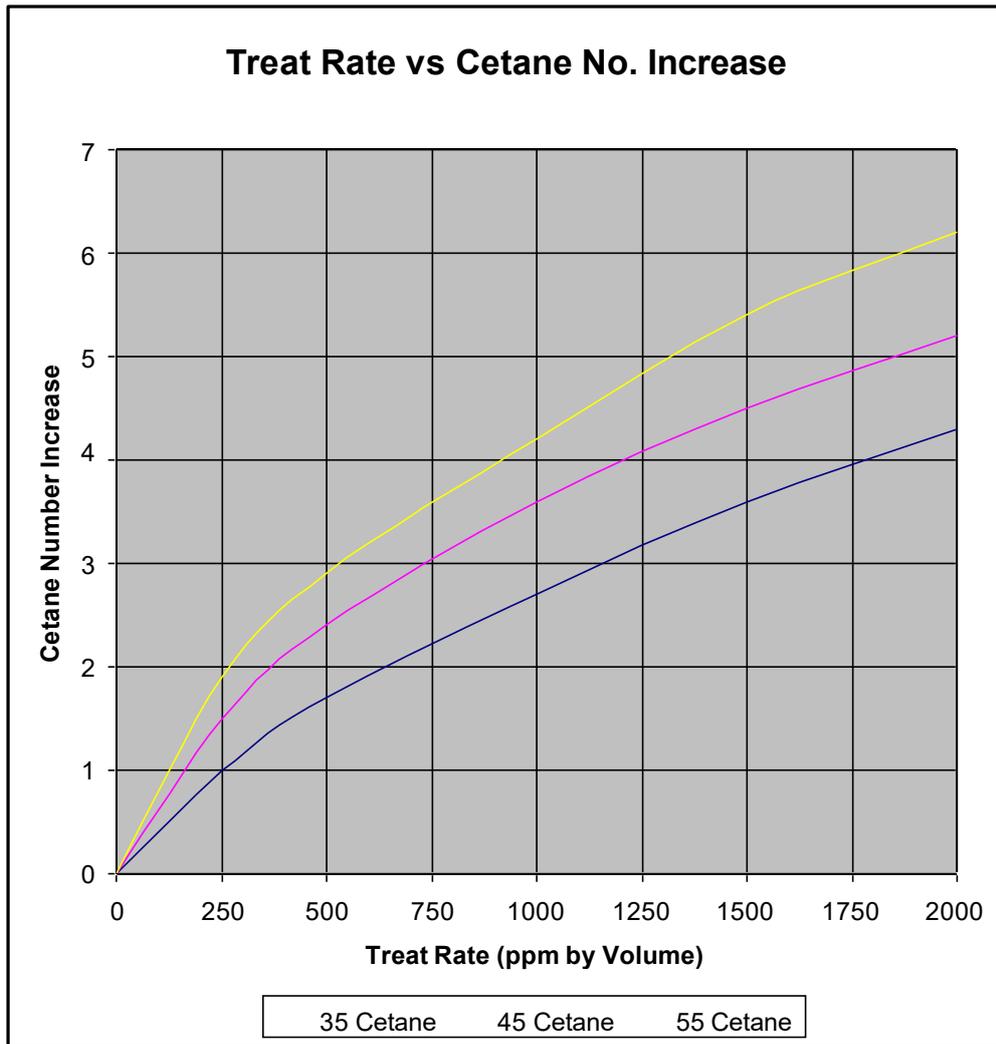


We repeated the tests at a higher concentration of 393ppm and saw a more substantial WSD reduction of 98µm on average.



## Cetane Booster

This is one of the claims that hasn't changed at all, we will still be using our cetane boosting technology. What this ensures is that when used the machine operator will clearly feel a difference in the power delivery.



Our new formulation contains an improved water dispersant that stops water/ethanol separation and of course reduces exhaust emissions.

In the coming days I will reissue point of sale materials and a revised power point sales presenter so watch this space.

Nigel McKenzie  
May 2021