



X-1R Global Ltd

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

Cc: Date 3rd May 2021

Subject: Revised Petrol Treatment Formulations

Our new Petrol Treatment Reach the Parts that others simply cannot.

After basically twenty years of manufacturing the only true five-in-one fuel treatments on the market we have decided it is time that we take advantage of some new technologies on the market and improve on our formula. Most importantly though these technologies have been developed by us and are thus proprietary and will not find their way into our competitor products.

The Claims we will be able to make are very similar to our previous claims, and are;

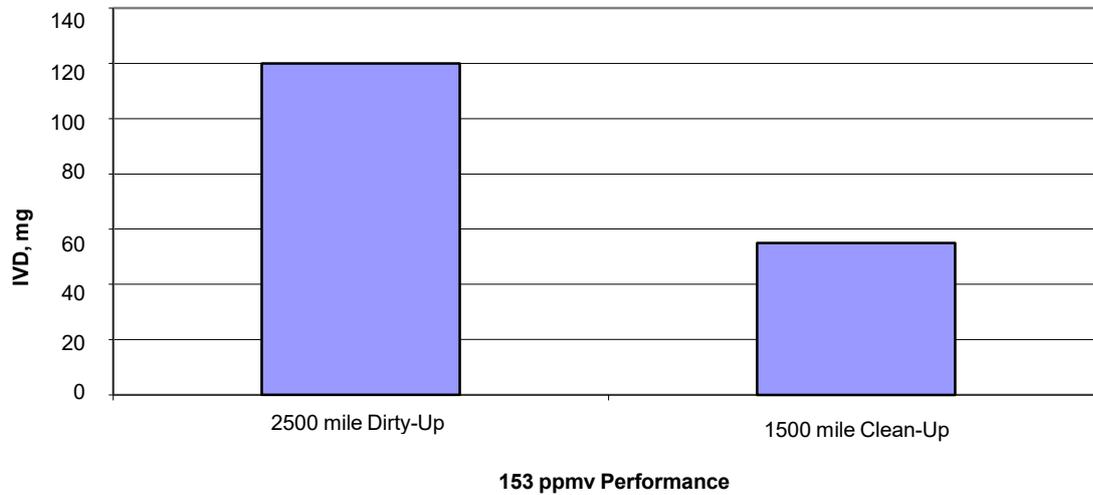
- Removes Carbon deposits and cleans fuel injectors
- Improves Fuel Economy and power delivery
- Lubricates upper cylinder and reduces wear
- Stabilizes fuel
- Eliminates moisture from the fuel tank and lines.

1. Removes Carbon build up and cleans fuel injectors

We have developed a new class of poly-isobutanes and added them into our fuel treatment in high concentrations. This gives our product a level of detergency unsurpassed in the market reaching the parts that others can only dream of reaching. Test data shows that not only will regular use of our Fuel Treatment eradicate existing carbon in the injectors and combustion chamber (Clean up) it will also stop new deposits from forming (Keep Clean).

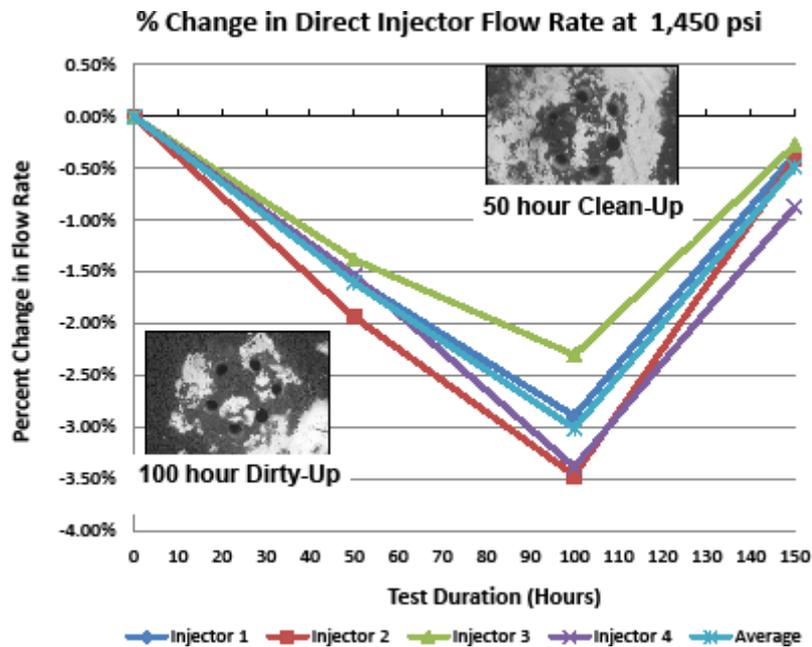
Testing followed a modified ASTM D5500 protocol which allows for a 2500 mile 'dirty-up' this is also known as the BMW Keep Clean Test.

BMW 318i IVD Clean Up

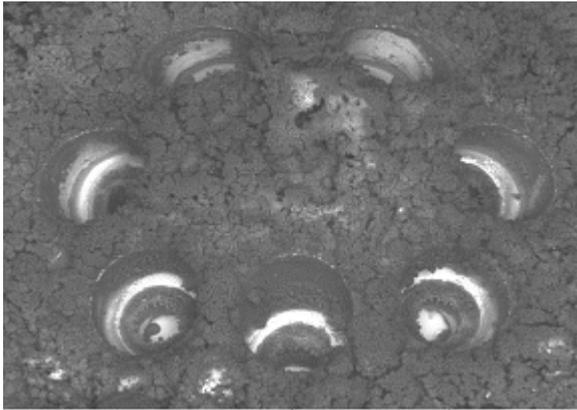


At 153 PPM will effectively clean up Intake Valve Deposits, improve fuel economy reduce exhaust emissions and restore smooth idling.

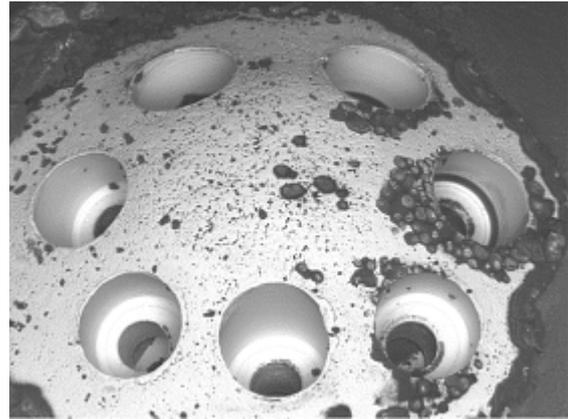
Injector Deposit Clean Up - Modern GDI:



- Steady state conditions; simulated highway speed
- Ford 2.0L GDI turbocharged engine
- Duration: DU: 100 hours; CU: 50 hours
- Treat Rate: 325 ppm detergent



Keep-clean with 230 ppm detergent



Keep clean with complete fuel system clean dosage (500 ppm detergent)

2. Improves Fuel Economy and Power Delivery

You will see a lot of claims on the packaging of our competitors about improving fuel consumption by 15% or more. These claims are really subjective and are very much a part of the effectiveness of the detergency as mentioned above. Our new Petrol Treatment has a brand new class of Esters that allow for increased lubrication of the upper combustion chamber. What this means is that even on a brand new car it is possible to see anything up to a 2% improvement in fuel economy.

Test results using the CARB HwFET Protocol

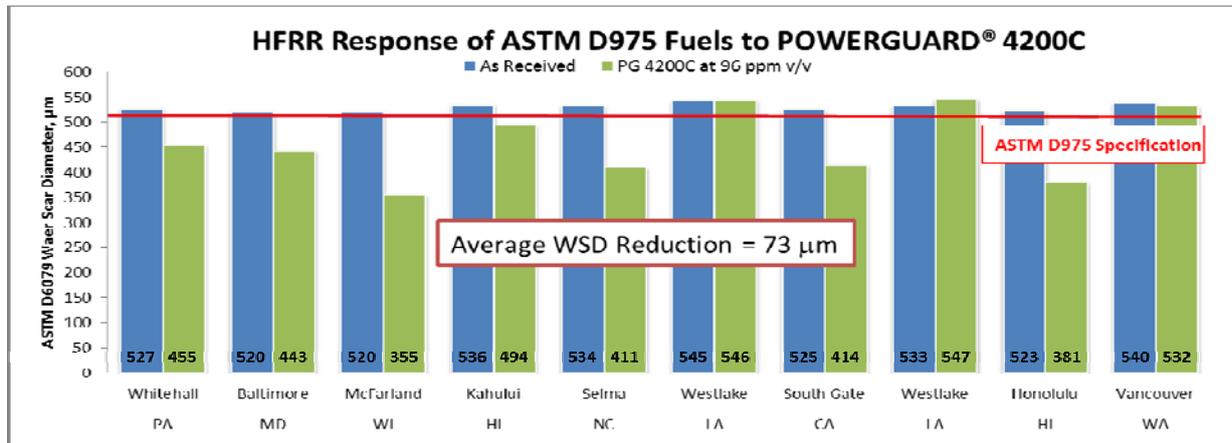
	NEDC, 1/100km CS	NEDC, 1/100km HS	Average	Power, kW	Acceleration 80- 120kph, s	Acceleration 50- 120kph, s
Base Fuel	8.01	7.48	7.75	65.4	9.84	16.44
Fuel Lubricity Improver (Avg of 3 Runs)	7.83	7.32	7.58	66.2	9.61	15.96

In all there were 40 test runs across 30 models of cars manufactured between 2005 and 2016 with both naturally aspirated and turbo engines. The lowest improvement was 1.01% with the average being 2.0%. AS important was a 1.2% improvement in power with a 2.3% improvement in acceleration in the 80-120 kph range and 2.92% improvement in the 50-120 kph range.

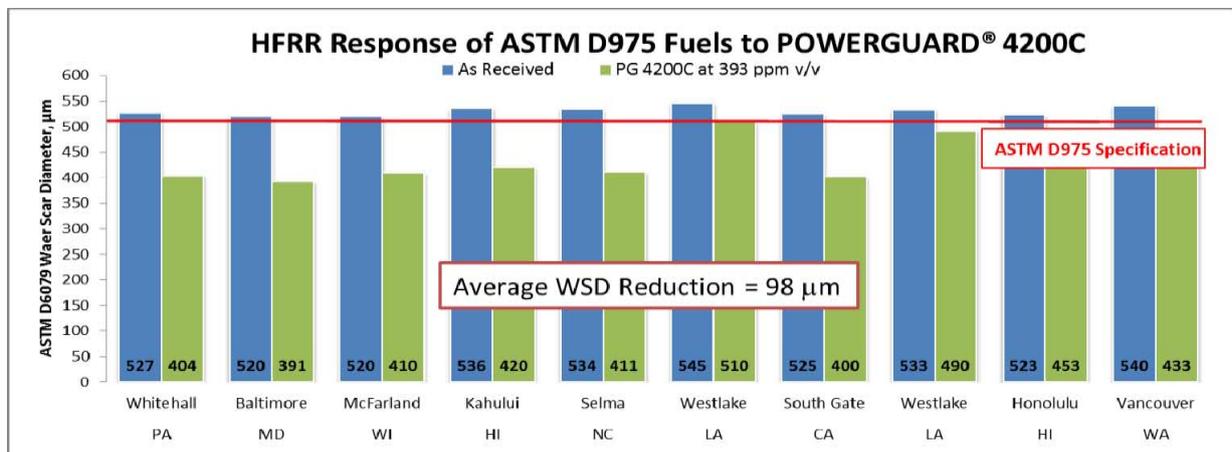
There is also significant increases in the Octane and Cetane of any fuel that is additized with X-1R, which of course is a nice little bonus. Petrol will increase by up to 3 numbers and diesel by 5 or more.

3. Lubricates upper cylinder and reduces wear.

The Ester effectively reduces friction and also helps to deliver smoother operating at lower temperatures, and wherever you have improved lubrication you have reduced wear and tear. Not satisfied with this testing though we took ten representative fuels using the ASTM D6079 protocol. Testing at a treat rate of 96ppm, well the results were pretty spectacular with a reduction in the wear scar diameter of 73 μm



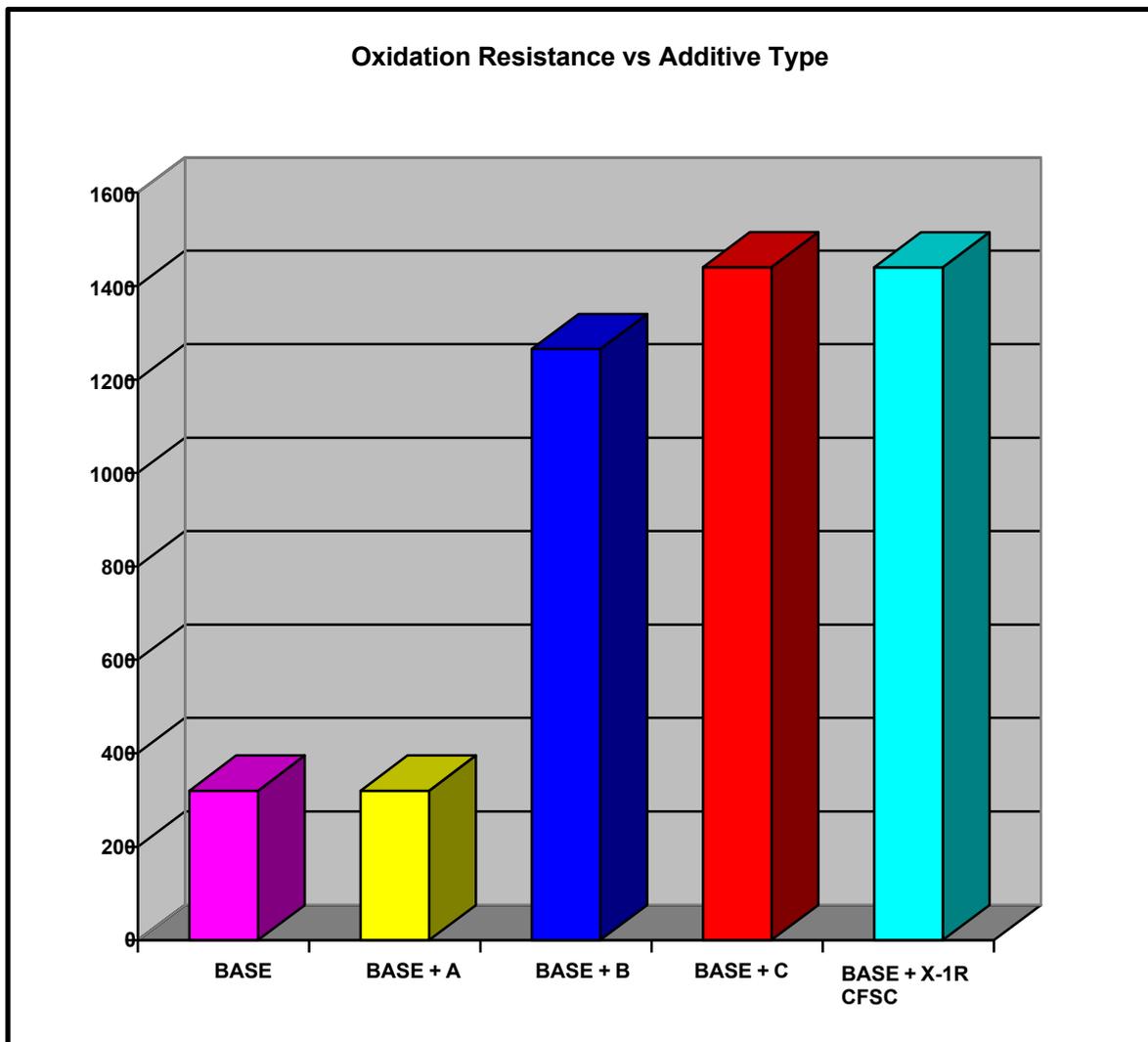
We repeated the tests at a higher concentration of 393ppm and saw a more substantial WSD reduction of 98 μm on average.



Of course as the ester mixes with the fuel and coats the walls of the combustion chamber there will be a reduction in the coefficient of friction leading to a smoother, cooler quieter and more efficient engine, but then that is what we have always done.

4. Fuel Stabilization

The further you truck fuel from the refinery to the filling station and the longer that fuel sits in tanks the more it will degrade. This makes the fuel increasingly prone to gum and other deposits as it oxidates. The test for determining when oxidation starts to occur measured by the sudden uptake of oxygen from the air which is known as the induction period. The test to determine the stability of the fuel is the ASTM D525 protocol. During this test if the induction period is over 1440 minutes the fuel is considered stable, it is at this point that the test is terminated. In the following graph are the results of our ASTM D525 test, only two of the widely available fuel stabilizers manage to actual reach the upper limit of 1440 minutes where the fuel is consider completely stable, of course one of those was our very own fuel stabilizer within our new Five in One Petrol treatment.



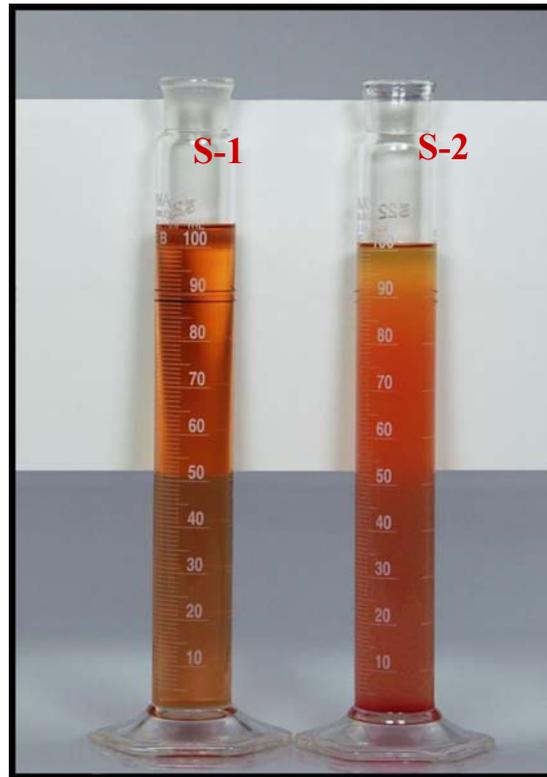
Where Base is weathered sample gasoline, and A, B, C are commercial competitors of X1R Five in One. ASTM D525 is terminated at 1440 minutes at which point the fuel/Additive mix is considered to be completely stable.

5. Moisture Elimination

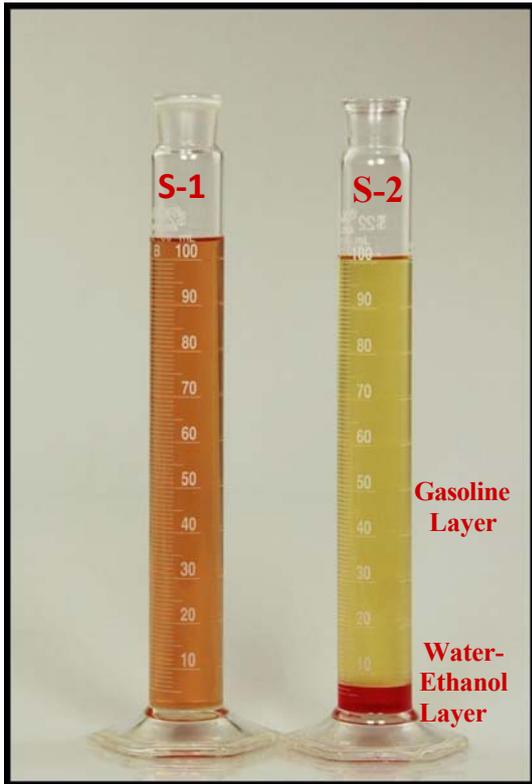
Water will enter your fuel system in a number of ways. This can lead to a number of issues particularly where you have an ethanol content in the fuel. Most bio-fuels readily absorb water, when they do the ethanol will combine with the water and 'fall-out' of the fuel. This will dramatically reduce the octane/cetane rating of the fuel. Our fuel additive is proven to stop the water and ethanol combining and further can be added to water contaminated fuels to reverse the process.



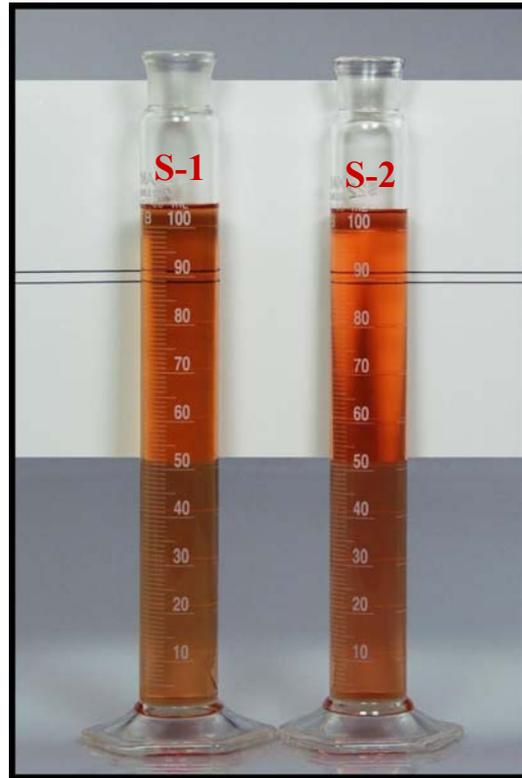
Sample S1 has been additized with X1R 5 in 1, both samples have then had 5% by weight of water added which sinks the bottom.



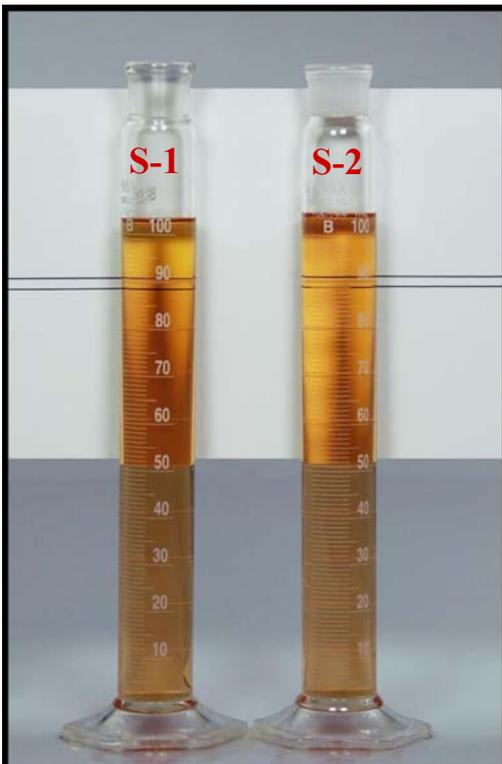
After being shaken S1 becomes clear. S2 becomes cloudy



After five minutes sample S1 remains clear and homogenous. Sample S2 is now in two layers and the water has now increased to 7% as ethanol has been leached from the fuel



After adding additive to sample S2 the liquid immediately becomes clear and homogenous



After 24 hours of storage both samples remain homogenous.