



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

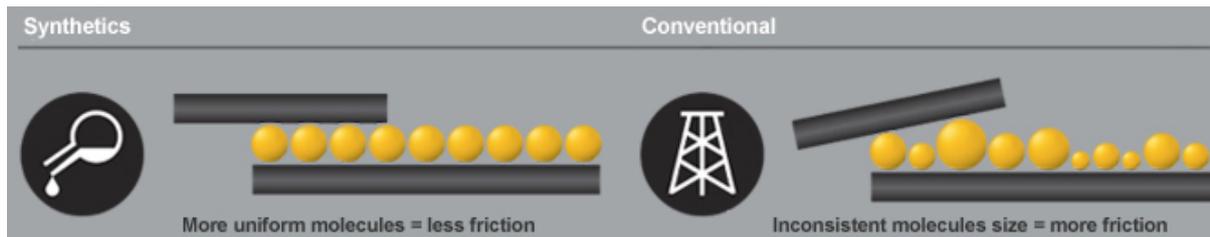
To: All X-1R distributors From: Nigel (Mac) McKenzie

Cc: Date 28<sup>th</sup> June 2018

Subject: Do modern Synthetic oils still need an Additive

There are a lot of myths surrounding synthetic oils and even the name is slightly misleading. The history of oil literary dates back thousands of years but synthetic oils originated during the WWII when the British were trying to get their bombers to fly higher faster and longer and the Americans were trying to stop their tank engines over heating in the desert. They discovered that certain 'plastics', in particular Poly Alfa Olefins, had the ability to produce hydrocarbon polymers that would stop oil thickening with heat whilst not compromising lower temperature viscosity.

So a synthetic oil is simply the same base stock as used for a mineral oil that has been refined and 'purified' to a higher level and synthetically altered to contain some pretty exotic Olefins. This process not only removes impurities but will enable the refine to alter the molecules so that they are much more uniformed in size and length which helps to create a more predictable oil.



Well that is the theory at least.

The trouble is that Synthetics are expensive to produce and in the early days the newer Poly Ol Ester oils as they had become, were pretty much restricted to jet engines and race cars. That is until a famous law suit between Mobil and Castrol lead to the American Petroleum Institute effectively removing their classification for Synthetic oils and now very many of the Synthetic Oils on the market are actually semi-synthetic with as little as 30% of the product being actually synthetic the rest merely being mineral oil.

Many of the lower end Synthetics simply do not have enough of the essential additives such as friction reducers, anti-wear agents, EP agents or detergents as these are expensive and in many

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markets the base stock from which the synthetics are refined or added to make a semi-syn is just not of the best quality. Oil is after all a commodity and there will always be the temptation to make more profit at the expense of producing a quality product.

There are other problems as well. Most of the major oil companies have been gradually scaling back on the Zinc and phosphorous in their products due to well-founded environmental issues. This has led to oils without sufficient extreme pressure or anti-wear protection this is particularly the case for trucks and older passenger vehicles. The trouble is you will never know which oils suffer from this. X-1R is specifically formulated with a proprietary non-Zinc extreme pressure agent and thus we can claim to maintain the performance of our product without compromising the environment, in other words X-1R Engine Treatment utilizes Green technology.

A previous study that we undertook in Malaysia where we compared three common available Synthetic oils (Reduction of sludge build-up with the use of X-1R Engine Treatment; Feb 2015) showed that there was a vast difference in the oxidation resistance of the sample oils. All three of which improved dramatically when X-1R was added to them.

So to summarize the term “Synthetic Oil” is a very broad term that covers a multitude of sins. Many of the oils that are labelled as Synthetic are actually Semi-Synthetic and they all come from the same base stock. We then need to educate the customer about this but also inform them that by adding a premium additive such as X-1R Engine Treatment a poor oil will perform like a good one and a good oil will perform like a great one.

Nigel McKenzie  
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