



## **UNIGLIDE FRICTION REDUCING CONCENTRATE**

### **Understanding Lubricating Oils**

Development of lubricating oils has evolved dramatically over the years. Since the 50's and 60's engines have become smaller and more powerful, requiring dramatic changes in the lubricating oils used in these engines. A variety of additives are used in the manufacture of modern oils to upgrade them to a level suitable for modern engines. Uniglide FRC uses the highest grade lubricating oil (as good as, or better than, those used in the so-called best available today) as a base oil. The oil is then further processed using revolutionary technology to produce a product that treats metal surfaces so as to reduce friction dramatically. To help understand how Uniglide FRC works, it helps to understand how lubrication works.

### **How Lubricating Oils Work**

If you look at even the most highly polished metal surface under a powerful microscope you will notice a rough, jagged surface full of "micropores". (A surface similar to sand paper). When two such metal surfaces come into contact with one other, friction and heat result. Lubricating oils provide a medium that separates these surfaces, therefore reducing friction. However, as pressure is applied to these surfaces, the lubricating oil "breaks down" allowing metal to metal contact. This contact leads to engine wear and in extreme cases, seizure.

### **Understanding Uniglide FRC**

The treatment process discussed above uses an active component that bonds strongly with metal surfaces. As a result, the Uniglide forms a "super slippery" film of molecular thickness. The resulting tenacious bond between the metal surfaces and Uniglide FRC makes it far more difficult to break through than that of normal lubricating oil, therefore inhibiting metal to metal contact. This reduces the friction and metal wear previously experienced using conventional oils. Because of this bond between Uniglide FRC and metal, a film remains in place even after all the oil has drained into the sump, ensuring protection at all times.

### **Rust Resistance**

This coating imparts excellent rust and corrosion resistance to all metal surfaces. This is because the Uniglide FRC layer creates a barrier between metals and oxygen. If oxygen is prevented from coming into contact with metal, then oxidation and rust, (iron oxide) cannot take place.

### **Further Benefits of Uniglide FRC**

**Power and Economy:** Apart from reducing friction and engine wear, monitored by spectrometric particle counting oil analysis, Uniglide FRC can improve horsepower, torque and fuel economy. This is because power (energy) previously lost to friction, drag and heat now becomes available at the final drive. (This tangible saving could subsidise the cost of product used.)

Cold Start: When engines are shut down, most of the oil drains down into the sump. Until the oil pressure builds and supplies lubrication to the upper engine components, a substantial amount of wear can take place on start up. As Uniglide FRC clings to all metal surfaces, providing a semi-permanent lubrication layer, these cold start problems are reduced significantly.

Turbochargers: Turbos operate at very high RPM and temperatures. Lubrication at these speeds and temperatures is critical. Damage can be caused both at start up but more commonly when the engine is shut down, unless a turbo-timer is fitted. Oil feed starvation to the turbo can result in accelerated wear and damage. "Heat soak" (power loss due to elevated turbo temperatures) can be significantly reduced by treating the engine with Uniglide FRC.

Exhaust Emissions: Reductions can be measured by means of a 4-gas analyser, this due to enhanced operating efficiency within the mechanical components of the engine.

Protection from Overheating: While Uniglide FRC will reduce engine heating due to reduced friction, there are instances where the engine can still overheat (e.g. stuck thermostat, radiator leak etc.) In such instances, Uniglide FRC gives extra protection to rings, cylinders, crankshaft and big-end bearings etc. This is because Uniglide not only reduces friction, but also withstands higher temperatures than conventional oils. (Wear scar tests conducted at INTERTECH AUTOMOTIVE TEST LABORATORIES have proven that Uniglide FRC reduces the wear scar significantly at temperatures beyond 120 degrees C, this being a critical temperature at which most engine oils begin to degrade.)

Dirt Ingestion: The presence of dirt in the oil cannot be eliminated completely without very expensive filtration systems. (Many oils are dirty straight out of the can!). If treated beforehand with Uniglide FRC, the abrasive action of the solid particles can be reduced, enabling the engine to function far more efficiently. The reason for this is unclear but is probably due to the particles being coated by Uniglide FRC, resulting in a lower coefficient of friction. NB. This does NOT mean that you can operate your equipment without your air filter when using Uniglide FRC!

For more details, please contact the UNIGLIDE HOTLINE on 61+ (0) 450 529 088 or email [info@uniglide.com.au](mailto:info@uniglide.com.au)