

# Anglo American Oil Company Ltd

Crude News Winter 2007/2008



## What happened to year 2007?

*2007 was the year when we had great ambitions for the Crude News newsletter with at least 3 planned issues. Well, as you have noticed this will be the first of the year not for lack of interesting features but due to a massive increase in sales and general workload.*

### 2007 summed up

From the start of the year at the Autosport racing car show it was clear that we were going to be very busy judging by the interest from new racers and championships looking for a fuel partner.

**Rally:** Another very successful year for the RTC turbo racing fuel with Marcus Dodd and Andrew Bargery / HPM Motorsport winning the ANCRO rally championship in their Hyundai WRC Accent rally car.



The season was nicely rounded off with Steve Simpson winning the ANCRO tarmac championship on the RTC, in a similar Hyundai Accent WRC rally car. Well done and thank you for trusting us as your fuel supplier.

Lately, due to the quality and consistency of the RTC we have had an influx of new customers switching to this fuel whose design makes it 100% repeatable and in our opinion (and many engine builders) the most powerful FIA conformant turbo fuel on the market.

**Historic racing:** We can not help it but it is great fun to support the historic racing series in a very relaxed atmosphere. Highlights of the year are of course the big events like the Silverstone Classic, Goodwood Revival, Oulton Gold cup and the Spa Festival. It is clear that the old race cars appreciate the Sunoco led racing fuels as we are increasing sales and number of users (or shall we say addicts) at every race meeting.



“We’ll be back for 2008” with full fuel support!

**Modern racing:** New for 2007 was the appointment as control fuel supplier to the new and exciting VdeV UK race series. Cars eligible are CN sport prototypes running space frame chassis in a very sleek and aerodynamic “Le Mans” sports prototype body powered by a one make Honda 2-litre engine.

VdeV UK will hold 8 races in the UK, of three, four or six hour duration for a minimum of 2 drivers, control tyres and fuel, fuel stops, driver changes and full trackside support from manufacturers and suppliers.



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With grids of up to 18 cars in 2007, 2008 looks very promising as many new cars are under construction and in build by Radical, Juno, Ligier, ADR, Norma and Hiron.



Dunlop Great & British has had another good year with strong grids and very exciting racing. 2008 should be even better as more Radicals from other series will be amalgamated into the Great & British next season.

Jenny Ryan took overall honours and top spot in Mini Club in a very competitive Mini Challenge 2007. Second and winner of Mini Cooper S Challenge was Oli Mortimer from Scotland.

### ***Joe Gibbs Driven range extended***

Following the success of the 75w110 gear oil, we have added the Joe Gibbs Superspeedway lightweight (80 weight) full synthetic GL5 gear oil to our range. This is ideal for: Ginetta's; Caterham's; Formula Ford's and the like, where the use of a strong, but lighter oil in the differential will help release more power, by reducing unnecessary drag. This makes it the ideal partner to our own Synchro 80 GL4 racing oil for use in the gearbox.

Our latest delivery from North Carolina included the Joe Gibbs XP5 (SAE20w50 semi synth.) and the XP6 (SAE15w50 full synth.) race engine oils. These contain the same anti wear /reduced drag technology as the original grades, but in thicker viscosities to cover the requirements of "looser" built engines.



The Joe Gibbs Driven running in oil has been a huge hit with engine builders as it is loaded (up to three times as much as current main stream engine oils) with anti-wear additives eliminating running in issues such as camshaft, bucket, rocker arm failures and piston ring sealing problems.

### ***New European distributors***

Europe is hotting up and it's not just down to global warming! Following a high degree of interest at the Autosport Show 2007, we have added outlets for Sunoco Race fuels in: Iceland, Portugal, Rumania, Germany and Spain. Our website shows our full agent network. You can either contact them directly, or speak to us first, if you are interested to check availability of products stocked in these countries.

This is great news as it means that if you are planning to test over the winter months in a slightly more pleasant climate we can easily sort out the fuel supply. However, make sure that you give us plenty of notice so that the agents have the right fuel in stock for you.

For 2008 we are looking to strengthen our network in Europe with distributors in Finland, Hungary, France, Austria and Italy.

Jim Crozier (Irish Racing Fuels) is our longest established agent, having been in operation since 2001. Jim (28) looks after Ireland and is well known within the rallying community there, having competed for many years. If it has four wheels and preferably a turbo, Jim has probably rallied one at some stage in his career!



He stocks a wide range of both leaded and unleaded fuels and supports many of the Irish events with a pumped race fuel service. He can also arrange drum deliveries throughout Ireland. If you ever need race fuel in Ireland, Jim is your man, call him on 07778 288108.

### ***R E85***

There is increasing discussion on the use of E85 in motorsport. Putting the environmental aspects of this debate to one side, there are some basic pieces of information to consider before making the switch.

Normal E85 is more aggressive on rubber material. Currently only Premier state that their fuel cells are compatible, while Earls advise that only a Teflon based hose should be used for all flexible pipe work. However, our R E85 Racing is kinder to rubber due to being totally free of aromatics (it is also free of benzene and sulphur) and a special lubricating additive to reduce corrosiveness. It also improves lubrication of valve train, cylinders and injectors.

Due to the fact that the octane testing method is designed for petrol it is impossible to accurately test the RON and MON of high ethanol (C<sub>2</sub>H<sub>5</sub>OH) blends. However our R E85 Racing has a minimum of 109RON and 99MON.

With an oxygen content of a massive 28% combined with a lower level of energy, the engine needs to be fed with much more fuel (up to 40% more). In addition E85 has a slower burn rate, so is less responsive to throttle changes, compared with regular race fuels.

R E85 Racing burns cooler, so will generate less heat and thanks to its high octane properties will boost power in high compression and turbo engines.



During 2007 we have supplied the Formula Woman championship with our R E85 Racing as a control fuel. To enable the Caterham 7 cars to run on this type of fuel they are first converted by Hyperion Motorsport who also run all the cars in the championship. Formula Woman is the first car Championship to run exclusively on E85 and is supported by EEMS (Energy Efficient Motorsport).



We have also supported an ACU short track Junior motorcycle championship with our R E85 Racing who successfully ran throughout the 2007 season.

### ***Metal Rotary fuel pumps.***

For those of you who regularly pump large amounts of fuel, we now stock a very good high quality metal rotary pump that has proved very popular. As a race fuel customer these are available for £130 (normally £153), plus delivery and vat. We always have these on our trucks at race meetings as well, should you wish to pick one up and save the cost of freight.



### ***What's new for 2008***

We will continue to support the championships and series that we have worked with in 2007. Due to ongoing negotiations we can not disclose which other championships that we will be involved with but it is looking very exciting!

Our range of racing oils and related products from Joe Gibbs Driven, Sunoco, 76 and

our R brand will grow to enable us to provide our racing customers with high quality products at competitive prices.

Due to growth in sales we are creating a new role that will be in charge of production, warehousing and purchasing. By centralising these back-office activities we will free up time to further enhance our customer support and service.

We are also increasing our range of cleaner burning fuels with a GTL high performance diesel - no sulphur = no soot, i.e. you can run more boost for more power. The GTL racing diesel will be in stock from mid to end of January.

### ***Euro Drag involvement***

Hauser racing are keen to promote the use of Sunoco Race Fuels and has been running a contingency offer throughout the 2007 season offering a free 25 litre drum of Sunoco racing fuel for class winners using Sunoco Race fuels in the Eurodrag series. Hauser Race Cars is your single source of race car parts, components and services. Whether you are looking for a simple bracket or a complete race car, HRC can meet your needs.

Hauser's years of racing successes and experience allows them to advise and deliver the most competitive package including race fuels, whatever your budget. The company was founded by

Geof Hauser in 1983 although his involvement in drag racing started in 1970. Through these interim years Geof gained invaluable experience and knowledge working with numerous top name racers of the day.

From early beginnings working in the garage behind his house, to the current extensive workshops, Hauser Race Cars has seen enviable growth

and currently boasts the largest drag racing preparation facility in Europe [www.hauserracing.com](http://www.hauserracing.com)



### ***Andy Barnes claims European 4WD record***

Andy broke the European record in his Skyline GTR33 "Fuujin" over a qt mile with a 8.27 second / 164MPH run at Santa Pod this summer. His secret weapon was of course the Sunoco MaxNOS leaded 119 octane racing fuel.

Andy runs Sumo Power that specialises in - you guessed right, tuning parts for Japanese racing cars. Andy is also the driving force behind rapidly growing Time Attack / EDC.



### ***Time Attack / EDC.***



This series has proved hugely popular and has attracted some of the top names from the performance tuning world.

Well done to Brett Castle, who won the EDC in his Nissan S14A prepared by

Abbey Motorsport, using our fuel and gear oils.

Congratulations also to Phil Grew, who won Pro Class in Time Attack in the Zen performance prepared Impreza using Sunoco Supreme.

### ***Show update 2008***

2008 kicks off with the Autosport racing car show 10th to 13th of January and we are of course exhibiting. We would be delighted if you popped in for a "coffee" and a chat during the show. We are always in hall 6, stand 6265 - welcome!



The next show is the historic show, Race Retro at Stoneleigh 14th to 16th of March where we will again look forward to meeting you. This show is growing as more and more exhibitors recognise the importance of historic racing in the UK and Europe.

November will see us in Cologne, Germany for the PMWE show which is trade only and we will round off the year with the London Motorsport show at Excel at the beginning of December. We are also participating at the PRI show (the largest racing car show in the world) in Orlando / Florida.

### **Crude technical tips**

Many say racing is all about winning. Everyone can not win due to car or driver differences (*it might be a possibility that someone else is a better driver - unlikely I know but...*) but you can certainly improve matters by putting some thought into which oils and fuels to use.

**Racing fuels:** the most important factor is to get a fuel that is consistent so that you can tune the engine precisely for maximum power and efficiency without jeopardising reliability. Pump fuels are only produced to meet current standards (like EN228 for unleaded pump fuel) at the lowest possible cost and therefore consistency is not on the agenda. So instead of comparing racing fuels (named after what they are designed for) with road going fuels let's concentrate on some simple tuning tips.

Racing fuels typically burn faster than normal pump fuel meaning that in theory you have to retard the timing in a low compression engine as you would otherwise increase pressure on the piston before TDC and as a result might lose power. However in reality engines tuned on pump fuels have been retarded to give a safety margin against inconsistency and to avoid detonation, so normally you can leave timing where it is.

However, in a high compression engine that is heavily retarded (timing not stupid...) a racing fuel's higher octane properties (even the low octane Sunoco RMR is 3 MON higher than super unleaded) will enable you to restore ideal timing resulting in an instant increase of power.

Specific gravity (SG) or density is extremely important as that determines the A/F ratio and huge variances (pump fuels) could result in the race engine running lean (going from dense to less dense fuel) with detonation as a result. Whereas pump fuels vary widely good quality race fuels are the same down to the 3rd decimal (pump fuels in the UK range from 0.72 kg/litre to 0.76 kg/litre). General rule - going from a dense fuel to a less dense fuel with all other properties the same - increase fuelling with around 0.75% for every 2nd decimal.

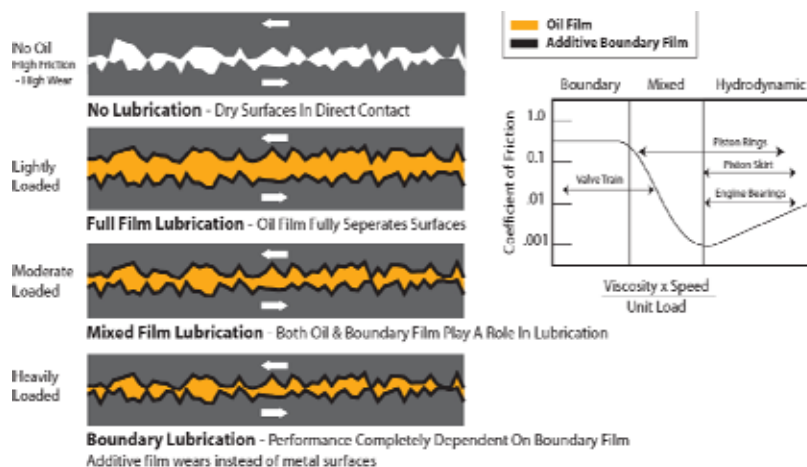
Oxygenated racing fuels are hugely popular as they burn more efficiently and therefore leave less carbon in the combustion chamber and on valves. Air restricted engines (i.e. F3) will greatly benefit from a high level of oxygen in the fuel. GT Plus that contains 4.8% of oxygen is great in engines with small carburettors as the oxygen is fed into the air

fuel mix through the fuel (normal air contains 20.95% of oxygen so adding 4.8% through the fuel makes a big difference. General rule - going from non-oxygenated fuel to oxygenated fuels with all other properties the same - increase fuelling with around 1% for each 1% of oxygen.

**Racing oils:** All oils that have the latest API SL/SM or ACEA ratings are less suitable for racing as the new standards are designed for zillions of miles between service intervals. These latest standards are also designed to avoid contamination of lambda sensors and catalytic converters. This means that the levels of detergents (to keep the engine clean) and dispersants (to keep the dirt within the oil) must be very high at the same time as anti-wear additives (such as zinc and phosphorous) need to be kept to a minimum. For road applications in road engines this is not a problem as loads on bearings, cam lobes, buckets etc are very low.

In a racing engine however, where pressure throughout the engine is high road oils are simply no good. Due to more extreme camshafts and/or aggressive rocker arms combined with higher compression ratios /or higher turbo pressure a race engine will suffer with road oils. Proper race oils such as Joe Gibbs Driven or the High Performance and the Sunoco racing oils have much higher levels of anti-wear additives and less detergents and dispersants as they combat anti-wear additives. The racing oils from Joe Gibbs Driven have the least detergents and the highest levels of anti-wear additives of them all.

Anti-wear additives are extremely important especially when the engine is fresh as the metal surfaces have not had the time to be "run" in. The purpose of the polar molecule anti-wear additives is to provide a sacrificial wear surface (see picture) to protect against metal to metal (i.e. disaster situation) contact in engines.



### **Finally**

Another great year with growth in the region of 25% compared to 2006. We can only thank you all for your continued appreciation of our products. Our pledge is to continuously improve our service, our range and our combination of quality and price. We are looking forward to a GREAT 2008!

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