

Going Green with Bio-fuel

Recycling scrap metal is just part of the greener effort taken by Hornby Transport.



It's over 35 years since Bob Hornby started Hornby Transport and today the company's progress is ensured by his son Adam and partner Rob Miners, who run the business from its depot at Unanderra on the NSW South Coast.

"The aim with anything we do is to be totally professional," said Adam. "That attitude applies to fleet appearance, how we present ourselves in the workplace, how tidy we keep our depot and obviously how we run our entire business," he added.

The fleet comprises 29 prime movers and approximately 55 trailers of which seven run as aluminium bodied trailers in B-double configuration. Trailers are manufactured by Hamelex

White and Freighter and where steel scrap is carried the construction of the trailers shifts from alloy to Hardox or steel. "The steel-bodied single tri-axled semi trailers carry steel scrap for recycling and obviously we need the strongest body possible in these circumstances to avoid damage," said Adam.

"Having found the Hendrickson Intraax axles to work well in our type of environment we have fitted several lifting axle sets in an attempt to reduce tyre wear. In reality we find we run »

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most of our equipment laden in both directions so the opportunity for cost saving in this area often doesn't eventuate," he added.

The fleet operates mainly between the shipping hub of Port Kembla with the northern run usually centred on Newcastle. In recent months the fleet has diversified slightly, acquiring skeletal trailers to carry containers in addition to the tipping trailers and several flat tops.

Three years ago Adam decided to trial the use of biodiesel in the fleet and the move proved so successful that today the fleet runs totally on B20 biodiesel.

The B20 Soydiesel® biofuel used in the fleet is supplied by National Biodiesel Ltd. Manufactured from soy bean extract the fuel is stored in bulk on the company premises.

According to company records there is little distinguishing difference between fuel economy for vehicles running today on B20 Soydiesel® compared to previous records showing conventional distillate use.

"We have recently been presented with a certificate by the fuel supplier commending us on having reduced our CO2 emissions levels by 66.54 tonnes within the six month period of June to December 2009," said Adam. "This sort of credible advantage certainly assists us when we present our business to new and existing customers," he added.

Below: Adam Hornby has been using bio-diesel for over three years in the fleet, with excellent results in the reduction of carbon emissions.



Above: The presentation of the B-double tippers and other equipment reflect the care taken to illustrate the professionalism of the company.

"I believe in the early days of fleets trialling bio-diesel there were problems with fuel quality and certainly many of the fuels available did not meet strict quality control criteria. That's certainly not the case today and we never have quality concerns. Our fleet is 100 per cent running on B20 biodiesel and as a result we have significantly reduced our carbon footprint. This is of interest to our customers," said Adam.



The fleet is predominantly based on Western Star Constellation 4800 prime movers but within the various makes you'll also find Kenworth T604s, T404s and K104s along with Freightliner units together with Sterlings that use the MBE 4000 EGR engine. While one of the Western Stars runs with the latest 525hp Detroit Diesel Series 60 EGR and VGT engine, the majority of the fleet is powered by either Cummins Signatures running at 600-620hp or the ISX engine running at 475hp.

"We are running EGR against non-EGR engines in the fleet but once again the difference is only marginal," said Adam.

All service and maintenance is contracted out to independent companies that perform fleet maintenance in the company's own workshops.

PROFILE

"We keep all the records and when a vehicle is due for a service check it flags automatically in our computer system," said Adam.

"We have certainly found this to be more efficient as our vehicles are on the road most of the day. Our maintenance work is completed out of peak times, which is far more efficient. It means we don't have workshop staff wondering what to do during the day. We stay focussed on what we have to do and keep our vehicles at peak utilisation," he added.

The company continues to look for advantages available by extending oil drain intervals and currently stipulates the use of fully synthetic lubricants in the engines using Gulf Western SynFleet MX. This is a 10W40 CJ4-rated oil and so far Adam is finding an ideal oil drain interval is around the 35,000km mark.

According to Gulf Western the SynFleet MX 15w40 Cj4/SM "Low SAPS" is a fully synthetic diesel engine oil capable of extended drain intervals exceeding 50,000kms (run in conjunction with an oil analysis program). It will reduce soot and sludge build-up, reduce friction, reduce oxidation, reduce heat and increase engine life.

"We did try pushing oil drain intervals for our long distance, B-double vehicles out to 40,000 kms but started to experience soot contamination problems. The smaller engines are running with oil drain intervals at every 600 hours," said Adam.

"The advantage of extending oil drain intervals is obviously a reduction in the fleet downtime. If you offset that against the increase in cost of a full synthetic we find we are still ahead. We certify this by oil sampling every engine at every oil drain," he added.

As we mentioned earlier, the attention to fleet presentation is a strong component of the success of the company and attention to detail extends to all vehicles in the fleet being run under a satellite tracking programme.

"We use the NavMan system and this also enables us to communicate with the vehicle to relay instructions rather than relying on mobile phones," said Adam. "Bridgestone supplies all our tyres and also run a full tyre pressure and fitting maintenance programme. We do use Bandag retreads on trailers which is a result of the type of work our equipment handles in areas prone to tyre spiking and sidewall damage. You can spike a brand new tyre or a recapped tyre just as easily but of course the cost of replacement is substantially different," he added.

"Everything we do is based on our fleet performance being subject to external scrutiny. We are NHVAS and Truck Safe accredited together with Mass Management requirements and also part of the IAP programme for weight management. We strive to be totally professional in every area in which we operate," he added. 

The fleet comprises mainly of Kenworth and Western Star prime movers.



National Biodiesel is a wholly owned Australian company manufacturing and distributing Soybiodiesel® and Soydiesel® blends sourced exclusively from BQ-9000 manufacturing processes.

Key consumers of Soybiodiesel® include urban and public transport fleets, harbour and marine operators in ecologically sensitive locations, underground mines, power stations, and users of machinery or vehicles in confined or closed areas. Existing rebates that apply for petroleum diesel apply for B20 Soydiesel® and the use of one million litres will reduce CO2 emissions by approximately 540 tonnes per annum. Every litre of Soybiodiesel® used will reduce CO2 emissions by 2.7gms.

Engine manufacturers such as Cummins (B20); Komatsu (B20); and Caterpillar (B30) have recognised the benefits of the BQ-9000 Quality standard and have made it a requirement that only Biodiesel produced to this standard should be used. Soybiodiesel also meets the US (ASTM D6751) standard and the European (EN14214) standard and is approved by Volvo (B30), Scania (B100) and other major OEM's.

Soybiodiesel® is the only fuel in Australia carries the BQ-9000 Quality Assurance Accreditation and has superior cold-flow operability compared to other Biodiesel products (CFPP - 4°C).

Soybiodiesel® is subjected to and passes the new stringent 'Cold Soak Filterability' test to ensure consistency in cold climate performance. The cold soak test basically exposes the product to cold temperatures for a long time. The product must then pass through a 1 micron filter within a minimum amount of time for approval. This new test is not part of the Australian Biodiesel Standard, however the manufacturer subjects their product on a voluntary basis.

Soybiodiesel® delivers a much lower cloud point than biodiesel produced from animal fats (tallow), palm oil and used cooking oils. This means it can be used at much lower temperatures (down to -4° C). Soydiesel® and its combustion emissions also have a pleasant odour.

Soydiesel® is the registered trademark for soy biodiesel sold in blends from B5 to B50 with the term Soybiodiesel being applied to B100 biofuel.

Biodiesel lubricates moving parts more than regular diesel and helps clean diesel engines, while giving similar performance. It is almost four times more [fossil] energy efficient than mineral diesel when the entire production and combustion chain is considered. It is also non-toxic being 10 times less toxic than common table salt and is highly biodegradable, breaking down at a rate similar to sugar.

There is a 78.5% reduction in Carbon Dioxide (CO2) emissions when using Soybiodiesel® considered over the life cycle. Emission reductions that occur at the tailpipe when using Soybiodiesel® in place of mineral diesel include 95% less Carcinogenic compounds, 100% elimination of Sulphur Dioxide (SO2), 37% less un-burnt hydro Carbons, 46% less Carbon Monoxide (CO) and 68% less particulate matter.