

Hassle-free Tours – making an environmental choice

Keen to reduce their carbon footprint and help conserve the Canterbury high country they showcase, this tourism operator looked for alternatives to petroleum diesel – and found biodiesel a perfect fit with their business, brand and fleet.

About Hassle-free Tours

Realising New Zealand scenery was among the most spectacular they'd seen on their travels abroad, Mark and Nikki Gilbert returned to Christchurch in 2003 to start their own tourism venture. Hassle-free Tours specialises in day-long alpine safaris, jetboat adventures and Lord of the Rings location tours. Customers traverse rough terrain in custom-built vehicles which best display Canterbury's scenic high country.

Concern for the environment

From its beginnings, Hassle-free Tours has had a strong conservation and sustainability ethos, which is incorporated into its mission statement. Because of this outlook, and conscious that their business uses a lot of diesel, Mark and Nikki began looking for ways to reduce their firm's impact on the environment. They began to investigate other fuel options and found that they could achieve substantial carbon emission reductions by using biodiesel.

Getting rolling on biodiesel

Mark – who had an engineering background – had considered producing his own biodiesel. But that proved unnecessary, as he found they could source high-quality biodiesel from a local manufacturer, Biodiesel New Zealand.

Hassle-free's fleet is mainly Toyota Landcruisers, so Mark liaised with Toyota about switching to biodiesel. Finding the manufacturer not very supportive, he was nevertheless undeterred, believing from his own research that as long as high-quality biodiesel was used, there should be no problems. As a test, Mark and Nikki fuelled their personal vehicle (a Toyota Prado) on biodiesel for a month, with no problems.

Discussions with their biodiesel supplier helped verify that biodiesel blends would be safe to use. (Biodiesel New Zealand produces technical support material for customers and, in situations where engine manufacturers do not certify use of biodiesel in their engines, uses a detailed process to check that the use of the blend is appropriate for the intended application.)

The practicalities of moving to biodiesel involved installing a 2,000 litre storage tank on their business site (at a cost of about \$5,000) and, after each vehicle had used three tank-fills of biodiesel, changing the fuel filters. This is common practice when switching over to biodiesel (see 'Technology overview' section).

They began to run their fleet on biodiesel blends in late 2007, and for over a year the vehicles ran on B60 (a 60% blend of biodiesel with 40% ordinary diesel). Although that fuel worked very well, changes in the pricing structure of biodiesel meant it became more cost effective to run on B20 (a 20% biodiesel blend), which they switched to in 2009.



✓ Key features

- Initial set up cost of \$5,000
- Technical support provided by biodiesel supplier
- Fuel and maintenance costs remain the same
- Extra fuel filter changes are initially required after switching to biodiesel

✓ Key benefits

- Marketing spinoff
- Customer satisfaction
- Higher engine lubrication than ordinary diesel
- Time savings on refueling

✓ Sector relevance

- Tourism industry
- Transport industry

Technology overview

- Biodiesel blends are blends of a percentage of biodiesel mixed with ordinary diesel. The percentage of biodiesel in the blend is indicated by the 'B' name – B5 for a 5% blend of biodiesel with 95% ordinary diesel, B20 for 20% blend of biodiesel with 80% ordinary diesel, and so forth.
- Virtually all diesel vehicles can use a 5% biodiesel blend (B5) without any engine or fuel system modifications. Higher blends, such as B20, are able to be used for many large commercial vehicles such as trucks, buses, and vessels, provided a few simple checks and steps are followed. Some engine manufacturers also approve the use of 100% biodiesel. EECA recommends that businesses check with their vehicle or engine manufacturer, and with a specialist with particular expertise in the field, about the level of blend that's suitable for their vehicle or vessel.
- Biodiesel blends tend to 'clean' fuel systems, loosening dirt and old fuel deposits and carrying them through to the fuel filter. As a result, it is common practice to change the fuel filter soon after switching to biodiesel, where there is a risk of the filter blockage.
- Biodiesel is more lubricating, cleaner burning and more biodegradable than ordinary diesel.
- As with ordinary diesel, biodiesel can 'gel' in very cold areas if the vehicle is left standing for extended periods e.g. overnight. Locally purchased fuel will be formulated to suit the region's colder temperatures, reducing the risk of this problem. Simply driving through cold areas with biodiesel in the tank is not a problem.

Benefits

- Greenhouse gas reduction of 15-18% (based on use of B20).
- Marketing spinoff: Actively promoting their use of biodiesel has generated newspaper and TV interviews about Hassle-free Tours' business.
- Customer satisfaction: International customers, a significant part of Hassle-free's business, are impressed that their tour firm is as "clean and green" as the countryside they are visiting.
- Higher engine lubrication than ordinary diesel. The fleet is running reliably on it, with fuel and maintenance costs unchanged.
- Time savings on refuelling, through having on-site fuel storage tank, are an added bonus.

Future strategy

Hassle-free Tours is keen to move to using pure biodiesel (B100) but it is currently more financially attractive for them to remain on B20, as this is the blend supported by the Government's Biodiesel Grants Scheme.

If and when they do move to B100, it will be during the summer months only, changing to a biodiesel blend during winter. Cold temperatures can cause pure biodiesel to 'gel', making it inadvisable in regions with very cold temperatures – see 'Technology overview' section.

Key personnel

Mark Gilbert (Managing Director, Hassle-free Tours) mark@hasslefree.co.nz



Hassle-free Tours' perspective

Mark Gilbert, Managing Director

"Having an engineering background, I knew a bit about biodiesel from way back. Then years later when we started the business, we were looking at ways of minimising our impact on the environment – and obviously we were getting through a lot of diesel. We saw that the potential emissions savings were massive. It seemed like a good thing to do.

"It was incredibly easy to change over (to biodiesel). You'd tell people about it and they'd be surprised at how easy it was to change over.

"We've had no problems with it, which is important. We run tours into the mountains. We don't want to be breaking down in the middle of nowhere.

"More and more, international visitors are looking for things like this, and with the "100% Pure" New Zealand tourism campaign, it's important to live up to that.

"I knew our use of biodiesel would be appreciated by some customers but I've been surprised at how impressed a lot of our clients are by it. On one tour of overseas visitors I was taking, (when we told them about the vehicles being fuelled on biodiesel) it even drew a round of applause!"

MARCH 2010/EEC1343



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