

919 Londonderry Road
Londonderry NSW 2753
AUSTRALIA

Tel: (+61) 2 47 775315

Fax: (+61) 2 47 775316

Submission to the Department of Environment and Heritage Biofuels

Background Information

Diesel Test Australia has been closely involved with many of the ethanol and biodiesel trials conducted over the past 10 years. As such we believe we can add significant insight and data on the issues surrounding the fuels production and use specifically vehicle/engine performance, fuel quality, operational issues and the impact on emissions. The following provides background of our experience relating to this matter.

Diesel Test in conjunction with Test Safe Australia established a major emission testing facility and reference laboratory at its 100 acre testing facility at Londonderry in Western Sydney. Using this facility we have completed a range of Federally funded projects relating to Biodiesel including comparison testing of various fuels (8 in all) including low sulphur diesel, diesel water emulsion, B5, B20 and B100 on four transport engines. All results have been provided to the NSW Roads and Traffic Authority for forwarding to Environment Australia. The results are very comprehensive and include both PM and greenhouse gas measurements. Some air toxics were also measured.

Diesel test has also been involved with a number of Biodiesel field trials. Transport SA, Charles Darwin Uni, NSWRTA, Camden and Newcastle councils using B20 or B100 have been evaluated for their emissions performance and the quality of fuel supplied against the standard.

The results obtained over the past 24 months of testing either in the laboratory or in the field are in general agreement with overseas data and show that significant emission benefits can be realised from the use of bio diesel. However, there are further opportunities to optimise the fuels performance and operability; namely:

- Improving quality control of the manufacturing process, consistency of specification and consistency of supply to the standard
- Storage requirements, agitation, filtration, sediment control, water
- Range of feedstocks used, waste stream vs raw materials and the quality control of supply and guidelines for the type of compounds allowable within the waste stream (oil) products used.



- Advice to end users, tuning engines to take full advantage of the fuel, filter upgrades, storage issues, quality of product/labelling/pricing/blend ratio.
- Determining the best mix i.e. B5, 20, 40,100 etc. B20 seems the safe and optimal blend for operations, emissions, storage etc unless better QA controls and technologies can be implemented for high blend ratios.
- Supply fluctuations, blending methods to ensure consistency and required distribution network to support end users.

Diesel Test was recently engaged by OAMPS the Petroleum industry major insurer to develop an industry questionnaire to guide, refiners, blenders and distributors who wish to become involved in the Biodiesel industry. A copy of this document is provided to the Committee under cover of confidentiality. It has been provided to many of OAMPS clients and as such may also be useful during the inquiry.

Comments on Standardising Diesel/Biodiesel Blend Fuels

This Commentary is in response to a request by the Department of the Environment and Heritage, for commentary on management options for standardising diesel/biodiesel blended fuels as discussed in its publication:

Setting National Fuel Quality Standards Standardising Diesel/Biodiesel Blends

Management Options

Options 1 and 2

We consider successful development of the biodiesel industry over the short term would best be achieved through low-level blends of less than 5% biodiesel (B5), where the biodiesel is certified to comply with the biodiesel fuel standard and where the blend is certified to comply with all requirements of the automotive diesel standard, including density (ie option 1). This option -

- Would be generally supported by the diesel engine and petroleum industries.
- Would likely cause few if any engine warranty issues.
- Would not lead to significant extra cost or complexity of distribution infrastructure.
- Would give good assurance that blends would be of high quality.
- Would ensure very few operational difficulties are encountered.
- Would likely enable consumer confidence in biofuel blends to be established relatively quickly.

We would not support an exception allowing density of the biodiesel blend to exceed the maximum specified in the diesel fuel standard (as in option 2) unless the diesel engine manufacturers consider this would have no significant negative impact on



engine operation, performance or durability, and would therefore not have warranty issues.

Options 3 and 4

We consider there would be benefit in establishing a B(06 to 20) biodiesel blend fuel standard –

- To provide assurance of the fuel quality in the market.
- To allow and encourage those transport operators willing (even eager) to trial these blends, to do so.
- To allow and encourage the accumulation of operational experience to inform operators, engine manufacturers, and the biodiesel industry.
- To guide the biodiesel industry's longer term development.

It may well be that until more operational experience is gained it will not be possible to develop a standard that would be acceptable to the engine manufacturers (as in option 3), and with which it would be practical and economic for the biodiesel industry to demonstrate compliance (perhaps as in option 4). In which case, a standard should be established that balances the risk (probably minor) of engine failure, between operators and the biodiesel industry (and their insurers).

Labeling

In principle, we consider that consumer information should always be sufficient to enable proper consideration of market alternatives.

B5 Label

We consider –

- Biodiesel B5 should always be labeled.
- A statement that the fuel 'contains 5% biodiesel' or 'contains up to 5% biodiesel' or equivalent would be sufficient.

Diesel/Biodiesel Blend Label (>B5)

We consider –

- Biodiesel blends higher than 5%, and neat biodiesel (B100) should always be labeled.
- A statement of the biodiesel content on its own, (eg 'this fuel contains 20% vol biodiesel) is not sufficient.
- Additional information is required, and should be provided in a label as suggested in the Seddon report (page 74).

Steve Brown
Director

