



## Fuel Storage 'Housekeeping'

Modern vehicles and farm machinery are requiring higher quality fuel, particularly with the advent of the common rail diesel engine.

The quality of fuel in New Zealand is regulated by exacting standards. However, just because you receive good quality fuel, doesn't mean it will stay that way in your storage tank unless you take some steps to maintain fuel quality.

Maintaining fuel quality can be best achieved by following this easy guideline.

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### It's important to keep your water out of your tank

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Water in fuel can be damaging to engines and furthermore the interface between diesel and water provides the perfect growing environment for specific microbes (more commonly called Diesel Bug). These microbes exist in the air around us and no matter how clean the fuel, if there is water present, they will have a chance to establish.

To keep water out of your fuel tank, the following is recommended:

- 1. Keep your fuel tanks full** – Moisture in the air is drawn into storage tanks as the fuel is used, or as it contracts and expands with changes in temperature. The moisture will then condense on the inside of the tank and collect at the bottom (as fuel is lighter than water it will float on top). By keeping your fuel tanks full you minimise the air that is drawn in by the expansion and contraction of the fuel.
- 2. Check your fuel tanks for water**
  - a. By opening the tank drain tap at the bottom of the tank slightly; you can normally drain off any water present. Make sure you turn the tap off when diesel appears.
  - b. An alternative method is to apply water finding paste to the bottom of the dipstick. This will give an indication if water is present at the bottom of the tank. Allied Petroleum Territory Managers can direct you to water finding paste suppliers.





- 3. Visually sample fuel** – Periodically take a sample of fuel from either the bottom of the tank or from the dispensing nozzle. Place the sample in a glass jar. If the sample is cloudy, this may indicate the presence of water in the fuel. Let the sample sit for a couple of hours, any water will separate out to the bottom. The presence of dark brown dots or clumps may indicate the presence of microbes.

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## Treating Diesel Bug

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Should you encounter microbe contamination then there are biocides available on the market, and these can be put in with the fuel to kill the bugs. However, there are some significant considerations here:

1. Use strictly as per the manufacturer's instructions, including safe handling
2. You are using a very potent chemical. Be very careful that it does not get into the environment
3. Make sure that it is used only as a shock treatment. Continued use can result in a biocide resistant bug evolving.

The best course of action is in prevention (points 1-3).

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## Other good practice

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- 4. Avoid other contamination** - Other forms of contamination can also have a detrimental effect on the quality of your fuel. Avoid dropping the fuel dispenser nozzle on the ground, as doing so could result in dirt entering the fuel tank of your vehicle. Its best to hang up a nozzle, but if it is dropped, wiping it clean with a rag is sufficient.
- 5. Use and maintain your tank filters** - Fuel filters are on the fuel tank pump or dispenser for a reason – to filter out contaminants. To work effectively they need to be periodically changed – at least annually. Indicators that a fuel filter might be contaminated and not working effectively are discolouration in the filter bowl or reduced fuel flow out of the dispenser nozzle.



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## Further Help

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If you wish to talk to us about tank maintenance, or if you are considering upgrading your equipment call your local Allied Petroleum Account Manager or Territory Manager (0800 383 566).

If you want guidance about keeping up with hazardous substances rules and managing the hazards associated with above ground fuel storage (and what to do, and who to contact, in the event of a fire or spill) then Allied Petroleum have produced a easy to follow Farm Compliance Handbook. A complementary copy also awaits you at the website, [www.alliedpetroleum.co.nz](http://www.alliedpetroleum.co.nz)

