

## TANK CLEANING & FUEL RESTORATION

PATENTED TECHNOLOGY TO ENSURE PREMIUM FUEL QUALITY



Modern fuel formulations can have a devastating impact on the health of tank systems and product quality. Leighton O'Brien provides the most comprehensive solution for removing contamination and free water as well as a patented process for restoring fuel quality and remediating phase separation.

Unlike other tank cleaning services, our market-leading technology sweeps the entire tank floor to remove free phase water from the tank, and only liquid waste (not fuel) is removed from site.

With Leighton O'Brien's tank cleaning and fuel polishing technology you can:

- Improve the cost effectiveness of free phase water removal from tanks
- Remediate phase separation
- Eliminate costly insurance claims from vehicles breaking down
- Kill and remove microbial growth

- Eliminate problems with blocked filters
- Improve the functionality of pumps and ATGs
- Eliminate power outages involving critical emergency power backup systems
- Remediate and re-sell degraded fuel stock







Phase separation before and after

ULP before and after

Diesel before and after

# With the introduction of ethanol, biofuels and modern additives, simply filtering the fuel is not enough to solve problems such as:

#### Phase separation

Phase separation occurs with ethanol blended fuels when the concentration of water within the tank approaches 0.5% of volume. Conventional water pump-out services don't consider water trapped in rust and contamination on the tank floor or water suspended in the fuel. With our patented process, you can restore phase separated product to refinery specification.

#### **Microbial contamination**

Water ingress in fuel storage systems often leads to the growth of microbial bacteria. This contamination almost always results in the corrosion of the metal parts of tanks and/or dispensing equipment and often leads to sludge in the tank. Our system removes 100% of the microbial growth and the environment in which it can flourish.

#### **Degraded diesel**

Diesel is particularly susceptible to the presence of water. Reduction in sulphur content has created environments that are much more tolerable to microbes, allowing them to grow at much higher rates. Our process can recondition and restore aged, degraded diesel fuel to clean, dry and on specification fuel.

### CASE STUDY

A retail fuel network commissioned Leighton O'Brien to undertake a sampling program to support the national rollout of premium diesel to 572 sites and 744 tanks. The program sought to confirm if existing tanks and standard diesel product contained microbial activity at the fuel/water interface. Sampling revealed:

- 36% of tanks failed the haze test
- 26% of tanks contained sludge
- 18% of tanks contained free water
- 37% of tanks contained active bacteria

A multi-stage tank cleaning process was applied to remove water and particulate matter from the tank floor and pumped into a holding tank to settle, then filtered and returned to the tank. Remaining fuel was treated via a filtration and conditioning system until satisfactory visual samples that meet ASTM requirements were achieved.

