Fuel News

10 ppm Sulphur Diesel

The legislated maximum sulphur content of diesel fuel was changed on 1st January 2009 from **50 ppm maximum to 10 ppm maximum**. This means that the **typical** sulphur content of diesel fuel will be **around 5 mg/kg or 0.0005%** mass instead of **45 mg/kg or 0.0045** % mass. This reduction in sulphur by factor of 10 will reduce exhaust particulate emissions and exhaust sulphur resulting in cleaner air, reduce concerns about diesel exhaust and will enable the introduction of engine technology that uses less fuel and reduces greenhouse gas emissions. BP has already been supplying diesel fuel with sulphur contents less than 10 ppm to Perth, Kalgoorlie, Tasmania, Victoria and South Queensland Northern NSW since the beginning of 2007.

Ultra low sulphur diesel fuel is made by refining crude types that are naturally low in sulphur or by further refining diesel fuel using a process called hydrofining which removes the sulphur, which is then used to make fertiliser. **Apart from having lower sulphur the diesel fuel is the same as that previously supplied and performs in engines in the same way.**

Comparison with Other Standards for Diesel Fuel

10 ppm sulphur diesel fuel meets the requirements of
Australian Standard AS 3570 of 1988
Australian Fuel Quality Standards 2000 Diesel Determination of 2001
ASTM D975 for a number 2 low sulphur diesel fuel
European Standard EN 590 for diesel fuel to enable Euro V emission standards

Certain properties will be noticeable as follows

Colour – because diesel fuel is now more highly refined it can be water white in colour. This is because all the impurities that gave it a brown colour before have now been removed. Some refining processes will produce a fluorescent blue, yellow or orange in some light conditions; this is normal and is associated with the additional refining.

Lubricity - lubricity is measured by additional testing during the manufacturing process. If lubricity does not meet accepted international standards then it is treated with an additive at the refinery. Low Sulphur Diesel fuel is tested to ensure that it always meets recognised international and manufacturers standards for diesel fuel lubricity as measured by the ASTM D 6079 High Frequency Reciprocating Rig. This additive will leave a film on fuel pumps and moving fuel system parts that may be noticeable during service and maintenance. This is normal

Other properties will not change.

What will happen as 10 ppm Diesel fuel is introduced?

There will be no perceptible change except that exhaust smoke will be reduced, crankcase oil soot levels may also decline because less soot is being produced. Diesel fuel pump repairers may sometimes notice a grey deposit on fuel pump components; this will be the lubricity additive providing additional protection to the fuel pump. Not all additives produce the grey film.

For further information, please call the BP Lubricants and Fuel Technical Helpline 1300 139 700 local call