



FILTER BLOCKAGE

At low temperatures wax crystals may form in automotive diesel fuel. As these crystals grow they can clog filters, leading to fuel starvation. The temperature at which wax crystal formation first occurs is known as the cloud point.

The fine crystals which appear at the cloud point temperature rarely block filters but as the temperature falls the crystals grow, increasing the chance of blockage.

BLENDING MAY LOWER CLOUD POINT

In some areas of Australia, such as the Alpine Regions, the temperature may often be below the cloud point of diesel fuel and operating difficulties may occur.

In these regions the cold weather operating characteristics can be improved by adding heating oil or lighting kerosine. Heating oil preferred as the blending agent because lighting kerosine has a lower flash point, hence increasing the risk that the blended fuel vapour may ignite. Lowering the flash point may contravene fuel storage regulations.

If lighting kerosine is used, it should only be added to the vehicle fuel tank.

BLENDING WITH HEATING OIL

The addition of heating oil to automotive diesel fuel will effectively reduce the cloud point of the fuel without presenting any combustion problems. However, the viscosity of heating oil is substantially less than that of diesel fuel. As a result, a heating oil to diesel fuel ratio of greater than 1:1 should not be used, as this could lead to increased fuel pump and injector wear.

Generally about 30L of heating oil per 100L of diesel fuel (ie, about 1:3 mixture) should be sufficient. This will lower the cloud point by 2-3°C, enough to overcome most cold-weather problems.

BLENDING WITH LIGHTING Kerosine

If heating oil is unavailable, the low temperature performance of automotive diesel fuel may be improved by the addition of lighting kerosine. Blending one part of lighting kerosine with four parts (ie, about 1:4 mixture) of automotive diesel fuel will lower the cloud point by 2-3°C, enough to overcome most cold-weather problems.

Blending more is not recommended as the low viscosity of such blends may lead to fuel pump and injector damage. Note that this blend should be done in the vehicle tank and not in storage tanks, because the lower flash point will contravene storage regulations.

CAUTION

PETROL SHOULD NEVER BE BLENDED WITH DIESEL FUEL. The low flash point of petrol leads to serious safety problems with a diesel fuel / petrol blend.

The reduced viscosity of diesel/petrol blends could also result in damage to fuel pumps and injectors.

**For further information, please call the BP Lubricants and Fuel
Technical Helpline 1300 139 700 local call
or visit www.bp.com.au/fuelnews**