



## Common Diesel Fuel Problems Number 2

This is a guide designed to help in resolving customer's fuel related problems.

It is important to remember that if a problem is fuel related then a number of vehicles from the same source will be affected.

### DIESEL ENGINES - LACK OF POWER AND HARD STARTING

This indicates that not enough mass of fuel is going into the combustion chamber to provide enough charge to generate the required energy.

**The fuel related** causes of this are: -

- 1) The fuel filter is blocked and is restricting the flow of fuel to the engine.
- 2) The fuel is of low density due to adulteration with another fuel like kerosine. The low density means that for a constant volume of fuel injected less mass of fuel goes into the combustion chamber.

### Resolution of the problem.

- 1) Check fuel filters for evidence of blockage, replace filter.
- 2) If blockage is found then check the fuel from the supply tank for dirty or hazy fuel.
- 3) Check that the customer is following proper fuel management practices, e.g. first in first out, regular water draining, storage tanks have a water drain at the lowest point.
- 4) Take a 1 litre sample and send to the lab, with a filter if filter blockage is found. Only send a sample if visual examination does not clearly identify the cause.
- 5) If filter blockage is not found then send a sample of the fuel to the lab for checking against the specification.
- 6) Once the cause is established the corrective treatment may be one or more of the following: -
  - Drain water and sediment and hazy fuel
  - Replace fuel
  - Treat with biocide
  - Train customer in housekeeping practices.

## OTHER CAUSES

Mechanical causes of loss of power apart from fuel filter blockage are: -

Faulty or incorrectly adjusted fuel injection system.

Improper sealing of combustion chamber by piston rings or exhaust valves which allows the combustion gases to leak out.

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