

TBM Ultra™

YEAR-ROUND TREATMENT



Our Deluxe Diesel Treatment and Water Dispersant

TBM Ultra provides superior protection and performance year-round

- Dissolves free and emulsified water in fuel
- Removes gum and varnish
- Cleans the entire injector system to improve fuel economy
- Lubricates cylinder walls
- Prevents formation of harmful acids
- Controls waxing and gelling
- Contains no alcohol or solvents

Diesel Fuel Water Dispersant

TBM Ultra is a year round fuel treatment that is 100% active ingredient. This treatment removes free and emulsified water in storage tanks and saddle tanks.

The treat rate is based upon a calculation of the amount of water typically dissolved in the fuel and free water that might be condensed in the fuel tank.

The dissolved water in the fuel, when under pressure in the injectors, can coalesce and form droplets that alter the spray pattern of the injector.

TBM Ultra eliminates the water by the process of hydrogen polar bonding where hydrocarbons are injected with the fuel, which encapsulates the water molecule and allows it to burn with the fuel at approximately 140 degrees.

TBM Ultra contains a de-icer that will absorb up to 1.5 times its weight in water.

This process prevents icing in fuel and prevents filter plugging.





Our Deluxe Diesel Fuel Biocide

This unique formulation combines TBM Ultra with the most advanced antifungal agent on the market. TBM Biocide provides superior protection in diesel applications and for storage.

- Kills bacteria and algae
- Breaks up sludge and slime mats
- Reduces engine maintenance costs
- For use in marine, fleet farm vehicles, and petroleum industries
- Fuel and water soluble
- Concentrated, time-release formula
- Destroys odor causing bacteria
- Approved by the EPA
Reg. #31910-2-68318
- Reduces exhaust gas smoke
- Fights injector plugging

Diesel Fuel Bacterial and Fungal Problems

Every user of diesel fuel has experienced bacterial or fungal problems on at least one occasion.

All storage tanks are vented to the atmosphere. This venting pulls in outside air which contains humidity and airborne, microscopic, bacteria spores.

The fuel oil tank and fuel are usually cooler than the outside air and the humidity condenses into water droplets.

Since water is 8.4 pounds per gallon and #2 diesel fuel 7.3 pounds per gallon, the heavier water droplets under the fuel and forms an interface of fuel and water.

The microscopic bacteria spores will collect in the moisture on the exposed inside tank surfaces or be carried with the condensed water underneath the fuel.

It is possible to have aerobic (needing air) bacteria and fungi growing above the oil surface on the sides of the tank and anaerobic (not needing air) bacteria growing at the interface of the diesel and water layer.



TBM Polar D

WINTER TREATMENT



Our Deluxe Anti-gel and Water Dispersant

This unique formulation combines all the benefits of TBM ULTRA with the most advanced cold flow improver on the market. TBM Polar D provides superior protection in the cold weather months.

- Prevents waxing and gelling
- Totally disperses water
- Contains lubricity additives
- Decarbonizes combustion chamber
- Eliminates the formation of algae and harmful acids
- Lubricates cylinder walls to prevent corrosion of metals in contact with diesel fuel
- Slows aging and oxidation of diesel fuel
- Decreases Pour Point and Cold Filter Plug Point to -37°C
- Contains no alcohol or solvents

I N T E R N A T I O N A L

Diesel Fuel and Cold Weather Problems

All diesel fuels contain paraffin wax in varying amounts. It is these paraffin waxes, at low temperatures, that drop out of solution and clog fuel systems. When the temperature begins to drop there is a point at which paraffin begins to crystallize and become cloudy. This is the cloud point. As the temperature continues to drop, the point where the fuel will no longer flow is the pour point. Somewhere between the cloud and pour points is the cold filter plug point where the fuel will no longer pass through a filter.

As the quality of crude oil going to the refineries have changed so has the quality of fuel entering the market. Today's fuels vary in quality and tend to have higher cloud, cold filter plug point and pour points, which are directly related to increased incidences of reported "waxing and gelling" problems. In a recent survey by the U.S. Department of Energy, fuel samples were tested for

cloud and pour points in six regions of the country. They found a range of 32° to $+42^{\circ}\text{F}$ for cloud point and 45° to $+34^{\circ}\text{F}$ for pour point.

Traditionally kerosene added to diesel fuel is effective in this regard because it is "thinner" and contains less paraffin wax. The use of kerosene, however, has major disadvantages to both the petroleum marketer and the end-user because it contains less wax it has less BTU value, meaning the user of the kerosene treated fuel will experience less MPG than by using #2 diesel fuel. In addition, paraffin also helps stabilize the fuel adding greatly to its storage life.

Because of these reasons and the cost factors involved, greater numbers of petroleum marketers and end-users are turning to TBM Polar D as their solution to diesel fuel's cold weather problems. 

