WATER DISPERSION

The Problem

Water contamination of diesel fuel is the biggest threat to diesel engines. All fuels contain some water in suspension, but unlike gasoline, diesel fuel and now biodiesels hold a much larger amount. This water can cause severe problems in water separators (filters), fuel injector tips, and sudden cooling in the engine which may result in shortened engine life and reduced performance, amongst other problems.

Where can water inside the tank go?

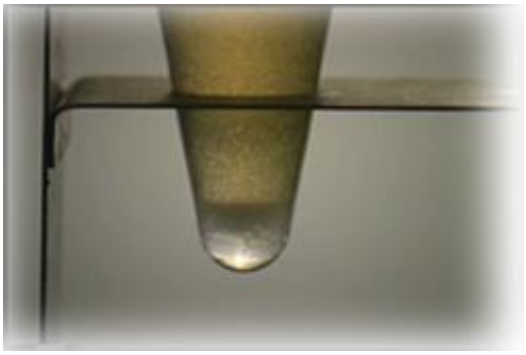
There are two types of water in the tank and each has its own way of leaving the tank:

Free Water – is the big mass of water that drops and settles at the bottom of the tank. This water can be drained via the drainage valve or via a pump.

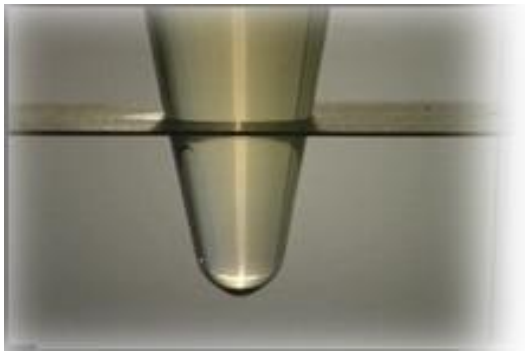
Water in the Solution – Because this water is much smaller in mass than the Free Water, it does not sink to the bottom, so the only way out is the same exit as the fuel. Left untreated, a large part of it will pass through the filters causing problems. Treating it with our Xp3 fuel additive, water will be **dispersed** (*see below*) and will exit the tank along with the fuel without causing any harm to the engine or without reduced performance.

What is water dispersion and how does Xp³ disperse water in the fuel?

Dispersion is the ability to separate and maintain a part infinitely minute, in this case a water molecule, and keep it separated from the rest of the water molecules and suspended in the fuel. What Xp³ does is disperse the water molecules and maintain them separated and suspended without allowing them to form a mass of water. This allows them to be burned or evaporated without causing any harm to the motor. Below you can see the dispersion in fuel w/ water, before and after being treated with Xp^3.



*Fuel **BEFORE** being treated w/ Xp^3*



*Fuel **AFTER** being treated w/ Xp^3*

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Water Dispersion explained using Shawshank Redemption as an analogy

Andy Dufresne (Tim Robbins) had a problem as he dug himself out of his cell. The dirt (water) he was carving out from the wall had to be removed from his cell (the fuel tanks). Having dirt (water) in the cell (fuel tank) caused problems. A little bit would be ok, but a lot would not. Andy had to figure out how to get the dirt (water) out of the cell without the guards (fuel filter and the fuel injectors) from noticing. So what Andy did was to disperse the big mass of sand into smaller amounts (water dispersion) and slowly released it outside without the guards (fuel filter and fuel injectors) from noticing.

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