Remediation of Phase Separated Fuel

Fueltec Models 950AW & 955SS are used in the remediation process of phase separated fuel.

After the filter/sePARATOR housings have been filled with clean gasoline from the upper portion of the tank to establish color; a suction tube is lowered to the tank bottom. As the machine draws the water rich ethanol solution a clear or hazy appearing liquid will appear coming from the bottom of the machine’s sight tube. The gasoline will be pushed upward as the separated phase is pumped from the tank.

When the water solution appears near the top of the sight tube; a drain valve is opened and the water/ethanol solution is pushed out to a waste tank.

After all of the water/ethanol solution has been removed from the tank bottom; a hazy appearing gasoline may be observed.

This upper phase can be salvaged by adding a 1:1 solution of fresh batch E-10.

Laboratory analysis will have to be done to determine the exact blending to hit your target product grade!

E10 can remain stable at up to its saturation point with water; after the saturation point is reached the water and ethanol will begin to separate from solution. Stability decreases with cold weather and lower aromatic fuels.

The Phase separation solution is more dense than gasoline, is polar, and will separate and sink to the bottom of the tank.

Photo shows a 10% contamination sample
1% contamination in 6,000 gallons of E-10 product equals 60 gallons to be removed.

60 gallons in a 10,000 gallon horizontal round tank is approximately 2-1/4 inches

When removing the contaminated phase pump slowly, do not agitate or mix with the upper phase.

This upper phase can be salvaged by adding a 1:1 solution of fresh batch E-10.

**BE CAUTIOUS WHEN USING ADDITIVES**

Some compounds introduced into gasoline-ethanol blends in an attempt to un-do the phase separation can be risky. High treat rates can cause the total mass % oxygen to exceed federal limits!

**YOUR ENTIRE PRODUCT COULD GO OUT OF SPEC.**

2-butoxyethanol is 27.08% oxygen (EtOH 34.74%)
Used as a solvent commercially
10%, 2%, 1%, 0.5%, 0.3% Water Contaminated Samples
1. Remove all moisture from the tank bottom.

2. Water/EtOH Phase must be disposed of.

3. Save top portion of product. (upper phase)

4. Determine the critical parameters of the gasoline phase – AKI, EtOH %.

5. Blend 1:1 Minimum with Fresh E10 Fuel – Retest for compliance before delivering for sale.

6. Replace all filters and purge lines.