Product Bulletin

Klenz ID Controls Asphaltenes in ULSD

Asphaltenes in diesel fuel are a major concern with today's ultra low sulfur diesel fuel (ULSD).

Asphaltenes are molecular substances commonly found in crude oil and in the form of asphalt, but are now being found in ULSD. There are many theories that exist as to where these molecules are coming from.

Some theories suggest they are the result of removing sulfur from ULSD, in which doing so also removed aromatic content in diesel fuel. So, this removal of aromatics caused them to no longer be able to be dissolved and dispersed. Another theory says the cause of them is high pressure, sometimes around 37,000 psi, along with fuel being continuously re-circulated at temperatures of 150 ˚C in the common rail found in diesel engines. This then results in asphaltene droplets that conglomerate together turning filters and diesel fuel black. Fuel inside one engine manufacturer's injector actually reaches a temperature around 300 ˚C. These theories in reality can be combined.

There may be theories as to where asphaltenes are coming from, but the fact is that asphaltenes exist in ULSD.

This requires the need to combat asphaltenes by use of Klenz ID that contains thermal and oxidative stability agents and dissolving and dispersant additives that will take care of the asphaltenes that already exist or occur after the fuel is in your tank. See pictures to right of how the Power Klenz ID and Winter Klenz ID products, Number's 5001/5007/5750/5757 – will dissolve and disperse asphaltenes. This is being demonstrated by use of Klenz ID dissolving and dispersing common asphalt, asphaltenes are commonly found in this form, which is a mixture of "tar" and rock.

Give us a call. We can help.

Specs of Asphalt (Representing "Asphaltenes")

"Asphaltenes" Dissolved by Klenz ID, T ime Span = 5 Minutes

"Asphaltenes" Dissolved by Klenz ID, Time Span = 10 Minutes

"Asphaltenes" Dispersed by Klenz ID, Note: Just the Rocks are Left Behind

Rev. 06/20/18