Negative Impact of Using B40 Biodiesel on Diesel Engines

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Over the past few years, the development of Biodiesel has progressed from B20, B30, B35 to the current B40. However, it's important to understand that using Biodiesel can lead to problems if preventive or anticipatory measures are not taken.

One key aspect of Biodiesel is its hygroscopic nature, meaning it easily absorbs water from its surroundings. As a result, this fuel is unsuitable for long-term storage with substantial empty space, as it is prone to oxidation.

Oxidation in Biodiesel B40 can lead to various issues, such as the formation of insoluble deposits or sludge that can block filters and injectors. This may also encourage the growth of microorganisms, degrade fuel quality, make the combustion system inefficient, have a corrosive impact on the engine, and cause fuel system failures and leaks.

A study conducted by Makassar State University (UNM) in 2019 found that out of 43 diesel cars that experienced damage, 3 had injector issues and 43 had fuel filter damage. Damaged fuel filters were caused by the entry of foreign particles, resulting in dirty and clogged filters from deposits. This caused a decrease in the fuel supply from the tank to the injector, and particles carried from the filter into the injector led to injector damage, poor acceleration, and reduced engine power.

A similar issue was reported by one of our clients in the shipping sector. One of their crew vessels experienced fuel pump and injector damage due to an inadequate filtering system and the use of unprocessed Biodiesel. This underscores the necessity of Biodiesel fuel processing to maintain its quality before it enters your diesel engine, ensuring its effectiveness and efficiency.

To address this, we have developed the most efficient and effective solution, stay tuned to our page for the latest updates.