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High Performance Biodiesel

If you run a diesel engine you are familiar with biodiesel fuel blends and you might already know from experience that they perform almost identically to conventional diesel fuel. The National Biodiesel board claims that there is only 1.73% difference in economy, torque and horsepower between B20 blend biodiesel and Diesel No. 2 fuel.

Somehow biodiesel fuel got a bad rap as a low performance fuel when actually the opposite is true. In fact biodiesel fuel blends are typically added to a diesel engine to improve its performance. The fact is that biodiesel fuel blends perform very similar to low sulphur diesel fuel in terms of power, torque, haulage and fuel consumption without major modification to diesel engines!

Biodiesel fuel lubricates your diesel engine far better than 'straight' petroleum diesel fuel. According to the National Biodiesel Board, lubricity tests that compare biodiesel fuel and petroleum diesel indicate that there is a marked improvement in performance after biodiesel is added to conventional diesel fuel.

Even biodiesel levels as low as one percent can provide up to a 65 percent increase in lubricity in petroleum distillate diesel fuels.

However like most diesel fuels, biodiesel is not perfect. Perhaps its biggest drawback is that it is not compatible with all engine components. Although many manufacturers have or are in the process of creating a diesel car or diesel engine more compatible with low sulphur diesel fuels such as biodiesel not all diesel engines can handle it.

Biodiesel's mistaken reputation as a bad diesel fuel probably originated with individuals who were trying to run certain older diesel engines on pure biodiesel. Keep in mind that all biodiesel fuel is not created equal and that it is usually a big mistake to pour pure biodiesel into any engine. Pure biodiesel is 100% vegetable oil. The best biodiesel that is compatible with most diesel engines is one that is a combination of both diesel fuel and vegetable oil. The confusion comes from the idea that the term biodiesel fuel also covers 'blends' with diesel. Pure vegetable oil is pure biodiesel and that is rarely used in any diesel car, truck or engine.

The main problem with putting pure biodiesel fuel into certain models and older machines is that pure biodiesel will soften and degrade certain types of elastomers and natural rubber compounds over time. Undiluted biodiesel can destroy certain types of gasket, hose, and seal compounds like natural rubber. Unfortunately these materials are what most fuel hoses and fuel pump seals are made of and of course if you pour pure biodiesel into a diesel engine or diesel car you are going to get poor performance.

Most manufacturers recommend that natural or butyl rubbers not be allowed to come in contact with pure biodiesel fuel. One way around this is to replace your hoses and fuel caps with a material that is compatible with biodiesel or stick to using a blend of biodiesel which will not cause as much wear and tear on your hoses and sealants. Once you have done this, you will be achieving high performance with biodiesel fuel every time.

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