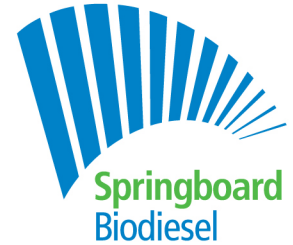


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## Why Red Metals Should Be Avoided With Biodiesel

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There are two major reasons that Springboard biodiesel has taken great care to make sure that all of the wetted parts in their machinery are free of copper, brass, and bronze (Often referred to as red metals)

**The first reason for this relates to the durability of the parts themselves.**

As anyone who has used these materials with biodiesel can testify, they are degraded over a period of time by the biodiesel fuel. A user will typically notice greenish discoloration and corrosion. Over time, valves will lose their ability to seal properly, and plumbing may become brittle and leak.

To ensure the highest quality of their product, Springboard biodiesel typically uses stainless steel in applications where other producers would use red metals.

**The second reason that Springboard Biodiesel takes great care to avoid the use of red metals in their machinery relates to a more insidious property of these materials.**

As these materials are slowly corroded by the biodiesel, they leach tiny amounts of copper and zinc atoms into the fuel itself. As a result, they serve to catalyze the degradation of the biodiesel.\*

Biodiesel that has been contaminated in such a way, will experience a dramatic reduction in shelf life, and will often develop sludge or sediments in the fuel system of a vehicle.

To ensure that their users are producing the best fuel possible, Springboard Biodiesel takes great pains to remove the risk of this contamination from their machinery.

*\*National Renewable Energy Labs. Biodiesel Handling and Use Guide 4<sup>th</sup> edition Jan 2009*

