Parker

Engineered Solutions

Parker Engineered Seals Division

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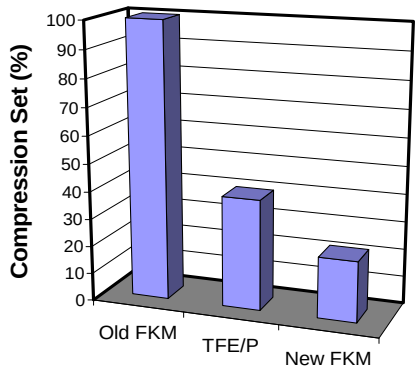
Summary:

Parker ESD has developed a family of fluorocarbon compounds with excellent resistance to fluids which degrade traditional fluorocarbon elastomers.

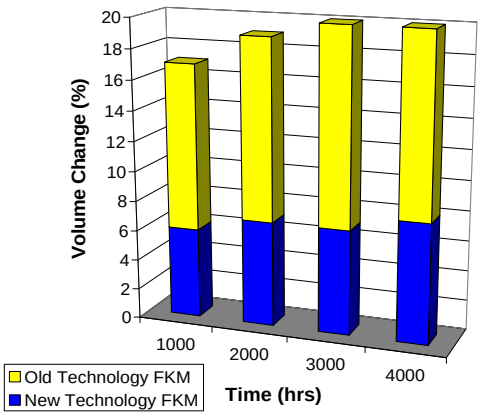
Problem:

Applications exist where multiple fluids contact a single seal, while other applications use similar seals in various fluids. Having a single, compatible seal material is highly desirable in these applications for design flexibility and to prevent premature seal failures. Traditional elastomers have limited ability to work in these demanding environments, and compromises often result in reduced service life or performance limitations. Oil coolers and heat exchangers often require seals to be in simultaneous contact with petroleum oils and glycol-based coolants. In other applications such as diesel fuel systems, a seal may be randomly exposed to a range of fluids such as traditional diesel and various biodiesel blends. This range of fluid exposure can cause degradation or loss of properties in traditional elastomers.

50/50 OAT Coolant / Distilled Water
1008 hrs. @ 135 °C



100% SME Biodiesel @ 125 °C



Solution: Broad compatibility seal material.

Parker Engineered Seals Division has developed a new family of fluorocarbon elastomers that is extremely resistant to biodiesel/biodiesel blends, automatic transmission fluids (ATF) including Dexron VI and glycol based solutions including organic acid (OAT) long-life coolants (LLC). This new compatibility is achieved while maintaining excellent capability in traditional fluorocarbon applications.

Previously, applications requiring resistance to various fluids had been limited to elastomers such as TFE/P, HNBR or silicone. These elastomers all have significant temperature and/or compatibility limitations compared with fluorocarbon elastomers.

Applications:

Parker Engineered Seals Division's broad compatibility fluorocarbon can be used in heat exchangers, oil coolers, transmission fluid coolers, diesel fuel systems and other challenging environments in addition to traditional fluorocarbon sealing applications. This polymer technology is ideally suited for applications where a seal may contact multiple fluids.

Give Parker Engineered Seals Division a call and ask for a Product or Materials Engineer to see how this innovative elastomer can extend the life of your application!

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