

## **FREQUENTLY ASKED QUESTIONS ABOUT MIXING DIFFERENT OILS**

### **Can I top off the existing compressor oil with another oil?**

Ultrachem does not recommend mixing two different oils. When doing so, a third oil is created. The resulting third oil may vary significantly depending on the mixing ratio, i.e. 50/50, 90/10, 10/90, etc. Additionally, these different mixtures have never been tested for extended periods of time in various makes of compressors. This means that expected oil life is not predictable.

### **Will I invalidate the compressor warranty by using aftermarket oils?**

Strictly speaking, the compressor manufacturer cannot require a customer to use their oil unless it is an “extended warranty” whereby the customer purchases a kit that comes with that warranty. Most oils contain identifiable components, additives or tracers. Oil manufacturers can tell when their oil has been blended with another oil. Contaminating one oil with another is typically sufficient grounds to invalidate warranty or insurance claims.

### **What do “different oils” mean?**

We mean different chemistries. Generally, oils of a similar base fluid, such as PAO, may be mixed with another PAO. A diester may be mixed with another diester, and a petroleum may be mixed with another petroleum of the same quality. The small additive differences are usually not significant.

### **What about mixing “Coolants”?**

The compressor oils referred to as “Coolants” are oils like Sullube®\* and Ingersoll-Rand SSR Ultracoolant®\*\*. They are comprised of a particular ester and a polyalkylene glycol. Due to the popularity of these oils there are many aftermarket products that are referred to as “Coolants”, when in fact they may contain neither of the two key base fluids found in the original “Coolants”.

The only “Coolants” that we are familiar with that may be mixed with Sullube or Ultracoolant are Coolant 32PE and Ultrachem Coolant PE, respectively. Other formulations may deteriorate oil life span and/or cause foaming in the compressor.

### **Why are there so many problems identified with mixing “Coolants”?**

The glycol contained in the coolants is a close cousin to ethylene glycol found in anti-freeze, and like anti-freeze, it may cause abnormal thickening and gelation if mixed with petroleum or PAO oils. Ultrachem recommends a short flush with Ultraclean any time OEM Coolants are being changed out and replaced with PAOs or petroleum-based oils.

Ultrachem also manufactures Coolant 32 and Ultrachem Coolant, which some customers have successfully mixed with Sullube and Ultracoolant in the past. However, we do not recommend the practice of mixing those oils. It is good practice to run an Ultraclean flush when changing over from an OEM Coolant to Coolant 32 or Ultrachem Coolant. These formulas are stronger “cleaners” than the OEM formulas, and they may lift and suspend residues left behind by the OEM formulas. This can lead to foaming.

## **What is the condition of the old oil that is already in the compressor?**

The old oil may have been run past or nearly past its normal useful life. If it is topped off, and then there is a failure, the new oil gets blamed.

The old oil should not be topped off with another oil if the old oil is not in good condition. Top-off with the same fluid, as required, and schedule the compressor for a change-out as soon as convenient. Sometimes the old oil is topped off with the same fluid to replenish additives that may have been depleted. If the old oil has developed an acid number well in excess of 1.0, then schedule the compressor for a flush with Ultraclean.

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\*Sullube is a registered trademark of Sullair. \*\*SSR Ultracoolant is a registered trademark of Ingersoll-Rand.