

## Frequently Asked Questions (FAQ) for Refrigerants and Lubricants

**Question:** Can I mix different oils?

**Answer:** Yes. Refer to the publication, No. 93-11 from Emerson Climate Technologies, Inc.

**Question:** Can I use different weight oil?

**Answer:** Yes. Refer to the publication No. 93-11 from Emerson Climate Technologies, Inc.

**Question:** Can I use R22 with POE?

**Answer:** Yes. Refer to publication No. 93-11 from Emerson Climate Technologies, Inc.

**Question:** Can I add an additive to the oil in my system?

**Answer:** No. Additives are not permitted. Refer to Application Engineering Bulletin No. 17-1282.

**Question:** When we are assembling the system it is open to the air for several hours. What effect will this have on POE oil?

**Answer:** Exposure to ambient air will cause moisture to be absorbed in the POE oil. Refer to various HFC refrigerant retrofit guidelines published by Emerson Climate Technologies, Inc.

**Question:** Will too high of an oil level cause the compressor to trip on oil failure?

**Answer:** No. It may result in a motor protector trip due to high amps.

**Question:** What is the viscosity of POE oil?

**Answer:** The viscosity of oils used in Copeland<sup>®</sup> compressors is selected by the design of the compressor and varies from 22 to 32 cst (centistokes). Refer to the Emerson Climate Technologies, Inc. publication No. 93-11 for further details.

**Question:** What should the oil level be in the sight glass of a Copeland<sup>®</sup> compressor?

**Answer:** Typically ½ sight glass of oil is required in Copeland<sup>®</sup> compressors; some models are different. Refer to Application Engineering Bulletin No. 4-1281 for further details.

**Question:** Where can I find what refrigerants are approved for Copeland<sup>®</sup> compressors?

**Answer:** Approved refrigerants can be found in the Emerson Climate Technologies, Inc. publication No. 93-11.

**Question:** What is centistokes and what is the difference between 22 CC and 32 CC?

**Answer:** Centistokes (cst) is the unit of measure for viscosity of the oil. 22 CC oil has a viscosity of 22 cst at standard conditions and 32 CC oil has 32 cst.

**Question:** What percent mix of oils is acceptable?

**Answer:** Refer to the refrigerant changeover guidelines from Emerson Climate Technologies, Inc.

**Question:** What would be the effect if I topped off the compressor with the wrong oil?

**Answer:** Copeland recommends topping with approved oils as listed in publication No. 93-11. Use of non-approved oils may result in oil management and lubrication issues that could lead to system inefficiencies and compressor failure.

**Question:** Are all POE refrigerant oils the same?

**Answer:** No. Oils vary in viscosity, formulation, etc. and are designed for different applications in different compressors.

**Question:** What acid test kit does Emerson Climate Technologies recommend?

**Answer:** Emerson Climate Technologies recommends the Emerson<sup>®</sup> Universal Acid Test Kit, product code number 064427.

**Question:** What will happen if I use Mineral oil or Alkybenzene oil with a HFC refrigerant?

**Answer:** Copeland recommends using oils approved as listed in publication No. 93-11. Use of non-approved oils may result in oil management and lubrication issues that could lead to system inefficiencies and compressor failure.

**Question:** How long can I leave POE oil exposed to the atmosphere before contamination occurs?

**Answer:** Exposure to ambient air will cause moisture to be absorbed in the oil. Refer to the various HFC refrigerant retrofit guidelines published by Emerson Climate Technologies, Inc..

**Question:** Will warranty be affected if I used the wrong oil and refrigerant combination?

**Answer:** Yes.

**Question:** How can I determine what oil is in a compressor?

**Answer:** A complete chemical analysis will confirm the identity of the oil. However, if there is doubt as to the oil in the compressor, we recommend changing the oil to what is approved in the Emerson Climate Technologies publication No. 93-11.

**Question:** Does Emerson Climate Technologies analyze oil from failed compressors?

**Answer:** Investigation of failed compressors generally requires oil analysis.