

Contractor Service Tips



R-12 and Polyol Ester Oil

There seems to be a misunderstanding about using R-12 and POE oil. Many contractors and end users believe it is OK to use them together, but in truth, they may be setting themselves up for some real problems.

Through numerous laboratory and field tests, Copeland has discovered that when moisture is induced into a system using R-12 refrigerant and POE oil, the refrigerant becomes acidic and may plug cap tubes and orifices. For this reason, Copeland does not recommend using R-12 and POE oil together.

Please refer to the "Copeland Accepted Refrigerants/Lubricants Chart" Form No. 93-11-R7 on the back of this card for further information.

Copeland Accepted Refrigerants/Lubricants

	Refrigerants	Source	Application			Lubricant Choices			Comments
			Similar To	Retrofit	Now	Preferred	Alternate #1	Alternate #2	
Ozone Depleting	CFC R-12	Many		LM	LM	MO	AB & MO		Phaseout by 1996 Phaseout by 1996 Phaseout by 2020
	CFC R-502	Many		LM	LM	MO	AB & MO	POE	
	HCFC R-22	Many		LMH	LMH	MO	AB & MO	POE	
Interims	HCFC R-401A	Dupont/Allied	R-12	MH	N/A	AB & MO	POE & MO	POE	Service only Suva® MP39 Service only Suva® MP68 Service only Suva® HP80 Service only FX10 Service only FX56
	HCFC R-401B	Dupont/Allied	R-12	LM	N/A	AB & MO	POE & MO	POE	
	HCFC R-402A	Dupont	R-502	LM	N/A	AB & MO	POE & MO	POE	
	HCFC R-408A	Atochem	R-502	LM	N/A	AB & MO	POE & MO	POE	
Non-Ozone Depleting	HCFC R-409A	Atochem	R-12	LM	N/A	AB & MO	POE & MO	POE	
	HFC R-134a	Many	R-12	MH	MH	POE			Suva® HP62, Forane® FX70 Genetron® AZ50 Suva® 9000/KLEA 66 Genetron® AZ20/Suva® 9001**
	HFC R-404A	Many	R-502	LM	LM	POE			
	HFC R-507	Allied	R-502	LM	LM	POE			
HFC R-407C	Dupont/Allied/ICI	R-22	MH	MH	POE				
HFC R-410A	Allied/Dupont			MH	POE				

Legend:

MO = Mineral Oil (3GS or Equivalent)
 AB = Alkyl Benzene (Copeland Ultra 200 or Shreve Zerol 200 TD or Soltex AB 200A or Thermal Zone 200)
 POE = Copeland Ultra 22CC or Mobil EAL™ Arctic 22 CC or ICI Emkarate™ RL32CF or Thermal Zone 22 CC
 POE & MO = Minimum 50% Alkyl Benzene
 AB & MO = Minimum 50% Alkyl Benzene (Shell 22-12)
 Note: Shell 2212 is a 70/30 mixture of AB and MO
 Copeland Ultra 200, Zerol 200 TD and Soltex AB 200A are 100% AB

Refer to the following Application Bulletins for additional information:

4-1295 HFC-134a Refrigerant Guidelines
 17-1248 Refrigeration Oils
 25-1177 Safe Handling of Compressed Gasses
 93-02 CFC-12 to R-401A*
 93-03 CFC-12 to R-410B*
 93-04 CFC-12 to HFC-134a*
 93-05 R-502 to R-402A*
 94-15 R-502 to R-404A/R-507*
 95-14 R-22 to R-407C*
 *Refrigerant Changeover Guidelines

**New equipment only

For specific product availability and performance data refer to Copeland Sales Literature



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