

R-421A

PROCEDURES FOR RETROFITTING R-22 SYSTEMS

Caution

Converting a system from an HCFC refrigerant to and HFC may cause a compression of elastomers and O-rings, which can result in a loss of refrigerant. After recovering the original refrigerant, it is recommended that the O-rings and elastomers be replaced.

- ✓ **Collect data from the pre-converted system**
 - Monitor operating conditions and record for post-converted reference (See chart on back page)
- ✓ **Recover the existing refrigerant**
 - By law*, the system must be recovered of all existing refrigerant
 - Record the amount of refrigerant that is recovered, this will help determine the amount of Choice™ R-421A the system needs

*For more information visit epa.gov
- ✓ **Determine Oil Composition**
 - Check the existing oil's moisture content and acidity
 - Also check for particulate matter such as metal shavings or rust
 - If the system's oil does not meet desired specification perform a complete oil change prior to converting the refrigerant
- ✓ **Install new Oil Filter and Filter Drier**
 - If the system contains a compressor oil filter or coalescent oil separator, replace as needed
- ✓ **Determine if the System has a leak**
 - Determine the units designed pressure level
 - Conduct a pressure test using dry nitrogen to determine if the system contains a leak
- ✓ **Evacuate System**
 - In order to remove all non-condensables and moisture from the system, a minimum vacuum of 500 microns is required

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- ✓ **Charge System**
 - The system should be charged with Choice™ R-421A in a liquid state only
 - Choice™ R-421A can be applied to the high pressure side of the system
 - The correct charge will vary for each system, though it is recommended that the initial charge be 90-95% of the original R-22 charge
- ✓ **Start System**
 - Evaluate systems performance by checking the subcooling, superheat temperatures and pressures
 - Reference the Choice™ PT chart as needed
 - Choice™ R-421A can be topped off multiple times, or until desired performance is reached
- ✓ **Label, Monitor and Record**
 - Properly label the converted system and perform leak tests as needed
 - Record the systems performance and compare to pre-conversion evaluation
 - For additional information please Call 1-888-659-COLD

System Data	Pre	Post
Suction PSIG		
Suction Temp		
Discharge PSIG		
Discharge Temp		
Ambient Temp		
Compressor S.H.		
Evaporator S.H.		
Subcooling		
Refrigerant (lbs)		
Compressor Oil Level		
Compressor Oil Temp		
Compressor Motor Amps.	L1	
	L2	
	L3	

Note

- We recommend converting a minimum of 20% of the compressor oil to POE when the system design has a vertical rise of 20-25ft between the evaporator and condensor.
- Choice™ R-421A should only be used in systems designed for R-22, or R-22 alternatives. Only trained technicians should perform conversions.

For More Information

visit us at choicerefrigerants.com



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