

# TECHNICAL SUPPORT MANUAL

## Cased Horizontal Duct Coils

### EHD4X, EHD2X

#### Safety Labeling and Signal Words

##### DANGER, WARNING, CAUTION, and NOTE

The signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTE** are used to identify levels of hazard seriousness. The signal word **DANGER** is only used on product labels to signify an immediate hazard. The signal words **WARNING**, **CAUTION**, and **NOTE** will be used on product labels and throughout this manual and other manuals that may apply to the product.

**DANGER** – Immediate hazards which **will** result in severe personal injury or death.

**WARNING** – Hazards or unsafe practices which **could** result in severe personal injury or death.

**CAUTION** – Hazards or unsafe practices which **may** result in minor personal injury or product or property damage.

**NOTE** – Used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

##### Signal Words in Manuals

The signal word **WARNING** is used throughout this manual in the following manner:



The signal word **CAUTION** is used throughout this manual in the following manner:



##### Signal Words on Product Labeling

Signal words are used in combination with colors and/or pictures on product labels.

#### TABLE OF CONTENTS

Exploded Drawing .....	2
EHD4X Parts List .....	3 – 4
EHD2X Parts List .....	5 – 6
Airflow vs. Static Pressure Chart .....	7
Model Number Identification .....	8
R-410A Quick Reference Guide .....	9

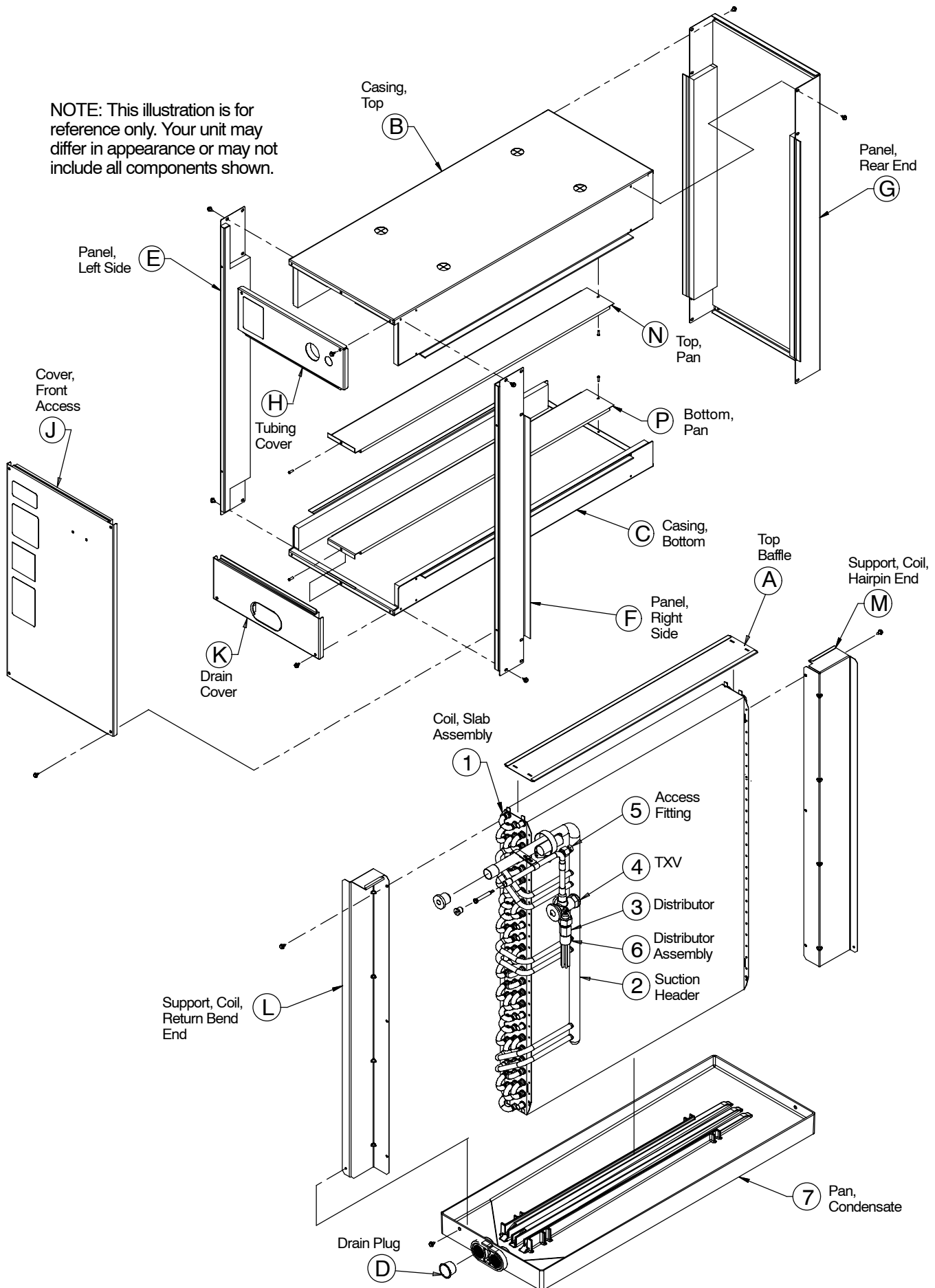


##### ELECTRICAL SHOCK HAZARD

**Failure to turn off electric power could result in personal injury or death.**

**Before installing or servicing system, turn off main power to the system. There may be more than one disconnect switch, including accessory heater(s).**

NOTE: This illustration is for reference only. Your unit may differ in appearance or may not include all components shown.



Specifications subject to change without notice.

EHD4X24 - EHD4X60 (R-410A) SERIES PARTS LIST														
KEY NO.	DESCRIPTION	PART NO.	EHD4X24AA1	EHD4X24AAT1	EHD4X30AA1	EHD4X30AAT1	EHD4X36AA1	EHD4X36AAT1	EHD4X42AA1	EHD4X42AAT1	EHD4X48AA1	EHD4X48AAT1	EHD4X60AA1	EHD4X60AAT1
1	Evap. Coil Assy	1173397	1											
1		1173601	-	1										
1		1173398	-	-	1									
1		1173602	-	-	-	1								
1		1173399	-	-	-	-	1							
1		1173603	-	-	-	-	-	1						
1		1173400	-	-	-	-	-	-	1					
1		1173604	-	-	-	-	-	-	-	1				
1		1173401	-	-	-	-	-	-	-	-	1			
1		1173605	-	-	-	-	-	-	-	-	-	1		
1		1173402	-	-	-	-	-	-	-	-	-	-	1	
1		1173605	-	-	-	-	-	-	-	-	-	-	-	1
2	Suction Header Asy.	1173345	1	1										
2		1173346	-	-	1	1								
2		1173348	-	-	-	-	1	1						
2		1172249	-	-	-	-	-	-	1	1				
2		1173350	-	-	-	-	-	-	-	-	1	1	1	1
3	Distributor	1173094	1	1	1	1								
3		1173093	-	-	-	-	1	1	1	1	1	1	1	1
4	Thermo Expansion Valve (TXV)	1173387	1	1	1	1								
4		1173399	-	-	-	-	1	1						
4		1173403	-	-	-	-	-	-	1	1				
4		1173391	-	-	-	-	-	-	-	-	1	1	1	1
5	Access Fitting	1171507	1	1	1	1	1	1	1	1	1	1	1	1
6	Distributor Assembly	1173095	1	1	1	1								
6		1173139	-	-	-	-	1	1	1	1				
6		1173303	-	-	-	-	-	-	-	-	1	1	1	1
7	Condensate Pan	1173305	1	1	1	1								
7		1173306	-	-	-	-	1	1	1	1	1	1		
7		1173307	-	-	-	-	-	-	-	-	-	-	1	1
A	Top Baffle	1173340	1	1										
A		1173341	-	-	1	1								
A		1173342	-	-	-	-	1	1						
A		1173343	-	-	-	-	-	-	1	1	1	1		
A		1173344	-	-	-	-	-	-	-	-	-	-	1	1
B	Casing Top	1173315	1	1	1	1								
B		1173316	-	-	-	-	1	1	1	1				
B		1173317	-	-	-	-	-	-	-	-	1	1		

- continued on next page -

Specifications subject to change without notice.

EHD4X24 - EHD4X60 (R-410A) SERIES PARTS LIST (continued)														
KEY NO.	DESCRIPTION	PART NO.	EHD4X24AA1	EHD4X24AAT1	EHD4X30AA1	EHD4X30AAT1	EHD4X36AA1	EHD4X36AAT1	EHD4X42AA1	EHD4X42AAT1	EHD4X48AA1	EHD4X48AAT1	EHD4X60AA1	EHD4X60AAT1
B		1173318	-	-	-	-	-	-	-	-	-	-	1	1
C	Casing Bottom	1173312	1	1	1	1								
C		1173313	-	-	-	-	1	1	1	1	1	1		
C		1173314	-	-	-	-	-	-	-	-	-	-	1	1
D	Drain Plug	1085010	1	1	1	1	1	1	1	1	1	1	1	1
E	Panel Left Side	1173320	1	1	1	1	1	1	1	1				
E		1173322	-	-	-	-	-	-	-	-	1	1	1	1
F	Panel Right Side	1173319	1	1	1	1	1	1	1	1				
F		1173321	-	-	-	-	-	-	-	-	1	1	1	1
G	Panel Rear End	1173308	1	1	1	1								
G		1173309	-	-	-	-	1	1	1	1				
G		1173310	-	-	-	-	-	-	-	-	1	1		
G		1173311	-	-	-	-	-	-	-	-	-	-	1	1
H	Cover Tubing	1173347	1	1	1	1	1	1	1	1	1	1	1	1
J	Cover Front Access	1173338	1	1	1	1	1	1	1	1				
J		1173339	-	-	-	-	-	-	-	-	1	1	1	1
K	Cover Drain	1173337	1	1	1	1	1	1	1	1	1	1	1	1
L	Support Coil, Return Bend End	1173329	1	1	1	1	1	1	1	1				
L		1173330	-	-	-	-	-	-	-	-	1	1	1	1
M	Support Coil, Hairpin End	1173331	1	1										
M		1173332	-	-	1	1								
M		1173333	-	-	-	-	1	1						
M		1173334	-	-	-	-	-	-	1	1				
M		1173335	-	-	-	-	-	-	-	-	1	1		
M		1173336	-	-	-	-	-	-	-	-	-	-	1	1
N	Support Top Pan	1173323	1	1	1	1								
N		1173324	-	-	-	-	1	1	1	1	1	1		
N		1173325	-	-	-	-	-	-	-	-	-	-	1	1
P	Support Bottom Pan	1173326	1	1	1	1								
P		1173327	-	-	-	-	1	1	1	1	1	1		
P		1173328	-	-	-	-	-	-	-	-	-	-	1	1
)	Strainer	1171739	1	1	1	1	1	1	1	1	1	1	1	1
)	Warranty	40106403001	1	1	1	1	1	1	1	1	1	1	1	1
)	Installation Instruction Manual	48401310000	1	1	1	1	1	1	1	1	1	1	1	1

EHD2X24 - EHD2X60 (R-22) SERIES PARTS LIST														
KEY NO.	DESCRIPTION	PART NO.	EHD2X24AA1	EHD2X24AAT1	EHD2X30AA1	EHD2X30AAT1	EHD2X36AA1	EHD2X36AAT1	EHD2X42AA1	EHD2X42AAT1	EHD2X48AA1	EHD2X48AAT1	EHD2X60AA1	EHD2X60AAT1
1	Evap. Coil Assy	1173352	1											
1		1173592	-	1										
1		1173353	-	-	1									
1		1173593	-	-	-	1								
1		1173354	-	-	-	-	1							
1		1173594	-	-	-	-	-	1						
1		1173355	-	-	-	-	-	-	1					
1		1173595	-	-	-	-	-	-	-	1				
1		1173356	-	-	-	-	-	-	-	-	1			
1		1173596	-	-	-	-	-	-	-	-	-	1		
1		1173357	-	-	-	-	-	-	-	-	-	-	1	
1		1173597	-	-	-	-	-	-	-	-	-	-	-	1
2	Suction Header Asy.	1173345	1	1										
2		1173346	-	-	1	1								
2		1173348	-	-	-	-	1	1						
2		1172249	-	-	-	-	-	-	1	1				
2		1173350	-	-	-	-	-	-	-	-	1	1		
2		1173351	-	-	-	-	-	-	-	-	-	-	1	1
3	Distributor	1173094	1	1	1	1								
3		1173093	-	-	-	-	1	1	1	1	1	1	-	-
3		1173302	-	-	-	-	-	-	-	-	-	-	1	1
4	Thermo Expansion Valve (TXV)	1173165	1	1	1	1	1	1						
4		1173166	-	-	-	-	-	-	1	1	1	1		
4		1173167	-	-	-	-	-	-	-	-	-	-	1	1
5	Access Fitting	1171507	1	1	1	1	1	1	1	1	1	1	1	1
6	Distributor Assembly	1173095	1	1	1	1								
6		1173139	-	-	-	-	1	1	1	1				
6		1173303	-	-	-	-	-	-	-	-	1	1		
6		1173304	-	-	-	-	-	-	-	-	-	-	1	1
7	Condensate Pan	1173305	1	1	1	1								
7		1173306	-	-	-	-	1	1	1	1	1	1		
7		1173307	-	-	-	-	-	-	-	-	-	-	1	1
A	Top Baffle	1173340	1	1										
A		1173341	-	-	1	1								
A		1173342	-	-	-	-	1	1						
A		1173343	-	-	-	-	-	-	1	1	1	1		
A		1173344	-	-	-	-	-	-	-	-	-	-	1	1
B	Casing Top	1173315	1	1	1	1								

- continued on next page -

Specifications subject to change without notice.

EHD2X24 - EHD2X60 (R-22) SERIES PARTS LIST (continued)														
KEY NO.	DESCRIPTION	PART NO.	EHD2X24AA1	EHD2X24AAT1	EHD2X30AA1	EHD2X30AAT1	EHD2X36AA1	EHD2X36AAT1	EHD2X42AA1	EHD2X42AAT1	EHD2X48AA1	EHD2X48AAT1	EHD2X60AA1	EHD2X60AAT1
B		1173316	-	-	-	-	1	1	1	1				
B		1173317	-	-	-	-	-	-	-	-	1	1		
B		1173318	-	-	-	-	-	-	-	-	-	-	1	1
C	Casing Bottom	1173312	1	1	1	1								
C		1173313	-	-	-	-	1	1	1	1	1	1		
C		1173314	-	-	-	-	-	-	-	-	-	-	1	1
D	Drain Plug	1085010	1	1	1	1	1	1	1	1	1	1	1	1
E	Panel Left Side	1173320	1	1	1	1	1	1	1	1				
E		1173322	-	-	-	-	-	-	-	-	1	1	1	1
F	Panel Right Side	1173319	1	1	1	1	1	1	1	1				
F		1173321	-	-	-	-	-	-	-	-	1	1	1	1
G	Panel Rear End	1173308	1	1	1	1								
G		1173309	-	-	-	-	1	1	1	1				
G		1173310	-	-	-	-	-	-	-	-	1	1		
G		1173311	-	-	-	-	-	-	-	-	-	-	1	1
H	Cover Tubing	1173347	1	1	1	1	1	1	1	1	1	1	1	1
J	Cover Front Access	1173338	1	1	1	1	1	1	1	1				
J		1173339	-	-	-	-	-	-	-	-	1	1	1	1
K	Cover Drain	1173337	1	1	1	1	1	1	1	1	1	1	1	1
L	Support Coil, Return Bend End	1173329	1	1	1	1	1	1	1	1				
L		1173330	-	-	-	-	-	-	-	-	1	1	1	1
M	Support Coil, Hairpin End	1173331	1	1										
M		1173332	-	-	1	1								
M		1173333	-	-	-	-	1	1						
M		1173334	-	-	-	-	-	-	1	1				
M		1173335	-	-	-	-	-	-	-	-	1	1		
M		1173336	-	-	-	-	-	-	-	-	-	-	1	1
N	Support Top Pan	1173323	1	1	1	1								
N		1173324	-	-	-	-	1	1	1	1	1	1		
N		1173325	-	-	-	-	-	-	-	-	-	-	1	1
P	Support Bottom Pan	1173326	1	1	1	1								
P		1173327	-	-	-	-	1	1	1	1	1	1		
P		1173328	-	-	-	-	-	-	-	-	-	-	1	1
)	Strainer	1171739	1	1	1	1	1	1	1	1	1	1	1	1
)	Warranty	40106403001	1	1	1	1	1	1	1	1	1	1	1	1
)	Installation Instruction Manual	48401310000	1	1	1	1	1	1	1	1	1	1	1	1

STATIC PRESSURE DROP ACROSS COIL AT A GIVEN CFM							
Coil Size	CFM Across Coil	Static Pressure Drop Across Coil (Inches Water Column)		Coil Size	CFM Across Coil	Static Pressure Drop Across Coil (Inches Water Column)	
		Dry	Wet			Dry	Wet
24 2 tons	400	0.060	0.069	48 4 tons	600	0.063	0.080
	500	0.081	0.096		700	0.076	0.101
	600	0.104	0.129		800	0.091	0.123
	700	0.129	0.162		900	0.105	0.149
	800	0.155	0.198		1000	0.121	0.175
	900	0.186	0.237		1100	0.138	0.206
	1000	0.217	0.278		1200	0.157	0.215
30 2½ tons	400	0.044	0.050	60 5 tons	1300	0.175	0.231
	500	0.060	0.071		1400	0.195	0.261
	600	0.077	0.093		1500	0.217	0.291
	700	0.097	0.116		1600	0.238	0.325
	800	0.116	0.144		1700	0.260	0.361
	900	0.140	0.172		1800	0.284	0.394
	1000	0.165	0.203		800	0.051	0.063
36 3 tons	1100	0.190	0.235	900	0.060	0.076	
	1200	0.219	0.269	1000	0.069	0.089	
	400	0.043	0.048	1100	0.079	0.102	
	500	0.058	0.066	1200	0.090	0.118	
	600	0.074	0.086	1300	0.101	0.135	
	700	0.089	0.104	1400	0.113	0.155	
	800	0.107	0.128	1500	0.125	0.175	
	900	0.127	0.154	1600	0.138	0.193	
	1000	0.150	0.182	1700	0.153	0.214	
	1100	0.172	0.212	1800	0.165	0.235	
42 3½ tons	1200	0.197	0.245	1900	0.180	0.258	
	1300	0.224	0.280	2000	0.195	0.279	
	1400	0.252	0.317	2100	0.211	0.302	
	600	0.065	0.076	2200	0.227	0.325	
	700	0.079	0.094				
	800	0.095	0.114				
	900	0.113	0.137				
	1000	0.134	0.163				
	1100	0.154	0.189				
	1200	0.176	0.215				
1300	0.197	0.245					
1400	0.220	0.273					
1500	0.246	0.303					
1600	0.268	0.332					

COIL MODEL NUMBER IDENTIFICATION GUIDE									
	<b>E</b>	<b>H</b>	<b>D</b>	<b>2</b>	<b>X</b>	<b>24</b>	<b>A</b>	<b>A</b>	<b>1</b>
E = Evaporator									
H = Horizontal		<b>TYPE</b>							
D = Duct			<b>APPLICATION</b>						
2 = R-22									
4 = Environmentally Sound R-410A				<b>REFRIGERANT</b>					
X = TXV					<b>METERING DEVICE</b>				
24 = 24,000 BTUH = 2 tons									
30 = 30,000 BTUH = 2½ tons									
36 = 36,000 BTUH = 3 tons									
42 = 42,000 BTUH = 3½ tons									
48 = 48,000 BTUH = 4 tons									
60 = 60,000 BTUH = 5 tons						<b>NOMINAL CAPACITY</b>			
A = 11.8"							<b>WIDTH</b>		
A = Standard									
AT = Tin Coated Copper Tubes for Additional Corrosion Protection									<b>SALES CODE / FEATURES</b>
Engineering Revision									



## R-410A QUICK REFERENCE GUIDE

---

- R-410A refrigerant operates at 50% – 70% higher pressures than R-22. Be sure that servicing equipment and replacement components are designed to operate with R-410A.
- R-410A refrigerant cylinders are rose colored.
- Recovery cylinder service pressure rating must be 400 psig, DOT 4BA400 or DOT BW400.
- R-410A systems should be charged with liquid refrigerant. Use a commercial type metering device in the manifold hose.
- Manifold sets should be 750 psig high-side and 200 psig low-side with 520 psig low-side retard.
- Use hoses with 750 psig service pressure rating.
- Leak detectors should be designed to detect HFC refrigerant.
- R-410A, as with other HFC refrigerants, is only compatible with POE oils.
- Vacuum pumps will not remove moisture from oil.
- Do not use liquid line filter-driers with rated working pressures less than 600 psig.
- Do not install a suction line filter-drier in liquid line.
- POE oils absorb moisture rapidly. Do not expose oil to atmosphere.
- POE oils may cause damage to certain plastics and roofing materials.
- Wrap all filter-driers and service valves with wet cloth when brazing.
- A liquid line filter-drier is required on every unit.
- Do not use with an R-22 TXV.
- If indoor unit is equipped with an R-22 TXV, it must be changed to an R-410A TXV.
- Never open system to atmosphere while it is under a vacuum.
- When system must be opened for service, break vacuum with dry nitrogen and replace all filter-driers.
- Do not vent R-410A into the atmosphere.
- Do not use capillary tube indoor coils.
- Observe all **WARNINGS, CAUTIONS, NOTES**, and **bold** text.