











CONNECTION DIAGRAM



- | | | | |
|---|----------------------------|------|----------------------------|
|  | FACTORY POWER WIRING | *CHS | CRANKCASE HEATER SWITCH |
|  | FACTORY CONTROL WIRING | COMP | COMPRESSOR |
|  | FIELD CONTROL WIRING | CONT | CONTACTOR |
|  | FIELD POWER WIRING | CS | COMPRESSOR SOLENOID |
|  | CONDUCTOR ON CIRCUIT BOARD | *CTD | COMPRESSOR TIME DELAY |
|  | COMPONENT CONNECTION | *HPS | HIGH PRESSURE SWITCH |
|  | FIELD SPLICE | IFR | INDOOR FAN RELAY |
|  | JUNCTION | *LLS | LIQUID LINE SOLENOID VALVE |
|  | PLUG RECEPTACLE | *LPS | LOW PRESSURE SWITCH |
|  | CAPACITOR | OFM | OUTDOOR FAN MOTOR |
| *CH | CRANKCASE HEATER | *SC | START CAPACITOR |
| | | *SR | START RELAY |
- * MAY BE FACTORY INSTALLED**

1. Symbols are electrical representation only.
2. Compressor and fan motor furnished with inherent thermal protection.
3. To be wired in accordance with National Electric N.E.C. and local codes.
4. N.E.C. class 2, 24 V circuit, min. 40 VA required, 60 VA on units installed with LLS.
5. Use copper conductors only. Use conductors suitable for at least 75°C (167°F).
6. Connection for typical cooling only thermostat. For other arrangements see Installation Instructions.
7. If indoor section has a transformer with a grounded secondary, connect the grounded side to the BRN/YEL lead.
8. When start relay and start capacitor are installed, start thermistor is not used.
9. CH not used on all units.
10. If any of the original wire, as supplied, must be replaced, use the same or equivalent wire.
11. Check all electrical connections inside control box for tightness.
12. Do not attempt to operate unit until service valves have been opened.
13. Do not rapid cycle compressor. Compressor must be off 3 minutes to allow pressures to equalize between high and low side before starting.

CONDENSING UNIT CHARGING INSTRUCTIONS

| REQUIRED LIQUID LINE TEMPERATURE | | | | | | | |
|---|--------------------------------------|-----|-----|-----|-----|-----|--|
| Liquid Pressure at Service Valve (psig) | Required Subcooling Temperature (°F) | | | | | | |
| | 6 | 8 | 10 | 12 | 14 | 16 | |
| 251 | 78 | 76 | 74 | 72 | 70 | 68 | |
| 259 | 80 | 78 | 76 | 74 | 72 | 70 | |
| 266 | 82 | 80 | 78 | 76 | 74 | 72 | |
| 274 | 84 | 82 | 80 | 78 | 76 | 74 | |
| 283 | 86 | 84 | 82 | 80 | 78 | 76 | |
| 291 | 88 | 86 | 84 | 82 | 80 | 78 | |
| 299 | 90 | 88 | 86 | 84 | 82 | 80 | |
| 308 | 92 | 90 | 88 | 86 | 84 | 82 | |
| 317 | 94 | 92 | 90 | 88 | 86 | 84 | |
| 326 | 96 | 94 | 92 | 90 | 88 | 86 | |
| 335 | 98 | 96 | 94 | 92 | 90 | 88 | |
| 345 | 100 | 98 | 96 | 94 | 92 | 90 | |
| 354 | 102 | 100 | 98 | 96 | 94 | 92 | |
| 364 | 104 | 102 | 100 | 98 | 96 | 94 | |
| 374 | 106 | 104 | 102 | 100 | 98 | 96 | |
| 384 | 108 | 106 | 104 | 102 | 100 | 98 | |
| 395 | 110 | 108 | 106 | 104 | 102 | 100 | |
| 406 | 112 | 110 | 108 | 106 | 104 | 102 | |
| 416 | 114 | 112 | 110 | 108 | 106 | 104 | |
| 427 | 116 | 114 | 112 | 110 | 108 | 106 | |
| 439 | 118 | 116 | 114 | 112 | 110 | 108 | |
| 450 | 120 | 118 | 116 | 114 | 112 | 110 | |
| 462 | 122 | 120 | 118 | 116 | 114 | 112 | |
| 474 | 124 | 122 | 120 | 118 | 116 | 114 | |

COOLING ONLY CHARGING PROCEDURE

1. Only use subcooling charging method when OD ambient is greater than 70°F and less than 100°F; indoor temp is greater than 70°F and less than 80°F and line set is less than 80 ft.
2. Operate unit a minimum of 15 minutes before checking the charge.
3. Measure liquid service valve pressure by attaching an accurate gauge to the service port.
4. Measure the liquid line temperature by attaching an accurate thermistor type or electronic thermometer to the liquid line near the outdoor coil.
5. Refer to unit rating plate for required subcooling temperature.
6. Find the point where the required subcooling temperature intersects the measured liquid service valve pressure.
7. To obtain the required subcooling temperature at specific liquid line pressure, add refrigerant if liquid line temperature is higher than indicated. When adding refrigerant, restrict in liquid form using a flow restricting device into suction service port. Recover refrigerant if temperature is lower. Allow a tolerance of +/- 3°F.

1. Compressor damage may occur if system is over charged.
2. This unit is factory charged with R-410A in accordance with the amount shown on the charging plate. The charge is adequate for most systems using matched coils and tubing not over 15 feet long. Check refrigerant charge for maximum efficiency. See Product Data Literature for required Indoor air Flow Rates and for use of line lengths over 15 feet.
3. Relieve pressure and recover all refrigerant before system repair or final disposal. Use all service ports and open all flow-control devices, including solenoid valves.
4. Never vent refrigerant to atmosphere. Use approved recovery equipment.



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Fig. 1 – PA17NA 2 - 5 Tons

