## CONDENSER AND EVAPORATOR AIR MOVERS

Impeller motors require no maintenance. All bearings, shafts, etc. are lubricated during manufacturing for the life of the motor.

If one of the condenser impeller motors (ambient impellers) should fail, it is not necessary to remove the air conditioner from the cabinet or enclosure to replace the blower. The condenser blower is mounted on its own bulkhead and is easily accessible by removing the front cover.

**⚠ CAUTION**

Operation of the air conditioner in areas containing airborne caustics or chemicals can rapidly deteriorate filters, condenser coils, blowers and motors, etc. Contact nVent Equipment Protection for special recommendations.

## REFRIGERANT LOSS

Each air conditioner is thoroughly tested prior to leaving the factory to insure against refrigeration leaks. Shipping damage or microscopic leaks not found with sensitive electronic refrigerant leak detection equipment during manufacture may require repair or recharging of the system. This work should only be performed by qualified professionals, generally available through a local, reputable air conditioning repair or service company.

Should the refrigerant charge be lost, access ports on the suction and discharge sides of the compressor are provided for recharging and/or checking suction and discharge pressures.

Refer to the data on the nameplate which specifies the type of refrigerant and the charge size in ounces.

Before recharging, make sure there are no leaks and that the system has been properly evacuated into a deep vacuum.

### REFRIGERANT PROPERTIES CHART (R134A)

| °F | °C | Pressure | | °F | °C | Pressure |
|---|---|---|---|---|---|---|
| -40 | -40 | -14.7 | | 60 | 15.6 | 58 |
| -35 | -37.2 | -12.3 | | 65 | 18.3 | 64 |
| -30 | -34.4 | -9.7 | | 70 | 21.1 | 71.5 |
| -25 | -31.7 | -6.8 | | 75 | 23.9 | 78 |
| -20 | -28.9 | -4 | | 80 | 26.7 | 86.7 |
| -15 | -26.1 | 0 | | 85 | 29.4 | 95 |
| -10 | -23.3 | 2 | | 90 | 32.2 | 105 |
| -5 | -20.6 | 4 | | 95 | 35 | 113.3 |
| 0 | -17.8 | 7.5 | | 100 | 37.8 | 125 |
| 5 | -15 | 9 | | 105 | 40.6 | 135 |
| 10 | -12.2 | 12 | | 110 | 43.3 | 146.7 |
| 15 | -9.4 | 15 | | 115 | 46.1 | 157.5 |
| 20 | -6.7 | 18.5 | | 120 | 48.9 | 170 |
| 25 | -3.9 | 22 | | 125 | 51.7 | 185 |
| 30 | -1.1 | 26 | | | | |
| 35 | 1.7 | 30 | | | | |
| 40 | 4.4 | 35 | | | | |
| 45 | 7.2 | 40 | | | | |
| 50 | 10 | 45.5 | | | | |
| 55 | 12.8 | 51.5 | | | | |

## UNIT CHARACTERISTICS

| | Model | | |
|---|---|---|---|
| | **N280416GXXX** | **N280426GXXX** | **N280446GXXX** |
| **Dimensional Data** | | | |
| Height | 28” / 711.2 mm | | |
| Width | 11.5” / 292.1 mm | | |
| Depth | 14” / 355.6 mm | | |
| Unit Weight | 84 lbs / 38 kg | 84 lbs / 38 kg | 98 lbs / 44 kg |
| Unit Protection Rating | Type 12/4/4X/3R | | |
| **Cooling Data** | | | |
| Refrigerant | R134a | | |
| Refrigerant Charge | 10 oz. | 11 oz. | 11 oz. |
| Cooling Capacity at 95 F Enclosure 95 F Ambient (BTU/Hr.) | 3754/4011 | 3706/4291 | 4291 |
| Cooling Capacity at Max Conditions (BTU/Hr.) | 3940/4104 | 4269/4703 | 4703 |
| Maximum Ambient Temp | 125 F / 52 C | | |
| Minimum Ambient Temp | -40 F / -40 C | | |
| Enclosure Airflow | 143 CFM | | |
| External Airflow | 288 CFM | | |
| Condensate Management | Hose discharge / Optional powered C/E | | |
| **Heating Data** | | | |
| Capacity | 1300 W | | N/A |
| **Electrical Data** | | | |
| Rated Voltage (50/60 Hz) | 115 V | 230 V | 460 V |
| Rated Frequency | 50/60 Hz | 50/60 Hz | 60 Hz |
| Voltage Range | +/- 10% of rated | | |
| Cooling Amps at Max Conditions | 10.6/10.0 | 4.9/5.0 | 2.5 |
| Heating Amps | 12.2 | 6.2 | N/A |
| Compressor RLA / LRA | 7.75/42 | 3.12/24.5 | 3.12/24.5 |
| Evaporator Fan RLA | .38/.36 | .19 | .19 |
| Condenser Fan RLA | .78/.93 | .53 | .53 |

## FUNCTIONAL DATA

| Unit | Evaporator. Air In(°F) | Amps(A) | Condenser Delta(°F) | Evaporator Delta(°F) |
|---|---|---|---|---|
| N280416GXXX | 65-80 | 7-7.4 | 15-22 | 13-28 |
| | 80-100 | 7.4-8.6 | 21-25 | 14-24 |
| N280426GXXX | 65-80 | 3.1-3.7 | 17-25 | 15-27 |
| | 80-100 | 3.4-4.1 | 19-29 | 14-31 |
| N280446GXXX | 65-80 | 1.5-1.9 | 17-25 | 15-27 |
| | 80-100 | 1.7-2.1 | 19-29 | 14-31 |

# SERVICE DATA

## COMPONENTS LIST

| Part Description | Part Number | | |
|---|---|---|---|
| | 115 V | 230 V | 460 V 60 Hz |
| Capacitor, Compressor, Start | 89112001SP | 10103208SP | 10103208SP |
| Capacitor, Condenser Impeller | 52603213SP | 52603214SP | 52603214SP |
| Coil, Condenser | 89068416SP | 89068416SP | 89068416SP |
| Coil, Evaporator | 89068414SP | 89068414SP | 89068414SP |
| Compressor | 89111751SP | 89111752SP | 89111752SP |
| Filter, Air, Reusable | 89068420SP | 89068420SP | 89068420SP |
| Filter/Dryer | 52602800SP | 52602800SP | 52602800SP |
| Head Pressure Control Switch (option) | 52610426SP | 52610426SP | 52610426SP |
| Impeller, Condenser | 101091123SP | 101091124SP | 101091124SP |
| Fan, Evaporator | 12101201SP | 12101202SP | 12101202SP |
| Relay, Compressor Start | 89115078SP | 89112003SP | 89112003SP |
| Run Capacitor | N/A | 52603220SP | 52603220SP |
| Capillary Tube | 99054039SP | 99064045SP | 99064045SP |
| Thermostat, SPDT, 55-100F | 10106116SP | 10106116SP | 10106116SP |
| Transformer, Input Power | N/A | N/A | 101006111SP |
| Overload | 89114723SP | 89114724SP | 89114724SP |
| Controller, Basic | 89075653SP | | |
| Thermistor | 89075654SP | | |
| Bridge Rectifier | 89087424SP | | |
| Controller Wires with pins (24) | 89083091SP | | |
| Communication Board | 89082033SP | | |
| Communication Cable | 89080313SP | | |
| 315 mA Fuse | 89085115SP | | |