Climate Master

OPERATIONAL AND MAINTENANCE INSTRUCTIONS

The Climate Master Decentralized Air Conditioning Systems offers the best year round comfort with simplicity of operation. There are two controls that activate and control the air conditioning and heating system. A push button switch which selects the functions of the equipment and the thermostat which controls the temperature of the room.

The standard push-button switch has five color buttons which are marked to correspond with the five different functions of the equipment as follows:

OFF - When the black button is pushed, the equipment does not operate.

COOL HIGH - When the first of the blue buttons is pushed, the equipment operates at high speed supplying maximum cooling to the room.

COOL LOW - The second of the blue buttons allows the equipment to operate at a lower speed and at reduced capacity.

HEAT - The red button is for heat operation and will operate a particular type of heat being used, electric, hot water, or steam, until the thermostat reaches a satisfied condition.

THERMOSTAT - Controls the temperature during both the cooling and heating cycle. Turning the thermostat knob clockwise (increasing numbers) will lower the room temperature. Turning the control in a counter clockwise direction (decreasing numbers) will increase room temperature. Leave the thermostat set at the temperature most comfortable to you and your equipment will automatically maintain this temperature for you.

VENT - Some equipment is equipped with this white switch and when the switch is in the down position it allows outside air into the room with no heating or cooling beomg supplied.

The push buttons should be pressed firmly and only one button at a time. After shutting down the equipment, you should wait at least five minutes before restarting. This applies also to the resetting of the thermostat.

GENERAL TROUBLE SHOOTING INFORMATION

The following are possible problems which you may encounter when checking out our equipment.

HEAT PROBLEMS

1. Evaporator fans will not run.

2. Evaporator fan will run for a short time.

3. No heat with fans running.

The following may be a cause for the above problems.

1. Evaporator fan will not run because:

   a. No power.
   b. Bad selector switch.
   c. Bad low speed motor windings.
   d. Blower wheel may be binding on sheet metal.

2. Evaporator fan may not continue to run because:

   a. Cycles on thermal overload, which could be caused by:

      1. Dirty filter.
      2. Restrictions in the Air Flow

3. No heat with fans running may be caused by:

   a. No electric - element may not be plugged into control box, thermostat may be bad or interconnecting wires may be incorrect.

   b. Hot water - thermostat may be bad, valve not functioning properly or water temperature too cold.

   c. Steam - thermostat not operating properly, valve malfunctioning or no steam in the line.

The following are a few problems which may be encountered in the cool position:

1. Evaporator fan will not run.

   a. High Cool
   b. Low Cool

2. Evaporator fan will run for a short time only.

3. Condenser fan will not start.

4. Condenser fan will start but will not remain running.

5. Compressor will not start.

6. Compressor will start but will not remain running.

7. Everything runs but no cooling.

The following are possible causes for the above mentioned problems.

1. Evaporator motor may not run because:

   a. High Cool.

      1. No power.
      2. Bad selector switch.
      3. Open high speed motor windings.
      4. Blower wheel hung up on sheet metal.

   b. Low Cool.

      1. No power.
      2. Bad selector switch.
      3. Open low speed motor windings.
      4. Blower wheel hung up on sheet metal.

2. Evaporator motor may not continue running because:

   a. Motor cycles on overload.

      1. Possible dirty filter.
      2. Possible restriction in air flow.

3. Condenser fan may not start because:

   a. Bad start capacitor.
   b. Bad motor.
   c. Bad selector switch.
   d. Condenser wheel hung up on sheet metal.

4. Condenser will start but will not remain running, may be caused by:

   a. Thermo Overload

      1. Restriction in air flow.
      2. Bad motor.

5. Compressor will not start, may be caused by:

   a. Bad thermostat.
   b. Bad selector switch.
   c. Bad start capacitor.
   d. Open overload.

6. Compressor will start but will not remain running (cycles on overload) because:

   a. Bad overload.
   b. Bad compressor.
   c. High heat pressure.

      1. Restriction in refrigerant circuit.
      2. Restriction in air flow across condenser coil.

7. Everything runs but no cooling may be caused by:

   a. Low refrigerant charge.

      1. Leak in hermetic circuit.
      2. Restriction in air flow.

EQUIPMENT START-UP GUIDE
FOR AIR-COOLED TERMINAL PACKAGES

1. During construction check wall box for rigidity in the wall.

   a. Loose wall boxes can cause noise problems.

2. Check for infiltration between wall box and wall.

   a. Infiltration can cause erratic thermostat action.

3. Check wall box to insure that room side flanges are vertically straight and horizontally plumb.

   a. Do not level the bottom of the wall box as there is a built-in pitch which is necessary for proper rain drainage.

4. Insure that the louver with four louver clips is properly installed.

5. Make sure the chassis is properly sealed all the way around the wall box and the two holding clamps are in place.

6. Make sure the heat section is secured properly and firmly.

7. Check the installation of the room cabinet to insure that it is firmly mounted against the wall. Check control box for proper mounting within the room cabinet and insure that it is electrically connected to the chassis.

8. Push the off button on the control box.

9. After checking the voltage at the power receptacle, insert the control box power plug.

10. Rotate the thermostat counter clockwise until it clicks, asking for heat.

11. Press heat button.

    a. Evaporator blowers should operate.

    b. If electric heat, heater should be energized.

    c. Motorized valve should go to the heat position when hot water or steam are used for heat.

12. Rotate thermostat clockwise until the thermostat clicks into a satisfied condition.

13. Check to make sure that the heat does shut off.

14. Rotate thermostat counterclockwise back into a heating position.

15. Press low cool switch.

    a. Evaporator motor should continue to operate.

    b. Condenser fan should start.

16. Rotate thermostat clockwise until thermostat clicks for cooling.

    a. Compressor should start and cold air should start coming out of the discharge grill.

17. Press high cool button.

    a. Evaporator motor should go to high speed.

    b. Compressor and condenser fan should continue to operate.

18. Rotate thermostat in a counter clockwise direction until cooling is satisfied.

    a. Compressor should stop running.

    b. Condenser fan should continue running.

After you have satisfactorily complete all of the above, your start up is complete and the unit is functioning properly. If any problems are encountered, refer to your trouble shooting guide.

PREVENTIVE MAINTENANCE

While being manufactured, your Climate Master equipment was thoroughly evacuated and a carefully measured refrigerant charge was put into the machine. After a run in operation and thorough inspection, your Climate Master equipment was cartoned and shipped to you. Unless problems developed during shipment, your Climate Master equipment should be in perfect operating condition. Accordingly maintenance is simplified to the following procedure.

1. Check your easily accessible filter frequently and change or clean as required.

2. Motor Lubrication - Once every two years.

3. Clean and polish room cabinet regularly to insure luxurious appearance. On a yearly schedule, remove chassis and clean condenser coil.

4. During yearly inspection, insure that the wall box drain holes are open.

5. Insure that discharge grille area is free from any obstruction such as: curtains, books, etc.

6. Insure that the bottom of the room cabinet is free of obstruction which might restrict return air.

A good preventive maintenance program will insure a long operating life for your Climate Master equipment.