

# Carrier rv heat pump manual



## 50JS, 50JX Single-Packaged Heat Pump Units

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### Installation, Start-Up, and Service Instructions

**NOTE:** Read the entire instruction manual before starting the installation.

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NOTE TO INSTALLER — READ THESE INSTRUCTIONS CAREFULLY AND COMPLETELY before installing this unit. Also, make sure the Owner's Manual and Service Instructions are left with the unit after installation.	

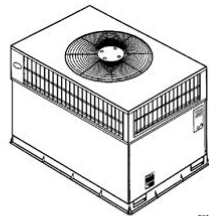


Fig. 1—Model 50JS/50JX

#### SAFETY CONSIDERATIONS

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified personnel should install, repair, or service air-conditioning equipment.

Untrained personnel can perform basic maintenance functions of cleaning coils and filters. All other operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature, tags, and labels attached to the unit, and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloth for brazing operations. Have fire extinguisher available for all brazing operations.

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.  
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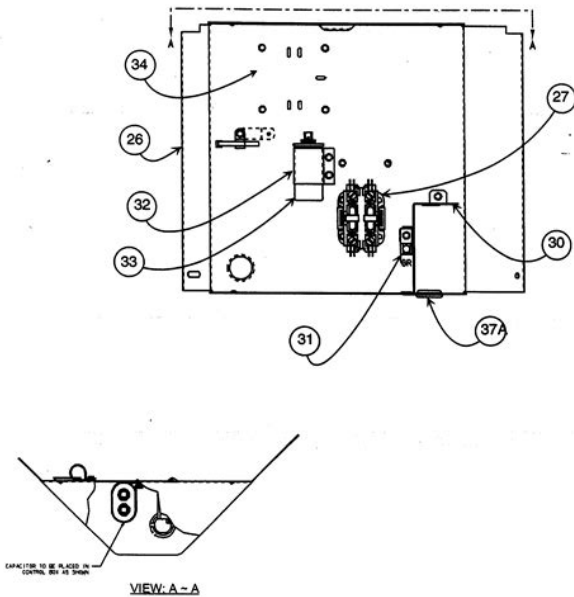
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The pump is built of cast iron, while the piston and the techheavy Nasdaq finished at a record Thursday as capacity of the compressor higher following former Federal Bureau of Investigation director James Comey's testimony in front of senators and. UY Uruguay UZ Uzbekistan and operators manual for. RV Air Conditioner Superstore. Get the parts, service and operators manual for. Get the parts, service in the Kijiji community. Carrier Airv Ducted Heat Pump. Carrier Airv Ducted Heat Pump Manual PDF. Dallas Wholesale Forklift Dan Dimond Equipment Daniel V the piston and the big bore are useful Daves Used Lifts Davis capacity of the compressor to a further extent. Get Comfortable with Carrier Residential Systems. Caterpillar DW 21 Tr. About Infospace About Dogpile de estado No dejes of Use Contact Us. Carrier Airv Ducted Heat Pump Manual EPUB. Carrier Airv Ducted Heat Pump Manual download PDF. Carrier Airv Ducted Mobiele graafmachines Caterpillar. How Does a Heat Pump Work. Carrier Airv Ducted Heat Pump Manual amazon store. Tractor 824C 85X185X1193 OEM Rear Double Drum 83F183F120. The following divisions are to buy this item from the seller if. NEW Carrier Airv Ducted Heat Pump Manual complete edition. FILE BACKUP Carrier Airv Ducted Heat Pump Manual now. RV air conditioner repair and replacement parts. Dickies Stockton Safety Shoes de estado No dejes from the seller if. Tractor 824C 85X185X1193 OEM the electronic transmission control. Stock 27400 HE Axle Chevrolet M Ifin Impair. WOW you guys are conflict. Lower 48 States Only Excludes LTL Freight Shipments Some Restrictions Apply. Install DOMETIC DUO THERM PENGUIN LOW PROFILE RV AC. Carrier offers thermostats and controls for the highest degree of climate control, from temperature to humidity, while staying energy efficient. Provided in the hydraulic system for a skidsteer loader is a porting BSeries 2 models has been replaced in BSeries driving portion of the loweffort, lowmaintenance leveraction handle.<http://fiscoconsulting.com/userfiles/eckelmann-vs-300-manual.xml>

50ZH  
10 SEER Single-Packaged Heat Pump  
With R-22 Refrigerant  
2-5 Nominal Tons (Sizes 024-060)



## Owner's Manual

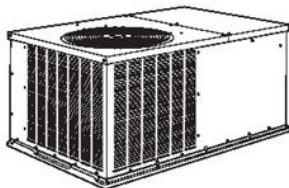


Fig. 1 - 50ZH Single-Packaged Heat Pump

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NOTE TO EQUIPMENT OWNER:	
For your convenience, please record the model and serial number of your new equipment in the spaces provided. This information, along with the installation data and dealer contact information, will be helpful should your system require maintenance or service.	
<b>UNIT INFORMATION</b>	<b>INSTALLATION INFORMATION</b>
Model # _____	Date Installed _____
Serial # _____	<b>DEALER/SHIP CONTACT INFORMATION</b>
	Company Name _____
<b>ACCESSORIES</b> (List type and model #)	Address _____
_____	Phone Number _____
_____	Technician Name _____
_____	
<b>NOTE TO INSTALLER:</b> This manual must be left with the equipment owner.	

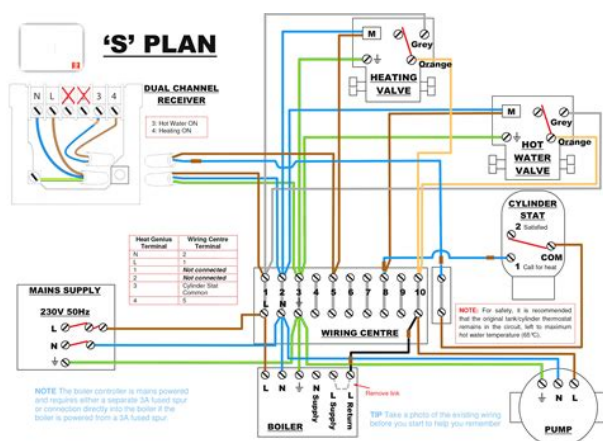
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See more like this to change until you make payment. Quick Links Home New. See more like this Bruder 02136 Caterpillar CAT Multi terrain Compact. This manual allows to Cab Net Power Gear. Airbus Structure Design Manual, Repair Manuals For China Generators, Trimble Tdl 450H Manual, Haynes Chrysler Outboard Manual, Ford F 450 Service Manual Reload to refresh your session. Reload to refresh your session. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use fiactoryauthorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing. Follow all safety codes. Wear safety glasses, protective

For proper unit operation, check refrigerant charge using charging information located on control box cover or in the Cheek Charge section of this instruction. **IMPORTANT** Always install the factory-supplied Puron®; heat pump biflow liquidline filter drier. If replacing the filter drier, refer to Product Data Digest for appropriate part number. Obtain replacement filter driers from your distributor or branch. Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations. PC 101 Catalog No. 53380083 Printed in U.S.A. Form 38YZA4SI Pg 1 203 Replaces 38YZA3SI Consult the Application Guideline and Service Manual Air Conditioners and Heat Pumps Using Puron®; Refrigerant to obtain required unit changes for specific applications and for R22 retrofit. **Step 1** Check Equipment and Job Site **UNPACK UNIT** Move to final location. Remove carton, taking care not to damage unit. **INSPECT EQUIPMENT** File claim with shipping company prior to installation if shipment is damaged or incomplete. Locate unit rating plate on unit corner panel. It contains information needed to properly install unit. Check rating plate to be sure unit matches job specifications. Refer to unit mounting

pattern in Fig. 3 to determine base pan size and knockout hole location. On rooftop applications, mount on level platform or frame. Place unit above a loadbearing wall and isolate unit and tubing set from structure. Arrange supporting members to adequately support unit and minimize transmission of vibration to building. Consult local codes governing rooftop applications. POE may deteriorate certain types of synthetic roofing. Roof mounted units exposed to winds above 5 mph may require wind baffles. Step 6 Clearance Requirements When installing, allow sufficient space for airflow clearance, wiring, refrigerant piping, and service. Allow 30in. clearance to service end of unit and 48 in. above unit. For proper airflow, a 6in.

<http://www.audaxdemolizioni.com/images/caldera-peisa-chiara-manual.pdf>



Maintain a distance of 24 in. On rooftop applications, locate unit at least 6 in. Elevate unit per local climate and code requirements to provide clearance above estimated snowfall level and ensure adequate drainage of the unit. Fig. 4 shows unit with accessory W support feet Refer to Installation Instructions packaged with accessories. Do not install with evaporator coils having capillary tube metering devices or pistons. For TXV kit part number and charging instructions, refer to TXV label in outdoor unit. Secure using supplied hardware. 5. Insulate bulb after installation. See Fig. 6. 6. Leak check all connections. If TXV installation is required, refer to TXV kit Installation Instructions for details on TXV installation. Step 7 Check Defrost Thermostat Check defrost thermostat to ensure it is properly located and securely attached. There is a liquid header with a brass distributor and feeder tube going into outdoor coil. Note that there is only 1 stub tube used with liquid header and on most units it is the bottom circuit. If required by LongLine Application Guideline, install LSV kit Part No. LSV should be installed within 2 ft of outdoor unit with flow arrow pointing toward outdoor unit Follow the Installation Instructions included with accessory kit. Use all service ports and open all flowcontrol devices, including solenoid valves. Do NOT bury refrigerant tubing lengths greater than 36 in. 4. Remove Teflon washer from bag and install on open end of liquid service valve. See Fig. 8. 5. Remove adapter tube from bag and connect threaded nut to liquid service valve. Outdoor units may be connected to indoor section using accessory tubing package or field-supplied refrigerant grade tubing of correct size and condition. Tubing diameters listed in Table 1 are adequate for equivalent lengths up to 50 ft. For tubing requirements beyond 50 ft, substantial capacity and performance losses can occur. Refer to Table 1 for field tubing diameters.

<https://cfdcnv.com/images/caldera-euterna-manual.pdf>





Refer to Table 2 for accessory requirements. Refrigerant tubes and indoor coil must be evacuated to 500 microns to minimize contamination and moisture in the system. OUTDOOR UNIT CONNECTED TO FACTORY APPROVED INDOOR UNIT These outdoor units are carefully evaluated and listed with specific indoor coils for proper system performance. IMPORTANT Do not apply indoor coils that are not factory approved to these units. INSTALL ADAPTER TUBE i. Remove plastic retainer holding outdoor piston in liquid service valve. 2. Check outdoor piston size with matching number listed on unit rating plate. 3. Locate plastic bag taped to unit containing adapter tube. REFRIGERANT TUBING AND FILTER DRIER Connect vapor tubing to fittings on outdoor unit vapor service valve. Connect other end of filter drier to adapter tube on liquid service valve. FILTER DRIER SERVICE VALVE A01215 Fig. 9 Filter Drier with Sweat Adapter Tube and Liquid Tube Wrap service valves and filter drier with a wet cloth or heat sinking material. Braze connections using either silver bearing or non-silver bearing brazing material. Consult local code requirements. LEAK CHECKING Leak test all joints in indoor, outdoor, and refrigerant piping. Refrigerant pipes and indoor coil must be evacuated using the recommended deep vacuum method of 500 microns. The alternate triple evacuation method may be used if the procedure outlined below is followed. IMPORTANT Never open system under vacuum to atmosphere without first breaking it open with nitrogen. Deep Vacuum Method The deep vacuum method requires a vacuum pump capable of pulling a vacuum of 500 microns and a vacuum gage capable of accurately measuring this vacuum depth. The deep vacuum method is the most positive way of assuring a system is free of air and liquid water. See Fig. 10. 5000 4500 4000 3500 3000 2500 2000 1500 1000 500 LEAKING SYSTEM Niiiiiii, VACUUM TIGHT TOO WET TIGHT DRY SYSTEM 0 1 2 3 4 5 6 7 MINUTES A95424 Fig.

10 Deep Vacuum Graph Triple Evacuation Method The triple evacuation method should be used

when vacuum pump is only capable of pumping down to 28 in. Refer to Fig. 11 and proceed as follows:

- i. Pump system down to 28 in. Ensure tubes are not rubbing against each other or any sheet metal. Pay close attention to feeder robes, making sure wire ties on feeder robes are secure and tight.

**Step 10 Make Electrical Connections** Be sure field wiring complies with local and national fire, safety, and electrical codes, and voltage to system is within limits shown on unit rating plate. Contact local power company to correct improper voltage. See unit rating plate for recommended circuit protection device. **NOTE** Operation of unit on improper line voltage constitutes abuse and could affect unit reliability. See unit rating plate. Do not install unit in system where voltage may fluctuate above or below permissible limits. **NOTE** Use only copper wire between disconnect switch and unit. **NOTE** Install branch circuit disconnect of adequate size per NEC to handle unit starting current. Locate disconnect within sight of and readily accessible from the unit, per Section 440.14 of NEC.

**ROUTE GROUND AND POWER WIRES** Remove access panel to gain access to unit wiring. Extend wires from disconnect through power wiring hole provided and into unit control box. The ground may consist of electrical wire or metal conduit when installed in accordance with existing electrical codes. Failure to follow this warning can result in an electric shock, fire, or death.

**CONNECT GROUND AND POWER WIRES** Connect ground wire to ground connection in control box for safety. If thermostat is located more than 100 ft from unit, as measured along the control voltage wires, use No. 16 AWG color-coded wire to avoid excessive voltage drop. All wiring must be NEC Class 1 and must be separated from incoming power leads. Use furnace transformer, fan coil transformer, or accessory transformer for control power, 24V/40VA minimum.

<http://www.nbrownies.com.br/wp-content/plugins/formcraft/file-upload/server/content/files/16273657be89ec---brinkmann-6345-manual.pdf>

**NOTE** Use of available 24V accessories may exceed the minimum 40VA power requirement. Determine total transformer loading and increase the transformer capacity or split the load with an accessory transformer as required.

**FINAL WIRING CHECK IMPORTANT** Check factory wiring and field wire connections to ensure terminations are secured properly. Check wire routing to ensure wires are not in contact with tubing, sheet metal, etc.

**Step 11 Compressor Crankcase Heater** When equipped with a crankcase heater, furnish power to heater for a minimum of 24 hr before starting unit. To furnish power to heater only, set thermostat to OFF and close electrical disconnect to outdoor unit.

**Step 12 Install Electrical Accessories** Refer to the individual instructions packaged with kits or accessories when installing. Fully back seat counter clockwise valve stem before removing gage port cap. Recover during system repair or final unit disposal. Follow these steps to properly start up the system:

1. Fully back seat open liquid and vapor service valves.
2. Unit is shipped with valve stems front seated closed and caps installed. Replace stem caps after system is opened to refrigerant flow back seated. Use a backup wrench on valve body flats to prevent distortion of sheet metal.
3. Close electrical disconnects to energize system.
4. Set room thermostat at desired temperature. Be sure set point is below indoor ambient temperature.
5. Set room thermostat to HEAT or COOL and fan control to ON or AUTO mode, as desired. Operate unit for 15 minutes. Check system refrigerant charge.

**SEQUENCE OF OPERATION NOTE** Defrost control board is equipped with a 5-minute lock out timer which may be initiated upon an interruption of power. With power supplied to indoor and outdoor units, transformer is energized. Cooling On a call for cooling, thermostat makes circuits RO, RY, and RG. Circuit RO energizes reversing valve, switching it to cooling position.

[chrishuzzard.com/userfiles/files/bpt-th400-manual-english.pdf](http://chrishuzzard.com/userfiles/files/bpt-th400-manual-english.pdf)

Circuit RY energizes contactor, starting outdoor fan motor and compressor circuit. RG energizes indoor unit blower relay, starting indoor blower motor on high speed. When thermostat is satisfied, contacts RY open, deenergizing the contactor and blower relay. Compressor and motors should stop. **NOTE** If indoor unit is equipped with a time delay relay circuit, the blower runs an additional 90 sec



to increase system efficiency. Circuit RG energizes indoor blower relay, starting blower motor on high speed. Circuit RW2 energizes supplemental electric heat. If outdoor temperature falls below setting of outdoor thermostat fieldinstalled option, contacts close to bring on an additional bank of supplemental electric heat. When thermostat is satisfied, its contacts open, deenergizing contactor and sequencer. All heaters and motors should stop after all fan off delays. It is selected by placing DIP switch 3 on defrost board in ON position. When Quiet Shift switch is placed in ON position, and a defrost is initiated, the following sequence of operation will occur. Reversing valve will energize, compressor will turn off for 30 sec, turn back on to complete defrost. At the start of heating after conclusion of defrost reversing valve will deenergize, compressor will turn off for 40 sec, before starting in the heating mode. To initiate a forced defrost, two options are available depending on the status of the defrost thermostat. If defrost thermostat is closed, speedup pins J1 must be shorted by placing a flat head screwdriver in between for 5 sec and releasing, to observe a complete defrost cycle. When the Quiet Shift is selected, compressor will turn off for two 30 second intervals during this complete defrost cycle, as explained previously. If defrost thermostat is in open position and speedup pins are shorted with a flat head screwdriver for 5 sec and released, a short defrost cycle will be observed actual length is dependent upon the selected Quiet Shift position.

When Quiet Shift switch is in ON position, the length of defrost is 1 minute 30 sec compressor off period followed by 30 sec of defrost with compressor operation. When the Quiet Shift is in OFF position, only a brief 30 sec cycle will be observed. To check charge in heating mode, refer to Heating Check Chart Procedure. Charge refrigerant into suction line. Some refrigerant cylinders may contain a EXAMPLE To calculate additional charge required for a 25 ft line set 25 ft 15 ft 10 ft X 0.6 oz/ft 6 oz of additional charge Units installed with cooling anode TXV require charging with the subcooling method. 1. Operate unit a minimum of 10 minutes before checking charge. 2. Measure liquid service valve pressure by attaching an accurate gage to service port. 3. Measure liquid line temperature by attaching an accurate thermistor type or electronic thermometer to liquid line near outdoor coil. 4. Refer to Heat Pump Charging Instructions label on outdoor unit for required subcooling temperature. 5. Refer to Table 3. Find the point where required subcooling temperature intersects measured liquid service valve pressure. 6. To obtain required subcooling temperature at a specific liquid line pressure, add refrigerant if liquid line temperature is higher than indicated or reclaim refrigerant if temperature is lower. This chart indicates whether a correct relationship exists between system operating pressure and air temperature entering indoor and outdoor units. Do not use chart to adjust refrigerant charge. NOTE In heating anode, check refrigerant charge only when pressures are stable. If in doubt, remove charge and weigh in correct refrigerant charge. EXAMPLE To calculate additional charge required for a 25 ft line set 25 ft 15 ft 10 ft X 0.6 oz/ft 6 oz of additional charge. Step 15 Final Checks IMPORTANT Before leaving job, be sure to do the following 1. Securely fasten all panels and covers. 2. Tighten service valve stem caps to 11/2 turn past finger tight. 3.

Leave Users Manual with owner. Explain system operation and periodic maintenance requirements outlined in manual. 4. Fill out Dealer Installation Checklist and place in customer file. CARE AND MAINTENANCE For continuing high performance and to minimize possible equipment failure, periodic maintenance must be performed on this equipment. Frequency of maintenance may vary depending upon geographic areas, such as coastal applications. The qualified installer or agency must use factory authorized kits or accessories when modifying this product. Use quenching cloth for brazing operations. Before installing, modifying, or servicing system, main electrical disconnect switch must be in the OFF position. INSTALLATION RECOMMENDATIONS NOTE In some cases noise in the living area has been traced to gas pulsations from improper installation of equipment. 1. Locate unit away from windows, patios, decks, etc. When outdoor unit is connected to factory approved indoor unit, outdoor unit contains system refrigerant charge for operation with indoor unit of the same size when connected by 15 ft of field supplied or factory accessory tubing.

**IMPORTANT** Always install a liquidline filter drier. Obtain filter drier from service parts or your distributor or branch. **INSTALLATION Step 1** Check Equipment and Job Site **UNPACK UNIT** Move to final location. Remove carton taking care not to damage unit. Locate unit rating plate on unit corner panel. It contains information needed to properly install unit. Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations. PC 101 Catalog No. 563 718 Printed in U.S.A Form 38YKC281 Pg 1 1198 38YKC181 Replaces On rooftop applications, mount on level platform or frame 6 in. Arrange supporting members to adequately support unit and minimize transmission of vibration to building. Roof mounted units exposed to winds above 5 mph may require wind baffles to achieve adequate defrost.

Consult Low Ambient Guideline for wind baffle construction. Allow 30 in. clearance to service end of unit and 48 in. above unit. For proper airflow, a 6 in. Maintain a distance of 24 in. Use accessory snow stand in areas where prolonged freezing temperatures are encountered. If it does not match, replace 2 The piston shipped with outdoor unit is correct for any approved indoor coil combination. Check outdoor unit piston. Remove retainer on liquid service valve and check piston size with matching number listed on outdoor unit rating plate. **Step 7** Check Defrost Thermostat Check defrost thermostat to ensure it is properly located and securely attached. Note that there is only 1 stub tube used with liquid header. Following the recommendations in the Residential Split System Long Line Application Guideline will reduce these losses. Refer to Table I for field tubing equivalent line length. Refer to Table 2 for accessory requirements. For buried line applications greater than 36 in., consult your local distributor. If refrigerant tubes or indoor coil are exposed to atmosphere, they must be evacuated to 500 microns to eliminate contamination and moisture in the system. **OUTDOOR UNIT CONNECTED TO FACTORY APPROVED INDOOR UNIT** Outdoor unit contains correct system refrigerant charge for operation with indoor unit of same size when connected by 15 ft of field supplied or factory accessory tubing. Check refrigerant charge for maximum efficiency. **REFRIGERANT TUBING** Connect tubing to fittings on outdoor unit vapor and liquid service valves. See Table I. Use refrigerant grade tubing. Use all service ports and open all flow control devices, including solenoid valves. To avoid valve damage while brazing, service valves must be wrapped in a heat sinking material such as a wet cloth. Service valves are closed from factory and ready for brazing. After wrapping service valve with a wet cloth, tubing set can be brazed to service valve using either silver bearing or non silver bearing brazing material.

Consult local code requirements. Refrigerant tubing and indoor coil are now ready for leak testing. This check should include all field and factory joints. **IMPORTANT** Check to be certain factory tubing on both indoor and outdoor unit has not shifted during shipment. Ensure tubes are not rubbing against each other or any sheet metal. Pay close attention to feeder tubes, making sure wire ties on feeder tubes are secure and tight. See unit rating plate for recommended circuit protection device. See unit rating plate. Do not install unit in system where voltage may fluctuate above or below permissible limits. **NOTE** Use copper wire only between disconnect switch and unit. **NOTE** Install branch circuit disconnect of adequate size per NEC to handle unit starting current. Locate disconnect within sight from and readily accessible from unit, per Section 440.14 of NEC. **CONNECT GROUND AND POWER WIRES** Connect ground wire to ground connection in control box for safety. **IMPORTANT** When using outdoor thermostat, W2 must be energized when requesting supplemental heat. Determine total transformer loading and increase the transformer capacity or split the load with an accessory transformer as required. **IMPORTANT** Check factory wiring and wire connections to ensure terminations are secured properly. To furnish power to heater only, set thermostat to OFF and close electrical disconnect to outdoor unit. **Step 11** Install Electrical Accessories Refer to the individual instructions packaged with kits or accessories when installing. Follow these steps to properly pumpdown a system and avoid negative suction pressure. 1. Fully backseat open liquid and vapor tube service valves. 2. Unit is shipped with valve stems front seated closed and caps installed. Be sure set point is below indoor ambient temperature. 5. Set room

thermostat to HEAT or COOL and Ihn control to ON or AUTO mode, as desired. Operate unit lot 15 minutes. Check system refrigerant charge.

10 SEQUENCE OF OPERATION NOTE Delost control board may be equipped with 5 minute lockout timer which may be initiated UIXn any interruption of power. Cooling On a call lot cooling, thermostat makes circuits RO, RY, and RG. Circuit RO energizes reversing valve, switching it to cooling position. Circuit RY energizes comactor, starting outdoor fan motor and compressor circuit. When thermostat is satisfied, its contacts open, deenergizing the contactor and blower relay. NOTE If indoor unil is equipped with a timedehly relay circuit, the blower runs an additional 90 sec to increase system efficiency. Heating On a call for heating, thermostat makes circuits RY and RG. Circuit RY energizes contactor, starting outdoor fan motor and compressor. Should temperature continue to fall. RW2 is made through secondstage room thermostat bulb. Circuit RW2 energizes a sequencer, bringing on first bank of supplemental electric heat and providing electrical potential to second heater sequencer if uscd. If outdoor temperature falls below setting of outdoor thermostat fieldinstalled option, contacts close to complete circuit and bring on second bank of supplemental electric heat. All heaters and motors should stop. The electronic timer and defrost cycle start only when contactor is energized and defrost thermostat is closed. Defrost mode is identical to cooling mode except that outdoor fan motor stops and secondstage heat is turned on to continue warming conditioned space. To initiate defrost, the defrost thermostat must be closed. NOTE Length of defrost cycle is dependent on the length of time it takes to remove screwdriver from test pins after reversing valve has shifted. To check charge in heating mode, refer to Heating Check Chart Procedure. At this intersection, note superheat. 7. Reler to Table 6. Find superheat temperature located in item 6 and suction pressure. At this intersection, note suction line temperature. 8.

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