Islandaire
Operating & User's Manual for Direct Vent Gas-Fired Packaged Terminal Thru-Wall Air Conditioners
EZ Series GS

WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

- **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**
- **WHAT TO DO IF YOU SMELL GAS**
  - **Do not try to light any appliance.**
  - **Do not touch any electrical switch; do not use any phone in your building.**
  - **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
  - **If you cannot reach your gas supplier, call the fire department.**
- **Installation and service must be performed by a qualified installer, service agency, or the gas supplier.**

NRTL/C

Table of Contents

THIS BOOK CONTAINS INSTRUCTIONS FOR INFORMATION AND OPERATIONS OF YOUR UNIT. KEEP IN A SAFE PLACE FOR READY REFERENCE. SHOULD YOU REQUIRE FURTHER INFORMATION, CONTACT YOUR DEALER OR OUR TECHNICAL SUPPORT DEPARTMENT AT 1-800-886-2759.

THE INFORMATION IN THIS MANUAL MUST BE FOLLOWED. IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE, OR MAINTENANCE CAN VOID WARRANTY, CAUSE PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE.
USE OF EXTENSION CORDS IS NOT RECOMMENDED AND WILL VOID WARRANTY.
A QUALIFIED INSTALLER OR SERVICE AGENCY MUST PERFORM INSTALLATION OR SERVICE. ALL LOCAL AND NATIONAL CODES MUST BE ADHERED TO WHEN INSTALLING THIS PRODUCT!

1 UNIT SPECIFICATIONS

This appliance is intended for new construction or retrofit replacement of most 42” x 16” Package Terminal Air Conditioners. Confirm that the electrical rating of this appliance matches the electrical supply available before beginning installation (refer to table on page 5).

The efficiency rating of this appliance is a product of thermal efficiency rating determined under continuous operating conditions and is determined independently of any installed system.

Due to high temperatures, the appliance should be located out of traffic and away from furniture and drapes. Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition. Young children should be carefully supervised when they are in the same room as the appliance. Clothing or other flammable material should not be placed on or near the appliance. Any safety screen or guard removed for service must be replaced before operating the appliance. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners, and circulating air passageways of the appliance be kept clean.

Use of extension cords is not recommended and will void the warranty.

Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person.

1. Safety Information
   - A. This appliance does not have a pilot. It is equipped with an ignition device, which automatically lights the burner. Do not try to light the burner by hand.
   - B. BEFORE OPERATING smell all around the appliance area for gas. If your unit uses LP (propane), be sure to smell next to the floor because LP (propane) gas is heavier than air and will settle on the floor.
   - C. Use only your hand to turn the gas valve knob. Never use tools. If the knob will not turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in fire or explosion.
   - D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and replace any part of the control system and any gas valve, which has been under water.

MODELS															
	EZ07				EZ09				EZ12				EZ15		
Volts	115	230	208	277	115	230	208	277	115	230	208	277	230	208	277
BTUH Cooling	7,500	7,500	7,300	7,500	9,500	9,500	9,300	9,500	12,200	12,200	12,000	12,200	15,000	14,800	15,500
Amps Cool	5.7	2.9	3.1	2.3	7.4	3.7	4.0	3.1	10.1	5.1	5.5	4.2	6.8	7.5	5.8
Watts Cool	660	658	640	647	845	850	830	848	1135	1140	1123	1143	1572	1557	1614
EER	11.4	11.4	11.4	11.6	11.2	11.2	11.2	11.2	10.7	10.7	10.7	10.7	9.6	9.6	9.6
CFM High Cool	340	340	320	340	400	400	380	400	400	400	380	400	460	440	460
CFM Low Cool/Heat	260	260	240	260	260	260	240	260	340	340	320	340	340	320	340

HEATING OPTIONS – Available with any cooling unit												
Input BTUH Heat	12,000	12,000	12,000	12,000	15,000	15,000	15,000	15,000	18,000	18,000	18,000	18,000
Output BTUH Heat	10,200	10,200	10,200	10,200	12,150	12,150	12,150	12,150	14,711	14,711	14,711	14,711
Volts	115	208	230	277	115	208	230	277	115	208	230	277
Watts Heat	224	184	254	294	224	184	254	294	224	184	254	294
Thermal Efficiency	85.0	85.0	85.0	85.0	81.0	81.0	81.0	81.0	81.7	81.7	81.7	81.7
Amps Heat	2.2	1.0	1.3	1.2	2.2	1.0	1.3	1.2	2.2	1.0	1.3	1.2

This appliance is based on sea level operation and need not be changed for operation up to 2,000 feet elevation. For use in the USA de-rate 4% per thousand feet above this elevation, this appliance is approved in Canada for elevations of 0-4,500 feet.

Electrical Circuit Ratings

Line Voltage	MaxImum Amperage	Wall Socket Configuration	Receptacle Number
115	16		NEMA 5-20R
208/230	16		NEMA 6-20R
208/230	24		NEMA 6-30R
277	16		NEMA 7-20R
208/230	12		NEMA 6-15R

2 INSTALLATION

Any safety screen or guard removed for servicing an appliance must be replaced prior to operating the appliance.

When installed in the appropriate wall sleeve, this appliance has zero clearance to combustible construction.

The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during pressure testing of that system at test pressures in excess of 1/2 psi. The appliance must be isolated from the gas piping system by closing equipment shutoff valves during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi.

The gas-fired heating design of this appliance requires that the installation of this appliance must conform with local codes or, in the absence of local codes, with the *National Fuel Gas Code, ANSI Z223.1/NFPA 54* and/or *National Gas and Propane Installation Code, CSA B149.1*.

This appliance is only for use with the type of fuel indicated on the rating plate. This appliance is not convertible for use with other gases.

Inlet gas pressure – Natural Gas: minimum 5.5” W.C., maximum 13.5” W.C.
Liquefied: minimum 11” W.C., maximum 13” W.C.
Minimum inlet pressures must be maintained for purpose of adjustment.

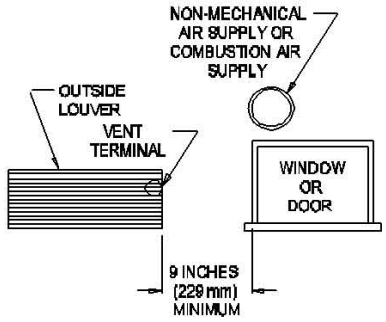
Confirm that Code-stipulated vent terminal positioning restrictions for minimum clearance distances to grade level below the rear of the wall sleeve, gas and electric meters, regulators, and relief equipment or adjacent public walkways, adjacent buildings, openable windows, and other building openings are consistent with local codes and/or *ANSI-Z223.1* and/or *CSA B149.1*. The *ANSI Z223.1* specifications include the following:

The vent terminal shall terminate at least 3 feet above any forced air inlet located within 10 feet. This provision does not apply to the combustion air intake of a direct vent appliance. **See Figure 1 Sidewall Venting Requirements**

1- The vent terminal shall be at least 1 foot above grade.
2- The vent system of a direct vent appliance with an input of 50,000 BTU/H or less shall be located at least 9 inches from any openings through which flue gases can enter.
3- Vent terminals shall not terminate over a public walkway or over an area where condensate or vapor cloud could create a nuisance or hazard or could be detrimental to the operation of regulators, relief valves, or other equipment.

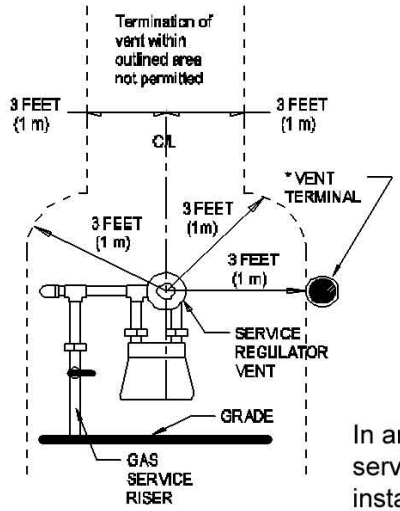
EXCEPTIONS FOR INSTALLATION IN CANADA

1- The vent terminal shall be located at least 1 foot from any window or door which can be opened in any building, any non-mechanical air supply inlet to any building, or the combustion air inlet to any other appliance.
2- The vent terminal shall be located at least 6 feet from any mechanical air supply to a building.
3- The vent terminal shall not terminate above a meter/regulator assembly within 3 feet horizontally of the vertical centerline of the regulator and shall be at least 3 feet from any gas service regulator vent outlet or electrical device.
4- The vent terminal shall not terminate less than 7 feet above a paved sidewalk or a paved driveway located on public property.
5- The vent terminal shall not terminate directly above a paved sidewalk or a paved driveway, which is located between two single-family dwellings.
6- The vent terminal shall not terminate underneath a porch, veranda, or deck unless the veranda, porch, or deck is open on a minimum of two sides beneath the floor, and the distance between the top of the vent terminal and the underside of the veranda, porch, or deck is at least 1 foot.

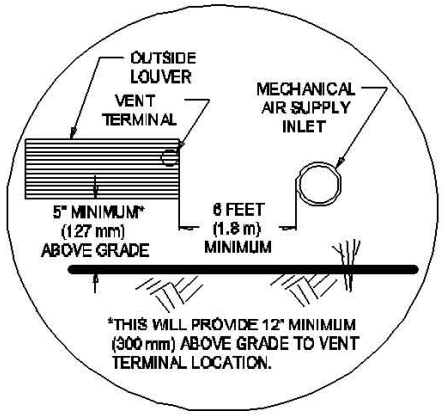


A vent is permitted under a veranda, porch or deck only where there are (2) fully open sides beneath the floor. A minimum of 12 inches (300mm) must be maintained from the vent to the underside of the veranda, porch or deck.

This vent must be fitted with a cap in accordance with the vent manufacturer's installation instructions.



*Louver not shown



In areas with low street gas pressures, a service regulator vent may not be installed. Maintain required clearances regardless, since street service may be updated in the future.

Figure 1
Sidewall Venting Requirements

Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

Ensure that there is adequate clearance for servicing and proper operation. A minimum of 36 inches to the front of the wall sleeve is required to remove the appliance from the wall sleeve.

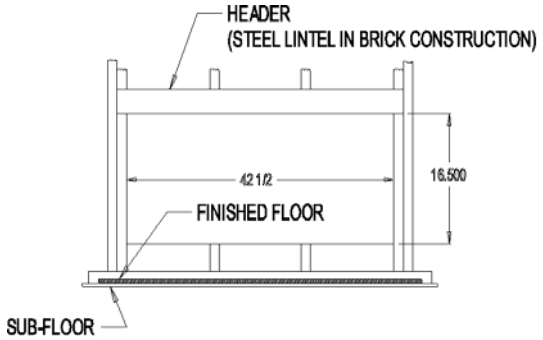
The installer is to ensure that adequate combustion and ventilation air is provided.

INSTALLATION PROCEDURE

STEP 1 For installation of retrofit replacement package terminal air conditioners. This unit will fit most existing 42" x 16" type wall sleeves by removing the existing front cabinet and air conditioner. If using the existing wall sleeve and outdoor louver, they must be inspected to ensure satisfactory condition prior to unit installation, and louver design must be approved by the Islandaire Engineering Department.

For installation of new construction, a wall sleeve must be installed through a 42-½ inch wide x 16-½ inch high hole in the exterior building wall. **See Figures 2, 3, and 4 for wall sleeve framing dimensions**. Secure the wall sleeve to the surrounding studs by drilling two 1/8 inch diameter holes through both sides approximately in the center of studs using ¾ pan head type screws supplied. Shim if necessary to prevent the sleeve from bowing. Make sure the wall sleeve is level from side to side and sloped ¼ inch from front to rear. ***DO NOT DRILL HOLES IN THE BOTTOM OF THE SLEEVE, WATER DAMAGE WILL OCCUR.***

Seal around the outside portion of the wall sleeve using weatherproof caulking to form a seal against rain, snow, and air leakage.



NOTE: Units approved for 0" clearance to combustible constructions top, sides, and bottom. Front and rear clearance not applicable as there can be no construction combustible or non-combustible to the front or rear of the opening.

Figure 2
Wall Sleeve Framing Dimensions

STEP 2 Important: Before installing louvers above the first floor, be sure to secure louver with a safety line (rope) to ensure louver does not fall. Attach the outdoor louver from the inside by maneuvering the louver through upright supports in the sleeve. Use the four #8-32 nuts and bolts to fasten the louver to the left and right sides of the wall sleeve.

STEP 3 Slide the Islandaire Series "GS" air conditioner into the wall sleeve. Verify proper sealing between the air conditioner and wall sleeve, also between the air conditioner and the outdoor louver. Lock the unit into the wall sleeve using the #8 sheet metal screws supplied. Consult Islandaire for information for accessory kits, which may be required for some retrofit installations.

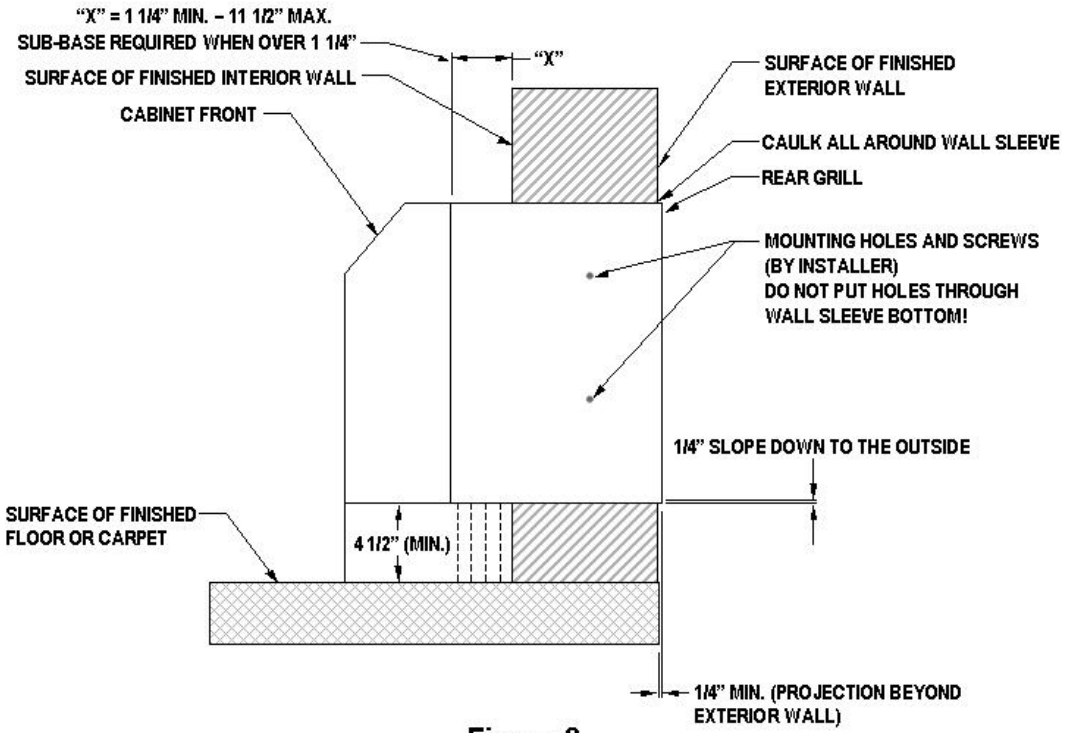


Figure 3
Wall Installation

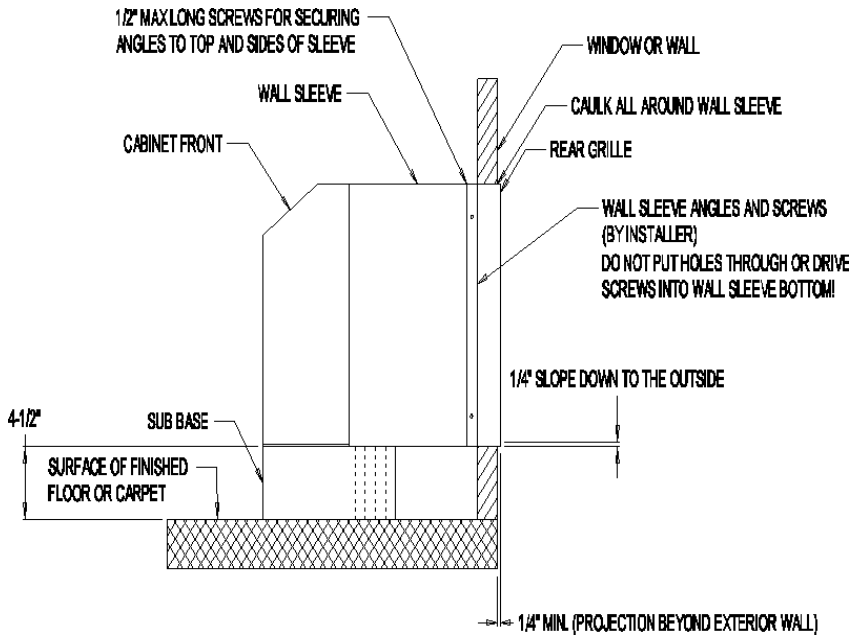


Figure 4
Panel Wall or Window Installation
Sub-Base Required

STEP 4 Connect gas supply line to the gas valve located in the lower right front of the unit, **See Figures 5 and 6.** A manual valve must be installer-supplied either inside or just outside of the wall sleeve as appropriate per local codes and/or ANSI-Z223.1 or CAN/CGA-B149. An 18-24 inch listed gas hose/flexible connector with ½ SAE female flare must be installer-supplied for connection to the appliance.

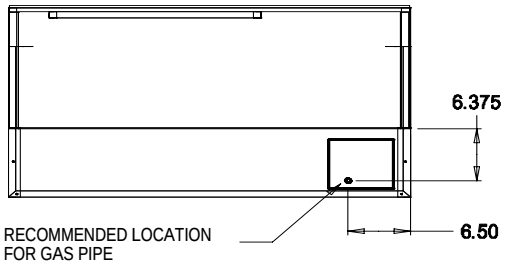


Figure 5
Gas Supply Entrance
Top View

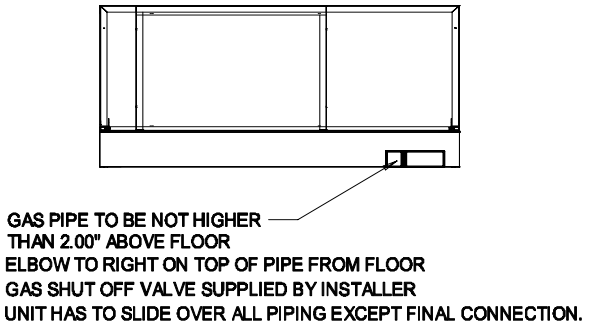


Figure 6
Gas Supply Entrance
Front View

STEP 5 Pressure test and purge gas piping according to the requirements of local gas codes and/or ANSI-Z223.1 or CAN/CGA-B149. The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures above ½ PSIG (3.5 kPa). Additionally, the appliance must be isolated from the gas supply piping system by closing the appliance manual valve during any pressure testing as described above.

STEP 6 Install air filter. Failure to do so could void the warranty.

STEP 7 Attach the wrap around room cabinet by sliding it down over mounting brackets located on the top and lower right and left sides of the cooling chassis.

STEP 8 Plug the integral supply cord (if provided) into an appropriate receptacle or directly wire the appliance to the appropriate electrical supply. Verify proper wiring of receptacle prior to attaching supply cord. Incorrect wiring may impede operation of unit. If this appliance is provided with a flexible service cord, the three-prong (grounding) plug is for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from the plug. When this appliance is installed, it must be electrically grounded in accordance with local codes or in the absence of local codes, with the National Electrical Code ANSI/NFPA 70 and/or the CSA C22.1 Electrical Code.

3

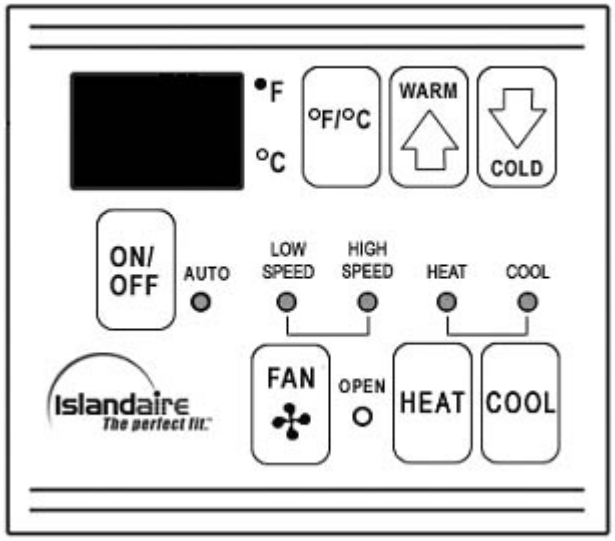
OPERATING INSTRUCTIONS

LIGHTING, OPERATING AND SHUT DOWN INSTRUCTIONS

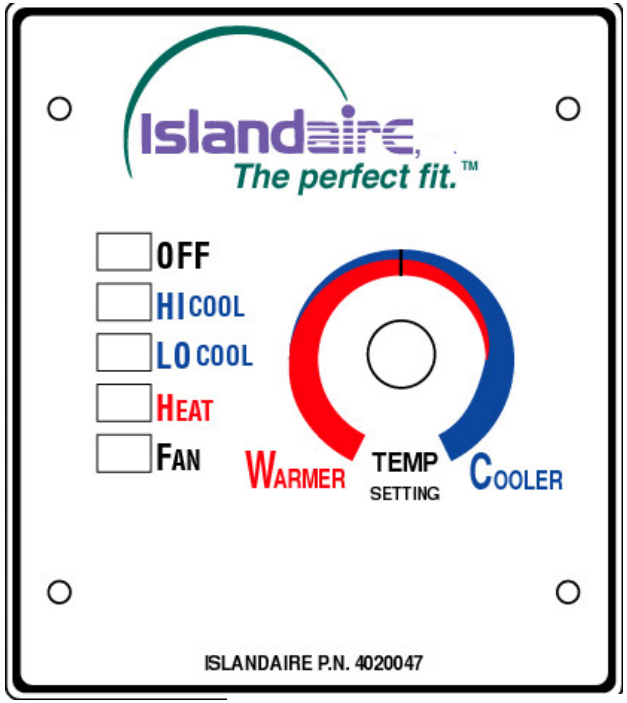
This appliance requires combustion air for heating operation. Air is drawn from the outdoors through the rear grill assembly. Do not block or obstruct air openings in the rear grill.

This appliance will automatically light itself in response to a thermostat call for heat. To initiate heating operation, turn on the manual valve in the gas supply piping and the manual valve located in the front right compartment of the appliance.

This procedure should be used on initial start up of thru-wall air conditioning units. On new installations and on units that may have been idle for a period of time, procedure should take approximately ten minutes per unit to test adequately.



Digital control plate



Mechanical control plate

Figure 7

Fan Mode

Press the FAN button on the selector switch and allow motor to reach maximum R.P.M. in the warm months. If unit is in a warm area, this should be approximately 15 to 30 seconds. In cold months or cold areas, this could take up to 90 seconds or more. This allows time to warm up on HI speed.

Electronic Units: Push fan button to cycle through Hi, Low, and Automatic Cycles.

Cooling Mode

Press HI COOL button, rotate thermostat counterclockwise until it stops. The indoor fan motor will run. WARNING: IF OUTSIDE TEMP. IS BELOW 55 DEGREES, DO NOT START THE COMPRESSOR AT THIS TIME. WAIT UNTIL WARMER WEATHER TO OPERATE COOLING. If the outside temperature is above 55 degrees, rotate the knob clockwise. The compressor and condenser fan motor will start. Cool air should be felt at the discharge openings in a short period of time (approximately 60 to 90 seconds).

Firmly press LO COOL button. The indoor motor should reduce speed without affecting compressor or condenser motor speed.

Heat Mode

Push the HEAT button on the selection console and establish the desired temperature setting on the thermostat or digital read out, depending on the control system supplied.

When a call for heat is received from the thermostat, the control will check the pressure differential switch for normally open contacts. The combustion blower is then energized, once the pressure switch contacts close, a time delay begins, and the hot surface igniter is activated. Following the igniter heat up period, the gas valve is energized for the trial for ignition period.

Should the burner fail to light or flame is not detected during the first trial for ignition period, the gas valve is de-energized, and the control repeats the prepurge cycle before another ignition attempt. The control will attempt two additional ignition trials before going into lockout. The valve relay will be de-energized immediately, and the combustion blower will be turned off, following the optional post purge period.

Recovery from lockout requires a manual reset by either cycling the thermostat or switching the appliance OFF and ON.

If the thermostat is still calling for heat after one hour, the control will automatically reset and attempt to ignite the burner again.

If the established flame signal is lost while the burner is operating, the control will respond within 0.8 seconds. The gas valve is de-energized immediately and a new ignition sequence begins in an attempt to relight the burner. If the burner does not light, the control will de-energized the gas valve. The system will make two more attempts to relight the burner. If the burner does not relight, the control will go into lockout as noted previously. If the flame is re-established, normal operation resumes.

Following burner ignition, the circulating fan will delay starting until the heat exchanger warms up. Following burner extinction, the circulating fan will continue to operate until the heat exchanger cools down. Circulating fan operation may terminate immediately if the appliance is switched OFF.

The appliance will attempt up to three ignition trials with a purge period in between. Should ignition not be achieved after the third attempt, the appliance will enter a lockout mode.

Combustion airflow is continually monitored during an ignition sequence by the airflow switch. If during the initial call for heat the airflow switch contacts are in the closed position for 30 seconds without an output to the combustion blower, an airflow fault will be declared and the control will remain in this mode with the combustion blower off waiting for the airflow switch contacts to open.

If the pressure differential switch remains open for more than 30 seconds after the combustion blower is energized, an airflow fault will be declared and the control will stay in this mode with the combustion blower on.

When proper airflow is detected from the pressure differential switch, the control begins the prepurge period with normal ignition sequence as follows:

If the pressure differential signal is lost while the burner is firing, the control will immediately de-energize the gas valve and the combustion blower will remain on. If the call for heat remains, the control will wait for proper airflow to return. If the proper airflow is not detected after 30 seconds, an airflow blower fault signal will flash at the LED. If the proper airflow is detected at any time, a normal ignition sequence will begin with the prepurge period.

The LED can be viewed without removing the unit from the wall by removing or tilting front cover forward and observing it through the clear view port located to the left of the controls. **See Figure 8**

View Port

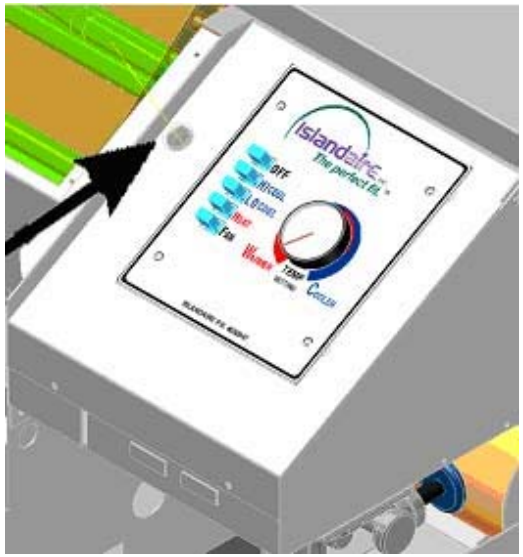


Figure 8
View Port Detail

If at any time the main valve fails to close completely and maintain a flame, the full time flame sense circuit will detect and energize the combustion blower. Should the main valve later close completely removing the flame signal, the combustion blower will power off following the optional post purge period for reconditioning the system.

Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the appliance before shutting off the electrical supply.

Base Electronic Control Operation (See Figure 9)

Turning Unit ON for Heating and Cooling:

1- Press **ON/OFF** key (room temperature will appear in display).
2- On initial startup press F/C key to select temperature scale (Celsius or Fahrenheit).
3- Select mode by pressing **HEAT** or **COOL** key.
4- Adjust set point by pressing **WARM** (up arrow) or **COLD** (down arrow) key (*while adjusting, temperature set point will appear in display*).
5- Select fan mode by pressing FAN key. Select constant fan operation (**LOW** or **HIGH** speed) or **AUTO**.

In **AUTO** the fan will cycle and select fan speeds based on heating or cooling demand.

Turning Unit OFF:

1- Press **ON/OFF** key (temperature display disappears).
2- To turn fan off press **FAN** key until fan **AUTO** LED indicator is lit.

Fan Only Operation:

1- Turn off unit by pressing **ON/OFF** key (temperature display disappears).
2- Select fan mode by pressing FAN key. Select constant operation (**LOW** or **HIGH** speed).
3- Selecting **AUTO** will turn fan off.

NOTE: When unit is shut off, current settings are saved in memory. When unit is turned back on, these settings are restored.

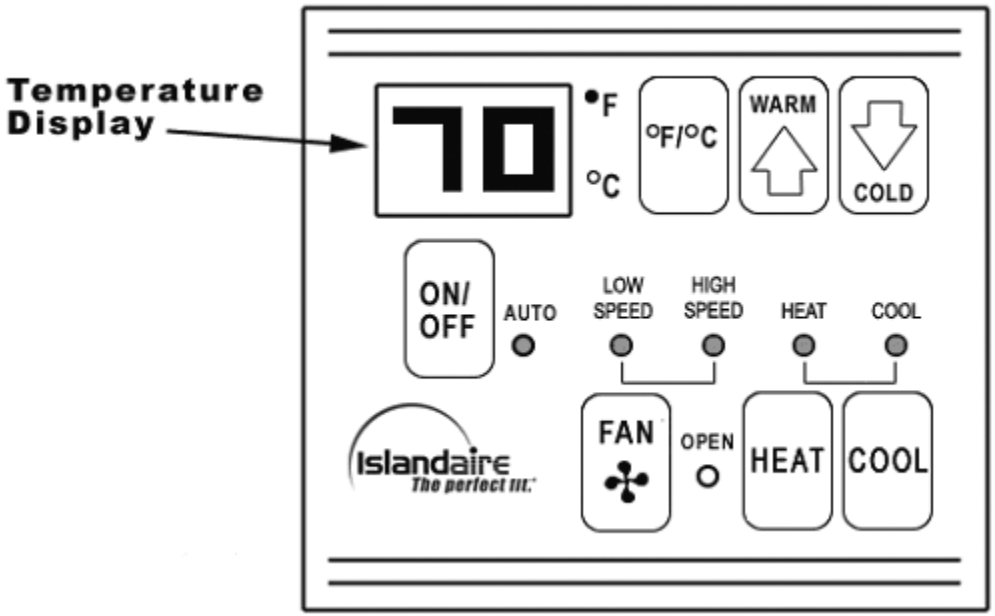
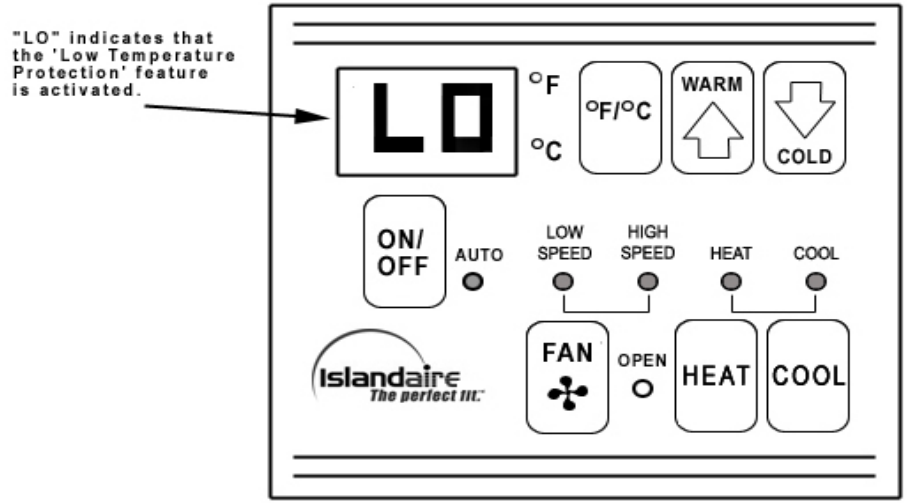


Figure 9
Base electronic control keypad

For all units equipped with electronic controls - Low Temperature Protection



A standard feature of the Islandaire electronic control system is the **'Low Temperature Protection'** option. If an indoor temperature of **55 degrees** Fahrenheit (or lower) is detected, the heat cycle will automatically activate (even if the unit is in the **OFF** position). While the **'Low Temperature Protection'** feature is activated, the letters **'LO'** will be displayed. The heat cycle will continue until the room temperature reaches **50 degrees** Fahrenheit, at which time the unit will satisfy and shut down. All control functions will be locked-out while **'LO'** is displayed.

Note: Disconnecting the power supply to the unit is the only way to interrupt unit function while the **'Low Temperature Protection'** feature is activated. If desired, this feature may be disabled by your qualified service provider.

SHUT DOWN

For extended shut down, turn off the manual valve in the gas supply piping and the manual valve located in the front right compartment of the appliance. Push the OFF button on the selection console and unplug power cord or turn off circuit breaker powering unit.

Note: On electronic units if power is not disconnected, the unit may activate indoor low temperature mode which will allow the appliance to maintain 55 degrees in the room space whether or not it is in the “OFF” position.

4

SERVICING

See Figures 16 - 22 for the proper wiring arrangement.

CAUTION: Label all wires prior to disconnection when servicing controls. Verify proper operation after servicing.

Periodically inspect outside louver, combustion air intake, and exhaust to make sure they are free of any obstruction or restriction. It is imperative that the products of combustion are properly vented to the outside atmosphere and that all combustion air supplied to the burner is drawn from the outside atmosphere.

Periodically check the control compartment, burner, and air circulating passageways of the unit. It is imperative that these areas be kept clean. *NOTE: More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc.*

The appliance area must be kept clear and free from combustible materials, gasoline, and other flammable liquids and vapors.

A periodic visual inspection of the burner flame through the sight glass is needed. The flame should be characterized by a blue flame with well-defined burner ports. The burner is factory set for maximum performance, however it can be removed from the unit to make air adjustments if necessary (See Figure 10 for disassembly). If the flame cannot be adjusted to achieve the desired burner flame, the surface of the burner and each burner port should be cleaned.

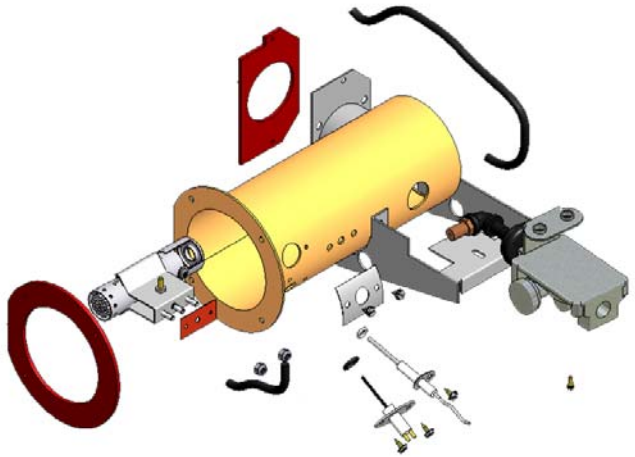


Figure 10
Combustion Box Assembly
See Page 62 for Item Details

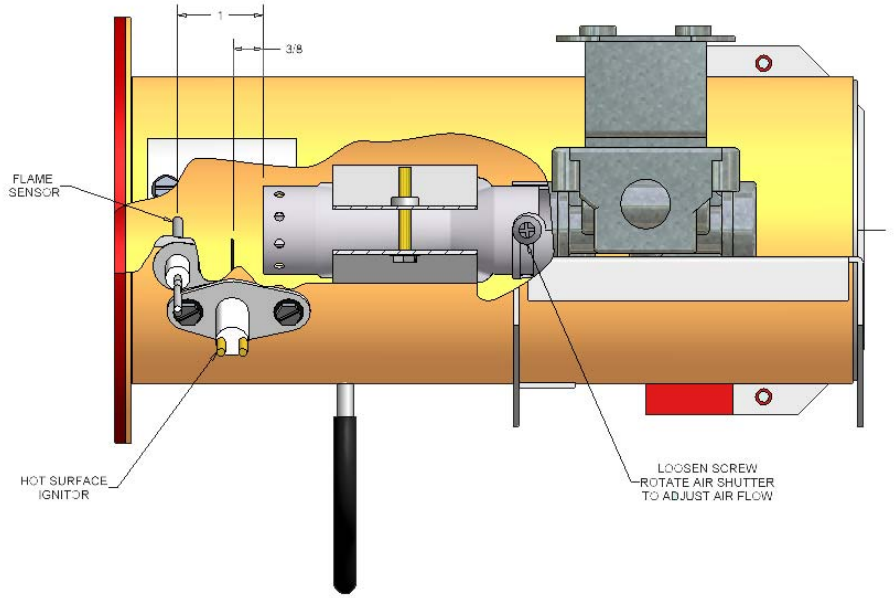


Figure 11
Burner Adjustment

The recommended method of cleaning flue gas passageways of the appliance is with a suitable flexible-shaft soft bristle brush and/or compressed air.

Disconnect electrical power before servicing.

Remove the combustion tube during any cleaning procedure. Remove igniter. The burner can then be cleaned with a soft brush without being removed from the combustion tube.

Ensure that the burner is centrally positioned around the gas orifice.

Should the appliance fail to operate, the ignition control displays a small LED light with up to three flashing pulses as follows. This LED light can be observed through the clear view port near user controls. **See Figure 8**

Error Mode	**LED Indication**
Internal Control Failure	**Steady On**
Air flow Fault	**1 Flash**
Flame with no call for Heat	**2 Flashes**
Ignition Lockout	**3 Flashes**

THERMOSTAT FOR MECHANICAL CONTROLS - CHECK/TEST & REPLACEMENT

Before replacement of the thermostat, it should be thoroughly checked by qualified personnel to determine true condition. Make sure each unit is disconnected from power source by unplugging, disconnecting switch, or disconnect at incoming circuit breaker or fuse box. Test for voltage before starting service.

Cycle the thermostat. If a clicking sound is heard, a continuity check should be made to determine that the electrical circuit has not broken down. At one point, continuity will be found between terminals 2 (common) and 1 on cooling circuit, when knob is rotated clockwise and between terminals 2 and 3 when knob is rotated counter-clockwise on heating circuit.

If room temperature is above 85 degrees at time of test, it may be necessary to cool thermostat bulb in cool water (below 75 degrees) to allow thermostat to operate on heating circuit. If thermostat does not function properly, replace according to the following instructions:

2- Remove decorative front panel and disconnect power.
3- Remove two screws located on the front of electric box top and rotate electric box top upwards.
4- Remove thermostat knob. Locate thermostat-mounting screws under the decorative operation plate near the thermostat control knob shaft.
5- Loosen the two screws, and thermostat will drop down for easy removal. Attach wiring to replacement thermostat at time of removal from failed thermostat to insure proper hookup without reversing the circuit. Check wiring diagram.
6- Reinstall the new thermostat using the reverse procedure of removal instructions.
7- Remove old thermostat capillary tube and bulb from hole in panel and clamp on blower housing.
8- Install new bulb through hole in panel and into clamp on blower housing.
9- Test unit.
10- Check for proper operation of the unit.
11- Reassemble thermostat knob, electric box top, and decorative panel.

COMPRESSOR

1- Make sure the compressor is at fault before starting a replacement procedure. This should be done by a qualified technician. A compressor that fails to start may appear to be faulty when in reality the fault may be elsewhere.
2- Check all other possibilities first. Examine the switch, thermostat, capacitors, wiring, and incoming power for electrical and/or mechanical misapplication or malfunction.
3- Disconnect unit from power source by unplugging, disconnecting switch, or disconnect at circuit breaker or fuse box before further test.
4- Check compressor motor to see if it is electrically grounded or open. If no fault is found, check motor resistance to determine if it shorted in motor winding.
5- If compressor is grounded or shorted out, this is a possible burnout situation and care should be taken when further work is done to insure safety to eyes and skin from acid in the refrigerant caused by burnout.
6- When breaking the refrigerant line to discharge gas or liquid, use extreme care. The unit should be moved to an area suitable for the procedure, if possible. NOTE: IT IS THE RESPONSIBILITY OF THE SERVICE PERSON TO PROPERLY RECOVER AND RECYCLE ALL REFRIGERANT IN THE SEALED SYSTEMS ACCORDING TO EPA GUIDELINES.
7- Remove compressor and install proper replacement. Consult Customer Service Department if in doubt. **See Figure 12**
8- If compressor was a burnout, install proper, approved filter drier in the refrigeration circuit. It may be necessary to fabricate new copper tubing. Make sure of proper material and line size.
9- If excessive burn has occurred, use a suction line filter drier also. Tubing changes may be necessary.
10- If excessive acid was found in the system, unit should be blown out with dry nitrogen before final hookup of new compressor, or a second burnout may occur very shortly. Any oil lost during this procedure must be replaced.
11- After braze has been completed, leak check the unit and evacuate the system. Then recharge with Refrigerant-22 to the amount specified on the nameplate.

Figure 12
Compressor

CAPACITORS

On occasion problems of compressor, condenser, or evaporator motor not starting, cycling, or running in reverse may be attributed to capacitor failure or failure of the compressor valves. If you have such a problem, first check the capacitor.

1- Make sure all power to the unit has been turned off before opening or removing service panel. This service should only be performed by a qualified technician. Before touching the capacitors, using an insulated screwdriver, short the terminals to each other and to the cabinet (gnd). This should be done on both capacitors to reduce hazard of electrical shock.
2- Remove one lead wire from the capacitor.
3- Using an ohmmeter, touch probes to terminals. A slight deflection should occur, then drop back to “0” reading.
4- Reverse probes and touch to terminals. Again a slight deflection should occur, then drop back to “0” reading.
5- If available, a capacitor checker should be used to get true capacitance.
6- If capacitor shows signs of failure, replace with correct part.

SWITCH - CHECK/TEST & REPLACEMENT

Occasionally it may become necessary to service the switching circuit of the thru-wall air conditioning units. The following procedure is to aid you if this should become necessary. **See Figure 13**

First, test the switch according to the following to find out if the switch is the faulty item in the circuit.

1- Make sure the unit has been disconnected from the power source. Unplug, open disconnect switch, or disconnect at circuit breaker box or fuse box as required. Check for power at unit junction box to insure power is off before proceeding with check tests.
2- Disconnect all wire terminals from the switch.
3- Connect test probe of ohmmeter (or other continuity checking meter or device) to terminal L1 of the switch. Check for continuity as follows.
4- Push OFF button. There should be no reading of continuity from L1 to any terminal.
5- Push HI COOL button. Cooling with hi-speed evaporator motor. There should then be continuity between L1 terminal and terminals 1,2, and 4 only.
6- Push LO COOL button-cooling with low-speed evaporator motor. There should then be continuity between terminal L1 and terminals 1,3, and 5 only.
7- Push HEAT button. There should be continuity between terminal L1 and terminals 5 & 6, and L2 & H.
8- Push FAN ONLY button. There should be continuity between L1 terminal and terminal 4 only.
9- With buttons for HI COOL, LO COOL or FAN pushed, there should then be continuity between terminal L2 and terminal 7. No continuity when HEAT button is pushed.
10- Any deviation from above information would indicate that the switch is faulty and should be replaced according to the following instructions.
11- Remove thermostat knob, control plate, and chassis front panel.
12- Remove the two screws, and the switch will drop down. Remove thermostat from control box.
13- Remove wiring from old switch and attach to new switch one wire at a time to insure proper wiring. Refer to wiring diagram.
14- Reassemble by reversing the above instructions.

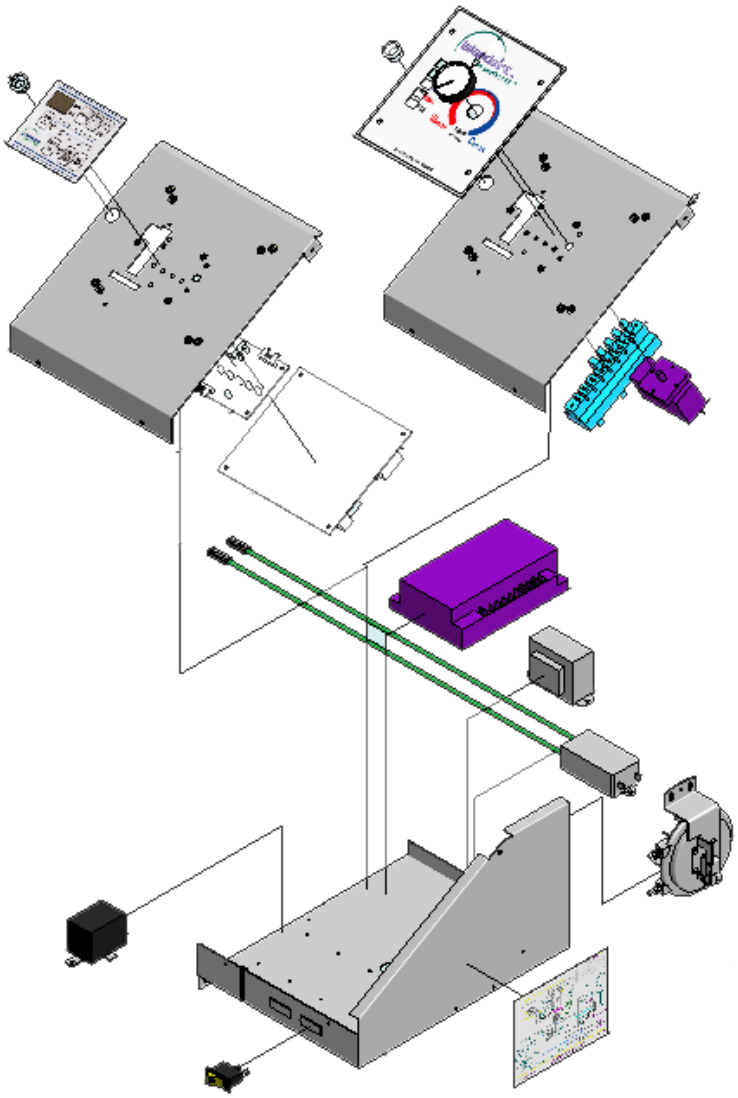


Figure 13
Electric Box Assembly
(Electronic or Standard Controls)
See Page 61 for Item Details

ELECTRONIC BOARD DIAGNOSIS/TEST *(Base or Intellitemp)*

Each unit has two built-in tools to assist the technician in the troubleshooting of the entire system. The first tool is the Continuous System Diagnostics, and the second tool is the Automatic System Component Test.

1- Continuous System Diagnostics:

The control incorporates continuous self-diagnostic checking of several system parameters and reports the status by an LED blink code on the main board.

1- Un-plug or disconnect the power to the unit.
2- Gain access into the electric box on the chassis and locate the main board within.
3- Locate the LED labeled DIAGNOSTIC STATUS on the main board, near the center of the board.
4- Reapply power to the unit, wait approximately 10 seconds, and the unit will enter its normal operating mode. At this time the diagnostic indicator LED will blink repeatedly. These blink codes will repeat approximately every 5 seconds with a delay between cycles and are readable as follows:
   a. 0 blinks = No power
   b. 1 blink = Normal
   c. 2 blinks = IAT (indoor air temperature) probe failure (check connection/replace)
   d. 3 blinks = OAT (outdoor air temperature) probe failure (check connection/replace)
   e. 4 blinks = Communications failure between boards
   f. 5 blinks = Keypad failure (stuck key) or interconnect & ribbon cable failure
   g. 6 blinks = Remote thermostat input failure (bad input combination) check thermostat wiring
   h. 7 blinks = Inadequate ground
   i. 8 blinks = Outdoor coil low temperature switch open (only if Heat Pump configured by DIP switch) disables compressor operation

j. 9 blinks = Fan-limit switch open (only if Hydronic heat or gas heat configured by DIP switch) – Disables fan in gas heat mode and Hydronic heat mode
k. 10 blinks = Configuration read failure (check setting on configuration switch)
l. 11 blinks = Module mismatch error (occurs if board versions are mismatched)

2- <u>Automatic System Component Test:</u> *(to be performed by a qualified service technician)*

1- Un-plug or disconnect power to the unit.
2- Gain access to the main board mounted within the electrical box.
Locate the 9-pin connector labeled **EXPANSION** on the main board. Pin #1 is located closest to the smaller connector labeled **IAT**. **See Figure 14**

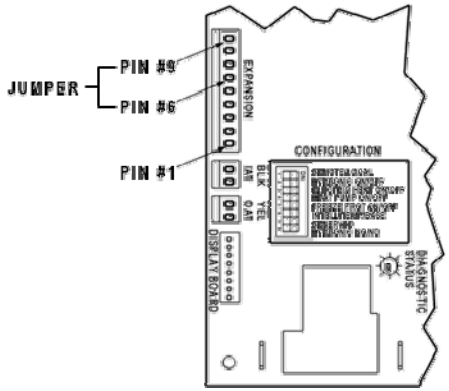


Figure 14

3- Place a jumper between pin #6 and pin #9 of the EXPANSION connector.
4- Be sure any wires or parts moved during installation of jumper will not cause an electrical short.
5- Reapply power to the unit and wait approximately 20 seconds, and the unit will enter an automatic system component test sequence. The system automatically runs through the operational functions of each component within the unit. If the unit is equipped with a display, an abbreviated description of each function will be displayed (display is where temperature and set points are viewed) as each function is tested. **Table 1** describes the abbreviated descriptions that are displayed and unit operation. Only functions available to the unit will be tested. Others will simply be ignored. This allows the technician to perform a quick field diagnostic of whether the compressor, motor speed, or heating components function properly during the automatic test function. Service efforts can be directed to the various controls that operate the system.
6- Un-plug or disconnect power to the unit.
7- Remove the jumper that was installed on pins #6 and #9 of the expansion connector.
8- Reapply power to unit to resume normal operation.

Table 1

Phase	Display	LEDs	Unit Operation	Time (seconds)	Notes
1	F1	Low Fan	LO FAN	5	
2	-	-	OFF	1	
3	F2	Med-Low Fan	MED-LO FAN	5	Will skip if base
4	-	-	OFF	1	Will skip if base
5	F3	Med-High Fan	MED-HI FAN	5	Will skip if base
6	-	-	OFF	1	Will skip if base
7	F4	High Fan	HI FAN	5	
8	-	-	OFF	1	
9	HP	Low Fan, F, C, Auto	RV, COMP, LO FAN	10	Skip if no Heat Pump
10	C	Low Fan, F, C, Auto	COMP, LO FAN	10	Skip if Heat Pump
11	-	-	OFF	1	
12	EH	Low Fan, F, C, Auto	ELEC HEATER, LO FAN	10	Skip if no Elec Heat
13	-	-	OFF	1	Skip if no Elec Heat
14	HD	Low Fan, F, C, Auto	HYDRONIC, LO FAN	5	Skip if no Hydronic
15	-	-	OFF	DONE	Skip if no Hydronic

BLOWER WHEEL REPLACEMENT (See Figure 15)

1- Make sure the unit has been disconnected from the power source. Unplug or disconnect at circuit breaker box or fuse box as required. Confirm that power is off at the unit.
2- Remove front decorative cabinet panel. Remove front panel of chassis by removing all panel mounting screws on chassis side. NOTE: COMPLETE FAN DECK ASSEMBLY MUST BE REMOVED FOR SERVICE.
3- Remove two clamps, one on each end of pan attached to coil end plates with screws.
4- Disconnect the drain hose at the drain pan.
5- Unplug motor wires from quick connector.
6- Remove thermostat bulb from the blower housing.
7- Press down on front of pan and pull forward. Pan should slip off the locating brackets and be ready to continue servicing on a bench.
8- Remove three screws and orifice ring from side of blower housing.
9- Loosen wheel setscrew with allen/torx wrench and slip off shaft.
10- Replace with new wheel. Make sure vanes are in right direction for the airflow.
11- Tighten setscrew and re-assemble fan deck assembly by reversing the above procedure, making sure that rotation is correct and the wheel is centered in the housing when running.
12- Remount pan assembly into unit by inserting pan under evaporator coil, making sure the rear of the pan is resting on the locating brackets. Lift up the front and hold while attaching clamps to end plates of the coil. Make sure pan is secure after clamps are tightened in place.
13- Connect drain hose to drain pan. Remount thermostat bulb on housing. Reconnect motor wiring harness to quick connector. Remount front panel on chassis.
14- Reconnect power source, check and test unit.

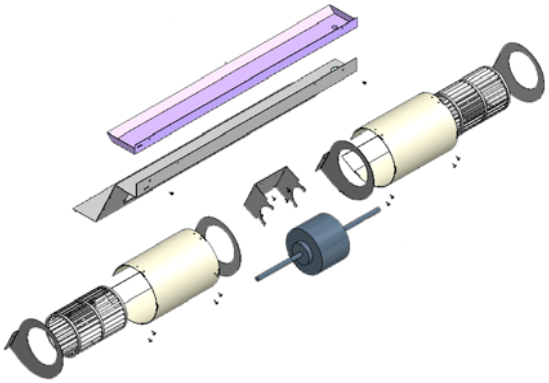


Figure 15
Fan Deck Assembly
See Page 64 for Item Details

BLOWER HOUSING REPLACEMENT (See Figure 15)

1- Make sure that the unit has been disconnected from the power source. Unplug or disconnect at circuit breaker box or fuse box as required. Make sure that power is off at the unit.
2- Remove front decorative cabinet panel and remove front panel of chassis by removing all panel screws on chassis. NOTE: COMPLETE FAN DECK ASSEMBLY MUST BE REMOVED TO SERVICE THESE PARTS.
3- Remove two clamps, one on each end of pan attached to coil end plates with screws.
4- Disconnect the drain hose at the drain pan.
5- Unplug motor wires from the quick connector.
6- Remove thermostat bulb from the blower housing.

7- Press down on front of pan and pull forward. Pan should slip off the locating brackets and be ready to continue servicing on a bench.
8- Remove three screws and orifice ring from side of blower housing.
9- Loosen wheel setscrew with allen/torx wrench and slip off shaft.
10- Remove three additional screws in blower outlet to the pan flanges. Housing will be free to remove.
11- Replace with new housing and re-assemble all parts by reversing the above procedure, making sure that the blower wheel rotation is correct and the blower wheel is centered in the housing when running.
12- Remount pan assembly into unit by inserting pan under evaporator coil, making sure the rear of the pan is resting on the locating brackets. Lift up the front and hold while attaching clamps to end plates of the coil. Make sure pan is secure after clamps are tightened in place.
13- Connect drain hose to drain pan. Remount thermostat bulb on the housing. Replug the motor into unit. Remount front panel on chassis.
14- Reconnect power source, check and test unit.

EVAPORATOR MOTOR REPLACEMENT (See Figure 15)

It may be necessary to replace the evaporator motor, but first make sure that it is the motor that is at fault.

1- Make sure that the unit has been disconnected from the power source. Unplug or disconnect from power at circuit breaker box or fuse box as required. Make sure that power is off at the unit.
2- Remove front panel of chassis by removing all panel mounting screws. NOTE: Unplug motor and check for short or open motor windings with a meter or circuit tester. If no fault is found in the motor, check back on the circuit to establish faulty part. If replacement is required, the complete fan deck assembly must be removed for this service.
3- Remove two clamps, one on each end, attached to coil end plates with screws.
4- Disconnect the drain hose at the drain pan.

5- Remove thermostat bulb from the clamp on the housing.
6- Press down on front of pan and pull forward. Pan should slip off the locating brackets and be ready to continue servicing on a bench.
7- Remove three screws and orifice ring from sides of both blower housings.
8- Loosen setscrews with allen/torx wrench and slip off the shaft.
9- Remove three screws in blower outlet to pan flanges. Housing will be free to remove.
10- Remove two motor mounting spring clamps on the end bell isolators of the motor. They unsnap from the mounting cradle. Remove screw holding ground wire. Motor is now free to remove.
11- Check drain hose for possible obstruction and clean pan of dirt or other items.
12- Remount new motor and reassemble by reversing the above procedures. NOTE: Make sure vanes are in right direction for airflow. Make sure that the wheels are centered in the housing and have proper clearances when running.
13- Remount pan assembly into unit by inserting pan under evaporator coil, making sure the rear of the pan is resting on the locating brackets. Lift up the front and hold while attaching clamps to end plates of the coil. Make sure pan is secure after clamps are tightened in place.
14- Remount thermostat bulb in clamp on housing. Reconnect motor to unit. Remount the front panel on the chassis.
15- Reconnect power source, check, and test unit.

CONDENSER MOTOR REPLACEMENT

As this is a major service, every effort should be made to inspect the condenser motor thoroughly prior to removal to be absolutely sure the motor is faulty.

1- Make sure that the unit has been disconnected from the power source. Unplug or disconnect at circuit breaker box or fuse box as required. Make sure power is off at the unit.

2- Check motor lead wires (black & white) for short or open in motor winding with meter or other circuit tester. Repeat test for red to white, blue to white, black to white, purple to white and test the motor run capacitor. If no fault is found with motor or capacitor, check unit to establish faulty part. To replace the condenser motor, use the following steps.
3- Remove chassis from wall sleeve.
4- Remove condenser cover screws from left and right sides of the condenser coil and top of shroud. Lift off condenser cover.
5- Disconnect four motor wires. Pull wires through firewall hole on motor side and remove motor lead clamp on firewall. Record location of wires in control box for future reference.
6- Remove two screws to firewall at top of condenser fan shroud and remove two screws attaching coil to bottom pan flange.
7- Loosen setscrew on fan blade and move fan blade forward towards coil.
8- Carefully lift coil and shroud above pan flange and pull out from the unit on the left side, being careful not to rupture the copper tubing. This service should be performed by a qualified technician only!
9- Remove fan blade, three nuts, and ground wire.
10- Motor may now be removed from the unit. There will be three rubber grommets and steel sleeves in the mounting leg holes in the motor if provided. These must be removed from the old motor and installed on the new motor mounting legs.
11- Reassemble unit exactly in reverse of the disassembly instructions using EXTREME caution when handling the coil and copper tubing assembly. When re-attaching motor leads into control box, make sure that the wiring is routed and connected in exactly the same fashion as the old motor leads. If wire colors of the old motor are not the same colors as the new motor, refer to the wiring diagram shipped with the motor.

START CAPACITOR USE

Each air conditioning unit is 100% run-tested during manufacture. Occasionally though, when a unit has been shipped with a complete charge, the compressor may be locked up due to oil drainage and/or refrigerant migration. If this occurs, the compressor should be checked electrically. (**See Compressor Section)** If the compressor has been checked electrically as per instructions #1, 2, and 3 of the compressor section and no fault is found, use an amp probe or other amp-meter to determine if the compressor is tripping out on the overload under locked rotor amperage as noted on specification plate.

If this checks out, it is recommended that a start capacitor or hard start kit be used to free the compressor. Use the following instructions.

Use a 50 mfd 370 volt Start Capacitor with terminal leads and alligator-type clips for quick disconnect of jumper wires.

1- Attach one start capacitor jumper wire clip to the compressor run capacitor, yellow lead from the compressor. This is the start winding of the compressor.
2- Attach the other jumper wire clip to, or hold in contact with, the white lead or run lead of the compressor run capacitor. This puts the start capacitor in series with the start winding of the compressor.
3- Energize the compressor electrically with the thermostat or switch. Immediately remove jumper wires after the compressor has started.
4- Discharge the capacitor to eliminate possible shock from the holding charge. There should be no need to repeat this procedure if the compressor is run for a short period of time to allow the system to function and to loosen up the tight compressor parts. This is not a recurrent problem.

NOTE: If the compressor fails to start after using these instructions, refer again to the compressor section for removal and replacement of compressor.

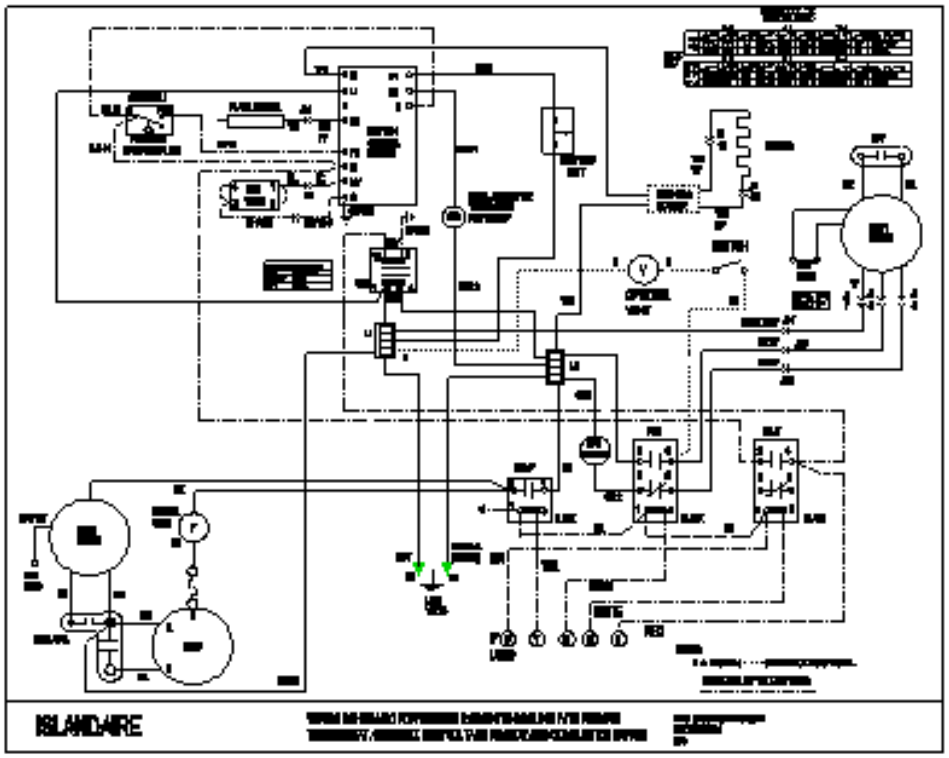


Figure 16

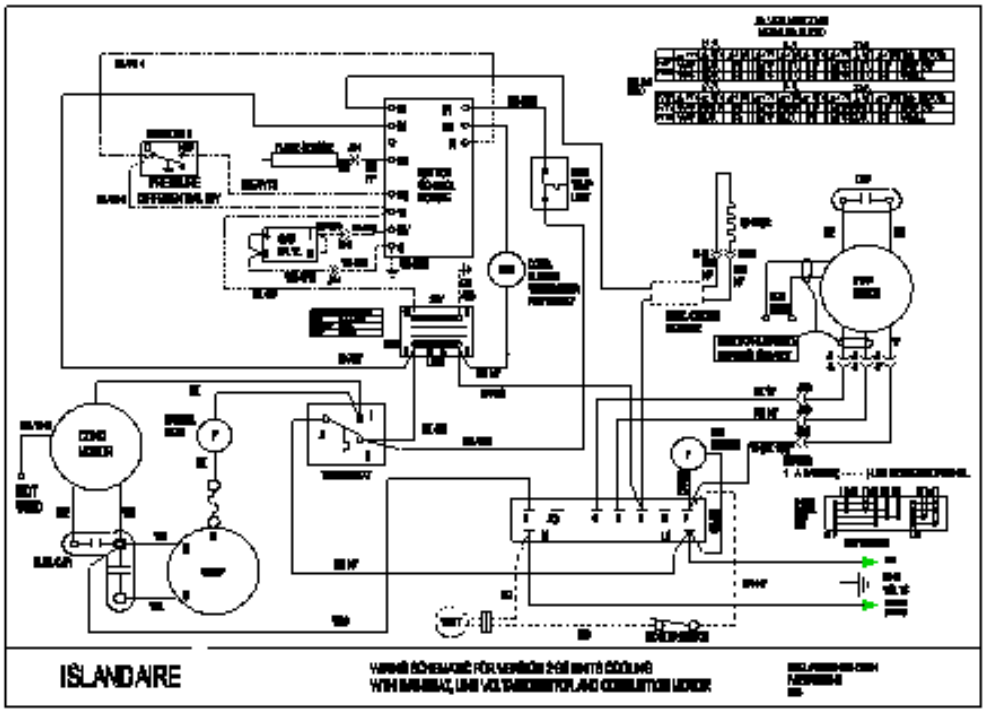


Figure 17

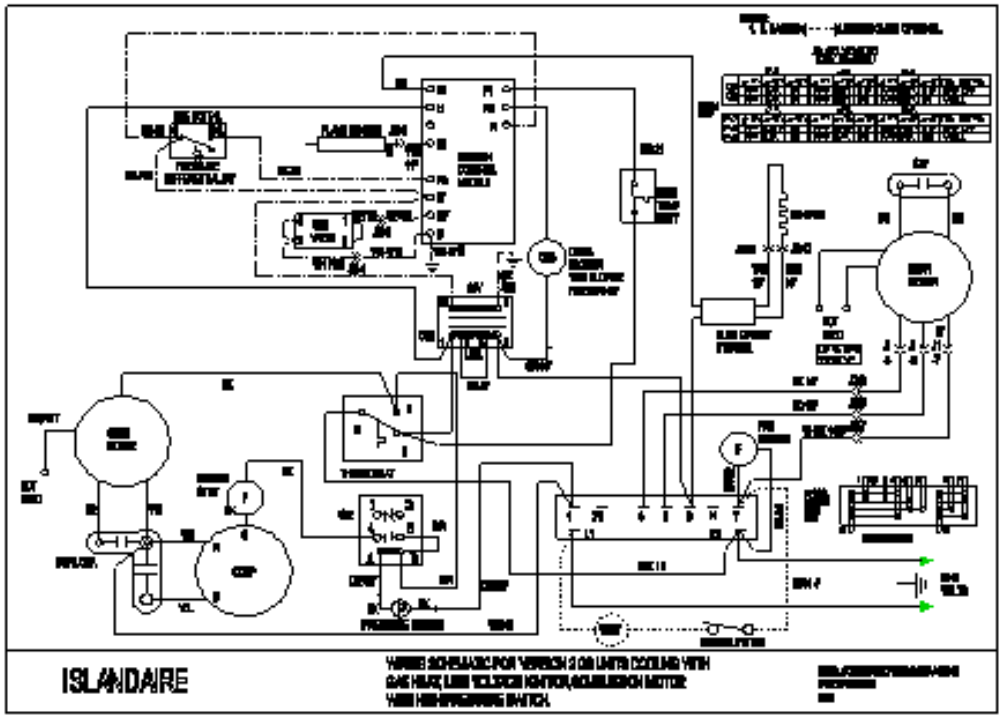


Figure 18

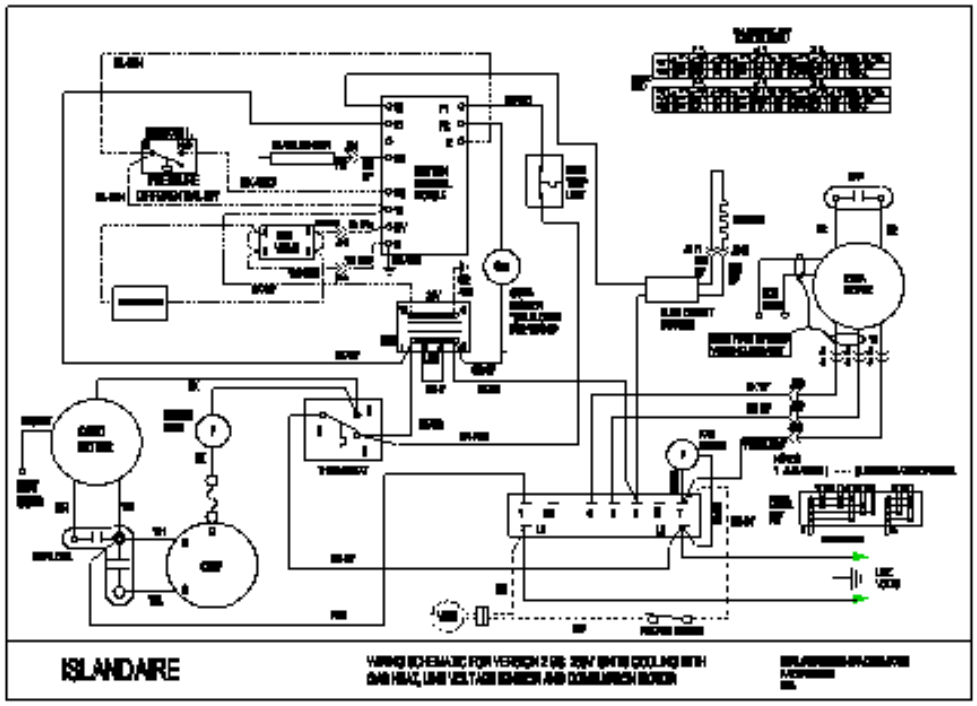


Figure 19

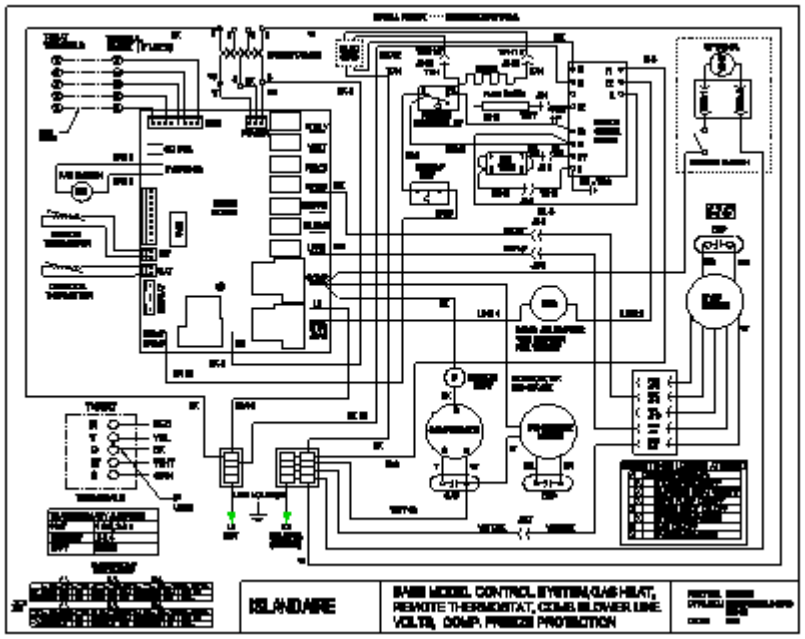


Figure 20

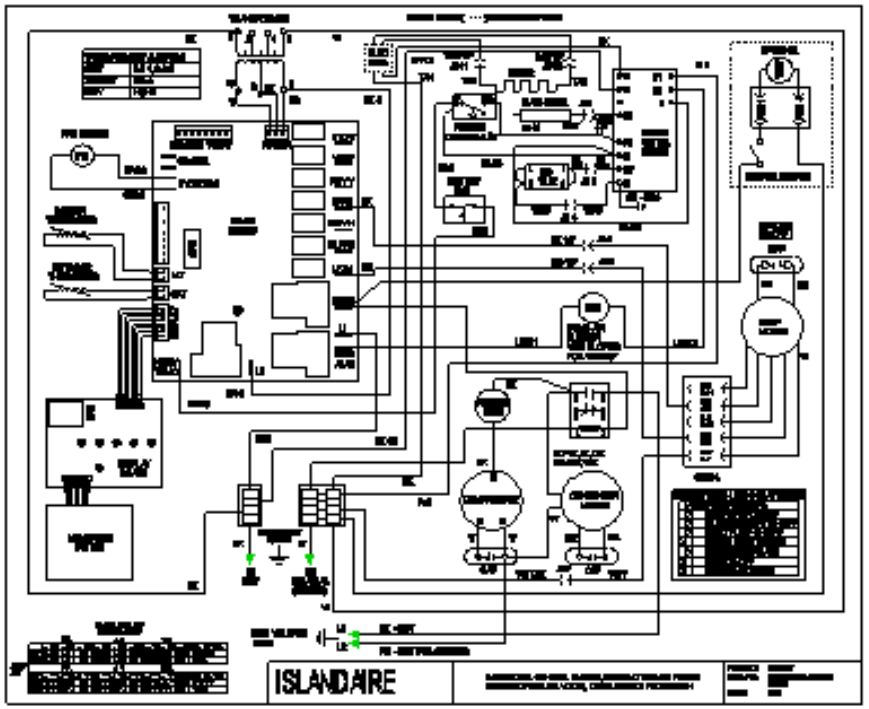


Figure 21

5 ACCESSORIES

Installation Instructions for GS Sub-Base (See Figure 22)

1- Determine distance from finished wall to front of wall sleeve bottom flange.

2- Measure “determined distance” from vertical bracket to nearest score marks on sides of sub-base.

3- Bend sides at score marks inward 90 degrees with pliers.

4- Attach sub-base to bottom flange of wall sleeve with 4 screws provided.

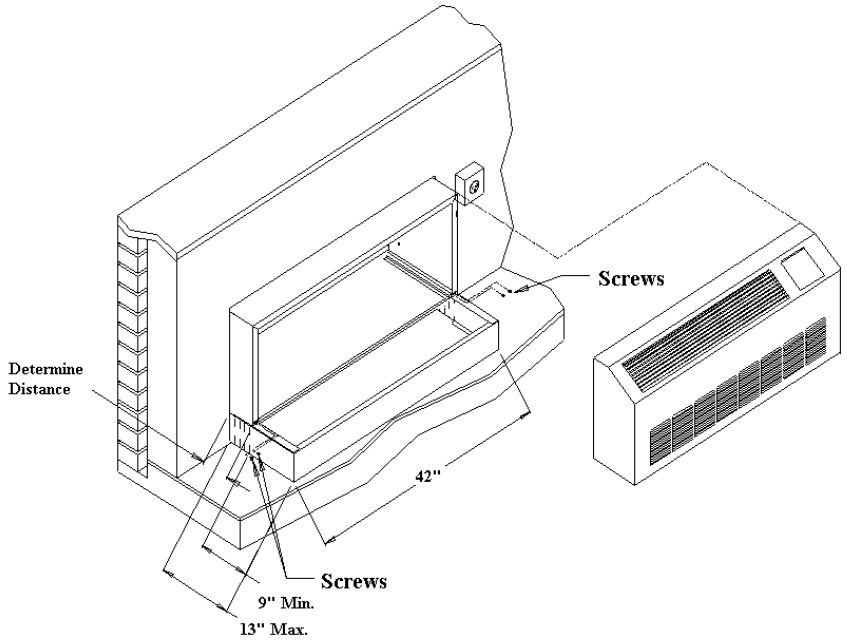


Figure 22

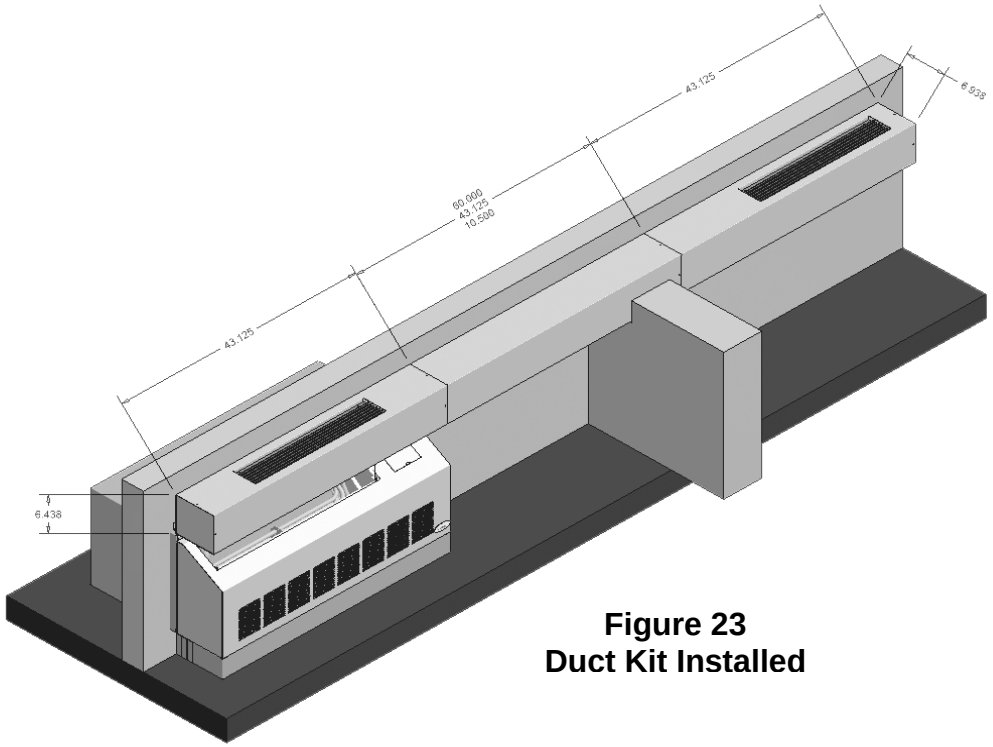
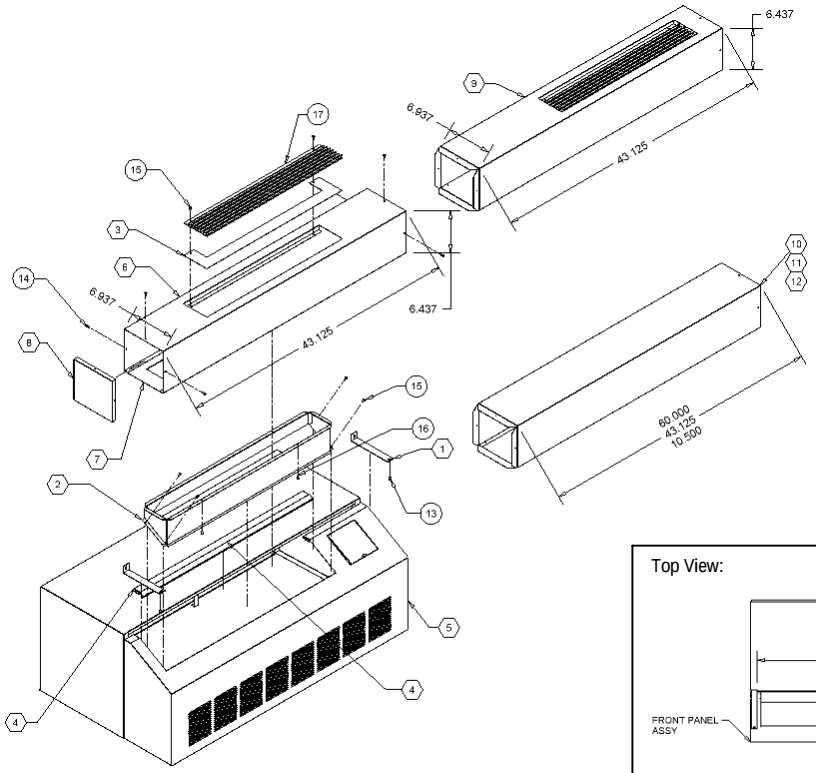


Figure 23
Duct Kit Installed



ITEM	QTY	PART #	NAME
1	2	1600152	MAIN SUPPORT BRACKET, GS
2	2	1600210	BKT, DUCT, GS2, SECONDARY
3	1	1900127	GS2 PLENUM
4	1	2200043	CHANNEL, TOP, GS2
5	1	2500188	DUCT, BAFFLE, GS
6	1	4080698	ENCL, CHANNEL, GS2
7	1	4080699	ENCL, ASSY, GS2, DUCTED
8	1	4080701	DUCT, MAIN, GS2
9	1	4080702	DUCT, BOTTOM, GS2
10	1	4080703	END CAP, DUCT, GS2
11	1	4080707	DUCT, EXT W/GRILL, GS2
12	1	4080709	ASSY, DUCT, EXT, W/OUT GRILL, GS2, 43.125
13	1	4080780	ASSY DUCT, EXT W/O GRILL 60.000
14	1	4080991	ASSY DUCT, EXT W/O GRILL 10.500
15	4	6060019	SCREW, #8 X ½ SELF TAP ¼ IN HEX HEAD
16	6	6060020	SCREW, 8 X ½ PHIL PAN
17	6	6060026	SCREW, 8 X ½ PHIL PAN BLACK
18	2	6060034	LOCK NUTS
19	2	6060040	SCREW, #8 X .5 AB POINT SLOTTED HEX
20	2	6060092	SCREW, 10-32 X ½ LONG, PAN HEAD
21	1	6070046	GRILL, JA, CK HYD, ROOM CABINET
22	1	WSGS2	WALL SLEEVE, GS2, RECESSED (METAL)

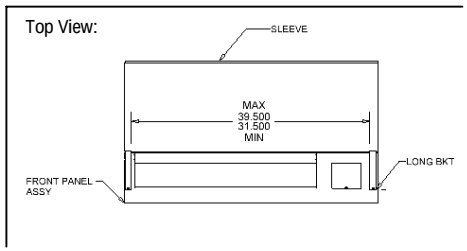


Figure 24

INSTALLING AIR DISCHARGE PACKAGE

NOTE: Recommended for use on models with remote thermostat. Not recommended for models with built-in thermostats.

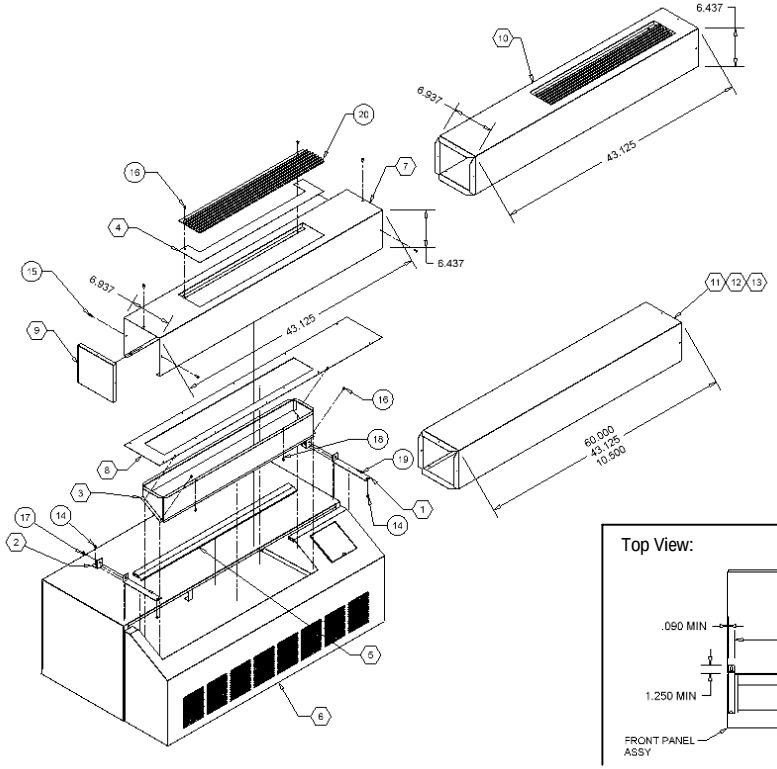
This original package allows for distribution of air into an adjacent zone requiring a controlled temperature. This assembly will discharge the conditioned air to either the right or left depending upon which end the end cap is placed. **See Figure 23**

NOTE: Modification to the factory supplied duct kit other than outlined herein will void the warranty. Total overall length of duct kit not to exceed 10 feet.

Installation when adaptor support brackets are mounted to finished wall (See Figure 24)
NOTE: projection of wall sleeve into room cannot *exceed 1-1/4"*

1- Remove the front panel assembly (part 4080699) and remove enclosure channel (item 6, part 4080698).
2- Pull the chassis out of the sleeve.
3- Remove the grill (item 18, part 6070046) from the unit.
4- Install the plenum (item 2, part 1900127) on the unit using four black pan screws (item 16, part 6060026).
5- Pre-assemble duct (items 7 & 8, parts 4080701 & 4080702) (shipped as 4080704) with end cap (item 9, part 4080703), baffle (item 4, part 2500188), and grill (item 18, part 6070046) using the hardware shown.
6- End cap can be installed left or right, depending on the requirement.
7- Install the long bracket (item 1, part 1600152) to the wall. **See Figure 24 Top View**
8- Place the pre-assembled parts (see note 7 above), so that when chassis is pushed back into the sleeve, the plenum follows the track provided below duct bottom.
9- Mount the front panel assembly without enclosure channel (item 6, part 4080698).
10- Install the extension (item 10, part 4080707) or the connectors as needed.
11- Air delivery baffle (item 4, part 2500188), located under the discharge air grill, is factory positioned to provide a 50-50 distribution of air into each zone. By removing it and cutting along the scored line, results in 60-40 air distribution. Removing the baffle completely will result in 70-30 split.
12- Duct extensions are also available without the grill in the following sizes: 60" (part 4080780), 43.125" (part 4080709), and 10.5" (part 4080991).

NOTE: YOUR DUCT KIT ASSEMBLY MAY NOT CONTAIN ALL PARTS SHOWN HERE DEPENDING ON WHAT ACCESSORIES YOU ORDERED.



ITEM	QTY	PART #	NAME
1	2	1600152	MAIN SUPPORT BRACKET, GS
2	2	1600210	BKT, DUCT, GS2, SECONDARY
3	1	1900127	GS2 PLENUM
4	1	2500188	DUCT, BAFFLE, GS
5	1	4080698	ENCL, CHANNEL, GS2
6	1	4080699	ENCL, ASSY, GS2, DUCTED
7	1	4080701	DUCT, MAIN, GS2
8	1	4080702	DUCT, BOTTOM, GS2
9	1	4080703	END CAP, DUCT, GS2
10	1	4080707	DUCT, EXT W/GRILL, GS2
11	1	4080709	ASSY, DUCT, EXT, W/O GRILL, GS2, 43.125
12	1	4080780	ASSY, DUCT, EXT, W/O GRILL, GS2, 60.000
13	1	4080991	ASSY, DUCT, EXT, W/O GRILL, GS2, 10.500
14	4	6060019	SCREW, #8 X ½ SELF TAP ¼ IN HEX HEAD
15	6	6060020	SCREW, 8 X ½ PHIL PAN
16	6	6060026	SCREW, 8 X ½ PHIL PAN BLACK
17	2	6060034	LOCK NUTS
18	2	6060040	SCREW, #8 X .5 AB POINT SLOTTED HEX
19	2	6060092	SCREW, 10-32 X 1/2 LONG, PAN HEAD
20	1	6070046	GRILL, JA, CK HYD, ROOM CABINET
21	1	WSGS2	WALL SLEEVE, GS2, RECESSED (METAL)

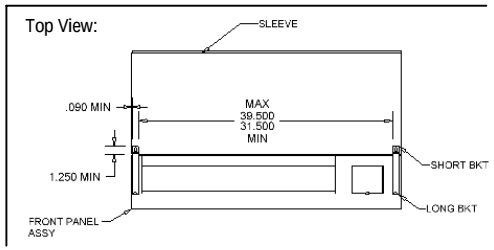


Figure 25
Duct Kit

Installation when adaptor support brackets are mounted to the wall sleeve (See Figure 25)
NOTE: projection of wall sleeve must be over 1-1/4”

1- Remove the front panel assembly (part 4080699) and remove enclosure channel (item 5, part 4080698).
2- Pull the chassis out of the sleeve.
3- Remove the grill (item 20, part 6070046) from the unit.
4- Install the plenum (item 3, part 1900127) on the unit using four black pan screws (item 16, part 6060026).
5- Install the short bracket (item 2, part 1600210) on the sleeve using two self tapping screws (item 14, part 6060019). **See Figure 25 Top View**
6- Pre-assemble duct (items 7 & 8, parts 4080701 & 4080702) (shipped as 4080704) with end cap (item 9, part 4080703), baffle (item 4, part 2500188), and grill (item 20, part 6070046) using the hardware shown.
7- End cap can be installed left or right, depending on the requirement.
8- Install the long bracket (item 1, part 1600152) with the short bracket (item 2, part 1600210) using two long pan screws (item 19, part 6060092) and two lock nuts (item 17, part 6060034).
9- Place the pre-assembled parts (see note 6 above), so that when chassis is pushed back into the sleeve, the plenum follows the track provided below duct bottom.
10- Mount the front panel assembly without enclosure channel (item 5, part 4080698).
11- Install the extension (item 10, part 4080707) or the connectors as needed.
12- Air delivery baffle (item 4, part 2500188), located under the discharge air grill, is factory positioned to provide a 50-50 distribution of air into each zone. By removing it and cutting along the scored line, results in 60-40 air distribution. Removing the baffle completely will result in 70-30 split.
13- Duct extensions are also available without the grill in the following sizes: 60” (part 4080780), 43.125” (part 4080709), and 10.5” (part 4080991).

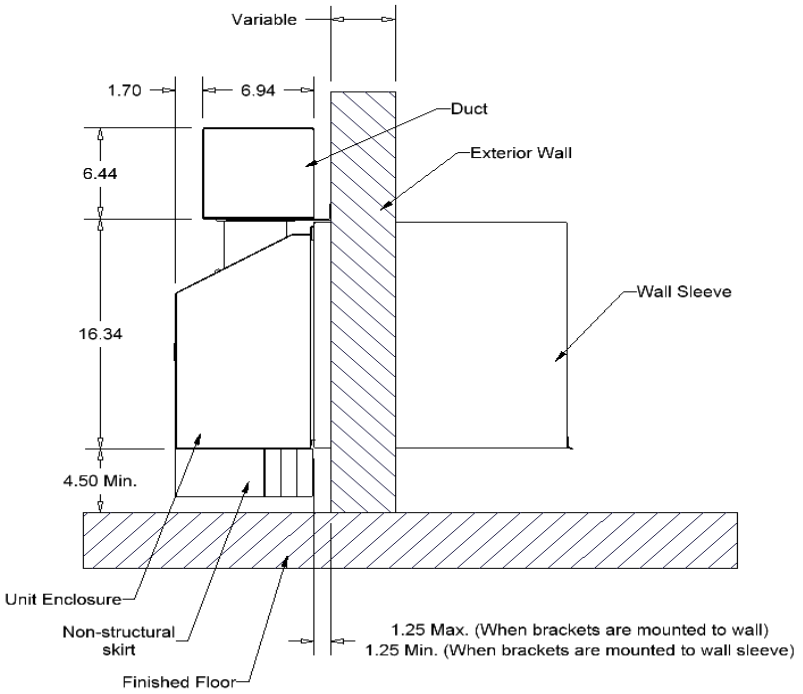


Figure 26
Duct Kit Installed

Gas Unit Louver Installation Instructions (See Figure 27)

1- Position louver through middle of sleeve and pull louver back against louver mounting brackets.
2- Hold louver with one hand against brackets. With the other hand, slide screws through slot.
3- Secure four screws and four nuts to mount louver.

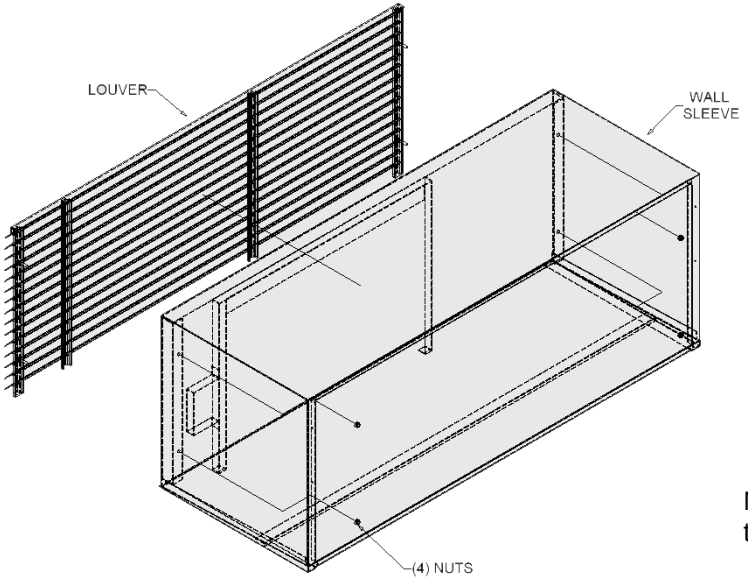


Figure 27

Note: Louver is designed to be installed from the inside.

6

REPLACEMENT PARTS

EXPLODED VIEW:

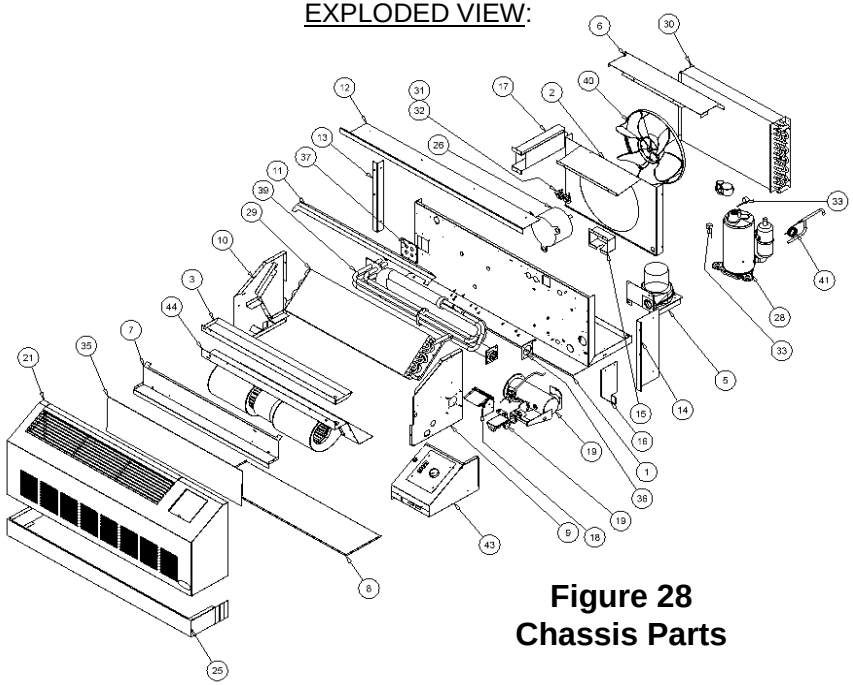
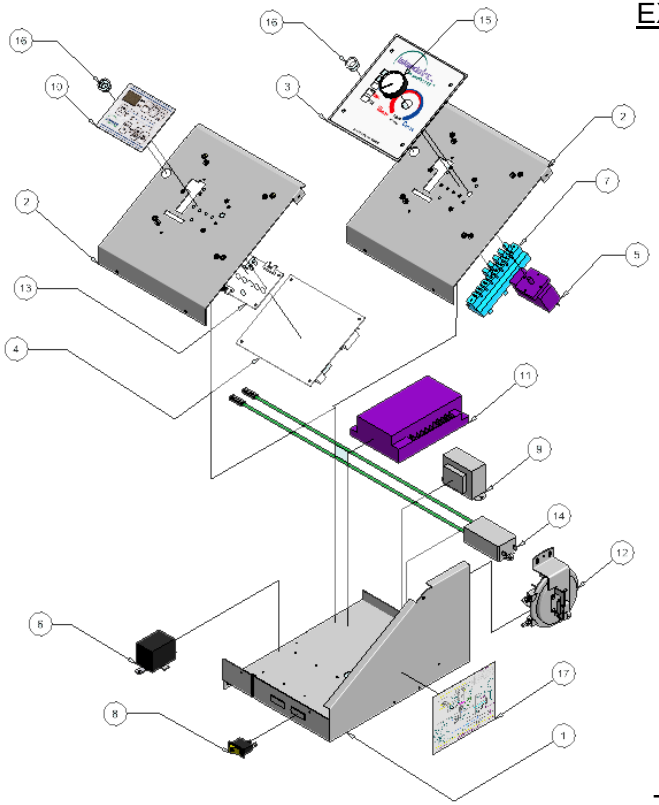


Figure 28
Chassis Parts

1	1100227	FIREWALL, GS2, PAN/TEC
2	1200110	SHROUD, GS2
3	1500062	DRAIN PAN, METAL LONG (ALU), GS2
4	1600152	MAIN SUPPORT BRACKET, GS
5	1600236	MOUNT, GS2/G3, COMB BLOWER, UNIVERSAL
6	1800350	COND, COVER, GS2
7	1800351	PANEL, FRONT, GS2
8	1900125	SAFE OFF PLT, GS2
9	2100265	SUPPORT, RIGHT, GS2
10	2100266	SUPPORT, LEFT, GS2
11	2200043	CHANNEL, TOP, GS2
12	2300070	ANGLE, TOP, GS2
13	2300071	ANGLE, SIDE, LT, GS2
14	2300072	ANGLE, SIDE, RT, GS2
15	2500159	LIMIT COVER, GS, EG
16	2500273	BKT ENCL, GS2, RT
17	2500276	GS2 FLUE ASSY
18	4010XXX	VENT ASSEMBLY
19	4010094	COMBUSTION BASE ASSEMBLY
20	4010XXX	GAS VALVE ASSEMBLY
21	4080700	ENCL, ASSY, GS2, STD
22	4080704	DUCT, MAIN, ASSY, GS2
23	4080707	DUCT, EXT W/GRILL, GS2
24	4080709	ASSY, DUCT, EXT W/OUT GRILL, GS2
25	4080710	SUBBASE, NON STRUCT, GS2
26	6020XXX	CONDENSOR MOTOR
27	6020XXX	COMBUSTION AIR BLOWER ASSEMBLY
28	6020XXX	COMPRESSOR
29	6030XXX	EVAPORATOR COIL
30	6030XXX	CONDENSOR COIL
31	6040261	FAN SWITCH
32	6040262	LIMIT SWITCH
33	6040XXX	OVERLOAD
34	6070014	GRILL, DISCHARGE, KA, BLACK
35	6080015	FILTER, (16) 7 x 30 ¾ x 3/32
36	6090059	GASKET, GS, HEAT EXCHANGER, RT
37	6090060	GASKET, GS, HEAT EXCHANGER, EXHAUST
38	6090146	GASKET, COMB AIR BKT
39	6110087	HEAT EXCHANGER
40	6120059	FAN BLADE
41	6160XXX	CAPILLARY TUBE
42	6160XXX	AIR RESTRICTOR
43		ELECTRICAL/CONTROL BOX ASSEMBLY
44		FAN DECK ASSEMBLY

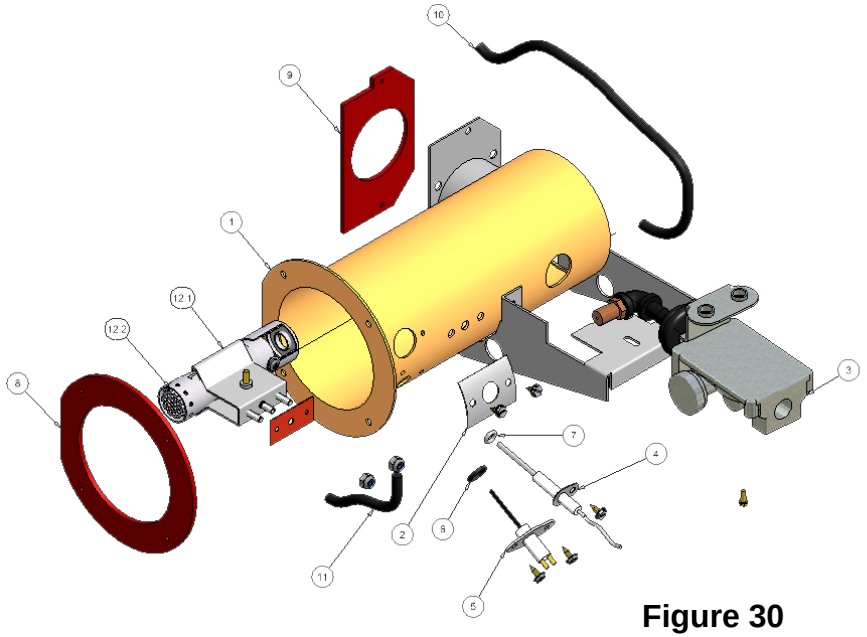
EXPLODED VIEW:



ITEM	QTY	PART #	NAME
1	1	1300549	ELECTRICAL BOX, GS2
2	2	1300550	SWITCH PLT-DIG5-5BUT GS2
3	1	4020067	CONTROL PLATE, GS\WM, FIVE BUTTON
4	1	6030372	DIGITAL BRAIN BOARD, DIG5GA BASE UNIT
5	1	6040038	THERMOSTAT
6	1	6040046	RELAY
7	1	6040081	SWITCH, 5 BUTTON
8	1	6040132	SWITCH, ROCKER
9	1	6040156	TRANSFORMER
10	1	6040173	MEMBER INTELLITEMP
11	1	6040253	IGNITION CONTROL MODULE
12	1	6040255	PRESSURE DIFFERENTIAL SWITCH
13	1	6040370	DIGITAL DISPLAY BOARD, DIG5GA BASE
14	1	6040440	IGNITOR JUMP STARTER
15	1	6080025	THERMOSTAT KNOB
16	2	6130067	PLASTICS. HEYCO WINDOW PLUG
17	1	6300587	WIRING DIAGRAM

Figure 29
Electric Box Parts

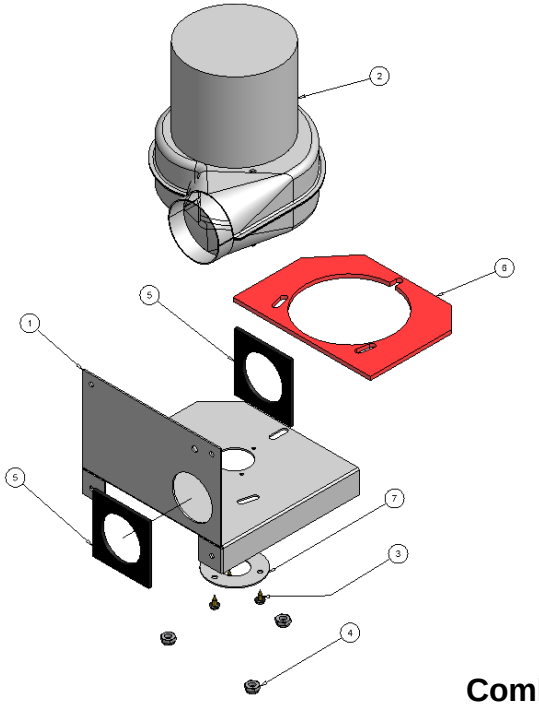
EXPLODED VIEW:



ITEM	PART #	NAME
1	2500284	COMBUSTION BASE, GS2
2	2500285	SIGHT GLASS COVER
3	4010095	GAS VALVE ASSEMBLY
4	6040254	FLAME SENSOR
5	6040XXX	HOT SURFACE IGNITOR
6	6090133	IGNITOR O-RING
7	6090134	FLAME SENSOR “O” RING
8	6090143	LEFT GASKET, COMBUSTION
9	6090145	COMB. BASE FLANGE GASKET
10	6130050	PRESSURE DIFFERENTIAL TUBE
11	6130050	DRAIN TUBE
12		BURNER ASSEMBLY
12.1	2500280	BURNER BKT, ASSY, GS2
12.2	6040259	BURNER, INSERT, ASSY, GAS

Figure 30
Combustion Burner Parts

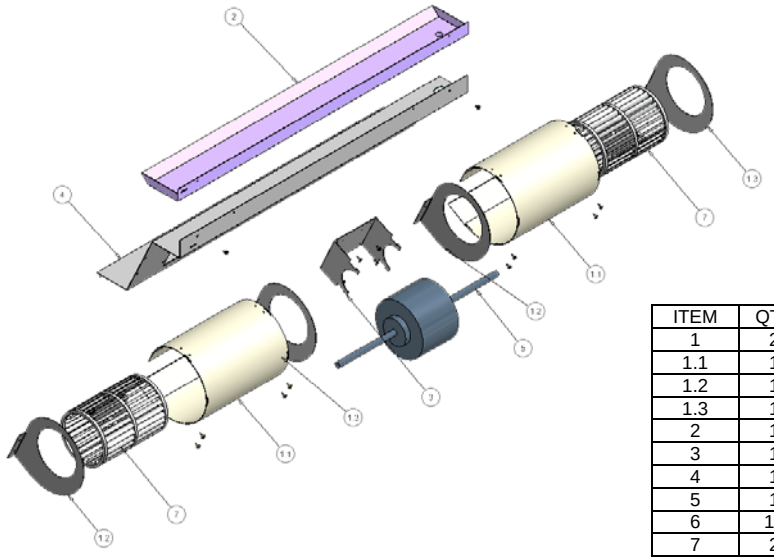
EXPLODED VIEW:



ITEM	PART #	NAME
1	1600XXX	MOUNT, GS2/G3, COMB BLOWER, UNIVERSAL
2	6020XXX	AIR BLOWER
3	6060024	SCREWS
4	6060034	LOCK NUTS
5	6090146	GASKET, COMB AIR BKT
6	6090177	GASKET, GS2/G3 BOTTOM, COMB AIR NEW
7	6160XXX	AIR RESTRICTOR

Figure 31
Combustion Air Parts

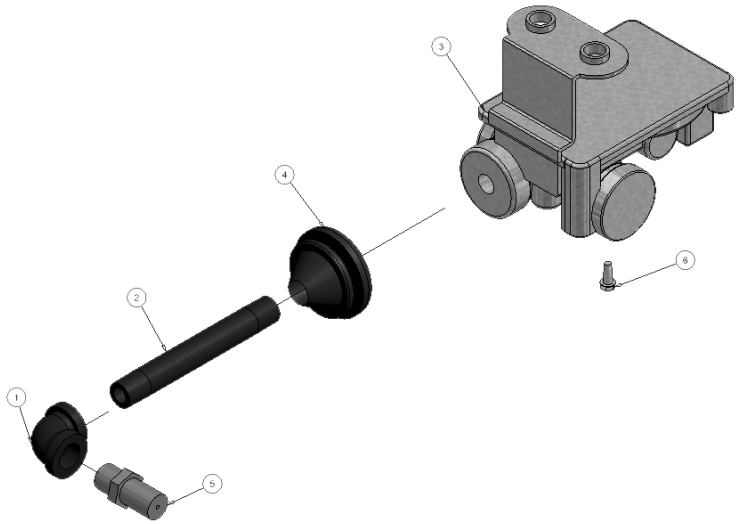
EXPLODED VIEW:



ITEM	QTY	PART #	NAME
1	2		IMF BLOWER ASSY
1.1	1	6120028	BLWR WRAP, IMF FANDECK, MEDIUM 8.313
1.2	1	6120062	BLWR HOUSING, IMF, LEFT SIDE
1.3	1	6120063	BLWR HOUSING, IMF, RIGHT SIDE
2	1	1500062	DRAIN PAN, METAL LONG (ALU), GS2
3	1	1600227	MOTOR MOUNT BRACKET, IMF FANDECK STYLE
4	1	1700200	FAN DECK, GS2
5	1	6020XXX	MOTOR, EVAPORATOR
6	14	6060024	SCREW, 8 X 3/8 HEX SLOTTED
7	2	6120047	BLOWER, WHEEL, STD

Figure 32
Fan Deck Parts

EXPLODED VIEW:



ITEM	PART #	NAME
1	6160148	90 ELBOW
2	6160147	PIPE NIPPLE
3	6040XXX	GAS VALVE
4	6090148	RUBBER BUSHING
5	6040XXX	ORIFICE
6	6060024	FASTENER

Figure 33
Gas Valve Parts

7

START UP CHECKLIST

Make	Date of Start Up
Serial #	Address
Model #	

Note: Units are to be installed and checked for proper function by qualified service personnel ONLY.

Check the following:

1- Check for proper voltage and correct receptacle wiring……☐
2- Filter clean and in place……☐
3- All panels in place……☐
4- Condenser coil inlet and outlet free of obstructions and is sealed to louver……☐
5- Unit is properly sealed in sleeve……☐
6- Evaporator air inlet and outlet is free of obstructions and properly sealed……☐
7- Open manual gas shut-off valve and check for leaks……☐
8- Check for proper operation of cooling, heating, and fan (see Page 15)……☐
9- Owner or operator instructed on control operation and routine maintenance……☐
10- Work area clean and free of debris……☐

Optional Limited Warranty Programs

Islandaire offers the following ***OPTIONAL*** Limited Warranty Program. Call your sales representative for additional information on the following:

Optional Limited Five (5) year parts & labor on entire unit

22 Research Way
East Setauket, NY 11733
Toll Free: 1-800-886-2759
Fax: (631) 471-2913

Website: www.islandaire.com E-Mail: sales@islandaire.com

Manufacturer of Quality Air Conditioning and Heating Products

6140025 Rev. H