January 2006

HUSSMANN®

INSTALLATION & SERVICE INSTRUCTIONS FOR

HGL-1, 2 & 3 BOTTOM & TOP MOUNT

REMOTES

HUSSMANN®

First Call for help (US and Canada):

1-800-922-1919

Soporte Tècnico y Asistencia (Mèxico):

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P/N OII – HGL Remotes
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INSTALLATION CHECK LIST
HGL / HGM / HGS UPRIGHT CABINETS

Level cabinet front to back and left to right. Level doors and adjust torque as needed. On HGL cabinets, it is important this be done to ensure proper operation of evaporator fan switches.

Is proper voltage supplied to cabinet?

Cut and remove compressor shipping band (HGL only)

Is timer set for correct time of day? Fail-safe at 40 minutes, defrost pins at 10 p.m. and 6 a.m. (HGL only)

Are electrical connections tight and tubing positioned to prevent rubbing? Is drain hose in water pan and trapped?

Does the condenser fan blade (s) turn freely?

Is the temperature control set per the following specifications?

	Control Set At	Cabinet Temperature	
HGL	**-18**	**-13 off**	**-9 on**
HGM/HGS	**+29 to 30**	**+34 off**	**+40 on**

Revised 5/99 lw

For more details on the above, refer to the Installation Booklet sent with the cabinet.

INTRODUCTION –

Hussmann HGL B/T models are remote, low temperature, vertical display merchandisers for ice cream and frozen foods. Design features include heated glass doors for fog free visibility, automatic defrost, and efficient foamed in place non-CFC insulation. These models are designed for remote installation as single cases or multiplexed with other cases.

INSPECTION –

Upon receipt of the cabinet, carefully examine the crating for damage. If crate is damaged, make a note on the delivery ticket before signing. Carefully remove shipping crate and examine cabinet for "concealed" damage. If damage is found, contact the delivery carrier immediately and have his agent prepare an inspection report for the purpose of filing a claim. This is your responsibility.

LOCATION –

Avoid locating the cabinet where direct sunlight would shine into the fixture or where drafts from air conditioning grills, fans and open doors could affect its operation.

INSTALLATION and START-UP –

SKID –

The skid should be left on the unit until it is near its final location. The skid provides protection for both case and floor. The skid is removed by raising one end of the case approximately six inches. BLOCK SECURELY and remove the two skid bolts on the raised end. The procedure is repeated on the opposite end. When the skid bolts are removed, the case may be slid off the skid.

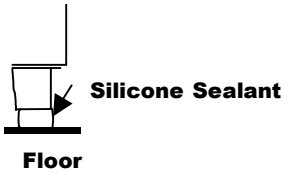
LEG INSTALLATION – Top Mounts Only

After the case is near its final location and the skid has been removed, the NSF approved legs should be installed. The legs are packaged inside the cabinet. Replace the tape and door blocks. To install legs, raise one end of the cabinet approximately eight (8) inches, BLOCK SECURELY, and install two legs. The leg mounting plates are factory installed and contain a 1/2 x 13 tapped hole to mate with the leg assembly. The procedure is repeated on the opposite end. The 3-door requires legs in the center. With cabinet legs installed, the cabinet should be positioned in its final location and leveled.

The cabinet is leveled by turning the bottom section of each leg. The self-closing doors require the cabinet to be properly leveled. End to end leveling will make the door (s) close with uniform speed and tightness. A slight pitch from front to rear is desirable. THE CABINET BACK SHOULD NEVER BE HIGHER THAN THE FRONT.

LEVELING – SEALING – Bottom Mounts Only

The case can be leveled by shimming under the cabinet base frame, or by installing optional levelers. The self-closing doors require the cabinet to be properly leveled. End to end leveling will make the doors close with uniform speed and tightness. A slight pitch from front to rear is desirable. Once level the case should be sealed to the floor as shown in the following drawing, using an NSF approved material such as General Electric RTV-102 silicone sealer or an equivalent



BOTTOM LOUVERED PANEL REMOVAL -

The louvered panel provides access to the electrical box. Remove panel by removing shipping screw (s) at the bottom and lifting up and pulling forward. Remove shipping screw on electrical box to allow the electrical box to slide out for servicing.

TOP DECORATIVE PANEL REMOVAL –

The top decorative panel is removed by lifting up and pulling forward.

SHELVES –

Each cabinet is provided with 4-cantilever shelves per door that are adjustable on 1-inch increments and are tiltable. Each cabinet also has one bottom shelf per door. These shelves have one inch legs to allow proper airflow in the cabinet. Behind the shelves are wire flue spacers which also allow for proper airflow. All shelves and flue spacers are white, epoxy coated for durability and ease of cleaning. Shelves should be adjusted to desired operating height.

When loading product into the cabinet, care should be taken not to load product so that it touches the evaporator coil cover, also, do not extend product past the front edge of the shelf. Extending past the edge will seriously effect internal air flow through out the cabinet.

Shelves are UL rated for a maximum load of 123 lbs. DO NOT OVERLOAD SHELVES.

AIR DISTRIBUTION AND REAR FLUE SPACER –

Air is drawn through the evaporator from front to rear and is discharged down the back wall, returning up the face of the glass door to the return air grill. NOTE: Rear wire grid must be in place as this forms a discharge air flue at the back of the cabinet.

ELECTRICAL CONNECTIONS –

The HGL-2, 3,-T/B require a conduit connections of 208-230 supply voltage. It is very important for safety to you and your customers to have the cabinet properly grounded. Conduit connections are required for positive grounding. The electrical installation should be done by a qualified electrician in accordance with the National Electrical Code and/or local codes.

NOTE: Connecting this unit to any electrical supply other than specified on the serial plate will VOID the warranty and may result in serious damage to the unit. The cabinet should be supplied with its own service.

SERIAL PLATE INFORMATION –

The serial plate is located in the upper left hand corner of the case interior. It has all the pertinent information needed for proper electrical installation. The serial plate should not be removed for any reason.

START UP PROCEDURE -

- √ **After the wiring has been completed, set the defrost timer for the correct time of day, making sure the defrost pins are secure in the face of the clock. HGL cabinets are factory set for 2 defrost periods in 24 hours. (6 a.m. and 10 p.m.)**
- √ **Check the cabinet thoroughly for loose nuts and bolts and electrical connections. Inspect the refrigeration lines for any visible damage or chafing.**
- √ **Replace the electrical box cover.**
- √ **Start the cabinet and allow to pull down to operating temperature before loading.**

BTU CAPACITIES -

		RATING TEMP ºF		
	BTU/HR	EVAP	COND	AMB
1-T/B	3100	-20	110	90
2-T/B	4160	-20	110	90
3-T/B	5900	-20	110	90

ELECTRICAL SPECIFICATIONS

	HZ/PH	VOLTS	RUN AMPS	FUSE	WT.
1-T	60/1	208-230	7.9	15AMP	547
2-T	60/1	208-230	8.8	15AMP	755
3-T	60/1	208-230	11.0	15AMP	986
1-B	60/1	208-230	7.9	15AMP	547
2-B	60/1	208-230	8.8	15AMP	816
3-B	60/1	208-230	11.0	15AMP	1065

All cases use R-404A refrigerant. Please check the serial plate for the specific refrigerant used.

GENERAL UP-KEEP, CARE and CLEANING, ROUTINE MAINTENANCE, and OPERATION MAINTENANCE

CARE and CLEANING –

To insure good sanitation, appearance, and minimum maintenance, the cabinet should be cleaned and washed regularly as use demands. Clean with mild detergent and warm water. DO NOT USE AN ABRASIVE CLEANER OR STEEL WOOL AS THEY WILL MAR THE FINISH.

ROUTINE MAINTENANCE –

Under normal conditions, after the cabinet is installed and running, very little maintenance should be required. However, the following list of housekeeping practices will assure trouble-free operation.

- √ **Check drain pan and heater to prevent accidental overflow.**
- √ **Make sure doors are closing properly and that the gaskets seal.**
- √ **Make sure all evaporator fan motors are running. These can be seen through grill inside cabinet.**

OPERATION and MAINTENANCE

POWER SWITCHES -

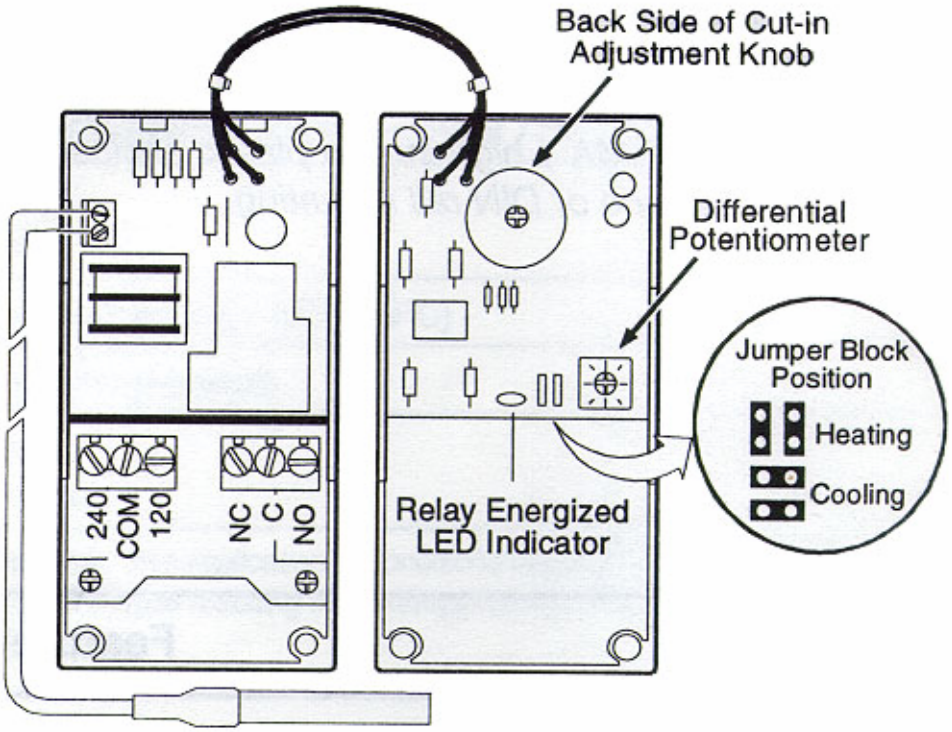
The power switch is located at the electrical box which is behind the bottom, louvered access panel (bottom mount) or behind the top decorative panel (top mounts). The switch will shut off all power.

TEMPERATURE CONTROL –

The electronic temperature control is located in the electrical box. The temperature control does not have an 'OFF' position. Adjustments may be made by turning the knob on the face of the dial. Turning it clockwise will give warmer temperatures while counter-clockwise will give colder temperatures. There is also an adjustable temperature differential (the difference between the cut-in temperature and the cut-out temperatures) located on the back of the temperature control cover. When adjusting the differential, the temperature setting may also have to be adjusted.

A picture of this Electronic Temperature Control board layout and terminal location is on the next page.

The control has a range of –20ºF to +100ºF with a differential of 1º to 30º. It is factory set for approximately –18F with an 10º differential. The temperature should be checked with a thermometer other than the case thermometer after it is running to insure that the case is running at the proper temperature for the product.



A319 Electronic Temperature Control
Board Layout and Terminal Locations

<u>THERMOMETER</u> –

The thermometer is located by looking through the right hand door onto the right hand end of the fan plenum.

The thermometer will also warm up rather rapidly when the case door is held open for a time such as when the case is being restocked or a shopper is making a decision on a product.

After the door is closed it will take some time for the thermometer to pull back down to the case temperature. The thermometer and temperature control sense discharge air temperature which is 5-10º colder than the case temperature.

<u>ELECTRICAL ENCLOSURE</u> –

The electrical enclosure contains the defrost time clock and temperature control. For servicing convenience, access is gained by removing the access panel and electrical box cover.

THE CABINET SUPPLY BREAKERS SHOULD BE DISCONNECTED BEFORE REMOVING THE ENCLOSURE COVER.

DEFROST TIME CLOCK –

The timer is factory pre-set for two defrost cycles per day at 6:00 a.m. and 10:00 p.m. with a 40 minute failsafe. The timer must be adjusted to the proper time of day when the cabinet is started. The timer is adjusted by turning the knurled adjustment knob in the center of the dial face counter-clockwise until the time indicator corresponds with the correct time of day. The defrost pins should be checked for tightness. The timer will require readjusting after a power failure or the cabinet supply is turned off for extended periods of time. If an additional defrost is required due to ambient or cabinet usage conditions, do not put a defrost during the middle of the day. Put any additional defrost during the night or a time when the cabinet has the lowest usage.

Defrost is time initiated and temperature terminated. If cases are multiplexed, the defrost thermostats can be wired in series so that the cases can be temperature terminated.

If the thermostat should fail, the timer is equipped with a failsafe set at 40 minutes that will allow defrost to terminate on time.

DEFROST HEATER THERMOSTAT –

The defrost heater thermostat is clamped to the evaporator outlet tube. It is a bi-metal thermostat that is tied in series with the evaporator fans for a delay and with defrost time clock solenoid to end defrost when the temperature has been satisfied. The evaporator fans will not come on until the thermostat senses 32ºF and defrost will terminated when the stat senses 58ºF.

DEFROST HEATER REPLACEMENT

The defrost heaters are firmly embedded in the evaporator and held in place with spring clips. To remove the heater, first remove all the spring clips and pull the defective heater out of the slots in the evaporator, starting at the wire supply lead.

The replacement heater should be firmly seated in the slots by using a small block of wood and a mallet. After the new heater is in place, replace all of the spring retaining clips to assure heater retention. One lead of the defective heater may be used to pull the new leads through the cabinet to the respective terminals as marked on each lead.

NOTE: Care must be taken to make sure the drain stub is correctly inserted in the cabinet drain tube for proper drainage.

LIGHTING –

Interior lighting is provided by electronically powered T-8 lamps located inside each doorway. The tubes are enclosed in a patented lens system to maintain proper heat around the bulb for maximum, light intensity and to protect the product in case of breakage. See the Anthony "ELS" instructions for lens removal, attached at the back of this booklet.

Each HGL model has a convenient ON/OFF switch so lights may be turned off to conserve energy during hours when the store is closed. The switch is located inside the cabinet above the left hand door. This switch only controls the lights. 208-230 volt power must be shut off at the main power supply source located within the store prior to starting any service or maintenance work.

Light ballasts are located in the mullions of the door frames. See the Anthony ballast removal instructions at the back of this installation booklet.

DOOR SWITCHES –

The switches at the top of the doorways operate the evaporator fan motors. These switches stop the fan motors when the doors are open.

DOOR FRAME HEATERS –

This cabinet is equipped with both frame and door heaters. These are thermostatically controlled and will not come on until the cabinet is at operating temperature. See door mfg. instructions for heater replacement at the back of this booklet

ALARM THERMOSTAT
(Heater Delay)

The alarm (heater delay) thermostat is located on the top of the inner liner in the upper right hand corner behind the evaporator. The thermostat will not turn the heaters on until it senses 0º and in turn will turn the heaters off when its senses +18º F. This is so that unwanted heat will not be added to the case during defrost or if the case refrigeration system fails.

EXPANSION VALVE ADJUSTMENT –

Expansion valve must be adjusted to fully feed the evaporator. Before attempting to adjust the valve make sure the evaporator is either clean or only lightly covered with frost, and that the cabinet is within 10º of its expected operation temperature. Adjust the expansion valve as follows:

Attach two sensing probes to the evaporator, one under the clamp holding the expansion valve sensing bulb and the

other securely taped to one of the return bends two thirds of the way through the evaporator circuit. Some "hunting" of the expansion valve is normal. The valve should be adjusted so that during the hunting the greatest difference between the two probes is 3º to 5ºF.

Remove valve stem cover and turn valve stem counter-clockwise to decrease temperature difference between the probes. To increase temperature difference of probes, turn the valve stem clockwise. With this adjustment, during a portion of the hunting the temperature differences between the two probes may be less than 3ºF, or at times as low as 0ºF.

Make adjustments of no more than one half turn of the valve stem at a time and wait for at least fifteen minutes before rechecking probe temperature and making further adjustments. Replace and tighten cover of the valve stem.

<u>REFRIGERATION</u> –

As stated previously, these cases can be designed for single or multiplexed installations. The following is a description of a 'packaged system' which includes the case, a factory-designed condensing unit, electrical line set, and refrigeration line set. These systems come precharged for easy field installation.

If it should become necessary to leak test the system, please adhere to the following notice:

<u>NOTICE:</u> BECAUSE OF THE CFC ATMOSPHERIC CONSIDERATIONS BEING TAKEN TODAY, WE ASK THAT LEAK TESTING BE DONE WITH REFRIGERANT 22 MIXED WITH NITROGEN.

IF THE CONDENSING UNIT NAMEPLATE DESIGNATES A REFRIGERANT OTHER THAN R-22 REMOVE ALL R-22 FROM THE IMMEDIATE AREA TO AVOID CONFUSION AFTER LEAK TESTING AND EVACUATING THE UNIT. RECHARGE THE UNIT WITH PROPER REFRIGERANT.

<u>LEAK TESTING</u> –

******* CAUTION*******

The test gas cylinder must be equipped with a pressure gauge and regulator so that system test pressures do not exceed maximum allowable limits. Do not ever use anything other than a R-22 / Nitrogen mixture for leak testing.

Attach a refrigerant test gas cylinder to your service manifold and connect the manifold to the charging port on the liquid line valve. Charge an R-22 / Nitrogen mixture into the system, raising the pressure to the remote unit's nameplate for the low side and high side pressures. Using an electronic detector, carefully check the entire system for leaks. Take special care to inspect all brazed and flare connections.

<u>EVACUATION</u> –

After the system is proven leak tight, thoroughly evacuate the system according to the following procedure:

- √ **Discharge the refrigerant-nitrogen mixture, allowing it to blow from the system as rapidly as possible, into an empty cylinder. Be sure that all service valves and solenoid valves are open to allow all of the mixture to be discharged.**

- √ **Connect a deep-drain vacuum pump to both the high and low side of the system. Pull a vacuum on the system to at least 1500 microns.**

- √ **Break the vacuum by adding refrigerant into the system until the pressure is above 0 psig. Always charge the refrigerant line into the system through a new drier in the charging manifold line. A 16 cubic inch drier is sufficient for this purpose.**

- √ **Repeat steps 2 and 3 two more times, the third time evacuating the system to 500 microns.**

<u>REMOTE CONDENSING UNIT</u> -

The remote condensing unit is constructed of weather resistant G-90 galvanized steel for durability. It includes the compressor, condenser, head pressure by-pass valve, receiver (insulated), crankcase heater, drier, sight glass, condenser fan motors, fan delay thermostat, dual pressure control, solenoid valve, electrical box, and quick connects (optional).

<u>COMPRESSOR</u> –

The compressor is mounted on semi-rigid, rubber pads. There are no mounting springs so the compressor is essence becomes solid mounted. DO NOT LOOSEN THE MOUNTING BOLTS ON THE COMPRESSOR.

<u>FAN DELAY THERMOSTAT</u> –

The fan delay thermostat is connected to the left hand fan motor (as you face the unit from the electrical box side) and will leave this fan off at ambients below 65ºF to insure proper condensing temperatures.

<u>HEAD PRESSURE BY-PASS VALVE</u> –

The head pressure by-pass valve is a pre-set, non-adjustable type. Its function is to divert the refrigerant to the receiver when the head pressure falls below the setting so that proper head pressure is maintained in the system and liquid is feeding the thermostatic expansion valve.

<u>CRANKCASE HEATER</u> –

The crankcase heater is located below the compressor on semi-hermetic models and wrapped around on hermetic models. The heater is on at all times.

<u>CRANKCASE PRESSURE REGULATOR</u> –

The remote units designed for the HGL-1-T/B and HGL-2-T/B employ a crankcase pressure regulator in the suction line. The CPR is set for 10 psi on the remote unit for both 1 and 2 door. The purpose of the valve is to maintain a low suction pressure on start-up so that the

compressor will start properly. On start-up, the valve will hold the suction pressure at the desired setting until the suction pressure has dropped below the setting, then the valve will open.

If it becomes necessary to check or reset the valve, the case must be warm such as after a defrost cycle or from an initial warm case condition. Put a suction compound gauge on the compressor suction valve, start the compressor. If the pressure needs to be reduced turn the adjustment screw clockwise or, counter-clockwise to raise the pressure. DO NOT SET THE VALVE BASED ON THE NAMEPLATE AMPERAGE RATING AS THE PRESSURE SETTING WILL BE TOO HIGH AND THE COMPRESSOR WILL NOT START PROPERLY.

ELECTRICAL BOX –

The electrical box comes pre-wired except for the electrical line set coming from the cabinet. Consult the wiring diagram for proper wiring. There is a power switch in the box for the compressor and a separate one for the crankcase heater.

ELECTRICAL LINE SET

When the electrical line set is employed, power is brought to the case first and the line set is installed between the case and the remote unit. Consult the wiring diagram for proper wiring.

BOTTOM MOUNT VERSIONS -

The refrigeration line set is provided with quick-connect connections on both ends for installation at the case and the remote unit.

The line set is tagged with the end that is to be attached at the case. The line set is tagged with the end that is to be attached at the case end.

Do not over tighten the quick connects as this will damage the seals.

After the quick connects are installed at the case end, the factory supplied 'insulating boot' must be sealed with contact cement to prevent air leakage that can cause ice and water to build up on the case. Nylon ties are further provided to seal the ends but should not be used solely to seal the ends. Do not over tighten the ties.

TOP MOUNT VERSIONS –

The refrigeration line set is provided with quick connects to mount to the remote condensing unit. The lines are factory installed and sealed at the case end. Care should be taken when uncoiling the line set. Do not over tighten the quick connects as this will damage the seals.

PUMPDOWN SYSTEM ON THE REMOTE UNIT -

Operation – The pumpdown system shuts off the flow of refrigerant in the high side liquid line when the case cycles off or during a defrost cycle and pumps the refrigerant from the evaporator into the condenser and receiver.

TROUBLE SHOOTING, LIGHTING TROUBLE SHOOTING WARRANTY and ELECTRONIC LIGHTING SYSTEM INSTRUCTIONS

TROUBLE SHOOTING CHARTS

TROUBLE	PROBABLE CAUSE	SOLUTION
Compressor runs continuously, Product too warm	1. Short of refrigerant	1. Leak check. Change drier. Evacuate and recharge
	2. Inefficient compressor	2. Replace
	3. Dirty condenser	3. Clean
High head pressure	1. Cabinet location too warm	1. Relocate cabinet
	2. Restricted condenser air flow	2. Clean condenser to remove air flow restriction
	3. Defective condenser fan motor	3. Replace
	4. Air or non-condensable gases in system	4. Leak check., change drier, evacuate, and recharge
	5. Defective fan delay thermostat	5. Replace
Warm storage temperatures	1. Temperature control not set properly	1. Reset control
	2. Short of refrigerant	2. Leak check, change drier, evacuate, and recharge.

	3. Cabinet location too warm	**3. Relocate**
	4. Too much refrigerant	**4. Change drier, evacuate, and recharge**
	5. Low voltage. Compressor cycling on overload	**5. Check power**
	6. Condenser dirty	**6. Clean**
	7. Dual pressure control not properly	**7. Reset control**
Compressor runs continuously. Product too cold	**1. Defective control**	**1. Replace**
	2. Control feeder tube not in positive contract	**2. Assure proper contract**
	3. Short on refrigerant	**3. Leak check, change drier, evacuate, and recharge**
Compressor will not start, no noise	**1. Blown fuse or breaker**	**1. Replace fuse or reset breaker**
	2. Defective or broken wiring	**2. Repair or replace**
	3. Defective overload	**3. Replace**
	4. Defective temperature control	**4. Replace**
	5. Power disconnected	**5. Check service cord or wiring connections**
	6. Defective dual pressure control	**6. Replace**
	7. Defective solenoid valve	**7. Replace**

TROUBLE SHOOTING CON'T

Compressor will not start, cuts out on overload	**1. Low voltage**	**1. Contact electrician**
	2. Defective compressor	**2. Replace**
	3. Defective relay	**3. Replace**
	4. Restriction or moisture	**4. Leak check, replace drier, evacuate and re-charge**
	5. Inadequate air over condenser	**5. Clean condenser**
	6. Defective condenser fan motor	**6. Replace**
	7. CRO not set properly	**7. Reset to 10 psi.**
Icing condition in drain pan	**1. Low voltage**	**1. Check voltage at compressor**
	2. Cabinet not level	**2. Check front to rear leveling, adjust legs accordingly**
	3. Defective drain tube heater	**3. Replace**
	4. Defective drain pan heater	**4. Replace**

LIGHTING SYSTEM

Lights won't start	**1. Check light switch**
	2. Check continuity to ballast
	3. Check to see if bulbs are inserted properly into sockets
	4. Check voltage

LIGHTING SYSTEM

Lights flicker	**1. Allow lamps to warm up**
	2. Check lamp sleeve for cracks
	3. Check sockets for moisture and proper contact
	4. Bulb replacement may be necessary
	5. Check voltage
	6. New bulbs tend to flicker until used
Ballast hums	**1. Check voltage**
	2. Replace ballast

ELECTRICAL COMPONENTS

MODEL	HGL-1-T/B	HGL-2-T/B	HGL-3-T/B
Evaporator Fan Motor	Morrill SPB5EM2	Same	Same
Light Ballast	Huss. #06-S183-1	06-S-183-1 (1) 06-S-183-2 (1)	06-S-183-2 (2)
Fluorescent lamp	FO4OW-T8-60”	Same	Same

WARRANTY –

Please read carefully to assure prompt and accurate service

Ordering Replacement Parts –

- Contact your nearest Hussmann Distributor.
- Always specify model and serial number of cabinet.
- If correct part number is not known, give a clear description of part itself and its function in the cabinet or remote unit.

Warranty Parts Procedure –

- Same as items above
- Give original installation date of cabinet and, if possible, forward a copy of the original invoice or delivery receipt.
- All shipments of in-warranty replacement parts will be invoiced from the factory until such time as the defective part is returned and proved to be defective by our Quality Control Department.
- Contact your Hussmann Distributor for instructions on returning in-warranty parts.
- Warranty parts must be returned to the factory within 30 days of date of failure to assure proper disposition.
- Lack of any of the above information may result in the shipment of the wrong part, or a delay in shipment.

Compressor Replacement Procedure –

- Replacement compressors will not be shipped from the Hussmann factory. They may be obtained from your nearest Copeland Wholesaler.

- Your wholesaler will replace, free of charge, any compressor found to be defective within twelve months of installation, not to exceed twenty months from the date of manufacture, as determined by the compressor serial number on the compressor serial plate.

- For any defective compressor beyond the twelve or twenty month time period, a salvage value credit will be given too partially offset the invoice for the replacement.

To obtain reimbursement forward to: **Hussmann Corporation**
140 East State Street
Gloversville, NY
12078
the following information:

1. The cabinet model and serial number

2. A copy of the wholesaler's invoice, along with a copy of the salvage value credit.

WIRING DIAGRAMS ARE ATTACHED AT THE BACK OF THIS BOOKLET

ADDENDUM TO HGL/HGM

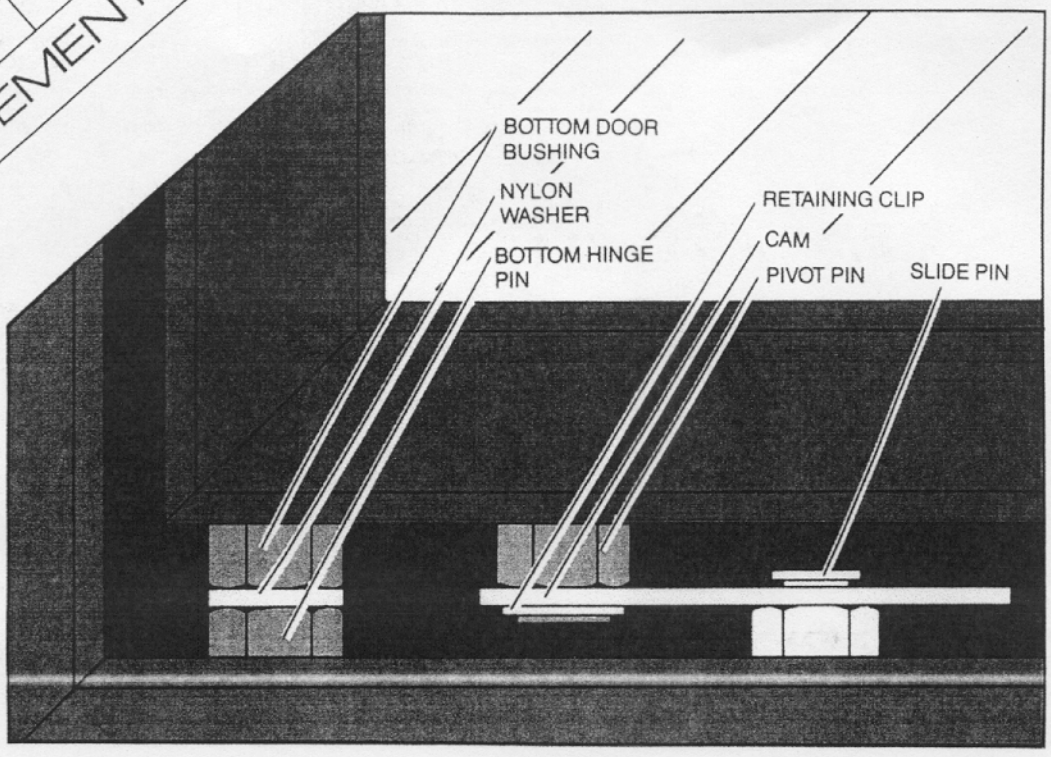
COMMERCIAL DOOR

LITERATURE

HOLD OPEN REPLACEMENT

TOOLS REQUIRED

- FLAT SCREWDRIVER
- 5/16" WRENCH
- 11/16" WRENCH
- 3/4" WRENCH
- PLIERS



HOLD OPEN REPLACEMENT

1. Remove door from frame.
   a. Holding the top hinge pin with a 5/16" wrench loosen the lock nut with a 11/16" wrench. This will release the spring tension.
   b. Open the door and remove the two screws from the door plug. Then unplug the cord from the frame.
   c. With the door open about 90°, lift the hold open cam off the slide pin.
   d. Lift the door up and out off the bottom hinge pin.
2. Use a flat screwdriver to remove retaining clip allowing cam to slide off.

   CAUTION: NOTE ORIENTATION OF CAM POSITION.
3. Remove the pivot pin from the door and the slide pin from the frame with a 3/4" wrench.

   CAUTION: NEVER REMOVE MORE THAN ONE PIN AT A TIME FROM EITHER THE DOOR OR FRAME.
4. Hand start the new pivot pin and the new slide pin and tighten both parts with a 3/4" wrench to approximately 25 foot pounds.
5. If bottom hinge bushing is black, do not remove. If it is not black, remove, slide spacer washer on, hand start hinge bushing and tighten with a 3/4" wrench to approximately 25 foot pounds.
6. Slide cam onto pivot pin, (orientation must be the same as before removal with offset toward frame). Hold cam in position and snap retaining clip in place with pliers.
7. Remove existing nylon washer and replace with the new piece.
8. Replace door by engaging top hinge pin into top bushing of door and lift door over bottom hinge pin allowing door to drop into proper position.

   CAUTION: MAKE SURE NYLON WASHER IS IN PLACE ON BOTTOM HINGE PIN.
9. To adjust door tension.
   a. Using a 5/16" wrench on top hinge pin, turn toward direction of door closing to increase tension.
   b. Tighten top lock nut with a 11/16" wrench.

Installation is now complete, open and close door to check operation.

INSTALLATION PROBLEMS?

Call us toll-free for solutions.

1-800-237-3940

STYLELINE®

Manufactured by COMMERCIAL REFRIGERATOR DOOR COMPANY

6200 Porter Road, Sarasota, FL 34240 (800)237-3940 Fax (941)377-2850 http://STYLELINE.com

TOP BUSHING REPLACEMENT

TOOLS REQUIRED

- 5/16" WRENCH
- 11/16" WRENCH
- HAMMER
- RETAINER RING PLIERS

TOP HINGE BUSHING REPLACEMENT

1. Remove door from frame as follows:
   a. Holding the top hinge pin with a 5/16" wrench loosen the 11/16" lock nut. This will release the spring tension.
   b. Open the door and remove the two screws from the door plug. Then unplug the cord from the frame.
   c. With the door open about 90°, lift the hold open cam off the slide pin.
   d. Lift the door up and out off the bottom hinge pin.

2. Remove the retainer ring from the top hinge hole by compressing the open ends together using retainer ring pliers.

3. Pull the top hinge bushing from the door. If it is still attached to the torque rod, do not pull it more than 6" out of the door. If the bushing is not attached to the torque rod, pull the torque rod from the top hinge hole but not more than 6".

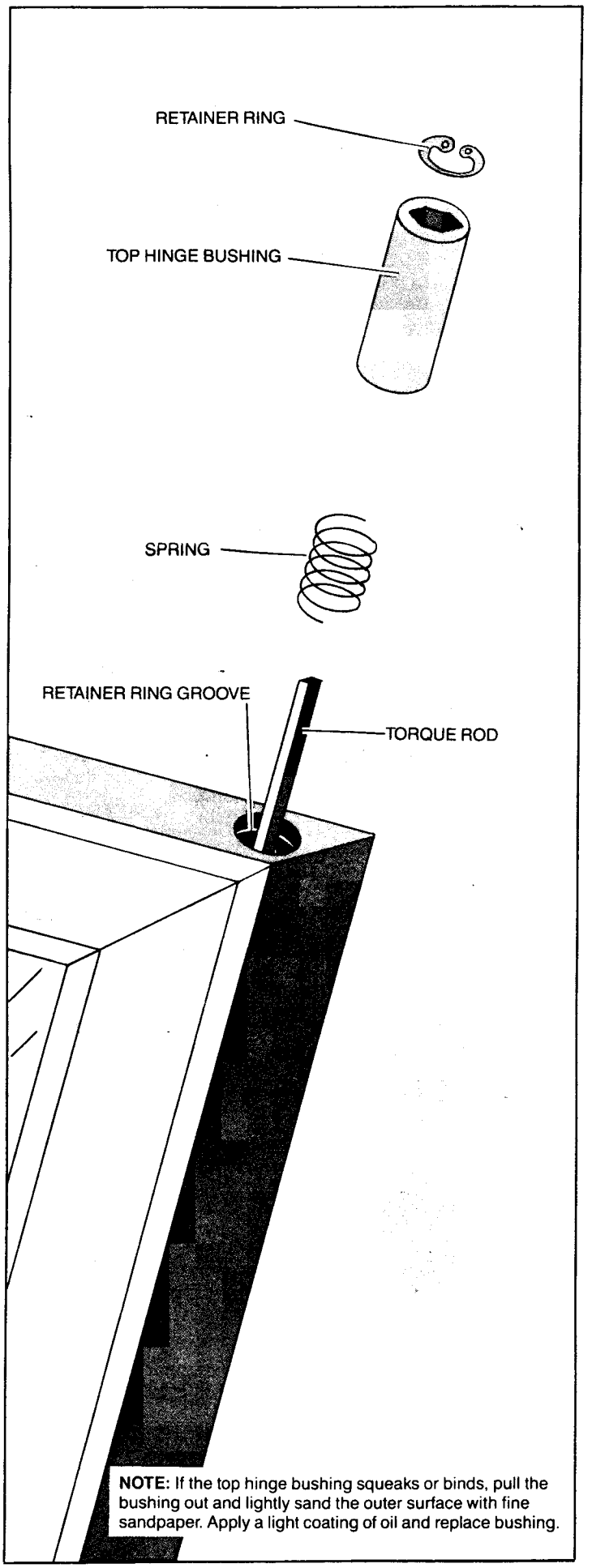
4. To replace top hinge bushing, hold the torque rod and pull old bushing off. If bushing is black, remove old spring from the torque rod and slide new spring in place. If bushing is beige, do not remove spring. To install new top hinge bushing align square of torque rod to square hole in top hinge bushing and tap onto torque rod.

5. The torque rod and hinge bushing can now be pushed back into the door. Top hinge bushing should go low enough to expose retainer clip groove. If groove is not visible, then the top hinge bushing is not far enough on the torque rod. Once the groove is visible, then replace the retainer ring by compressing the open ends.

NOTE: Before replacing door remove existing nylon washer from bottom hinge pin and install new washer in place.

6. Replace door by engaging top hinge pin into top bushing of door and lift door over bottom hinge pin allowing door to drop into proper position.

7. To adjust door tension.
   a. Using a 5/16" wrench on top hinge pin, turn toward direction of door closing to increase tension.
   b. Tighten top lock nut.



NOTE: If the top hinge bushing squeaks or binds, pull the bushing out and lightly sand the outer surface with fine sandpaper. Apply a light coating of oil and replace bushing.

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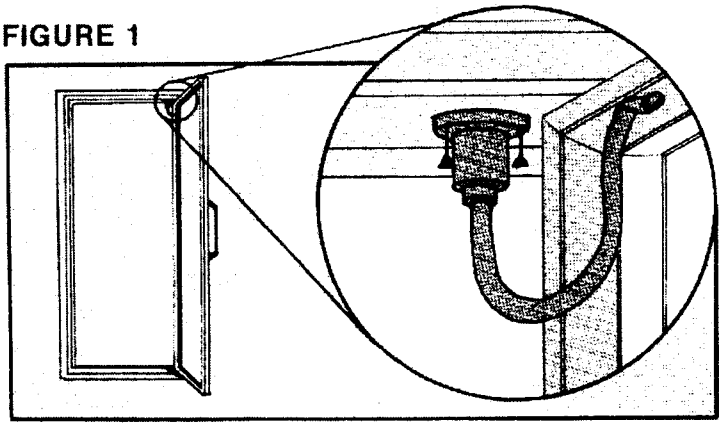
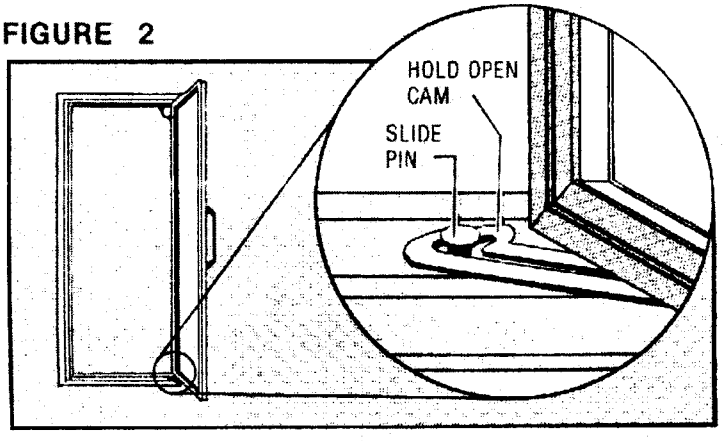
FIGURE 1



DOOR REMOVAL

1. Remove door plug connected to frame (Fig. 1).
2. Loosen the top hinge pin locknut and allow hinge pin to move freely.
3. Opening door to a 90 degree position, disconnect the hold open cam (Fig. 2) by lifting the cam over the slide pin.
4. With door open, lift up and pull out on the bottom of the door. Once the bottom of the door is off the bottom hinge pin and away from the frame, pull down on the door to disengage the door from the top hinge pin. (Fig. 4 A-C). **CAUTION:** Do not lose the nylon washer which rests on the bottom hinge pin.

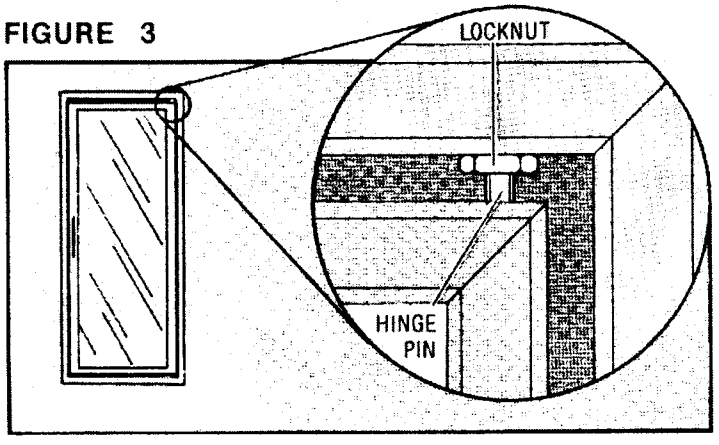
FIGURE 2



CAUTION:

TO AVOID INJURY, BE SURE ALL ELECTRICAL POWER IS DISCONNECTED FROM FRAME AND DOOR WHILE SERVICING OR ADJUSTING.

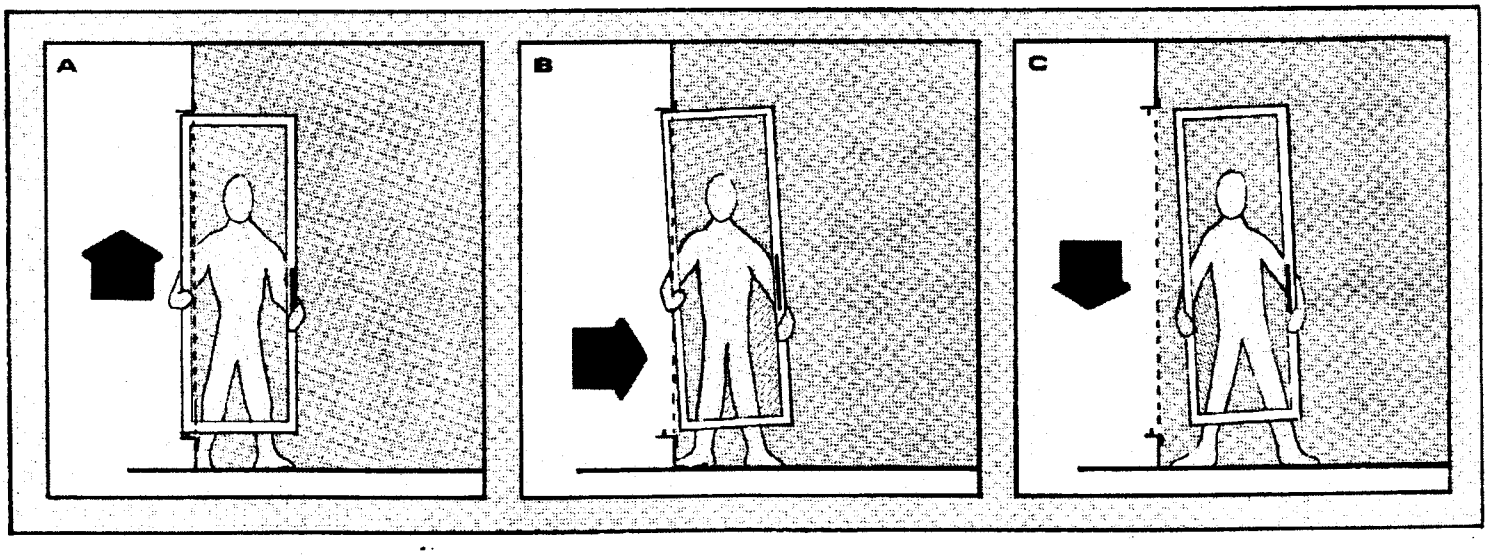
FIGURE 3



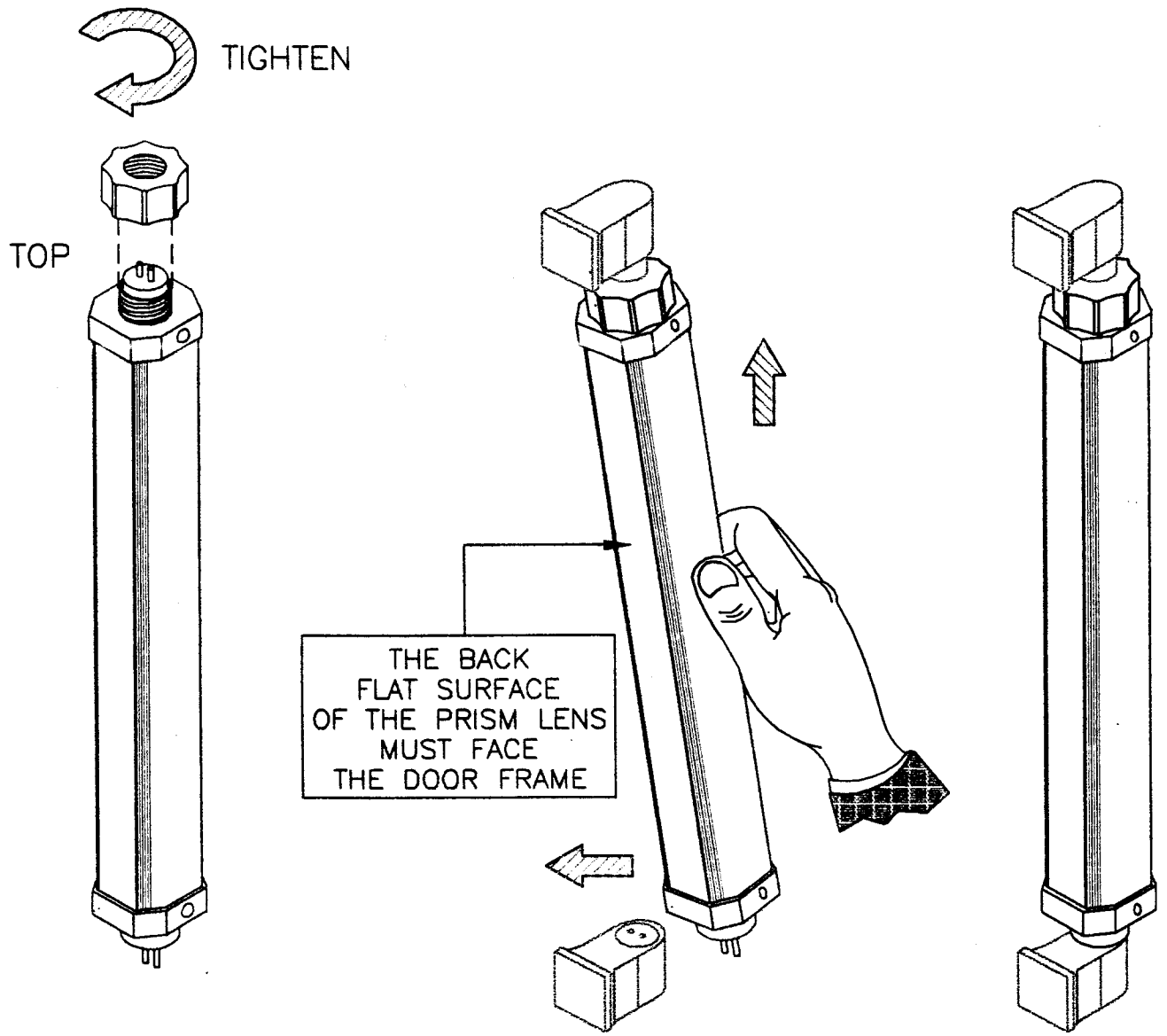
DOOR INSTALLATION

1. Hold door at a 90 degree angle to frame and lift door into top hinge pin.
2. Seat door on bottom hinge pin. Make sure nylon washer is in place and attach hold open cam to slide pin.
3. Tighten upper hinge pin locknut after adjusting door tension (see door tension adjustment on page 3).
4. Attach and secure the door plug.

FIGURE 4



PRISM LENS LAMP INSTALLATION
T8 AND T10



STEP 1 STEP 2 STEP 3

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(941) 371-8110
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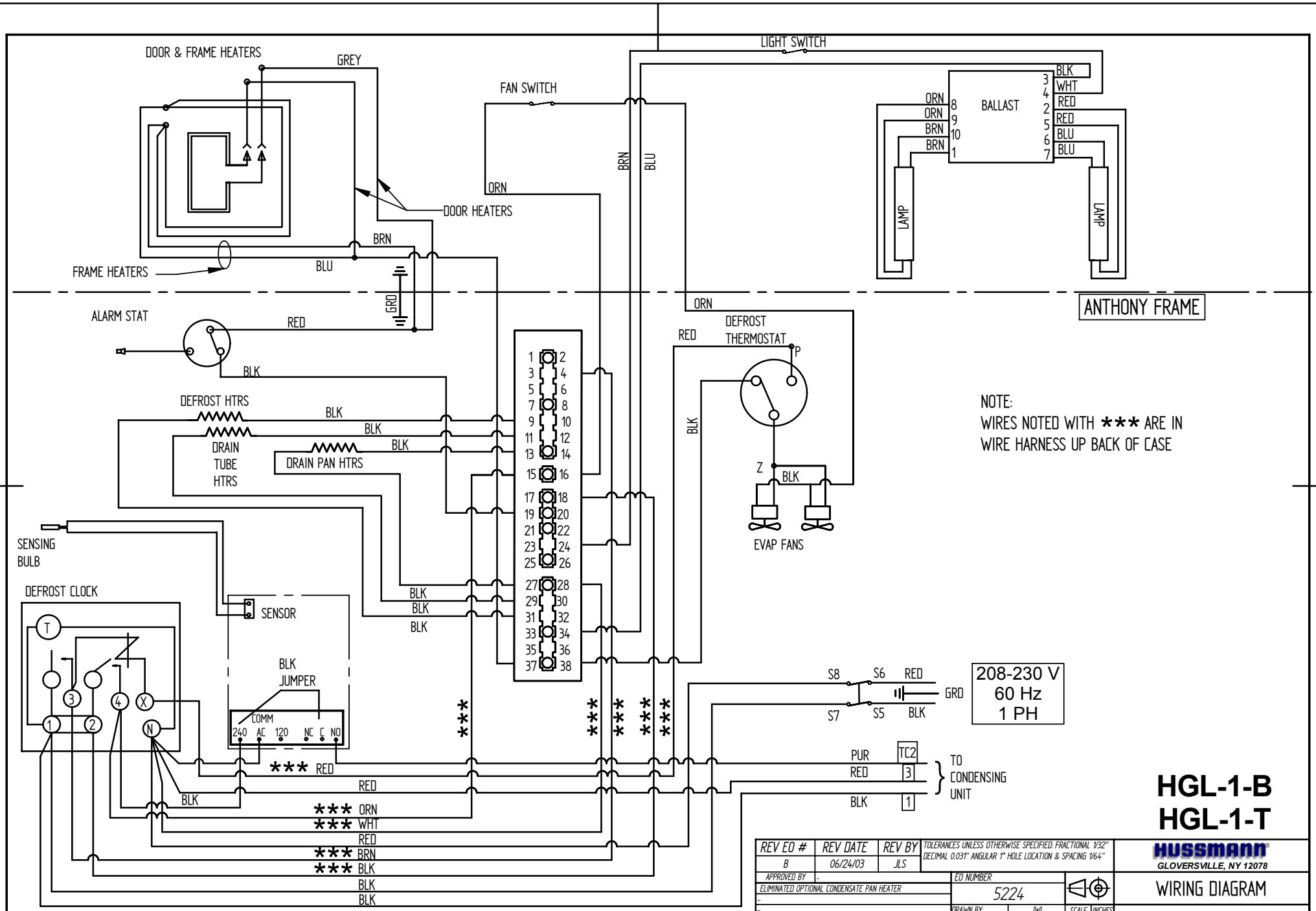
DOOR & FRAME HEATERS
GREY
DOOR HEATERS
BRN
FRAME HEATERS
BLU
GRD
FAN SWITCH
ORN
BRN
BLU
LIGHT SWITCH
BALLAST
ORN 8
ORN 9
BRN 10
BRN 1
BLK 3
WHT 4
RED 2
RED 5
BLU 6
BLU 7
LAMP
LAMP
ANTHONY FRAME
ALARM STAT
RED
BLK
GRD
DEFROST HTRS
DRAIN TUBE HTRS
DRAIN PAN HTRS
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Z
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NOTE:
WIRES NOTED WITH *** ARE IN
WIRE HARNESS UP BACK OF CASE
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S7 S5 BLK
GRD
208-230 V
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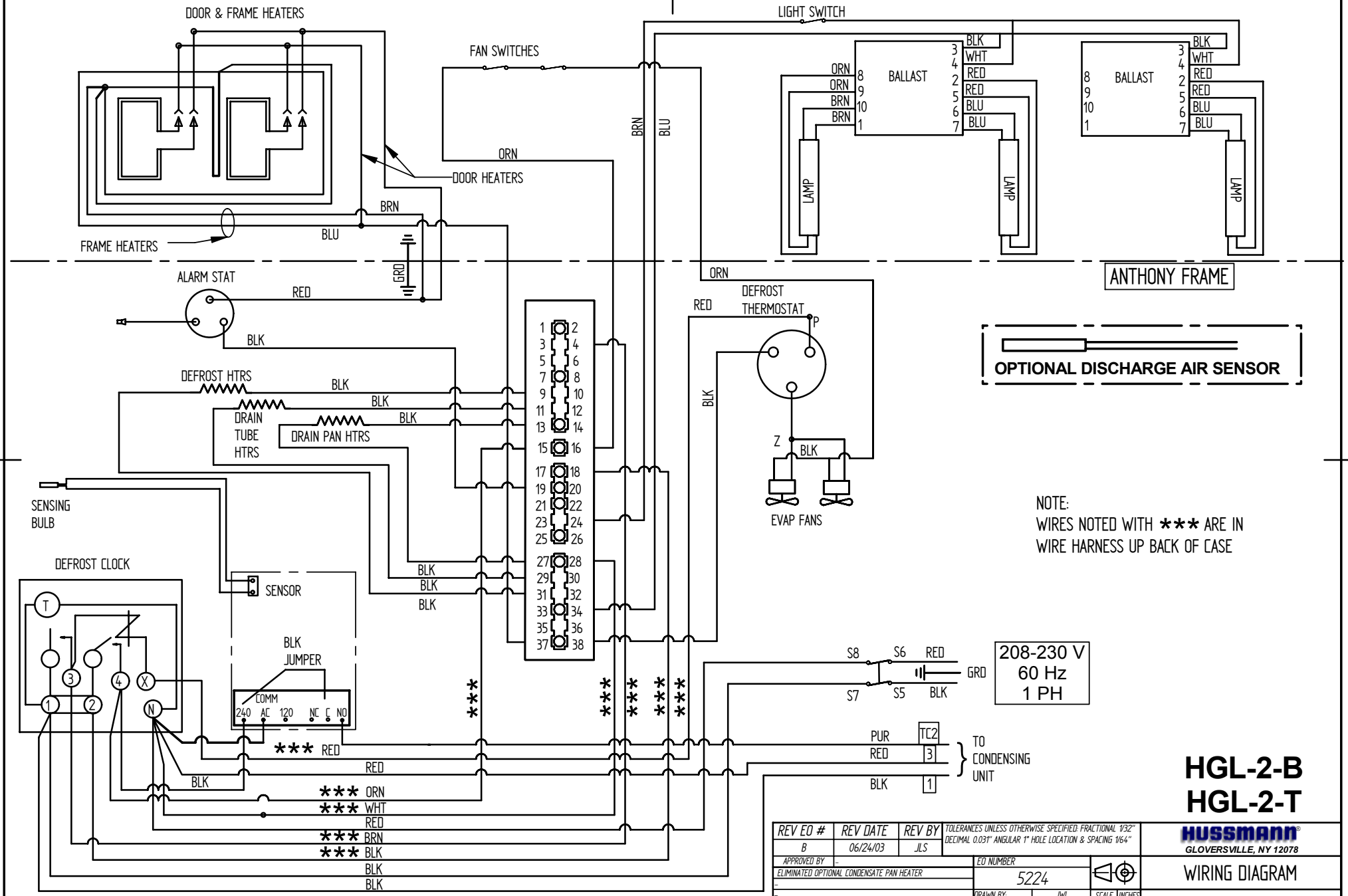
1
TO CONDENSING UNIT
HGL-1-B
HGL-1-T
REV EO # B
REV DATE 06/24/03
REV BY JLS
TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONAL 1/32" DECIMAL 0.031" ANGULAR 1° HOLE LOCATION & SPACING 1/64"
APPROVED BY –
ELIMINATED OPTIONAL CONDENSATE PAN HEATER
EO NUMBER 5224
DRAWN BY: JWL
DATE DRAWN: 2/23/96
APPROVED BY: –
SCALE INCHES
SHEET # 1 OF 1
HUSSMANN®
GLOVERSVILLE, NY 12078
WIRING DIAGRAM
M100-2024R B


DOOR & FRAME HEATERS
FAN SWITCHES
LIGHT SWITCH
BALLAST
LAMP
ANTHONY FRAME
OPTIONAL DISCHARGE AIR SENSOR
ALARM STAT
DEFROST THERMOSTAT
DEFROST HTRS
DRAIN TUBE HTRS
DRAIN PAN HTRS
SENSING BULB
DEFROST CLOCK
SENSOR
BLK JUMPER
COMM
240 AC 120 NC C NO
EVAP FANS
NOTE:
WIRES NOTED WITH *** ARE IN
WIRE HARNESS UP BACK OF CASE
208-230 V
60 Hz
1 PH
TO CONDENSING UNIT
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HGL-2-T
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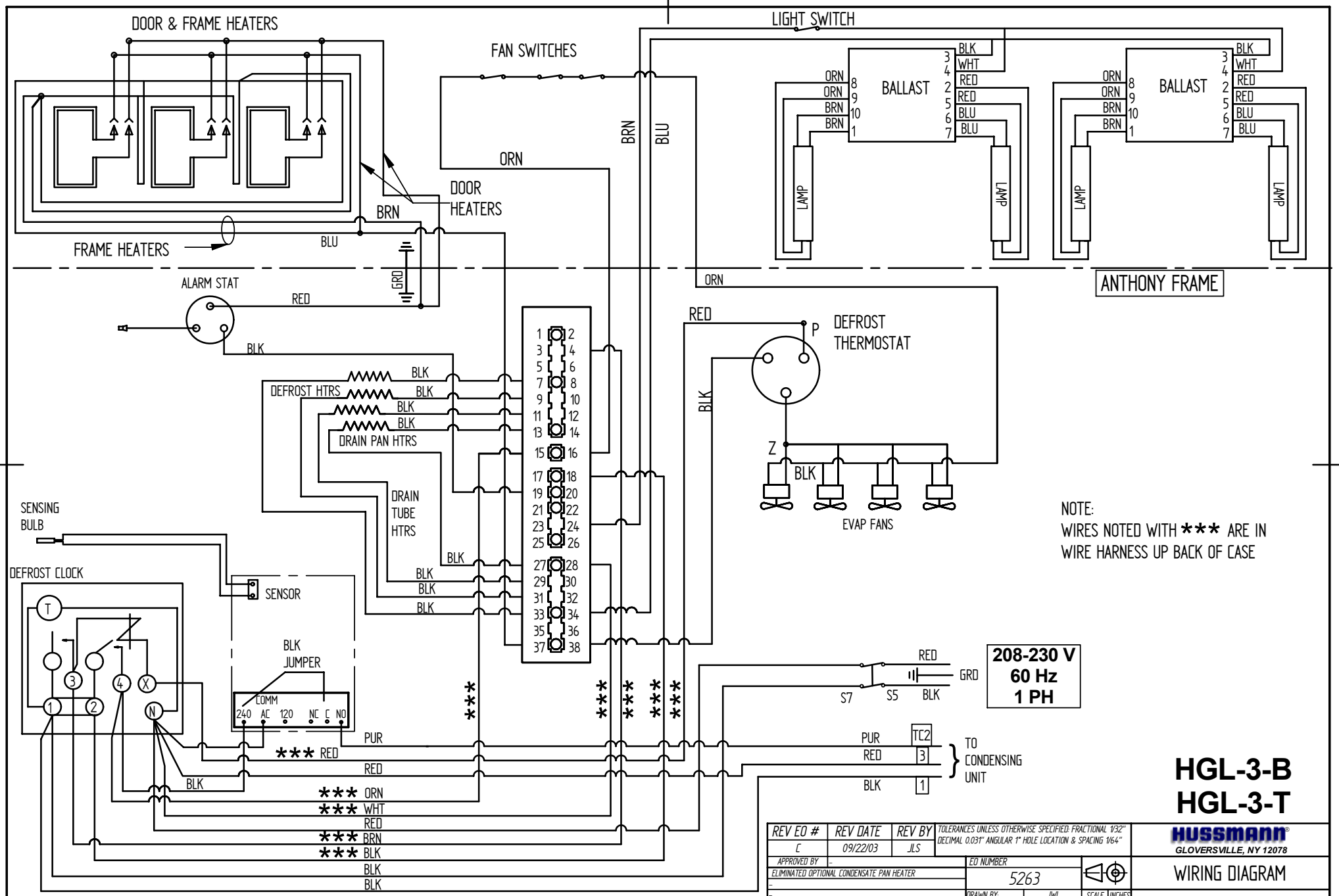
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SHEET # 1 OF 1