

AN760

TABLE OF CONTENTS

GENERAL INFORMATION AND INSTALLATION	
Introduction	2
For the Installer	3
Location and Leveling	5
For the Electrician	6
For the Plumber	7
Final Checklist	8
OPERATING INSTRUCTIONS	
Start-Up	10
Operation/Icemaker	12
Electrical/Refrigeration	12
COMPONENT LOCATION	15
MAINTENANCE AND CLEANING INSTRUCTIONS	
Maintenance Instructions	18
Cleaning Instructions	21
SERVICE DIAGNOSIS	22
ADJUSTMENT PROCEDURES	
Bin Thermostat Control	26
Leg Levelers	26
Water Regulator Assembly	26
Water Reservoir Float	26
REMOVAL AND REPLACEMENT PROCEDURES	
Slide-Out Chassis	27
Auger, Water Seal, O-ring, Ice Breaker Assembly and Freezer Assembly (A & C Models)	28
Elbow and Switch Assembly	32
Compressor Assembly	33
Condenser, Air-Cooled Models	33
Condenser, Water-Cooled Models	33
Liquid Line Drier	34
Gear Motor	36
Gear Motor Assembly	36
Fan Motor Assembly, Air-Cooled Models	38
Water Regulator Valve Assembly, Water-Cooled Models	38
Safety Controls, High Pressure, Low Pressure and Auger Delay	38
Water Reservoir Assembly	39

LIST OF ILLUSTRATIONS

Specifications	3
AN760 - Component Location	4
Location and Leveling	5
Electrical Connections	6
Water and Drain Connections	7
Final Checklist	8
Water Schematic	11
Operation	13
Component Description	16
Maintenance and Cleaning	20
Removal and Replacement	27-37
PARTS LIST AND WIRING DIAGRAMS	1
(Printed in Yellow)	
PARTS LIST:	
Cabinet Assembly (Part I)	4
Cabinet Assembly (Part II)	5
Air-Cooled Assembly	6
Water-Cooled Assembly	7
Water and Drainage System	8
Freezer Assembly (A & C Models)	9
Freezer Assembly (A Models)	9
Elbow and Switch Assembly	10
Drive Motor Assembly	11
Compressor Assembly	12
Control Box Assembly, Air-Cooled	13
Control Box Assembly, Water-Cooled	14
WIRING DIAGRAMS:	
AN760AE-1A (115/60/1)	16
AN760WE-1A (115/60/1)	17
AN760AE-1C (115/60/1)	18
AN760WE-1C (115/60/1)	19

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AN760 FOR THE INSTALLER

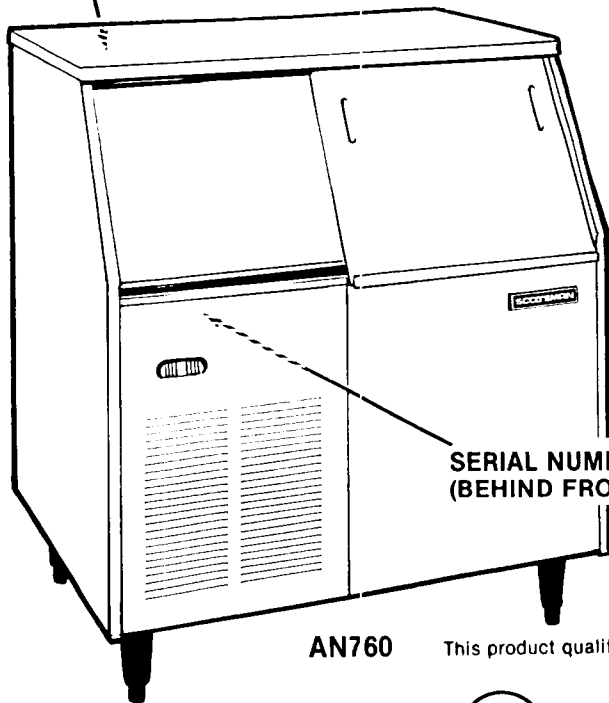
INTRODUCTION

This manual provides the specifications and the step-by-step procedures for the installation, start-up, operation, maintenance and cleaning of the SCOTSMAN Model AN760 Automatic Nugget Icemaker.

The Scotsman AN760 icemakers store their own ice supply in a heavily insulated, polyethylene storage bin, with a handy ice access door opening at the front.

Another feature is the slide-out chassis, allowing the icemaking components to be slid out as an assembly for maintenance or service.

NAMEPLATE
(ON THE BACK)



AN760

This product qualifies for the following listings:



This icemaker has been engineered to our own rigid safety and performance standards. The National Sanitation Foundation (NSF) seal, signifies that it is listed with NSF and that it complies with the materials and construction standards of NSF. In addition, the Underwriters Laboratories, Inc., (UL) Listing Mark and the Canadian Standards Association (CSA) Monogram, both signify that its construction and design have been inspected and tested by them. NSF, UL and CSA inspectors also periodically examine production icemakers at the factory, to assure continued compliance.

To retain the safety and performance built into this icemaker, it is important that installation and maintenance be conducted in the manner outlined in this manual.

NAME PLATE

MODEL NUMBER					
SERIAL NUMBER					
A.C. SUPPLY VOLTAGE					
MINIMUM CIRCUIT AMPACITY				WIRES	
MAXIMUM FUSE SIZE *				HERTZ	
HEATER WATTS				PHASE	
REFRIGERANT		CHARGE		OZ.	
MOTORS	VOLTS	R.L.A./F.L.A.	W/H.P.	L.R.A.	
COMPRESSOR					
FAN					
DRIVE					
OTHER					
DESIGN PRESSURE		LOW		HIGH	
* OR HACR TYPE CIRCUIT BREAKER					



SCOTSMAN A HOUSEHOLD
INTERNATIONAL COMPANY

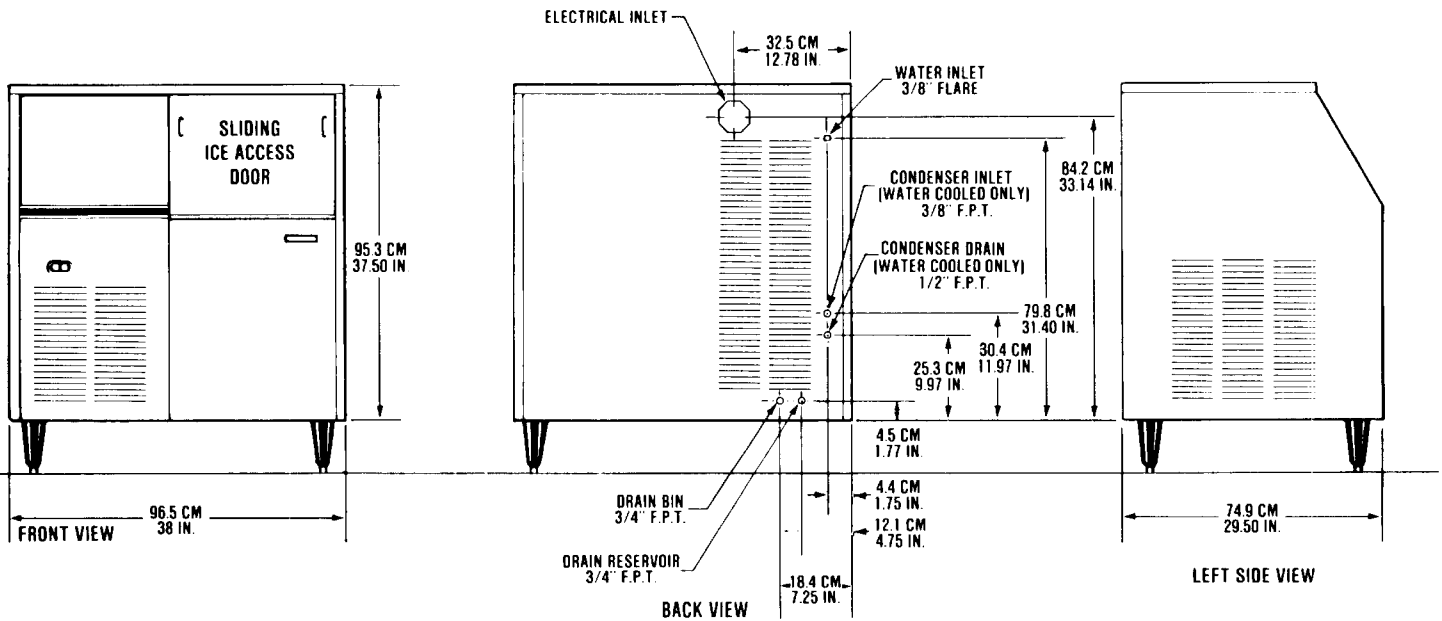
ALBERT LEA, MINNESOTA U.S.A.

SERIAL NUMBER PLATE

MODEL NUMBER			
SERIAL NUMBER			
VOLTS/HERTZ/PHASE			
MAXIMUM FUSE SIZE			
REFRIGERANT		CHARGE	OZ.

AN760 FOR THE INSTALLER

AN760iA or W)E-1C utility connection location and cabinet size.



We reserve the right to make product improvements at any time. Specifications and design are subject to change without notice.

SPECIFICATIONS

Model Number	(Height - w/o Legs) Dimensions H" x W" x D"	Bin Cap.	Cube Size	Cond. Unit	Finish **	Basic Electrical	Comp. H.P.	No. of Wires	Min. Circuit Ampa- city †	* Max. Fuse Size	Ship. Wt. lbs./kg.
AN760AE-1C	37 1/2" x 38" x 29 1/2"	255 lbs	Nugget	Air	ES	115/60/1	3/4	2	19.3	30	304/138
AN760WE-1C	37 1/2" x 38" x 29 1/2"	255 lbs	Nugget	Water	ES	115/60/1	3/4	2	16.0	25	304/138

**ES Sandalwood high-gloss, baked enamel finish on leathergrain embossed steel.

†Use this value to determine minimum wire size as per National Electric Code Standards.

* Or HACR type circuit breakers.

IMPORTANT OPERATING REQUIREMENTS

	MINIMUM	MAXIMUM
Air Temperatures	50°F (10.0°C)	100°F (38°C)
Water Temperatures	40°F (4.4°C)	100°F (38°C)
Water Pressures	20 lbs. gauge	120 lbs. gauge

Electrical Voltage Variations

Voltage rating specified on nameplate	-10%	10%

Extended periods of operation exceeding these limitations constitutes misuse under the terms of Scotsman Manufacturer's Limited Warranty, resulting in a loss of warranty coverage.

OPTIONAL PANEL KITS

SPKAN760 stainless steel panel kit for use with AN760.

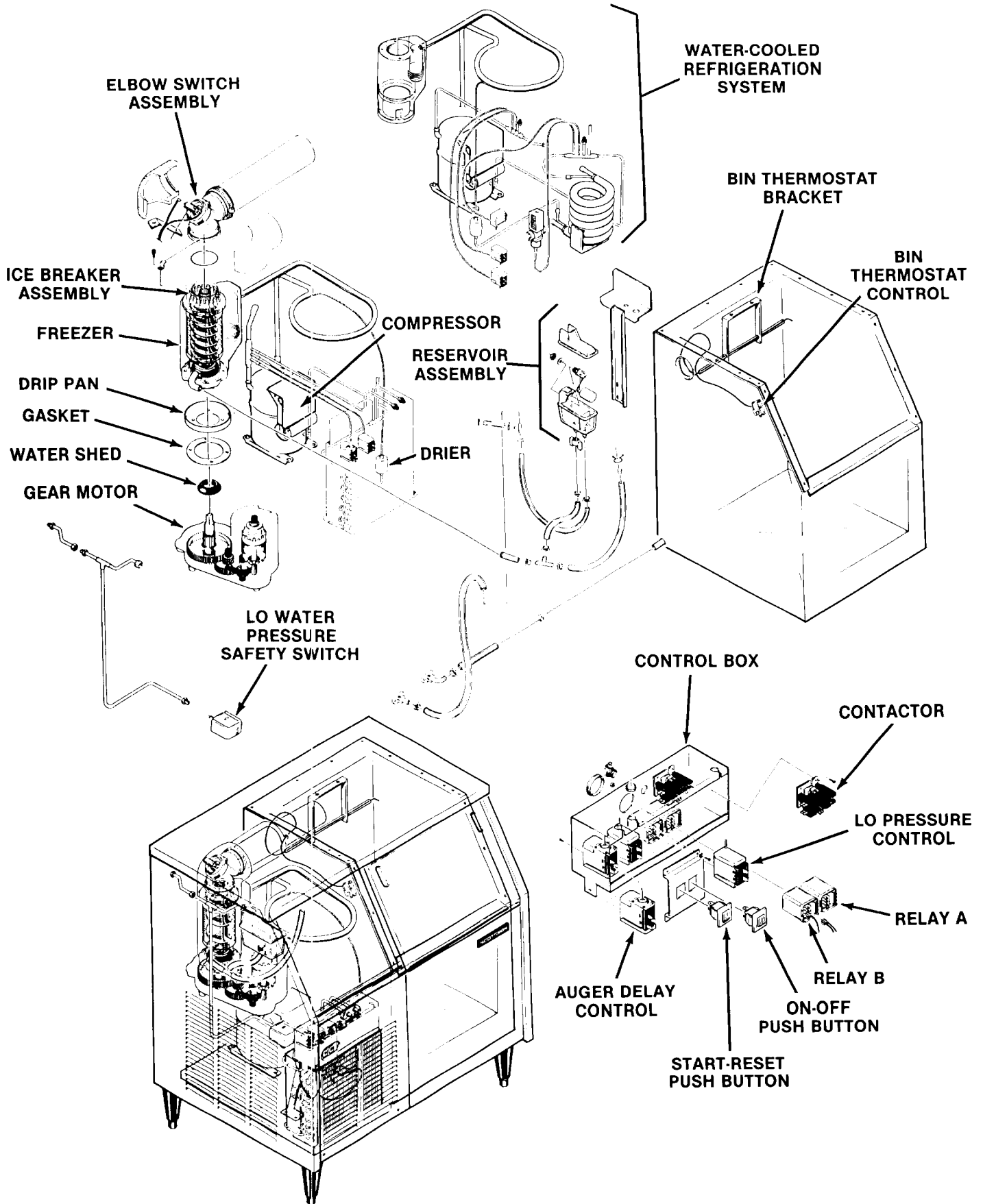
SEE NAMEPLATE, for electrical and refrigeration specifications.

NAMEPLATE is located on the rear panel.

Remove left panel to locate Model/Serial Number plate, on the top of the control box.

Legs are included with the machine. (Enamel only). If SPKAN760 is used KLP2S (Nickel-plated legs) should also be ordered.

AN760 FOR THE INSTALLER



AN760(A or W)E-1C COMPONENT LOCATION

AN760 FOR THE INSTALLER

LOCATION AND LEVELING

CAUTION

This icemaker is NOT designed for outdoor installations or where air temperatures are below 50-degrees F. or above 100-degrees F. and water temperature is below 40-degrees F. or above 100-degrees F. Extended periods of operation at temperatures exceeding these limitations will constitute misuse, under the terms of the SCOTSMAN manufacturer's limited warranty, resulting in LOSS of warranty coverage.

CAUTION

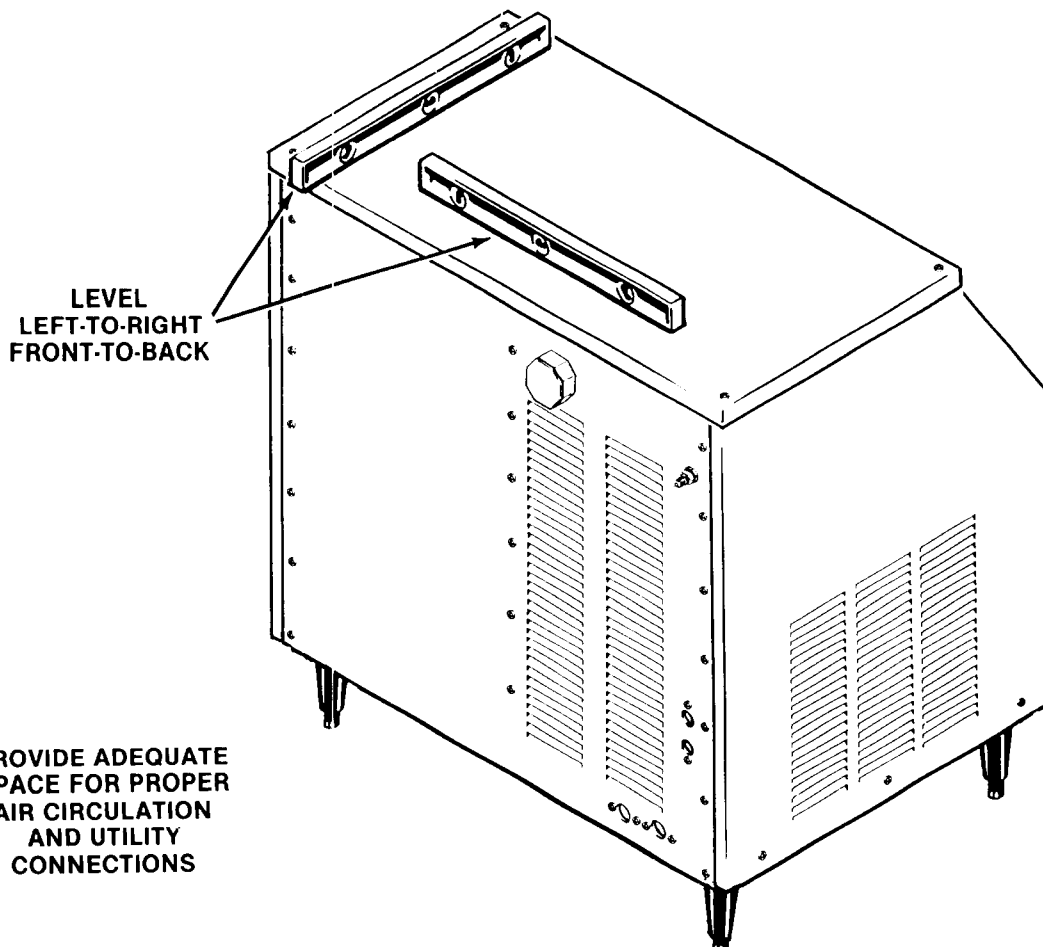
Any soda lines and/or drains should be routed AWAY from the ice machine control box. Syrup in the control box can cause SEVERE DAMAGE and will result in a LOSS of warranty coverage.

1. Position the cabinet in the selected permanent location and install legs.

Select a well-ventilated location for the air-cooled model, advising the user to frequently clean the air-cooled condenser, located directly behind the lower front service panel.

SERVICE ACCESS: Adequate space is required for all service connections, located at the back of the cabinet. A six-inch minimum clearance at back and left side panels, for routing cooling air drawn into and exhausted out of the compartment to maintain proper condensing operating on air-cooled models.

2. Level the cabinet in both the left-to-right and front-to-back directions. The leveling legs can be adjusted with an open end wrench. (See adjustment of leg levelers, #1 Page 26)



AN760 FOR THE ELECTRICIAN

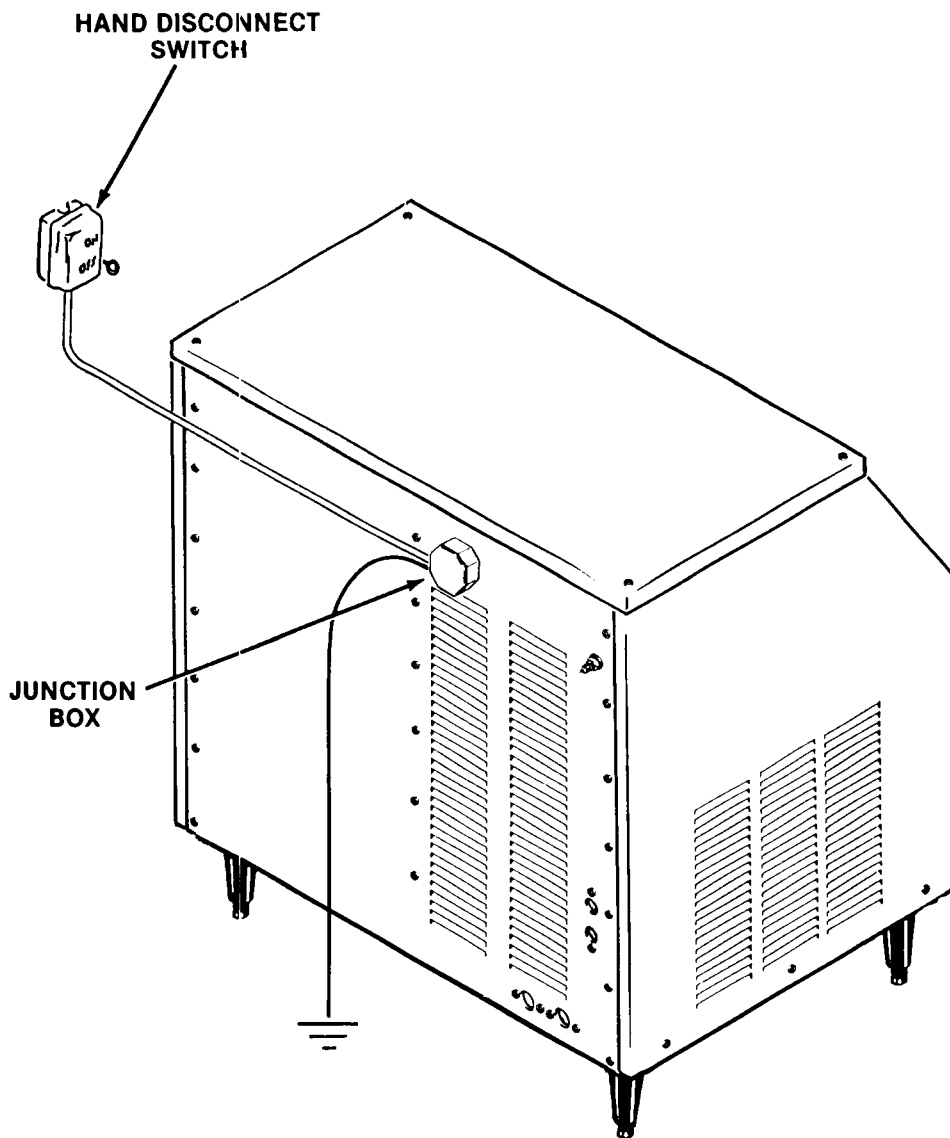
ELECTRICAL CONNECTIONS:

SEE NAMEPLATE for current requirements to determine wire size to be used for electrical hookup. The AN760 Icemaker requires a solid earth ground wire. See wiring diagram.

Be certain the icemaker is connected to its own electrical circuit and individually fused. The maximum allowable voltage variation should not

exceed ten percent of the nameplate rating, even under starting conditions. Low voltages can cause erratic operation and may be responsible for serious damage to the overload switch and motor windings.

All external wiring should conform to the national, state and local electrical codes. A permit and services of a licensed electrician will be required.



AN760 FOR THE PLUMBER

WATER SUPPLY AND DRAIN CONNECTIONS

AIR-COOLED MODELS: The recommended water supply line is a 3/8-inch O.D. copper tubing with a minimum pressure of 20 PSIG. A 3/8-inch flare fitting is provided at the water inlet. Connect to cold water supply line with standard plumbing fittings, with a shut off valve installed in an accessible place between the water supply and the cabinet.

In some cases, a plumbing permit and services of a licensed plumber will be required.

CAUTION

This icemaker is equipped with a low water pressure safety device, which in the event of interruptions or low water pressure, the icemaker will automatically stop to prevent damage. It will restart automatically after water pressure is restored.

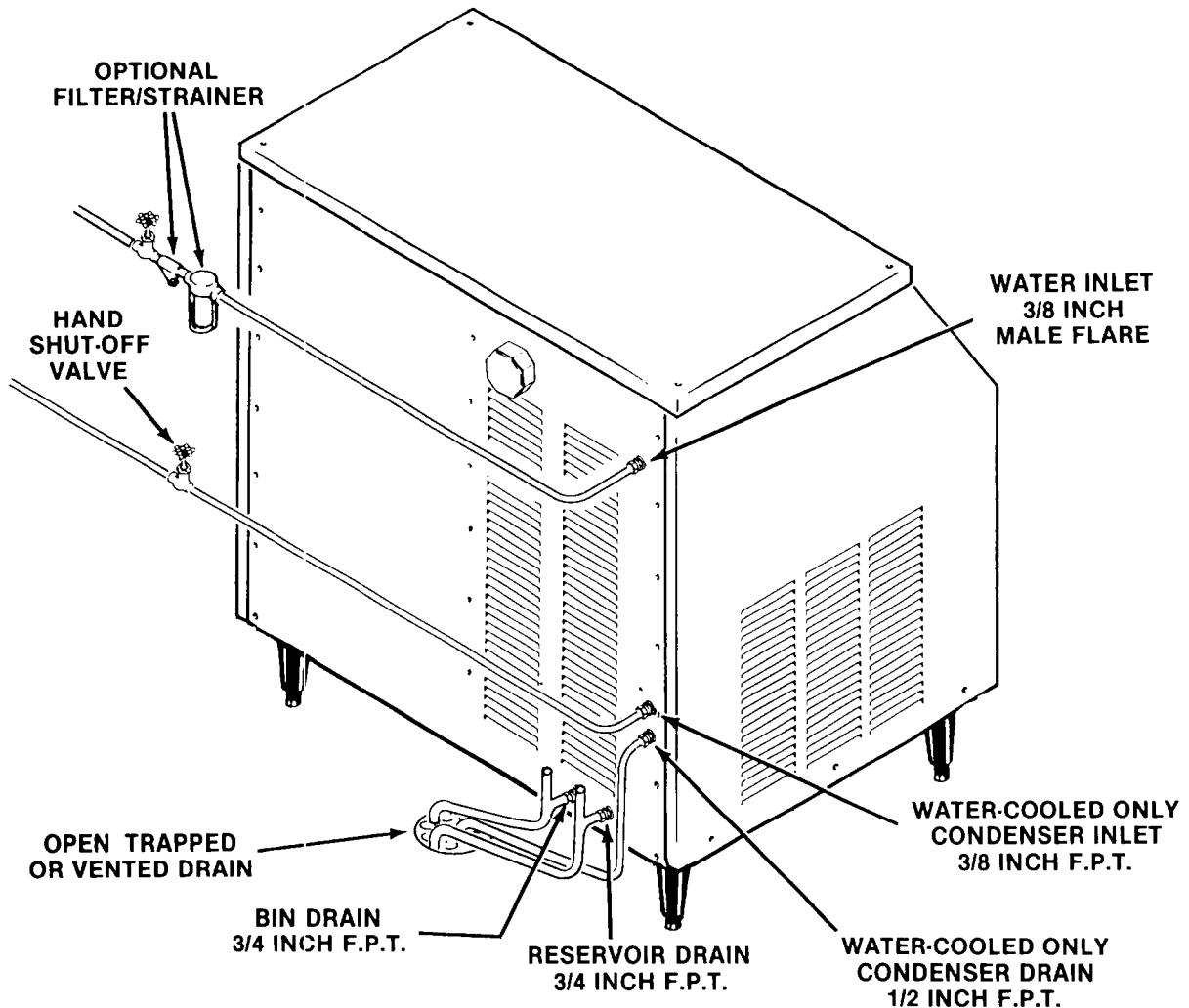
The icemaker in this cabinet will not operate properly when water supply temperatures are below 40-degrees F. or above 100-degrees F.

WATER-COOLED MODELS: On water-cooled models a separate connection to the condenser is required. 3/8-inch O.D. copper tubing is recommended for the separate water inlet line and a separate drain line must be connected.

NOTE

The CAUTION in the text for the air-cooled models equally applies for the water-cooled models. In both type installations, water supply must be installed to conform with the local plumbing codes. In some cases a plumbing permit and services of a licensed plumber will be required.

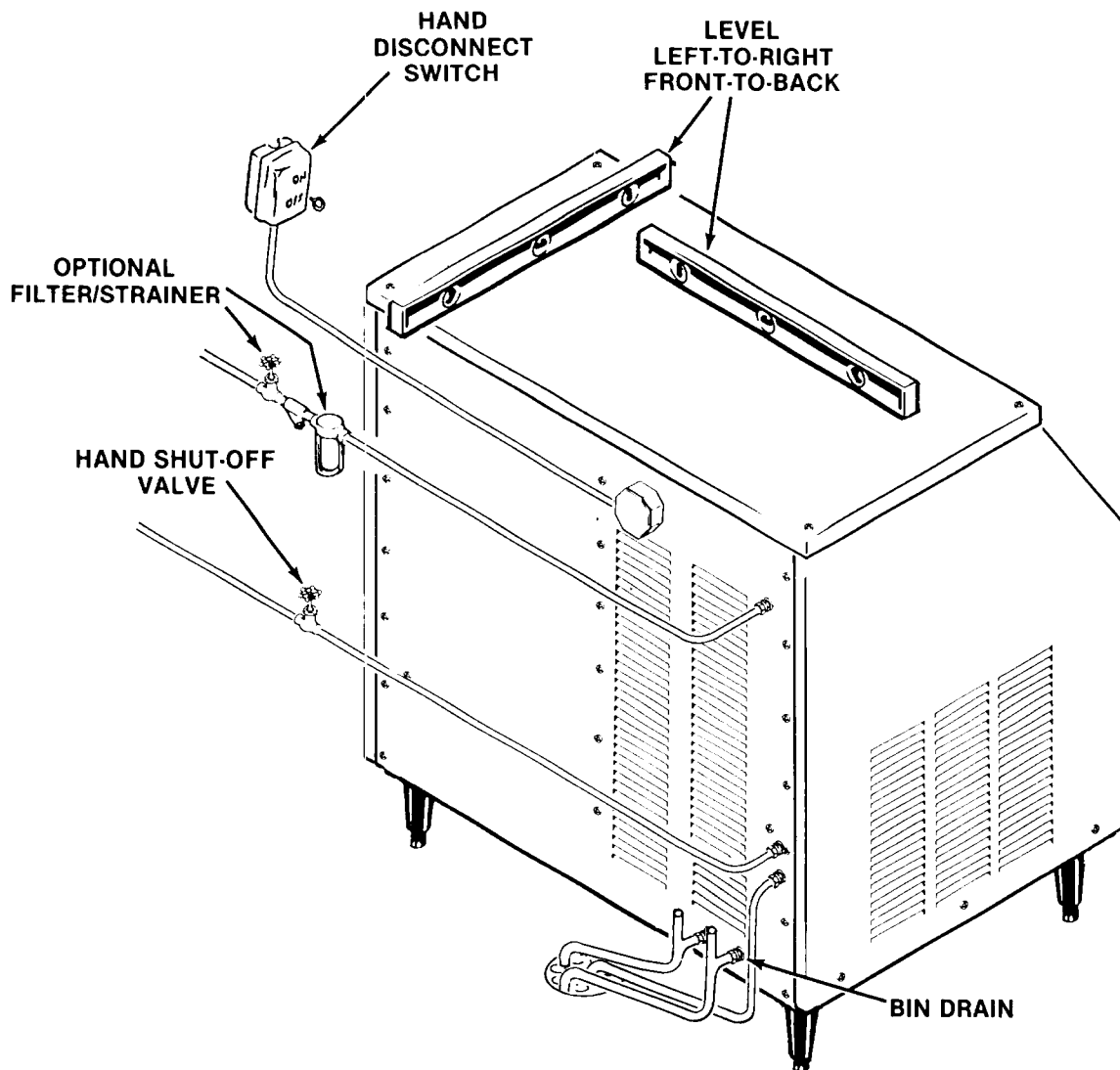
Local water conditions may require the use of water filtration and/or water treatment equipment. Consult your local SCOTSMAN Distributor for advice. Untreated or unfiltered water may adversely affect the operation of any icemaker.



AN760 FOR THE INSTALLER

FINAL CHECK LIST

1. Is the cabinet in a room where ambient temperatures are within the minimum and maximum temperatures specified?
2. Is there at least six inches clearance at the left side and rear of the cabinets for proper air circulation?
3. Has water supply pressure been checked to insure a minimum of 20 PSIG and a maximum of 120 PSIG operating pressure?
4. Is the cabinet level?
5. Have all electrical and piping connections been made and the water supply line shut-off valve installed and electrical wiring properly connected?
6. Have the compressor hold-down nuts been checked to be sure the compressor is snug on the mounting pads?
7. Check all refrigerant lines and conduit lines, to guard against vibration or rubbing and possible failure.
8. Have the bin and cabinet been wiped clean?
9. Has the Manufacturer's Registration Card been properly filled out? Check for correct model and serial numbers from Serial nameplate, then mail the completed card to the SCOTSMAN factory.
10. Has the owner/user been given the Service Manual and instructed how to operate and maintain the icemaker?
11. Has the owner been given the name and telephone number of the authorized SCOTSMAN Service Agency serving him?



AN760 START-UP

START UP

1. Remove screws and remove trim strip. Remove screws and the upper left front panel.
2. OPEN the water supply line shutoff valve.
3. Observe the water filling operation, see water schematic.
 - a. Water flows into water reservoir.
 - b. Water flows through water feed line to bottom of freezer assembly.
 - c. Float moves up as water rises.
 - d. Float stops water flow, when water level reaches the molded horizontal line, on the body of the water reservoir.
4. Check all internal water connections for leaks.
5. Connect electrical power from the building source to the icemaker and check voltage.
6. Press the Master ON-OFF pushbutton and the START—RESET to ON position to start the automatic icemaker operation.

//////////////////// **CAUTION** //////////////////////

BE ALERT that momentary LOSS OF POWER, such as a brief power outage, will cause the RED light of the START-RESET pushbutton to turn ON. It must be PRESSED, to reset and restart the Icemaker.

Repeated need to PRESS the START-RESET pushbutton, requires checking for:

1. Faulty bin thermostat control.
2. Need to clear jammed ice tube.
3. Loose wiring connections.

////////////////////////////////////

7. Observe that ice begins dropping into the ice storage bin.

8. Let the system operate until ice covers the bottom of the bin. Check for any excess noises beyond normal compressor noise:
 - a. Fan noises, when air-cooled: blades touch other surfaces; blades bent, out-of-balance, or loose on shaft.
 - b. Vibrating type, from touching lines.
 - c. Chattering: Lack of water in freezer.
 - d. Compressor loose at one or more hold-down bolts.

//////////////////// **CAUTION** //////////////////////

This Icemaker is equipped with a low water pressure safety device, which in the event of interruptions or low water pressure, the Icemaker will automatically stop to prevent damage. It will restart automatically after the water pressure is restored.

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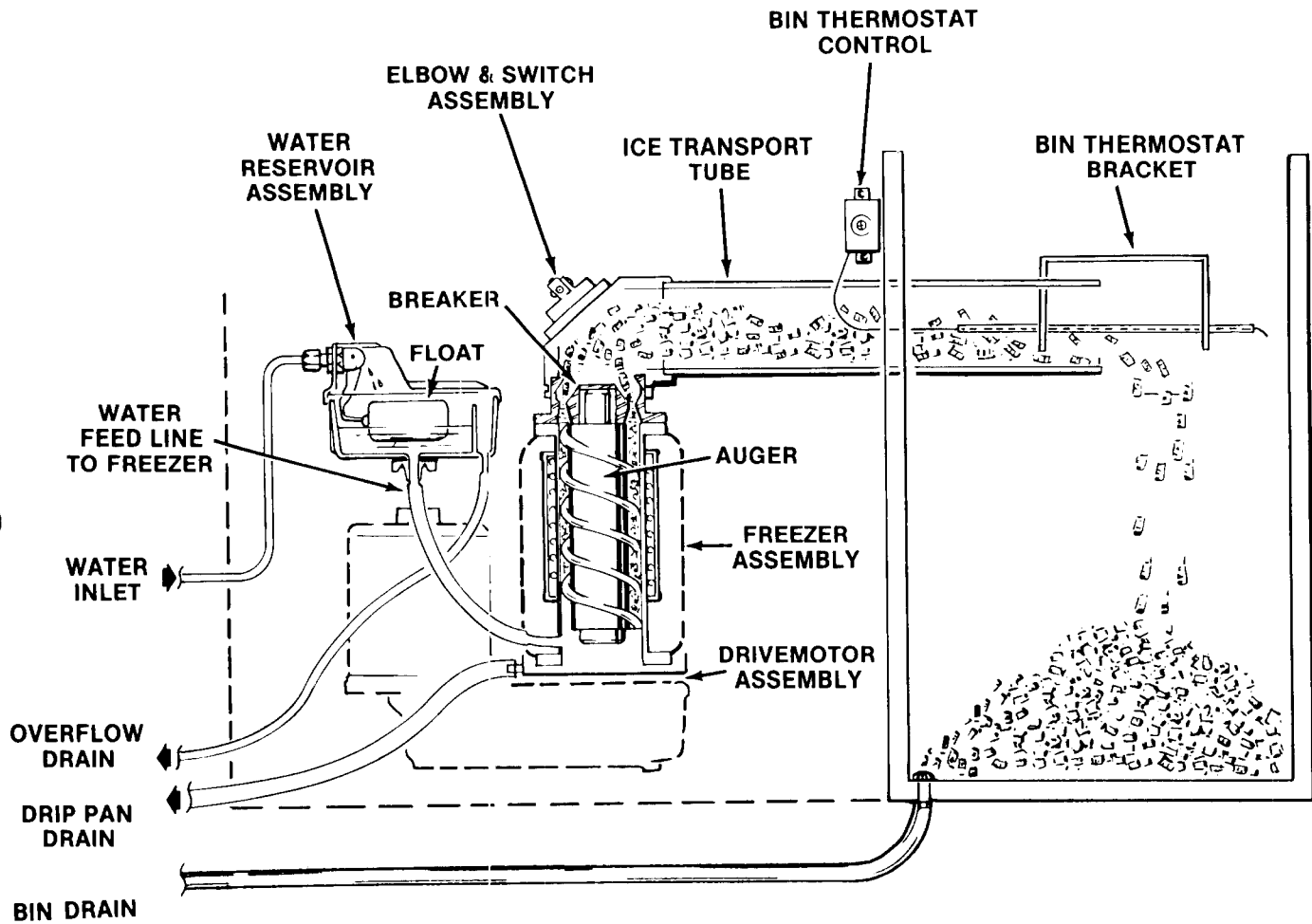
9. Check Lo side pressure. Should be 10 ± 2 PSIG.
10. Check on Water-Cooled only, High side pressure - adjust if necessary to 135 PSIG.
11. Shut off water to test water safety switch. Compressor should stop. Turn water back on, compressor should start.
12. Check amp draw, compare to Nameplate.
13. Place ice on the ice storage bin thermostat control bulb, to test shut-off.

NOTE

Within minutes after the ice is removed from the sensing bulb, the bulb will warm up and cause the icemaker to restart. This control is factory set and should not be reset until testing is performed. Normal setting is 35-degrees F. CUT-OUT and 45-degrees F. CUT-IN, to prevent short cycling.

14. Thoroughly explain to the owner/user the significant specifications of the icemaker, the start up and operation, going through the procedures for the operating instructions. Answer all questions about the icemaker, by the owner; and, inform the owner of the name and telephone number of the authorized SCOTSMAN Distributor or Service Agency serving him.

AN760 START-UP



Water Schematic

AN760 OPERATION

OPERATION

ICEMAKER

The water supply flows from the building source through the inline water strainer, enters at the unit fitting and on to the water reservoir. The water reservoir functions to maintain a constant water level inside the freezer assembly. Water from the water reservoir enters at the bottom of the freezer assembly and is changed into ice by low temperatures inside the freezer.

A stainless steel auger within the freezer is powered by the drivemotor assembly, a direct-drive gear-motor, and the rotating auger carries the ice upward to the end of the auger. See Water Schematic, where excess water is pressed out of the ice, as it is extruded and broken into random length chunks of ice and pushed out through the ice transport tube and into the ice storage bin.

Pressing the Master ON-OFF pushbutton to ON, starts the automatic and continuous icemaking process. When the ice storage bin has been filled with ice, up to the level of the bin thermostat control capillary bulb, the icemaking process shuts OFF.

As ice is removed from the ice storage bin, the bulb warms up, restarting the automatic icemaking process.

Factory settings for the bin thermostat are 35-degrees F. CUT-OUT and 45-degrees F. CUT-IN.

Altitude adjustment should ONLY be performed on icemakers installed at 2000-foot level locations and ABOVE, and adjust only in increments of one-fourth turn of screw at a time.

ELECTRICAL/REFRIGERATION

The Model AN760 icemakers are designed to operate on standard electrical supply 115 volts, 60 Hertz, single phase. Other voltage requirements are available on special order. Therefore, always CHECK NAMEPLATE for electrical information BEFORE proceeding with electrical wiring connections to the icemaker.

Cold ambient temperatures and interruptions in water supply are conditions that can cause excessively hard ice and overloads within the freezer assembly, which is directly transmitted to the drivemotor; and in turn, will cause speed reduction or ultimate freezeup.

When the drivemotor is slowed to a pre-determined RPM, a sensing switch mounted on top of the motor is designed to open the electrical circuit to the compressor. The compressor stops operating, no more ice is produced, and the drivemotor continues to operate rotating the auger to clear the overload and gradually build up to full speed.

At a pre-determined higher RPM drivemotor speed, the speed sensing switch closes the electrical circuit to the compressor, causing the normal icemaking process to resume.

The elbow & switch assembly is mounted on top of the freezer assembly and movement of ice against the rubber diaphragm inside the elbow, actuates the switch. The switch acts as a backup safety switch, should the bin thermostat control fail, and cause ice to jam up the ice transport tube. This safety switch will shut off the icemaker when actuated; or, as stated earlier, when there may occur a momentary loss of power, such as a brief power outage, there will be an immediate and complete shutdown of the icemaker. Pressing the START-RESET pushbutton will of course reset the circuit for RESTART, when the Master ON-OFF pushbutton is ON.

There are three safety controls in the control box on the water-cooled models and two safety controls in the control box for the air-cooled models. The low pressure control, an automatic reset, nonadjustable control, is used on both models and is set to open at zero to four PSIG to stop the compressor. The auger delay switch, a single-pole double-throw (SPDT) switch, functions as a control device to allow the drivemotor to rotate the auger to clear the freezing chamber while the compressor circuit is OFF.

Refer to the appropriate wiring diagram and trace circuitry and control functions, as described in the following paragraph.

As shown on all SCOTSMAN wiring diagrams, the controls are in the ICEMAKING MODE. Thus, the 1-2 contacts are CLOSED. At START-UP, the 1-2 contacts are OPEN and the 3-2 contacts are CLOSED. As the icemaker begins to operate, the low side pressure starts to decrease from the stabilized or at-rest pressure. As soon as the pressure is reduced to 20 PSIG, the 3-2 contacts OPEN and the 1-2 contacts CLOSE.

AN760 OPERATION

This removes the operating controls, such as the bin thermostat, from the drivemotor circuit. If one of the operating controls OPENS, it will SHUT OFF the compressor circuit. The drivemotor will operate until the low side pressure increases to 32 PSIG. Then, the 1-2 contacts OPEN and SHUTS OFF the drivemotor, usually within one to two minutes, depending upon ambient conditions. This brief period of time allows the auger to transport all the ice out of the freezing chamber. Consequently, when called on to START-UP again, there is no ice load to start up against. Again, on START-UP, the 1-2 contacts are OPEN and the 3-2 contacts are CLOSED.

On the water-cooled models only, a manual reset, high head pressure control is factory set to stop the entire icemaker should the head pressure reach 250 PSIG.

On the water-cooled models, correct head pressure is 135 PSIG. Adjustments can be made on the water regulator assembly valve. On air-cooled models, the head pressure is normal

about 130 PSIG, however it will vary depending upon ambient air temperature.

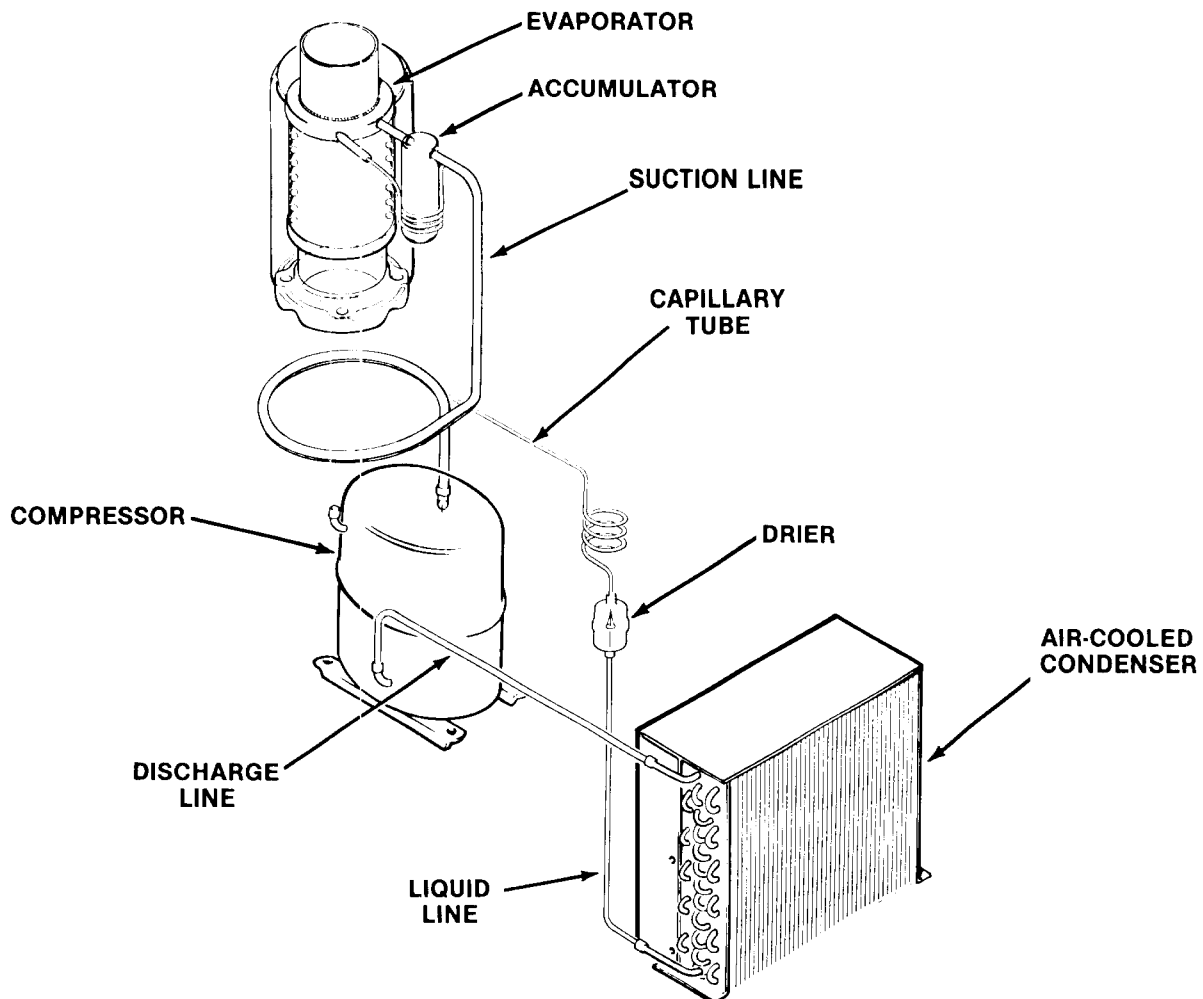
Suction pressure should be 10 PSIG with proper refrigerant charge. Suction pressure will vary about two PSIG plus or minus, depending upon ambient temperatures and inlet water supply temperatures to the freezer assembly.

When charging the system with refrigerant, always CHECK NAMEPLATE for specific refrigeration charge for individual icemaker.

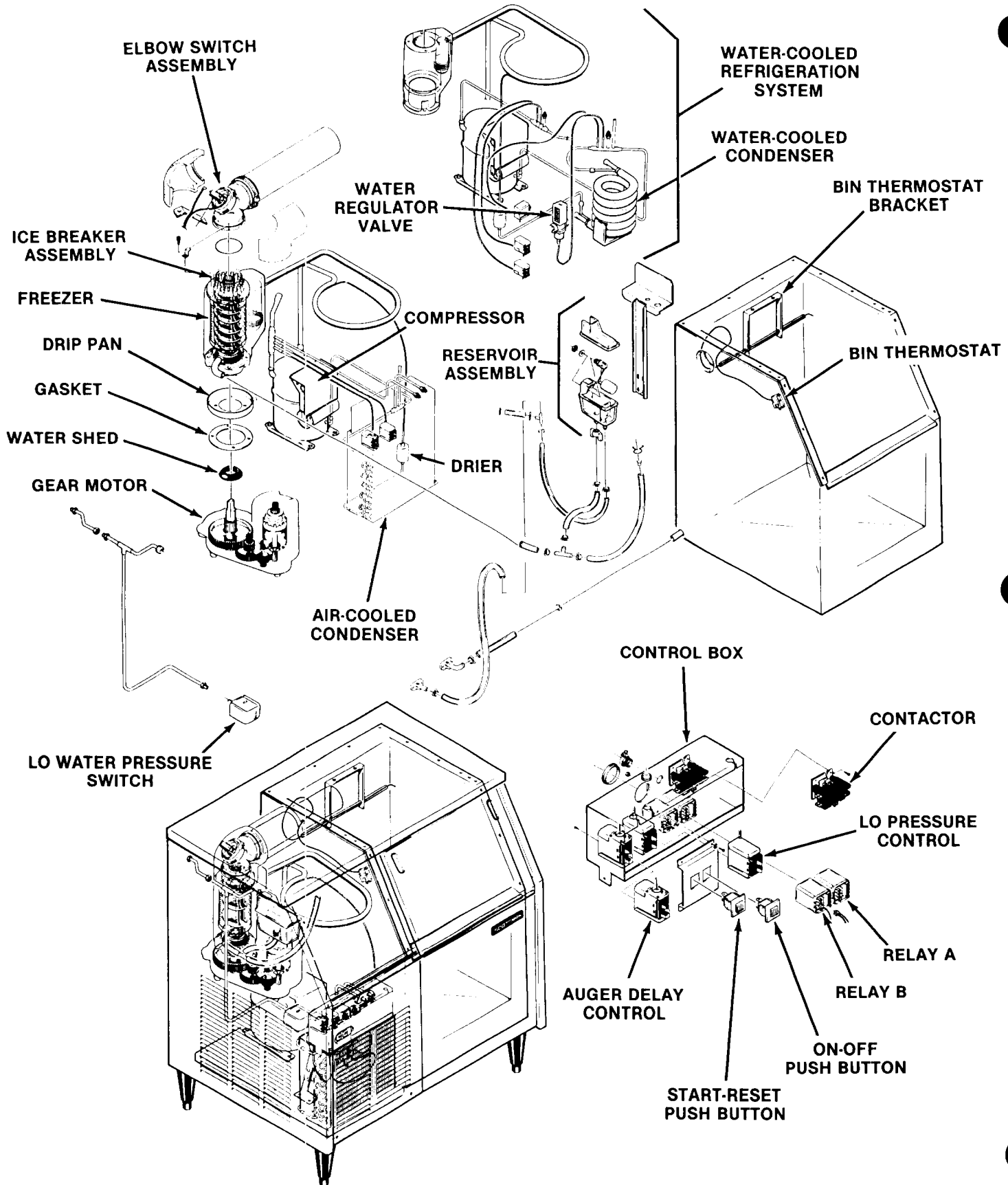
Read the instructions thoroughly before performing any adjustment or removal and replacement procedures.

Average gear motor amps (115V) are 2.9 - A Model
2.0 - C Model

Average compressor amps (115V) are 9.5.
Amp draw will vary depending upon voltage, installation, ambients and the mechanical condition of the unit.



AN760 COMPONENT DESCRIPTION



AN760 COMPONENT DESCRIPTION

ELBOW SAFETY SWITCH

The elbow safety switch is an ON-OFF switch that shuts off the compressor when an ice jam presses against the rubber diaphragm depressing the switch and opening the circuit. Melting action relieves pressure closing the circuit, lighting the start-reset pushbutton. The start-reset switch must then be pressed to start the automatic icemaking process.

ICE BREAKER ASSEMBLY

The ice breaker assembly, bolted to the top of the freezer, contains the bearing and seal for the top of the auger. Flaked ice created by the freezer is carried by the auger to the ice breaker assembly and the flaked ice is pushed by the auger through the tapered holes in the ice breaker. Flaked ice is compressed by auger pressure as it is pushed through the ice breaker assembly and the shafts of compressed ice are broken into random lengths of Ice Nuggets by the taper on the top of the ice breaker.

DRIVEMOTOR

The drivemotor assembly rotates the auger through a series of reduction gears from the electric motor to the freezer assembly. Cold ambient temperatures and interruptions in water supply are conditions that can cause excessively hard ice and overloads within the freezer assembly which is directly transmitted to the drivemotor; and in turn, will cause speed reduction or ultimate freezup.

When the drivemotor is slowed to a pre-determined RPM, a sensing switch in the motor is designed to open the electrical circuit to the compressor. The compressor stops operating, no more ice is produced and the drivemotor continues to operate rotating the auger to clear the overload and gradually build up to full speed.

At a pre-determined higher RPM drivemotor speed, the speed sensing switch closes the electrical circuit to the compressor causing the normal icemaking process to resume.

WATER PRESSURE SAFETY SWITCH installed in the potable water inlet line is set to electrically open at 10 PSIG and stop the compressor. This AUTOMATIC RESET switch will restart the icemaking process when water pressure rises to 20 PSIG.

WATER REGULATOR VALVE WATER-COOLED MODELS

The water regulator valve functions to maintain a constant head pressure, by regulating the amount of incoming water flow through the condenser, on water-cooled models. The valve operates through the refrigerant system high side pressure. Rotating the adjusting screw, located on top of the valve, can INCREASE or DECREASE the operating head pressure. 135 PSIG is the normal discharge pressure.

WATER RESERVOIR

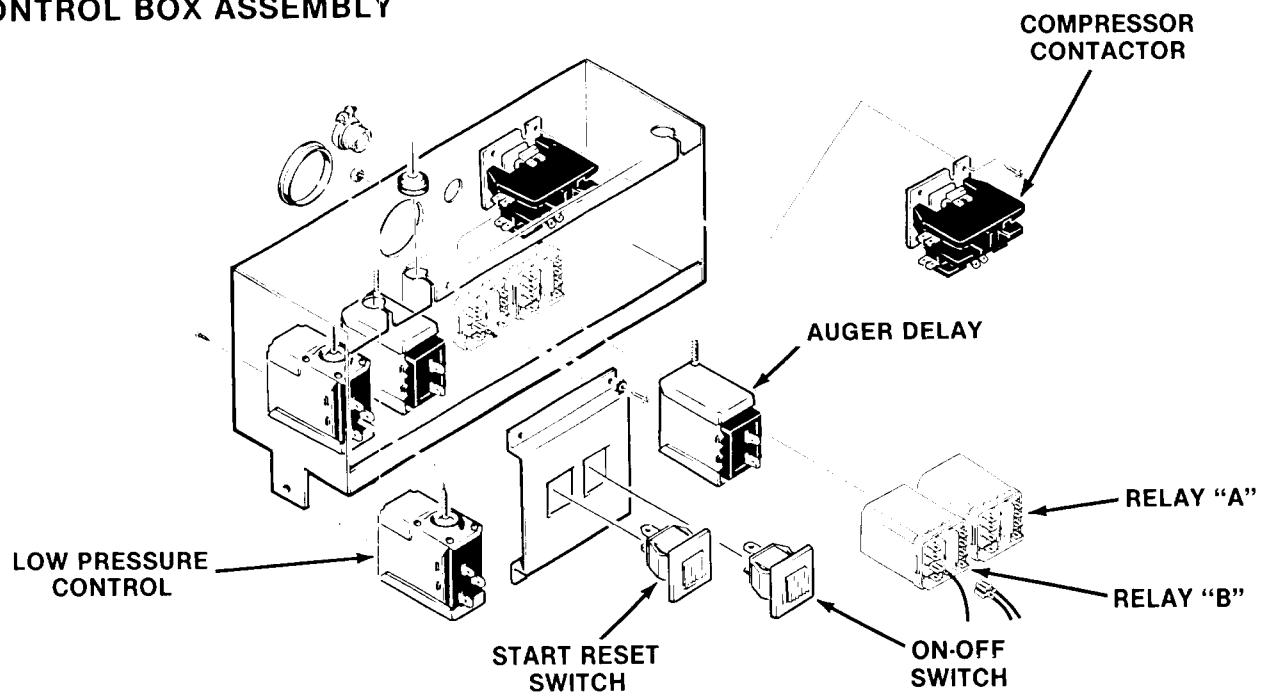
The water reservoir, with a float valve assembly, maintains a consistent water supply within the freezer assembly. The water level in the reservoir is the same water level as in the freezer and the correct water level in the freezer is level with the top of the auger flights. The water level in the freezer can be adjusted by raising or lowering the water reservoir with the bracket.

BIN THERMOSTAT BRACKET

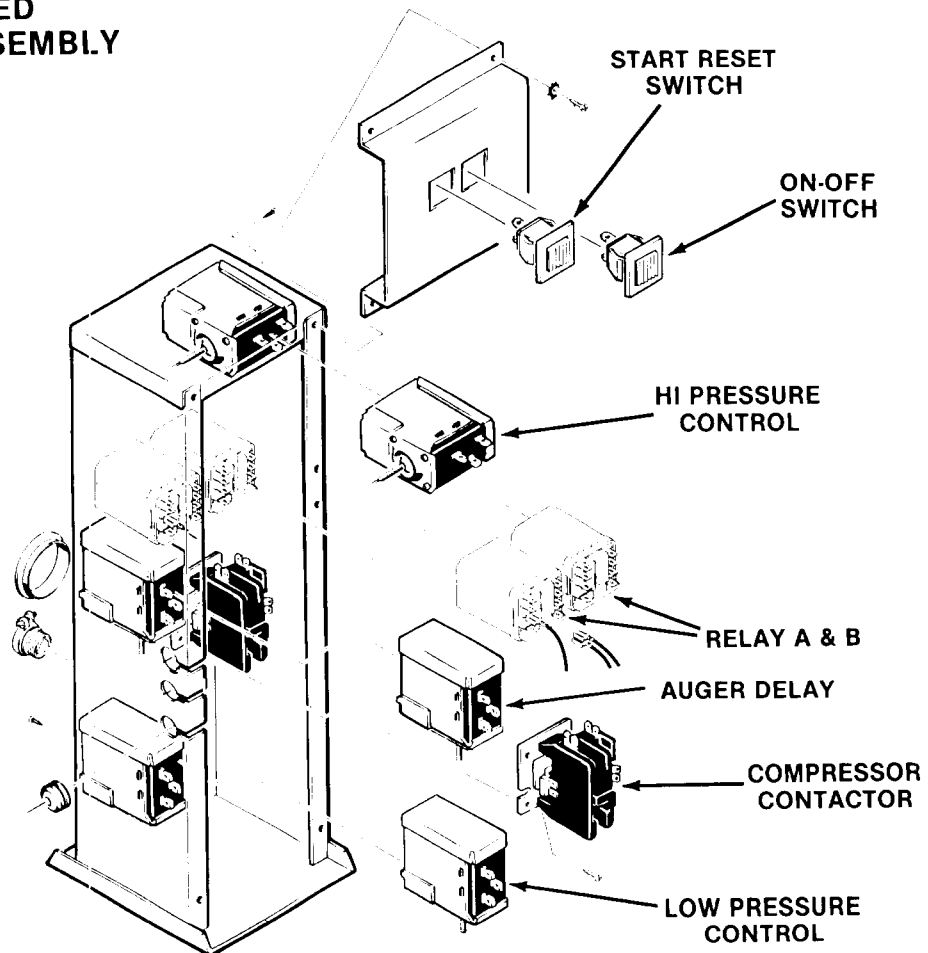
The bin thermostat bracket is the bin full ice contact point of the bin thermostat capillary tube.

AN760 COMPONENT DESCRIPTION

AIR-COOLED CONTROL BOX ASSEMBLY



WATER-COOLED CONTROL BOX ASSEMBLY



AN760 COMPONENT DESCRIPTION

ON-OFF PUSHBUTTON (AMBER)

When pushed completes the electrical circuit through the icemaker electrical components. The ON-OFF PUSHBUTTON is illuminated whenever it is ON (and electrical power is ON).

START-RESET SWITCH (RED)

Must be pushed to initially start unit. Also it's illuminated when bin overfills and spout switch opens to stop the machine, or in the event of a power interruption to the unit.

REFRIGERANT LO PRESSURE CONTROL is factory set to automatically SHUT DOWN the icemaker if the low-side pressure drops below 4 PSIG. This is an AUTOMATIC RESET control.

AUGER DELAY SWITCH, a single-pole double throw (SPDT) switch, allows the gearmotor to rotate the Auger and clear the freezing chamber after the bin ice level switch circuit to compressor is OFF. When the icemaker restarts, the gearmotor starts in a no load condition, preventing excessive loading of gearmotor and bearings.

HI PRESSURE CONTROL (WATER-COOLED ONLY)

This manual reset control shuts off the ice machine should the high side refrigeration pressure exceed 250 PSIG. This may happen when the cooling water to the condenser is interrupted.

COMPRESSOR CONTACTOR (IN CONTROL BOX)

A single-pole contactor is used to supply current to the compressor; and, is wired so any control in the pilot circuit, such as the bin thermostat and high pressure control, ect., will cause the contactor coil to be de-energized, when the control contact OPENS, thereby breaking the circuit to the compressor through the contactor points.

COMPRESSOR START RELAY (ON COMPRESSOR)

The compressor start relay completes the circuit to the compressor from the start capacitor to provide enough energy to start the compressor. When the compressor motor has reached the proper RPM's, the compressor relay opens and removes the start capacitor from the circuit.

ELBOW SAFETY SWITCH RELAY "A"

The elbow safety switch relay "A" maintains a circuit through the elbow safety switch until the elbow safety switch opens and switches the current through the lamp of the start reset pushbutton, which must be pushed and reset to restart the automatic icemaking process.

RELAY "B"

Relay "B" protects the compressor contactor from chattering during operation of the icemaking system.

AN760 MAINTENANCE & CLEANING INSTRUCTIONS



A Scotsman Ice System represents a sizable investment of time and money in any company's business. In order to receive the best return for that investment, it MUST receive periodic maintenance.

It is the USER'S RESPONSIBILITY to see that the unit is properly maintained. It is always preferable; and less costly in the long run, to avoid possible down time by keeping it clean, adjusting it as needed and by replacing worn parts before they can cause failure. The following is a list of recommended maintenance that will help keep your machine running with a minimum of problems.

Maintenance and Cleaning should be scheduled at a MINIMUM of twice per year.



ICEMAKER

THE FOLLOWING MAINTENANCE SHOULD BE SCHEDULED AT LEAST TWO TIMES PER YEAR ON THIS ICEMAKER. CALL YOUR AUTHORIZED SCOTSMAN SERVICE AGENCY.

1. Check and clean water line strainers.
2. Check that the water level in the water reservoir is at the water level on the side of the float.
3. Remove cover from water reservoir and depress the float to insure that a full stream of water enters the reservoir.
4. Check that the icemaker cabinet is level, in side-to-side and front-to-back directions.
5. Clean the water reservoir and interior of the freezer assembly, using a solution of SCOTSMAN Ice Machine Cleaner. Refer to CLEANING-Icemaker.
6. When doubtful about refrigerant charge, install refrigerant gauges on Schrader valves and perform steps 6 and 7. Check gauge for compressor head pressure:

AIR-COOLED MODELS: Varies between 130 and 145 PSIG.

WATER-COOLED MODELS: Set at 135 PSIG. Adjust screw on top of water regulator valve to raise or lower head pressure.
7. Check gauge for suction line pressure:

Varies between 8 and 12 PSIG, depending upon inlet water temperature and ambient air temperature.

AFTER SERVICING REFRIGERATION SYSTEM:

TORQUE REFRIGERATION ACCESS VALVE CAPS TO 60-75 INCH POUNDS.

8. Check drivemotor operation:

Normal operating temperatures are about 160-degrees F., which is hot to touch. Oil motor once per year. Compressor should not start until this motor is up to full speed.

WARNING

Disconnect electrical power supply before removal procedures.



9. Check the elbow safety switch by removing the insulation halves, twisting the locking ring 90° and pulling out the switch assembly. The switch action can then be tested.

NOTE

The elbow safety switch is an ON-OFF switch that shuts off the compressor when an ice jam presses against the rubber diaphragm depressing the switch and opening the circuit. Melting action relieves pressure closing the circuit, lighting the start-reset pushbutton. The start-reset switch must then be pressed to start the automatic icemaking process.

10. Clean the air-cooled condenser, using vacuum cleaner, whisk broom or brush. Instruct customer to clean frequently and to be sure icemaker and fan motor are OFF.
11. Check that fan blades move freely, are not touching any surfaces and are not bent or out of balance.
12. Check for water leaks. Pour water down bin drain to be sure that drain line is open and clear.
13. Check the bin thermostat control bulb for position and function.

NOTE

The bin thermostat is factory set at 10-degrees F. differential and should keep the entire icemaker shut off at least 20 minutes in high ambient temperatures, longer in low ambient temperature during normal operation. Settings are 35-degrees F. CUT-OUT and 45-degrees F. CUT-IN.

AN760 MAINTENANCE AND CLEANING

NOTE: If the unit being serviced is equipped with a steel needle bearing, the breaker assembly should be replaced. Breakers with a "water friendly", self lubricating bearing need to be cleaned and inspected twice per year with the rest of the icemaker.

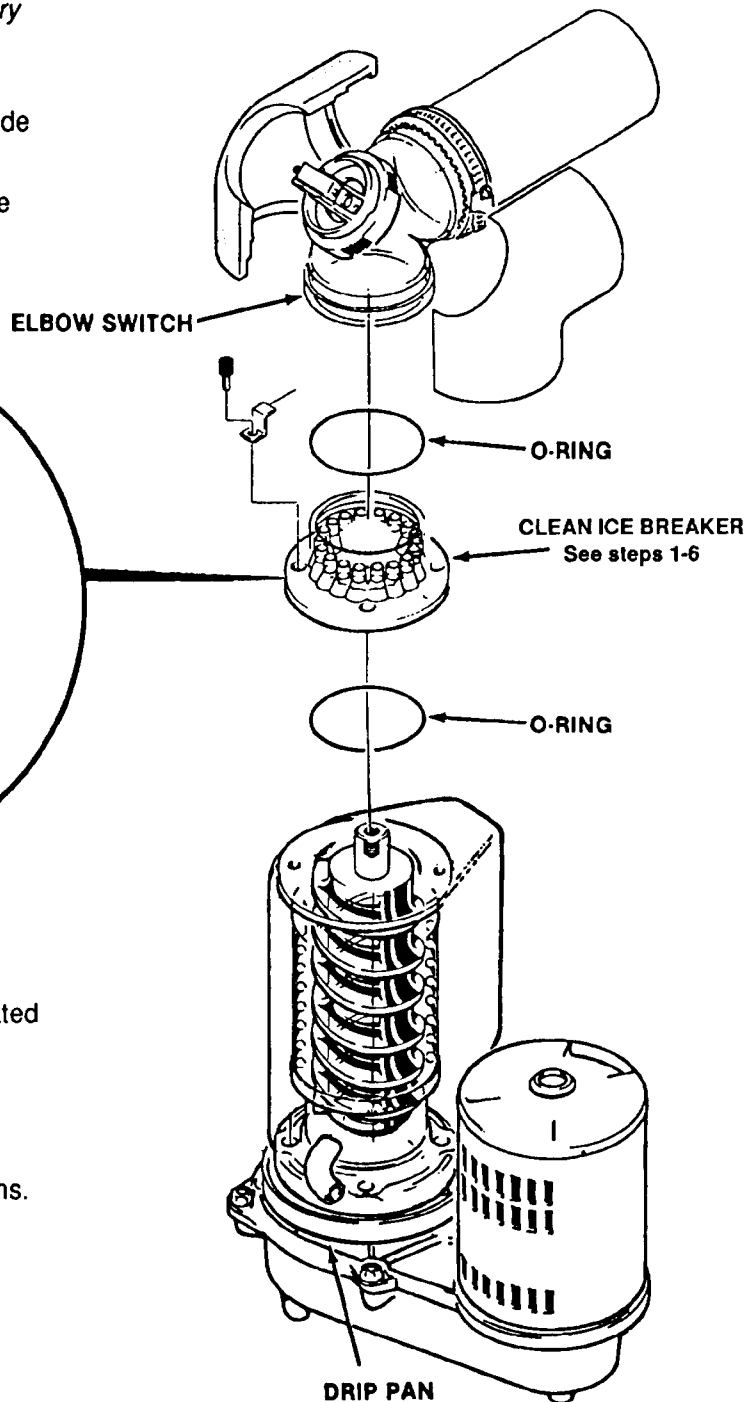
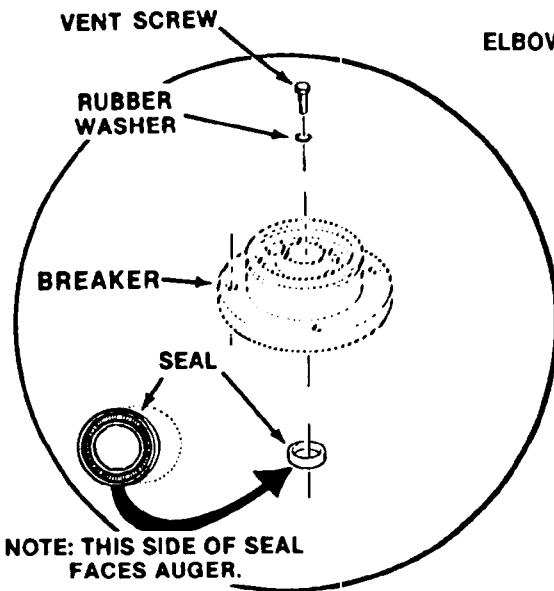
1. Remove the elbow insulation, three allen head screws, and spout retaining brackets from the freezer assembly end of the elbow and switch assembly.

NOTE: To accomplish the removal of the elbow and switch assembly in the next step, it may be necessary to further remove panels and disassemble the ice transport tube.

2. Lift up the elbow and switch assembly and set aside to gain access to the top of the freezer assembly.

3. Remove four cap screws, lockwashers and the ice breaker from the top of the freezer for inspection.

//////////////////////**CAUTION**//////////////////////
DO NOT force the auger and breaker together without having the vent hole open because pushing the ice breaker on with no air relief will cause the internal air pressure to force the seal away from the breaker.
 ////////////////////////

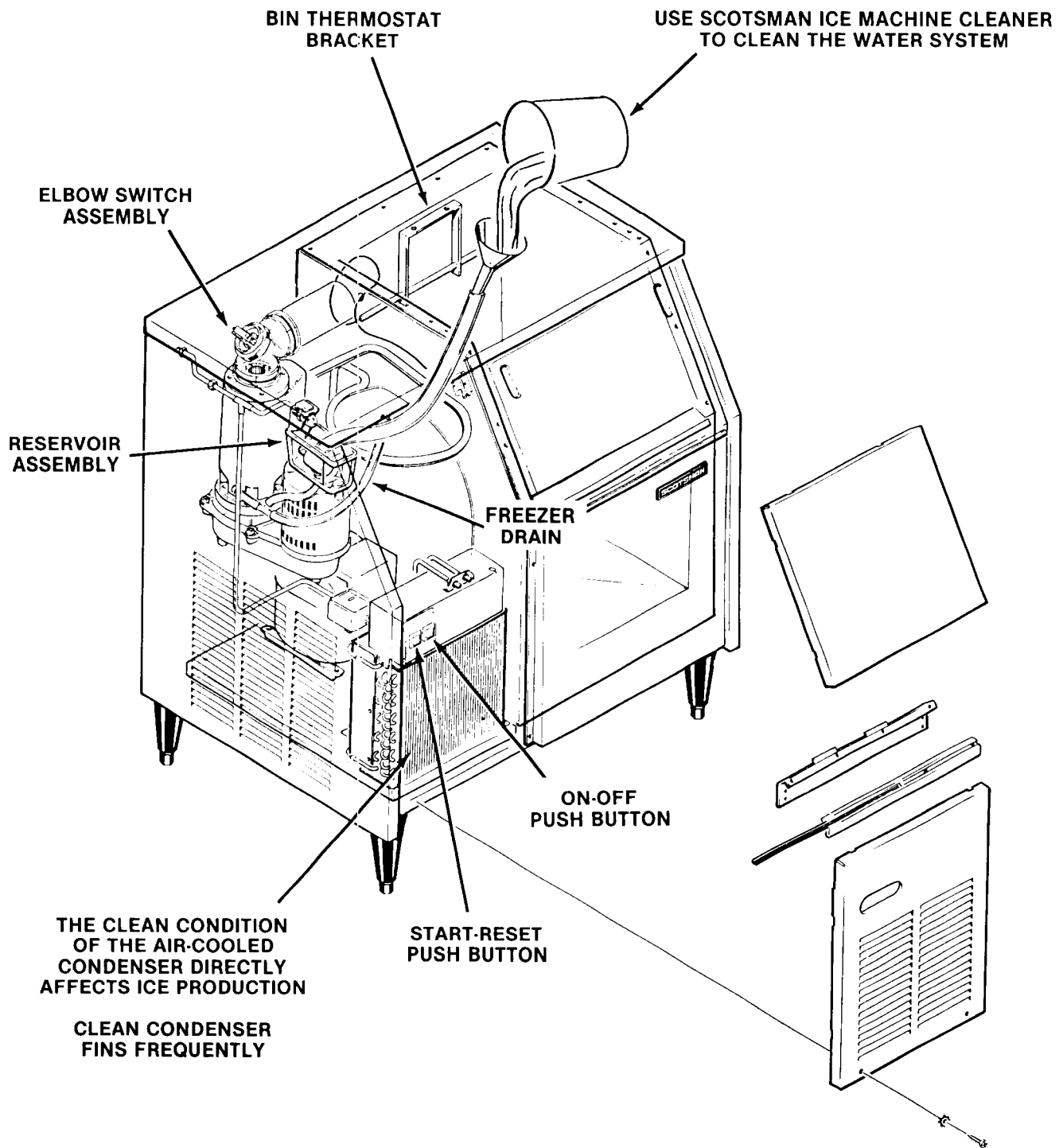


4. Retain the o-ring for replacement during reassembly. Inspect the o-ring for cuts or excessive wear. Replace if doubtful.

5. Replace the seal and inspect the top bearing seated in the ice breaker. Wipe clean of mineral build up. Replace the ice breaker if the bearing is scored or worn.

6. Remove the auger, allow to dry, check for stains. Clean as needed. The auger **MUST** be free of stains. Replace the water seal prior to reassembly.

AN760 MAINTENANCE & CLEANING INSTRUCTIONS



CLEANING INSTRUCTIONS
Continued on page 21

AN760 MAINTENANCE & CLEANING INSTRUCTIONS

CLEANING-ICEMAKER

1. Press the master on-off switch to off.
2. Remove screws, top, and front panel.
3. Remove all ice from the ice storage bin.
4. Close the water supply shut off valve or remove the reservoir cover and block the float in the water reservoir up to stop water flow.
5. Drain the reservoir using the drain provided between the water reservoir and the bottom of the freezer assembly. Replace the drain tube.

////////////////////WARNING////////////////////////////////////

Scotsman Ice Machine Cleaner contains phosphoric and hydroxyacetic acids. These compounds are corrosive and may cause burns. If swallowed, DO NOT induce vomiting. Give large amounts of water or milk. Call Physician immediately. In case of external contact flush with water. KEEP OUT OF THE REACH OF CHILDREN.

////////////////////////////////////

6. Prepare cleaning solution: Mix 8 ounces of Scotsman ice machine cleaner with three quarts of hot (95⁰F.-115⁰F.) water.
7. Slowly pour the cleaning solution into the water reservoir. Allow to stand for 15 minutes.
8. Press the master switch to on.

9. Continue to slowly pour the cleaning solution into the water reservoir. Maintain the level just below the reservoir overflow.

10. Continue icemaking using the cleaning solution, until all the solution is used up and the water reservoir is almost empty. Do not allow the icemaker to operate with an empty reservoir.

11. Press the master switch to off.

12. Wash and rinse the water reservoir.

13. Remove the block from the float in the water reservoir.

14. Press the master switch to on.

15. Continue icemaking for at least 15 minutes to flush out any cleaning solution. Check ice for acid taste. Continue icemaking until ice tastes normal.

////////////////////////////////////CAUTION////////////////////////////////////

Do Not use ice produced from the cleaning solution.

////////////////////////////////////

16. Press the master on/off switch to OFF.

17. Remove all ice from the storage bin.

18. Add warm water to the ice storage bin and thoroughly wash and rinse all surfaces within the bin.

19. Clean and sanitize the ice storage bin once per week.

AN760 SERVICE DIAGNOSIS

The Service Diagnosis is for use in aiding the serviceman in diagnosing a particular problem for pin-pointing the area in which the problem lies, thus an ever available reference for proper corrective action.

The following charts list corrective actions for the causes of known symptoms of certain problems that can occur.

INTRODUCTION

SYMPTOM	POSSIBLE CAUSE	CORRECTION
Water Leaks.	Defective water seal. Gravity feed line leaking. Water level in reservoir too high. Storage bin drain and connecting fittings.	Replace seal. Check hose clamp. Adjust water level to molded line on the float assembly. Check and repair.
Excessive noise or chattering.	Mineral or scale deposit on auger and inner freezing chamber walls. Intermittent water supply. Water level in reservoir too low. Gear reducer loose on frame. Motor compressor not solid on rubber mounts. Gearmotor thrust bearing worn. Top bearing worn. Water interruption.	For severe deposit, remove and manually polish auger, sand inner chamber walls of freezer barrel. For lighter concentration, use Scotsman Ice Machine Cleaner periodically. Check and clean water strainer. Check gravity feed line for air lock. Check to be sure float orifice is not restricted Check incoming water supply. Remove air lock. See CORRECTION for Water Leaks above. Tighten gear reducer. Repair or replace rubber mounts. Check/replace bearing. Check/replace breaker. Check for frozen water inlet to freezer.
Drivemotor makes high pitched noise.	Rotor bearing dry or worn. Dry grease seal under rotor bearing.	Replace motor or bearing. Grease seal.

AN760 SERVICE DIAGNOSIS

SYMPTOM	POSSIBLE CAUSE	CORRECTION
Making wet ice	Back pressure too high. Faulty compressor.	Overcharge of refrigerant, faulty compressor or high head pressure. Lower pressure as indicated. Replace compressor.
Low ice production.	Loss of refrigerant. Under or over-charge of refrigerant. Dirty or plugged condenser. Low water level in water reservoir. Partial restriction in capillary tube or drier. Inlet water strainer partially plugged. Corroded or stained auger due to water condition.	Check and recharge. See NAMEPLATE for charge correction. Clean condenser. See CORRECTION for water leaks above. Moisture in system. Overcharge of oil in system. Remove charge by blowing back through cap tube. Replace drier evacuate and recharge. Remove screen and clean. Remove auger and clean, or use Scotsman Ice Machine Cleaner. See Maintenance Section.
Gearmotor noise.	Low on oil.	Remove case cover to check for proper oil level. See Removal and Replacement Section for gear motor.
Icemaker will not operate.	Blown fuse in line. Bin thermostat set too high. Loose electrical connection. Switch in OFF position. Inoperative master switch. Off on manual-reset pressure control. (Water-Cooled) Low supply water pressure.	Replace fuse and check for cause of blown fuse. Replace thermostat. Check wiring. Set switch to ON position. Replace switch. Reset. Check for water interruption. Restore water pressure.

AN760 SERVICE DIAGNOSIS

SYMPTOM	POSSIBLE CAUSE	CORRECTION
Icemaker continues to operate with full storage bin.	Bin thermostat not properly set or is defective.	Re-set or replace bin thermostat. Re-set to 35-degrees cut-out, 45-degrees cut-in.
Compressor cycles intermittently.	Low voltage. Dirty condenser. Air circulation blocked. Inoperative condenser fan motor. Non-condensable gases in system. Bin thermostat differential too small causing short cycling. Low on refrigerant causing low pressure control to cycle.	Check for overloading. Clean condenser. Remove cause or move unit. Replace motor. Check for gas leaks, evacuate and recharge. Replace bin thermostat. Check for leaks.
Icemaker operates but makes no ice.	Loss of undercharge of refrigerant. Water not entering freezing chamber. Moisture in system. Water seal leaking. Drivemotor stripped.	Check for leaks and recharge. See NAMEPLATE for correct charge. Plugged strainer or supply line. Check and clean. Air lock in gravity feed line. Check and remove air lock. Water interruption, freezer inlet frozen shut. Check, evacuate, replace drier. Recharge, See NAMEPLATE for correct charge. Replace seal. Repair or replace drivemotor

AN760 ADJUSTMENT PROCEDURES

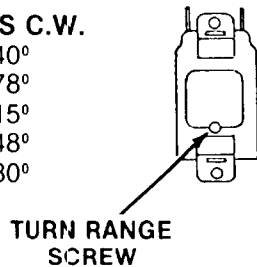
ADJUSTMENT OF THE BIN THERMOSTAT CONTROL

(Installations 2,000 feet above sea level only)

The control for the bin thermostat is the temperature control, located on the upper part of the retainer wall.

ALTITUDE CORRECTION (ROBERTSHAW ONLY)

ALTITUDE	TURNS C.W.
2,000	40°
4,000	78°
6,000	115°
8,000	148°
10,000	180°



//////////////////// CAUTION //////////////////////

The adjusting screw on the temperature control device has a very sensitive response to adjustment. **DO NOT** attempt to adjust the screw until after thoroughly reading and understanding the instructions and illustrations. Over-adjusting or erratic guessing, can foul the instrument and cause ultimate delay and part replacement, WHICH COULD HAVE BEEN PREVENTED.



ADJUSTMENT OF THE LEG LEVELERS

When the icemaker is installed with legs, the legs must be adjusted to level the cabinet. The cabinet must be leveled in the front-to-back and side-to-side directions. This adjustment should be performed during initial installation of the cabinet and anytime the cabinet is moved from the original location to another site.

1. Using a 1-1/8" open-end wrench, and a carpenter's bubble level, rotate the threaded leveler in each leg to RAISE or LOWER the cabinet until the cabinet is level in the front-to-back direction.
2. Repeat step A, for leveling in the side-to-side direction.
3. Recheck both the front-to-back and the side-to-side leveling and repeat adjustments, as necessary.

ADJUSTMENT OF THE WATER REGULATOR ASSEMBLY

The correct head pressure on water-cooled models is 135 PSIG. Adjustments can be performed on the water regulator assembly to increase or decrease the head pressure.

To adjust the water regulator assembly:

1. To INCREASE the head pressures: Rotate the adjusting screw, on the water regulator assembly COUNTER-CLOCKWISE.
2. To DECREASE the head pressure: Rotate the adjusting screw, on the water regulator assembly CLOCKWISE.

ADJUSTMENT OF THE WATER RESERVOIR FLOAT

The correct water level in the water reservoir should be at the level of the raised molded line, on the side of the body of the water reservoir. When the water line level is above or below the raised molded line, adjustment can be performed to raise or lower the water level by bending the metal arm of the float inside the water reservoir.

To adjust the water reservoir float:

1. To RAISE the water level:
Hold one end of the metal arm of the float and slightly bend the float up.
2. To LOWER the water level:
Hold one end of the metal arm of the float and slightly bend the float DOWN.
3. To perform MAJOR adjustment:
When repair or replacement has been performed and the water level line between the water reservoir and the freezer assembly has been substantially altered:
 - a. Loosen the three screws and lockwashers which attach the reservoir bracket and water reservoir to the freezer mount.
 - b. Move the reservoir bracket UP or DOWN to properly position the water line level within the freezer. The proper water level within the freezer is 1/2" - 3/4" below the top of the auger.
 - c. When proper water level within the freezer is adjusted, re-tighten screws attaching the water reservoir bracket to the freezer mount.

AN760 REMOVAL AND REPLACEMENT PROCEDURES

SLIDE OUT CHASSIS PROCEDURE

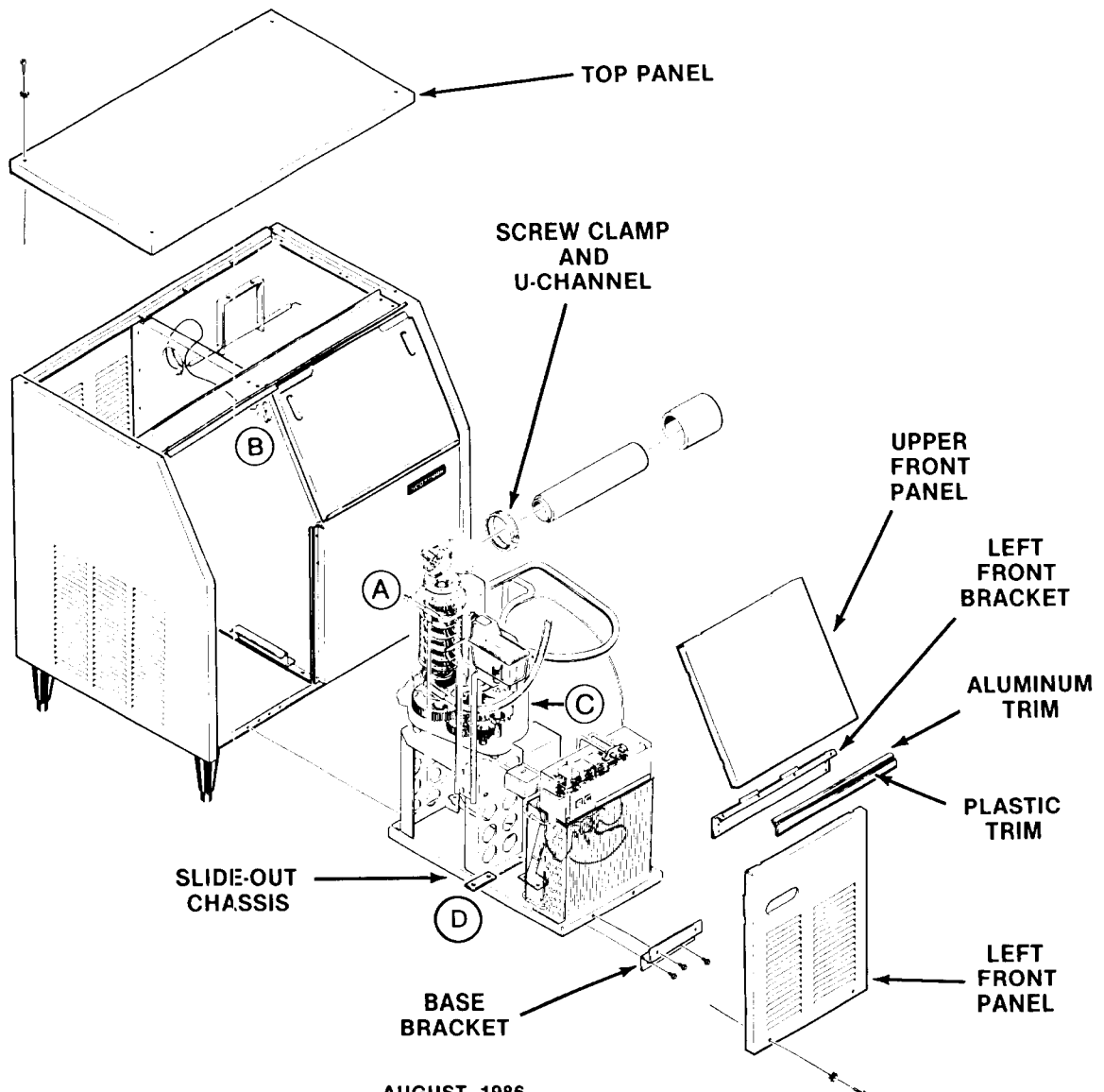
1. Disconnect the electrical supply to the icemaker at the circuit breaker or fuse box.

//////////////////// **WARNING** //////////////////////

Be sure the electrical power supply to the icemaker is OFF before proceeding with removal procedures.

////////////////////////////////////

2. Close the inlet water valve to the icemaker.
3. Remove two screws and the lower left front panel.
4. Remove plastic trim, screws, aluminum trim.
5. Remove screws and left front bracket. Remove upper front left panel. Disconnect the water inlet line. Point A.
6. Remove screws and control box cover to gain access and disconnect and remove from the control box the building source electrical connections.
7. Loosen the screw on the screw clamp and U-channel securing the ice transport tube to the elbow and safety switch and separate the ice transport tube from the elbow.
8. Remove wire leads from the bin thermostat. Point B.
9. Water-cooled models must be disconnected at the water-cooled condenser inlet and outlet connections. (Inside cabinet).
10. Remove Corbin clamp and remove reservoir overflow drain tubing from the reservoir and drip pan. Point C.
11. For partial chassis removal, remove two screws and remove base to base bracket located on the lower chassis front and pull chassis out to service. For complete removal, remove chassis stop. Point D.



AN760 REMOVAL AND REPLACEMENT PROCEDURES

AN760's have been manufactured in "A" and "C" Models (as in model AN760AE-1A vs. AN760AE-1C.) The following instructions are designated for either "A" or "C" models. (There was NO "B" model.) Be certain to check your model number and refer to the appropriate steps.

Read the instructions thoroughly before performing any Adjustment or Removal and Replacement Procedures.

////////////////////// WARNING ////////////////////////

Be sure the electrical power supply and the water supply are OFF, BEFORE starting any of the following REMOVAL AND REPLACEMENT procedures as a precaution to prevent possible personal injury or damage to equipment.

////////////////////////////////////

REMOVAL AND REPLACEMENT OF THE AUGER, WATER SEAL, O-RING, ICE BREAKER ASSEMBLY AND FREEZER ASSEMBLY (A, B and C MODELS)

To remove the auger, water seal, o-ring and ice breaker assembly:

1. Shut off water supply to the icemaker/dispenser at the building source.
2. Disconnect or shut-off electrical power to the icemaker at the building source.
3. Perform steps from slide-out chassis procedure page and pull the chassis out for servicing.
4. Remove three socket head screws and spout retaining brackets from the end of the spout assembly at the top of the freezer assembly.
5. Lift the elbow safety switch and spout UP, off of the freezer assembly.
6. Retain the o-ring for replacement during reassembly. Inspect for cuts, tears or excessive wear, causes for replacement.
7. Remove four capscrews, lockwashers and the ice breaker assembly from the top of the freezer assembly.

NOTE: To service icebreaker only, go to steps 21-24.

8. Retain the o-ring for replacement during reassembly. Inspect for cuts, tears or excessive wear, causes for replacement.
9. Remove hose clamp and disconnect the water feeder tube from the reservoir, at the freezer to drain the reservoir and freezer of water.

10. Remove the auger. If necessary a bolt can be threaded into the top end of the auger from the freezer and a hand tool used to pull on the bolt to remove the auger.

To remove Water Seal only, omit steps 12, 13, and 14.

TO REMOVE FREEZER ASSEMBLY:

11. Pull back permagum around freezer base mounting bolts and remove four screws and flatwashers. Separate the freezer assembly, gasket and adapters, from the drivemotor assembly.
12. Bleed off or blow the refrigerant charge through the Schrader valve.
13. Unsolder and disconnect the refrigerant suction line at the compressor, and the associated capillary line at the drier.
14. Remove the freezer assembly from the chassis.

A and B MODELS

15. Using a suitable length and size wooden dowel or stick inserted through the top of the open freezer assembly, tap the stationary piece water seal out the bottom of the freezer assembly.

C MODEL

15. Remove snap ring from inside bottom of evaporator assembly. Using a suitable length and size of wooden dowel or punch inserted through the top of the open freezer assembly, tap the stationary portion of the water seal out the bottom of the freezer assembly.
16. Replace the water seal any time it has been removed.

////////////////////// CAUTION ////////////////////////

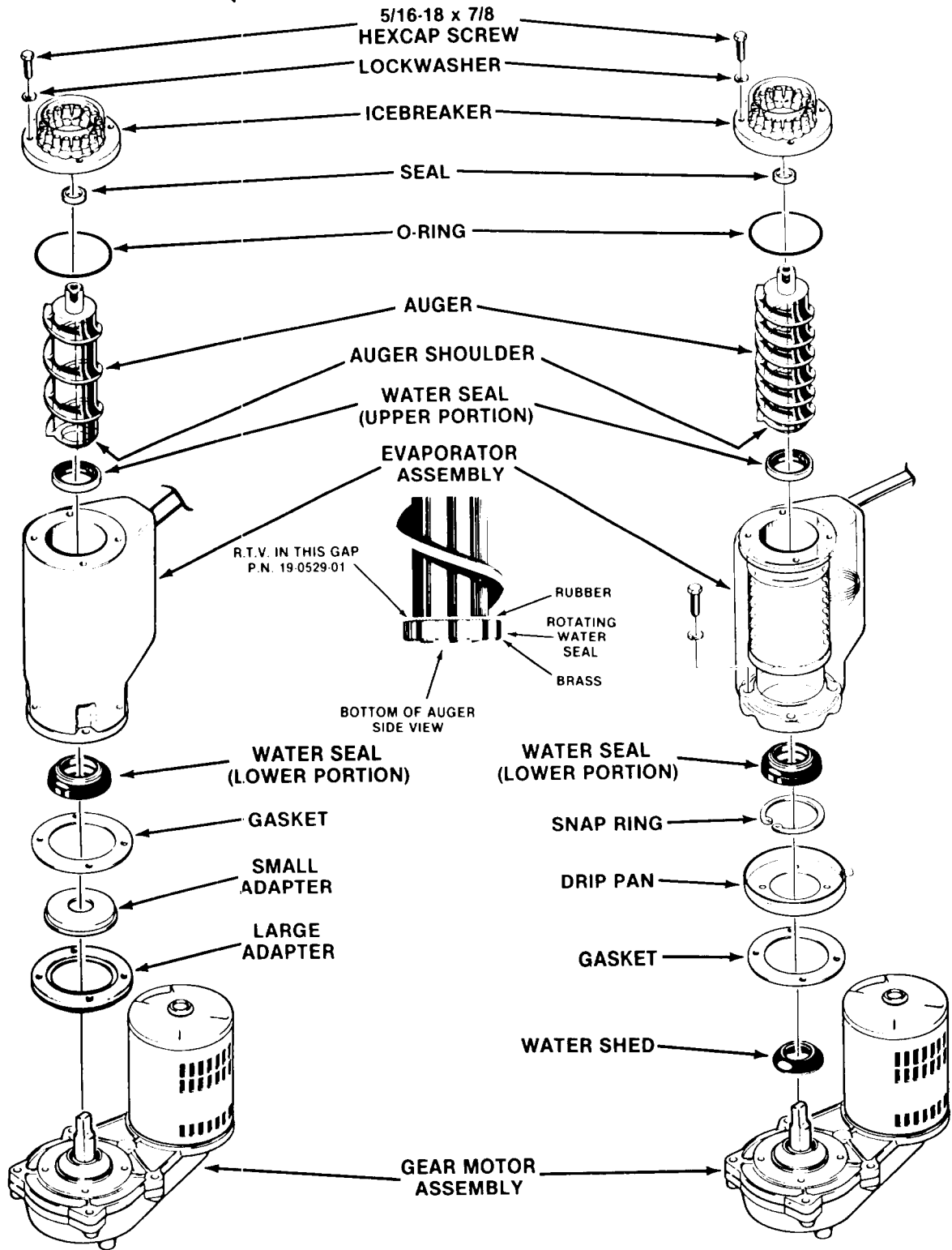
The lower two-part water seal is a precise seal and fitting. Any damage or wear will cause a failure. It is recommended that the lower two-part water seal be replaced any time there is a question of condition.

////////////////////////////////////

AN760 REMOVAL AND REPLACEMENT PROCEDURES

"A" MODEL FREEZER

"C" MODEL FREEZER



AN760 REMOVAL AND REPLACEMENT PROCEDURES

A and B MODELS

17. Replace the parts starting with the stationary part of the water seal. Carefully inspect it prior to assembly. Insert this half of the water seal into the bottom of the freezer. Then insert the brass freezer adapter into the bottom of the freezer tube and push it in as far as it will go.

C MODEL - OR REPLACEMENT FREEZER

17. Replace the new stationary portion of the two-part water seal in the bottom of the freezer assembly and press in far enough to install the snap ring. **IMPORTANT:** pull water seal back down against snap ring all the way around the freezer.

A and B MODELS

18. Mount the freezer and gasket to the gear motor case. Be certain that the gearmotor is in good working condition and that the large plastic adapter is in place on the gearbox.

C MODEL - OR REPLACEMENT FREEZER

18. Mount the freezer, drip pan and gasket to the gearmotor case. Check to be sure the gearmotor is in good condition and the water shed is in place around the output shaft.
19. Apply Scotsman part number 19-0529-01 RTV silicone rubber to the auger shoulder before pushing on the water seal. Place just enough silicone on to the auger, so that when the water seal is placed on the auger, the gap between the auger shoulder and water seal is completely filled with silicone.

The silicone must be allowed to "set-up" or dry on the surface before any water can be added to the freezer.

CAUTION

If any silicone gets onto the mating surfaces of the water seal, the seal is ruined, and cannot be used.

20. Install auger.

21. Remove vent screw from brass plug to provide pressure relief during assembly and carefully place the breaker bearing assembly onto the auger. This new seal fits the auger shaft very tightly and it will go onto the auger with some resistance. Be very careful to push it straight onto the auger as tipping or angling of the breaker could damage the seal lip.

22. Install the vent screw with rubber washer into the breaker plug. Use a small drop of Loctite 680 on the screw threads.

23. Bolt the breaker back onto the freezer assembly and test the unit.

24. Reassemble ice transport tube, insulation, and bin top assembly in reverse order of disassembly.

CAUTION

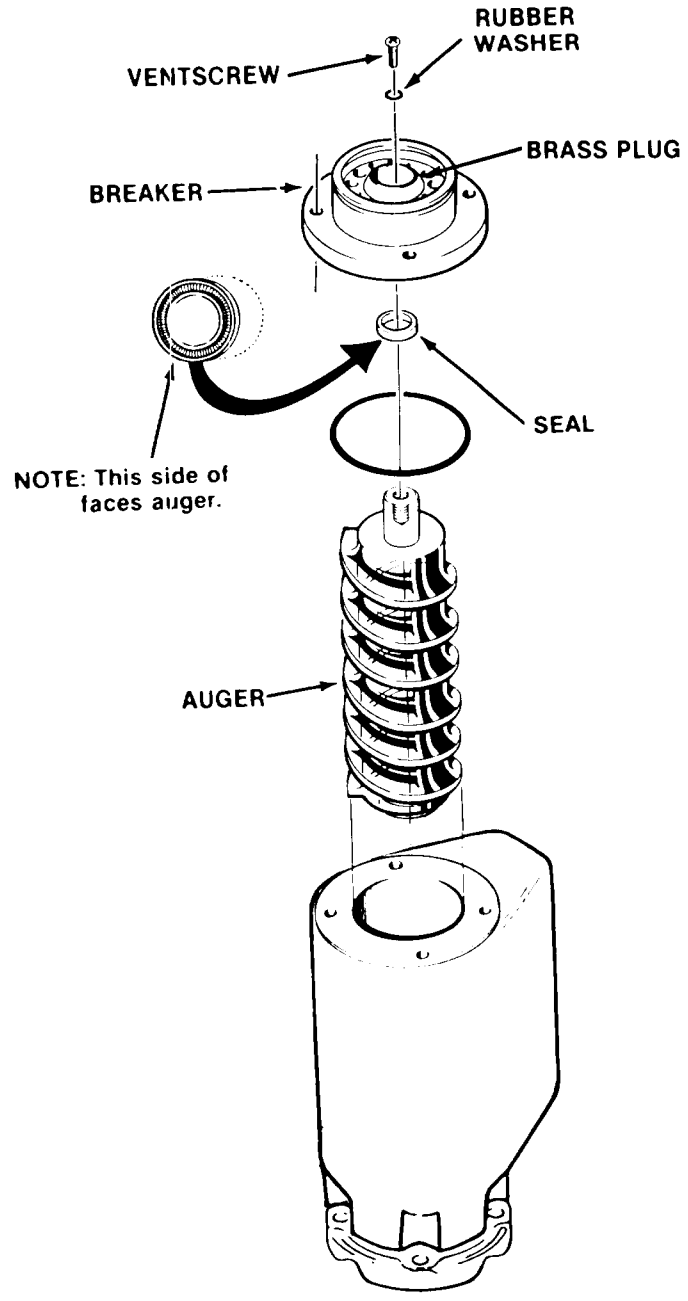
DO NOT force the auger and breaker together without having the vent hole open because pushing the breaker on with no air relief will cause the internal air pressure to force the grease seal away from the breaker.

AN760 REMOVAL AND REPLACEMENT PROCEDURES

//////////////////// CAUTION //////////////////////

DO NOT force the auger and breaker together without having the vent hole open because pushing the breaker on with no air relief will cause the internal air pressure to force the grease seal away from the breaker.

////////////////////////////////////



AN760 REMOVAL AND REPLACEMENT PROCEDURES

REMOVAL AND REPLACEMENT OF THE ELBOW AND SWITCH ASSEMBLY

To remove the elbow and switch assembly:

1. Disconnect the electrical supply to the icemaker at the circuit breaker or fuse box.

//////////////////// **WARNING** //////////////////////

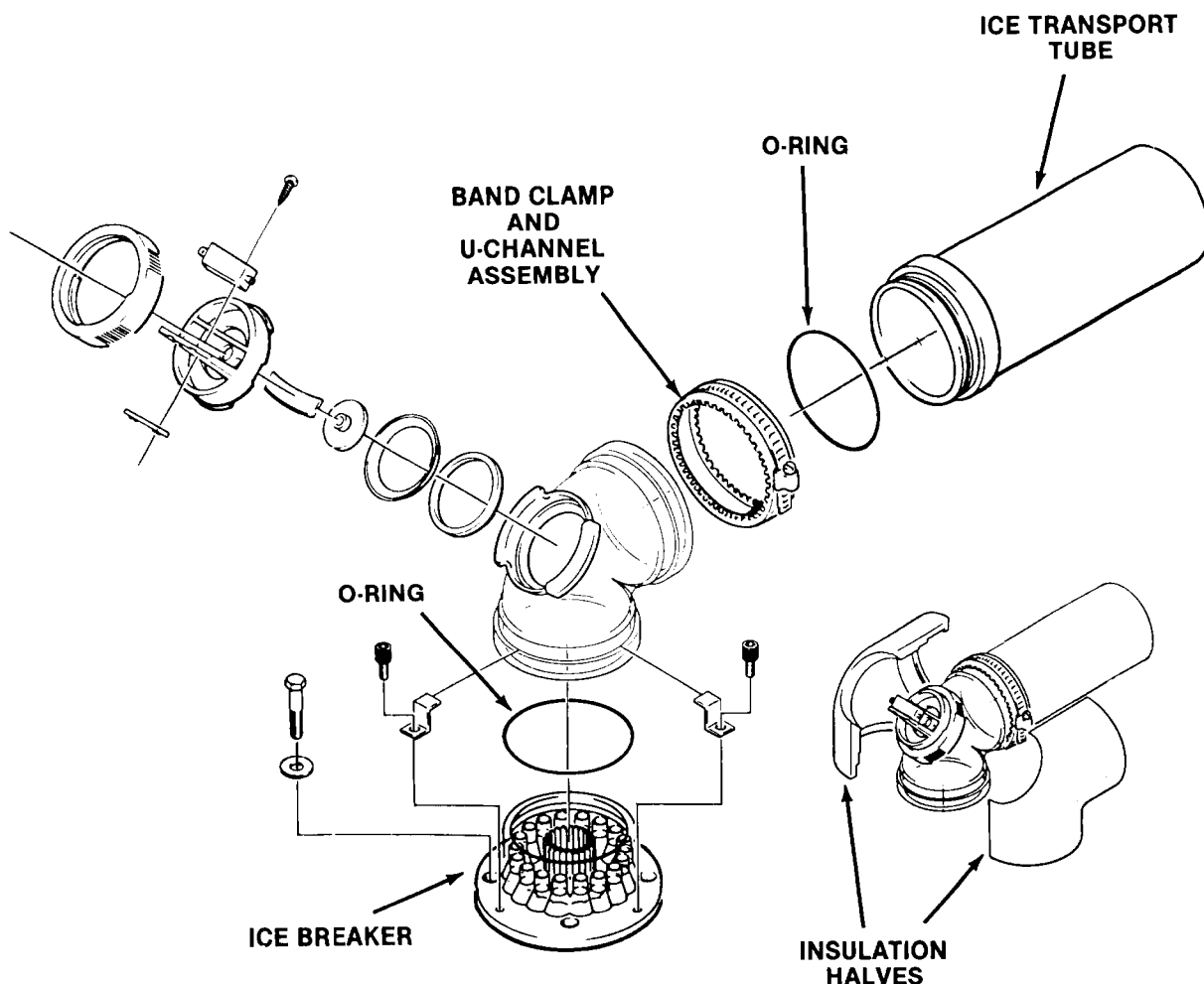
Be sure the electrical power supply to the icemaker is OFF before proceeding with removal procedures.

////////////////////////////////////

2. Remove screws and remove top panel.
3. Remove insulation halves from the elbow switch assembly.
4. Loosen the screw on the screw clamp and U-channel securing the ice transport tube to the elbow and safety switch.
5. Separate the ice transport tube from the elbow.

6. Remove bolt and washer and remove switch support from the ice breaker.
7. Remove three Allen head screws and spout retaining brackets from the freezer assembly and elbow and switch assembly.
8. Lift the elbow and switch assembly UP to clear the top of the freezer assembly.
9. Remove screws and the switch from the switch actuator housing.
10. Rotate the retainer ring 90-degrees to unlock the retainer ring and the switch actuator housing from the elbow assembly and separate the parts from the elbow.
11. Inspect the rubber diaphragm for cuts, tearing or excessive wear.

To replace the elbow and switch assembly, reverse the removal procedure.



AN760 REMOVAL AND REPLACEMENT PROCEDURES

////////// WARNING //////////

Be sure the electrical power supply to the icemaker is OFF before proceeding with removal procedures.

////////////////////////////////////

REMOVAL AND REPLACEMENT OF THE COMPRESSOR ASSEMBLY

To remove compressor refer to SLIDE-OUT CHASSIS PROCEDURE and remove chassis from cabinet.

1. Remove two screws and the cover from the compressor junction box.
2. Disconnect the electrical leads at the compressor junction box, that originate in the control box and fan motor.
3. Bleed off or blow the refrigerant charge through the Schrader valve.
4. Unsolder the suction line from the compressor.
5. Unsolder the discharge line from the compressor.
6. Unsolder the process header tube from the compressor and retain for installation on the replacement compressor.
7. Remove four bolts, lockwashers and washers which secure the compressor to the chassis mounting base.
8. Remove the compressor from the chassis.
9. To replace the compressor assembly, reverse the removal procedures.
10. When recharging the system with refrigerant, always check the nameplate for the specified refrigerant charge.

REMOVAL AND REPLACEMENT OF THE CONDENSER — AIR-COOLED MODELS

To remove the condenser refer to SLIDE OUT CHASSIS PROCEDURES and complete all steps.

1. Bleed off or blow the refrigerant charge through the Schrader valve.
2. Remove one screw and disconnect the drier brace and drier from the condenser shroud.
3. Unsolder and disconnect the condenser inlet tube at the condenser.
4. Unsolder and disconnect the condenser outlet tube at the condenser.
5. Remove three screws, lockwashers and washers securing the condenser to the chassis base.
6. Remove four screws and attach the control box to the condenser.
7. Remove the condenser from the chassis base.
8. To replace the condenser, reverse the removal procedure.
9. When recharging the system with refrigerant always check nameplate for the specified refrigerant charge.

REMOVAL AND REPLACEMENT OF THE CONDENSER — WATER-COOLED MODELS

To remove the water-cooled condenser:

1. Remove two screws and cabinet left front panel.
2. Bleed or blow the refrigerant charge through the Schrader valve.
3. Unsolder the refrigerant inlet and outlet lines from the condenser.
4. Disconnect the water inlet and outlet lines from the condenser.
5. Remove two bolts, lockwashers and washers which secure the condenser to the chassis mounting base.
6. Remove the condenser from the cabinet.
7. To replace the condenser, reverse the removal procedure.
8. When recharging the system with refrigerant always check nameplate for the specified refrigerant charge.

//////////////////////////////////// NOTE //////////////////////////////////////

Always install a replacement drier, anytime the sealed refrigeration system is opened. Do not replace the drier until all other repair or replacement has been completed.

Thoroughly evacuate the system to remove moisture and non-condensables.

AN760 REMOVAL AND REPLACEMENT PROCEDURES

REMOVAL AND REPLACEMENT OF THE LIQUID LINE DRIER

To remove the drier refer to SLIDE OUT CHASSIS PROCEDURES and complete all steps.

1. Remove screw and drier brace attaching the drier to the condenser shroud on air-cooled models; and, the chassis base on water-cooled models.
2. Bleed off or blow the refrigerant charge through the Schrader valve.
3. Unsolder refrigerant lines at top and bottom of drier, remove the drier and separate the drier from the drier brace.

To replace the drier:

1. Remove the factory seals from the replacement drier and install the drier in the refrigerant lines with the arrow positioned in the direction of the refrigerant flow.

CAUTION

If the factory seal is broken on the replacement drier, exposing it to the atmosphere more than a few minutes, the drier will absorb moisture from atmosphere and lose substantial ability for moisture removal.

Be sure the replacement drier is installed with the arrow positioned in the direction of the refrigerant flow.

2. Install the drier brace on the drier.
3. Solder the drier into the lines, two places.
4. Purge the system and check for leaks.
5. Thoroughly evacuate the system to remove moisture and non-condensables.
6. Charge the system with refrigerant by weight SEE NAMEPLATE for specifications.
7. Leak test the system.

AN760 REMOVAL AND REPLACEMENT BREAKER/BEARING/WATER SEAL ASSEMBLY

INSPECTION:

If, when the breaker is removed from the evaporator, the yellow water seal stays on the auger, replace the breaker. If the auger shaft is rough or scored, it and the ice breaker must be replaced. If the auger shaft can be cleaned up, do NOT use an abrasive material; a nylon scouring pad used for cleaning dishes will do a very good job.

The bearing in the breaker is not replaceable. The breaker must be replaced when the bearing is worn past 1.009"ID.

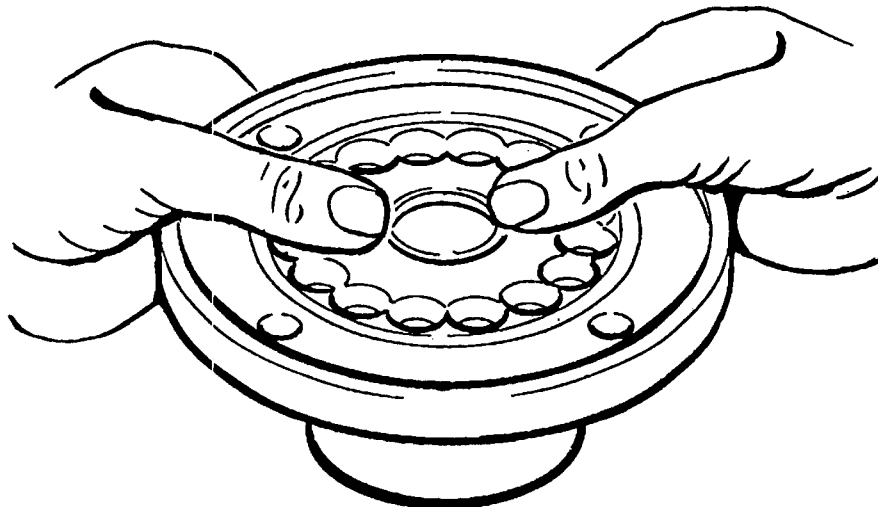
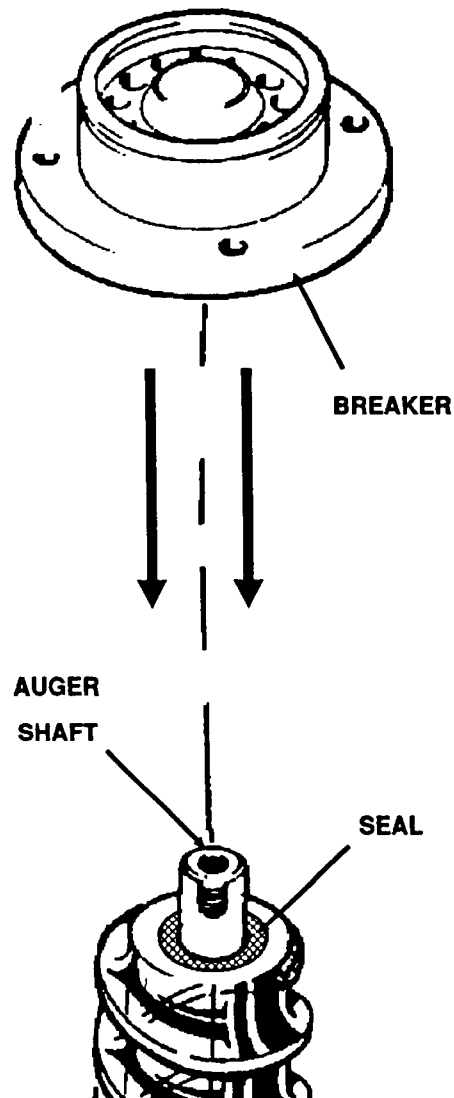
The method of retaining the water seal in the nugget ice breaker was changed in early 1988.

The newest breakers have, at the water seal mounting location, a "lip" protruding into the inner diameter of the breaker.

This "lip" is at the bottom of the seal, retaining the seal in the breaker. The seal is retained so positively, that it cannot be removed without ruining it.

TO REPLACE THE SEAL IN THE BREAKER:

1. Pull old seal out with a pliers.
2. Place new seal on auger shaft, open side down.
3. Push breaker onto auger and seal as far as it will go.
4. Remove breaker and seal from auger, use your thumbs to push the seal all the way into the breaker.



AN760 REMOVAL AND REPLACEMENT PROCEDURES

REMOVAL AND REPLACEMENT OF THE GEAR MOTOR

////////// WARNING //////////

Be sure the electrical power supply to the icemaker is OFF before proceeding with removal procedures.

////////////////////////////////////

To remove the gear motor refer to SLIDE OUT CHASSIS PROCEDURES and complete all steps.

To remove the auger drivemotor:

1. Disconnect electrical power leads from the motor.
2. Unscrew four capscrews securing motor to gearcase.
3. Lift off motor winding from the gear reducer.
4. Use a pry bar to remove rotor and rotor bearing from the gearcase.
5. Examine grease seal in gearcase. Replace if worn. Add grease to seal and bearing housing before re-assembly.

To replace, reverse the removal procedures.

NOTE

Motors must be exchanged complete. DO NOT mix rotors, housings or windings.

REMOVAL AND REPLACEMENT OF THE GEAR MOTOR ASSEMBLY

////////// WARNING //////////

Be sure the electrical power supply to the icemaker is OFF before proceeding with removal procedures.

////////////////////////////////////

////////// CAUTION //////////

SHUT OFF water supply to icemaker.

////////////////////////////////////

To remove the gear motor assembly:

1. Refer to Removal and Replacement of the Elbow & Switch Assembly and perform steps to gain access to the freezer assembly.
2. Thread suitable length bolts, having No. 5/16-18 UNC-2B threads, into thread hold in the top of the auger. Grasp bolt head with hand tool and pull auger out.
3. Unbolt freezer from gear motor assembly, lift up and off gear motor.
4. Remove the drivemotor cover and disconnect the three electrical wire leads.
5. Remove bolts holding gear motor plate to the machine base.

6. Lift the gear motor from the machine base.

To replace the gear motor assembly, reverse the removal procedure.

*Torque bolts to 250-300 inch pounds.

REPAIR OF THE GEAR MOTOR ASSEMBLY

1. Remove (6) cap screws to prepare to open gearcase.
2. Pry the two cases apart. Inspect the internal parts, look for:
 - Condition and quality of lubricant. (The proper oil level is flush with the top of the output (biggest) gear.)
 - Gear and gear shaft condition
 - Woodruff key between output gear and shaft
 - Grease seals, back to back
 - Vent hole open
 - Thrust bearing intact.

Be sure to count and retain the spacer washers as they come out of the gearbox.

Replace the parts as required, using the part numbers found in the parts list section of this manual. Replace the gears into a CLEAN bottom gearcase, replacing the spacer washers in the same quantity as they were upon disassembly. If no count was kept, refer to the parts illustration.

NOTE: Some bearing grease should be placed in all bearings before assembly to insure proper lubrication upon start-up.

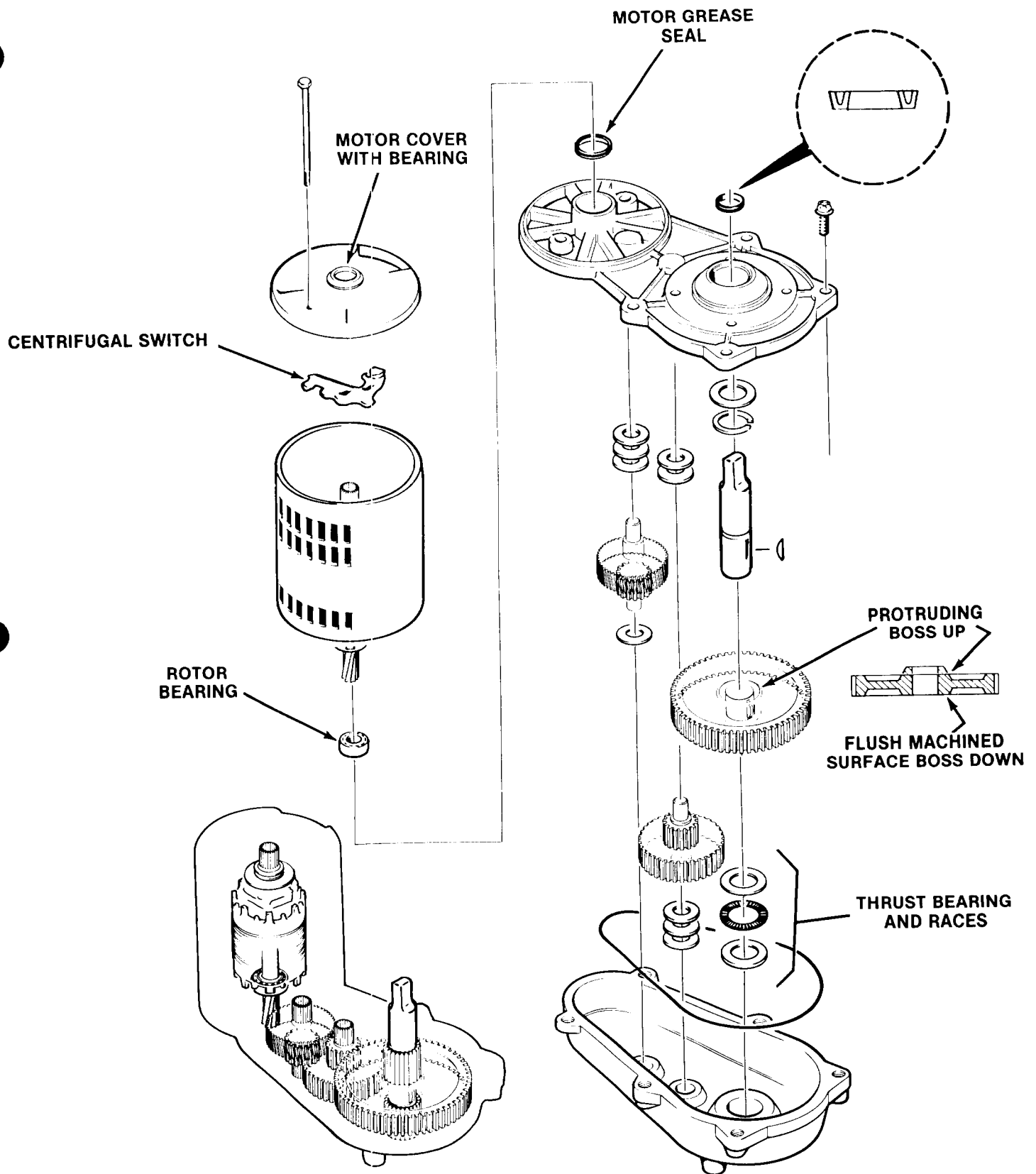
To reassemble:

1. Set top gearcase on gears and spacers and oil. Output gear when installed must be assembled with the flush, machined side DOWN and the protruding bossed center UP. Be sure O-ring is in place.
2. Replace gearcase cover. Drive in alignment pins before tightening cap screws and torque at 250-300 inch pounds.
3. Bench test the gearmotor assembly.
Test for noise, amp draw (must not be in excess of icemaker nameplate for gearmotor) and oil leaks.

Return gearbox to the unit. Be certain all mounting surfaces are clean and reassemble gearbox to chassis and freezer assembly.

If the freezer water seal begins to leak, removal of the auger is required in order to replace the top bearing and water seal. AT THE SAME TIME, it would be recommended to remove the gearmotor assembly, open it up and inspect it.

AN760 REMOVAL AND REPLACEMENT PROCEDURES



AN760 REMOVAL AND REPLACEMENT PROCEDURES

//////////////////// WARNING //////////////////////

Be sure the electrical power supply to the icemaker is OFF before proceeding with removal procedures.

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REMOVAL AND REPLACEMENT OF THE FAN MOTOR ASSEMBLY — AIR-COOLED MODELS

NOTE

Before beginning this procedure, observe the fan blade position on the shaft of the fan motor and mark the fan blades so it will be correctly positioned during reassembly. Direction of air flow should be toward the fan motor.

To remove the fan motor assembly:

1. Disconnect the electrical supply to the icemaker at the circuit breaker or fuse box.
2. Remove two screws and the lower left front panel.
3. Remove plastic trim, screws, and aluminum trim.
4. Remove screws and left front bracket. Remove upper front left panel.
5. Disconnect the electrical lead from the fan motor at the compressor control box.
6. Remove two screws securing the motor bracket to the chassis base and remove the fan motor and motor bracket from the chassis.
7. Remove the nut from the end of the fan motor shaft and remove the fan blade.
8. Remove four screws securing the fan motor to the motor bracket and separate the motor from the bracket.

To replace the fan motor assembly, reverse the removal procedure.

REMOVAL AND REPLACEMENT OF THE WATER REGULATOR VALVE ASSEMBLY — WATER-COOLED MODELS

To remove the water regulator assembly refer to slide out chassis procedure and complete all steps.

1. Close the inlet water valve to the icemaker.
2. Bleed off or blow the refrigerant charge through the Schrader valve.
3. Unsolder capillary tube from the discharge line process header.
4. Disconnect the water inlet and outlet lines from the water regulator valve.
5. Remove the two screws from the valve bracket to the machine base and remove the water regulator valve.
6. To replace the water regulator assembly, reverse the removal procedure.

REMOVAL AND REPLACEMENT OF THE SAFETY CONTROLS, HIGH PRESSURE, LOW PRESSURE, AND AUGER DELAY

To remove the controls, refer to the slide-out chassis procedure and complete all steps.

1. Bleed off or blow the refrigerant charge through the Schrader valve.
2. Unsolder the control capillary tube from its corresponding process header.
3. Replace the control and solder the capillary tube to its corresponding process header.
4. Follow the Removal and Replacement Procedure of the liquid line drier.

//////////////////////////////////// NOTE //////////////////////////////////////

Always install a replacement drier, anytime the sealed refrigeration system is opened. Do not replace the drier until all other repair or replacement has been completed.

Thoroughly evacuate the system to remove moisture and non-condensables.

AN760 REMOVAL AND REPLACEMENT PROCEDURES

//////////////////// **WARNING** //////////////////////

Be sure the electrical power supply to the icemaker is OFF before proceeding with removal procedures.

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NOTE

Be prepared with container to catch water left in lines disconnected in next steps, to prevent draining water on parts, components, electrical lines, etc.

REMOVAL AND REPLACEMENT OF THE WATER RESERVOIR ASSEMBLY

To remove the water reservoir assembly refer to slide out chassis procedure and complete all steps.

1. Close the inlet water valve to the icemaker.
2. Disconnect the water inlet tube from the water reservoir assembly.

3. Remove two Corbin clamps and two tubes from the bottom of the water reservoir assembly.
4. Unscrew and remove the wing nut from the bottom of the water reservoir assembly.
5. Lift and remove the water reservoir assembly from the mounting bracket.

To replace the water reservoir assembly, reverse the removal procedure.

NOTE

Check that the installed replacement water reservoir assembly float moves freely. Bend metal arm of float to adjust, as necessary. The correct water level in the water reservoir is the point of the raised molded line, on the side of the body of the water reservoir.