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GENERAL DESCRIPTION

This unit is a counter top or wall suspended type of dispenser which contains a complete flaked ice dispenser, storage bin, and automatic dispensing mechanism.

The primary purpose of this machine is to fill glasses with water and ice or just ice by actuating a control arm with the glass.

Variable portion or continuous flow of ice can be obtained by rotating the ice control switch. By pushing a water switch to "On", water will be dispensed with the ice as long as the glass actuator arm is depressed. Ice dispensing will stop automatically when the preselected portion of ice has been dispensed.

The drain grate is vinyl-coated steel wire allowing spilled ice to pass through freely.

The cabinet is stainless steel or steel with baked-on enamel. Enamel models have a wood grain upper front panel, orange control panel, stainless steel splash panel and remaining cabinet enclosure in a textured color.

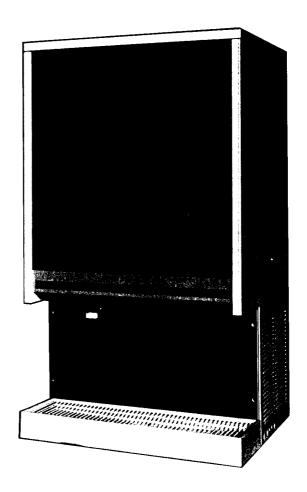
The complete machine has been designed with sanitation and ease of cleaning emphasized. The storage bin is sealed, and the ice spout is automatically closed when ice is not being dispensed. The dispensing mechanism, storage bin, and parts requiring cleaning are accessible without tools.

All components are accessible through the top or front panels. On air cooled machines, there is a special removable section of the condenser shroud to facilitate cleaning of condenser.

The bin control is a mechanical arm controlling a switch. This is backed up by a manual re-set switch to prevent damage by failure of the bin control.



FD-6 SERIES ICEMAKERDISPENSERS



ice making capacity

Daily Ice Capacity is directly related to condenser air inlet temperature, water temperature and age of machine.

NOTE: To keep your SCOTSMAN DISPENSER preforming at it's maximum capacity it is necessary to perform periodic maintenance as outlined on page 9 of this manual.

SPECIFICATIONS

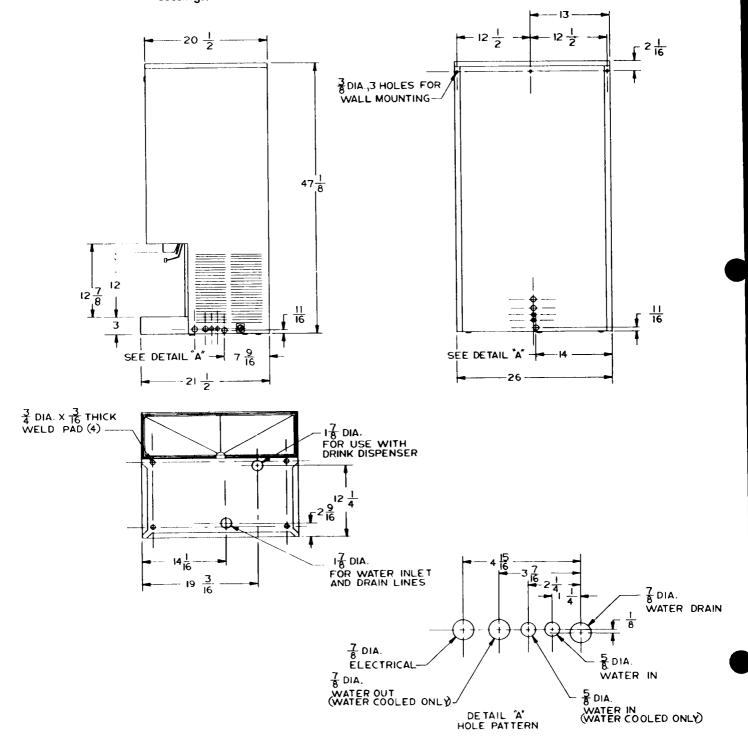
PERFORMANCE DATA:

Ice Storage - Approximately 35 lbs.

Ice Portion — Portion is variable from approx. 1 to 5 oz. per vend or may be positioned to continuous vend.

Vend Rate - Approximately 2.0 oz./sec.

Water Control – Water may be dispensed with all ice portion control settings.



SPECIFICATIONS

ElectricalPower Supply
Plumbing Potable Water Inlet
Water Limits 100° F. Maximum Temperature
Temperature Limits 100° F. Maximum Ambient Air
Compressor RSN4-0050-1AA Copelaweld 115V 60Cy 11.2 FLA 51.0 LRA 1/2 H.P.
Gear Motor (Freezer Drive) A-22750-021 Queen Products 115V 60Cy 4.8FLA 1/4 H.P.
Gear Motor (Ice Dispensing) Merkle-Korff
Refrigerant Charge Frost Line
Normal Operating Pressures Air Cooled
Water Cooled
WARNING: THIS MACHINE MUST NOT BE ALLOWED TO OPERATE WHEN THE WATER SUPPLY IS SHUT OFF, OR AT BELOW RECOMMENDED WATER PRESSURE. DISCONNECT UNIT ELECTRICALLY WHEN WATER SUPPLY IS OFF, OR WHEN WATER PRESSURE IS BELOW RECOMMENDED OPERATING PRESSURE.
Condenser Water Inlet

INSTALLATION INSTRUCTIONS

The following installation instructions pages 4 through 10 were written for use by an autorized tradesman only, not the user or customer. We suggest you call your local authorized Scotsman Service Agency for hook-up, start-up, and check out. He's listed under "Ice Making Machinery & Equipment" in your telephone book, yellow pages.

- 1. Machine should have both sides open to free air for air movement in and out of the machine (air cooled models). Avoid locations with high temperatures and dirty air, such as found next to grills or in kitchens.
- Machine may be placed on a solid countertop, on other equipment manufactured by Scotsman or fastened to a wall. When wall mounting is desired, use the three mounting holes provided across the reinforcement strip on upper back of cabinet. Follow the directions provided with the wall mount kits.
- 3. Remove cabinet top (push up on front edge), remove upper front panel (pull out along top edge) and lower front splash panel (remove 4 screws.)
- 4. Electrical connections and plumbing connections may enter cabinet through the sides, back or base, whichever is convenient.

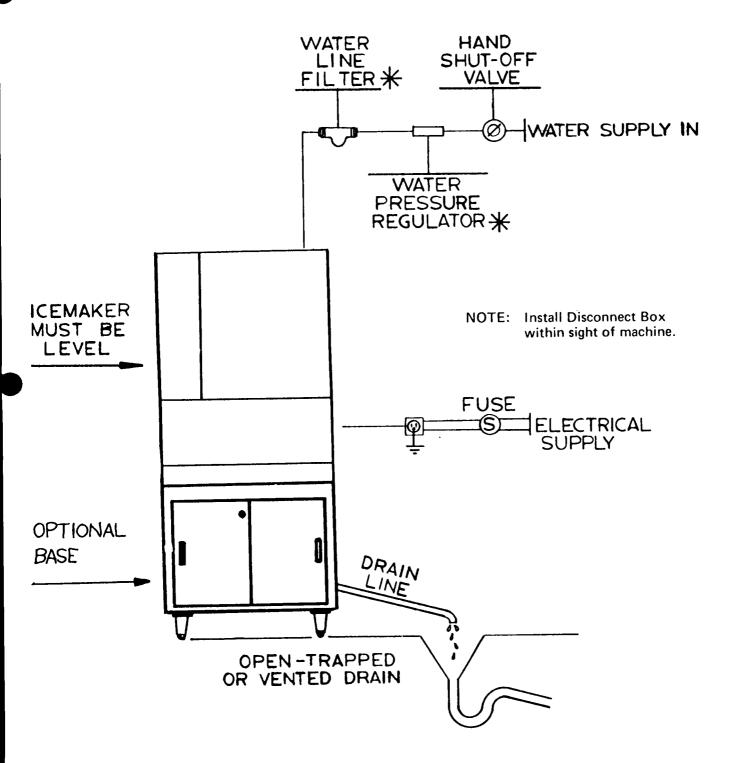
Electrical - Terminate at control box - See wiring diagram for wire and fuse size - Voltage must be within - 10% of nameplate rating during start-up and normal Running conditions. Wiring must conform to National and Local Codes.

Plumbing (water in) - Inlet fitting is 1/4" SAE male and has fasteners provided on fitting to attach to cabinet sides. Use 1/4" O.D. copper tube with separate hand shut-off valve. If local conditions warrant, install water regulator and water* strainer between machine and valve. Water cooled models have a 3/8" N.P.T. Fitting at the water regulating valve for condenser water inlet.

Plumbing (water out) - 5/8" O.D. drain tube must be used and connected to plastic tube inside cabinet. Drain must run to an open drain such as a floor drain or sink. Allow ample slope to assure proper drainage of machine. Water Cooled models have a 3/8" SAE flare fitting at the condenser water outlet.

- 5. Remove sink and grill from packaging and mount in place fasteners are provided with sink. Place drain tube on sink drain fitting and secure with clamp. Clamp is shipped in place on drain tube.
- 6. Replace panels, turn on water and electrical supply.
- 7. Thirty minutes after the unit has been started ice can be dispensed.
- * Water regulator, strainer are available as accessory items.

INSTALLATION SCHEMATIC



* REGULATOR AND FILTER ARE ACCESSORY ITEMS TO BE INSTALLED AS CONDITIONS WARRANT

INSTALLATION LIMITATIONS

ELECTRICAL

- 1. Scotsman, like most manufacturers, purchases electrical motors that are rated to operate within 10% variance above or below nameplate ratings.
- 2. Improper voltages applied to Scotsman equipment can cause premature failures and burnouts. Failures of this type are not considered as factory fault or defect.

AMBIENT

WARNING — This machine is not designed for outdoor installations. This machine will not operate when air temperatures are below 50° F. or above 100° F.

2. This unit was not fabricated nor intended to be installed outdoors.

WATER

3. Scotsman Ice Systems require 20 pounds flowing water pressure to operate satisfactorily. Pressures lower than 20 pounds or interruptions in the water supply can cause serious mechanical damage to this product.

This machine will not operate when water supply temperatures are below 40° F. or above 100° F.

CLEANING INSTRUCTIONS — FD6

THE FOLLOWING MAINTENANCE SHOULD BE SCHEDULED THREE TIMES PER YEAR ON SCOTSMAN DISPENSERS. CALL YOUR AUTHORIZED SCOTSMAN SERVICE DEPARTMENT.

- 1. Check and clean water strainers and float valve. Depress float valve to insure full stream of water.
- 2. Check water level and machine level, keep water level below overflow, but as high as possible and still not run out of spout opening with machine off. Water droplets come out of spout with ice at all times. Adjust as required.
- 3. Clean reservoir and interior of freezer using SCOTSMAN Ice Machine Cleaner.
 - A. If machine has been cleaned regularly and no problems such as dry ice or chatter are noticed, clean as per the following instructions:
 - a. Set selector switch to continuous ice and vend until bin is empty.
 - b. Disconnect Power
 - c. Remove inner bin and bin bottom, wash and sanitize these parts and inside of bin.
 - d. Turn Off water supply of block float. Drain reservoir by removing the overflow tube in the reservoir. After draining, replace the overflow tube.
 - e. Turn On power and pour cleaning fluid into reservoir. (Use 4 oz, of Scotsman cleaner and 1 gal. of hot water). Do not fill above overflow tube. Do not allow unit to operate with less than 1" of solution in reservoir.
 - f. While waiting for step "e" to complete, wash and sanitize sink, drain grate, glass filler lever and surrounding area in accordance with local Health Department regulations.
 - g. When cleaning fluid has been depleted, turn on water supply and let unit run for at least 15 minutes to flush out any cleaning fluid. Check ice for acid taste - run unit until ice tastes sweet.
 - h. Disconnect power and melt ice in storage bin with hot water to remove ice and rinse bin parts.
 - i. Re-assemble all parts unit is ready for normal operation.

NOTE: Cleaning requirements vary according to local water conditions. Visual inspection of the auger before and after cleaning will indicate best procedure to be followed in local areas.

- 4. Check high and low side pressure. On air-cooled models head pressures range between 130 and 145 PSI. Suction pressure should be above 12 PSI and will range up to 15 PSI depending upon water and ambient temperatures.
- 5. Check gearmotor operation. Normal running temperatures are in the area of 160° Farenheit, which is hot to the touch.
- 6. Check top bearing of freezing tube. Remove retainer ring around edge of stamped brass cap. If moisture is around bearing, wipe up and remove grease. Add new grease. Use Beacon No. 325. Replace cap and retainer ring.
- 7. Clean air cooled condenser. Inform customer to clean frequently. Always shut off machine when cleaning.
- 8. Check for refrigerant leaks and proper frost line. Should frost out of accumulator at least one-half way to compressor, and in some areas back to service valve.
- 9. Check for water leaks. Tighten drain line connections. Run water down bin drain line to make sure it is open.

BIN CONTROL SYSTEM

There are two switches mounted in the enclosure on the bin top. (4-6) One switch is actuated by the lever which is moved by the incoming ice—this switch has a large differential. (4)

In the event this switch fails to stop the ice maker, then the incoming ice forces the lever (2) which in turn pushes the bin switch back into the manual re-set switch.(6) The icemaker will not start until this switch is re-set.

Continual tripping of the re-set switch will result if the bin full switch is defective. If nuisance tripping of this switch occurs, the bin full switch may be moved away from the reset switch by use of its mounting nuts. Major adjustment can be made by bending the lever to increase or decrease its angle.

To further control the compressor and to avoid the freezing and stoppage of the auger in the freezer, a control is incorporated on the gear motor drive for the freezer.

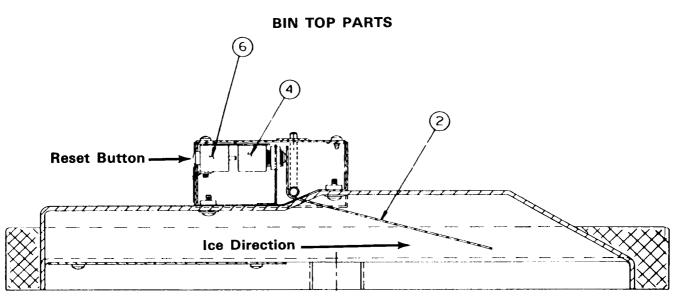
The bin controls do not energize the compressor, only the gear motor. In turn, the gear motor operates the compressor.

A speed sensing switch designed internally in the motor of the gear unit will stop the compressor when the RPM of the motor is reduced or stalled.

Should the auger beginto freeze, the speed of the gear motor is reduced due to excessive load. At reduced RPM it opens the circuit to the compressor and thereby stopping the freezing. As the gear unit, only, continues to run, it will clear the auger; and when the motor speed increases, the compressor is turned on.

Any freeze-ups are thereby automatically cleared by the unit.

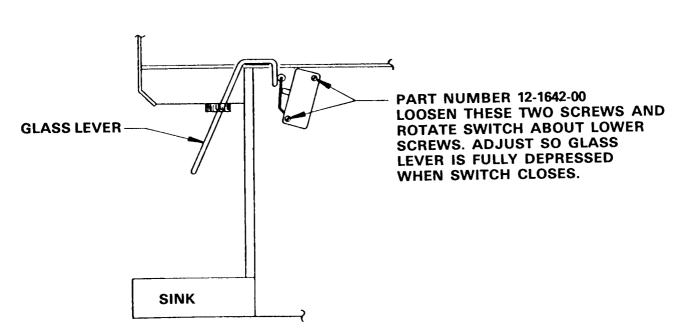
If the water should be shut off when the unit is running, the inlet water line will freeze shut. The control mentioned above will have no control over such a situation.

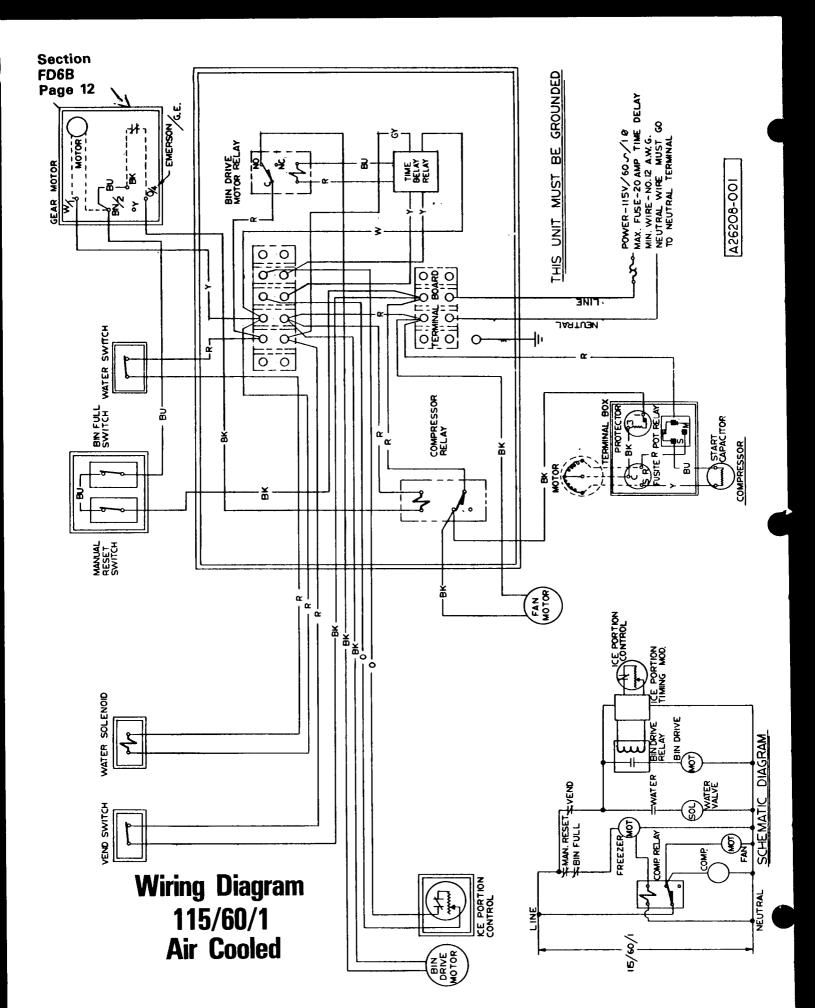


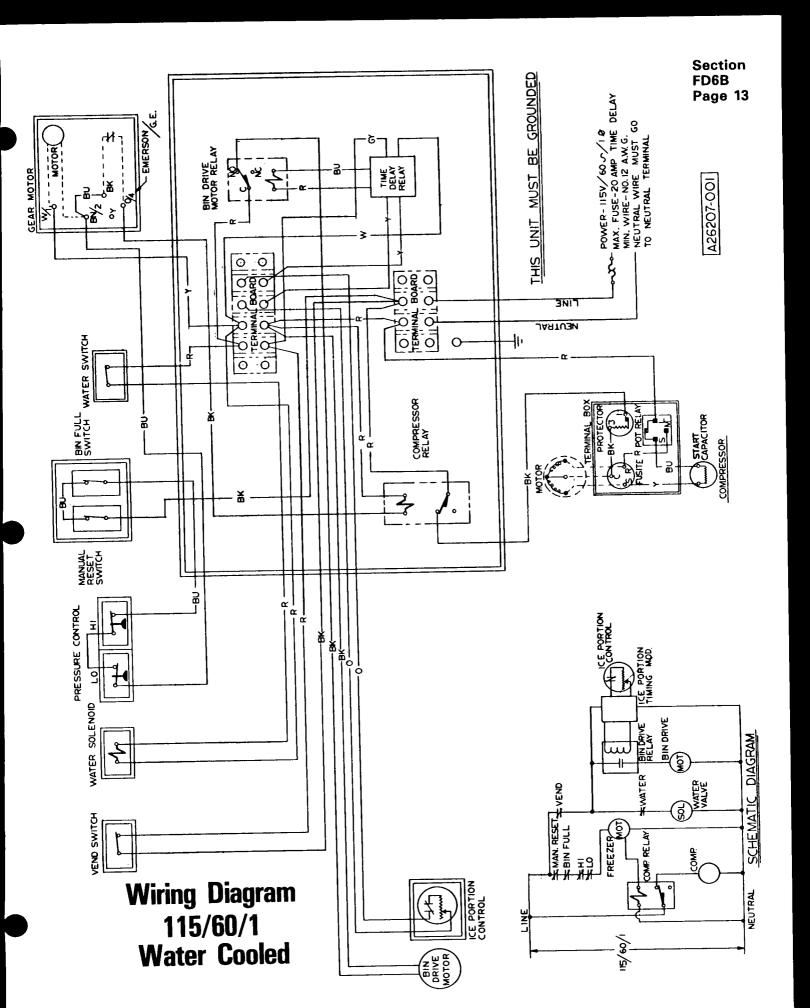
ICE DISPENSER CONTROL SYSTEM

Depressing the glass filler opens the spout and closes the vend switch. The vend switch closes the circuit to the water switch and to the water solenoid valve, if water switch is positioned to "with water". Also, the vend switch closes a circuit to the ice portion control and its timing module located in the control box. If ice control is positioned to continuous, then ice will be dispensed as long as the glass lever is depressed. If ice control is in a portion position, then only that quantity of ice will be dispensed until the glass lever is actuated another time. The portion control and timing module regulate the time period the bin drive motor is engaged. When this time period has lapsed then the normal closed relay is energized, opening the circuit to the drive motor and stopping the dispensing action. The vend switch mounting position is adjustable and must be positioned so glass lever is fully depressed before closing vend switch. This is to insure the ice spout is fully opened.

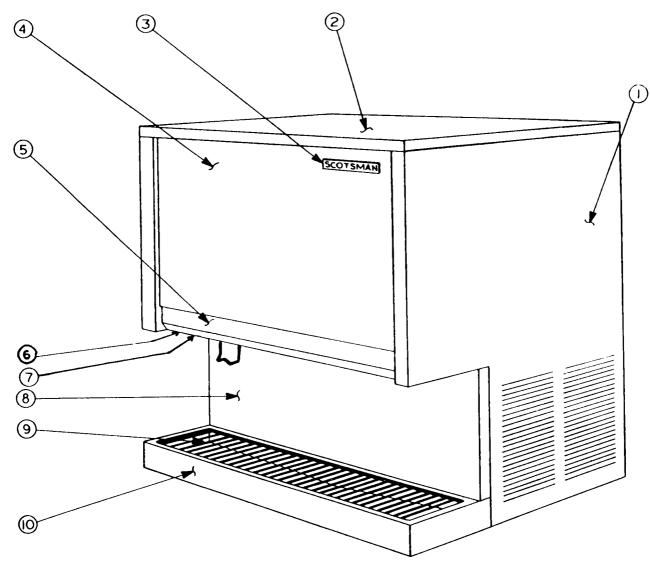
VENT SWITCH ADJUSTMENT





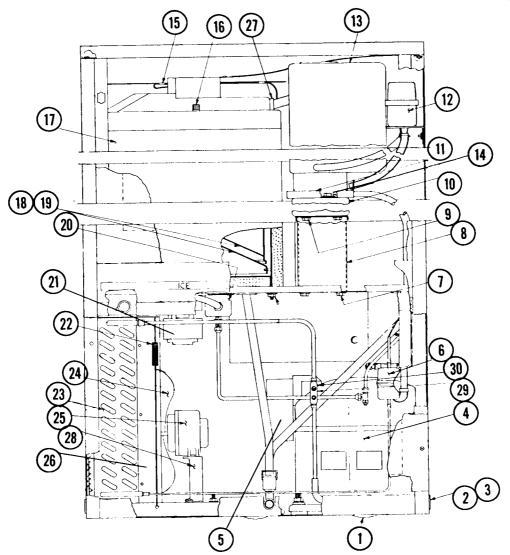


EXTERNAL CABINET PARTS



ITEM NO.	PART NO.	DESCRIPTION		
1. 2.	A23431-001 A23431-002 A20192-000	Cabinet Painted Cabinet SS Top Panel Painted		
3.	A20192-001 15-0156-00	Top Panel SS Emblem Scotsman		
	03-0271-00 A23443-001	Speed Nut Front Panel Wood Grain	PANEL FAST	reners
5.	A23443-002 A24282-001 A24282-002	Front Panel SS Control Panel Painted Control Panel SS	15-0411-00 03-1406-04	Strike Nut
6.	15-0561-00 12-1557-00	Decal Portion Control Portion Control	02-0836-00	Catch
7.	02-1810-00 12-1377-01	Knob Portion Control Switch Water		
8.	A19339-000 03-1404-09	Splash Panel Screws Panel		
9. 10.	02-1858-00 A23212-000	Grill Sink		

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FD6B AIR COOLED

Item No.	Part No.	Description	Item No.	Part No.	Description
1.	A22349-000	Plug Button		03-1408-03	Washer
2.	, ,	Plug Button (Small)	15.	03-1230-00	Tin Clip
3.		Plug Button (Large)	16.	A21983-000	Nut
4.	18-4600-01	Compressor	17.	A23250-001	Bin Assy
5.	18-2200-25	Overload	18.	A23247-001	Inner Bin
O.	18-2200-26	Relay	19.	A19343-000	Inner Bin Bottom
	18-1901-33	Capacitor	20.	12-1646-01	Solenoid Valve
6 .	02-0544-01	Drier	21.	12-1561-01	Bin Drive Motor
7.	03-1405-03	Screw	22.	02-1827-00	Spring
, ,	03-1417-09	Washer	23.	18-3304-01	Condenser
8.	A23497-001	Motor Support	24.	18-0137-02	Fan Blade
9.	03-1405-17	Screw	2 5.	12-1576-01	Fan Motor
J .	03-1417-12	Lock Washer	26.	A24082-001	Condenser Shoud
10.	See Break Down	Gear Motor	27.	A24876-001	Spout Extension
11.	A24156-001	Drip Pan	28.	18-0422-00	Motor Bracket
11. 12.	See Break Down	Reservoir Assy	29.	16-0560-00	Valve Core
13.	See Break Down	Freezer Assy		16-0563-00	Brass Cap
14.	03-1420-03	Screw	30.	16-0673-18	Process Header.

Section FD6B Page 16

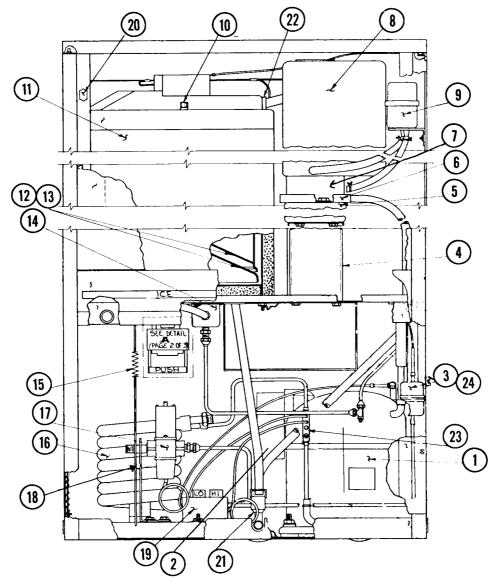
12.

13.

14.

A23247-001

A 19343-000 12-1646-01



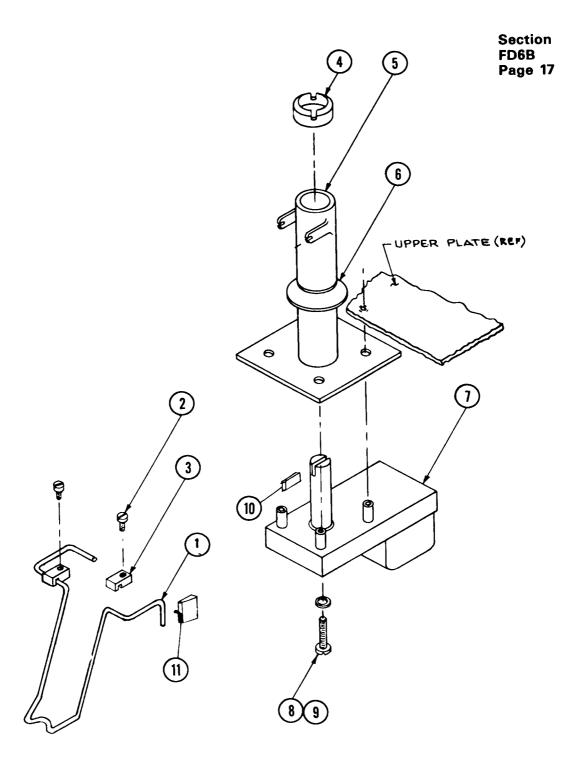
FD6B Water Cooled

ITEM NO.	PART NO.	DESCRIPTION	ITEM NO.	PART NO.	DESCRIPTION
1	18-4600-01	Compressor	15.	02-1827-00	Spring
1. 2.		Overload	16.	18-3305-02	Condenser W. C.
۷.	18-2200-25				
	18-2200-26	Relay	17.	11-0198-02	Water Regulator
	18-1901-33	Cap Ocitor	18.	A15924-000	Bracket
3.	02-0544-01	Drier	19.	11-0385-01	Hi-Lo Pressure Control
4.	A23497-001	Motor Support	20.	02-0836-00	Catch
5.	A22750-021	Gearmotor 115/60/1	21.	A21532-000	Drain Tee
6.	A24156-001	Drip Pan	22 .	A24876-001	Spout Extension
7.	02-1629-00	Base Adapter	23.	16-0673-08	Process Header
8.	See Break Down	Freezer Assy	24.	16-0560-00	Valve Core
9.	See Break Down	Reservoir Assy		16-0563-00	Brass Cap
10.	A21983-000	Nut			
11.	A23250-001	Bin Assembly			

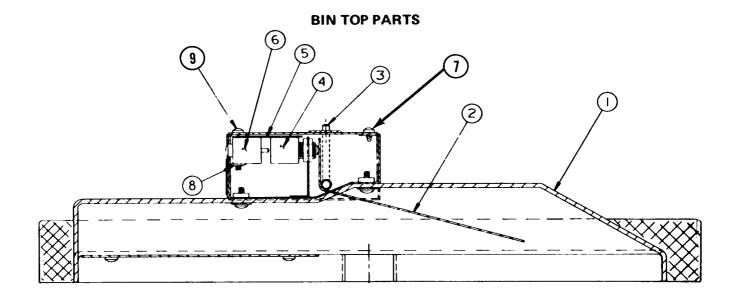
Inner Bin

Inner Bin Bottom

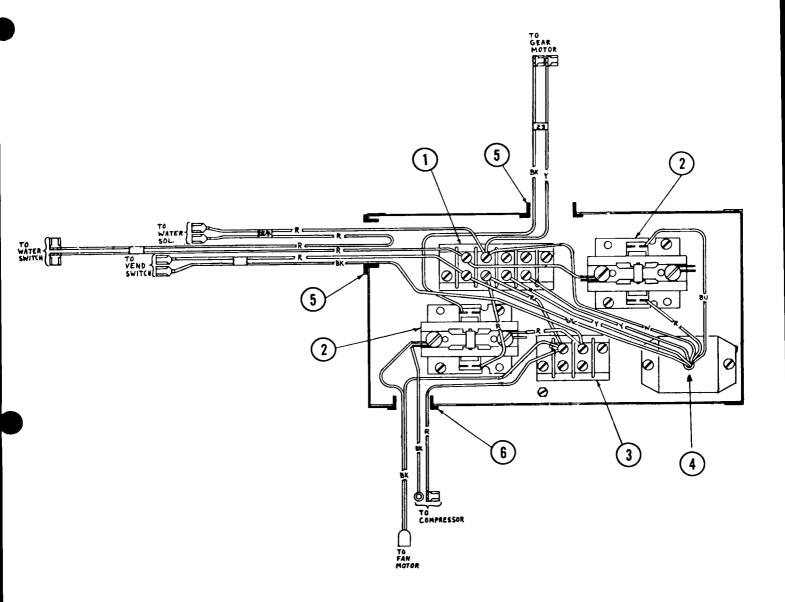
Solenoid Valve



ITEM NO.	PART NO.	DESCRIPTION
1.	02-2076-01	Glass Filler
2.	03-1403-06	Screw
3.	02-1969-00	Linkage Clamp
4.	02-1976-00	Retaining Collar
5.	02-1971-00	Bracket Gear Motor
6.	13-0747-00	Water Shed
7.	12-1561-01	Gear Motor
8.	03-1410-02	Lockwasher
9.	03-1403-36	Screw
10.	A20472-000	Slot Pin
11.	12-1642-00	Vend Switch

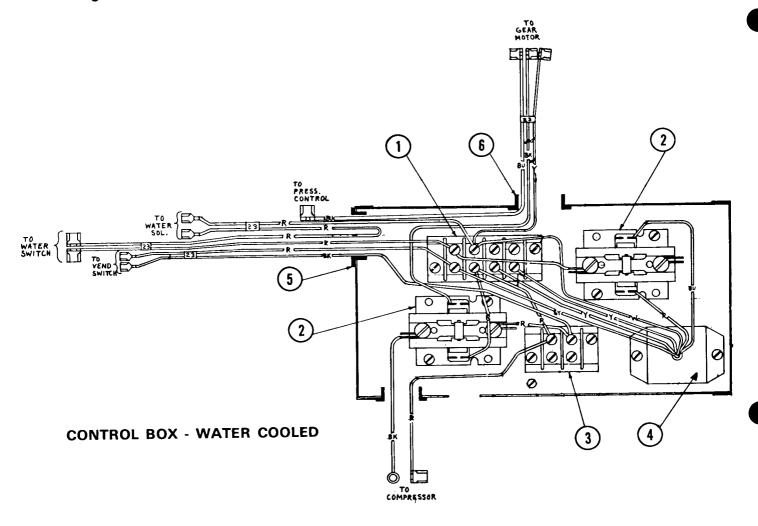


ITEM NO.	PART NO.	DESCRIPTION
1.	A23493-001	Top Foam Assy
2.	A21995-000	Actuator Arm
3.	A21982-000	Pin
4.	12-1018-02	Bin Full Switch
5.		Electrical Insulation
6.	12-1664-00	Reset Switch
7.	03-1404-04	Screw (4)
8.	03-0886-00	Twin Nut
9.	03-1403-10	Screw (2)

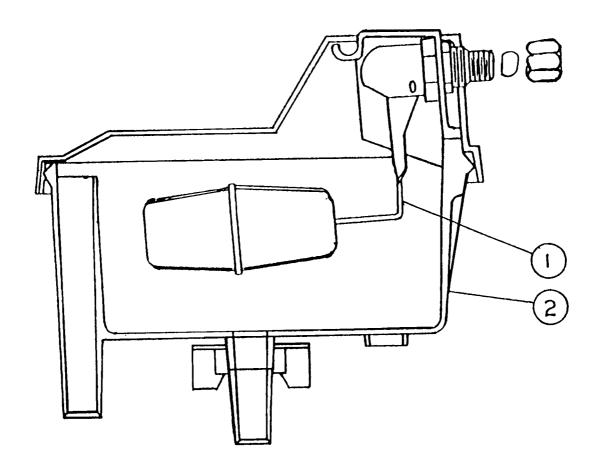


CONTROL BOX - AIR COOLED

ITEM	NO. PART NO.	DESCRIPTION
1.	12-0813-01	Terminal Board
2.	12-2041-01	Contactor
3.	12-0813-04	Teminal Board
4.	A26213-001	Relay - Time Delay
5.	12-1213-12	Snap Bushing
6.	12-1213-11	Snap Bushing

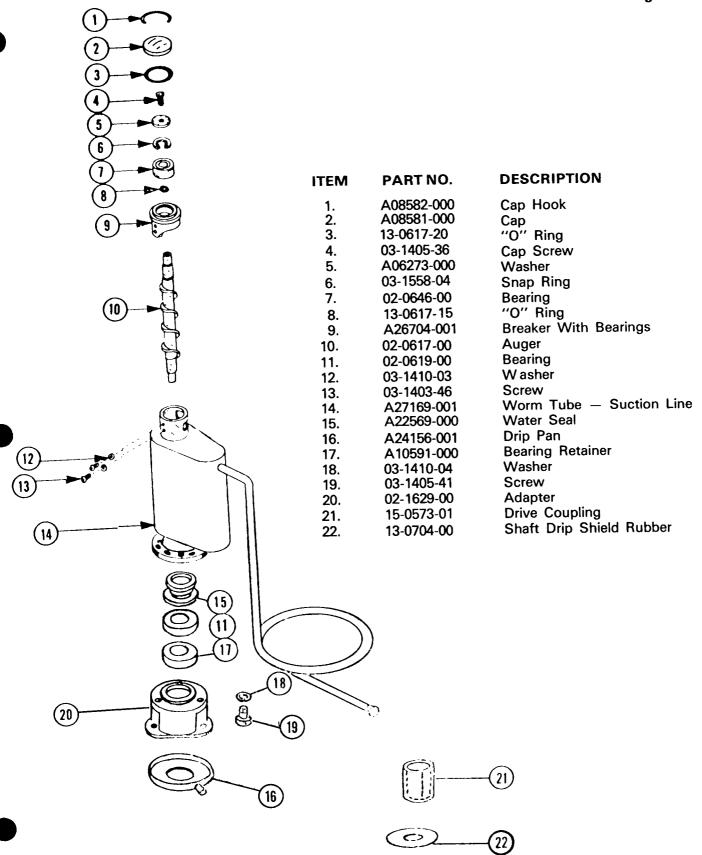


ITEM	NO. PART NO.	DESCRIPTION
1.	12-0813-01	Terminal Board
1. 2.	12-2041-01	Contactor
3.	12-0813-04	Terminal Board
4.	A26213-001	Relay - Time Delay
5.	12-1213-12	Snap Bushing
6.	12-1213-11	Snap Bushing



RESERVOIR ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION
1.	02-2217-02	Valve Assy.
2	02-2217-01	Reservoir Complete



STORAGE BIN ASSEMBLY

			8	0	(5)) (6)
			9		7	
ITEM	PART NO.	DESCRIPTION	- 0	`		
1.	03-1404-04	Screw (4 reqc)		7]		
2.	A21996-000	Cover Fab. Assy		@	72	
3.	03-1403-10	Screw (2 reqd)		Ĭ	(8)	
4.	03-0886-00	Twin Nut		}		
5.	12-1664-00	Reset Switch Switch				
6. 7.	12-1018-02 A21982-000		A A	6		
7. 8.	A21992-000	Bin Switch Box			1 V	1 1
9.	A21995-000	Actuator Arm Fab.				///
10.	A21983-000	Nut (2 reqc)	(E)—(
11.	03-1406-04	Nut (4 reqd)	Vé.			
12.	A23493-001	Top-Foam Assy				
13.	A21987-000	Bridge Plate				
14.	03-1279-000	Screw, Thumb (4 reqd)				130
15.	A23247-001	Inner Bin Fab. Assy Pin-Inner Bin	(3)——/·			
16. 17.	A23223-000 02-1976-00	Collar				
17. 18.	A19343-000	Inner Bin Bottom Fab.			(<	>) _A ~//
	71.0010 000	Assy	1		1 1	
19.	A23250-001	Bin Assy	(14)		_	
		-				
			.			
					(9)	
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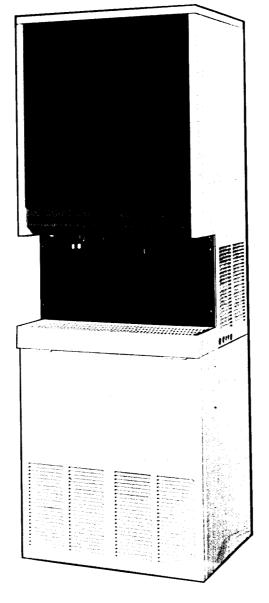
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SERVICE ANALYSIS — ICE MAKER SECTION FD6

SYMPTOM	POSSIBLE CAUSE	CORRECTION
Water Leaks	Defective water seal.	Replace.
	Gravity feed line leaking. Water level in reservoir too high	Check hose clamps. Adjust water level to 1/4 inch below reservoir overflow, then raise reservoir until water comes out freezer spout, then lower 3/4 inch.
Excessive noise or chattering.	Mineral or scale deposit on auger and inner freezing chamber walls. Low suction pressure.	Clean per cleaning instructions with Scotsman Ice Machine Ceaner - for severe deposits remove auger and clean freezer parts manually. Add gas to raise suction pressure.
	Intermittent water supply.	Check and clean water strainer. Check gravity feed line for air lock. Remove air lock. See "Correction" under "Symptom"
	Water level in reservoir too low. Motor compressor not solid on rubber mounts.	water leaks. Repair or replace rubber mounts.
Gearmotor noise.	Low on oil.	Remove case cover to check for proper oil level. Top of gears should be covered. Use 600W or equivilant.
Unit will not run.	Bin Reset Switch	Push to reset - continue operation replace bin full switch.
	Blown Fuse.	Replace fuse and check for cause of blown fuse.
	Loose electrical connection.	Check wiring.
	Inoperative master switch.	Replace switch.
Compressor cycles intermittently	High or low voltage.	Check for overloading.
Monnicontry	Dirty condenser. Air circulation blocked.	Clean. Remove cause or move unit to correct.
	Inoperative condenser motor. Non-condensable gases in system.	Replace. Check for leaks, evacuate and recharge.
Making wet ice.	Surrounding air temperature very high.	Correct or move unit.
	Under or over-charge of refrigerant.	Recharge with the proper amount.
	Faulty compressor.	Replace or repair.
Low ice production.	Loss of refrigerant, under or over-charge of refrigerant.	Check and recharge with proper amour of refrigerant.
	Dirty or plugged condenser.	Clean condenser.
	Water level in water reservoir.	See "Corrections" under "Symptiom" water leaks.

Section FD6B		
Page 26	Partial restriction in capillary tube or drier.	Moisture in system. Oversharge of oil in system. Remove charge and drier. Replace and recharge system.
	Inlet water strainer partially plugged.	Remove screen and clean.
	Corroded or stained worm shaft due to water conditions.	Remove worm shaft and clean.
Machine runs but makes no ice.	Loss or under-charge of refri- gerant. Water not entering freezing	Check for leaks and recharge. Plugged strainer or supply line. Check
	chamber. Moisture in system.	and clean. Air lick in gravity feed line. Check and remove air locks. Check and remove charge and drier.
ı	Water seal leaking. Water turned off while unit was operating.	Replace and recharge. Replace seal. Inlet water line froze shut. Unit must be turned off and defrosted.
Will not dispense.	Power off.	Check master switch, fuses and electrical supply to machine. Check symptoms - bin drive motor runs, bin drive motor stopped.
Bin drive motor runs (will not dispense)	Plugged spout.	Operator held full glass under spout forcing ice to jam, clear spout and instruct personnel using machine.
	Vend switch adjustment.	Vend switch must be positioned so it will close only when glass lever is completely depressed to prevent vending when ice chute is only partially open.
	Gear Motor.	Check if output shaft turns if not, replace gearmotor.
	Inner bin does not rotate	Check keyed coupling to gear motor. Key is soft soldered in place and may be replaced.
Bin drive motor stopped.	Drive motor burned out.	Replace.
	Inner bin Jammed.	Check assembly of inner bin bottom, may NOT be down and locked in place.
	Vend switch.	Faulty-replace. Out of adjustment - readjust
	Relay (relay has 115 V holding coil 24V coil will not work with timing module.	Relay is normally closed, may open too quidkly if ice portion control or timing module is faulty.
Will not portion ice, runs continuous.	Ice portion control timing module.	If components fail to open machine will vend continuously when glass lever is depressed. The timing module and ice portion control stop the vend cycle by energizing the relay which opens the circuit to the bin drive motor. It is recommended to service these two components by substitution.



FD-6 Dispenser

Optional Machine Stand

Accessory Legs Not included

ACCESSORY LIST

KWB-3 Wall Mount Kit

KGF-1 Glass Filler Kit

KSP-1 Splash Panel Kit

DMS-20 E Machine Stand - Enamel Finish

DMS-20 S Machine Stand - Stainless Steel.

KLP-2E 4 Leg Package - Enamel Finish

KLP-25 4 Leg Package - Stainless Steel Finish.