

Service Manual

Cold Mechanically Refrigerated Tables and Cold Ice Pan Tables

Models: 3-CM, 4-CM, 5-CM and 6-CM
3-CI, 4-CI, 5-CI and 6-CI

For Service Information, Call 800-544-3057

Please provide the following information:

- Model number
- Serial number
- Date of purchase
- Part description and number as shown in parts list

Piper Products, Inc.
300 South 84th Avenue
Wausau, WI 54401
Phone: 715-842-2724 / Fax: 715-842-3125

INTRODUCTION

Congratulations: You have just purchased one of the finest pieces of equipment on the market today. Before installing or operating your new Piper Products, Inc. equipment, you should read through this manual. This manual should be retained for further reference as it contains installation and operating instructions, service tips, part lists and warranty information.

For your safety, read and follow all cautions and warnings.

Freight Damage Claims:

Your Piper Products equipment was carefully inspected and packed before leaving our factory. The transportation company assumes full responsibility for safe delivery of this equipment. Piper Products cannot assume responsibilities for damage or loss incurred in transit. Visible damage or loss should be noted on the freight bill and signed by the person making the delivery.

A freight claim should be filed immediately with the transportation company. If damage is unnoticed or concealed until equipment is unpacked, notify the transportation company immediately and tell them you want to file a concealed damage claim. This must be done within ten (10) days after delivery was made. Be sure to retain all packing material and cartons.

WARNING

Installation of this equipment should be done only by persons qualified or licensed to install electrical equipment.

Adjustments and service work should be performed only by a qualified service technician. Service is available through Authorized Piper Products Parts and Service Distributors throughout the United States. For a complete listing of these call or write Piper Products, Inc. for the name of the nearest distributor.

This equipment is intended for commercial use only. Not for household use.

Use of other than genuine Piper Products replacement parts or service work performed by other than an authorized Piper Products service agent will void the warranty.

Do not use any corrosive cleaners. Use only cleaners approved for stainless steel.

INSTALLATION

Carefully remove carton or crate from unit. Remove all loose packing materials, making sure that no small parts or accessories are lost. Inspect unit for concealed damage before discarding packing materials.

It is the responsibility of the installer to comply with all local codes.

Install the protector guard. Installation instructions for the different model protector guards are found on pages 4, 5 and 6 of this manual. Refer to these for installation details. If protector guard is equipped with lights, be sure that the protector guard light switch located at the end of the protector guard is turned off. For mechanically refrigerated units make sure that the switch in the control panel is turned off. Connect the electrical power cord and NEMA 5-15P plug to a 120 volt 15 AMP power source.

Remove the access panels to the condensing unit and check that the fan turns freely and the condenser is not blocked. The service valves have been opened at the factory and the pressure control is pre-set to the proper temperature and should need no further adjustment.

START-UP AND OPERATION

When installing unit, make sure there is a minimum 2" of air space to allow free air flow into the louver panel located on the end of the unit. Also allow 12" of free air space for the louvered panels located in the front and in the rear of the cabinet.

Turn the switch in the control panel to the "ON" position. The pilot light will light and the condensing unit will start. Allow the unit to run for about 15 minutes. The bottom of the cold pan should start to frost over and should be cold to the touch.

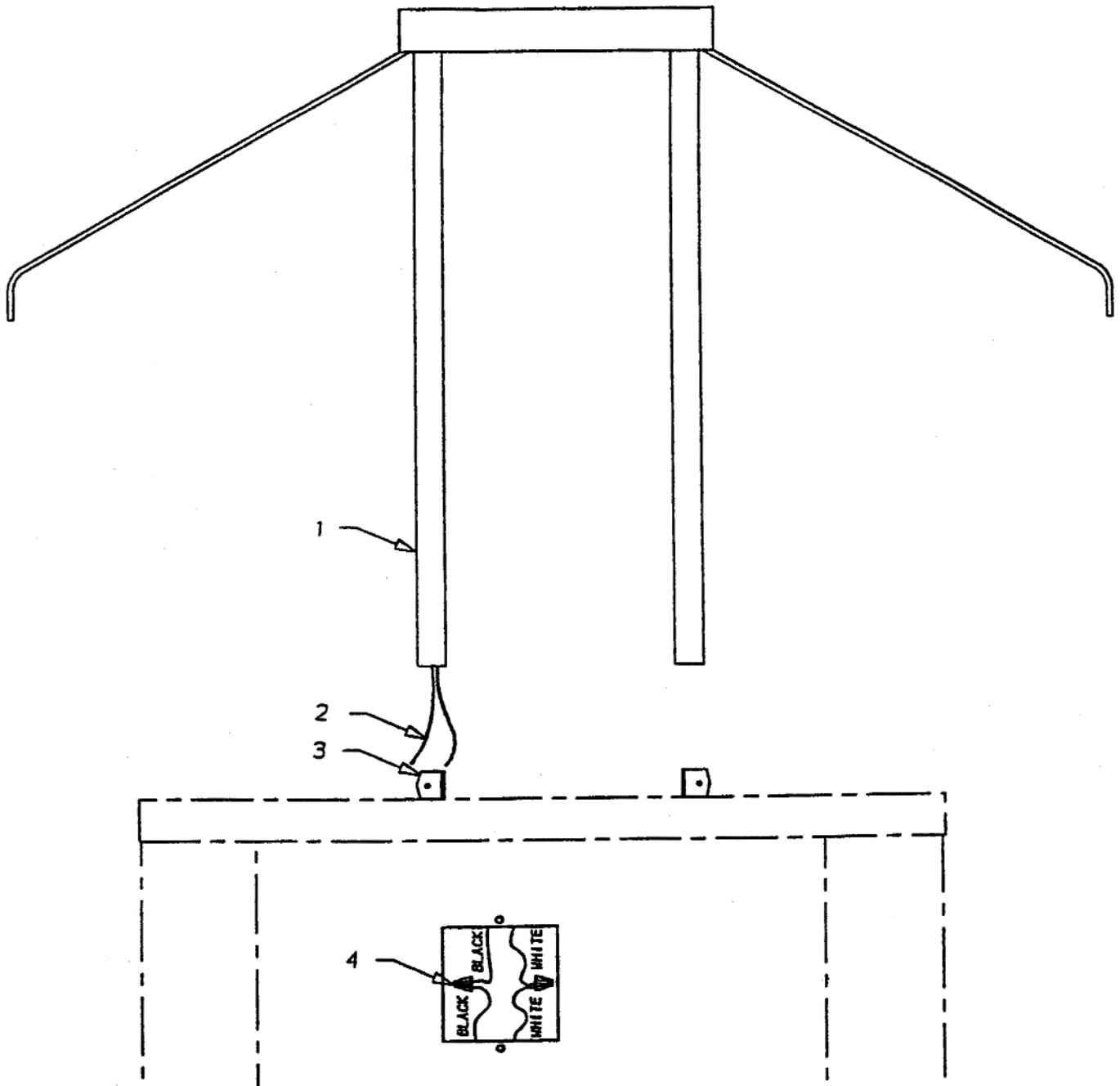
THEORY OF OPERATION

The Cold Ice Pan Food Table (CI) is designed to be used with ice to display cold foods and salads during the meal period. There is no mechanical refrigeration used. Ice is packed around food pans placed into the food well to provide cooling. A one-inch drain valve is provided for draining excess water from melted ice and for ease of cleaning.

The Mechanically Refrigerated Cold Food Table (CM) is designed to be used with or without ice to display cold foods and salads during the meal period. The mechanical refrigeration system uses a 1/3 horsepower compressor and thermostat control to provide cooling to copper coils mounted to the bottom of the food well. Crushed ice should be used along with the mechanical refrigeration system to achieve the optimum control of food temperatures over longer periods of time.

NOTE: Cold Food Tables are NOT refrigerators and will NOT keep food cold for long periods of time. Food should always be placed into the table directly from the refrigerator at as low of a temperature as possible. When the food in the table reaches a temperature of 38° to 40° Fahrenheit it should be placed back into the refrigerator and replaced with cold food from the refrigerator.

BUFFET PROTECTOR GUARD MOUNTING ASSEMBLY

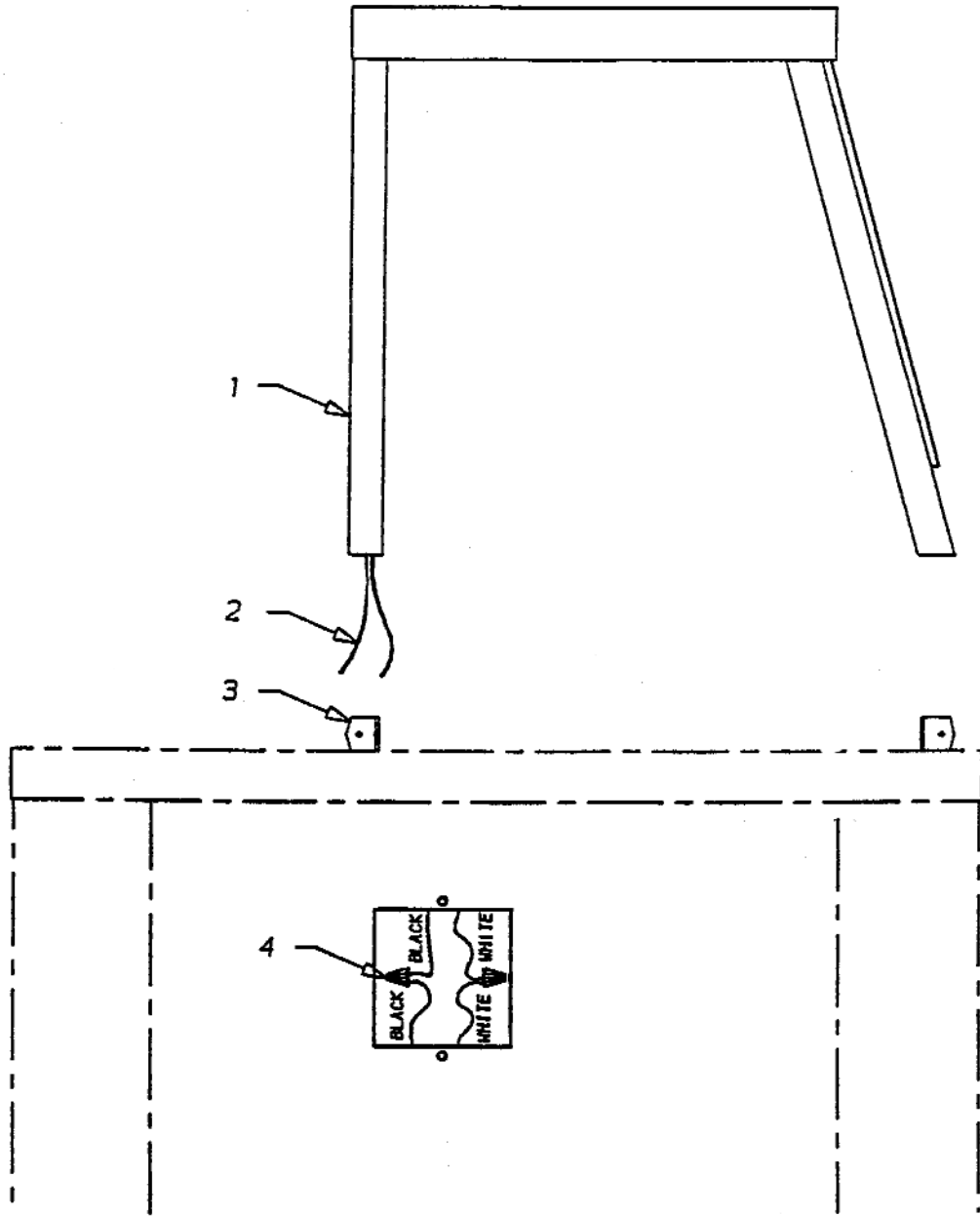


PROTECTOR GUARD ASSEMBLY INSTRUCTIONS

CAUTION: Disconnect Electrical Power to Table.

1. Set protector guard (item 1) onto table top. If equipped with heat or lights, feed electrical wires (item 2) through hole in table top.
2. Using screws provided, attach protector guard to brackets (item 3).
3. Remove the cover plate located on the end of the unit in the center of the panel.
4. Using wire nuts provided (item 4), wire nut the two black leads together. Next, wire nut the two white wires together. For added protection, tape the wire nuts with hi-temperature glass braid tape and reinstall cover plate.

CAFETERIA PROTECTOR GUARD MOUNTING ASSEMBLY

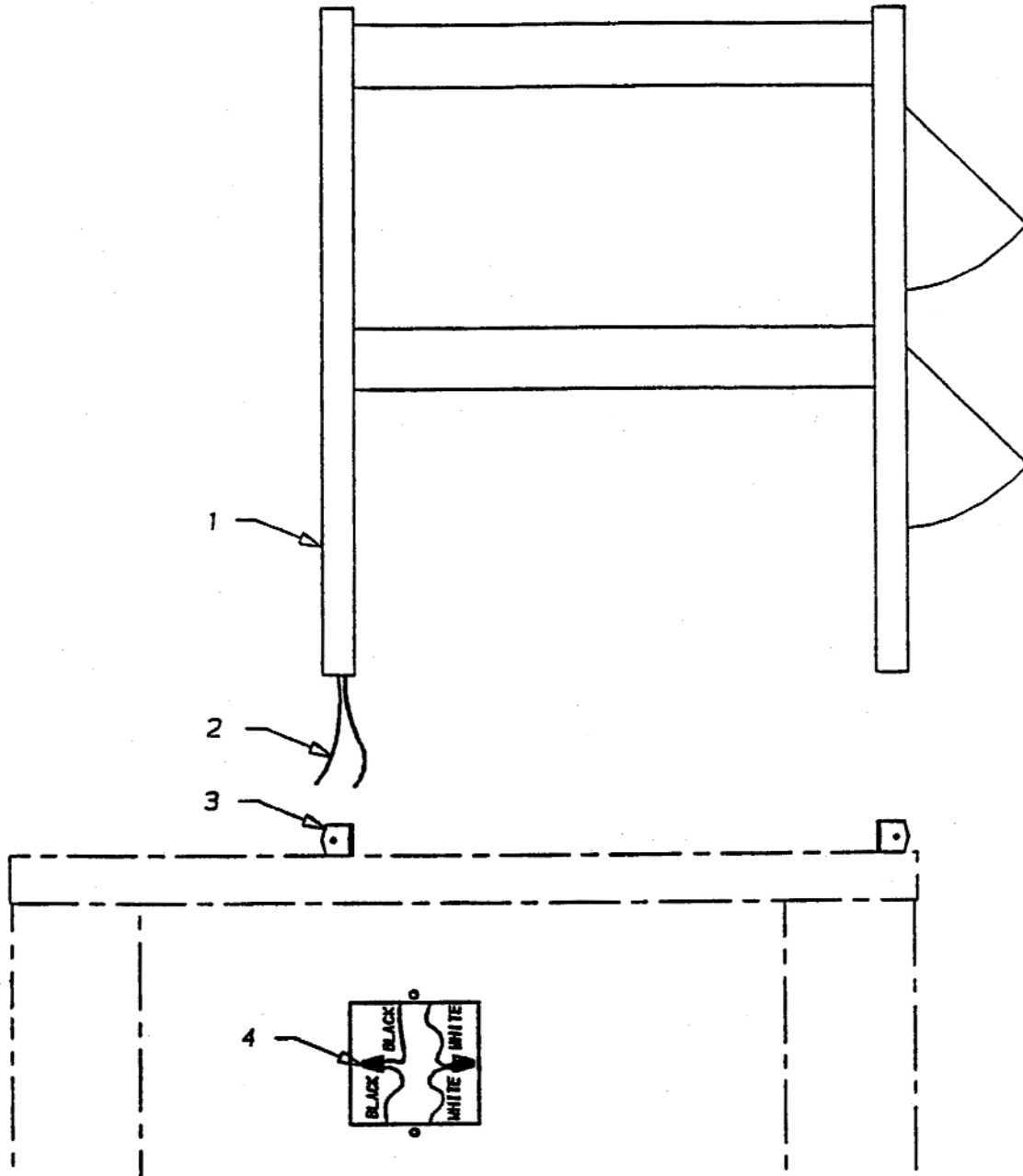


PROTECTOR GUARD ASSEMBLY INSTRUCTIONS

CAUTION: Disconnect Electrical Power to Table.

1. Set protector guard (item 1) onto table top. If equipped with heat or lights, feed electrical wires (item 2) through hole in table top.
2. Using screws provided, attach protector guard to brackets (item 3).
3. Remove the cover plate located on the end of the unit in the center of the panel.
4. Using wire nuts provided (item 4), wire nut the two black leads together. Next, wire nut the two white wires together. For added protection, tape the wire nuts with hi-temperature glass braid tape and reinstall cover plate.

CAFETERIA DOUBLE DISPLAY MOUNTING ASSEMBLY



PROTECTOR GUARD ASSEMBLY INSTRUCTIONS

CAUTION: Disconnect Electrical Power to Table.

1. Set protector guard (item 1) onto table top. If equipped with heat or lights, feed electrical wires (item 2) through hole in table top.
2. Using screws provided, attach protector guard to brackets (item 3).
3. Remove the cover plate located on the end of the unit in the center of the panel.
4. Using wire nuts provided (item 4), wire nut the two black leads together. Next, wire nut the two white wires together. For added protection, tape the wire nuts with hi-temperature glass braid tape and reinstall cover plate.

OPERATION OF COLD ICE PAN FOOD TABLE (CI)

- A. Make sure that the well is empty and clean and that the drain valve is closed.

NOTE: Crushed ice should be used as it will pack around the food pans better and give more efficient cooling than cubed ice.

- B. Place about two inches of ice on the bottom of the well. Never place food directly into the well. Using four-inch deep food pans place pans of pre-refrigerated food into the well on top of the ice leaving about 2 inches between pans. Pack ice completely around food pans filling well to the top with ice.
- C. Food pans should be kept covered when possible. Food should be stirred often and pans of food should be changed if the temperature reaches 40° Fahrenheit or above.
- D. As the ice melts, new ice should be added around and under the food pans.
- E. Excess water should be drained off by placing a bucket under the drain pipe and opening the drain valve. Be sure to close the drain valve before removing the bucket.
- F. Always drain or remove water from the well after each meal. Place a bucket under the drain pipe and open drain valve. When bucket is full, close drain valve and empty bucket. Repeat this until the well is drained.

OPERATION OF MECHANICALLY REFRIGERATED COLD FOOD TABLE (CM)

- A. Make sure that the well is empty and clean and that the drain valve is closed.

NOTE: Crushed ice should be used as it will pack around the food pans better and give more efficient cooling than cubed ice.

- B. Turn the master switch in the control panel "ON" to start mechanical refrigeration system. Place about 2 inches of crushed ice on the bottom of the well then cover the well and allow unit to pre-cool for approximately 30 minutes.
- C. Uncover well and add additional crushed ice until at least 2 inches of ice covers the bottom of the well. Never place food directly into the well. Using four-inch deep food pans, place pans of pre-refrigerated food into the well on top of the ice making sure that pans fit tightly together. Do NOT leave any open space between food pans. Cover all open spaces or fill with crushed ice.
- D. Food pans should be kept covered when possible. Food should be stirred often and pans of food should be changed if the temperature reaches 40° Fahrenheit or above.
- E. With the mechanically refrigerated system operating less ice will be required, but as the ice melts new ice should be added around and under the food pans.
- F. Excess water should be drained off by placing a bucket under the drain pipe and opening the drain valve. Be sure to close the drain valve before removing the bucket.
- G. Always drain or remove water from the well after each meal. Place a bucket under the drain pipe and open drain valve. When bucket is full, close drain valve and empty bucket. Repeat this until the well is drained.

MAINTENANCE

Piper equipment is constructed with the best quality materials and is designed to provide you with durable service when treated with ordinary care. To obtain the best performance from your equipment, it should be cleaned daily and maintained in good condition.

CAUTION: Prior to cleaning or maintenance, turn all switches "OFF" and disconnect the power cord from the receptacle.

WARNING: Do not use any chlorinated or highly caustic cleaners, acids, ammonia or other corrosive cleaners. These may cause corrosion and/or damage to the stain less steel well. Use only cleaners approved for stainless steel. Do not allow water to stand in wells for long periods of time. Water must be removed from well and the well cleaned after every serving period.

GENERAL CLEANING

CAUTION: Use only cleaning agents approved for aluminum and stainless steel. Do NOT use chlorinated cleaners.

- A. Clean the well using a soft cloth or sponge with a mild detergent. Rinse completely with warm water and then dry.
- B. A plastic scouring pad and a mild detergent may be used to remove any hardened food or scale deposits.

NOTICE: Do NOT use steel wool to clean wells.

- C. Use a soft cloth or sponge with a mild detergent to clean all exposed surfaces of the table. Rinse completely with warm water and dry.

CAUTION: The louvered panels may have sharp edges and could cause injury. Do NOT run fingers along edges and use gloves when cleaning.

- D. Wipe the cord and plug using a cloth with detergent and warm water. Do NOT use excessive water.

CLEANING ACRYLIC PROTECTOR GUARDS

WARNING: Do NOT use window cleaning sprays, kitchen scouring compounds or solvents such as acetone, gasoline, benzene or lacquer thinner.

- A. Use a soft cloth and mild detergent with plenty of lukewarm water to clean protector guards.
- B. Rinse thoroughly with lots of water and dry by blotting with a damp cloth or chamois.
- C. Protect and maintain the surface gloss by occasionally waxing with a good paste wax. Apply a thin even coat with a soft clean cloth and polish with cotton flannel. Wipe with a damp cloth to help eliminate electrostatic charges.
- D. Fine scratches can be removed by hand polishing. Apply a compound such as Simonize cleaner to a soft flannel pad and rub. When the scratches have disappeared, remove all residue and polish.

CLEANING CONDENSING UNIT (CM)

It is very important for proper performance and condenser longevity to keep the condenser clean.

EVERY MONTH:

- A. **DANGER:** Disconnect electrical power to the cooler by turning master switch to the "OFF" position and unplugging cooler from electrical receptacle.
- B. Remove the louvered panels from the condensing unit compartment.
- C. Clean condenser by using a brush and vacuum cleaner to remove all dust and dirt. Thoroughly clean condenser. Wipe all surfaces of the condensing unit using a soft cloth or sponge with a mild detergent. Rinse completely with warm water and then dry.

CAUTION: The fins on the condensing unit coils are sharp and may cause injury. Use care when cleaning, gloves should be worn.

WARNING: Refrigerant is under high pressure. Do NOT bend, kink or damage any tubing or condensing unit coil.

LUBRICATION (CM)

CAUTION: Make sure that master switch is "OFF" and disconnect the power cord from the receptacle.

- A. Remove the louvered panels from the condensing unit compartment. Grasp the louvered panel at the bottom and pull straight out from the table to release from the magnetic catch.
- B. Remove the rubber plugs from oil ports on the front and back of the condenser fan motor. Apply a couple of drops of 10 weight machine oil to each oil port, do NOT over oil. Reinstall rubber plugs into oil ports.

TEMPERATURE ADJUSTMENT (CM)

The temperature is adjusted by means of a low-pressure control device connected to the suction line of the refrigeration system. The control is located in the condensing unit compartment and is mounted to the false bottom of the sell near the rear of the condensing unit.

A thin straight blade screwdriver is required to make any adjustments.

- A. Remove the louvered panels from the condensing unit compartment. Grasp the louvered panel at the bottom and pull straight out from the table to release from the magnetic catch.
- B. There are two adjusting screws located on the top of the control. The screw nearest to the side of the control adjusts the differential (low temperature) and is pre-set at 18# and should only be adjusted by a qualified service technician. The screw towards the center of the controls adjusts the cut-in pressure (high temperature) and is pre-set at 23#. This results in the system starting at a temperature of approximately 38° and shutting off at a temperature of 34°.

TEMPERATURE ADJUSTMENT (CM) CONT.

- C. To raise the operating temperature turn the cut-in screw counterclockwise. To lower the operating temperature turn the cut-in screw clockwise. Do NOT adjust more than $\frac{1}{4}$ turn at a time, then allow unit to operate for one hour before making further adjustments. Never turn adjusting screws more than one full turn.

SERVICE

WARNING: Adjustments and service work should be performed only by a qualified service technician. For service, contact your Authorized Piper Products Inc. Parts and Service Dealer. For a complete listing of these call or write Piper Products, Inc. for the name of the nearest dealer. Piper Products does not recommend that service work be performed by anyone other than a qualified service technician.

If service or parts are required, contact the nearest Authorized Parts and Service Distributor. You will need to have available the complete model number, serial number, voltage and wattage, (this information is shown on the name plate attached to the control side of the unit), date of installation or purchase and a description of the problem. The Distributor must have this information in order to provide proper service or parts for your equipment.

Never use chlorinated cleaners or cleaners/sanitation agents containing quaternary salts on the interior or exterior of the cooler. These cleaners can attack the stainless steel and cause rusting or pitting. Never use abrasive scouring pads.

NOTE: Be especially careful with plastic parts.

TROUBLESHOOTING GUIDE

If problems are not found by the following checks, then you should contact your Authorized Parts and Service Dealer for service. They have the necessary parts and training to repair your unit quickly and efficiently

DANGER: Disconnect all power to unit before servicing.

Problem: Pilot light is off and condensing unit does not run.

1. Has unit been connected to proper electrical receptacles?
2. Is electric turned on at the main? Check the circuit breaker and fuse.
3. Is switch in control panel turned on?

Problem: Pilot is on but condensing unit does not run.

1. Is pressure control set properly?

Problem: Unit does not cool to proper temperature.

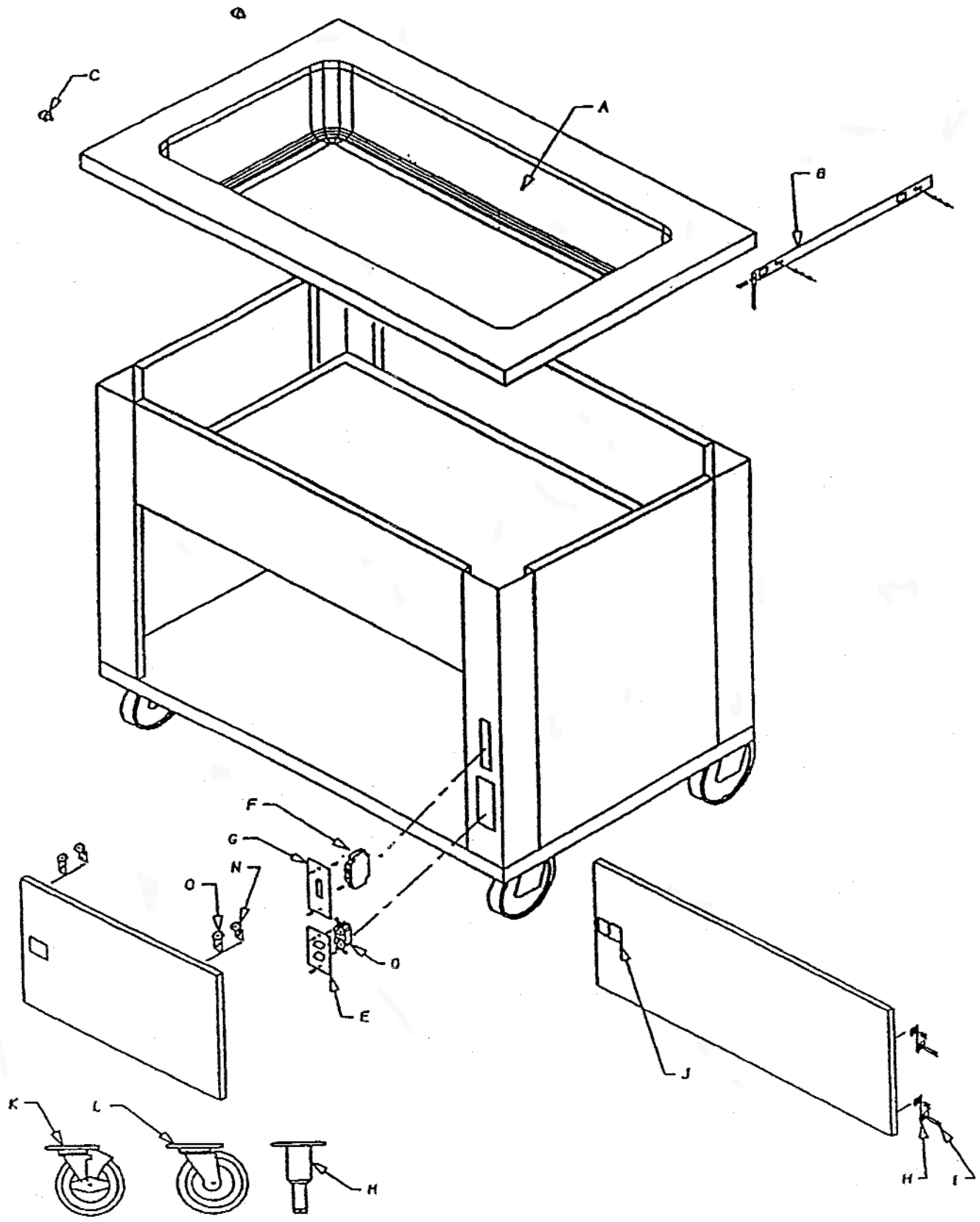
1. Is pressure control set to proper setting?
2. Has unit been allowed to pre-cool for at least 30 minutes?
3. Are there heating or air conditioning ducts, make-up air ducts or fans located near or over unit causing cool drafts?
4. Is unit connected to proper voltage? If so, is there a "low" voltage condition?

Problem: Unit does not maintain food temperature.

1. Is pressure control set to proper setting?
2. Has unit been allowed to pre-cool for at least 30 minutes?
3. Were pans of food placed into unit at or below 38° Fahrenheit?
4. Were food pans kept covered? Has food been kept in the unit more than two hours?
5. Are there heating or air conditioning ducts, make-up air ducts or fans located near or over unit causing cool drafts?
6. Is unit connected to proper voltage? If so, is there a "low" voltage condition?

Problem: Protector guard lights do not work.

1. Has switch located at the end of the protector guard under the canopy been turned on?
2. Is the base unit turned on and the pilot light on?
3. Has unit been connected to proper electrical receptacle?
4. Is electric turned on at the main? Check the circuit breaker and fuse.
5. Has the protector guard been installed and wired according to the installation instructions on earlier pages of this manual?
6. Are the light bulbs burned out?

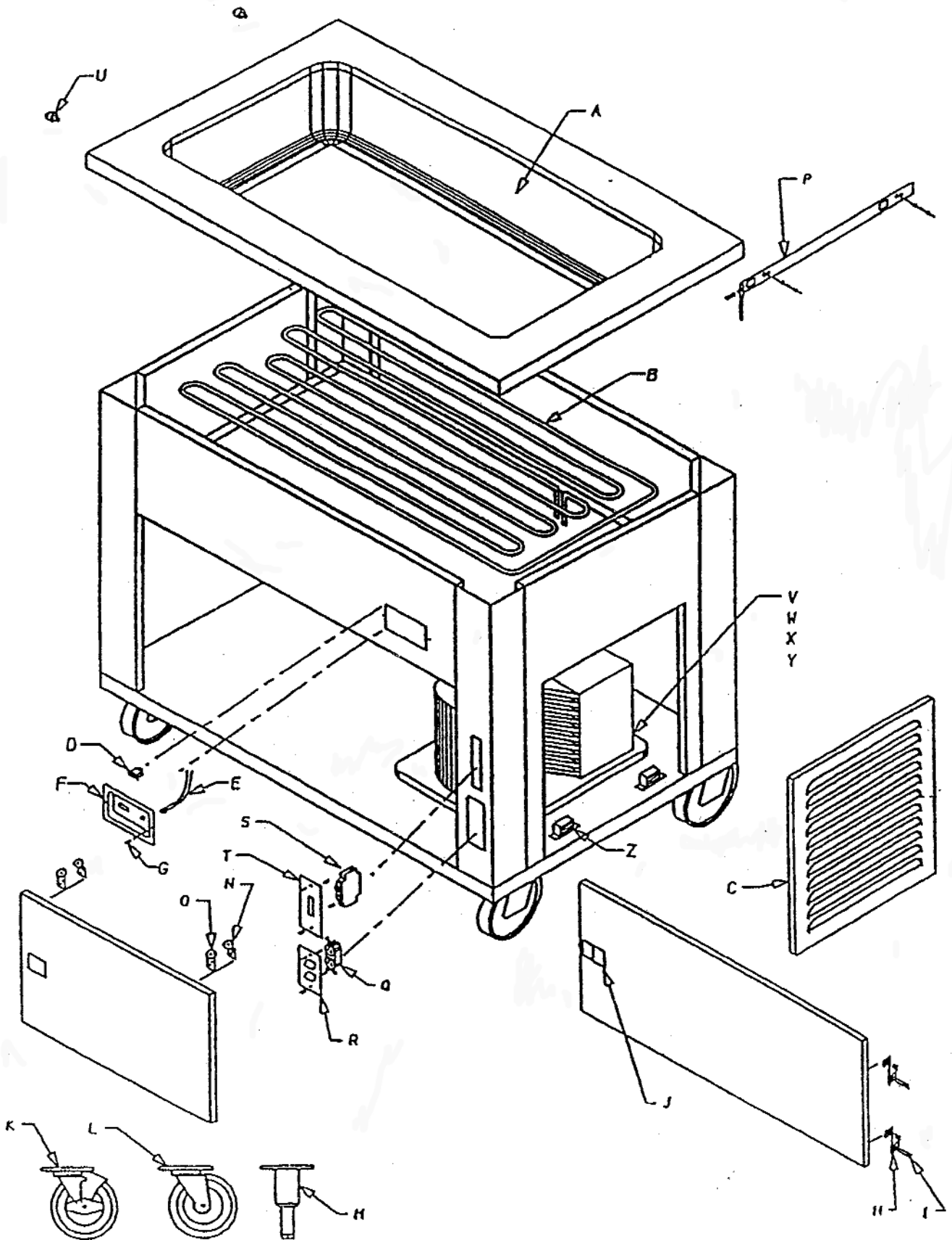


PARTS LIST ELITE COLD ICE PAN TABLES

DETAIL	DESCRIPTION	PART NUMBER
A	Cold Pan with Drain Less Top	Consult Factory
B	Coil	Consult Factory
*	Coil Tape	0337610
C	Louver Panel	0829700
D	On/Off Switch	0331350
E	Pilot Light	0189400
F	Control Plate	0832050
G	Screw	0291225
H	Right Hand Hinge Assembly	0810944
	Left Hand Hinge Assembly	0810945
I	Screw	0271032
J	Door Pull	0111676
K	Caster With Brake	0054500
L	Caster Without Brake	0054450
M	Stainless Steel Foot	1501109
N	Rear Door Roller	0271005
O	Front Door Roller	0271006
P	Interlock Assembly	0811074
Q	Duplex Receptacle	0254460
R	Receptacle Plate	0241450
S	Breaker	0031224
T	Breaker Plate	0831045
U	Interlock Stud	0270834
Z	Louver Magnet	0056950

*NOT SHOWN

ELITE COLD ICE PAN TABLE



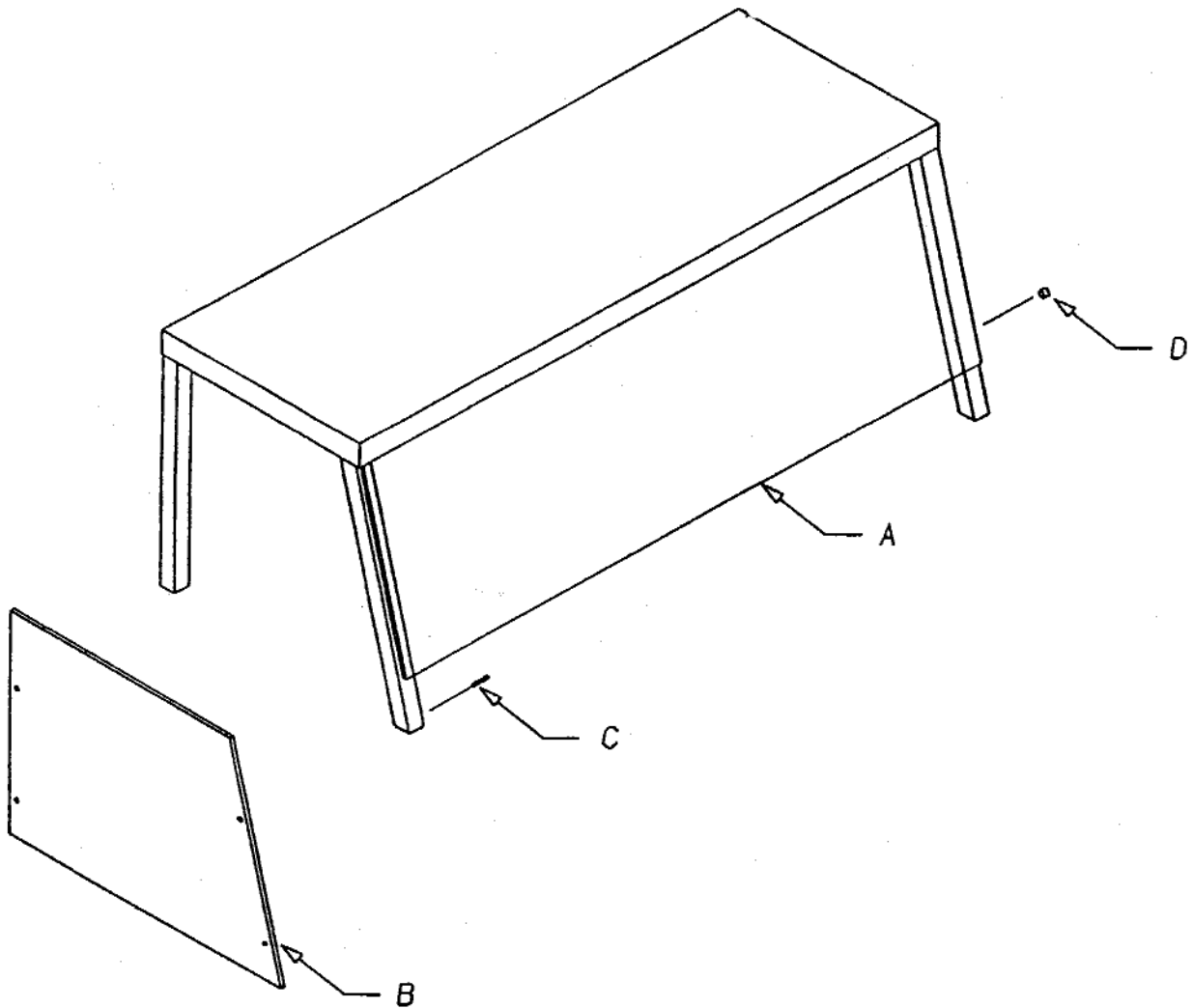
PARTS LIST ELITE COLD MECHANICALLY REFRIGERATED TABLE

DETAIL	DESCRIPTION	PART NUMBER
A	Cold Pan w/Drain Less Top	Consult Factory
B	Coil	Consult Factory
*	Coil Tape	0337610
C	Louver Panel	0829700
D	On/Off Switch	0331350
E	Pilot Light	0189400
F	Control Plate	0832050
G	Screw	0291225
H	Right Hand Hinge Assembly	0810944
	Left Hand Hinge Assembly	0810945
I	Screw	0271032
J	Door Pull	0111676
K	Caster With Brake	0054500
L	Caster Without Brake	0054450
M	Stainless Steel Foot	1501109
N	Rear Door Roller	0271005
O	Front Door Roller	0271006
P	Interlock Assembly	0811074
Q	Duplex Receptacle	0254460
R	Receptacle Plate	0241450
S	Breaker	0031224
T	Breaker Plate	0831045
U	Interlock Stud	0270834
V	Compressor Complete	0112900
W*	Accumulator	0112083
X*	Thermostat Control	0112037
Y*	Line Drier	0112143
Z	Louver Magnet	0056950
*	Capillary Tube	0112144

*NOT SHOWN

ELITE COLD MECHANICALLY REFRIGERATED TABLE

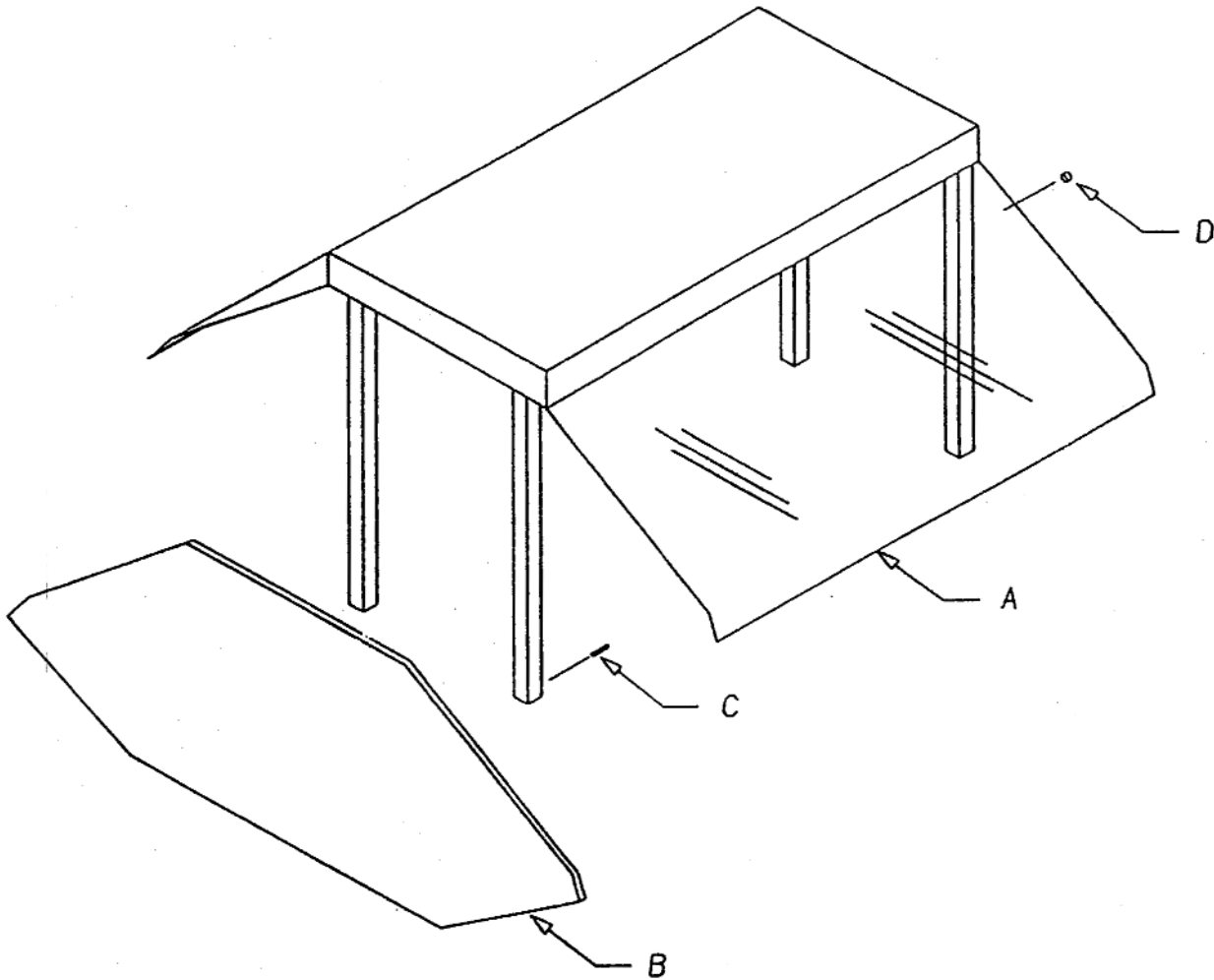
PARTS LIST CAFETERIA PROTECTOR GUARD



DET	DESCRIPTION	PART NO.
A	GLASS	SEE CHART
B	END GLASS	0000719
C	SCREW	0279060
D	CAP NUT	0220725

DET	32" UNIT	46" UNIT	60" UNIT	74" UNIT	88" UNIT
A	0000701	0000702	0000703	0000704	0000705

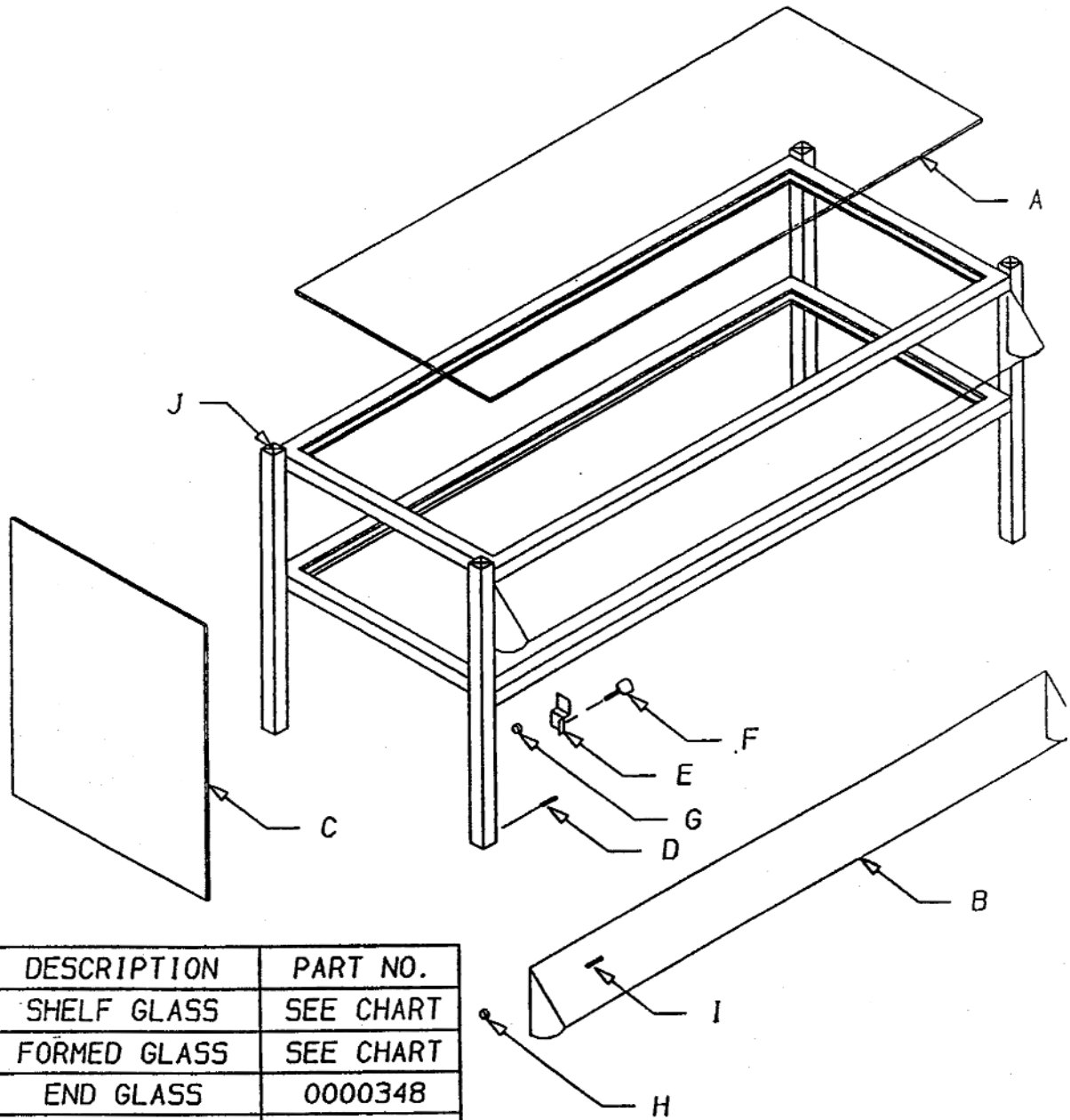
PARTS LIST BUFFET PROTECTOR GUARD



DET	DESCRIPTION	PART NO.
A	GLASS	SEE CHART
B	END GLASS	0000970
C	SCREW	0279060
D	CAP NUT	0220725

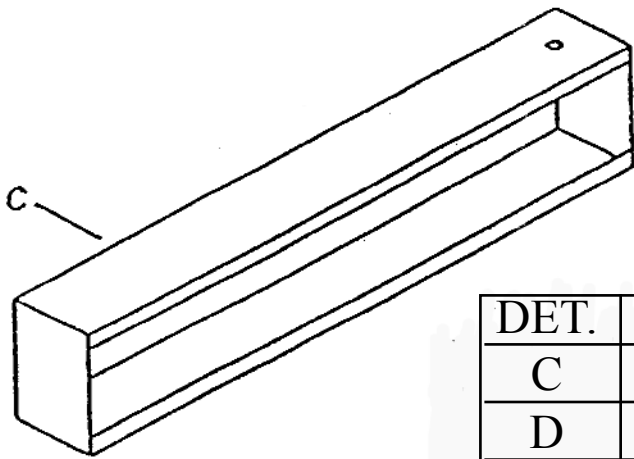
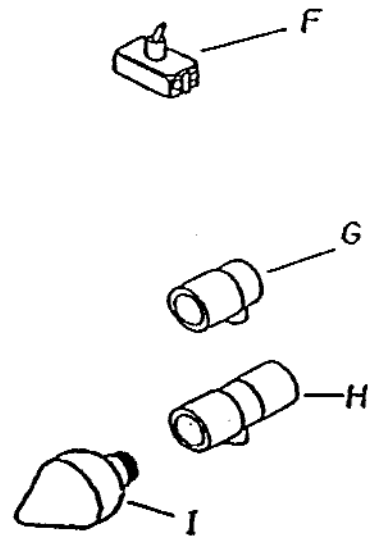
DET	32" UNIT	46" UNIT	60" UNIT	74" UNIT	88" UNIT
A	0000965	0000966	0000967	0000968	0000969

PARTS LIST DOUBLE DISPLAY PROTECTOR GUARD



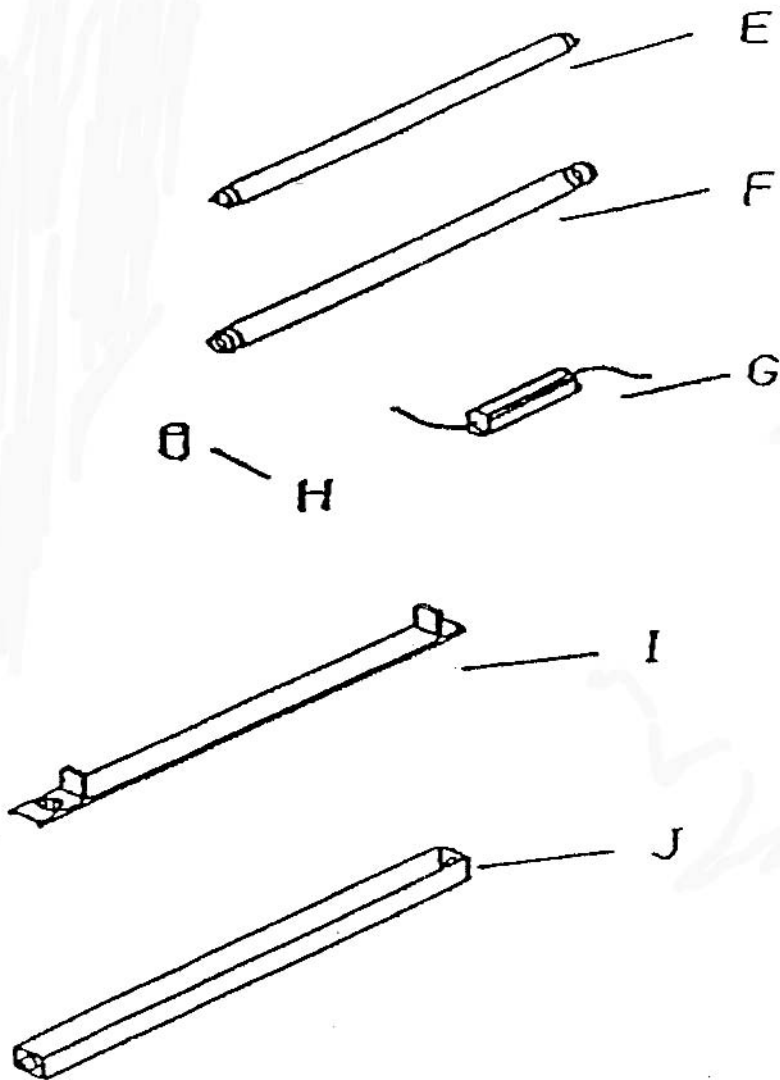
DET	DESCRIPTION	PART NO.
A	SHELF GLASS	SEE CHART
B	FORMED GLASS	SEE CHART
C	END GLASS	0000348
D	SCREW	0279060
E	GLASS CLIP	0804452
F	SCREW	0280525
G	RUBBER STOP	0033975
H	BUSHING	0385505
I	SCREW	0281225
J	LEG CAP	0042705

DET	32" UNIT	46" UNIT	60" UNIT	74" UNIT	88" UNIT
A	0000756	0000757	0000758	0000759	0000760
B	0000955	0000956	0000957	0000958	0000959



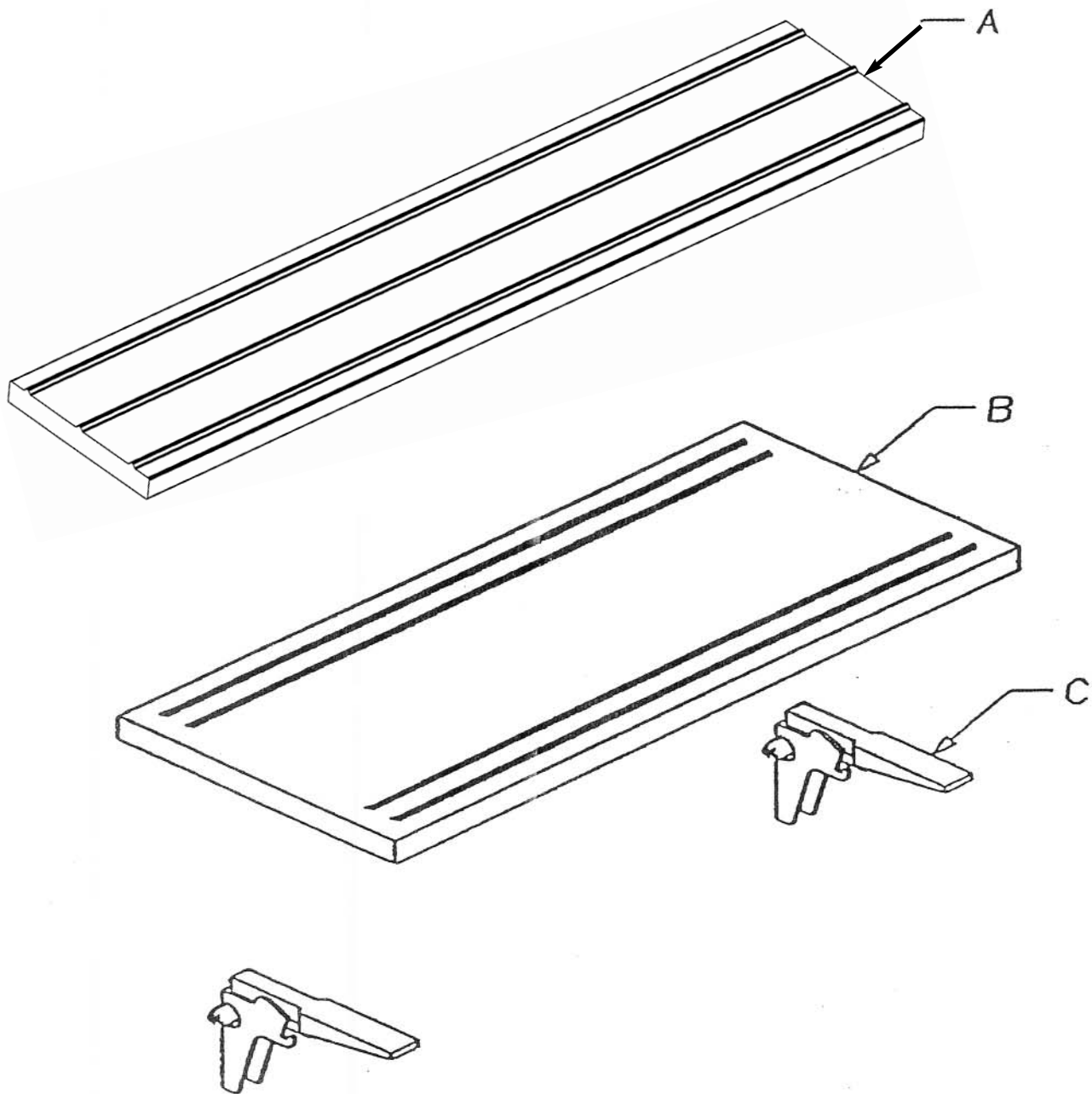
DET.	DESCRIPTION	PART NO.
C	LIGHT UNIT	SEE CHART
D	GUARD	SEE CHART
F	SWITCH	0810726
G	SINGLE SOCKET	0801685
H	DOUBLE SOCKET	0801686
I	BULB	0183820

DET.	24" UNIT	36" UNIT	48" UNIT	66" UNIT
C	0373124	0373136	0373148	0373166



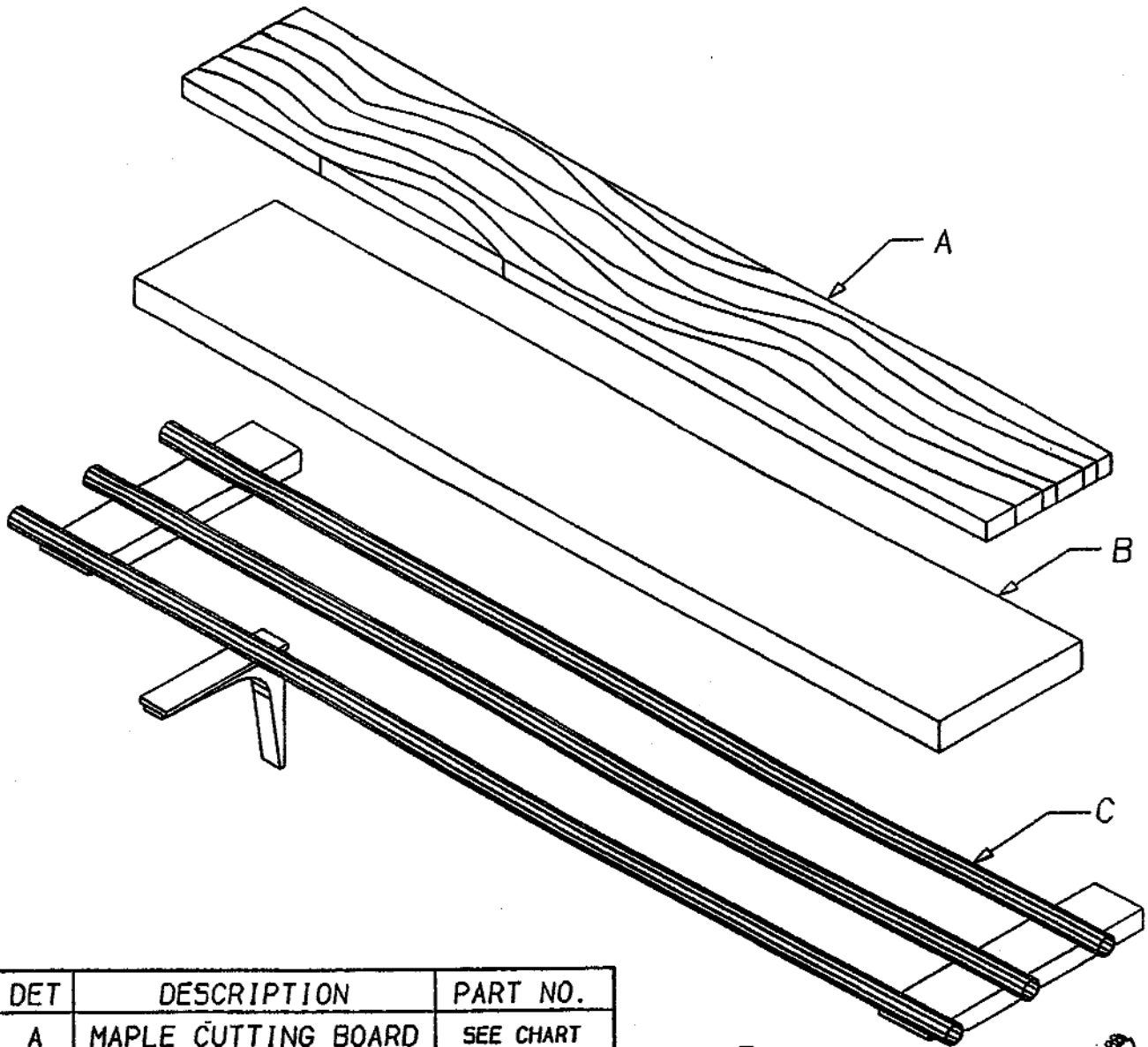
DET	DESCRIPTION	PART NO.
E	FLUORESCENT BULB	0184400
F	BULB SHIELD	0303350
G	BALLAST	0013800
H	STARTER	0321525
I	LIGHT FIXTURE	0505800
J	LIGHT BASE	0506590

- 1 Assembly on 32" & 46" units
 2 Assembly on 60" units
 3 Assembly on 74" & 88" units

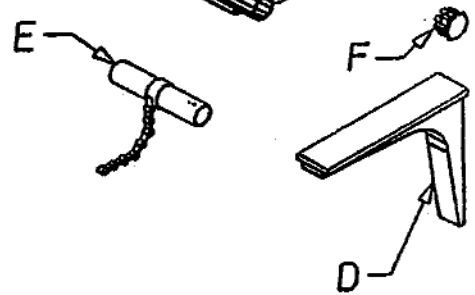


DET	DESCRIPTION	PART NO.
A	RIBBED TRAY SLIDE	SEE CHART
B	4-RIB TRAY SLIDE	SEE CHART
C	DROP HINGE	0817060

DET	30" UNIT	32" UNIT	46" UNIT	60" UNIT	74" UNIT	88" UNIT
A	0801684	0801661	0801662	0801663	0801664	0801665
B	0801666	0801667	0801668	0801669	0801670	0801671

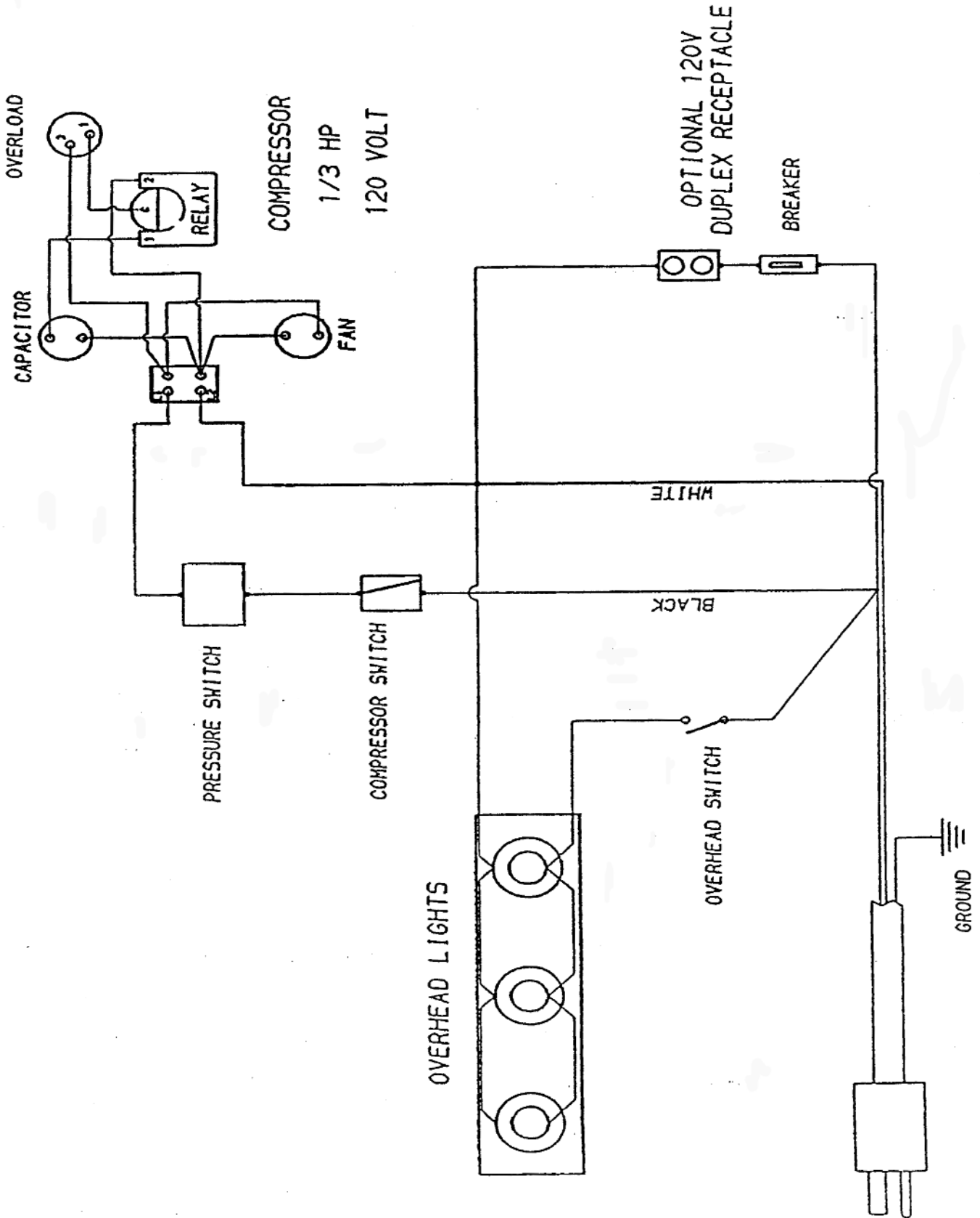


DET	DESCRIPTION	PART NO.
A	MAPLE CUTTING BOARD	SEE CHART
B	5/5 CUTTING BOARD	SEE CHART
C	3-BAR TRAY SLIDE	SEE CHART
D	FOLDING BRACKET	0028800
E	CONNECTING PIN	0725710
F	END CAP	0042250

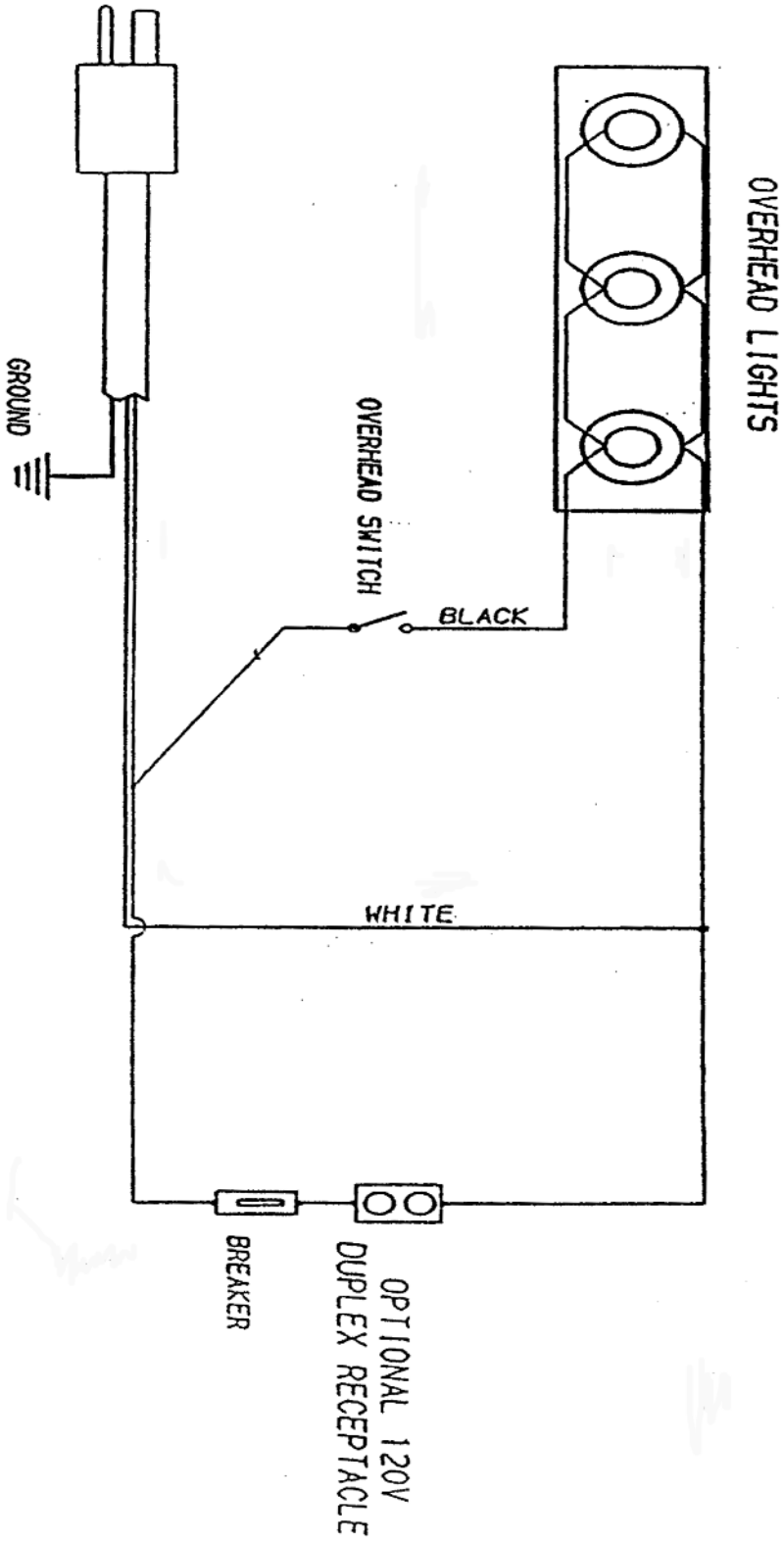


DET	30" UNIT	32" UNIT	46" UNIT	60" UNIT	74" UNIT	88" UNIT
A	----	0023326	0023327	0023328	0023329	0023330
B	0801672	0801673	0801674	0801675	0801676	0801677
C	0801678	0801679	0801680	0801681	0801682	0801683

COLD MECHANICAL WIRING DIAGRAM



COLD ICE PAN WIRING DIAGRAM



PIPER PRODUCTS, INC LIMITED WARRANTY

All Piper products are warranted to be free of defects in material and workmanship for a period of 12 months from date of purchase on all parts and labor.

Piper Products, Inc. warrants to the original purchaser that its equipment will be free from defects in the materials and/or parts for a period of 12 months from date of shipment from the factory.

The purchaser is responsible for having equipment properly installed, operated under normal conditions with proper supervision and to perform periodic preventative maintenance. Equipment failure caused by inadequate water quality, improper cleaning, harsh chemicals, or acids are not covered under warranty.

The manufacturer's obligation under this warranty shall be the replacement or repair of defective parts within the warranty period. Excessive labor (more than 1/2 hour) required to access Piper equipment built into cabinets, tables or structures by others, is NOT covered under labor warranty. Example: Piper multiple- or single-well food wells. All labor shall be performed during regular working hours. Overtime premium will be charged to buyer. After thorough examination, the decision of the Piper Products Service Department shall be final.

Any defective parts to be repaired or replaced must be returned to Piper Products, Inc., 300 South 84th Avenue, Wausau, WI 54401, transportation charges prepaid, and they must be properly packed and tagged. The serial and model number of the equipment and date of original installation of such equipment must be given. However, after one year we will not assume any responsibility for any expenses (including labor) incurred in the field incidental to the repair or replacement of equipment covered by this warranty. Our obligation hereunder to repair or replace a defective part is the exclusive remedy for breach of this warranty; and we will not be liable for any other damages or claims, including consequential damages.

If, upon inspection by Piper Products, Inc. or its Authorized Service Agency, it is determined that this equipment has not been properly installed or has not been used in an appropriate manner, has been modified, has not been properly maintained, the warranty will be void. Also, if the nameplate or other identifying marks have been removed, defaced or changed or the unit has been repaired or altered by persons other than expressly approved by Piper Products, Inc., the warranty will be void. If the equipment has been subjected to misuse or misapplication, neglect, abuse, accident, damage during transit or delivery, fire, flood, riot or acts of God, then this warranty shall also be void. When any situation occurs which voids the warranty the manufacturer shall not be liable for any damage to any person or any property which may result from the use of the equipment thereafter.

Warranty is limited to Piper manufactured products only and does not apply to other equipment which may be connected to or installed within.

No representative, dealer, distributor or any other person is authorized or permitted to make any other warranty or obligate Piper Products, Inc. to any liability not strictly in accordance with this policy.

This warranty is in lieu of all other warranties expressed or implied, including any warranty of merchantability, and fitness for a particular purpose. Piper Products does hereby exclude and shall not be liable to purchaser for any consequential or incidental damages including but not limited to damages to property, damages for loss of use, loss of time, loss of profits or income, resulting from any breach of warranty.