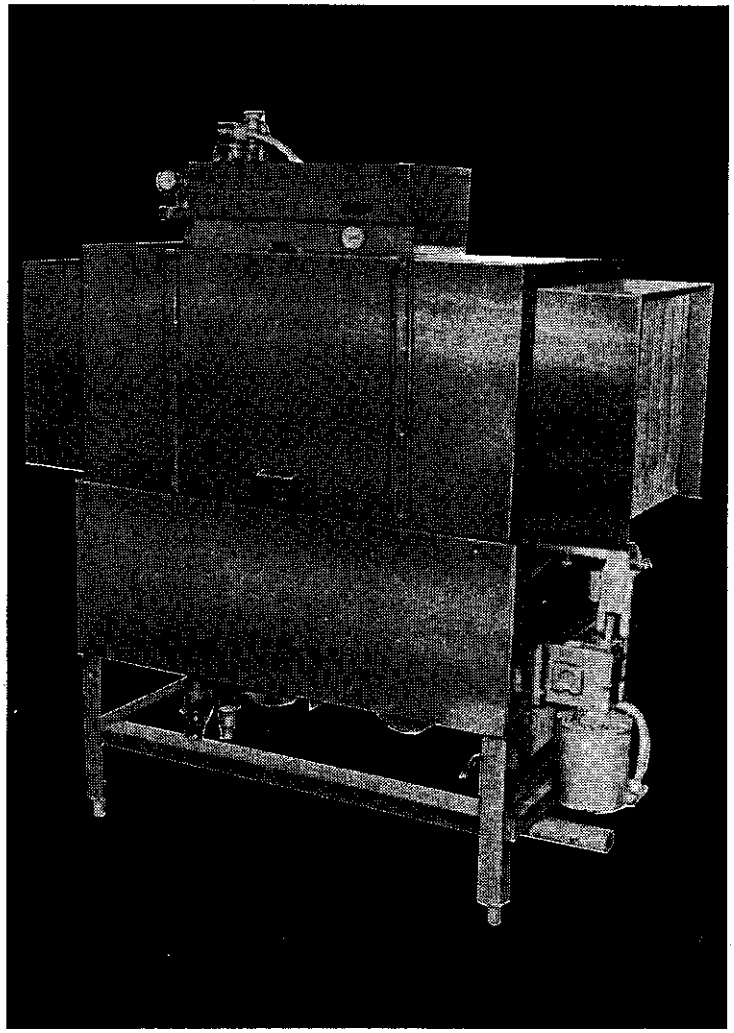
CMA
DISHMACHINES

MODEL CMA-44
SERVICE & PARTS MANUAL



CMA DISHMACHINES
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GARDEN GROVE, CALIFORNIA 92841

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CMA DISHMACHINES

SPECIFICATIONS

	CMA-44 L.T.	CMA-44 H.T.
WATER CONSUMPTION	.8 gallons per rack 193 gallons per hour	.94 gallons per rack 193 gallons per hour
OPERATING CYCLE		
Pre-wash time	15 seconds	17.5 seconds
Power wash time	15 seconds	17.5 seconds
Rinse time	15 seconds	17.5 seconds
Total cycle	45 seconds	52.5 seconds
CONVEYOR SPEED	6.75 ft./min.	5.7 ft./min.
OPERATING CAPACITY	**242** racks per hour (NSF rated)	**205** racks per hour (NSF rated)
HOLDING TANK CAPACITY	16 gallons	
PUMP CAPACITY		
Pre-wash/wash/rinse	38 gallons per minute each pump	
WATER REQUIREMENTS		
Inlet temp	Low Temp 140 degrees Fahrenheit/ High Temp 180 degrees Fahrenheit	
Water inlet IPS	3/4"	
Drain size IPS	2"	
Flow pressure	20 psi	
WASH PUMP MOTORS (2)	1 Horsepower @ 208/230, 3 Phase	
CONVEYOR MOTOR (1)	1/3 Horsepower @ 208/230, 3 Phase	
HEATERS		
Heater (1)	10 Kw, 3 Phase	
DIMENSIONS		
Depth	25"	
Width	44"	
Height	54", 72" extended	
Standard table height	32-1/2" adjust to 34"	
Maximum clearance for dishes	19"	
Standard racks	19-3/4" x 19-3/4"	
SHIPPING WEIGHT		
Approximate Basic Model	**750 pounds**	
ELECTRICAL RATING		
Volts	208/230	
Phase	3	
Load Amps	31.6	

Requires clean 40 amp circuit

Specifications subject to change without notice

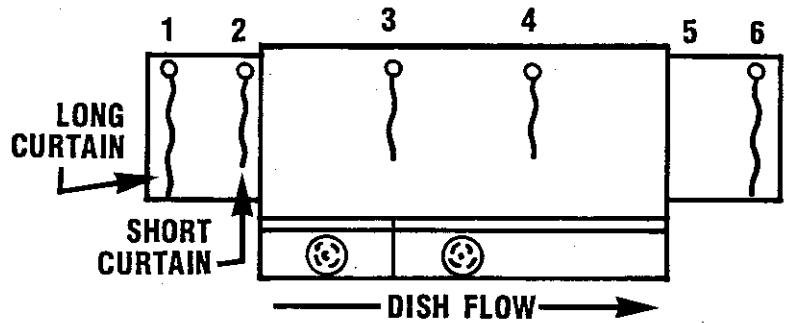
PREPARATION FOR INSTALLATION

When you receive your new CMA-44, complete the assembly by installing the curtain rods and two buffer sections which are shipped inside the machine. After the shipping crate has been removed from the machine, remove the left and right stainless steel buffer sections and bolt them in place with the nuts and bolts provided. The buffer with the extra curtain clamps mounts onto the dirty end of the machine.

All of the spray arms should be inserted and locked in place over the wash tank compartments. Make sure that the end caps are in place.

There are a total of five curtains used in the CMA-44; two are long and three short. Two of the long curtains have shorter rods than any of the other curtains. The short rods hold the long curtains at the entrance and exit of the machine.

If the dish flow is from left to right, the proper sequence for the placement of the curtains would be long curtain, short rod, in the first station; short curtain, short rod, in the second station; short curtain, long rod, third station; short curtain, long rod, fourth station; short rod, long curtain, sixth station. The only curtain change to reverse the flow of dishes is that the short curtain #2 changed to #5. The sketch below lists the stations 1 through 6. In this case, it represents a flow to left to right. Reverse the sequence for right to left dishmachine.



DISHMACHINE FRONT VIEW

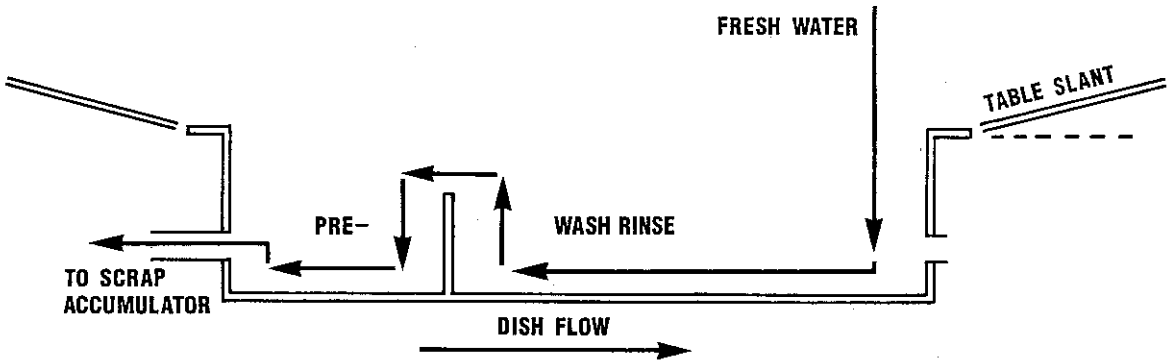
The CMA-44 is designed to give maximum cleaning in 44 inches. It represents the cleaning power of machines twice its length. The curtains incorporated in the machine minimize transfer from tank to tank during the wash and sanitizing procedures.

Energy costs for running the CMA-44 have been greatly reduced by the introduction of stage washing. This design allows the heavy food soil to be removed in the first station which provides a relatively clean dish before it reaches the wash stage in the center tank.

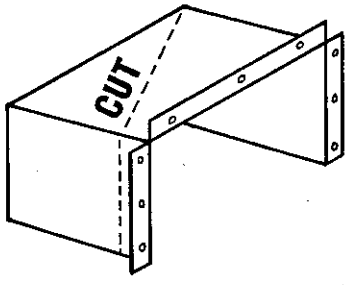
INSTALLATION NOTES

1. Tables must slant into machine (for 28" of Table we recommend a drop of at least 3/4" in table height).
2. Tray rail is not to be moved up or down. Any change will alter the position of the Tilt Switch in relation to the dish rack or the dish rack in relation to the conveyor dogs.
3. Use wide angle 90 degree plumbing for scrap trap (to avoid debris from blocking the scrap trap drain). This could result in flooding the machine.

The scrap accumulator is plumbed to the two inch exit on the entrance side (or dirty dish side) of the machine. The machine is designed to deliver .8 L.T./.94 H.T. gallons of fresh rinse water which carries from the rinse and power wash tank, into the pre-wash tank and then exits out into the scrap accumulator. SEE DIAGRAM.



4. Observed rotation of the Conveyor Cam.
   - If rotation is clockwise as you are looking at the machine from the front, that is correct.
   - If it is counter clockwise, the movement of the rocker arm will unscrew the cam bearing.
   - To change rotation switch any two wires at motor.
   - See (below right) for conveyor speed cam locations.
5. Water pump motors should be wired as such:
   **Caution – motors are 3 Ph. Check rotation. Motors must turn clockwise looking at shaft from back of motor. Remove dust cap on back of motor to check rotation of motor shaft.*
6. Incoming wire for the CMA-44 should be at least an 8 gauge wire for L1, L2 and L3. Connect highest voltage wire (stinger) to L-2.
7. If tables enter conveyor machine at a 90 degree angle and buffer or splash shield cannot be used, modify shield by cutting on a diagonal. It will provide some protection from splash.



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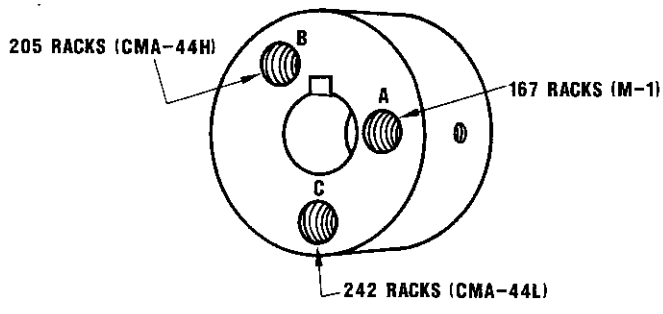
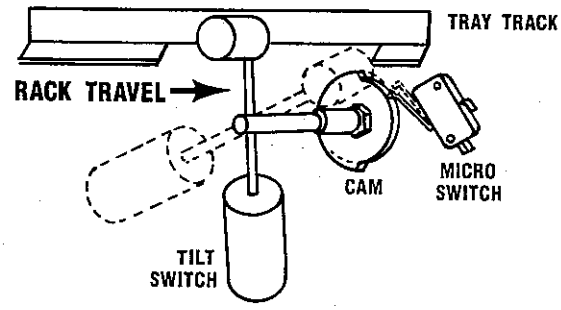


INSTALLATION NOTES

8. Make sure that all racks used will press lever switch down – far enough to activate. If they DO NOT, adjust tray track so that the racks will.
9. No Quick Drains should be installed on tables before or after machine. They must be plumbed back into machines or welded over and capped off.
10. The diagram below should be viewed as though looking at from the inside of the machine. The diagram indicates proper tilt switch adjustment. Adjust cam to activate micro switch, when trip switch is level with tray track.

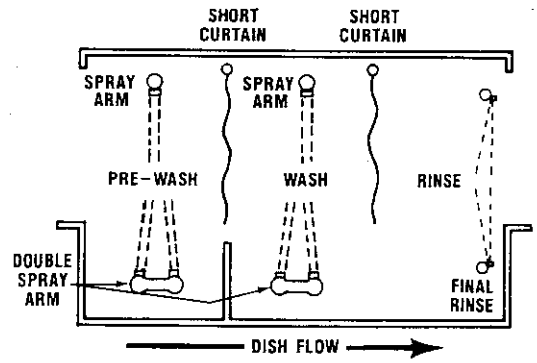
    NOTE: If not adjusted properly, Final Rinse will turn off and on several times when dish rack releases tilt switch and it rocks back and forth.



11. The water inlet is attached to the inlet line of the top of the machine with a three-quarter inch, 140 L.T., 180 H.T. degree hot water supply.

    NOTE: Make sure that the primary heater is set to deliver 140-150 degrees to the machine. If unsure, turn down the booster heater to 140-150 degrees and leave it on line. Be sure the water source is 3/4" inlet all the way from water heater or water softener. No 1/2" restrictions. The High Temp machine comes with two incoming water line connections. One is for the final rinse at 180°F and the other is to fill the machine 140°F. **High Temp must be 180°F water supply to final rinse valve and an additional 140°F supply line to machine fill valve.*
12. Set Pressure Regulator while machine is in FINAL RINSE CYCLE; correct pressure is 20 psi (+ or - 2 lbs.) VERY IMPORTANT.
13. The diagram below shows the proper spray arm alignment to prevent tank to tank contamination and excessive spray reflecting out of machine. **See #7 under Regular Service & Maintenance Check List.*

CORRECT SPRAY ARM ALIGNMENT



14. Mixing Chamber

    CAUTION: Check valves should be installed parallel to the machine where chemicals will not leak onto stainless. Have sanitizer line enter chamber without any bends to prevent leaks at check valve.

FIELD-INSTALLED ACCESSORIES

Installation of the accessory chemical pumps must be conducted by qualified personnel.

CHEMICAL DISPENSERS

Connect only to primary of listed Class 2 Transformer 208-230 V., 60 Hz maximum 100 VA.

ELECTRICAL POWER REQUIREMENTS

CMA-44 requires 208-230 volt, 3 phase power. Connect the wire that indicates the highest voltage (stinger lead) to L-2 powerblock connection.

Install CMA-44 Conveyor on a clean 40 amp breaker.

**IMPORTANT: Check that motors are turning in the correct direction. Looking at shaft of motor on the back side, it should be turning clockwise. If one or both pump motors are turning in the wrong direction switch L-1, L-2 & L-3 wires until correct direction is found.*

CMA-44 HEATER

The 10 Kw, 3 phase heater is located in the wash/final rinse tank. The heater has an independent power switch which is activated when ready for operation. If one was to drain the tank and leave the heater on, the thermostat would receive a signal to shut down from the float switch, located along side heater in the rinse end of the tank.

**We do recommend that the heater is shut off when machine is not in operation.*

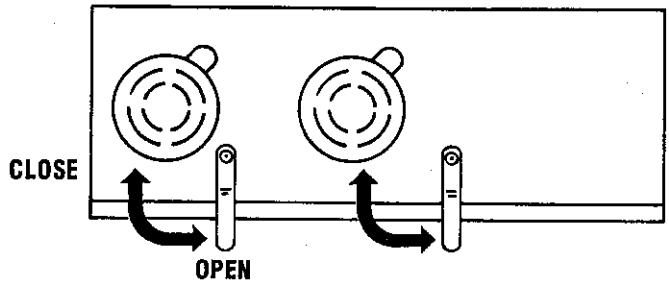
Thermostat is located behind stainless cover on final rinse side of machine. There is a thermostat adjustment access hole located on this cover.

SAFETY TIPS FOR CMA-44

DANGER	Always turn off circuit breaker at wall when working on dishmachine. (Remember it is 220 voltage.) Even with machine switched off there is a live connection coming to the switch so switch off circuit breaker.
CAUTION	Do not get in path of conveyor rocker arm and the conveyor moving bar. Do not reach into rocker arm area without first making sure the dishmachine is turned off at the circuit breaker.
CAUTION	Do not open front door when machine is in operation.
CAUTION	Avoid water spraying on electrical control box on top of the dishmachine. When cleaning, do not spray water directly on to motors.
CAUTION	When cleaning final rinse arms that are plugged, exercise caution when removing. The final rinse arms are under pressure and filled with chemicals.

OPERATION INSTRUCTIONS FOR CMA-44

A. Make sure the drains are closed (handle turned horizontal).



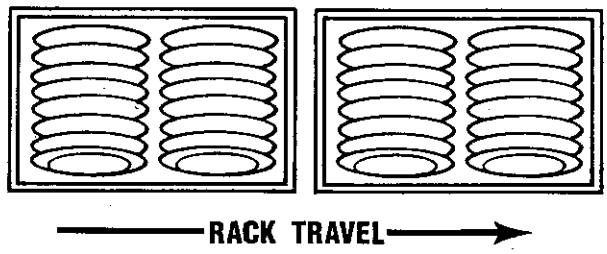
B. Turn on circuit breaker from power source. Turn ball valve on and fill machine until overflowing out pre-wash tank.

C. Turn heater switch on an make sure water temperature is between 140-150 degrees. Tank heater will hold temperature at 140° if final rinse is providing 140°-150° at all times (Low Temp) and 150°-160° for High Temp if final rinse is maintained at 180°.

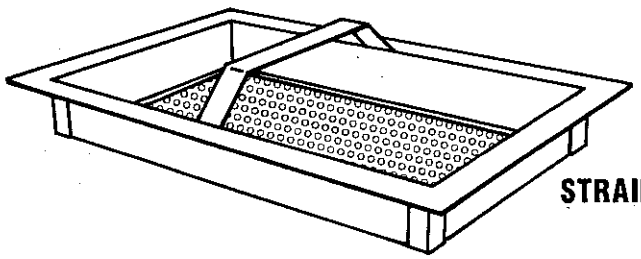
D. IMPORTANT

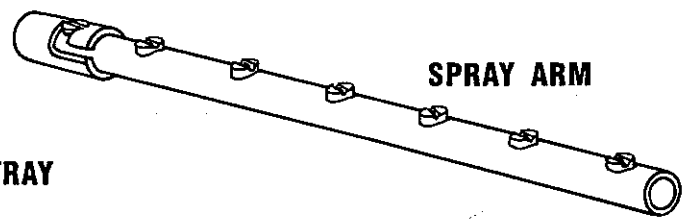
Placement of dishes in rack:

Make sure dishes are placed correctly. If they become dislodged, they could interfere with lever tilt switch and interrupt the operation of the machine.



E. At the end of the day and after heavy periods of accumulation, clean strainer trays. There are 5 trays inside the machine. Also, remove six spray arms and clean them out. Remove these and clean, then take caution in returning to holding tracks in tanks.





When water becomes heavily soiled, drain tanks and refill machine.

F. Check chemical buckets. Make sure there is adequate supply of detergent, rinse aid, and sanitizer (L.T.). Also check that pick-up line is inserted into correct bucket.

G. Activate trip switch on pre-wash end of machine. The 60 sec. time delay-off relay will lock the machine in the run position for 60 sec. then shut-off. This delay-off relay can be adjusted from 0-60 sec. This relay prevents machine from running when flight of dish racks are not in machine.

TO BEGIN OPERATION

1. Turn Power on to machine (circuit breaker from power source).
2. Turn manual ball valve to fill machine until water flows out overflow on pre-wash end of machine.

OPEN FILL VALVE UNTIL BOTH TANKS OVERFLOW. CLOSE FILL VALVE.

3. Turn on Heater Switch and wait until temperature rises to 140°-150° Low Temp and 150°-160° for High Temp.

TURN ON HEATER

The rinse and sanitizing agents are not injected during the initial fill stage. They are injected into the final rinse make-up water when the tilt switch is activated in the final rinse tank.

CHEMICAL DISPENSING: Low Temperature Application.

See BETA operational instructions for sanitizer adjustments for Low Temp applications.

The BETA sanitizing pump operates when the fresh water enters the machine during final rinse. The water is treated at 50 ppm. The CMA-44 is adjusted with the pressure regualtor to 20 pounds pressure, + or - 2 lbs. This allows .8 (L.T.)/.94 (H.T.) gallons of water to enter the machine each time a rack is washed.

It is recommended the 5-1/2% chemical solution be standardized to allow uniform dispensing of the sanitizing solution into the flow of rinse water as the machine operates. At this level, maximum shelf life is available.

Inside the control box is a labeled power block for sanitizer and rinse aid which is powered when the final rinse tilt switch is activated. The detergent power block is labeled and provides power when the conveyor and pump motors are operational.

CMA DISHMACHINES

REGULAR SERVICE & MAINTENANCE CHECK LIST

1. Upon entering the facility, make a preliminary check of the flatware and glasses, especially stemware. This will give you a quick indication of how the machine is functioning.
2. Go to the CMA-44, turn off the circuit breaker providing power to the machine. Open the door and check the interior condition of the machine.
   a. The stainless on the inside of the machine should be clean and shiny, no dull look or buildup of white lime scale.
   b. Check the condition of the scrap trays for excessive garbage. Make sure the machine operator is cleaning the machine, explain proper cleaning procedures.
   c. Open the drains and check to make sure they are all working properly.
3. Once the machine has drained, remove both end curtains from the scrap and rinse and remove all the scrap trays from the machine. A. Check all spray arms and jets – clean and explain cleaning procedures to dishmen. B. Check the drain openings making sure they are free and clear of debris. C. Check the heater element. It should be black with no splits, breaks, or cracks.
4. Close the drains, turn the power on and fill the machine.
   a. Check fill vacuum breaker for leaks.
   b. This is a time to check the water hardness. Check the water at the fill while it is coming into the machine.
   c. Using a curtain bar or something long, turn on the final rinse and observe the spray pattern of the final rinse jets. It is easier to see while the pressure is lower. If you have any clogged rinse jets, clean them using a bent paper clip.
5. Check the heater to see if it is working. If the temperature is below 140 degrees, check the thermostat setting. Also check that the heater contactor has activated. The contactor plunger should be in the PULLED-IN position. Check that the float switch is working properly.
6. With the machine full, replace all of the scrap trays into the proper position.
7. Place a rack into the machine, and observe the spray pattern of the scrap, the wash, and the final rinse.

   ***The CMA-44 has an excellent feature about it which is helpful in checking the spray pattern. The wash pump motors and the conveyor motor can be operated independently from one another by pushing the test switch located on the top of the mag starters. Disarm one mag starter at a time and observe the spray arm spray pattern for needed adjustments.**

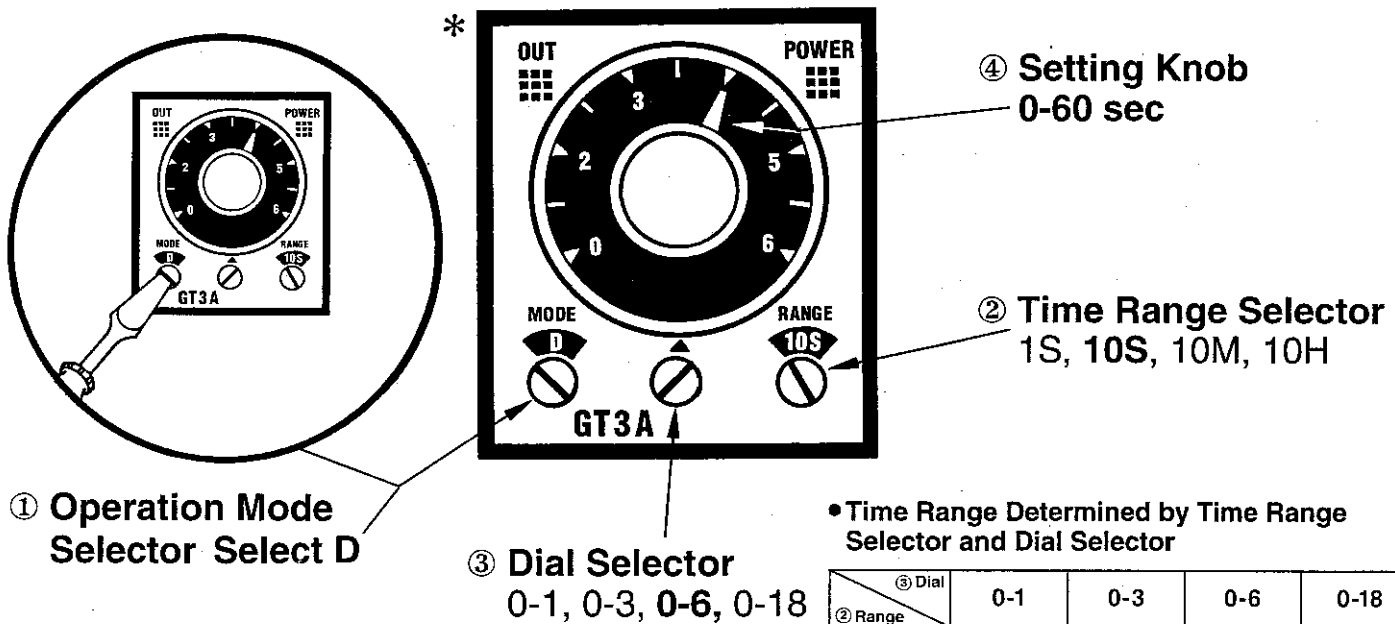
   By disarming the conveyor motor while a dishrack is in the final rinse section this makes it convenient in setting the chemical levels.

   a. Check the titration of the wash tank at this point.
   b. While the rack is in the final rinse, check the chlorine for 50 ppm in the final rinse.
   c. Observe final rinse vacuum breaker for leaks.
8. Run a stemware or glass rack through the machine at this point and check the results on the glassware. A. Observe the check valves for the rinse and sanitizer. Make sure they are not leaking or building up chlorine crystals. If they are clean, leave them alone. B. Check the condition of the chemical tubing from the peri pump to the check valves. C. Check the peri pump squeeze tubes to make sure they are tight, pumping product properly and not leaking within the peri pump. There should be no moisture within the peri pump itself. D. Observe the final rinse pressure at 20 psi ±2. Adjust if necessary.

REGULAR SERVICE & MAINTENANCE CHECK LIST

9. Check the condition of the chemical tubing coming from the detergent rinse and sani buckets, up to the machine.
10. With the machine stopped, check the roller cam bearing on the conveyor. You should be able to move the outer cover of that roller cam bearing with your finger. Also, keep it well greased so that outer covering does not freeze up.
11. Check the conveyor system. Make sure the complete system is running smoothly.
12. Run two or three racks through the machine. Check the scrap overflow. While the racks are running through the machine, take a quick look under the machine to check for any drips or leaks coming from the machine or motor to make sure a pump seal is not leaking.
13. *Run a rack through the machine and check if 60 sec. off delay relay is operating properly. If relay is set for 60 sec., machine will shut off 60 sec. after final rinse trip switch is de-activated. If 60 sec. off delay is not working, there is an override switch located on the back of control box.
14. Run a rack through and check if power activating trip switch is operating properly. This trip switch is located on pre-wash end of machine. The trip switch activates a reed switch that is mounted on the outside of the machine under the dish table.
15. Using an all-purpose cleaner or stainless steel polish, clean up the outside of the machine to keep it looking nice.
16. Once this is done, fill out a service report and take your results to the manager.

This is a quick, preliminary check of the machine that should be done at least once a month on a regular scheduled service call with a serviceman or a scheduled appointment with a salesman going in. All of this checking does not require much in the way of tools. About the only extra item you need is a chlorine test kit or a detergent test kit. The above can be accomplished in 10-15 minutes.



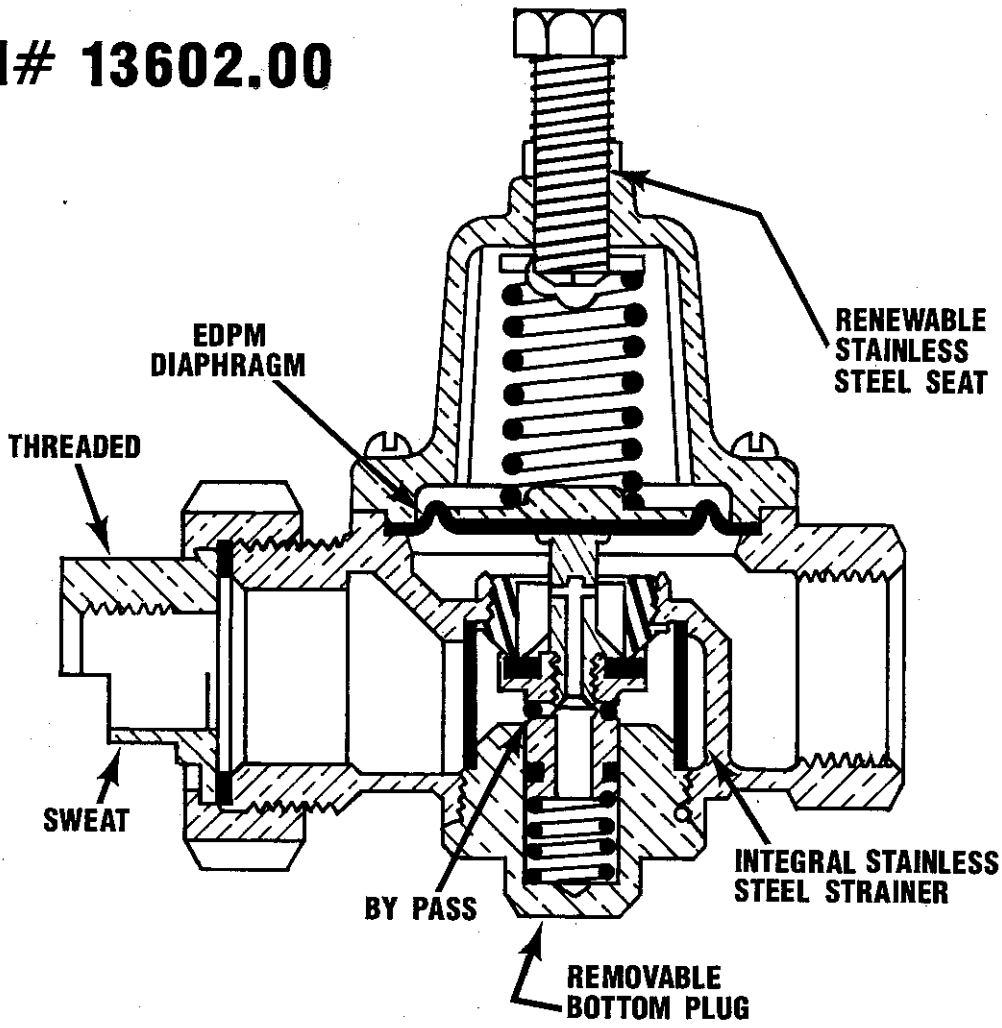
• Time Range Determined by Time Range Selector and Dial Selector

② Range \ ③ Dial	0-1	0-3	0-6	0-18
1S	0.05 sec –1 sec	0.05 sec –3 sec	0.05 sec –6 sec	0.05 sec –18 sec
10S	0.1 sec –10 sec	0.3 sec –30 sec	0.6 sec –60 sec	1.8 sec –180 sec
10M	6 sec –10 min	18 sec –3 min	30 sec –6 min	100 sec –18 min
10H	6 min –10 hours	18 min –30 hours	36 min –60 hours	108 min –180 hours

CMA DISHMACHINES

PRESSURE REGULATOR W/STRAINER

PN# 13602.00



MAINTENANCE INSTRUCTIONS

1. Shut off water supply.
2. Loosen check nut and turn adjusting screw counter clockwise to relieve spring tension.
3. Remove bottom plug, 'O' ring, bottom plug spring, disc assembly and strainer.
4. Inspect all parts for dirt or scoring; clean and/or replace.
5. Valve seat can be removed, if necessary, with an allen wrench.
6. Diaphragm can be inspected or serviced by removing the spring cage.
7. Reassemble valve in reverse order and turn in adjusting screw (clockwise) for required reduced pressure adjustment.

Annual inspection of all water system safety and control valves is required and necessary. Regular inspection, testing and cleaning assures maximum life and proper product function.

SPECIAL TOOLS NEEDED IN SERVICING THE CMA-44 CONVEYOR:

Electrical Test Equipment

1. Voltage/ohms tester
2. Amp probe

Hand Tools

1. Small snap ring pliers
2. Mechanical fingers (flexible or rigid)
3. Thermometer
4. Allen wrench set
5. variety of hand tools

TEST TO RUN

Heater Circuit 10 Kw 3 Phase heater should read 21 amps on any of the three wire connections.

Tilt Switch If a tilt switch becomes loose and inoperative, it will be necessary to remove it by taking the snap ring from the shaft after the cam has been taken off. Then the tilt switch can be pulled from the inside after which the bearing and brass sleeve can be tightened or replace.

Elect All controls in the CMA-44 conveyor are operated with 208/230 voltage. The power supply to the three motors and heater element is 208/230 voltage three phase.

Thermostat If it become necessary to adjust the thermostat, it can be done by removing hole plug on heater cover and turning set screw clockwise to increase. Heater cover is on the final rinse side of machine tank.

Best results are obtained if line water temperature at machine is 150 degrees F for Low Temp and 180°F for High Temp.

If all tests have been made and all components are satisfactory, a solution (if an answer still has not been found), may be a loose connection or poorly crimped wire. This will keep full power from reaching the motor or heater.

When testing for voltage in the CMA-44 conveyor, start at the power block and follow down to the end (defective item). When you lose a voltage reading, you have found your problem.

Final Rinse Arms Recommend keeping extra rinse arms on service trucks, in case of hard water clogging, soak clogged arms in a delimer back at shop.

SERVICE CHECK LIST

1. Inspect Chemical Dispensing Units
   A. Peri-pumps
   B. Squeeze tubes
   C. Chemical line (tubing)
   D. Check valves
   Make sure that the product is being dispensed.
2. Inspect Tilt Switch
   A. Is tight (no leaks)
   B. Does arm move freely?
   C. Is micro switch properly positioned?

3. Check overflow drain. Is is clear of debris?
4. Check primary drain.
5. Inspect heater.
6. Remove any debris from tanks.
7. Inspect conveyor dogs. Do they move freely?
8. Inspect curtain for proper placement and wear.
9. Fill machine and check for leaks.
10. Check that proper water level is maintained during operation. Adhust arms if water level drops in either tank.
11. Check incoming water temp. Should be 140-150° Low Temp and 180° final rinse and 150-160° wash tank High Temp.
12. Test pH in wash tank.
13. Run a flight of racks. Make sure heater is on. Check results and ppm available chlorines.
14. Grease Cam Bearing.

The attached list is recommended for the initial inventory of parts which are unique to the CMA-44 and not in standard distributor inventory.

13996.82

CMA-44 INITIAL PARTS INVENTORY
208-240V 60HZ

P/N	DESCRIPTION	NO. REQ'D
00120.00	Thermometer (Bi Metal)	1
00200.85	MOTOR ASSY – 1HP 3PH 220V 60HZ	1
00213.00	1" Ford Adapter MIP X PJ Tube	1
00411.00	MICRO SWITCH (TIMER)	3
00421.85	CMA-44 HEATER ROCKER SWITCH AMBER	1
00471.10	TOGGLE SWITCH OFF/ON 20 AMP	1
00471.85	CMA-44 CUT OFF LIMIT SWITCH	1
00557.70	CMA-44 REED SWITCH MAGNET ONLY	1
00557.82	KYNAR REED SWITCH 110/220 72"	1
00706.00	3/4 SOLENOID REPAIR KIT JE	1
00735.00	3/4 VAC BRKR REP KIT-WATTS	1
00738.15	3/4 SOLENOID COIL INT 220 V	1
03202.00	THERMOMETER (CAPILLARY)	1
13003.50	MAIN CONCTACTOR	1
13003.70	TIMER RELAY OVERIDE SWITCH	1
13012.10	CMA-44 MOTOR STARTER (SQD)	1
13012.20	1HP OVERLOAD RELAY (SQD) 50/60	1
13012.30	1/3HP OVERLOAD RELAY (SQD) 50/60	1
13303.70	SPRAY ARM UNIVERSAL	1
13304.55	SS FINAL RINSE SPRAY JET- HT	1
13305.00	SPRAY ARM END CAP--SS	1
13306.55	SPRAY ARM EXTENSION SPRING	1
13403.30	FUSE 10 AMP – SLOW BLOW GLASS	3
13408.85	TRIP SWITCH CMA-44	1
13417.77	IMMERSION HEATER 3PH 240V 10KW	1
13417.85	THERMOSTAT 10KW HEATER CMA-44	1
13418.85	60 SEC TIMER RLAY	1
13463.10	LIQUID LEVEL SWITCH SS	1
13501.85	MOTOR 1/3HP 208/220 60HZ 3PH	1
13504.00	GEAR REDUCER	1
13507.50	CAM BEARING S/S	1
13508.60	SWIVEL HOOK SPRING ASSY.	1
13515.00	CONVEYOR DOG SS	1
13605.00	PRESSURE GAUGE	1
13658.00	CHEMICAL INLET CHECK VALVE	2

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Pre-wash/powers wash motor inopertative	Bad motor or capacitor	Replace defective motor
	Mag Starter Overload tripped	Replace defective motor
	Faulty Mag Starter or Overload Relay	Replace
Heater No heat		(check again after installed)
	Defective element	Replace element
	Thermostat not adjusted	Adjust, turn clockwise for higher temp
	Burned of loose wire	Follow back on wires and replace
Low heat during operation	Low incoming water temp (should be at least 150°F, 180°F for Hight Temp)	Turn up supply or booster heat Insulate pipe. Check for cold water mixing
	Incoming water being deflected out of machine.	Correct placement of ware on rack. Correct curtain placement. Correct table slant into machine. Check alignment of spray arms.
	Water washing out of machine	Slant tables into dishmachine
	Limed up rinse spray tips	De-line machine – clean out rinse spray tips with a piece of wire
Low spray arm pressure (approx. 8 psi)	Low water, clogged	Check above causes. Check inlet hole for debris (tooth picks, straws)
Low water level	Water washing out of machine	Slant tables into dishmachine
	Limed up final rinse tips	De-lime machine – clean out rinse with a piece of wire. De-lime final rinse system. Connect rinse pump pick up line to de-limer container, activate final rinse tilt switch. Chemical will be drawn up to mixing chamber and flush system.
	Spray arms not aligned properly	
	CAUTION: MUST DRAIN TANKS AND DISCONNECT SANITIZER CHEMICAL PUMP WHEN DELIMING	
High water level	Not draining out of machine	Clear opening to trap
Machine will not operate (power supply is coming into control box)	Defective on/off switch or contactor	Replace

TROUBLE SHOOTING

	Limit switch activated or defective	Remove rack activating switch, replace switch
Water pump motor runs continuously	60 sec. timer faulty or needing to be set properly	Set properly or replace
Racks stay in machine and will not exit	Broken, bent racks. Rack rail alignment.	Replace, adjust 1/8" above tank top lip or table height
	Rack rides on conveyor dogs. Dogs too high or low.	Free dog movement, alignment. Dogs need to be 1/2" higher than table.
Low or no pressure in final rinse spray	Defective solenoid valve	Replace water solenoid kit
	Final rinse pressure below 20 psi.	Adjust regulator. Increase pipe size to machine.
	Plugged jets	Remove and clean
Rinse water runs	Rinse/tilt switch stuck "on". Tilt switch cam adjusted properly.	Remove, clean, make free moving. Adjust.
	Defective water solenoid kit.	Replace
Chemicals not injecting:	Check chemical power block	Check for power
	Supply has emptied	Replace with new supply
	Chemical line cut, burned or leaking	Restore
	Dispenser malfunction	Check for power at dispenser and at pump

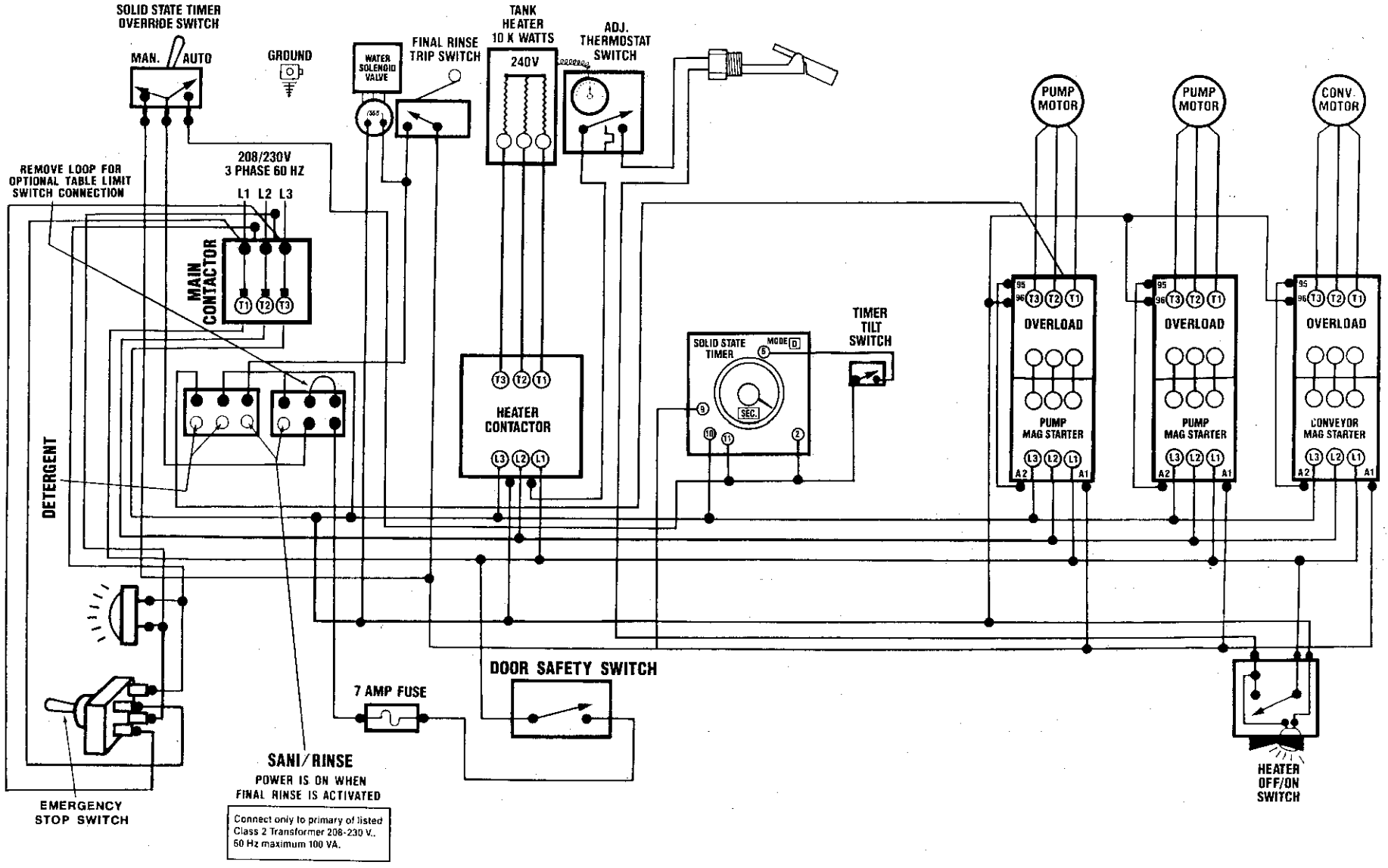
CMA-44 INSTRUCTIONS
CUSTOMER NOTICE
TEN TIPS TO SAVE A SERVICE CHARGE

If a service call is initiated by the Lessee of this equipment and it is subsequently determined that the problem does not relate to part failure or out or chemicals, there will be a minimum service charge for a serviceperson to respond.

1. Circuit breaker found in "off" position.
2. Clogged drains (at any point in drain line – it is not a garbage disposal).
3. Lack of soft water (check salt level in brine tank).
4. Lack of hot water due to valves shut off or incorrect thermostat settings.
5. Failure of equipment unrelated to machine.
6. Abuse to equipment or failure to perform minimum cleaning requirements as outlined at time of installation.
   A. Rinse arm tips clean and free of debris.
   B. Strainer trays clean and free of debris.
   C. Water tank drain and pick up openings clean and free of debris.
7. No water pressure in spray arms due to end caps missing caused by operator neglect.
8. Lever switch blocked or held from free movement due to lodged utensil or dish.
9. Lines to chemical buckets found in wrong containers or empty. (Note: Lines to buckets are color coded.)
10. Lessor's service responsibility shall be limited to its initial orientation, delivery of chemicals, adjustment of chemical injection system, and replacement of parts found to be worn or defective.

IF YOU HAVE A STINGER (HIGHER VOLTAGE) LINE, CONNECT TO L-2

CMA-44 CONVEYOR
208/230V



13508.40

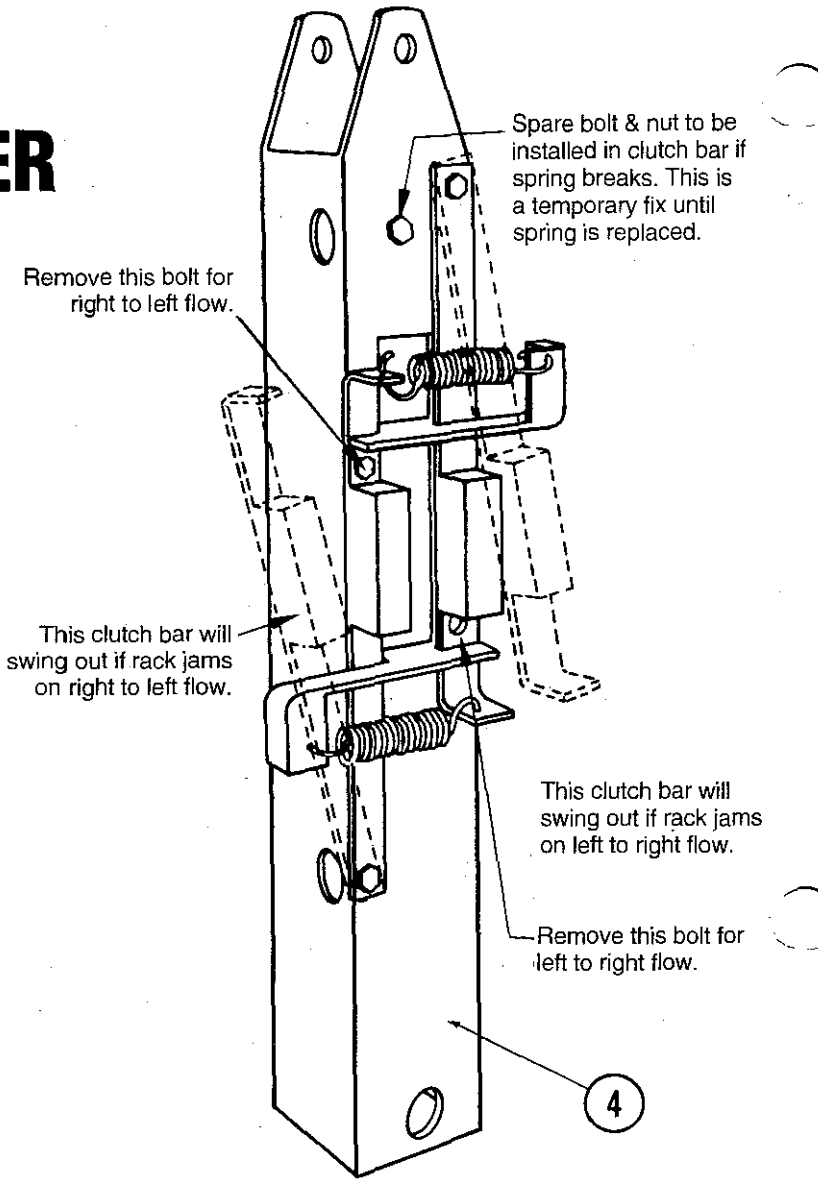
CMA-44 RACK SAVER ROCKER ARM ASSY.

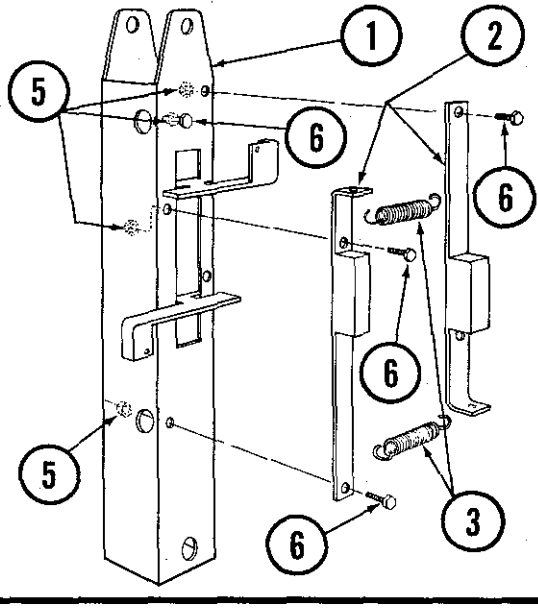
CMA's Rack Saver System was designed to prevent damage to dish racks and to the conveyor if one was to allow racks to jam at the end of a clean dish table.

HOW IT WORKS:

1. Rt. to Lt. Flow – The left clutch bar will pivot, allowing cam drive to slip when in a jam rack situation. When the jammed rack has been cleared, the clutch bar will return to its operational position automatically.
2. Lt. to Rt. Flow – The right clutch bar will pivot and respond the *same as above*.
3. **Emergency** – If clutch spring were to break, do the following: Option #1. Replace broken spring with extra spring stored on rocker arm. Option #2. Install bolt #6 and nut #5 supplied (see diagram) into hole in clutch bar.

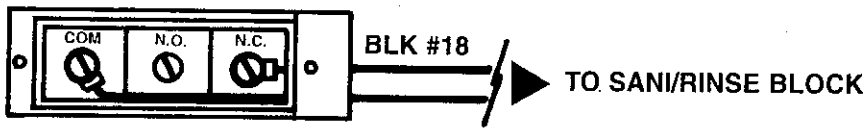
CAUTION: If spare bolt is installed into clutch bar, conveyor will operate, but clutch system is inoperative until spring is replaced.



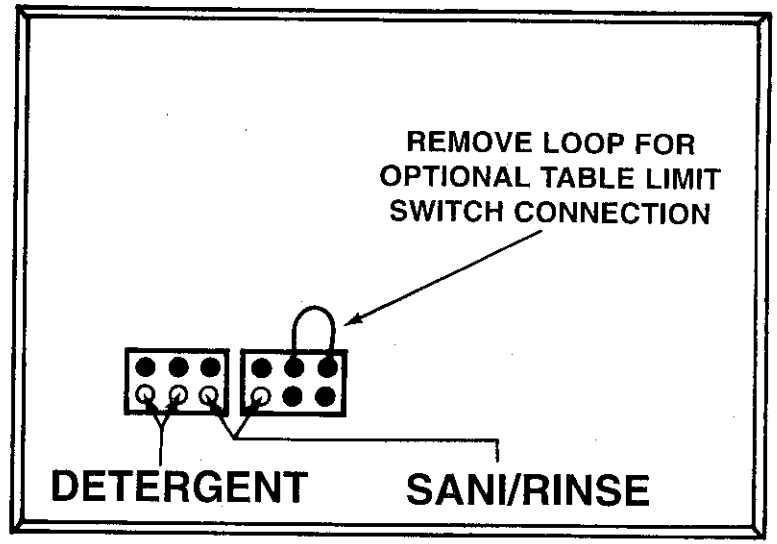


ITEM NO.	NO. REQ'D	DESCRIPTION
1	1	P/N 13508.10 Rack Saver Rocker Arm
2	2	P/N 13508.20 Rack Saver Clutch Bar
3	2	P/N 13508.60 Swivel Hook Spring
4		P/N 13508.40 Rack Saver Rocker Arm Assy. (all parts shown)
5	5	P/N 00912.00 1/4" 20 Nylon Lock Nut
6	5	P/N 00914.00 1/4" 20 x 3/4" Hexhead Bolt

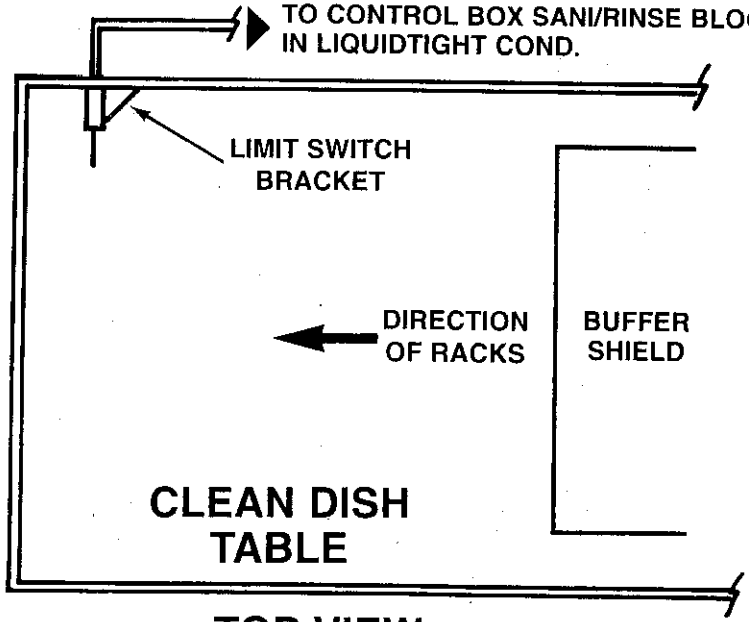
OPTIONAL TABLE LIMIT SWITCH ASSY.



LIMIT SWITCH
COVER PLATE REMOVED



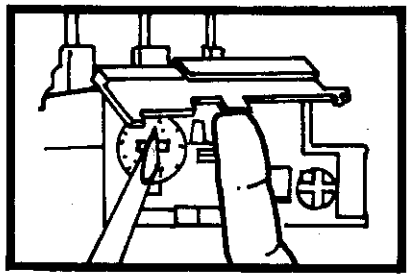
CONTROL BOX
(TOP VIEW)



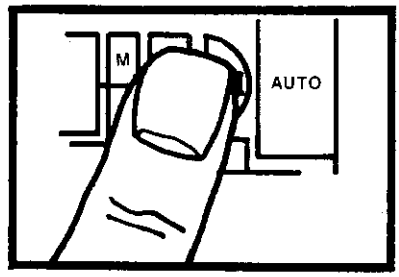
TOP VIEW

CMA DISHMACHINES

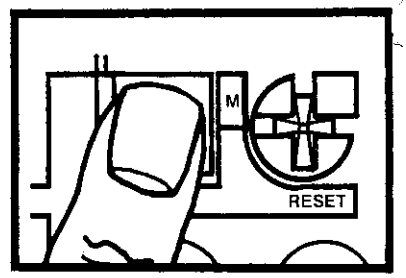
CMA-44 OVERLOAD CONTACTOR



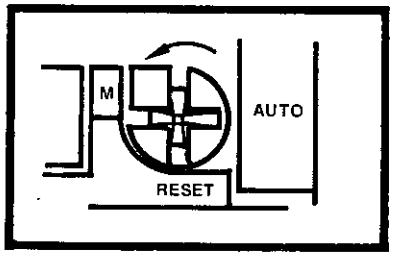
OVERLOAD ADJUSTMENT



RESET FUNCTION

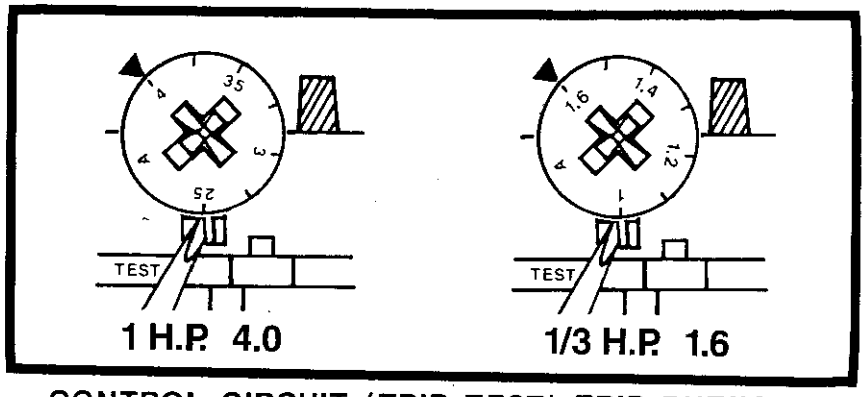


STOP FUNCTION



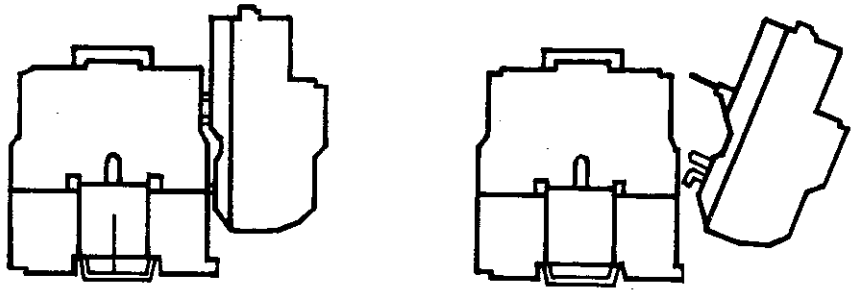
MANUAL AUTO RESET

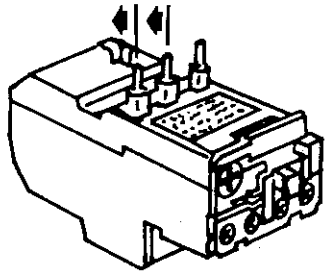
SETTINGS



CONTROL CIRCUIT (TRIP TEST) TRIP BUTTON

THERMAL OVERLOAD REPLACEMENT



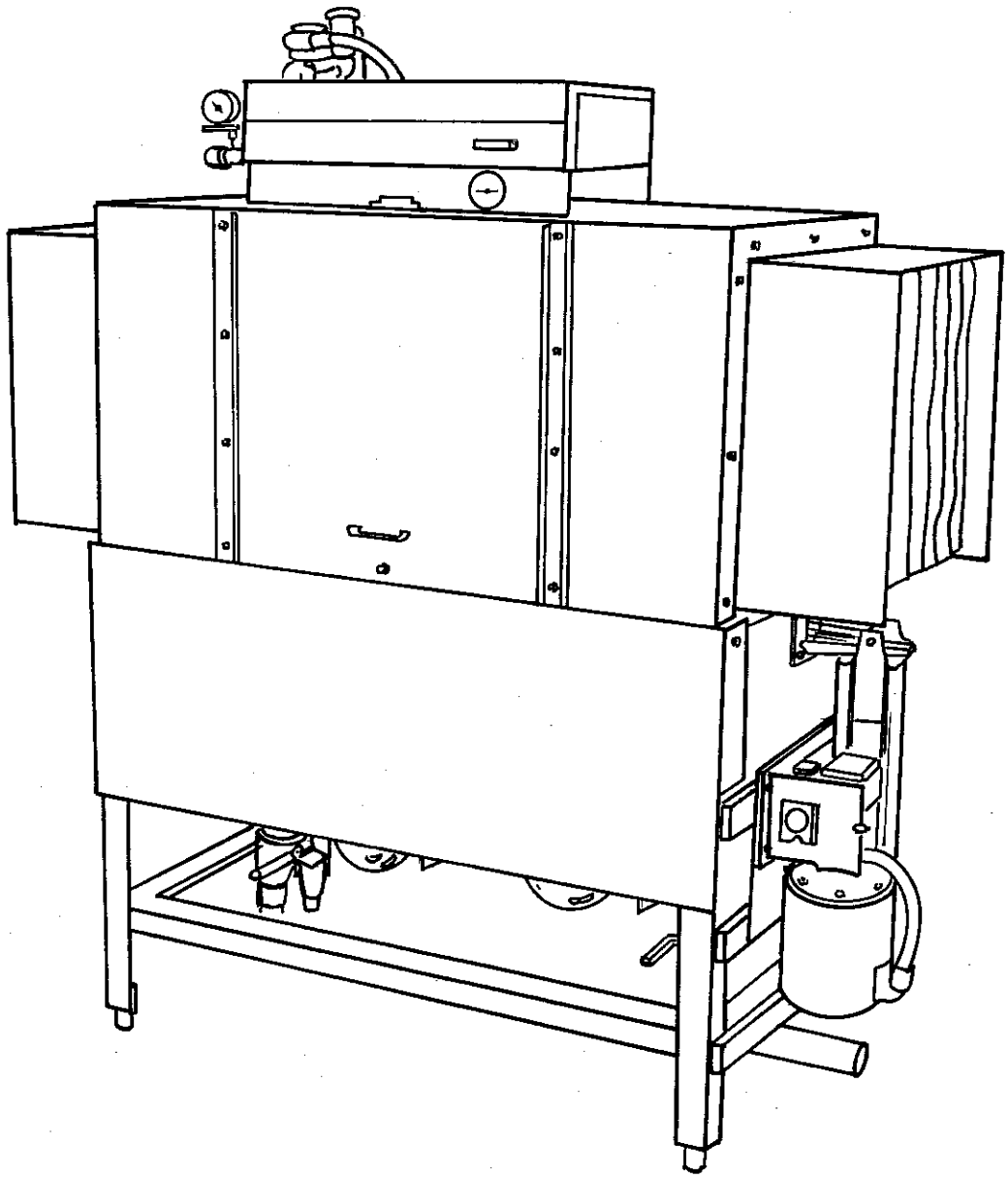


ADJUST PINS FOR DO9 CONTACTOR.

D09

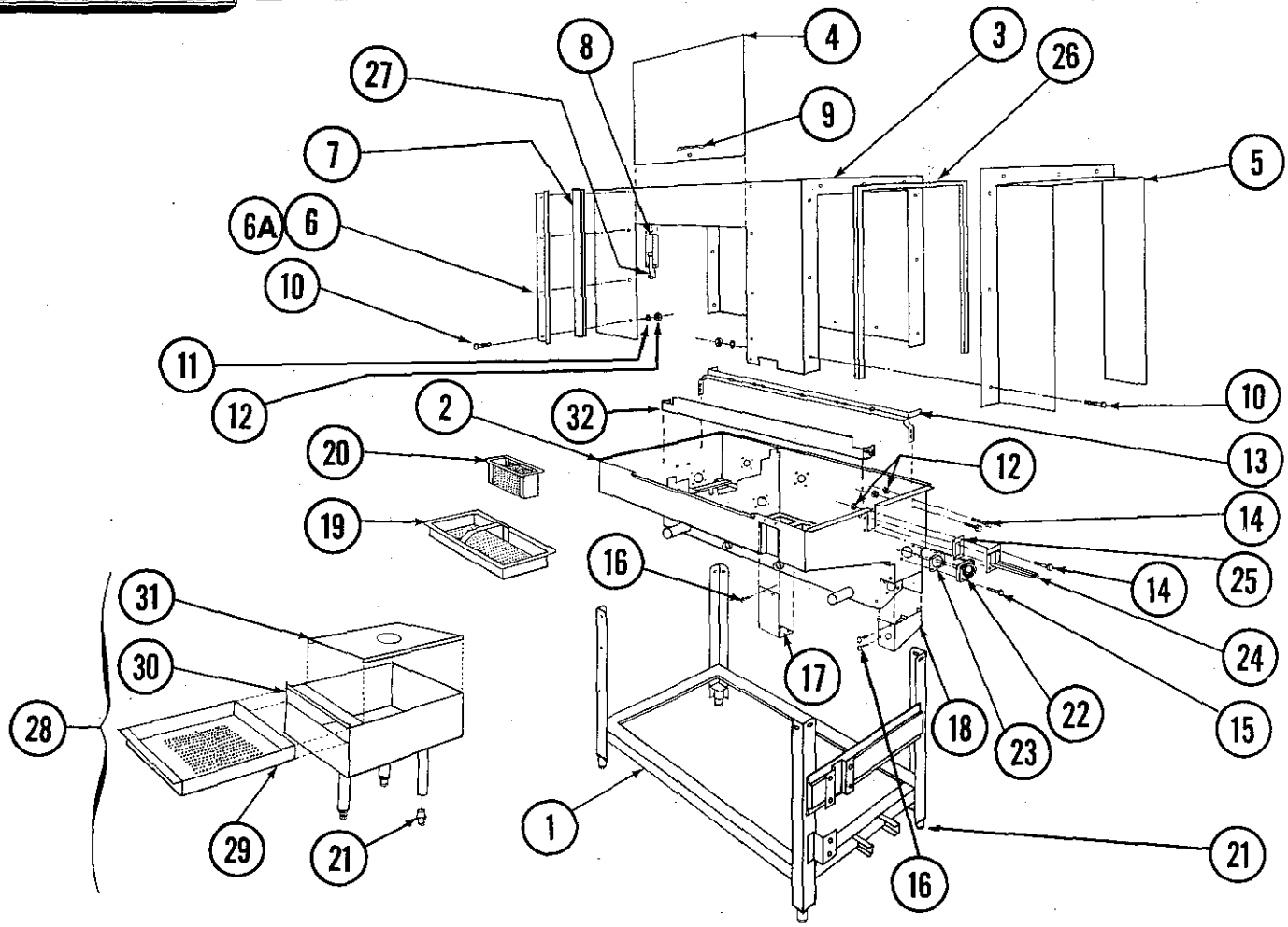
CMA DISHMACHINES

CMA-44 EXPLODED VIEW SECTION



CMA DISHMACHINES

FRAME SYSTEM ASSEMBLY



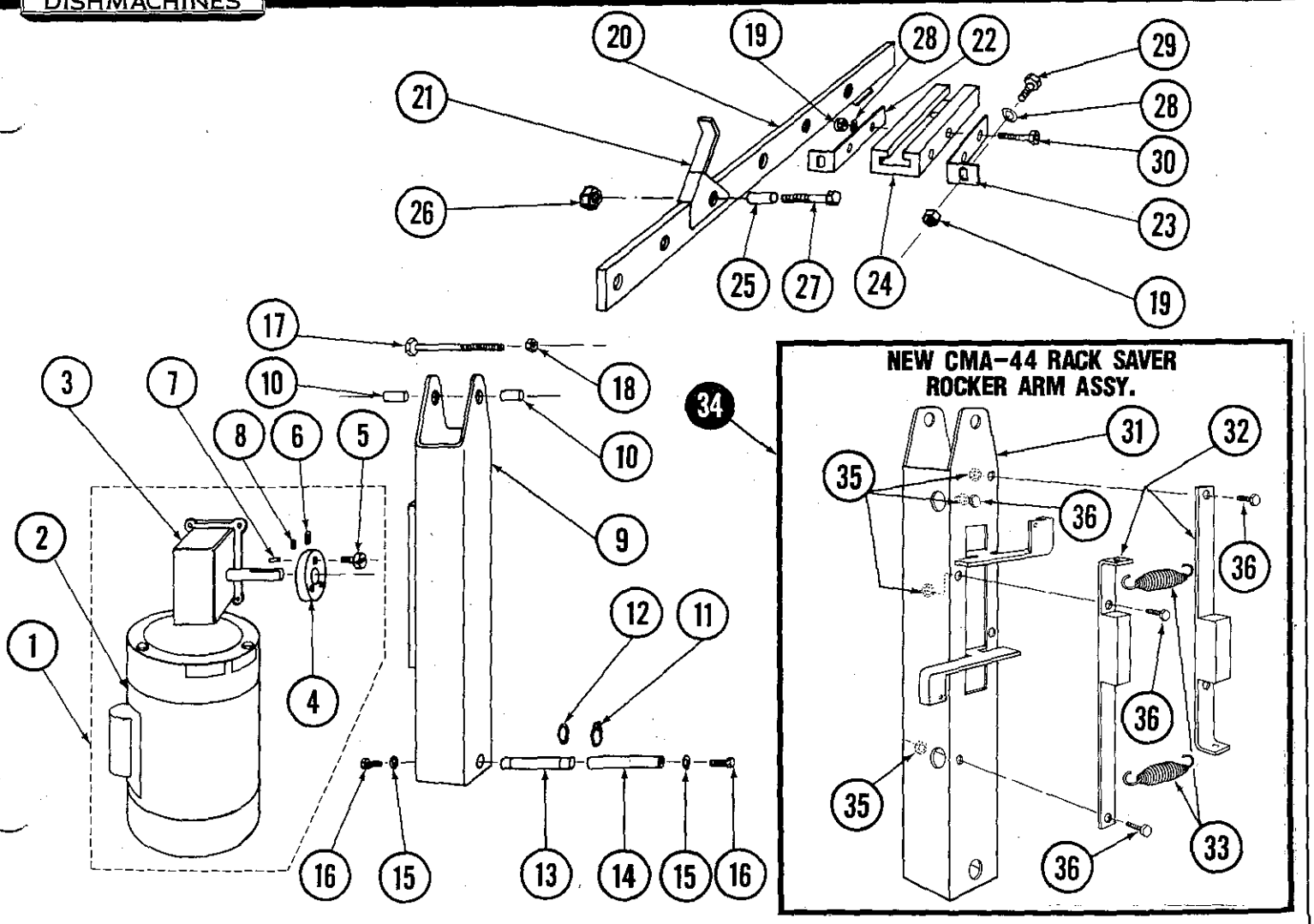
ITEM NO.	NO. REQ'D	DESCRIPTION
1	1	P/N 13903.10 CMA-44 Frame Stand
2	1	P/N 13902.82 CMA-44 L → R Pan P/N 13902.84 CMA-44 R → L Pan
3	1	P/N 13900.82 CMA-44 L → R Wrapper P/N 13900.84 CMA-44 R → L Wrapper
4	1	P/N 01506.00 Door (A-B-C-CMA-44)
5	2	P/N 13901.00 Wrapper Shield
6	2	P/N 01554.00 Door Guide
6A	1	P/N 01554.30 E.Z. Glide Door Guide
7	2	P/N 00636.10 E.Z. Glide Plastic Guide
8	1	P/N 13915.00 CMA-44 Door Latch Bracket
9	1	P/N 00535.30 CMA-44 Door Handle
10	26	P/N 00905.00 1/4"-20x1/2" Trusshead Bolt
11	60	P/N 00923.00 1/4" Brass Washer
12	52	P/N 00912.00 1/4"-20 Nylon Lock Nut
13	2	P/N 13906.00 Tray Track
14	8	P/N 00914.10 1/4"-20x5/8 Hexhead Bolt
15	4	P/N 00962.00 1/4"-20x1" Hexhead Bolt

ITEM NO.	NO. REQ'D	DESCRIPTION
17	1	P/N 13408.82 CMA-44 Trip Switch Cover
18	1	P/N 13927.82 CMA-44 L → R Heater Cover P/N 13927.84 CMA-44 R → L Heater Cover
19	2	P/N 13910.82 CMA-44 Wash Rinse Strainer Basket
20	3	P/N 13910.85 CMA-44 Prewash Strainer Basket
21	7	P/N 01310.00 Bullet Feet
22	1	P/N 01307.00 Flange Nut
23	1	P/N 01308.00 Flange Nut Gasket
24	1	P/N 13913.00 Drip Chute
25	1	P/N 13542.00 Drip Chute Gasket
26	4	P/N 03705.00 Foam Tape
27	1	P/N 13701.00 Door Latch
28	1	P/N 01560.00 3 Leg Scrap Trap*
29	1	P/N 01562.00 Scrap Trap Drawer
30	1	P/N 01560.51 Scrap Trap Body
31	1	P/N 01561.00 Scrap Trap Lid
32	1	P/N 13922.00 Center Support Rail

** 28 includes: 29 and 30.*

CMA DISHMACHINES

CONVEYOR SYSTEM ASSEMBLY

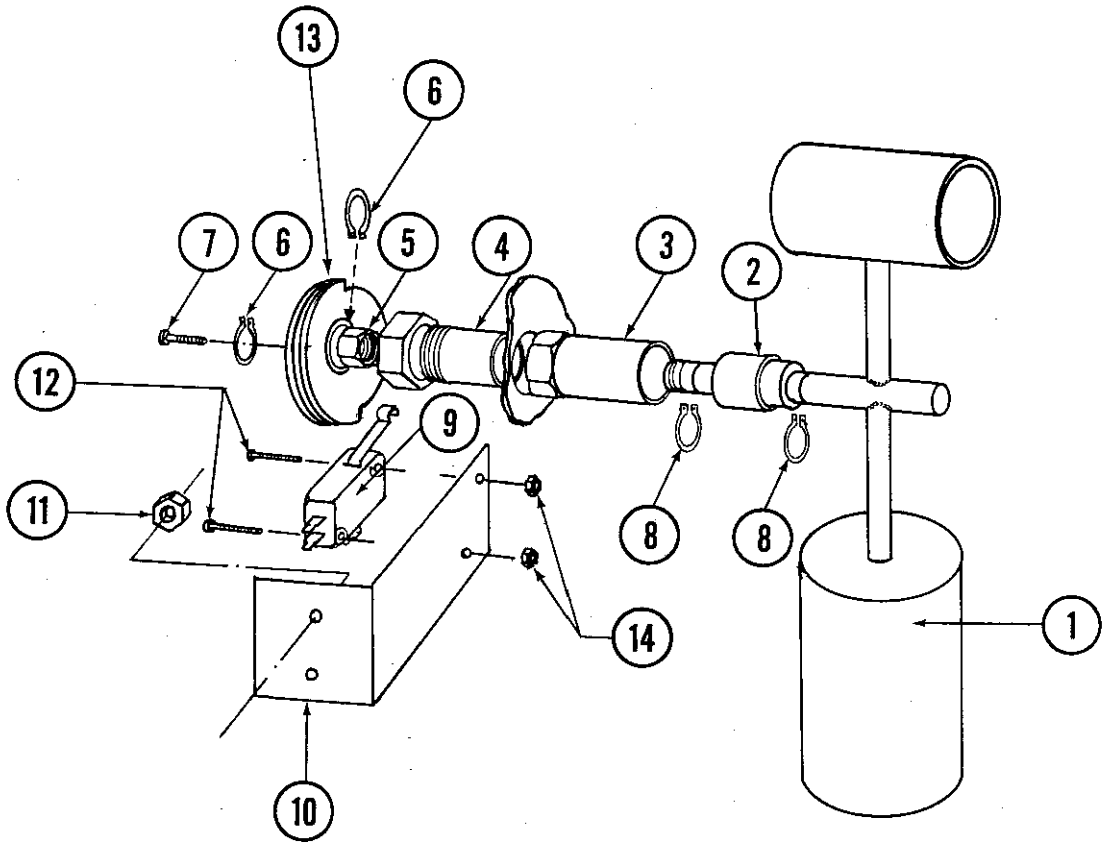


ITEM NO.	NO. REQ'D	DESCRIPTION
1	1	P/N 13570.20, CMA-44 220V 60HZ 3HP Conv. Dr. Assy.*
2	1	P/N 13501.85, Motor 1/3HP 220V 60HZ 3PH
3	1	P/N 13504.00, Gear Reducer
4	1	P/N 13505.10, Rocker Arm Cam
5	1	P/N 13507.50, Cam Bearing SS
6	1	P/N 13816.00, 3/16" - 18 x 1/2" Socker Set Screw
7	1	P/N 13505.20, Keyway Cam
8	1	P/N 00935.00, 1/4" - 20 x 1/4" Set Screw
9	1	P/N 13508.00, Rocker Arm
10	2	P/N 13513.10, Rocker Arm Spacer
11	2	P/N 13509.52, 7/8" I.D. Lock Ring
12	2	P/N 13509.53, 1" I.D. Brass Washer
13	1	P/N 13509.51, Rocker Arm Shaft Bearing
14	1	P/N 13510.10, Bearing Shaft CMA-44
15	2	P/N 00922.00, 1/4" Lock Star Washer
16	2	P/N 00914.00, 1/4" - 20 x 3/4" Hexhead Bolt
17	1	P/N 13808.00, 1/2" - 13 x 3 1/2" Hexhead Bolt
18	1	P/N 13809.00, 1/2" - 13 Nylon Lock Nut

** 1 Includes 2 through 8.*

ITEM NO.	NO. REQ'D	DESCRIPTION
19	1	P/N 00912.00, 1/4" - 20 Nylon Lock Nut
20	1	P/N 13514.85, CMA-44 Conveyor Bar
21	5	P/N 13515.00, Conveyor Dog SS
22	1	P/N 13514.82, CMA-44 Left Conveyor Bar Bracket
23	1	P/N 13514.84, CMA-44 Right Conveyor Bar Bracket
24	1	P/N 13521.50, CMA-44 Conveyor Bar Slide Bearing
25	10	P/N 13520.00, Conveyor Dog Bearing
26	5	P/N 13806.00, 3/8" Nylon Lock Nut
27	5	P/N 13818.00, 3/8" - 16 x 1 3/4" Hexhead Bolt
28	2	P/N 00924.00, 1/4" S.S. Washer
29	2	P/N 00914.10, 1/4"- 20 x 5/8" Hexhead Bolt
30	1	P/N 00903.00, 1/4" - 20 x 1 3/4" Hexhead Bolt
31	1	P/N 13508.10, Rack Saver Rocker Arm
32	2	P/N 13508.20, Rack Saver Clutch Bar
33	2	P/N 13508.60, Swivel Hook Spring
34	1	P/N 13508.40, Complete Rack Saver Rocker Arm Assy.
35	4	P/N 00912.00, 1/4" 20 Nylon Lock Nut
36	4	P/N 00914.00, 1/4" - 20 x 3/4" Hexhead Bolt

TRIP SWITCH

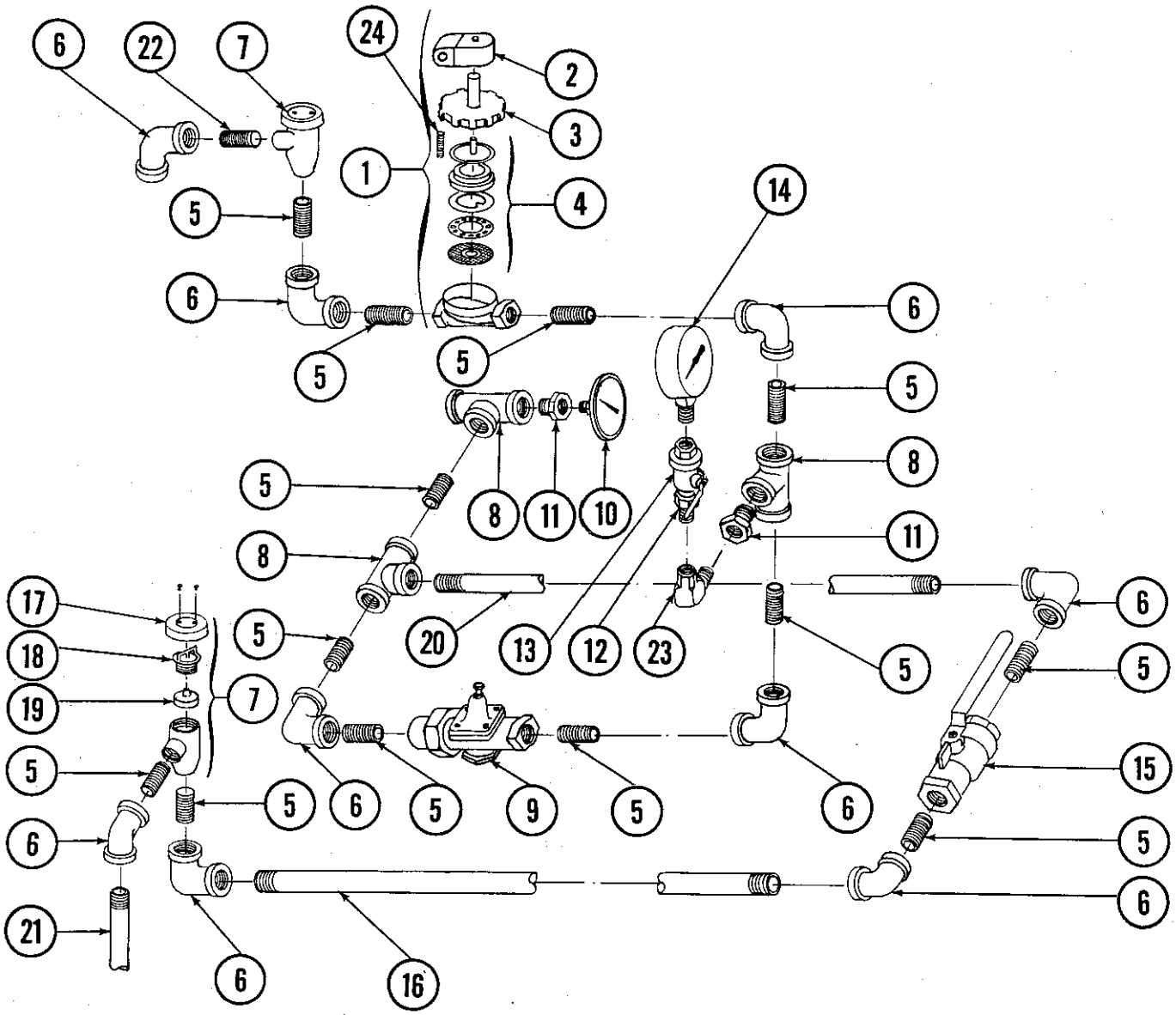


ITEM NO.	NO. REQ'D	DESCRIPTION
1	1	P/N 13408.85, Trip Switch Assy.*
2	1	P/N 13424.50, Trip Switch Bearing
3	1	P/N 13455.00, Switch Sleeve Brass
4	1	P/N 13435.00, Bearing Nut
5	1	P/N 13409.51, Shaft Extender – Threaded
6	2	P/N 13411.00, Lock Ring
7	1	P/N 13825.00, 8 - 32 x 1" Pan Head Screw

ITEM NO.	NO. REQ'D	DESCRIPTION
8	2	P/N 13411.50, Large Ring
9	1	P/N 00411.00, Micro Switch
10	1	P/N 13414.82, M-2 Micro Switch Support Bracket
11	2	P/N 00965.00, 6" - 32 Nylon Lock
12	3	P/N 13826.00, 4" - 40 x 5/8" Pan Screw
13	1	P/N 01115.15, Adjustable Cam
14	2	P/N 13826.50, 4" - 40 Hexhead

** 1 includes 2, 3, 4, & 8.*

PLUMBING SYSTEM ASSEMBLY LOW TEMP



ITEM NO.	NO. REQ'D	DESCRIPTION
1	1	P/N 00705.00 3/4" Water Solenoid Valve JE*
2	1	P/N 00738.15 3/4" Solenoid 220V JE
3	1	P/N 00705.20 3/4" Water Solenoid Valve Bonnet JE
4	1	P/N 00706.00 3/4" Water Solenoid Valve Repair Kit JE
5	13	P/N 00701.00 3/4" Close Nipple Brass
6	7	P/N 13633.00 3/4" 90 Deg ELL FxF Brass
7	2	P/N 00710.50 3/4" Vacuum Breaker-Watts*
8	2	P/N 00716.50 3/4"x3/4"x3/4" FxFxF Brass Tee
9	1	P/N 13602.00 3/4" Pressure Regulator
10	1	P/N 00120.00 Thermometer
11	2	P/N 00769.00 3/4"x1/4" Brass Bushing
12	1	P/N 41011.00 1/4" Close Nipple Brass

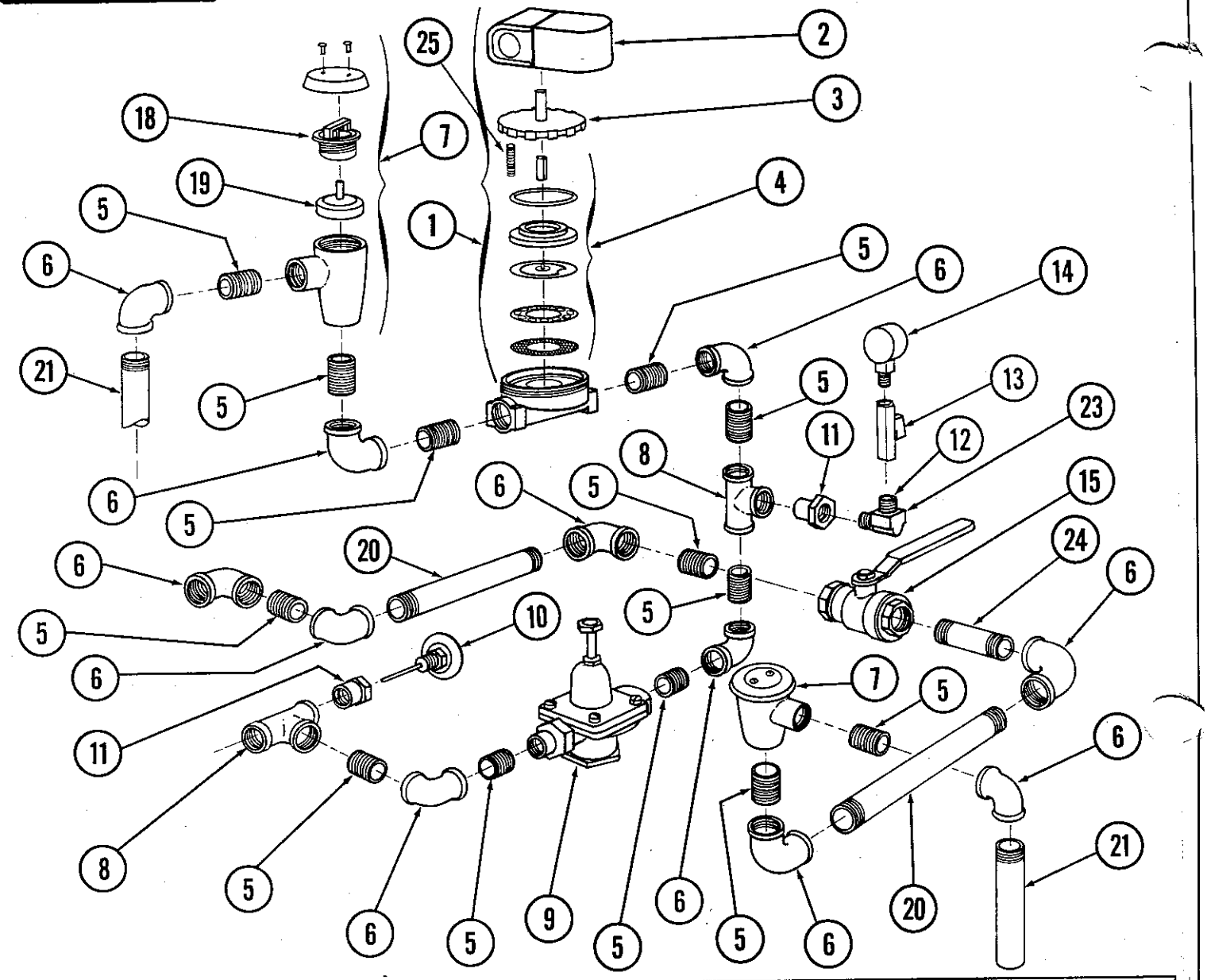
ITEM NO.	NO. REQ'D	DESCRIPTION
13	1	P/N 41010.02 1/4" Mini Ball Valve
14	1	P/N 13605.00 Pressure Gauge
15	1	P/N 13027.00 3/4" Ball Valve
16	1	P/N 13656.82 3/4"x 10 1/2" Brass Nipple
17	2	P/N 00739.50 3/4"x 1/2" Vac. Breaker Cap SS
18	2	P/N 00735.60 3/4" Vac. Breaker Bonnet Brass
19	2	P/N 00735.00 3/4" Vac. Breaker Repair Kit Watts
20	1	P/N 13656.85 3/4"x 12" Brass Nipple
21	1	P/N 13656.84 3/4"x 4 1/2" Brass Nipple
22	1	P/N 13635.00 3/4"x 2" Nipple SS
23	1	P/N 40137.00 1/4" Street Elbow
24	1	P/N 00706.10 3/4" Solenoid Plunger Spring Only

** Item 1 includes: 2,3 and 4.*

** Item 7 includes: 17,18 and 19.*

CMA DISHMACHINES

PLUMBING SYSTEM ASSEMBLY HIGH TEMP



ITEM NO.	NO. REQ'D	DESCRIPTION
1	1	P/N 00705.00 3/4" Water Solenoid Valve JE* 220V
2	1	P/N 00738.15 3/4" Solenoid 220V JE
3	1	P/N 00705.20 3/4" Water Solenoid Valve Bonnet JE
4	1	P/N 00706.00 3/4" Water Solenoid Valve Repair Kit JE
5	12	P/N 00701.00 3/4" Close Nipple Brass
6	10	P/N 13633.00 3/4" 90 Deg ELL FxF Brass
7	2	P/N 00710.50 3/4" Vacuum Breaker-Watts*
8	2	P/N 00716.50 3/4"x3/4"x3/4" FxFxF Brass Tee
9	1	P/N 13602.00 3/4" Pressure Regulator
10	1	P/N 00120.00 Thermometer
11	2	P/N 00769.00 3/4"x1/4" Brass Bushing
12	1	P/N 41011.00 1/4" Close Nipple Brass

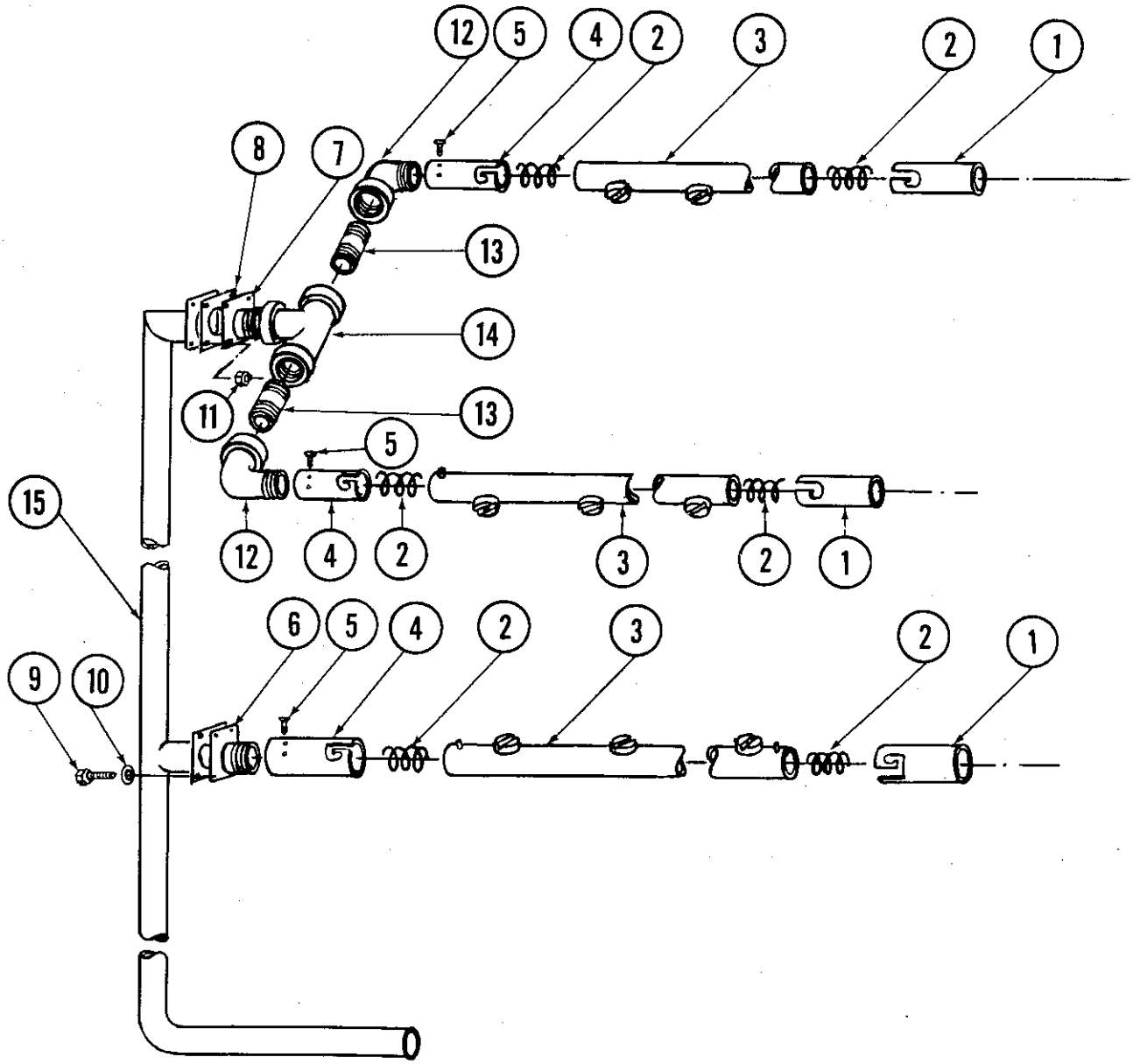
ITEM NO.	NO. REQ'D	DESCRIPTION
13	1	P/N 41010.02 1/4" Mini Ball Valve
14	1	P/N 13605.00 Pressure Gauge
15	1	P/N 13027.00 3/4" Ball Valve
16	1	P/N 13656.82 3/4"x 10 1/2" Brass Nipple
17	2	P/N 00739.50 3/4"x 1/2" Vac. Breaker Cap SS
18	2	P/N 00735.60 3/4" Vac. Breaker Bonnet Brass
19	2	P/N 00735.00 3/4" Vac. Breaker Repair Kit Watts
20	1	P/N 13656.85 3/4"x 12" Brass Nipple
21	1	P/N 13656.84 3/4"x 4 1/2" Brass Nipple
22	1	P/N 13635.00 3/4"x 2" Nipple SS
23	1	P/N 40137.00 1/4" Street Elbow
24	1	P/N 00781.00 Nipple 3/4"x3-1/2"
25	1	P/N 00706.10 3/4" Solenoid Plunger Spring Only

** Item 1 includes: 2,3 and 4.*

** Item 7 includes: 17,18 and 19.*

CMA DISHMACHINES

SPRAY SYSTEM ASSEMBLY

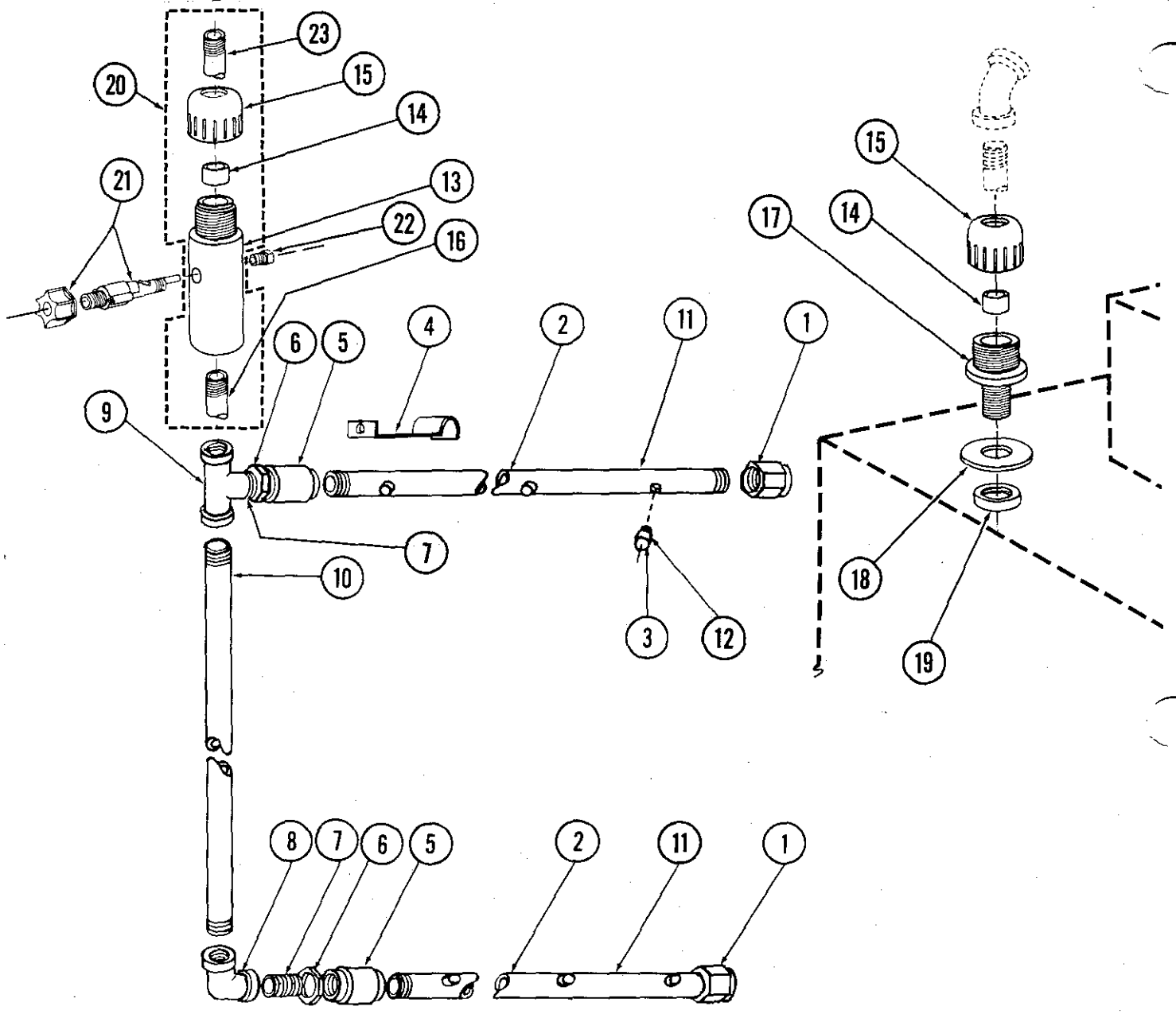


ITEM NO.	NO. REQ'D	DESCRIPTION
1	6	P/N 13305.00 Spray Arm End Cap SS
2	12	P/N 13306.55 Spray Arm Extension Spring
3	6	P/N 13303.70 Spray Arm Universal
4	6	P/N 13306.20 Spray Arm Extender
5	12	P/N 00906.00 1/4" – 20 x 1/2" Hexhead Bolt
6	2	P/N 13306.51 Spray Arm Adapter Long
7	2	P/N 13306.50 Spray Arm Adapter Short
8	8	P/N 04306.00 Square Manifold Gasket

ITEM NO.	NO. REQ'D	DESCRIPTION
9	16	P/N 00914.00 1/4" – 20 x 3/4" Hexhead Bolt
10	32	P/N 00923.00 1/4" Brass Washer
11	16	P/N 00912.00 1/4" – 20 Nylon Lock Nut
12	4	P/N 13633.50 3/4" 90° Ell SS
13	4	P/N 13639.00 3/4" Close Nipple SS
14	2	P/N 13611.00 3/4" Tee FXFXF SS
15	2	P/N 13301.00 M-1 & M-2 Manifold
16	1	P/N 13306.00 Flanged Tee Assy.

CMA DISHMACHINES

FINAL RINSE SYSTEM

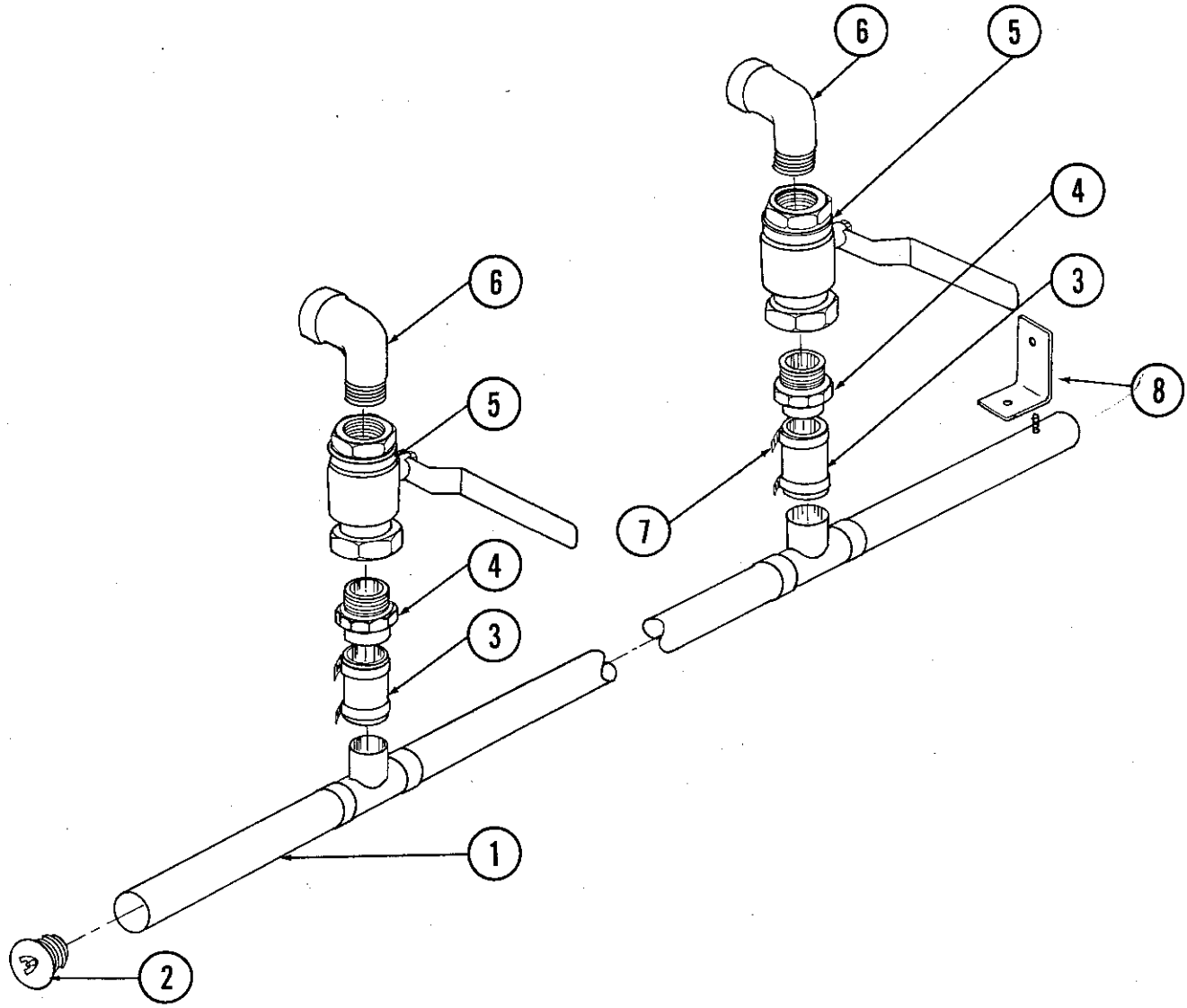


ITEM NO.	NO. REQ'D	DESCRIPTION
1	2	P/N 13310.00, 1/2" Brass Cap
2	2	P/N 13304.82, SS Final Rinse Spray Arm
3	8	P/N 13304.55, Final Rinse Spray Tip SS
4	3	P/N 13304.53, Long Support Bracket
5	2	P/N 13618.00, 1/2" Coupling SS
6	4	P/N 00721.00, 1/2" Jump Nut
7	2	P/N 13629.00, 1/2" Close Nipple SS
8	1	P/N 13628.00, 1/2" 90° Ell FXF SS
9	1	P/N 13630.00, 1/2" Tee FXFXF SS
10	1	P/N 13307.00, Final Rinse Down Tube SS
11	2	P/N 13304.82, SS Final Rinse S.A. High Temp
12	8	P/N 13304.55, SS Final Rinse Spray Tip High Temp

ITEM NO.	NO. REQ'D	DESCRIPTION
13	1	P/N 13669.00, Mixing Chamber Body
14	2	P/N 13656.20, 3/4" IPS Comp. Gasket
15	2	P/N 13656.30, 3/4" IPS Comp. Cap
16	1	P/N 13629.82, Nipple SS ½"x5½"
17	1	P/N 13652.00, Collar Insert Water Inlet
18	1	P/N 00752.85, Collar Gasket
19	1	P/N 13606.00, 3/4" Jamb Nut Brass
20	1	P/N 13656.00, Mixing Chamber Assy.
21	1	P/N 13658.00, Chemical Inlet Check Valve
22	1	P/N 3232.00, 1/8" CPVC Plug
23	1	P/N 13656.10, Inlet Tube

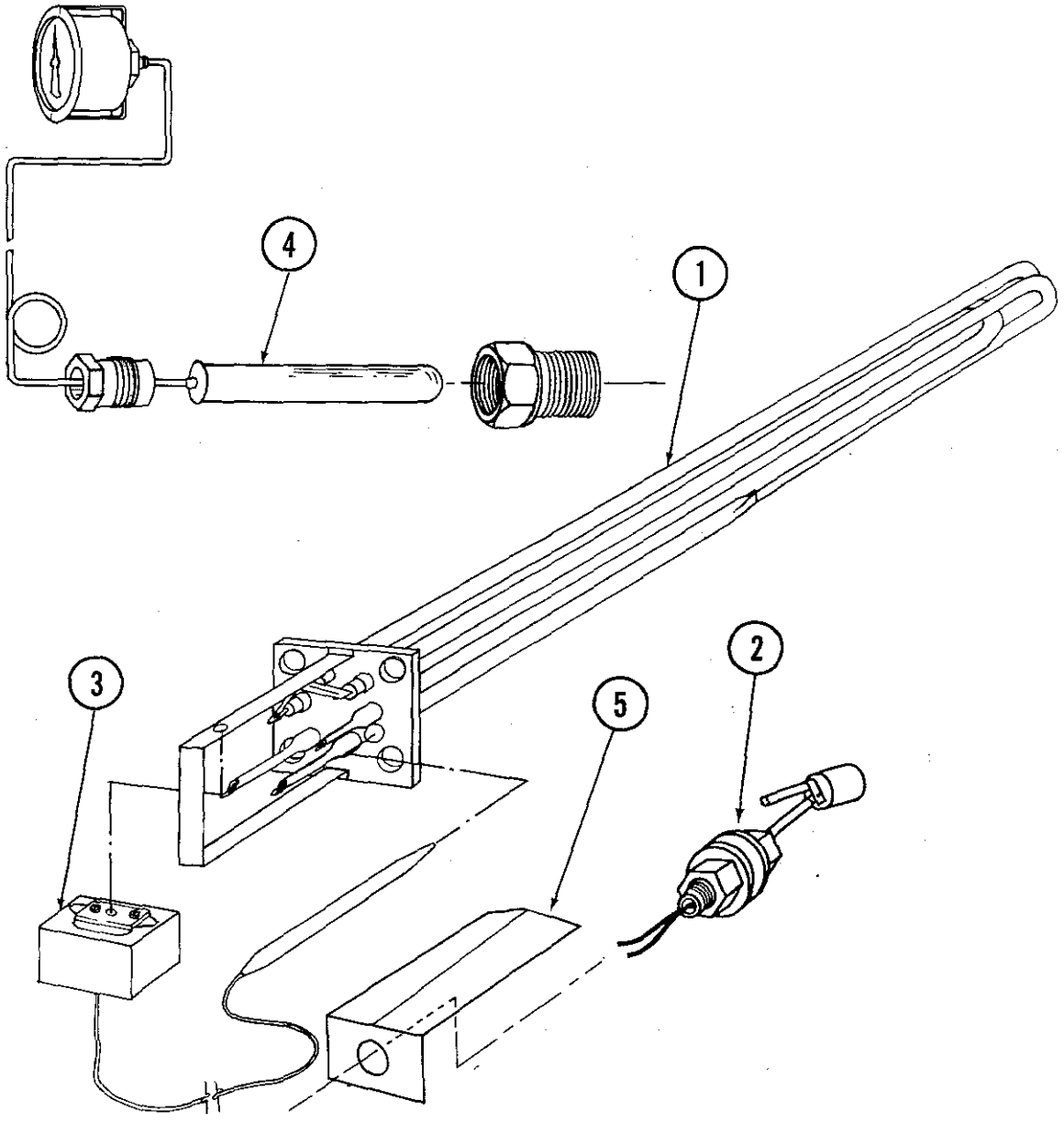
CMA DISHMACHINES

DRAIN SYSTEM ASSEMBLY



ITEM NO.	NO. REQ'D	DESCRIPTION
1	1	P/N 13001.85 CMA-44 Drain Manifold
2	1	P/N 13024.00 Dynamite Plug
3	2	P/N 13020.20 Hose Drain Manifold Valve
4	2	P/N 00766.50 1-1/2" CXMIP Adapter
5	2	P/N 13002.00 1-1/2" Ball Valve
6	2	P/N 00767.10 1-1/2" Brass Street Ell
7	4	P/N 50109.00 Hose Clamp #28 SS
8	1	P/N 13001.82 CMA-44 Dr. Pipe Support Bracket

WATER CONTROL SYSTEM

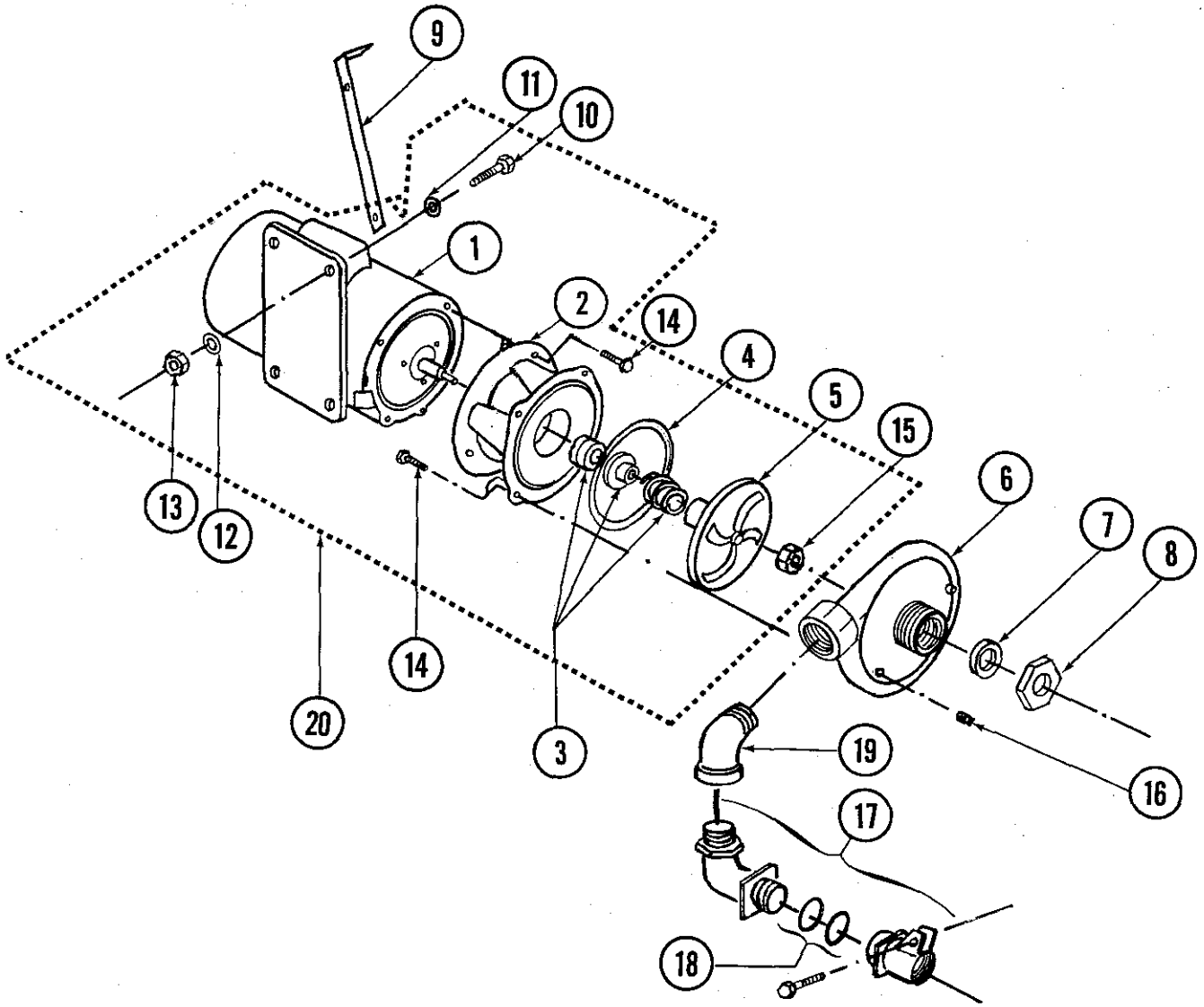


ITEM NO.	NO. REQ'D	DESCRIPTION
*1	1	P/N 13417.77 CMA-44 Immersion Htr. 3 PH, 240V, 10KW*
2	1	P/N 13463.10 CMA-44 Liquid Level Switch
3	1	P/N 13417.85 CMA-44 10 KW Heater Thermostat
4	1	P/N 03202.00 Thermometer
5	1	P/N 13463.50 Liquid Level Switch Shield

** Includes P/N 13417.85 Thermostat.*

CMA DISHMACHINES

PUMP SYSTEM ASSEMBLY



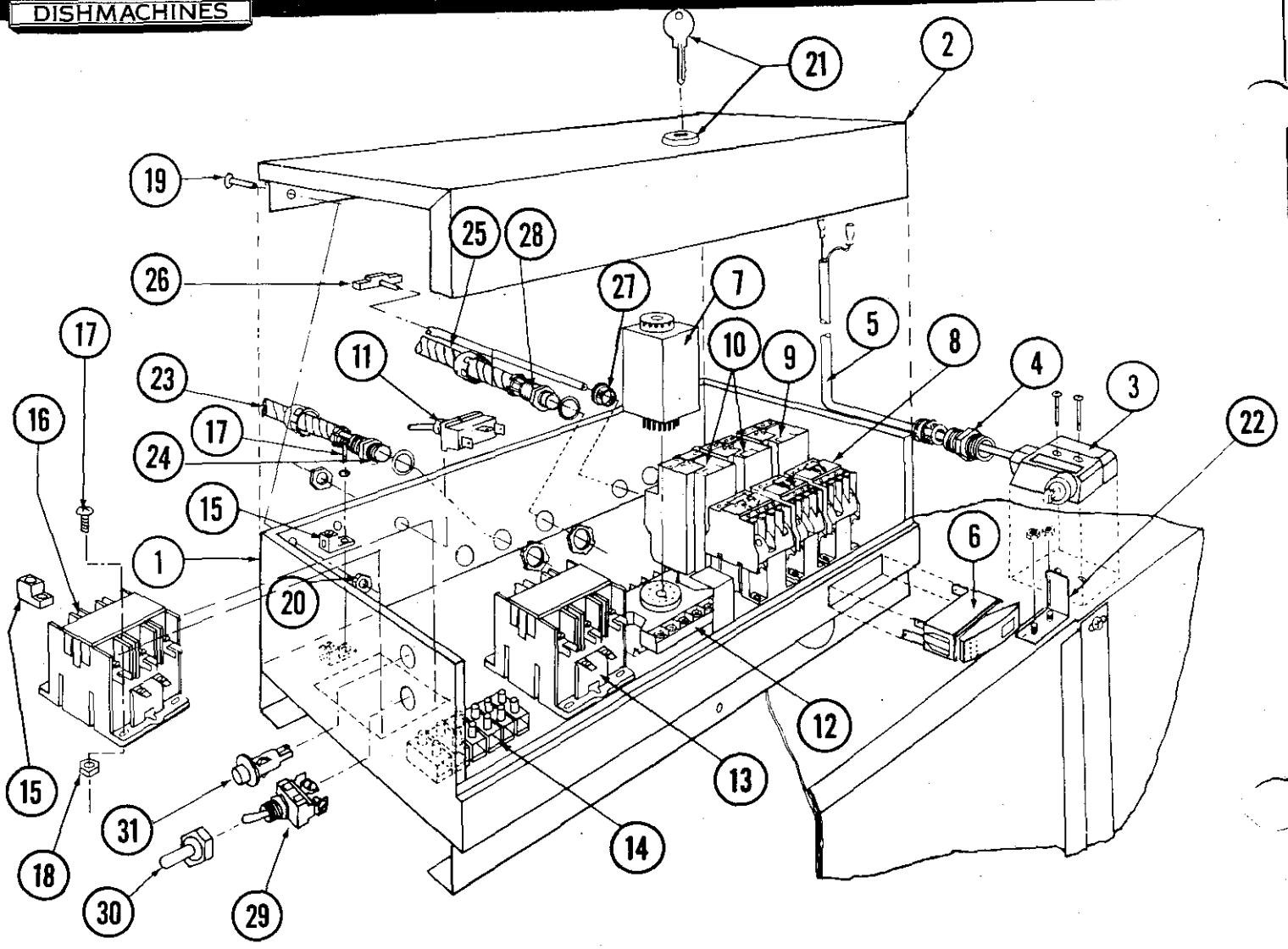
ITEM NO.	NO. REQ'D	DESCRIPTION
1	2	P/N 00201.85 Pump Motor 1 HP, 3 PH, 60 HZ, 220V
2	2	P/N 03224.00 Pump Base Mount
3	2	P/N 00206.00 Pump Seal Kit
4	2	P/N 03226.00 Pump "O" Ring Gasket
5	2	P/N 03222.85 CMA-44 Water Pump Impeller
6	2	P/N 04206.00 Pump Cover
7	2	P/N 00208.00 Slip Joint Nut Gasket
8	2	P/N 04204.00 Compression Nut 2.5"
9	2	P/N 13916.00 Motor Support Bracket
10	4	P/N 00906.00 1/4" – 20 x 1/2" Hexhead Bolt

ITEM NO.	NO. REQ'D	DESCRIPTION
11	4	P/N 00922.00 1/4" Lock Star Washer
12	4	P/N 00924.00 1/4" SS Washer
13	4	P/N 00912.00 1/4" – 20 Nylon Lock Nut
14	16	P/N 00921.00 3/8" – 16 x 3/4" SS Hexhead Bolt
15	2	P/N 13829.00 7/16 – 20 Thin Nylon Lock Nut
16	4	P/N 00238.00 3/8" Male Plug
17	2	P/N 00213.00 1" Ford Adapter MIP x PJ Tube
18	2	P/N 00225.00 1" Compression Gasket
19	1	P/N 00704.85 1" 90° Elbow *
20	2	P/N 00200.85 Motor Assy. 1 HP, 3 PH, 220V, 60 HZ **

** For CMA-44 R → L only.*
*** Includes Items 1, 2, 3, 4, 5 and 14.*

CMA DISHMACHINES

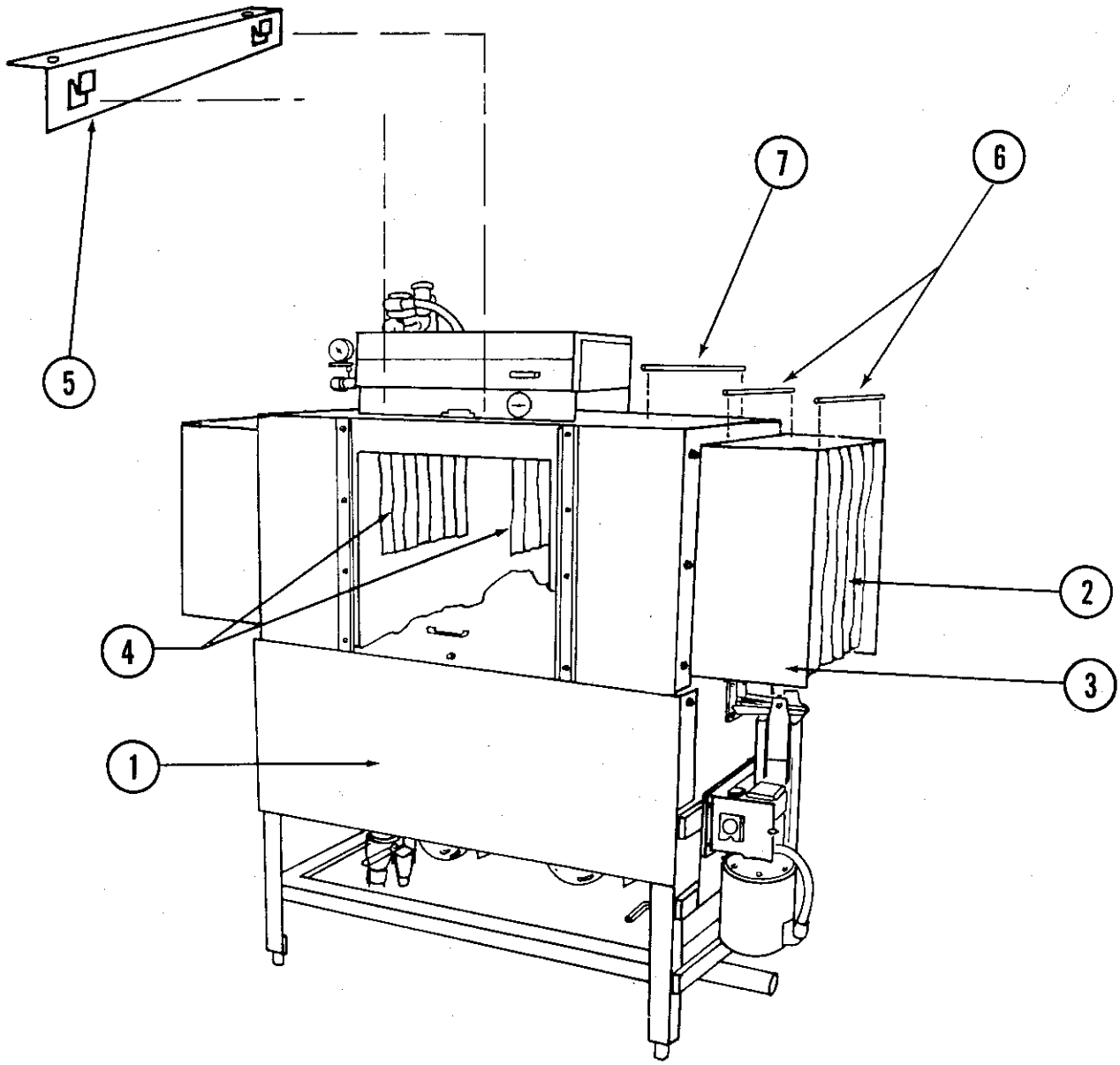
CONTROL BOX ASSEMBLY



ITEM NO.	NO. REQ'D	DESCRIPTION
1	1	P/N 13904.10 CMA-44 Control Box Body
2	1	P/N 13904.82 CMA-44 Control Box Lid
3	1	P/N 00471.85 CMA-44 Cut Off Limit Switch
4	1	P/N 00471.80 Limit Switch Cord Connector
5	2	P/N 00546.00 Switch Cord
6	1	P/N 00421.83 Heater Rocker Switch/Amber
7	1	P/N 13418.85 60 Sec. Timer Relay
8	3	P/N 13012.10 CMA-44 Motor Stater (LICD0910U6)
9	1	P/N 13012.30 1/3 HP Overload Relay Sqd. (LR2D1306)
10	2	P/N 13012.20 1 HP Overload Relay Sqd. (LR2D1308)
11	1	P/N 13003.70 Timer Relay Override Switch
12	1	P/N 13419.85 Timer Power Block Socket
13	1	P/N 13003.40 CMA-44 Heater Contactor #C25DN325B
14	2	P/N 00454.10 3 Pole Socket Terminal Block
15	1	P/N 13426.50 Control Box Ground Block

ITEM NO.	NO. REQ'D	DESCRIPTION
16	1	P/N 13003.50 Main Contactor
17	2	P/N 03812.00 8 – 32 x 5/8" Pan Head Screw
18	1	P/N 00927.00 8 – 32 Nylon Lock Nut
19	4	P/N 00911.50 8 – 32 x 3/8" Pan Head Screw
20	3	P/N 00927.00 8 – 32 Nylon Lock Nut
21	1	P/N 00449.00 Lock and Key
22	1	P/N 00471.84 Door Safety Switch Bracket
23	20	P/N 00400.00 3/8" Sealtite Conduit
24	4	P/N 00401.00 ST 3/8" Connector
25	6	P/N 00400.10 1/2" Sealtite Conduit
26	1	P/N 00557.50 Kynar Reed Switch
27	1	P/N 00438.00 875-11 Snap Bushing
28	1	P/N 00401.10 1/2" Conduit Connector
29	1	P/N 00471.10 On/Off Switch
30	1	P/N 00471.10 Rubber Boot
31	1	P/N 00406.05 220V Green Light

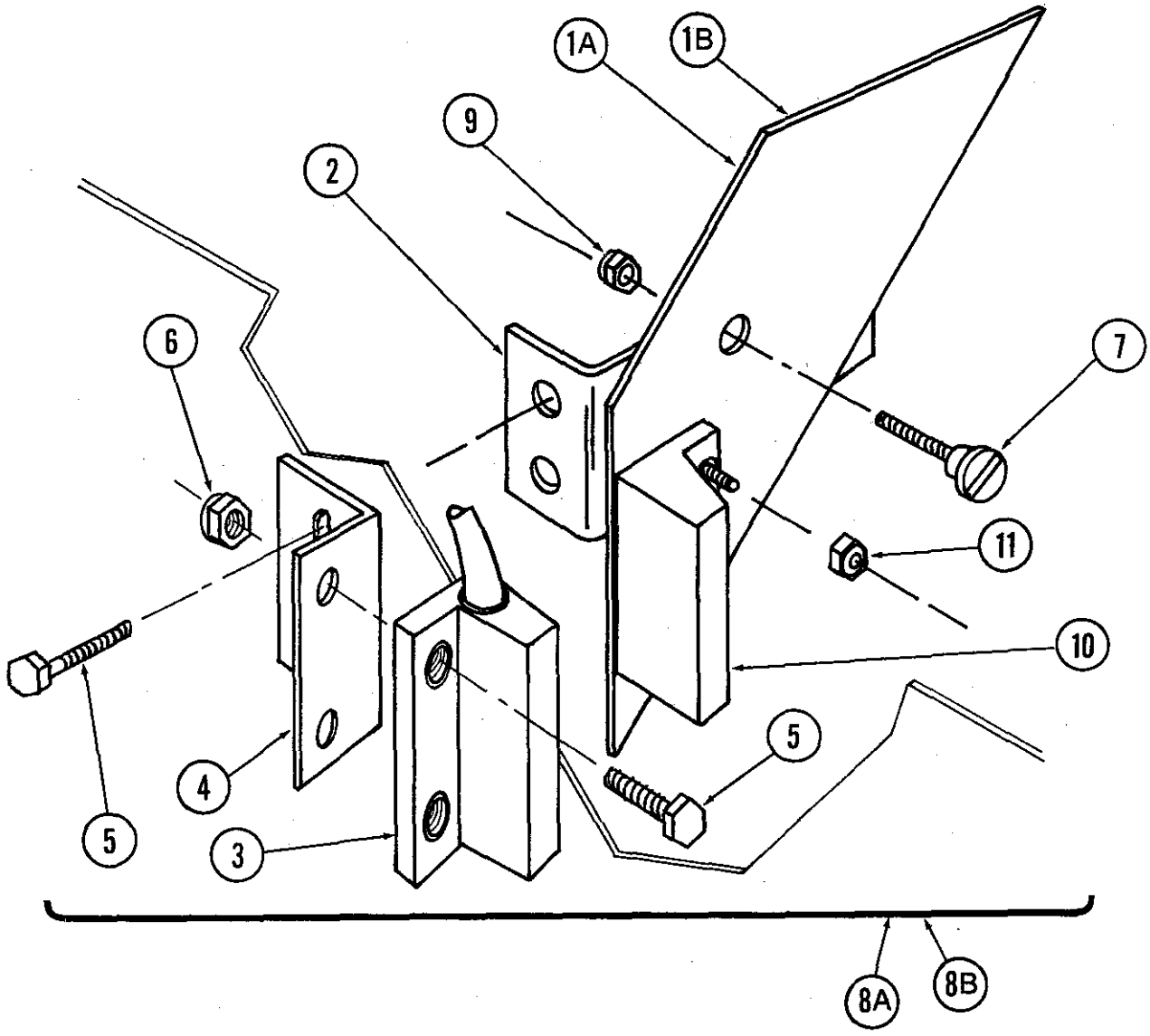
CURTAIN AND VENT SYSTEM



ITEM NO.	NO. REQ'D	DESCRIPTION
1	1	P/N 13912.82 M-2 Splash Shield
2	2	P/N 13703.20 M-2 Curtain Longest 20-1/2" x 19"
3	1	P/N 13702.25 M-2 Curtain Smallest 20-1/2" x 15"
4	2	P/N 13702.30 M-2 Curtain (Widest) 24-1/2" x 15"
5	2	P/N 13704.50 Conveyor Curtain Splash Guard
6	3	P/N 13705.00 Curtain Rod Short
7	2	P/N 13705.10 Curtain Rod Long

CMA DISHMACHINES

PADDLE SWITCH ASSEMBLY



ITEM NO.	NO. REQ'D	DESCRIPTION
1	1-A	P/N 13409.86 Paddle with Magnet, R → L
1	1-B	P/N 13409.89 Paddle with Magnet, L → R
2	1	P/N 13409.87 Paddle Support Brackets
3	1	P/N 00557.56 Kynar Reed Switch
4	1	P/N 13409.30 P.S. – Reed switch Bracket
5	4	P/N 00914.00 1/4" - 20 x 3/4" Hexhead Bolt
6	4	P/N 00912.00 1/4" - 20 Nylon Lock Nut
7	1	P/N 00109.00 Shoulder Bolt
8-A	1	P/N 13409.85 Paddler Switch Assembly, R → L
8-B	1	P/N 13409.84 Paddler Switch Assembly, L → R
9	1	P/N 3801.00 10 - 32 Lock Nut
10	1	P/N 00557.70 Kynar Reed Switch Magnet Only
11	2	P/N 00927.00 8 - 32 Nylon Lock Screw

ADDENDUM FOR MACHINES INSTALLED IN THE CITY OF CHICAGO

"All food dispensing establishments using chlorine or other approved chemical sanitizers shall, at all times, maintain an adequate testing device."

"Dishes and other eating and drinking utensils to be washed in a dishwashing machine shall be properly scraped and pre-rinsed and shall be stacked in racks or trays so as to avoid overcrowding, and so as to permit the wash and rinse waters to reach all surfaces of each utensil."

"In machine washing, multi-use eating and drinking utensils shall be washed in water containing a suitable detergent at a temperature from 120 degrees F. to 140 degrees F. or other method approved by the Department of Health."

"The water in the wash tank shall be changed during operation as often as is necessary to keep it reasonably clean. An effective concentration of detergent in the wash water shall be maintained at all times."

"Bactericidal treatment shall consist of exposure of all surfaces of dishes and utensils being washed to a rinse of clean water, at a temperature of not less than 180 degrees F. or other method approved by the Department of Health."

"All dishwashing machines shall maintain a flow pressure not less than 15 or more than 25 pounds per square inch on the fresh water line at the machine and not less than 10 pounds per square inch at the rinse nozzles. A suitable gauge cock shall be provided immediately upstream from the final rinse sprays to permit checking the flow of the final rinse water. An easily readable thermometer accurate to ±2 degrees F. shall be provided on both the wash and rinse water lines of the dishwashing machine which will indicate the temperature of the water solution therein."

"Dishwashing machines shall be thoroughly cleaned at least once each day. The pumps and the wash and rinse sprays or jets shall be so designed that a forceful stream of water will reach all surfaces of the utensils when they are properly racked. These parts shall be thoroughly cleaned at least once each day. The pumps and the wash and rinse sprays or jet shall be so designed that a forceful stream of water will reach all surfaces of the utensils when they are properly racked. These parts shall be readily accessible for inspection and cleaning."

"After bactericidal treatment, utensils and containers shall be stored at a sufficient height above the floor in a clean, dry place, protected from flies, splash, dust, overhead leakage and condensation, and other contamination. Containers and utensils shall be inverted, covered, or otherwise protected from contamination until used for serving."

Drain racks, trays, and shelves shall be made of non-corrodible material and shall be kept clean.

In handling containers and utensils the surfaces thereof which come in contact with food or drink shall not be touched by the hands, except during the process of washing.

Tables for clean and dirty dishes and food shall be so arranged that the dirty dishes will be as far removed from the food and clean dishes as may be possible.

All single-service articles and utensils shall be purchased in sanitary cartons and stored therein in a clean, dry place until used, and after removal from the cartons, these articles shall be handled in such a manner as to prevent contamination.

Please note the following procedures must be followed for City of Chicago Approval:

1. **All low energy models must have low level sani alarms, both visual and audio.**

2. **All models must have a City of Chicago approval data label affixed to the machine.**

3. **Chlorine sanitizer must be a minimum of 100 PPM.**