



# MODEL CMA-180UC

SERVICE & PARTS MANUAL

Rev 1.10



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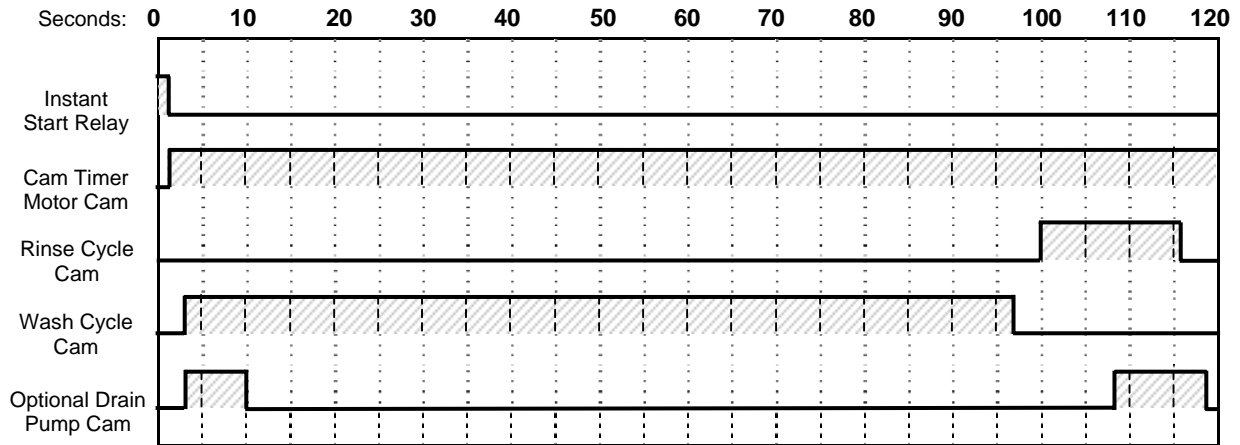
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# 1. Specifications

<b>1.1. CMA-180UC</b>	<b>METRIC EQUIVALENT</b>	
<b>WATER CONSUMPTION</b>		
PER RACK	.86 GAL.	(3.25 L)
PER HOUR	20.6 GAL.	(77.8 L)
<b>OPERATING CYCLE</b>		
WASH TIME-SEC	94	94
RINSE TIME-SEC	16	16
DWELL TIME-SEC	10	10
TOTAL CYCLE	2 MIN.	2 MIN.
<b>OPERATING CAPACITY</b>		
RACKS PER HOUR	24	24
WASH TANK CAPACITY	2.5 GAL.	(9.46 L)
PUMP CAPACITY	38 GPM	(144 LPM)
<b>WATER REQUIREMENTS</b>		
	140°F	(60°C)
WATER INLET	½"	—
DRAIN CONNECTION	1"	—
RINSE PRESSURE SET	24 PSI	1.7 kg/cm <sup>2</sup>
<b>CYCLE TEMPERATURES</b>		
WASH-°F	155°F – 160°F	(68°C/71°C)
RINSE-°F	180°F – 195°F	(82°C/90°C)
<b>FRAME DIMENSIONS</b>		
DEPTH	26"	(66.04 cm)
WIDTH	24"	(60.96 cm)
HEIGHT	33 ¼"	(84.45 cm)
MAX CLEARANCE FOR DISHES	15"	(38.1 cm)
<b>ELECTRICAL RATING*</b>	<b>208 VOLTS</b>	<b>230 VOLTS</b>
	1 PH—60 Hz	1 PH—60 Hz
	33 AMPS	35 AMPS
BOOSTER HEATER	5.3 kW	6.5 kW
WASH PUMP MOTOR	¾ HP	¾ HP
<b>*MUST CONNECT TO DEDICATED 50 AMP SUPPLY CIRCUIT.</b>		
<b>USE #8 AWG (MIN) 90°C STANDARD COPPER WIRE</b>		
THIS SYSTEM REQUIRES THREE POWER WIRES, WHICH INCLUDES A CURRENT CARRYING NEUTRAL. AN ADDITIONAL FOURTH WIRE MUST BE PROVIDED FOR MACHINE GROUND.		
<b>SHIPPING WEIGHT</b>		
APPROXIMATE	193#	(87.54 kg)

## 1.2. CMA-180UC Operational Cycle

The CMA-180UC Operational Cycle has a total cycle time of 2 minutes (120 seconds). The Timing Diagram and the steps listed below detail the individual functions that are executed during each Operational Cycle.



1. With the machine powered up toggling the START switch begins a cycle.
  - a) Toggling the START switch energizes both the Cam Timer motor and the Instant Start Relay. The Instant Start Relay latches ON the power to the Cam Timer motor so that the START switch can be released a moment after it has been toggled without the Cam Timer motor losing power.
  - b) After about 1.5 seconds the Cam Timer's first cam—the Cam Timer Motor Cam—latches ON the power to the Cam Timer motor and drops out the Instant Start Relay. The Cam Timer motor continues to run for a total of 2 minutes, at which time it switches OFF—resetting the Cam Timer—and waits for the next START command.
2. The Cam Timer's third cam controls the Wash Pump. The Wash Pump comes ON about 3 seconds into the Operational Cycle and continues to run for 94 seconds. This 94-second period is the Wash Cycle.
3. At the same time that the Wash Pump comes ON the Cam Timer's fourth cam powers ON the Optional Drain Pump—if one is present—and keeps it running for about 7 seconds before powering OFF. This cam turns ON again midway through the Rinse Cycle and stays ON for 10 seconds, turning OFF 2 seconds after the Rinse Cycle has completed.
4. About 3 seconds after the Wash Cycle has completed the Cam Timer's second cam, which controls the Rinse Cycle, turns ON—energizing the Water Solenoid—and stays ON for 16 seconds. This 16-second period is the Rinse Cycle.



## 2. Getting Started

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### 2.1. Introduction to CMA-180UC

The CMA-180UC is a hot water sanitizing, single rack, under-counter dishmachine. It is a standalone machine featuring a self-contained booster heater. The only external connections necessary are power supply, water supply, drainpipe, and optional chemical dispensers. The machine uses re-circulated wash water and fresh water final-rinse.

Operation of the CMA-180UC is extremely user friendly. To initially fill the machine each day, push the switch marked "FILL". The machine is full when water begins to flow into the scrap tray. The booster tank heater will maintain the wash water temperature at 155°F. The booster heater will produce a minimum of 180°F final rinse water each cycle.

The supply water to the CMA-180UC must be a minimum of 140°F at 24 PSI (Pounds per Square Inch) with a 6 GPM (Gallons Per Minute) flow rate and 60 GPH (Gallons Per Hour) recovery rate. The pipe supplying the water must be ½" minimum. The plumbing connection is located at the back of the machine. (See specification sheet on page 2).

The drain is a 1" barbed fitting on the back of the machine for easy attachment of your drain hose.

The machine retains the features of the standard CMA-180 Series in that it has a scrap tray and the manner in which the tank is filled ensures that the dishes are always rinsed with fresh water instead of re-circulated water. The CMA-180UC is the first under-counter dishmachine of its kind to discharge soil from the wash tank into a scrap tray outside of the wash chamber. This feature keeps the wash water much cleaner over long periods of time. The scrap tray may be emptied on a periodic basis without interruption of the flow of work, thereby providing a much cleaner environment for the wash and rinse cycle. There are also enhancements that can be chosen when required such as drain pump kits and other accessories. Refer to Section 4 "Parts Manual" for the parts list and accessories available for the machine.

This manual is structured to provide a complete reference guide to the CMA-180UC. It is presented in a manner that all users will be able to comprehend and use as an effective tool in supporting the operation and maintenance of the dishmachine. The first section explains how the machine is packaged and what to look for when receiving the machine.

After unpacking the machine, this manual explains how to install and set up the machine for use. Requirements are given for plumbing, wiring, and space considerations. *These attributes of the machine are always taken into consideration by our well-trained sales representatives prior to the order being placed.* In the manual, guidance is also given for installation to ensure that the machine will be able to run at optimum conditions.

The Operation Section of the manual may be used for instruction and procedures when required. We make this portion of the manual easy to understand so that all levels of operators may be able to read and comprehend the operation of the machine. The function of the machine itself is mostly automatic and takes little training to put into full operation. The Operation Section also includes diagnostic considerations for the machine when problems occur.

The next section of the manual is the Parts Manual. This section has the parts lists and wiring diagram for the machine. CMA warrants the workmanship of the machine.

We are committed to providing the best machines and customer service in the food industry and your feedback is welcome.

## 2.2. Receiving and Installation

The dishwasher is shipped from the factory in a corrugated box on a wooden pallet. The installation guidelines give a systematic procedure for setting up the machine.

Start by removing the packaging material. Unwrap the machine and check for the following component parts:

The Wash Tank Scrap Screen is shipped inside the wash cavity of the machine. This screen must be in place during operation. It has been designed to perform two basic functions:

1. Strain water that is circulating through the spray arms and pump assembly.
2. A basket to catch broken glass, or heavy solids that may plug the impeller.

Set the machine in place, and level from side-to-side and front-to-back.

### 2.2.1. Electrical<sup>1</sup>

A 50-amp, single-phase 230 volt, 60 Hz dedicated circuit should be used to supply electrical energy to the CMA-180UC dishwasher (see specification sheet page 2). This system requires three power wires, which include a current carrying neutral. An additional fourth wire must be provided for ground. CMA and local codes require the CMA-180UC to be hardwired using #8 AWG (90°C) copper wire (minimum). Approximately 4-feet of ¾" flexible conduit with power leads (L-1, L-2, Neutral and Ground) extending out of the conduit are provided for easily connecting the power at installation. The power connection must be located such that there is sufficient length of the flexible conduit remaining to permit the machine to be moved for cleaning.

### 2.2.2. Plumbing<sup>2</sup>

The machine is equipped with a ½" NPT connection located at the lower left-hand corner (facing the back) of the machine. A 140°F water line should be plumbed to this point (see specification sheet page 2). The water line used must be of sufficient length and flexibility to permit the machine to be moved for cleaning.

The supply water to the CMA-180UC must be a minimum of 140°F at 24 PSI (Pounds per Square Inch) with a 6 GPM (Gallons Per Minute) flow rate and 60 GPH (Gallons Per Hour) recovery rate. The pipe supplying the water must be ½" minimum. The plumbing connection is located at the back of the machine. (See specification sheet on page 2).

The CMA-180UC may be supplied with an optional drain pump for elevated drains. For floor gravity drain applications the drain pump should not be used and a good commercial grade hose needs to be connected to the discharge side of the diverter valve (drain valve) and run to the floor drain. If removing a drain pump, safe-end (insulate electrically) the white and purple wires and secure them out of the way. If a drain pump is used with a floor drain, the drain hose must rise 12 to 16" before dropping to the floor drain (to reduce any chance of the pump cavitating).

### 2.2.3. Detergent And Rinse Dispenser

**Note:** *If you are installing the optional CMA Supplied Detergent and Rinse Dispenser follow the instructions in Section 2.2.4 CMA Supplied Detergent and Rinse Dispenser.*

1. A mounting plate for ½" conduit is provided on the top right-hand corner (facing the back) of the machine. (See section 4.4 Mechanical Drawings; Cabinet Assembly, item A).

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<sup>1</sup> All electrical connections must be made by a qualified electrician

<sup>2</sup> All plumbing connections must comply with all safety and plumbing codes

- i. Run an appropriate length of ½" conduit from your dispenser to the mounting plate where it will be secured. The conduit needs to be of sufficient length and flexibility to permit the machine to be moved for cleaning without having to disconnect any wiring.
  - ii. Run your dispenser wires from the conduit through the enclosed area across the top of the machine and feed them through the access hole provided in the back of the control panel drawer.
2. With the machine's power "OFF", connect your detergent and rinse dispenser wires to the power block supplied and labeled ("DISPENSER 110V - 3 AMPS MAX") inside the control panel drawer. See Figures 2.2.3a, and Figure 2.2.3c. Connect dispenser ground (if present) to the ground lug located next to the power block. See Figure 2.2.3d.
3. Remove the plug from the mixing chamber located by the vacuum breaker on the back of machine and install the rinse injection fitting (supplied with your dispenser). See Figure 2.2.3b.
4. A 7/8" detergent injection hole is provided in the back of the wash tank. Remove the S.S. plug and install the detergent fitting. See Section 4.4.1 Cabinet Assembly, item #17.

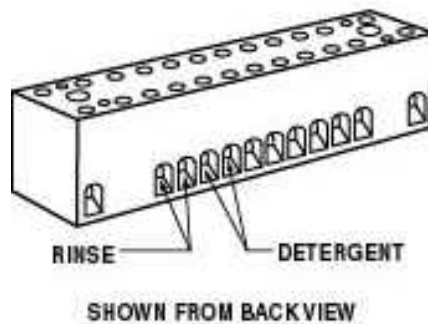


Figure 2.2.3a

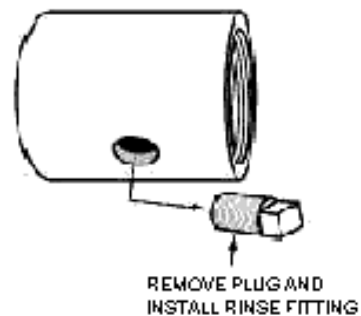
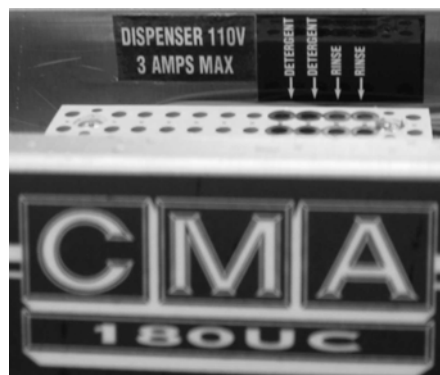


Figure 2.2.3b



(Dispenser wire connections)  
Figure 2.2.3c



(Ground lug)  
Figure 2.2.3d

## 2.2.4. CMA Supplied Detergent and Rinse Dispenser<sup>1</sup> (Optional)

The CMA supplied Detergent and Rinse Dispenser has its own reference manual. Familiarize yourself with the dispenser's reference manual before proceeding with installation.

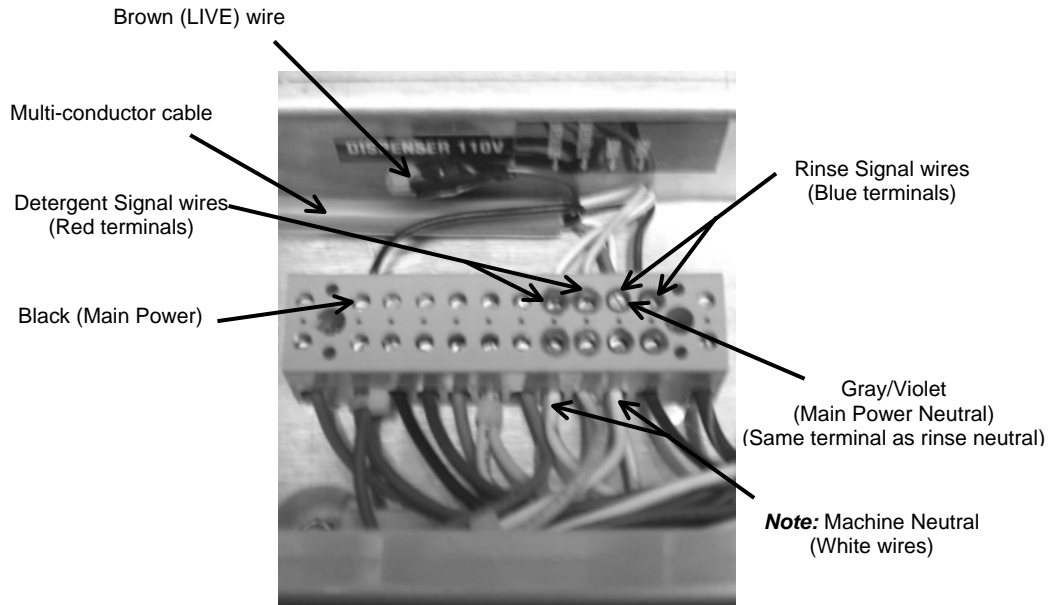
1. The CMA supplied dispenser is pre-wired with a multi-conductor electrical cable that is to be run through a conduit to the power block inside the control panel drawer. Use a ½" watertight conduit meeting all local and national codes. A conduit fitting is present on the bottom of the dispenser where the power cable exits. A mounting plate to receive the ½" conduit is provided on the top right-hand corner (facing the back) of the machine. (See section 4.4 Mechanical Drawings; Cabinet Assembly, item A).
  - i. Run an appropriate length of ½" conduit from your dispenser to the mounting plate where it will be secured. The conduit needs to be of sufficient length and flexibility to permit the machine to be moved for cleaning without having to disconnect any wiring.
  - ii. Run your dispenser wires through the conduit and through the enclosed area across the top of the machine and then feed them through the access hole provided in the back of the control panel drawer.
  - iii. With the machine's power "OFF", connect your detergent and rinse dispenser wires to the power block supplied and labeled ("DISPENSER 110V - 3 AMPS MAX") inside the control panel drawer. The table that follows lists the function of each conductor of the multi-conductor electrical cable.

Wire Colors	Circuit Voltage	Function
Gray/Violet	90 VAC-130 VAC 50/60 Hz	Main AC Power
Black	90 VAC-130 VAC 50/60 Hz	Main AC Power
Brown	No Connection. <b>Insulate this wire!</b>	This wire is LIVE!
Yellow	90 VAC-130 VAC 50/60 Hz	Detergent Signal
White/Yellow	90 VAC-130 VAC 50/60 Hz	Detergent Signal
Violet	90 VAC -130 VAC 50/60 Hz	Rinse Signal
White/Violet	90 VAC -130 VAC 50/60 Hz	Rinse Signal

The individual conductors need to be connected as shown in Figure 2.2.4 and as described on next page.

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<sup>1</sup> All electrical connections must be made by a qualified electrician



**Figure 2.2.4**

**Note:** In Figure 2.2.4 the machine's wire harness was left out of the back of the power block to more clearly show the dispenser wires.

2. Remove the plug from the mixing chamber located by the vacuum breaker on the back of machine; and install the rinse injection fitting (supplied with your dispenser). See Figure 2.2.3b.
3. A 7/8" detergent injection hole is provided in the back of the wash tank. Remove the S.S. plug and install the detergent fitting (supplied with your dispenser). See Section 4.4.1 Cabinet Assembly, item #17.
4. The final step of installing the CMA supplied Detergent and Rinse Dispenser is programming it to your specific application. The reference manual supplied with the dispenser shows you how to program it.
  - Keep in mind while reading the reference manual that the CMA-180UC operates in "probe-less" mode. (This mode is selected by setting a value of "2" in screen 21).
  - Screen 22 must be set to "1" (Door).

There are four user functions with this dispenser. Their operation is described in the reference manual. The four user functions are:

- **Rack Counter**
- **Detergent Prime**
- **Rinse Prime**
- **De-Lime**

## 2.2.5. Booster Heater Setup

The booster tank must be filled with water before the heating element is energized. For this reason the "High Limit Switch" has intentionally been activated at the factory and will require resetting before the heating element will turn on.

Follow the procedure below to complete the initial installation:

1. Close the door on the machine.
2. Turn the Power switch to the "ON" position.
3. Hold the "FILL" switch in until water overflows into the scrap tray.
4. Turn the Power switch to the "OFF" position.
5. Reset the High Limit Switch by pressing its reset button (the High Limit Switch is located behind the thermostat, which is behind the front kick panel). See section 4.4.10 Heater Assembly, item #3.

## 2.2.6. Installers Checklist

- Dishmachine checked for concealed damage
- Hot water supply is 140° F (60 C) — minimum
- Incoming water supply line is ½" — minimum
- Incoming water supply is 6 GPM minimum at 24 PSI
- Supply circuit breaker for machine is properly sized (50 amp)
- Service voltage and phase type are correct to machine data plate
- If drain pump is used, drain hose rises 12 to 16" before dropping to drain
- Drain hose is installed with air gap (discharge 1" above drain)
- Optional detergent and rinse dispenser (if present) is properly installed
- Dishmachine is properly grounded
- Dishmachine is properly leveled
- Machine circuit breaker is labeled "DISHWASHER"
- Machine has been "hard-wired" with correctly sized wire
- Booster tank has been filled with water (before High Limit Switch is reset)
- High Limit Switch for heater has been reset (after Booster Tank has been filled)

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## 3. Operation

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### 3.1. *Initial Setup*

#### 3.1.1. Rinse Pressure Regulator

The CMA-180UC requires a supply water input pressure of 24 PSI minimum. This pressure is then reduced by the supply water regulator. Use the following procedure to adjust the rinse pressure to 20 PSI:

1. Close the door on the machine.
2. Turn the Power switch to the "ON" position.
3. While holding the "FILL" switch—to activate the water solenoid—adjust the pressure regulator until the gauge reads 20 PSI. (Regulator is located behind the front kick panel). See section 4.4.5 Plumbing System Assembly, item #2.

#### 3.1.2. Rinse and Wash Temperatures

1. Turn the Power switch to the "ON" position.
2. After the machine has warmed up for about ten-minutes, note the wash and rinse temperatures. The wash temperature must be 155°F minimum. The rinse temperature must be 180°F minimum<sup>3</sup>. If necessary, adjust the temperatures by removing the front kick panel and turning the thermostat adjustment clockwise to increase, counterclockwise to decrease. This one adjustment controls both temperatures. See section 4.4.10 Heater Assembly, item #2.

#### 3.1.3. Post Instructions

1. Install wall chart and instruct machine operator on proper cleaning and operation of the CMA-180UC.

### 3.2. *Startup Procedures*

1. Open the door of the machine and check that the scrap screen is in place, and that the spray arms and end plugs are secure.
2. Close the door of the machine and turn the Power switch to the "ON" position.
3. Hold the fill button until the water overflows into the scrap tray.
4. Once the water is filled to the proper level, press the rocker switch marked "START" – the machine will automatically begin its cycle.
5. Check machine's operating temperatures — Adjust if necessary. See section 3.1.2 Rinse and Wash Temperatures.
6. At the end of the wash period, drain the machine by pushing the rocker switch marked "DRAIN". Clean the wash tank screen and scrap tray screen. Remove and clean the spray arms. (See wall chart instructions).

See Sections 2.2.3 and 2.2.4 dispenser insulation instructions for proper setup of chemical feeders.

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<sup>3</sup> Rinse cycle temperature must be observed during a rinse cycle while the machine is in operation.

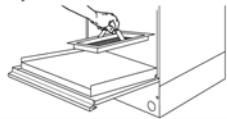
3.3. *Operating and Cleaning Instructions*



# Operating and Cleaning Instructions

## CMA-180UC Undercounter Dishmachine

**1** Open dishmachine door, verify internal scrap screen is in place, then load dish rack.

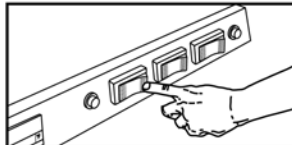


**2** If dishmachine requires powdered soap installed by hand, add proper amount for one (1) gallon of water based on soap manufacturer's recommendations. **IF USING AUTOMATICALLY INJECTED LIQUID SOAP, SKIP THIS STEP.**

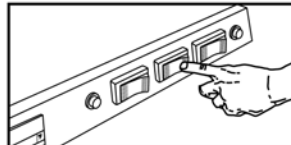
**3** Close dishmachine door.



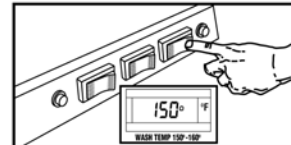
**4** Turn power switch to "ON" position.



**5** Hold the fill button until the water overflows into the external scrap drawer. (Initial fill only.)

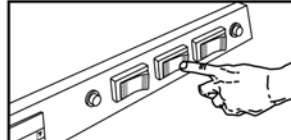


**6** Once proper water level is attained and wash temperature reaches 150°F press rocker switch marked "START".

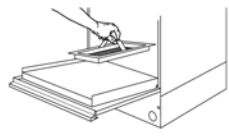


**7** After completion of the wash & rinse cycle, open door, remove clean rack of dishes, load next rack of soiled dishes, close door, press rocker switch marked "START". Repeat as needed.

**8** After all racks of dishes are washed, press and hold rocker switch marked "DRAIN" to drain the wash tank.



**9** Open door. Remove and clean internal scrap screen.



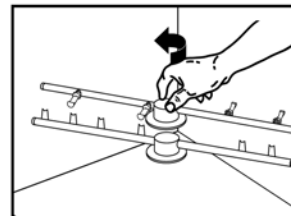
**10** Remove and clean external scrap drawer.



## MAINTENANCE:

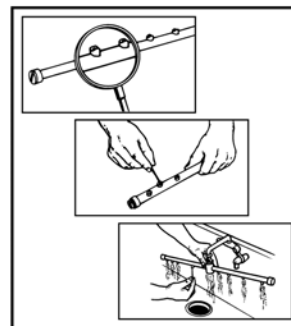
**1** Periodically, inspect before operating:

- Open door and verify internal scrap screen is secure and in place.
- Verify each spray arm is properly installed and threaded assembly is tight.
- Verify spray arm end plugs are tight and secure.



**2** Periodically, remove top and bottom spray arms. Next, inspect spray jets and clean as needed.

- Remove spray arm end plugs and flush with water.



### 3.4. Troubleshooting

PROBLEM	LIKELY CAUSE	SOLUTION
Machine inoperative	Power off at circuit breaker	Reset circuit breaker
	Defective power switch	Replace power switch P/N: <u>15521.50</u>
Motor inoperative	Door is open	Close door
	Control panel is pulled out	Secure control panel
	Defective reed switch	Replace reed switch P/N: <u>00557.55</u>
	Defective timer assembly	Replace timer assembly* P/N: <u>14408.80</u>
	Defective pump motor contactor	Replace contactor P/N: <u>15504.00</u>
	Defective motor	Replace motor P/N: <u>00201.66</u>
Motor runs with door open	Defective reed switch	Replace reed switch P/N: <u>00557.55</u>
	Defective pump motor contactor	Replace contactor P/N: <u>15504.00</u>
Heater (no heat)	High limit switch opened or defective	Reset or replace switch P/N: <u>17523.51</u>
	Defective thermostat	Replace thermostat P/N: <u>13417.89</u>
	Defective heater contactor	Replace heater contactor P/N: <u>15504.50</u>
	Defective heater	Replace heater P/N: <u>15517.00</u>
Heater (never turns off)	Defective thermostat	Replace thermostat P/N: <u>13417.89</u>
	Defective heater contactor	Replace heater contactor P/N: <u>15504.50</u>

\*The timer assembly motor (P/N: 00501.00) or micro switches (P/N: 00411.00) can be replaced independently if that's the only component that's failed.

## Operation

PROBLEM	LIKELY CAUSE	SOLUTION
Low heat during operation	Low incoming water temperature (below 140° F)	Turn up supply water heater Insulate supply water pipe
	Thermostat out of adjustment	Adjust thermostat
	Cold water mixing with supply	Isolate hot water from cold water
	Defective heater	Replace heater <b>P/N: <u>15517.00</u></b>
Low rinse water pressure	Pressure regulator out of adjustment	Adjust pressure regulator
	Defective pressure gauge (actual pressure is okay)	Replace pressure gauge <b>P/N: <u>13605.45</u></b>
Regulator at maximum but rinse pressure still low	Insufficient water supply flow	Supply larger supply line
	Defective water solenoid valve	Replace water solenoid valve <b>P/N: <u>03603.10</u></b>
Low rinse water flow	Low rinse water pressure	See "Low rinse water pressure" in <b>PROBLEM</b> column
	Limed up rinse arm spray nozzles	De-lime rinse arm nozzles
No rinse water flow	Defective water solenoid valve	Replace water solenoid valve <b>P/N: <u>03603.10</u></b>
	Defective (Rinse Relay) ice cube relay	Replace ice cube relay <b>P/N: <u>00631.00</u></b>
Rinse water runs with door open	Defective reed switch	Replace reed switch <b>P/N: <u>00557.55</u></b>
Water overflows scrap tray onto floor	Drain hose is kinked	Un-kink drain hose
	Drain hose is not properly elevated before dropping to drain (if drain pump is used)	Elevate drain hose 12 to 16" above pump before dropping to drain
	Defective timer assembly	Replace timer assembly* <b>P/N: <u>14408.80</u></b>
	Defective drain pump (if drain pump is used)	Replace drain pump <b>P/N: <u>15503.00</u></b>
With power on, activating start switch does not begin cycle	Defective start switch (cycle light will not light either)	Replace start switch <b>P/N: <u>15521.00</u></b>
	Defective timer assembly	Replace timer assembly* <b>P/N: <u>14408.80</u></b>

\*The timer assembly motor (P/N: 00501.00) or micro switches (P/N: 00411.00) can be replaced independently if that's the only component that's failed.

PROBLEM	LIKELY CAUSE	SOLUTION
Start switch requires > 1 second activation to run cycle	Defective (Instant Start) ice cube relay	Replace ice cube relay P/N: <u>00631.00</u>
Activating fill switch does not fill machine	Defective drain/fill switch	Replace drain/fill switch P/N: <u>15522.00</u>
	Defective water solenoid valve	Replace water solenoid valve P/N: <u>03603.10</u>
Fill (rinse water) won't shut off	Defective water solenoid valve	Replace water solenoid valve P/N: <u>03603.10</u>
	Defective drain/fill switch	Replace drain/fill switch P/N: <u>15522.00</u>
	Defective timer assembly	Replace timer assembly* P/N: <u>14408.80</u>
	Defective (Rinse Relay) ice cube relay	Replace ice cube relay P/N: <u>00631.00</u>
Activating drain switch does not drain machine	Drain hose is kinked	Un-kink drain hose
	Defective drain/fill switch	Replace drain/fill switch P/N: <u>15522.00</u>
	Defective drain valve	Replace drain valve P/N: <u>04103.00</u>
Cycle light does not light while cycle runs	Defective cycle light	Replace cycle light (green) P/N: <u>00406.60</u>
Power light does not light but machine runs	Defective power light	Replace power light (red) P/N: <u>00406.00</u>
Wash tank or final rinse temperature does not display	Defective digital thermometer	Replace digital thermometer P/N: <u>03202.45</u>
Both the wash tank temperature and the final rinse temperature do not display	Defective thermometer transformer	Replace thermometer transformer P/N: <u>03202.60</u>
Wash tank or final rinse displays wrong temperature	Defective digital thermometer	Replace digital thermometer P/N: <u>03202.45</u>
	Defective thermister	Replace thermister P/N: <u>03202.65</u>

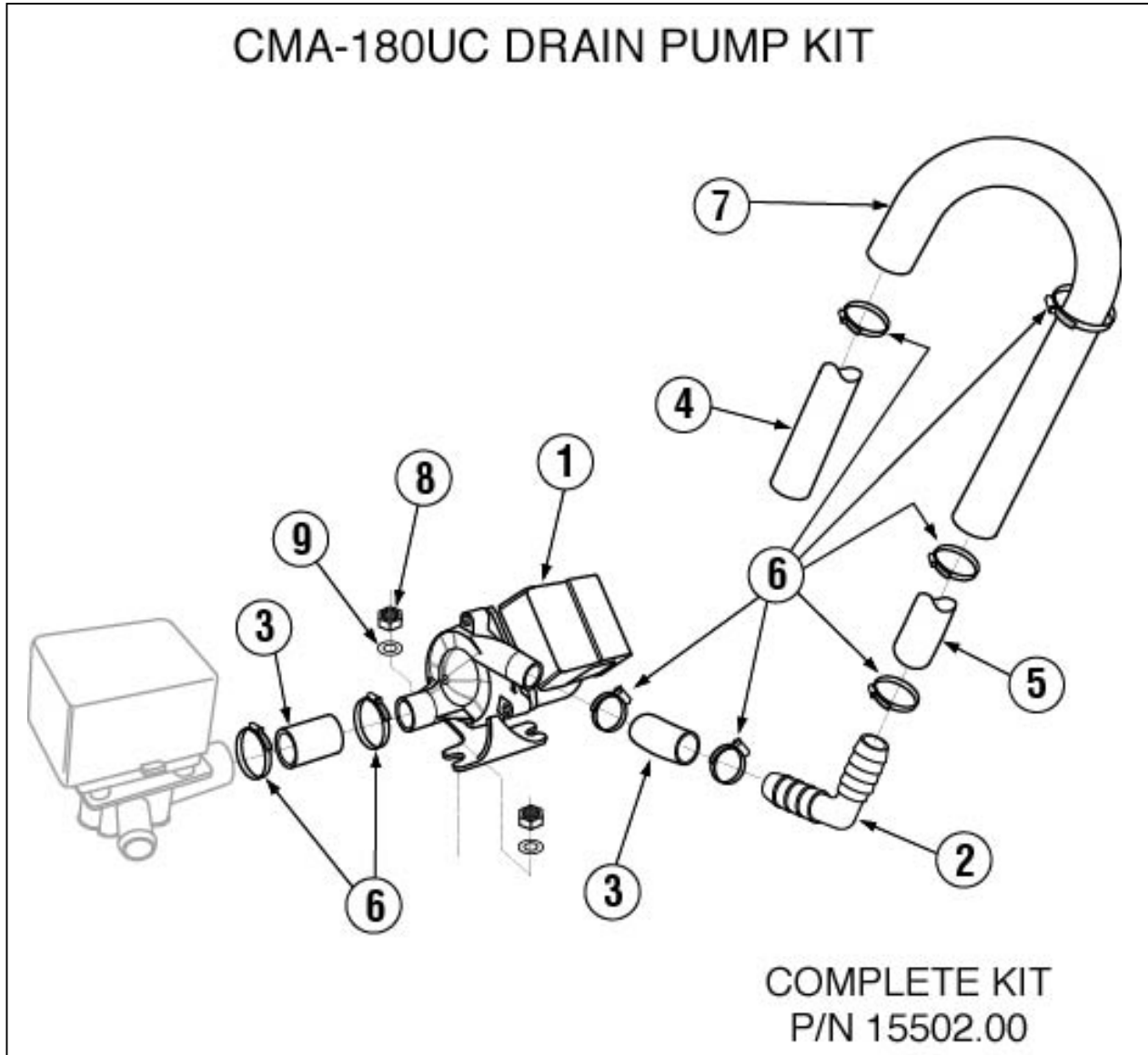
\*The timer assembly motor (P/N: 00501.00) or micro switches (P/N: 00411.00) can be replaced independently if that's the only component that's failed.

## 4. Parts Manual

### 4.1. Initial Parts Kit (P/N 1100.66)

P/N	DESCRIPTION	Qty
15504.00	Motor Contactor, 2-Pole 20 Amp	1
15504.50	Heater Contactor, 2-Pole 35 Amp	1
00501.00	2-Minute Timer Motor	1
00631.00	Ice Cube Relay 120 V	1
15521.00	Rocker Switch Start Momentary	1
15522.00	Rocker Switch Drain/Fill	1
15521.50	Rocker Switch Start Maintained	1
00557.55	Reed Switch	1
03623.00	1/2" Vacuum Breaker Repair Kit – Watts	1
00707.00	1/2" Water Solenoid Repair Kit – J/E	1
04103.00	L1X/L1-C Drain Valve 120V	1
00206.00	Pump Seal Kit	1
13417.89	Heater Thermostat	1
17523.60	High Limit Switch 200°F	1
00411.00	Microswitch	1
00738.15	3/4" Water Solenoid Valve Coil – J/E	1

**4.2. Optional Drain Pump Kit**



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	15503.00	Drain Motor Ultra Jet for CMA-180UC
2	1	04106.00	1" 90° Barb x Barb Elbow
3	2	15601.10	Black Drain Hose 1" ID X 3 1/2"
4	1	15601.50	Drain Hose 1" ID, 6 ft
5	1	15601.20	Drain Hose 1" ID, 10"

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
6	8	03101.00	Hose Clamp 1"
7	1	15603.00	Drain Line Gooseneck
8	2	03801.10	10-32 SS Nut
9	2	04806.00	#10 Brass Washer

### 4.3. Optional Drain Pump—INSTALLATION INSTRUCTIONS

1. Start by removing the existing drain hose from the Drain Valve as shown in **Figure 1**.

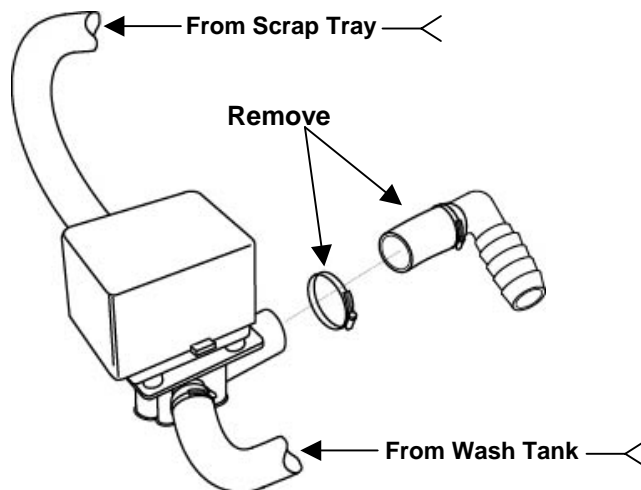


Figure 1

2. Locate the white and purple wires that are safe-ended and tie-wrapped at the top of the Drain Pump compartment. Bring these wires out so they can be connected after mounting the Drain Pump.
3. Connect the 3-inch long pump inlet drain hose to the Drain Valve and mount the Drain Pump using the nuts and washers provided with the kit as shown in **Figure 2**.

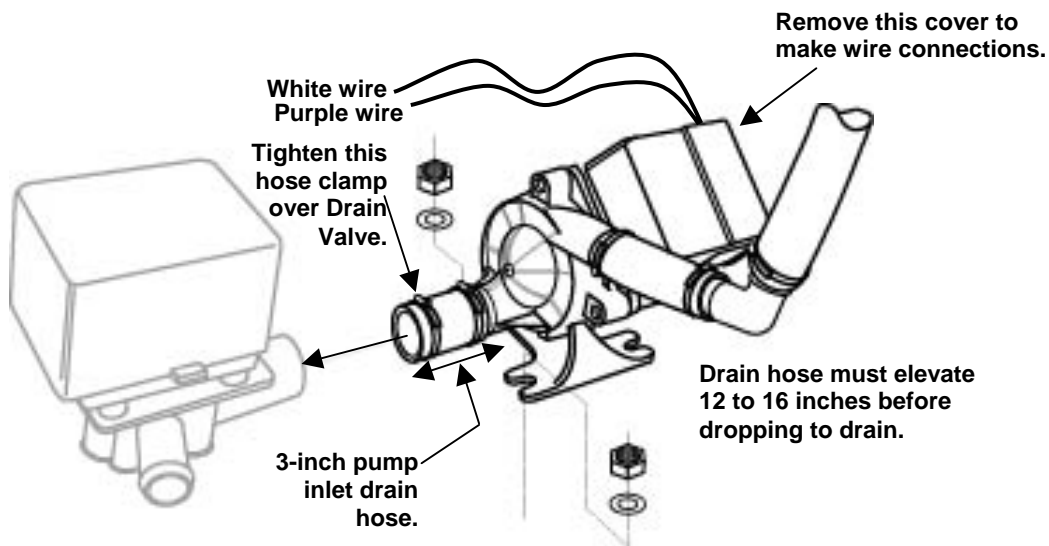
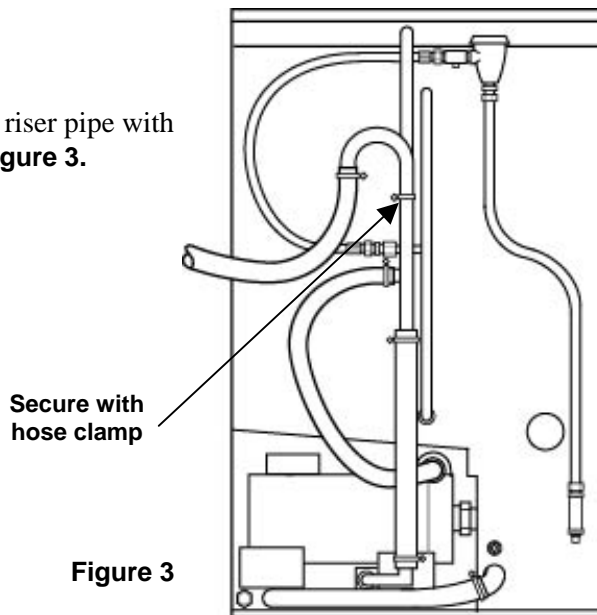


Figure 2

4. Remove the terminal cover and connect the white and purple wires to the two white wires from the pump. Replace the cover.

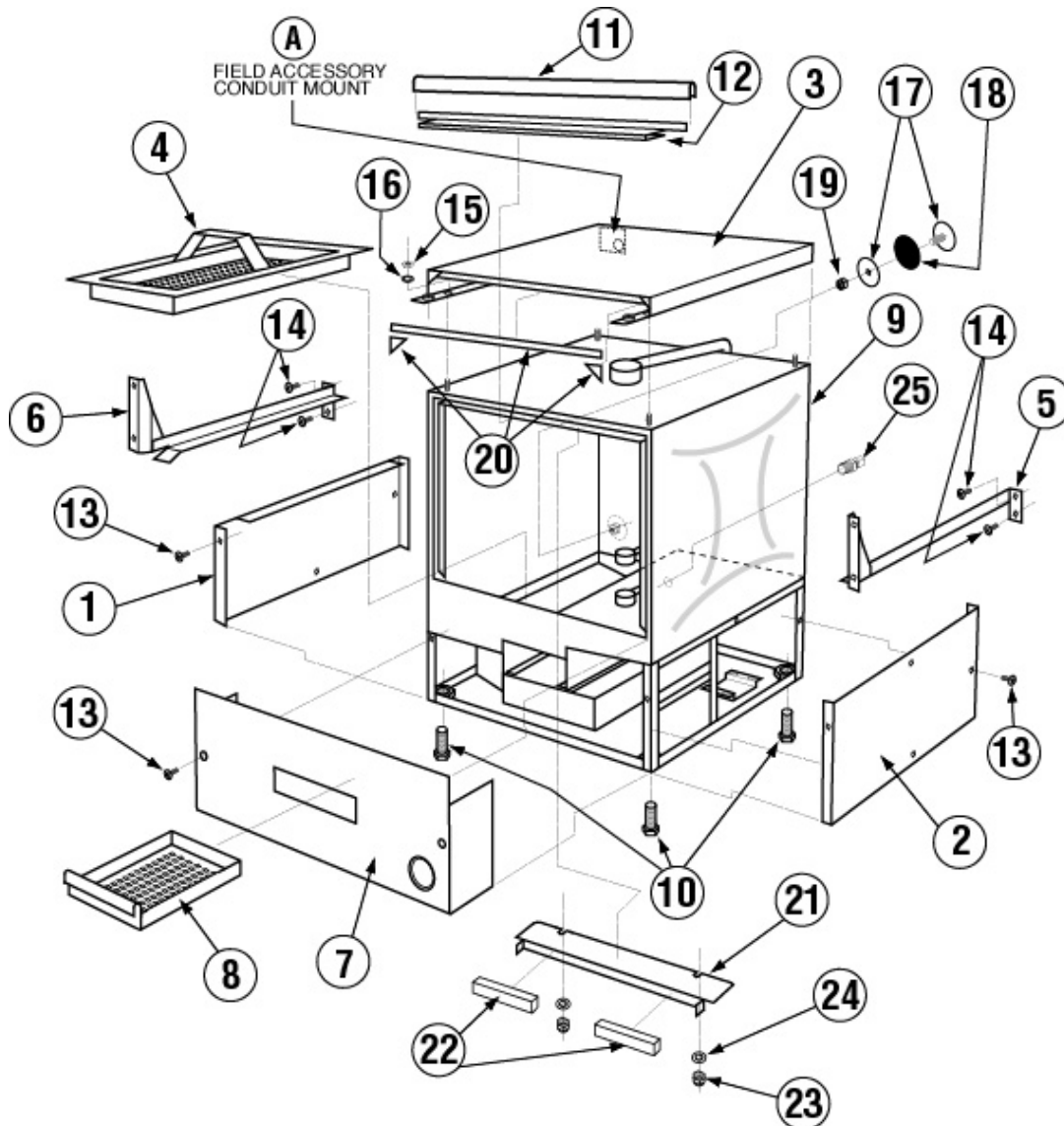
5. Secure the drain gooseneck to the wash riser pipe with the hose clamp provided as shown in **Figure 3**.



6. Route the drain hose to the drain and provide a 1-inch air gap at the drain.

### 4.4. Mechanical Drawings

#### 4.4.1. Cabinet Assembly

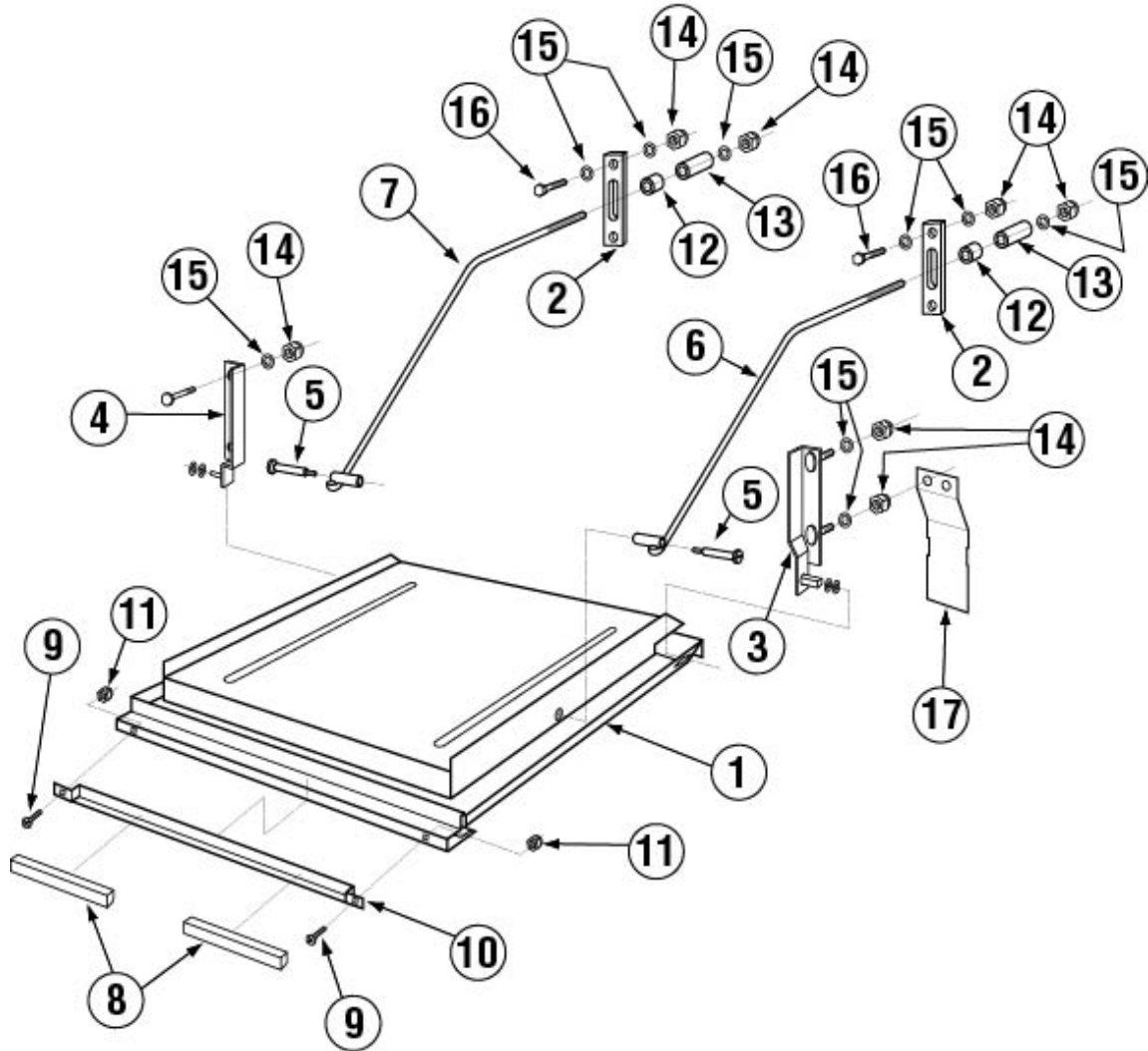


ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	14502.82	Side Panel L.H. for CMA-180UC
2	1	14502.84	Side Panel R.H. for CMA-180UC
3	1	14503.50	SS Top for CMA-180UC
4	1	14510.00	Scrap Basket for CMA-180UC
5	1	14511.00	Tray Track R.H. for CMA-180UC
6	1	14512.00	Tray Track L.H. for CMA-180UC
7	1	14515.00	Lower Front Panel for CMA-180UC
8	1	14560.00	Scrap Tray Drawer for CMA-180UC
9	1	14501.00	SS Body for CMA-180UC
10	4	01310.60	Leg Adjusters for CMA-180UC
11	1	14506.50	Door Gasket for CMA-180UC
12	1	14506.45	Gasket Bracket for CMA-180UC
13	6	00940.50	10-32 x 3/8 Trusshead Screw

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
14	8	00941.00	10-32 x 5/8 Panhead Screw
15	4	03801.00	10-32 Lock Nut
16	4	00940.51	#10 Internal Lock Star Washer
17	1	01513.00	Detergent Injection Hole Plug
18	1	00752.00	Detergent Injection Hole Plug Gasket
19	1	00912.00	1/4"-20 Nylon Lock Nut
20	1	03705.84	Control Box 2ft Gasket for CMA-180UC
21	1	14558.00	Body Magnet Holder for CMA-180UC
22	2	00557.80	Magnet for CMA-180UC
23	2	00927.00	8-32 Lock Nut
24	2	04806.00	#10 Brass Flat Washer
25	1	00214.30	1/4" Compression x 3/8" MIP Fitting

4.4.2. Door Assembly

CMA-180UC DOOR ASSEMBLY

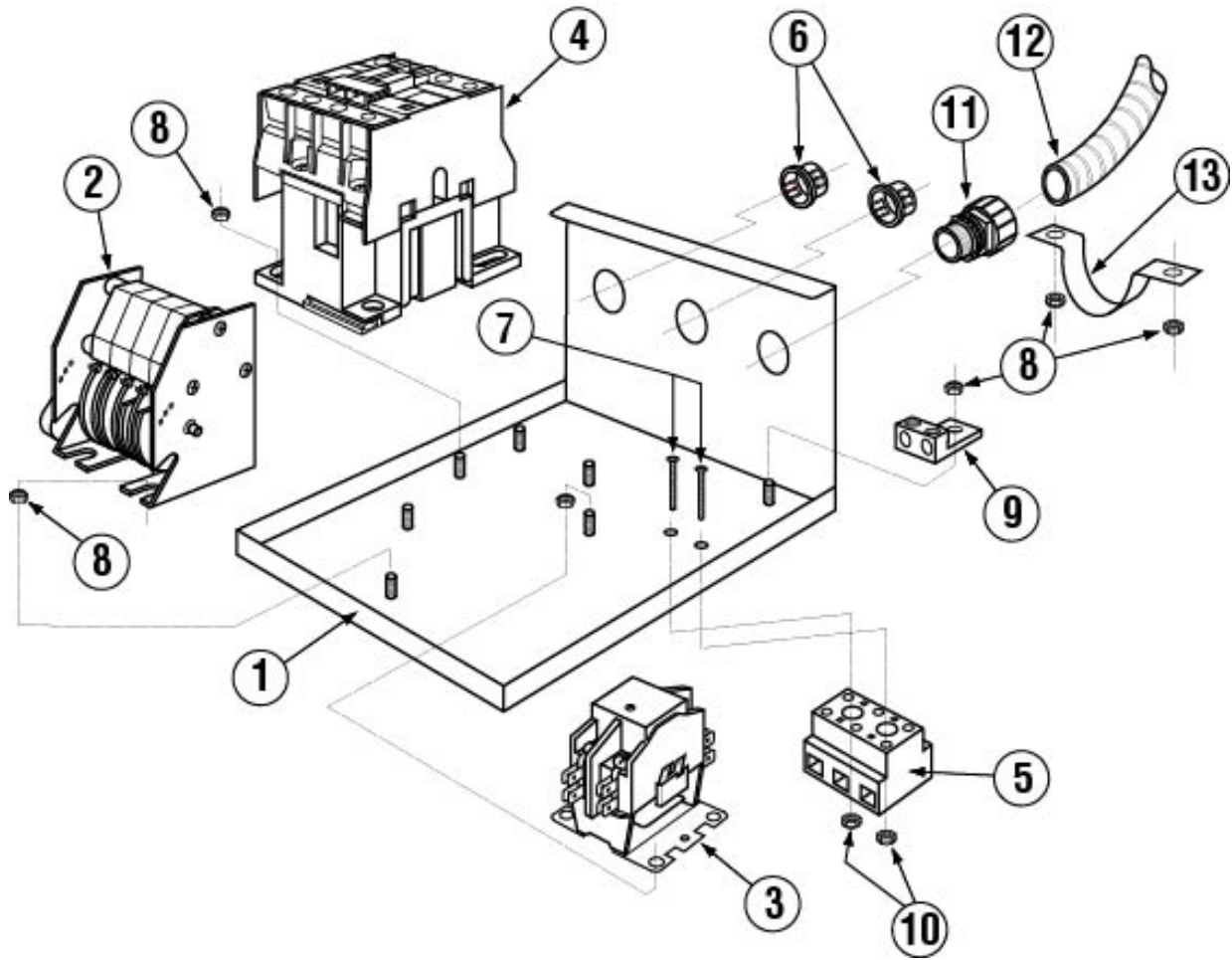


ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	14506.00	Door for CMA-180UC
2	2	04517.60	Door Support Rod Block
3	1	14570.00	Door Hinge R.H. for CMA-180UC
4	1	14570.50	Door Hinge L.H. for CMA-180UC
5	2	04919.00	Door Rod Screw Pin for CMA-180UC
6	1	04918.60	Door Support Rod Right
7	1	04919.50	Door Support Rod Left
8	2	00557.80	Door Magnet
9	2	00970.60	6-32 x 1/2" Flathead Screw

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
10	1	14558.61	Door Magnet Holder for CMA-180UC
11	2	00965.00	6-32 Lock Nut
12	2	00605.20	Door Rod Spacer
13	2	04517.15	Door Stop (Parallel)
14	10	00912.00	1/4"-20 Nylon Lock Nut
15	14	00924.00	1/4" SS Washer
16	4	00914.10	1/4"-20 x 5/8" Hexhead Bolt
17	2	14518.00	Splash Guard

4.4.3. Electrical Tray

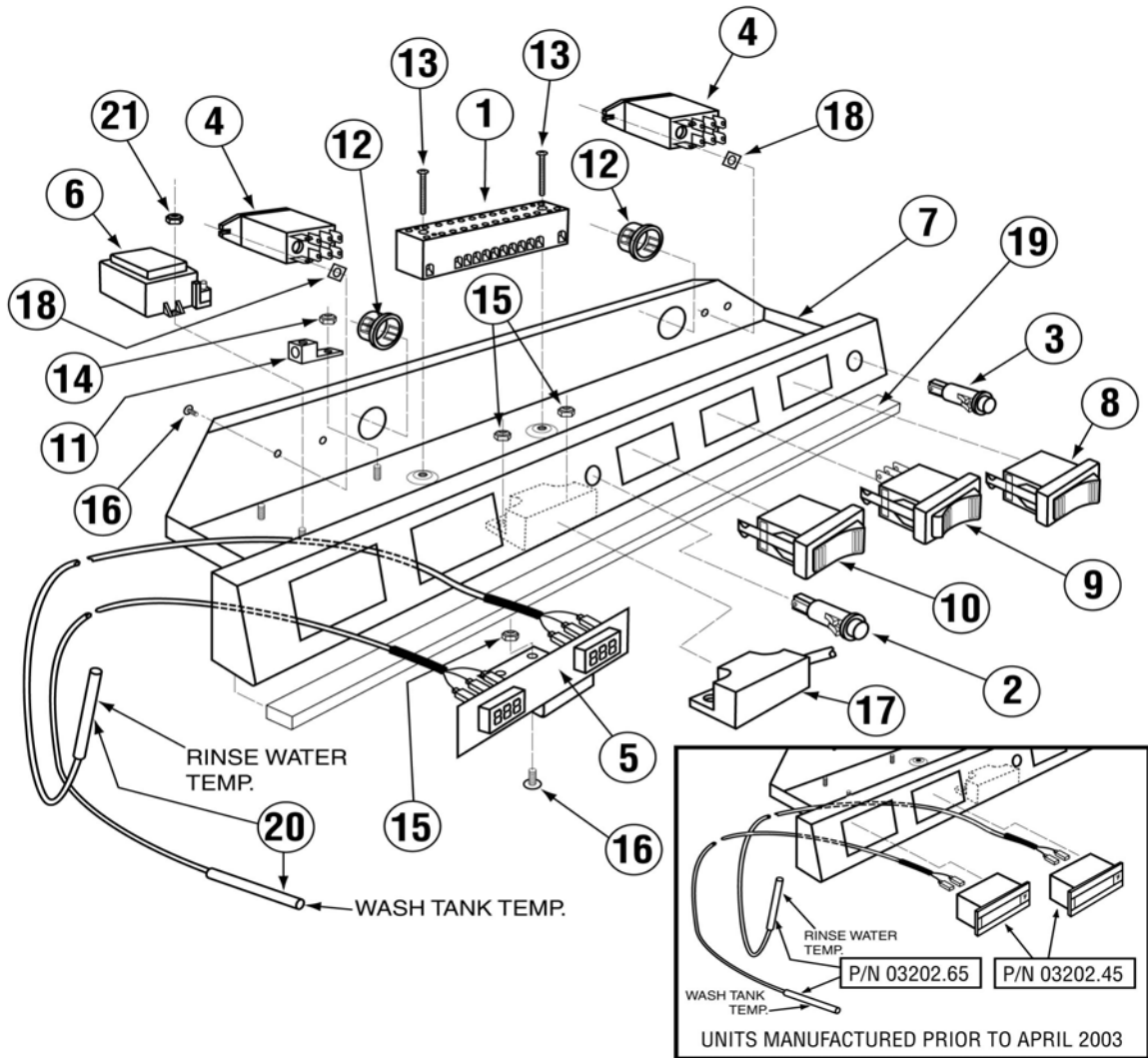
CMA-180UC ELECTRICAL TRAY



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	14504.00	Electrical Tray for CMA-180UC
2	1	14408.80	Timer Assy 4 Cam 2 Min. CMA-180UC
3	1	15504.00	Motor Contactor, 2-Pole 20 Amp
4	1	15504.50	Heater Contactor, 2-Pole 35 Amp
5	1	15520.50	Power Block, 3-Position
6	2	00438.00	Snap Bushing, Universal
7	2	01001.00	6-32 x 1" Panhead Screw

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
8	12	00927.00	8-32 Nylon Lock Nut
9	1	13426.60	Ground Block
10	2	00965.00	6-32 Lock Nut
11	1	00401.85	3/4" Conduit Connector, Straight
12	9	00400.85	3/4" Conduit, Sealtite
13	1	13304.61	HT Plumbing Bracket

4.4.4. Control Panel



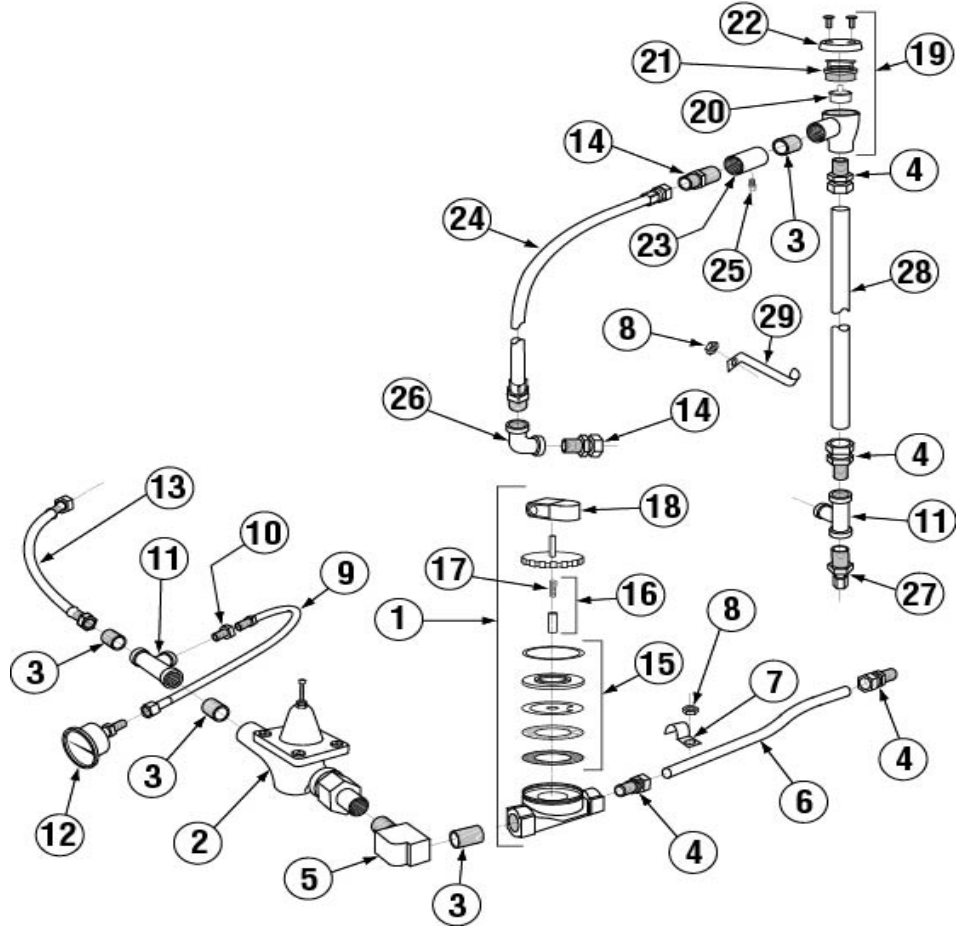
ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	15520.00	Power Block 12-Position
2	1	00406.00	Control Box Light .5 Diameter Red
3	1	00406.60	Control Box Light .5 Diameter Green
4	2	00631.00	Ice Cube Relay 120 V
5*	2	03203.00	Dual Temperature Display Kit
6	1	03202.60	Thermometer Transformer
7	1	14503.00	Control Drawer for CMA-180UC
8	1	15521.00	Rocker Switch Start Momentary
9	1	15522.00	Rocker Switch Drain/Fill DPDT/Mom.
10	1	15521.50	Rocker Switch Power Maintained
11	1	13426.50	Ground Block

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
12	1	00438.00	Snap Bushing, Universal
13	2	01001.00	6-32 x 1" Panhead Screw
14	2	00965.00	6-32 SS Nylon Lock Nut
15	5	00927.00	8-32 Nylon Lock Nut
16	6	00911.00	8-32 x 1/2" Panhead Screw
17	1	00557.55	Reed Switch
18	4	00917.00	8-32 PM Nut
19	2	03705.82	Sponge Strip
20	2	03202.66	Thermocouple
21	2	00971.10	4-40 Nylon Lock Nut

\*Kit includes 2 of #03202.66

4.4.5. Plumbing System Assembly

CMA-180UC PLUMBING SYSTEM ASSEMBLY

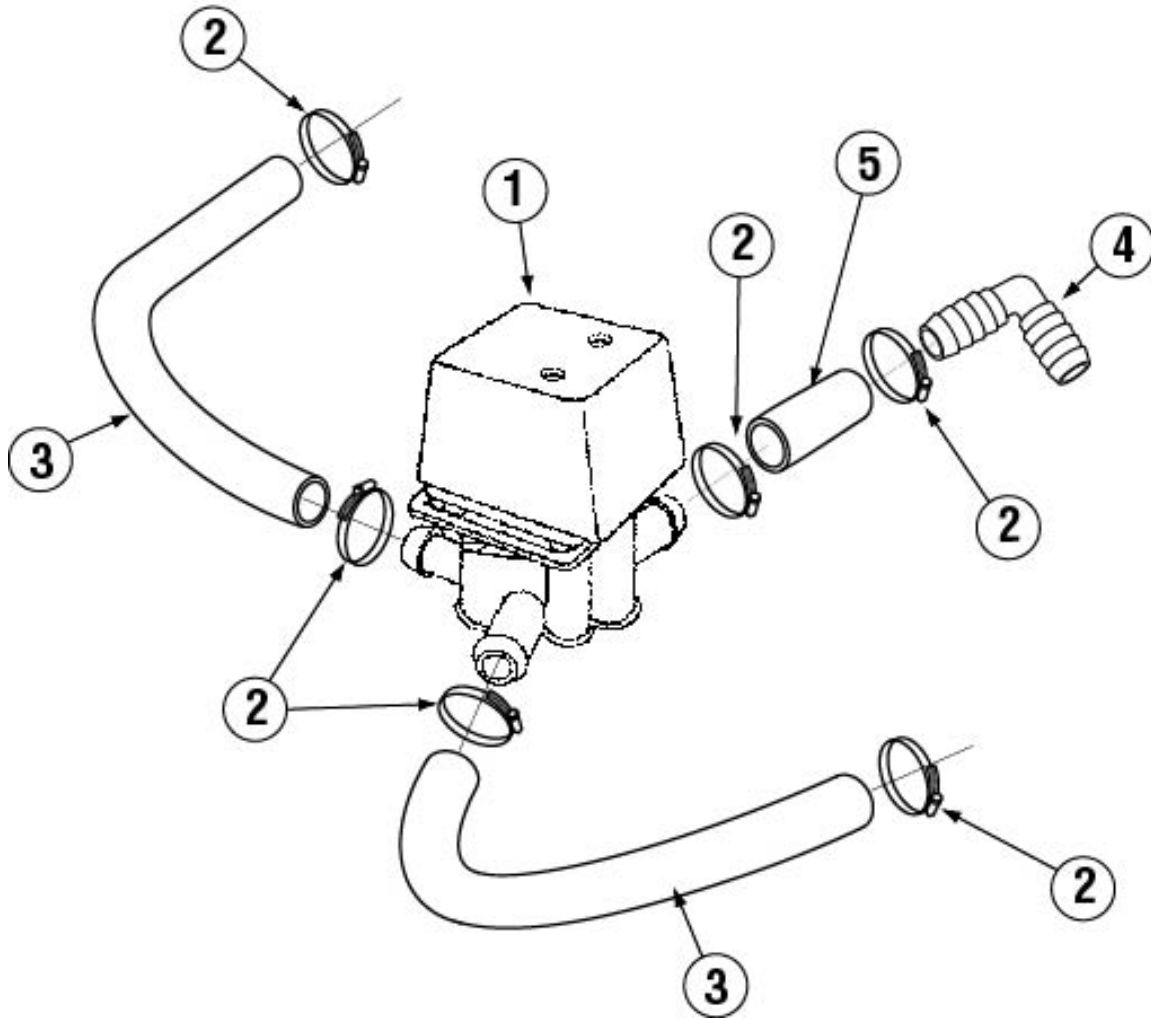


ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	03603.10	1/2" Water Solenoid Valve 120V/60Hz
2	1	13602.45	1/2" Pressure Regulator CMA-180UC
3	4	03614.00	Nipple, Brass 1/2" Close
4	4	00760.00	5/8" Compression x 1/2" MIP Adapter
5	1	00745.00	1/2" 90° Elbow M x F (RM)
6	1	05007.66	Solenoid and Valve Line
7	1	00725.60	1/2" Plumbing Strap
8	1	00915.00	1/4"-20 SS Nut
9	1	15602.00	Rubber Hose 1/4" MPT x 1/4" FNPT
10	1	13604.00	Bushing, 1/2" x 1/4" Brass
11	2	00743.10	1/2" T, F x F x F
12	1	13605.45	Pressure Gauge for CMA-180UC
13	1	00798.40	SS Braid Hose
14	2	00724.00	1/2" Compression x 1/2" MIP Adapter
15	1	00707.00	1/2" Water Solenoid Repair Kit J/E

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
16	1	00786.00	Water Solenoid Valve Plunger
17	1	00706.10	Plunger Spring Only
18	1	00738.10	Water Solenoid Coil J/E
19	1	03624.00	1/2" Vacuum Breaker – Watts
20	1	03623.00	1/2" Vac. Breaker Repair Kit – Watts
21	1	03624.25	Vacuum Breaker Bonnet, Brass
22	1	00739.50	Vacuum Breaker Cap, SS
23	1	13669.45	SS Mixing Chamber CMA-180UC
24	1	00798.00	1/2" SS Braided Hose
25	1	03232.00	1/8" Male Plug
26	1	41030.10	1/2" Elbow 90° F x F
27	1	00214.60	1/4" Compression x 1/2" MIP FTG
28	1	05007.60	Vacuum Breaker Line
29	1	13304.53	Long Support Bracket

4.4.6. Drain System Assembly

CMA-180UC DRAIN SYSTEM ASSEMBLY

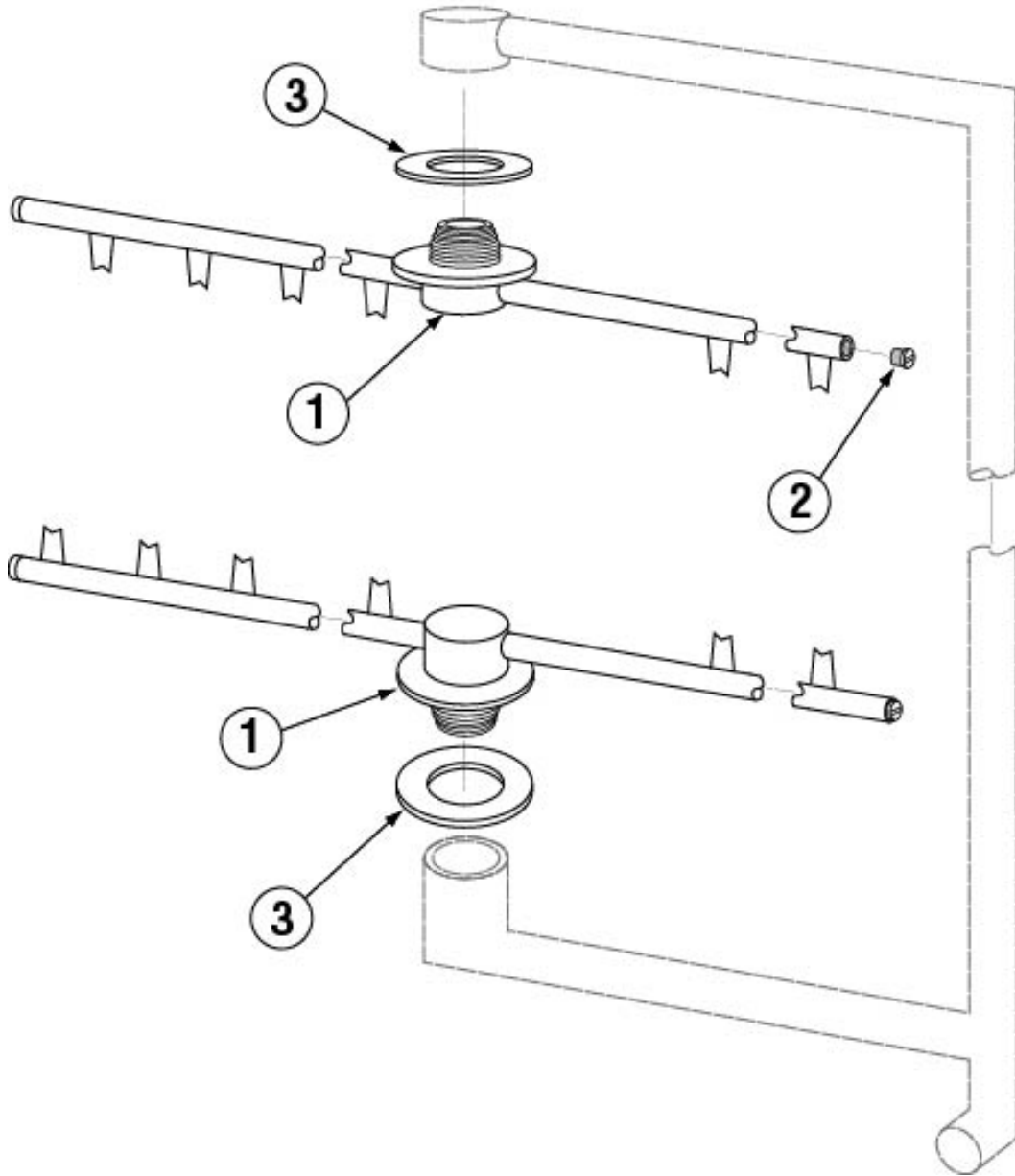


ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	04103.00	L1X/L1-C Drain Valve 120V
2	6	03101.00	Hose Clamp #16-1"
3	2	15601.60	Hose 1" ID 7" Pump to Manifold

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
4	1	04106.00	1" 90° Barb x Barb Elbow
5	1	15601.10	Black Drain Hose 1" ID X 3 1/2"

4.4.7. Wash System

CMA-180UC WASH SYSTEM

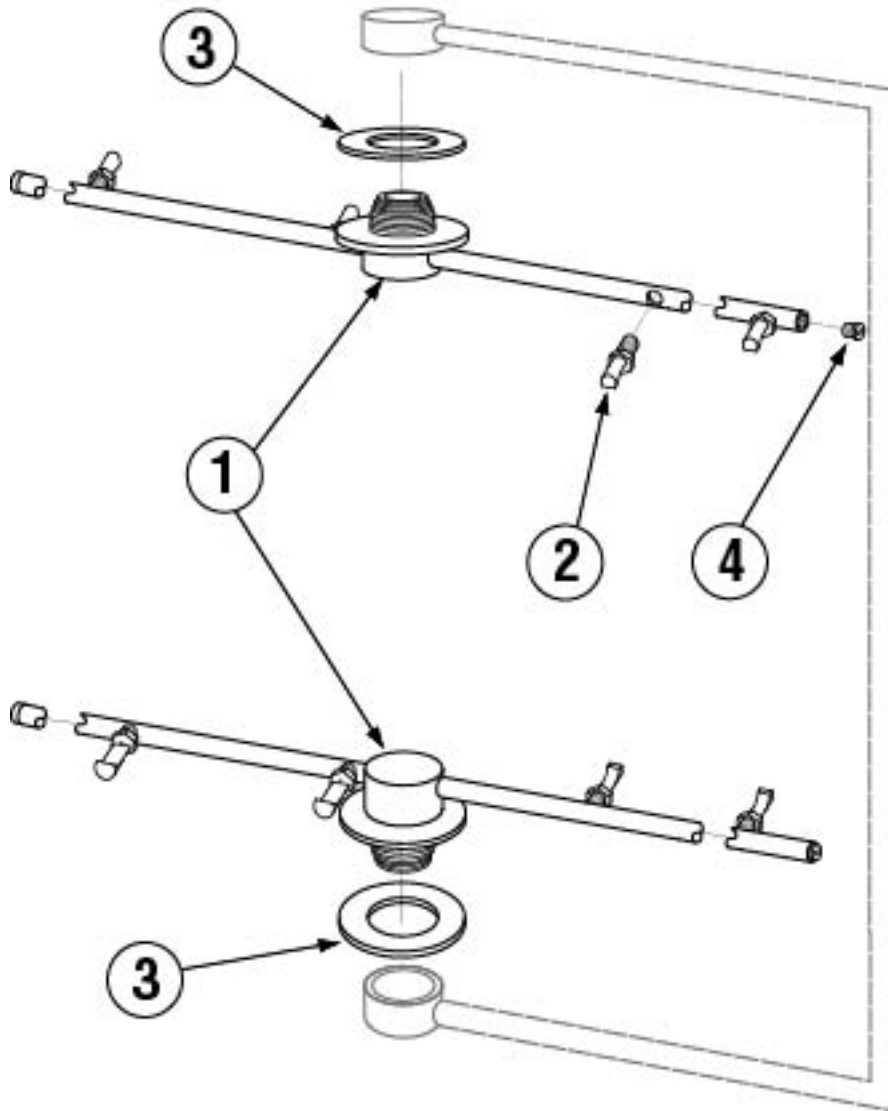


ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	2	00304.45	Wash Arm
2	4	00308.20	Wash Arm End Plug

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
3	2	04305.17	Red Silicon Gasket 1/16" Thick

4.4.8. Rinse System

CMA-180UC RINSE SYSTEM

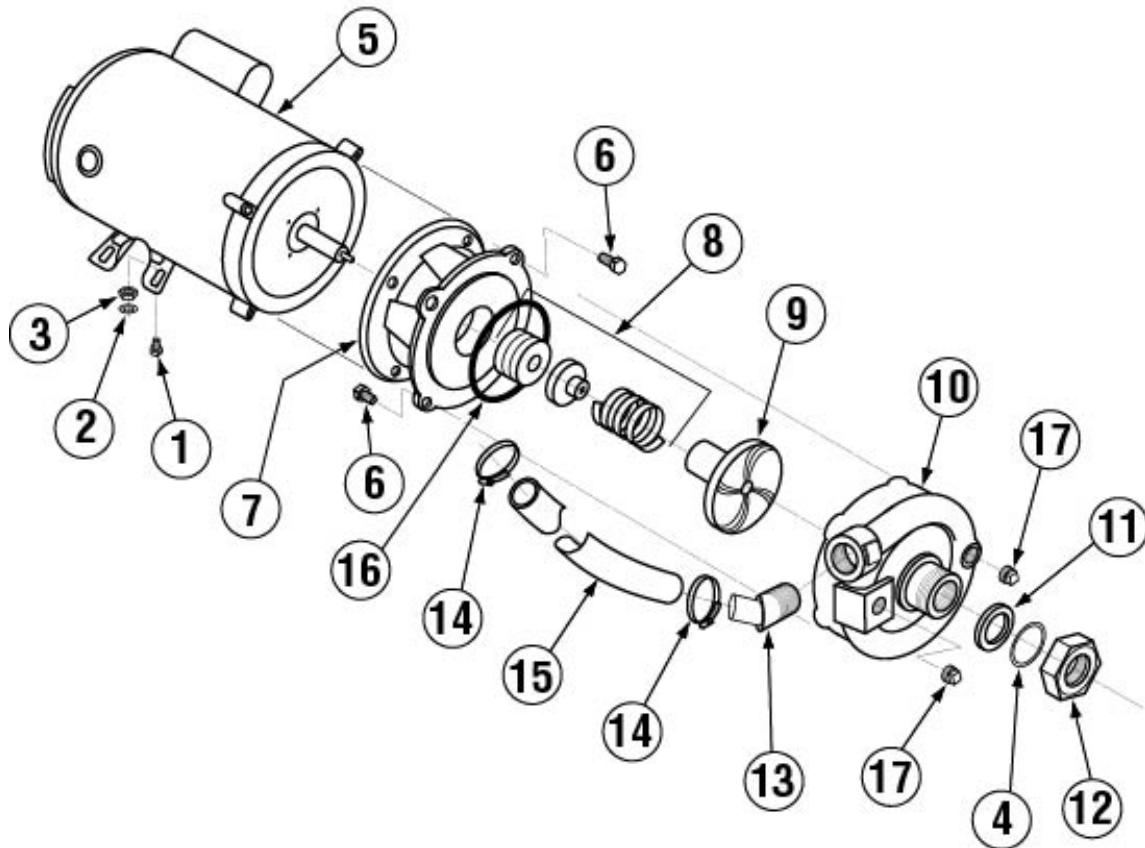


ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	2	00304.65	Rinse Arm CMA-180UC
2	8	13304.55	SS Final Rinse Spray Jet – HT

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
3	2	04305.17	Red Silicon Gasket 1/16" Thick
4	4	00308.17	Rinse Arm End Cap

4.4.9. Pump System Assembly

CMA-180UC PUMP SYSTEM ASSEMBLY

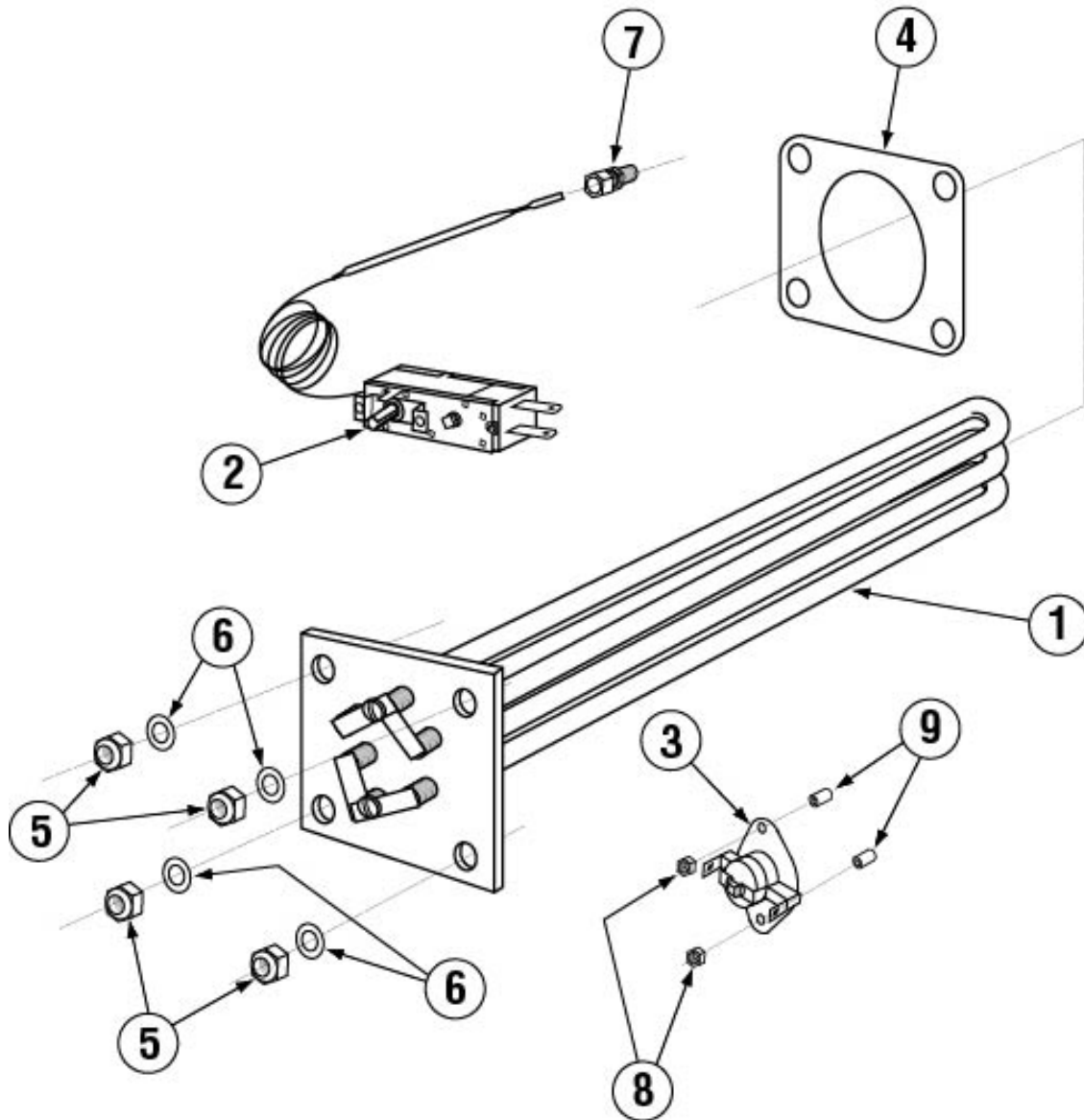


ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	4	00908.00	5/16"-18 SS Hexhead Bolt
2	4	00926.00	5/16" SS Washer
3	4	00913.00	5/16"-18 Hex Nut
4	1	00208.20	Slip Joint Ring
5	1	00201.66	Water Pump Motor for CMA-180UC
6	8	00921.00	3/8"-16 x 3/4" Hex Bolt
7	1	03224.00	Pump Base (Mount)
8	1	00206.00	Pump Seal Kit
9	1	03222.05	Impeller L-1M

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
10	1	04206.00	Pump Cover
11	1	00208.00	Slip Joint Nut Gasket
12	1	04204.00	L-1X Compression Nut 2.5"
13	1	00213.50	Pump Fitting
14	2	00301.00	1" Hose Clamp #16
15	1	03108.60	1" Reinforced Hose
16	1	03226.00	Pump "O" Ring Gasket
17	2	00238.00	3/8" Male Plug

4.4.10. Heater Assembly

CMA-180UC HEATER ASSEMBLY



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	15517.00	Heater 6kW for CMA-180UC
2	1	13417.89	Heater Thermostat
3	1	17523.60	High Limit Switch 200°F
4	1	15517.10	Heater Gasket
5	4	13805.00	5/16"-18 Nylon Insert Lock Nut

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
6	4	00926.00	5/16" SS Washer
7	1	40116.00	1/4" Compression x 1/4" MIP FTG
8	2	00965.00	6-32 Lock Nut
9	2	17524.00	High Limit Switch Spacer



