



TEMPSTAR
TEMPSTAR SDS
TEMPSTAR NB

HOT WATER SANITIZING UPRIGHT
DOOR DISHMACHINES

SERVICE MANUAL

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TABLE OF CONTENTS

Section	Description	Page
I.	General	
	Specifications of the Tempstar	1
	Specifications of the Tempstar SDS	1
	Specifications of the Tempstar NB	1
II.	Instructions	
	Installation Instructions	2
	Operation Instructions	3
III.	Troubleshooting Section	4
IV.	Drawing/Parts Section	
	Dimensions Tempstar/Tempstar NB(Side Mounted Control Box)	6
	Dimensions Tempstar/Tempstar NB(Top Mounted Control Box)	7
	Dimensions Tempstar SDS	8
	Table Dimensions	9
	Side Mounted Control Box Assembly	10
	Top Mounted Control Box Assembly	12
	SDS Control Box Assembly	14
	Hood Assembly	16
	Hood Assembly (Single Piece Weldment)	17
	Cantilever Arm/Door Assemblies	18
	Tub Front Assembly	20
	Wash Tank Heating System	21
	RinseTank Assembly	22
	Inner Tub Components/Track Assembly	23
	Wash Pump Exploded View	24
	Wash Motors	25
	Thermostats/Wash Heaters/Rinse Heaters	26
	Incoming Plumbing/Outlet Plumbing Assembly	27
	Tempstar NB Incoming Plumbing Assembly	29
	Tempstar SDS Incoming Plumbing Assembly	30
	Vacuum Breaker Repair Kit (3/4" NPT)	31
	Solenoid Valve Repair Parts	31
	Wash and Rinse Arm/Manifold Assemblies	32
	Tempstar SDS Dispenser Assembly	34
	Water Pressure Regulator Kit (WPRK) Option Plumbing	39
	Safety Door Interlock (SDI) Option	40
	Exhaust Fan Control Option	41
	460 Volt Transformer Mounting Box	42
V.	Electrical Diagrams	
	208 - 230V, 60 Hz, single/three phase Tempstar (Side Mount)	43
	460V, 60 Hz, three phase Tempstar (Side Mount)	44
	208 - 230V, 60 Hz, single/three phase Tempstar (Top Mount)	45
	460V, 60 Hz, three phase Tempstar (Top Mount)	46
	208 - 230V, 60 Hz, single/three phase Tempstar NB (Side Mount)	47
	460V, 60 Hz, three phase Tempstar NB (Side Mount)	48
	208 - 230V, 60 Hz, single/three phase Tempstar NB (Top Mount)	49
	460V, 60 Hz, three phase Tempstar NB (Top Mount)	50
	208 - 230V, 60 Hz, single/three phase Tempstar SDS	51
	460V, 60 Hz, three phase Tempstar SDS	52
	Tempstar SDS Dispenser	53

1

(12 KW Booster Heater)					(14 KW Booster Heater)					
Model	Volts	Hz	Phase	Amps	Amps	Model	Volts	Hz	Phase	Amperage Loads
Tempstar	208	60	1	68.7	75.8	Tempstar NB	208	60	1	24.6
Tempstar	230	60	1	75.4	83.6	Tempstar NB	230	60	1	26.6
Tempstar	208	60	3	42.1	46.3	Tempstar NB	208	60	3	16.3
Tempstar	230	60	3	45.5	50.7	Tempstar NB	230	60	3	17.5
Tempstar	460	60	3	21.7	24.1	Tempstar NB	460	60	3	7.9
Tempstar SDS	208	60	1	68.7	75.8					
Tempstar SDS	230	60	1	75.4	83.6					
Tempstar SDS	208	60	3	42.1	46.3					
Tempstar SDS	230	60	3	45.5	50.7					
Tempstar SDS	460	60	3	21.7	24.1					
PERFORMANCE/CAPABILITIES										
OPERATING CAPACITY (RACKS/HOUR)				TEMPERATURES			FRAME DIMENSIONS			
RACKS PER HOUR				57	WASH---(MINIMUM)		150°F	WIDTH		25 3/4"
DISHES PER HOUR				1425	RINSE---(MINIMUM)		180°F	DEPTH		25 1/4"
GLASSES PER HOUR				1425	ELECTRICAL REQUIREMENTS			HEIGHT		56 3/4"
OPERATING CYCLE (SECONDS)				WASH PUMP MOTOR HP				3/4	STANDARD TABLE HEIGHT	
WASH TIME				45	WATER REQUIREMENTS			RACKS		
RINSE TIME				11						
DWELL TIME				2	INLET TEMPERATURE (12 KW) (Tempstar)		140°F	DISH 20" X 20"		OPTIONAL
TOTAL CYCLE TIME				60	INLET TEMPERATURE (14 KW) (Tempstar)		110°F	GLASS & SILVER 20" X 20"		OPTIONAL
TANK CAPACITY (LITERS) GALLONS					INLET TEMPERATURE (12 KW) (SDS)		140°F			
					INLET TEMPERATURE (14 KW) (SDS)		110°F			
				INLET TEMPERATURE (12 KW) (NB)		180°F				
WASH TANK (MINIMUM)				8.0	GALLONS PER HOUR		52.0			
BOOSTER TANK				3.0	WATER LINE SIZE I.P.S. (Minimum)		3/4"			
WASH PUMP CAPACITY					DRAIN LINE SIZE I.P.S. (Minimum)		1-1/2"			
				FLOW PRESSURE P.S.I. (Optimum)		20				
(LITERS) GALLONS PER MINUTE				150						

SPECIFICATIONS for TEMPSTAR/SDS/NB

INSTALLATION INSTRUCTIONS

Jackson MSC Inc. provides technical support for all of the dishmachines detailed in this manual. We strongly recommend that you refer to this manual before making a call to our technical support staff. Please have this manual with you when you call so that our staff can refer you, if necessary, to the proper page. Technical support is available from 8:00 a.m. to 5:00 p.m. (EST), Monday through Friday. Technical support is not available on holidays. Contact technical support toll free at 1-888-800-5672. Please remember that technical support is available for service personnel only.

VISUAL INSPECTION: Before installing the unit, check the container and machine for damage. A damaged container is an indicator that there may be some damage to the machine. If there is damage to both the container and machine, do not throw away the container. The dishmachine has been inspected and packed at the factory and is expected to arrive to you in new, undamaged condition. However, rough handling by carriers or others may result in there being damage to the unit while in transit. If such a situation occurs, do not return the unit to Jackson; instead, contact the carrier and ask them to send a representative to the site to inspect the damage to the unit and to complete an inspection report. You must contact the carrier within 48 hours of receiving the machine. Also, contact the dealer through which you purchased the unit.

UNPACKING THE DISH MACHINE: Once the machine has been removed from the container, ensure that there are no missing parts from the machine. This may not be obvious at first. If it is discovered that an item is missing, contact Jackson immediately to have the missing item shipped to you.

LEVEL THE DISH MACHINE: The dishmachine is designed to operate while being level. This is important to prevent any damage to the machine during operation and to ensure the best results when washing ware. The unit comes with adjustable bullet feet, which can be turned using a pair of channel locks or by hand if the unit can be raised safely. Ensure that the unit is level from side to side and from front to back before making any connections.

PLUMBING THE DISH MACHINE: All plumbing connections must comply with all applicable local, state, and national plumbing codes. The plumber is responsible for ensuring that the incoming water line is thoroughly flushed prior to connecting it to any component of the dishmachine. It is necessary to remove all foreign debris from the water line that may potentially get trapped in the valves or cause an obstruction. Any valves that are fouled as a result of foreign matter left in the water line, and any expenses resulting from this fouling, are not the responsibility of the manufacturer.

CONNECTING THE DRAIN LINE: The drain for the Tempstar models covered in this manual are gravity discharge drains. All piping from the 1-1/2" FNPT connection on the wash tank must be pitched (1/4" per foot) to the floor or sink drain. All piping from the machine to the drain must be a minimum 1-1/2" I.P.S. and shall not be reduced. There must also be an air gap between the machine drain line and the floor sink or drain. If a grease trap is required by code, it should have a flow capacity of 5 gallons per minute.

WATER SUPPLY CONNECTION: Ensure that you have read the section entitled "PLUMBING THE DISH MACHINE" above before

proceeding. Install the water supply line (3/4" pipe size minimum) to the dishmachine line strainer using copper pipe. It is recommended that a water shut-off valve be installed in the water line between the main supply and the machine to allow access for service. The water supply line is to be capable of 25 PSI "flow" pressure at the recommended temperature indicated on the data plate.

In areas where the water pressure fluctuates or is greater than the recommended pressure, it is suggested that a water pressure regulator be installed. The Tempstar models covered in this manual come with water pressure regulators as standard equipment. Please notify Jackson immediately if this component is not present on your machine.

Do not confuse static pressure with flow pressure. Static pressure is the line pressure in a "no flow" condition (all valves and services are closed). Flow pressure is the pressure in the fill line when the fill valve is opened during the cycle.

It is also recommended that a shock absorber (not supplied with the Tempstar model) be installed in the incoming water line. This prevents line hammer (hydraulic shock), induced by the solenoid valve as it operates, from causing damage to the equipment.

PLUMBING CHECK: Slowly turn on the water supply to the machine after the incoming fill line and the drain line have been installed. Check for any leaks and repair as required. All leaks must be repaired prior to placing the machine in operation.

ELECTRICAL POWER CONNECTION: Electrical and grounding connections must comply with the applicable portions of the National Electrical Code ANSI/NFPA 70 (latest edition) and/or other electrical codes.

Disconnect electrical power supply and place a tag at the disconnect switch to indicate that you are working on the circuit.

The dishmachine data plate is located on the right side and to the front of the machine. Refer to the data plate for machine operating requirements, machine voltage, total amperage load and serial number.

To install the incoming power lines, open the control box. This will require taking a phillipshead screwdriver and removing the four (4) screws on the front cover of the control box. Install 3/4" conduit into the pre-punched holes in the back of the control box. Route power wires and connect to power block and grounding lug. Install the service wires (L1, L2, and L3 (3 phase only)) to the appropriate terminals as they are marked on the terminal block. Install the grounding wire into the lug provided. Tighten the connections. It is recommended that "DE-OX" or another similar anti-oxidation agent be used on all power connections.

VOLTAGE CHECK: Ensure that the power switch is in the OFF position and apply power to the dishmachine. Check the incoming power at the terminal block and ensure it corresponds to the voltage listed on the data plate. If not, contact a qualified service agency to examine the problem. Do not run the dishmachine if the voltage is too high or too low. Shut off the service breaker and mark it as being for the dishmachine. Advise all proper personnel of any problems and of the location of the service breaker. Replace the control box cover and tighten down the screws.

OPERATION INSTRUCTIONS

PREPARATION: Before proceeding with the start-up of the unit, verify the following:

1. The pan strainer and pump suction strainer are in place and are clean.
2. The overflow tube and o-ring are installed.
3. That the wash and rinse arms are screwed securely into place and that their endcaps are tight. The wash and rinse arms should rotate freely.

POWER UP: To energize the unit, turn on the power at the service breaker. The voltage should have been previously verified as being correct. If not, the voltage will have to be verified.

FILLING THE WASH TUB: Ensure that the delime switch is in the NORMAL position, and place the power switch into the ON position. The Tempstar should fill automatically and shut off when the appropriate level is reached (just below the pan strainer). Verify that the drain stopper is preventing the wash tub water from leaking excessively. There may be some slight leakage from the drain hole. Verify that there are no other leaks on the unit before proceeding any further. The wash tub must be completely filled before operating the wash pump to prevent damage to the component. Once the wash tub is filled, the unit is ready for operation.

WARE PREPARATION: Proper preparation of ware will help ensure good results and less re-washes. If not done properly, ware may not come out clean and the efficiency of the dishmachine will be reduced. It is important to remember that a dishmachine is not a garbage disposal and that simply throwing unscrapped dishes into the machine simply defeats the purpose altogether of washing the ware. Scraps should be removed from ware prior to being loaded into a rack. Pre-rinsing and pre-soaking are good ideas, especially for silverware and casserole dishes. Place cups and glasses upside down in racks so that they do not hold water during the cycle. The dishmachine is meant not only to clean, but to sanitize as well, to destroy all of the bacteria that could be harmful to human beings. In order to do this, ware must be properly prepared prior to being placed in the machine.

DAILY MACHINE PREPARATION: Refer to the section entitled "PREPARATION" at the top of this page and follow the instructions there. Afterwards, check that all of the chemical levels are correct and/or that there is plenty of detergent available for the expected workload.

WARM-UP CYCLES: For a typical daily start-up, it may be necessary to run the machine through 3 cycles to ensure that all of the cold water is out of the system and to verify that the unit is operating correctly. To cycle the machine, ensure that the power is on and that the tub has filled to the correct level. Lift the doors and the cycle light will illuminate. When the light goes out, close the doors, the unit will start, run through the cycle, and shut off automatically. Repeat this two more times. The unit should now be ready to proceed with the washing of ware.

WASHING A RACK OF WARE: To wash a rack, open the doors completely (being careful for hot water that may drip from the doors) and slide the rack into the unit.

Close the doors and the unit will start automatically. Once the cycle is completed, open the door (again watching for the dripping hot water) and remove the rack of clean ware. Replace with a rack of soiled ware and close the doors. The process will then repeat itself.

OPERATIONAL INSPECTION: Based upon usage, the pan strainer may become clogged with soil and debris as the workday progresses. Operators should regularly inspect the pan strainer to ensure it has not become clogged. If the strainer does, it will reduce the washing capability of the machine. Instruct operators to clean out the pan strainer at regular intervals or as required by work load.

SHUTDOWN AND CLEANING: At the end of the workday, close the doors. When the unit completes the cycle, turn the power switch to the OFF position and open the doors. Remove and clean the pan strainer. Remove the drain stopper from the tub and allow the tub to drain (NOTE: the wash tank water will be hot so caution is advised). Once the wash tub is drained, remove the pump suction strainer. Remove soil and debris from the strainer and set to the side. Unscrew the wash and rinse arms from their manifolds. Remove the endcaps and flush the arms with water. Use a brush to clean out the inside of the arms. If the nozzles appear to be clogged, use a toothpick to remove the obstruction. Wipe the inside of the unit out, removing all soil and scraps. Reassembly the wash and rinse arms and replace them in the unit. The arms only need to be hand tight, do not use tools to tighten them down. Reinstall the drain stopper and strainers and close the doors.

TROUBLESHOOTING SECTION

WARNING: Inspection, testing and repair of electrical equipment should only be performed by a qualified service technician. Many of the tests require that the unit have power to it and live electrical components be exposed. USE EXTREME CAUTION WHEN TESTING THE MACHINE.

Problem: Dishmachine will not fill after the door is close. Power "ON" light is illuminated.

1. Faulty rinse solenoid valve. Repair or replace valve as required.
2. Faulty door switch. Verify the wiring of the switch; if correct, replace the switch.
3. Fouled/faulty high level probe. Clean probe if fouled. If clean, and still not working, replace.

Problem: Dishmachine will not fill after the door is closed. Power "ON" light is not illuminated.

1. Service breaker tripped. Reset. If the breaker trips again, contact an electrician to verify the amp draw of the machine.
2. Machine not connected to power source. Verify that the machine has been properly connected to the power source.
3. Faulty power source. Verify the wiring of the switch; if correct, replace switch.

Problem: Dishmachine will not run after the door is closed. Power "ON" light is illuminated and the unit is filling.

1. Timer motor is faulty. Verify that the timer is rotating. If not, check to see that the motor is receiving power. If so, replace the motor and/or timer assembly.
2. Wash motor faulty/damaged. Verify that the wash motor is getting power. If so, replace the motor.
3. Wash motor contactor faulty. Check for continuity; if contacts are open, replace the contactor.

Problem: Dishmachine runs continuously in the wash cycle.

1. Machine is in Delime mode. Flip NORMAL/DELIME switch to NORMAL mode.
2. Timer motor is faulty. Verify that the timer is rotating. If not, check to see that the motor is receiving power. If so, replace the motor and/or timer assembly.
3. Cam timer jammed by obstruction. Remove obstruction.

Problem: Wash or rinse heater does not work.

1. Faulty heater element. Check element for continuity; if open, replace the heater.
2. Faulty heater contactor. Replace the contactor.
3. Misadjusted/faulty thermostat(s). Verify operation and setting of thermostats, replace if necessary.

Problem: Dishmachine fill slowly and/or the rinse is weak.

1. Clogged or obstructed rinse arms. Remove and clean the rinse arms.
2. Low incoming water pressure. Adjust the water pressure regulator to ensure that there is 20 PSI flow.
3. Y-strainer is clogged. Clean out the Y-strainer.

Problem: Rinse water not reaching required temperature.

1. Faulty rinse heater. Check element for continuity; if open, replace heater.
2. Misadjusted/faulty thermostat(s). Verify operation and setting of thermostats, replace if necessary.
3. Rinse thermometer is defective. Replace thermometer.

Problem: Wash water is not reaching required temperature.

1. Faulty wash heater. Check element for continuity; if open, relace the heater.
2. Misadjusted/faulty thermostat(s). Verify operation and setting of thermostats, replace if necessary.
3. Wash thermometer is defective. Replace thermometer.

TROUBLESHOOTING SECTION

WARNING: Inspection, testing and repair of electrical equipment should only be performed by a qualified service technician. Many of the tests require that the unit have power to it and live electrical components be exposed. USE EXTREME CAUTION WHEN TESTING THE MACHINE.

Problem: Doors will not close completely.

1. Improper spring tension. Adjust spring tension as required by loosening (not removing) spring bolt nuts and adjusting the tension. Tighten nuts back when done.
2. Obstruction in door channel. Remove the obstruction.
3. Doors are not square with frame. Adjust the frame to accommodate the doors.

Problem: Water leaks at the wash pump.

1. Wash pump seal defective. Replace the seal.
2. Petcock or pump drain (if equipped) not shut/tight. Close or tighten.
3. Loose hoses (hose clamps) on the wash pump. Tighten the hose clamps.

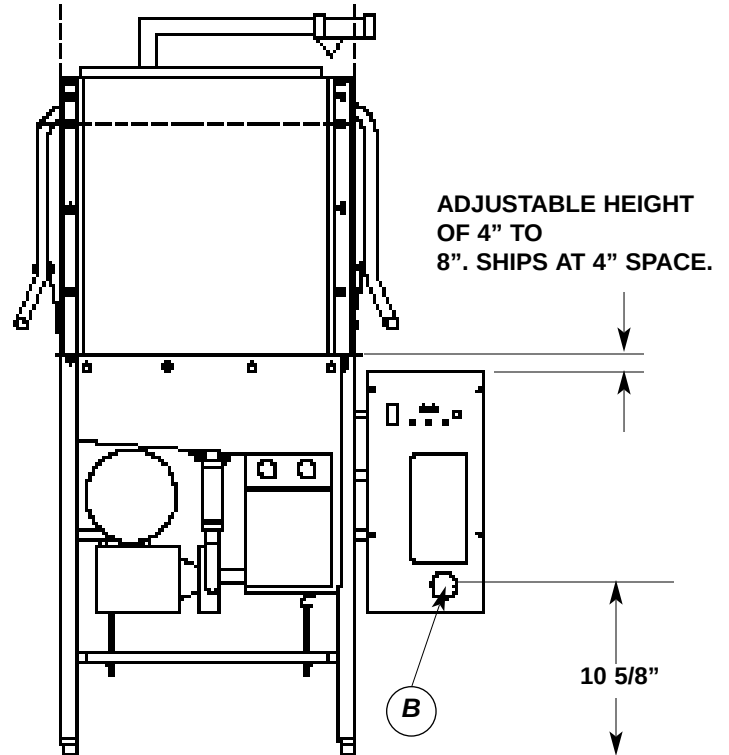
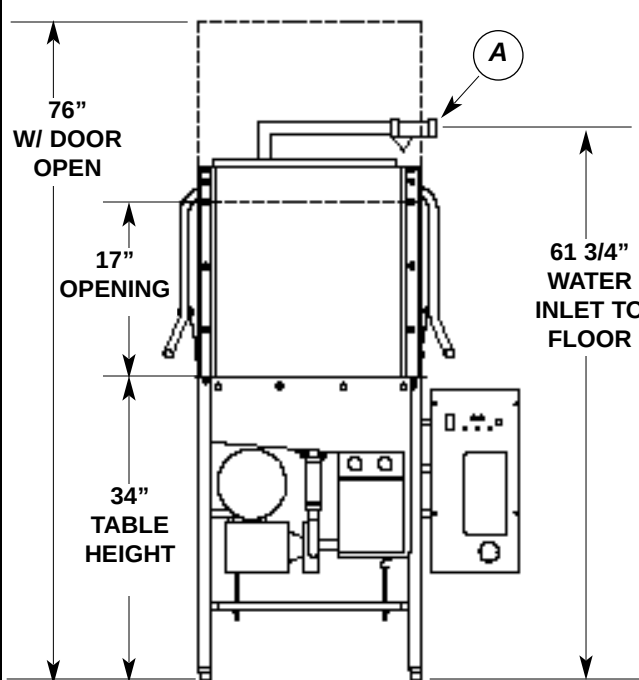
Problem: Will not rinse during autocycle.

1. Defective rinse solenoid. Repair or replace the rinse solenoid as required.
2. Faulty fill microswitch. Replace microswitch.
3. No water to the machine. Verify that there is water a 20 PSI connected to the machine.

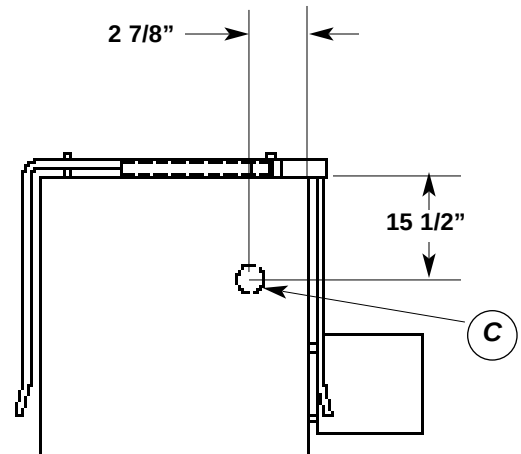
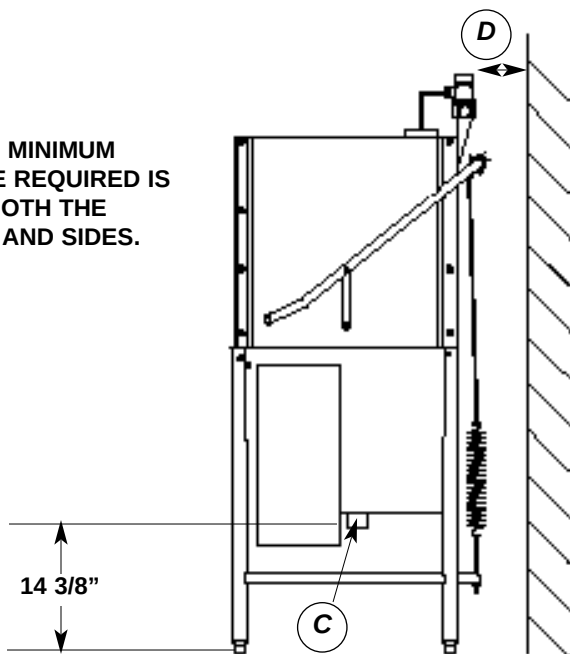
Problem: Dishes are not coming clean.

1. Machine temperatures are not up to the minimum requirements. Verify that incoming water, rinse water, and wash water match the required temperatures as listed on the machine data plate.
2. No detergent/too much detergent. Adjust detergent concentration as required for the amount of water held by the machine.
3. Solid dispenser canister is empty. Replace the canister.

DIMENSIONS TEMPSTAR/TEMPSTAR NB (SIDE MOUNTED CONTROL BOX)



NOTE: MINIMUM SPACE REQUIRED IS FOR BOTH THE BACK AND SIDES.



LEGEND

A- WATER INLET (3/4" IPS)
B- ELECTRICAL CONNECTION POINT

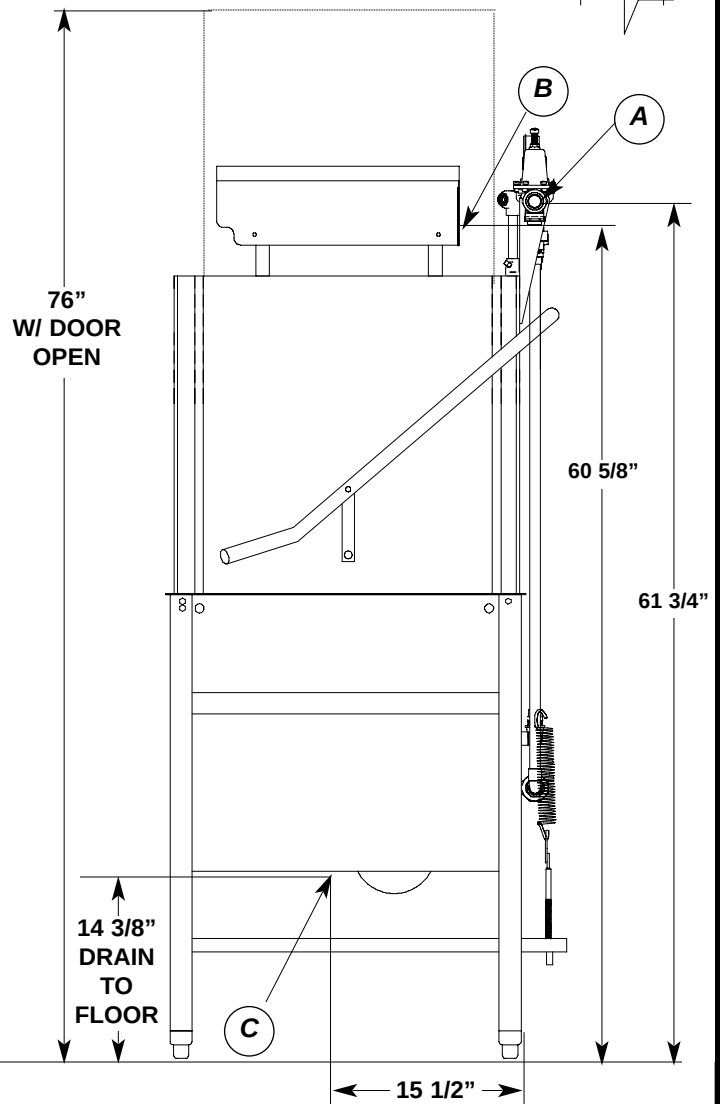
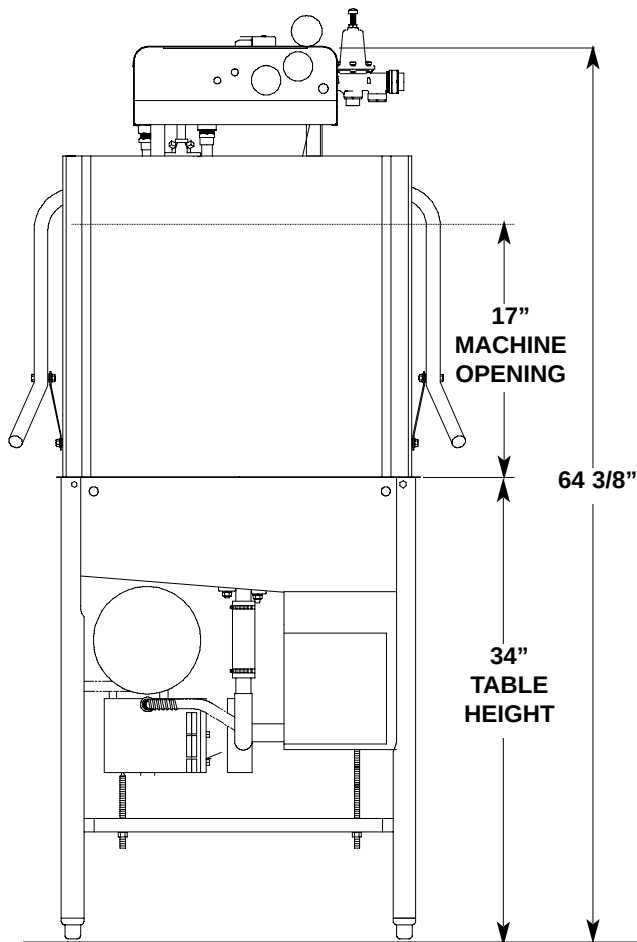
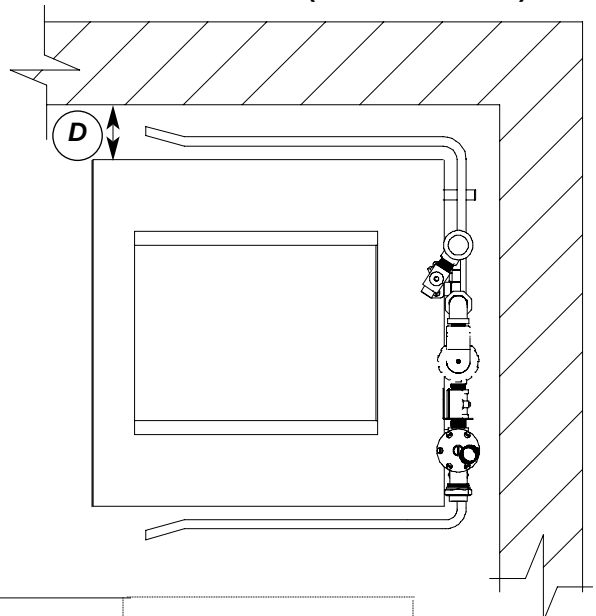
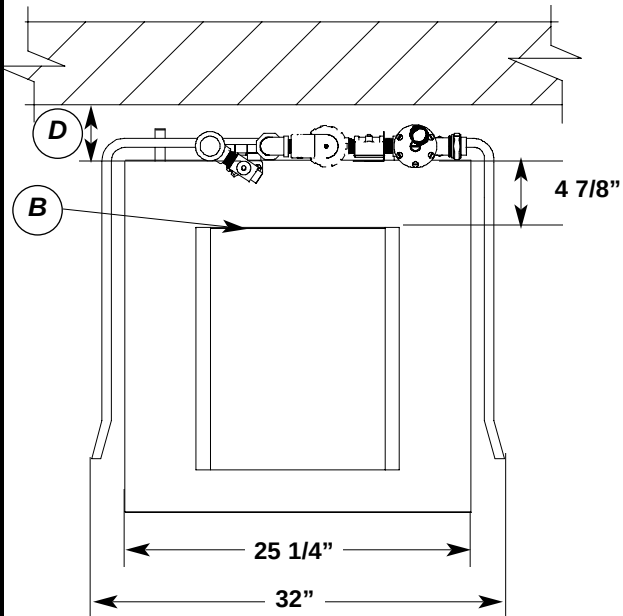
C- DRAIN (1 1/2"IPS)
D-STANDARD CLEARANCE BETWEEN MACHINE AND WALL (WITH DISHTABLE) IS 4".

DIMENSIONS TEMPSTAR/TEMPSTAR NB (TOP MOUNTED CONTROL BOX)

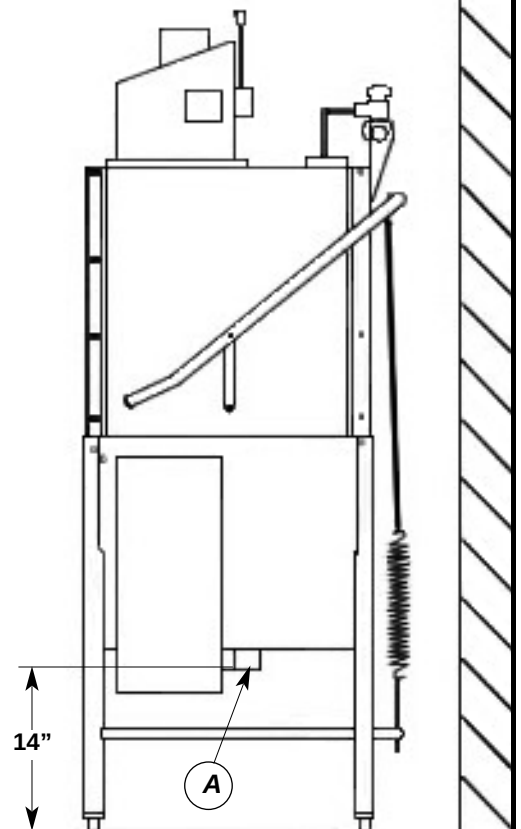
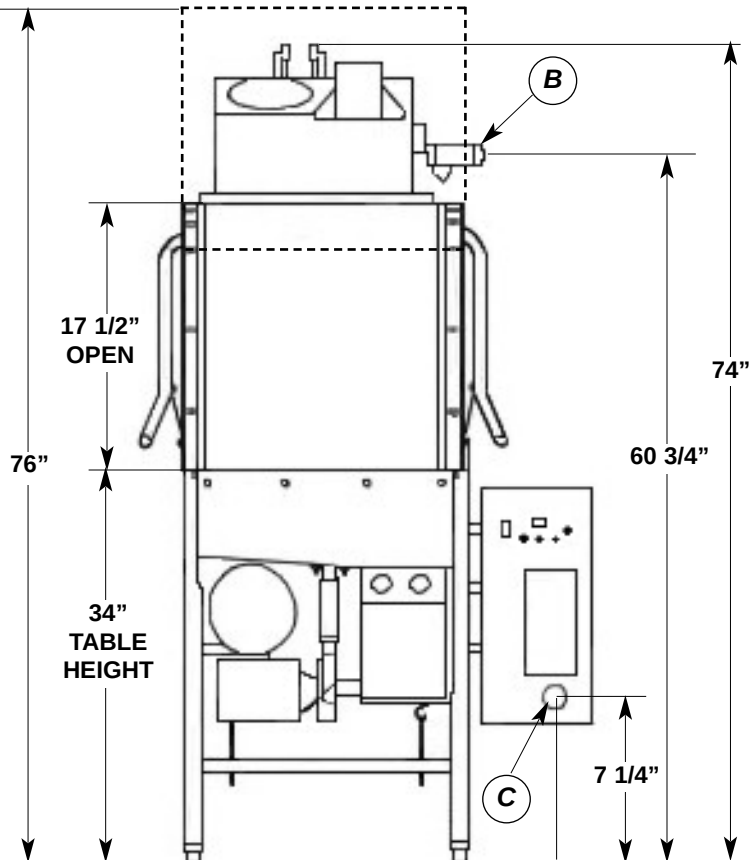
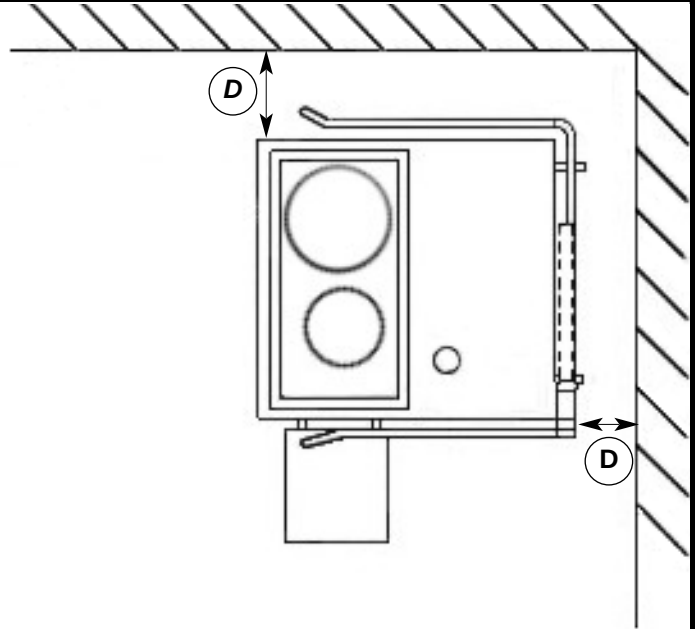
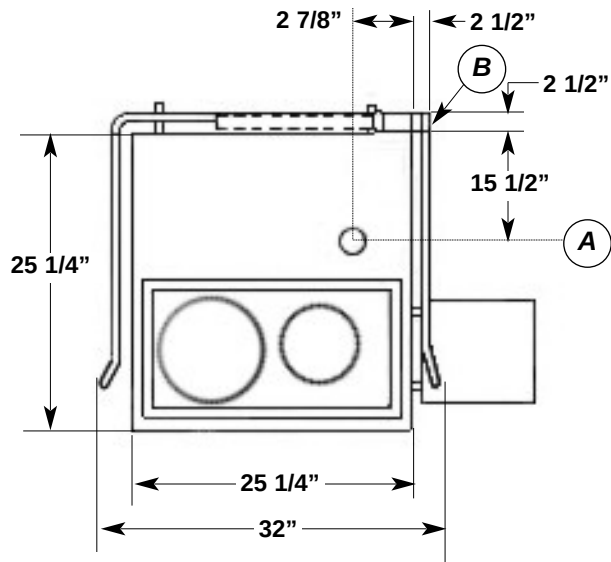
A- WATER INLET (3/4" IPS)
B- ELECTRICAL CONNECTION POINT

LEGEND

C- DRAIN (1 1/2" IPS)
D-STANDARD CLEARANCE BETWEEN
MACHINE AND WALL (WITH DISHTABLE) IS 4".



DIMENSIONS TEMPSTAR SDS



LEGEND

A - Drain 1 1/2" I.P.S.
B - Water inlet 3/4" I.P.S.

C - Electrical connection
D - Standard wall clearance with dishtable 4"

TABLE DIMENSIONS

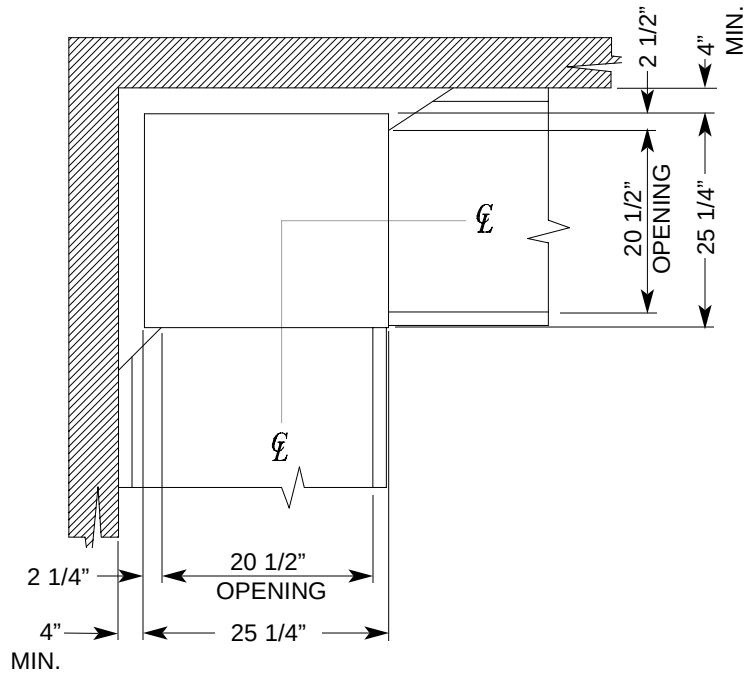


TABLE DIMENSIONS
CORNER INSTALLATION

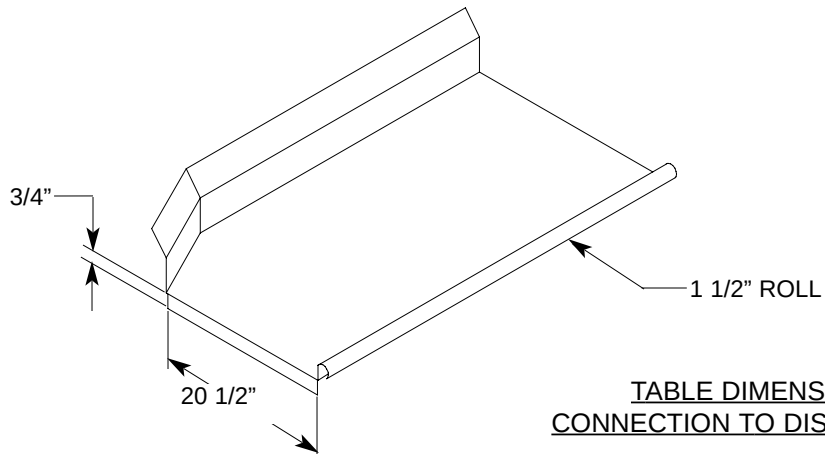


TABLE DIMENSIONS
CONNECTION TO DISHMACHINE

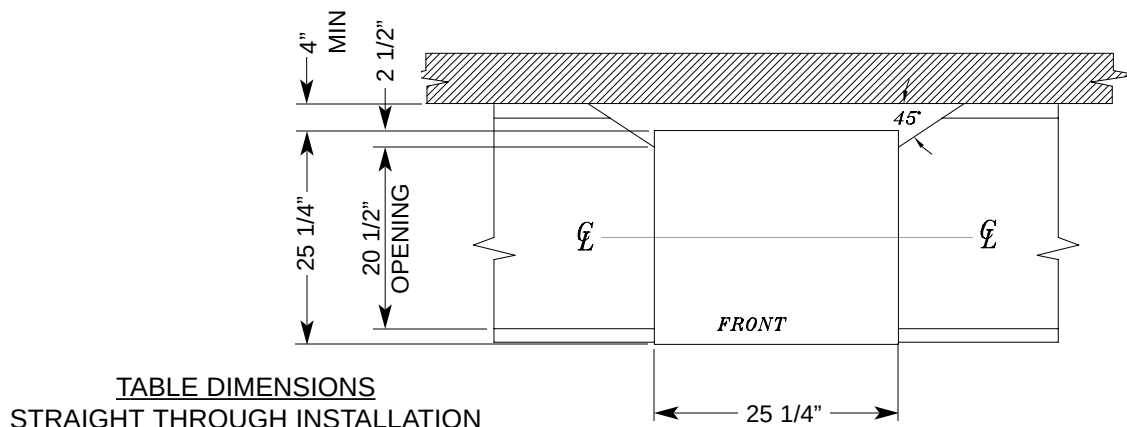
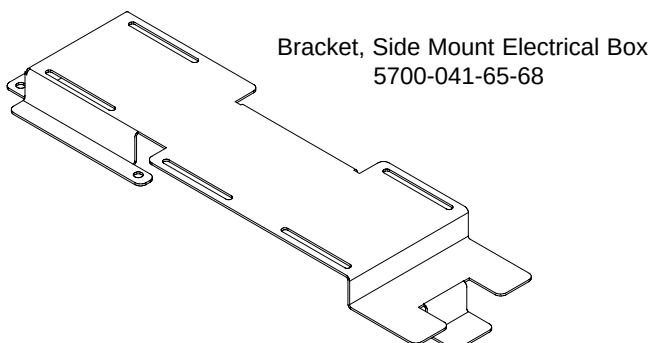
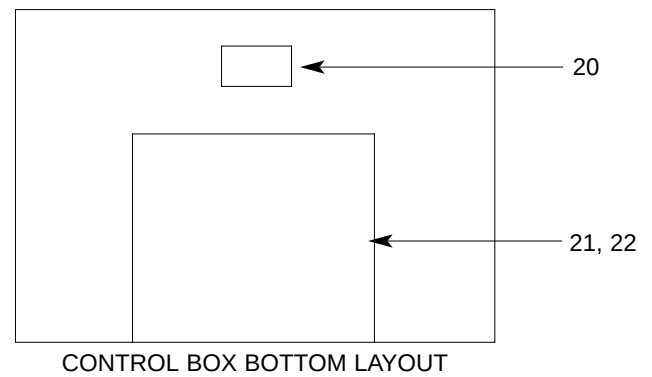
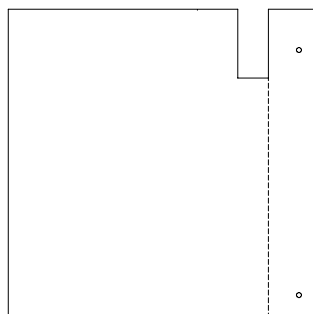
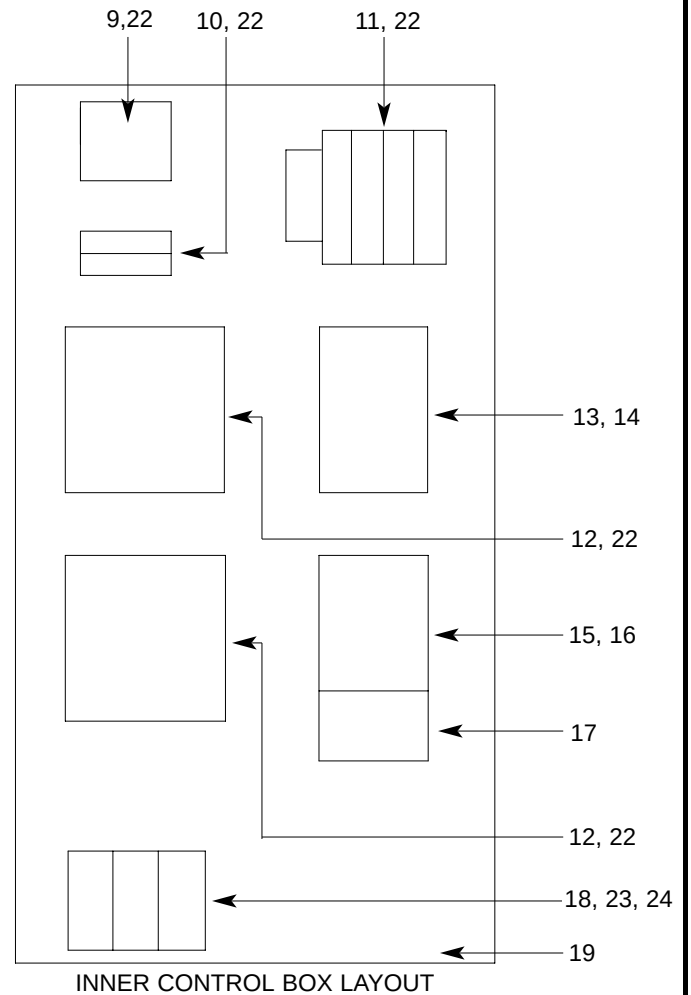
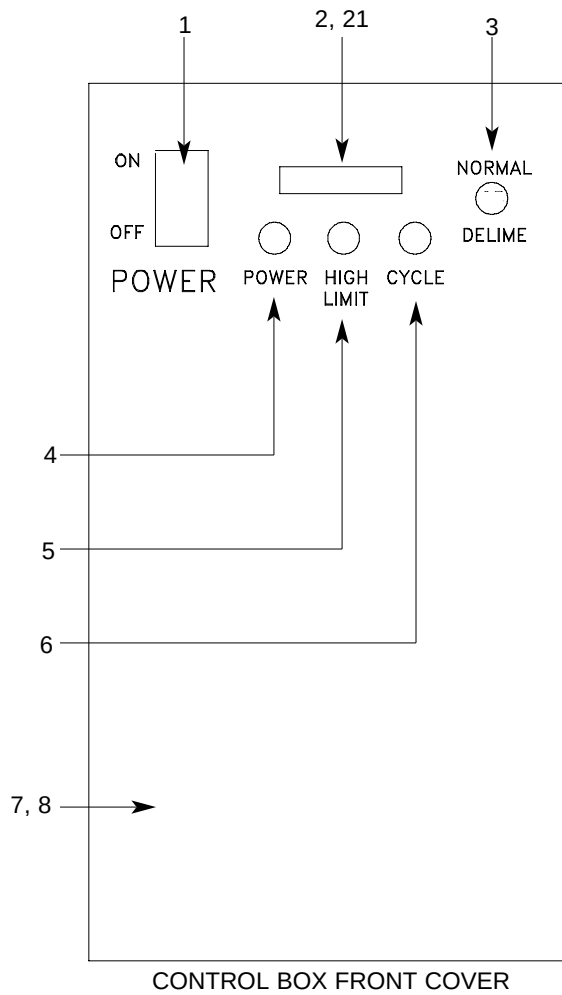


TABLE DIMENSIONS
STRAIGHT THROUGH INSTALLATION

SIDE MOUNTED CONTROL BOX ASSEMBLY



THE MOUNTING SCREWS FOR THE CONTROL BOX FRONT COVER (10-32 X 1/2" SLOTTED TRUSSHEAD SCREWS) MAY BE ORDERED USING 5305-011-39-85.

SIDE MOUNTED CONTROL BOX ASSEMBLY (CONTINUED)

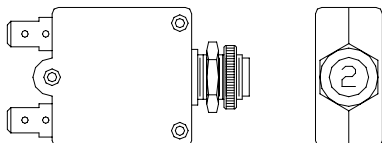
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Power Switch	5930-301-21-18
2	1	Cycle Counter	5990-111-47-42
3	1	Normal/Delime Switch	5930-301-46-00
4	1	Power Light	5945-504-06-18
5	1	High Limit Light	5945-504-07-18
6	1	Cycle Light	5945-504-08-18
7	1	Decal, Control Box Cover	9905-021-64-41
8	1	Control Box Cover	5700-031-91-45
9	1	Relay, Top Mount, Control	5945-111-47-51
10	1	Fuse Holder	5920-401-03-14
11	1	Timer	5945-303-31-00
12	2	Contactor, 220V, 4 Pole (1 for Tempstar NB models)	5945-109-01-69
13	1	Liquid Level Control Board	6680-200-08-21
14	2	Screw, 6-32 x 5/8" Long	5305-011-39-85
15	1	Wash Motor Contactor	5945-109-03-69
16	3	Screw, 10-32 x 3/8" Panhead	5305-173-26-00
17		See Below	N/A
18	1	3 Pole Terminal Block	5940-011-48-27
19	1	Control Box Weldment	5700-041-47-55
20		See Below	N/A
21		See Below	N/A
22	9	Screw, 6-32 x 3/8" Long	5305-171-02-00
23	3	Locknut, 10-24 with Nylon Insert	5310-373-01-00
24	1	Ground Lug	5940-200-76-00

Other components not shown:

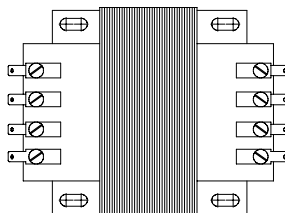
Connector, 1/2", 90 DEG Plastic	5975-011-45-14
Connector, 3/4", 45 DEG Plastic	5975-011-47-74
Connector, 1/2", 45 DEG Plastic	5975-011-45-23
Connector, 1/2", 90 DEG Metal	5975-111-01-00
Grommet, 1/2" OD x 3/8" ID	5325-011-46-73
Grommet, 7/8" Split	5975-200-40-00
Plug	5975-011-47-81
Decal, Delime/Normal	9905-011-34-96
Decal, L1, L2, L3	9905-101-12-66
Decal, Copper Conductors	9905-011-47-35
Decal, Ground	9905-011-86-86

The following components are used only in the 460 Volt control box.

Item #20
Circuit Breaker, 2 AMP
5925-111-64-18



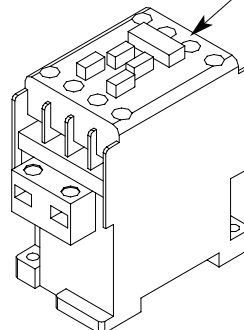
Item #21
Transformer
5950-111-65-93



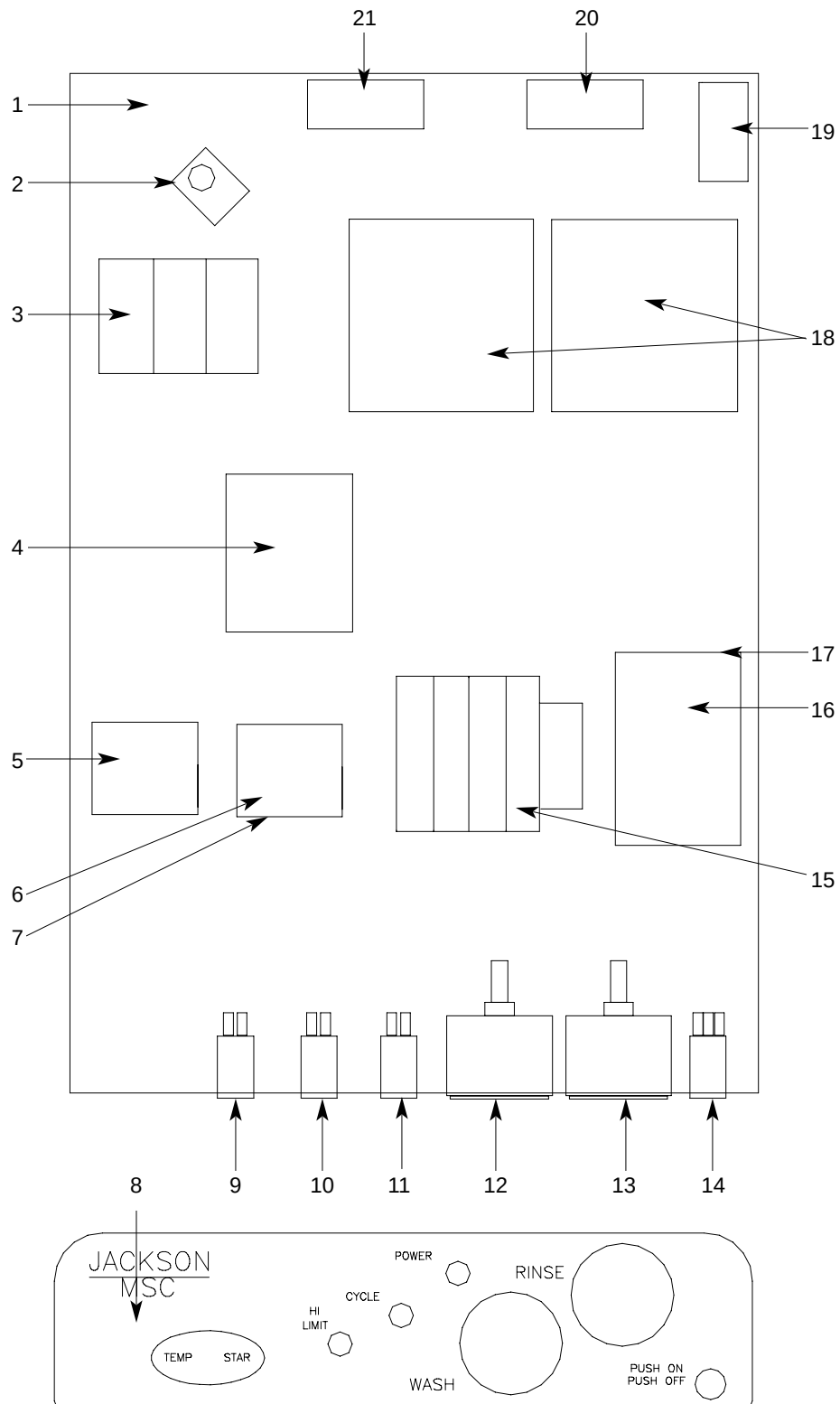
Exchange item #15 with the following:

Wash Motor Contactor
5945-002-14-78

Item #17
Overload (not shown)
5945-002-14-79



TOP MOUNTED CONTROL BOX ASSEMBLY



TOP MOUNTED CONTROL BOX ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Control Box Weldement	5700-002-29-76
2	1	Ground Lug	5940-200-76-00
3	1	Terminal Block	5940-011-48-27
4	1	Contactor, Wash Motor 208-230	5945-109-03-69
5	1	Relay	5945-111-47-51
6	1	Counter	5990-111-47-42
7	1	Plate, Counter Mounting	5700-002-37-71
8	1	Decal, Control Box	9905-002-31-85
9	1	Light, Yellow	5945-111-44-44
10	1	Light, Green	5945-111-44-43
11	1	Light, Red	5945-111-44-45
12	1	Temperature Gauge, Wash 96" Lead	6685-111-68-48
13	1	Temperature Gauge, Rinse 48" Lead	6685-111-68-49
14	1	Switch, Power	5930-002-29-13
15	1	Timer	5945-303-31-00
16	1	Liquid Level Control Board	6680-200-08-21
17	1	Bracket, Liquid Level Control Board	5700-002-13-22
18	2	Heater Contactors	5945-109-01-69
19	1	Magnetic Reed Switch	5930-011-47-50
20	1	Normal Delime Switch	5930-301-21-18
21	1	Fuse Holder	5920-401-03-14

For a 460 Volt control box, exchange item 4 with one each of the following:

Wash Motor Contactor	5945-002-14-78
Overload	5945-002-14-79

Other components not shown:

Cover, Top Mount Control Box	5700-002-23-03
Decal, Warning-Disconnect Power	9905-100-75-93
Screw, 10-32 x 3/8" Phillips Truss Head	5305-173-12-00

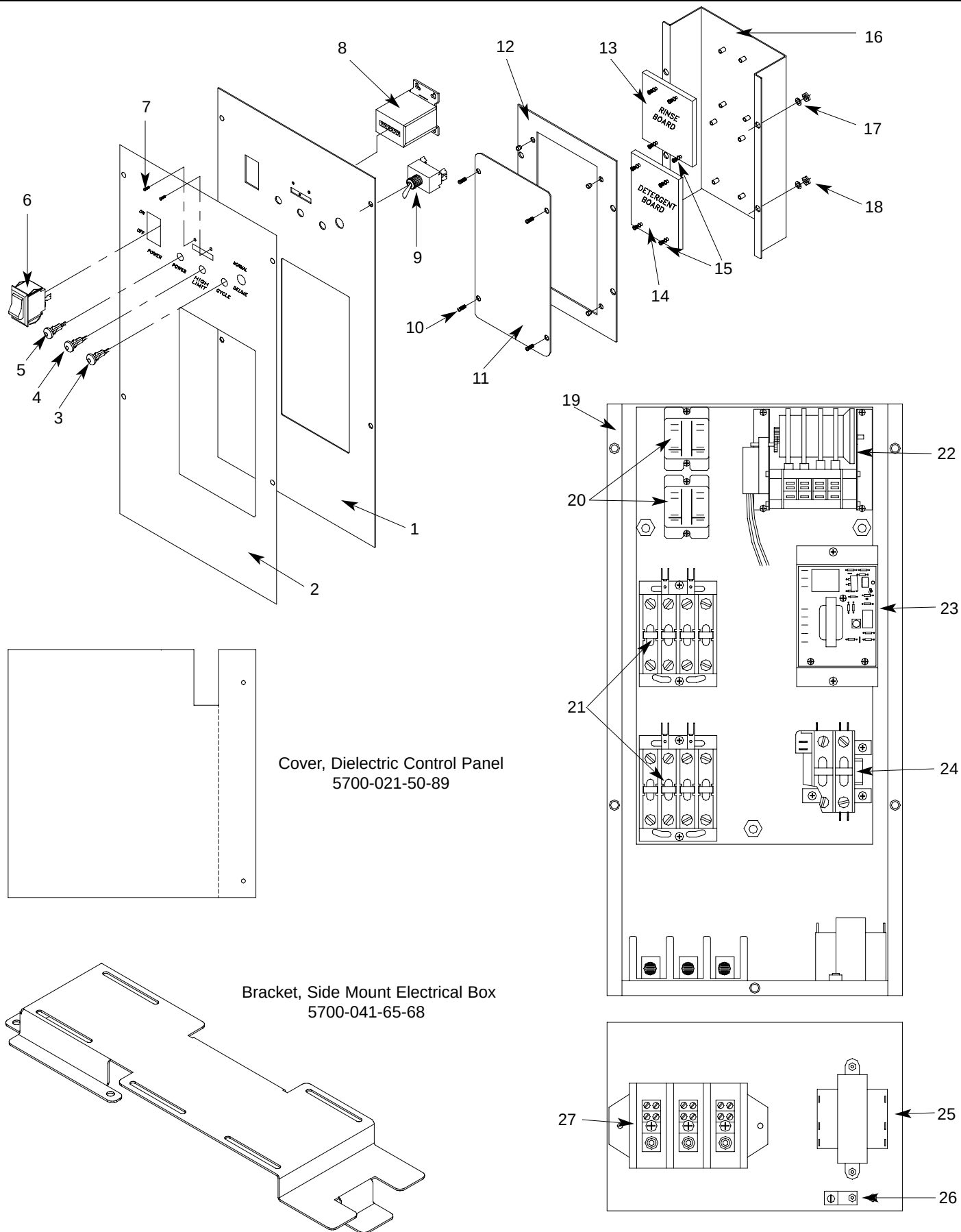
Leg, Control Box	5700-002-33-05
Screw, 1/4"-20 x 2 3/4" Hex Head Cap	5305-274-13-00
Washer, 1/4"-20 ID S/S	5311-174-01-00
Locknut, 1/4"-20 S/S Hex w/Nylon Insert	5310-374-01-00

Connector, 1/2", 90 DEG Plastic	5975-011-45-14
Connector, 3/4", 45 DEG Plastic	5975-011-47-74
Connector, 1/2", 45 DEG Plastic	5975-011-45-23
Connector, 1/2", 90 DEG Metal	5975-111-01-00
Grommet, 1/2" OD x 3/8" ID	5325-011-46-73
Grommet, 7/8" Split	5975-200-40-00
Plug, 1/2"	5975-011-47-81
Decal, Delime/Normal	9905-011-34-96
Decal, L1, L2, L3	9905-101-12-66
Decal, Copper Conductors	9905-011-47-35
Decal, Ground	9905-011-86-86

Associated Hardware:

Locknut, 6-32 S/S Hex w/Nylon Insert	5310-373-03-00
Locknut, 10-24 S/S Hex w/Nylon Insert	5310-373-01-00
Screw, 6-32 x 5/8"	5305-011-39-85
Screw, 6-32 x 3/8" Phillips Round Head	5305-171-02-00

SDS SIDE MOUNTED CONTROL BOX ASSEMBLY



SDS SIDE MOUNTED CONTROL BOX ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Control Box Cover Weldment	5700-021-60-43
2	1	Decal, Control Box Cover	9905-021-50-13
3	1	Light, Amber	5945-504-06-18
4	1	Light, Green	5945-504-08-18
5	1	Light, Red	5945-504-07-18
6	1	Manual Wash Switch	5930-301-46-00
7	2	Screw, 4-40 x 1/4" Phillips Panhead	5305-011-36-92
8	1	Cycle Counter	5990-111-47-42
9	1	Wash Switch	5930-301-21-18
10	4	Screw, 10-32 x 3/8" Phillips Panhead	5305-173-04-00
11	1	Cover, Electrical Box Panel	5700-011-49-23
12	1	Frame, Electrical Box Cover Panel	5700-011-49-22
13	1	Board, PC Rinse	6680-111-50-55
14	1	Board, PC Detergent	6680-111-50-54
15	8	Screw, 6-32 x 3/8" Long	5305-171-02-00
16	1	Bracket, PC Board	5700-011-49-24
17	4	Lockwasher, Internal Tooth #10	5311-011-59-51
18	4	Locknut, 10-24 with Nylon Insert	5310-373-01-00
19	1	Control Box Weldment	5700-041-47-55
20	2	Relay, Top Mount, Control	5945-111-47-51
21	2	Contactor, 220V, 4 Pole (1 for Tempstar NB models)	5945-109-01-69
22	1	Timer	5945-303-31-00
23	1	Liquid Level Control Board	6680-200-08-21
24	1	Contactor, 220V, 2 Pole	5945-109-03-69
25	1	Transformer	5950-400-01-35
26	1	Ground Lug	5940-200-76-00
27	1	3 Pole Terminal Block	5940-011-48-27

Other components not shown:

Connector, 1/2", 90 DEG Plastic	5975-011-45-14
Connector, 3/4", 45 DEG Plastic	5975-011-47-74
Connector, 1/2", 45 DEG Plastic	5975-011-45-23
Connector, 1/2", 90 DEG Metal	5975-111-01-00
Grommet, 1/2" OD x 3/8" ID	5325-011-46-73
Grommet, 7/8" Split	5975-200-40-00
Plug, 1/2"	5975-011-47-81
Decal, Delime/Normal	9905-011-34-96
Decal, L1, L2, L3	9905-101-12-66
Decal, Copper Conductors	9905-011-47-35
Decal, Ground	9905-011-86-86

The following components are used only in the 460 Volt control box.

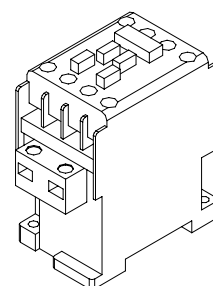
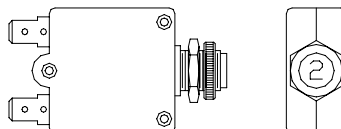
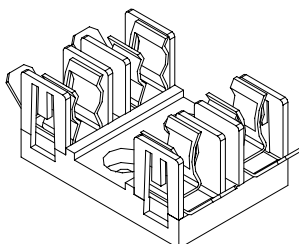
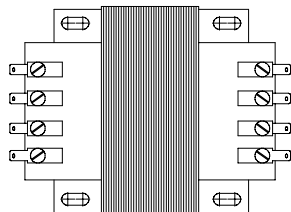
Exchange item number 25
with the following:
Transformer
5950-111-65-93

Fuse Holder
5940-401-03-14

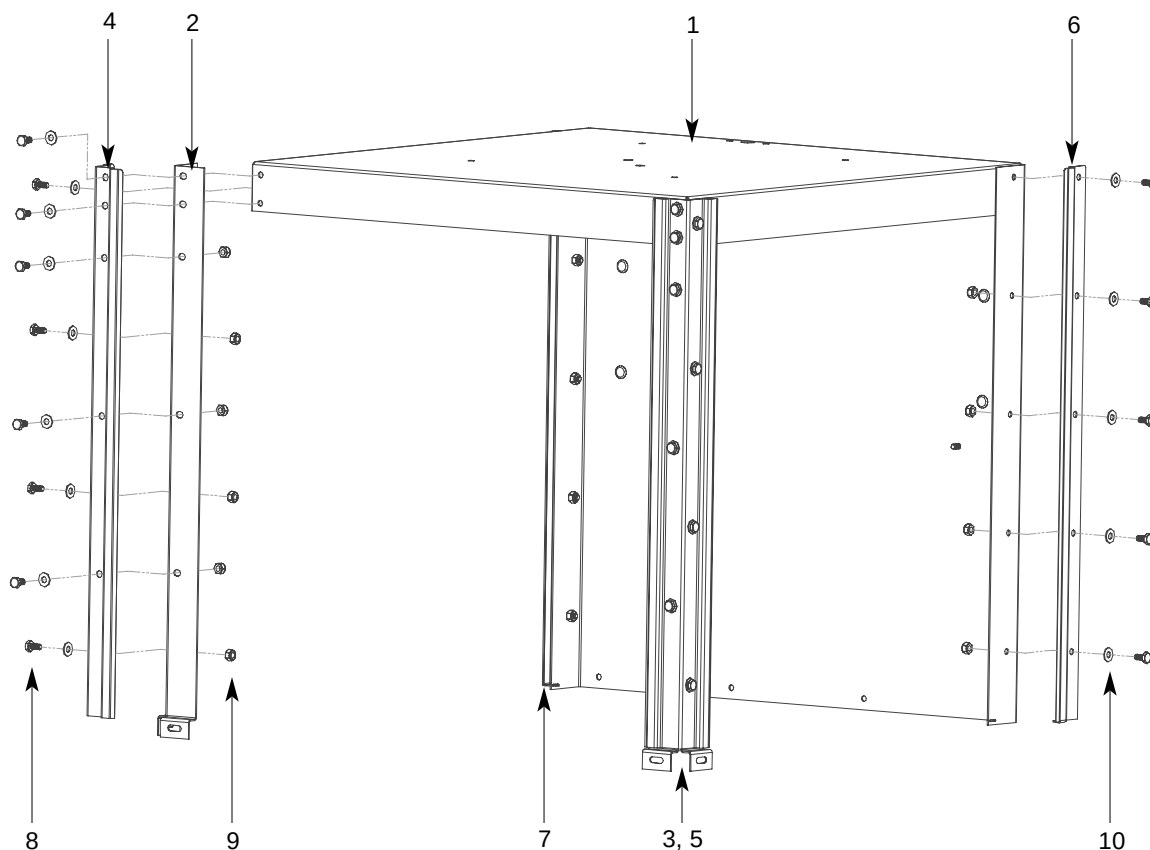
Circuit Breaker, 2 AMP
5925-111-64-18

Exchange item number 24
with the following:
Wash Motor Contactor
5945-002-14-78

Overload (not shown)
5945-002-14-79



HOOD ASSEMBLY



Switch Box Weldment
5700-002-14-34

SDS Switch Box Weldment
5700-002-30-98

Magnetic Reed Switch
5930-011-47-50

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Hood Weldment (Tempstar/Tempstar NB)	5700-041-94-39
1	1	Hood Weldment (Tempstar SDS only)	5700-041-47-87
2	1	Left Front Hood Support	5700-021-33-18
3	1	Right Front Hood Support	5700-021-33-17
4	1	Double Door Guide, Front Left	5700-021-33-20
5	1	Double Door Guide, Front Right	5700-021-33-19
6	1	Guide, Right Rear	5700-021-84-70
7	1	Guide, Left Rear	5700-021-84-71
8	28	Screw, 1/4"-20 x 1/2" Long	5305-274-02-00
9	28	Locknut, 1/4"-20 with Nylon Insert	5310-374-01-00
10	28	Washer, 1/4"-20 ID, S/S, Flat	5311-174-01-00

HOOD ASSEMBLY (SINGLE PIECE WELDMENT)



Switch Box Weldment
5700-002-14-34

SDS Switch Box Weldment
5700-002-30-98

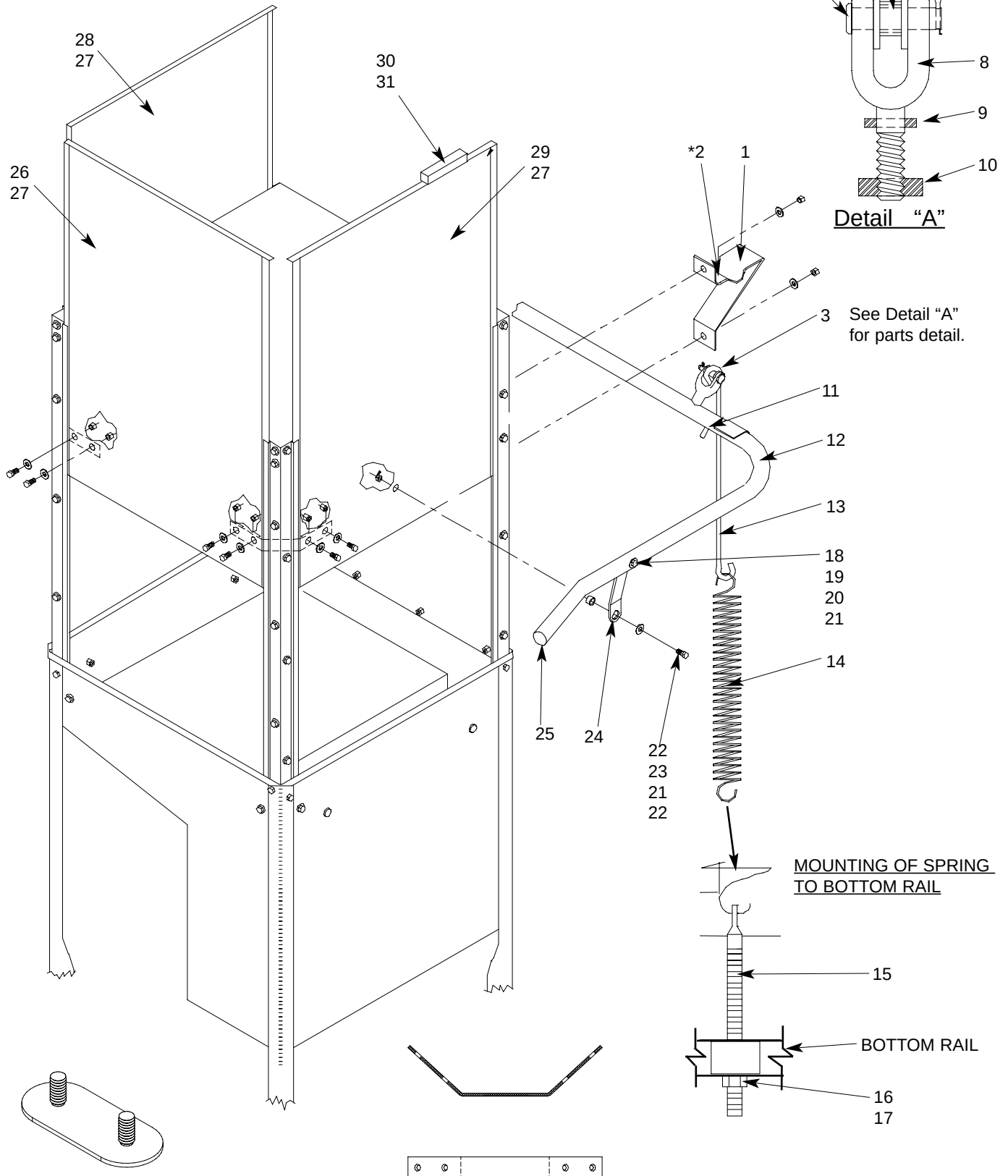
Magnetic Reed Switch
5930-011-47-50

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Hood Weldment (Tempstar /Tempstar NB)	5700-002-29-79
1	1	Hood Weldment (Tempstar SDS)	5700-002-36-91
2	1	Plug, Bulkhead	4730-609-05-00
3	1	Frame Weldment	5700-031-48-01

CANTILEVER ARM/DOOR ASSEMBLIES

Back Corner Steam Plugs may be ordered using part number 5700-002-25-01.

Front Corner Steam Plugs may be ordered using part number 5700-002-24-99.



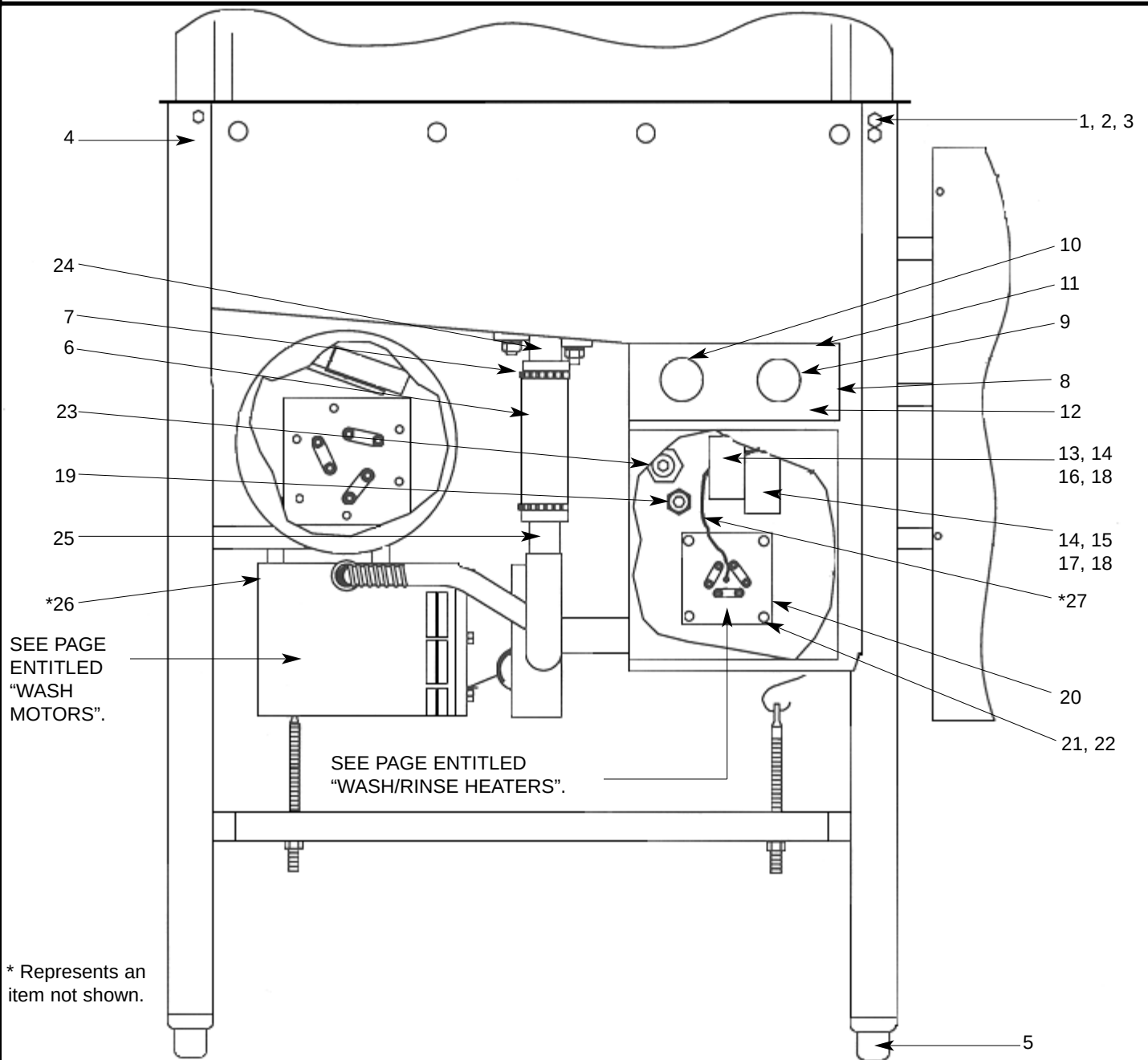
Door Connecting Plate
5700-002-20-78

Door Connecting Bracket
5700-021-33-39

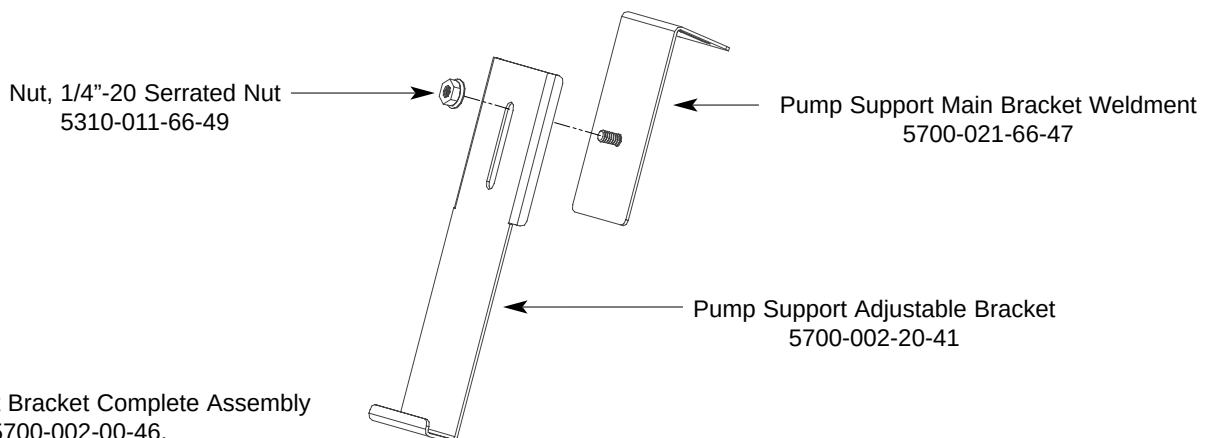
CANTILEVER ARM/DOOR ASSEMBLIES (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	2	Bracket, Cantilever Support	5700-031-88-00
2	6	Wear Button .50 Dia	5700-011-88-01
3	2	Yoke Assembly	5700-000-75-77
4	2	Clevis Pin	5315-700-01-00
5	4	Washer, Nylon	5311-369-03-00
6	2	Bushing	3120-100-03-00
7	2	Cotter Pin 3/32" x 3/4"	5315-207-01-00
8	2	Yoke	5700-000-75-78
9	2	Space Washer	5311-156-02-00
10	2	Nut, 3/8"-16 S/S Hex Locking	5310-256-04-00
11	2	Spring Pin, 1/4" x 1 1/8"	5315-407-06-00
12	1	Cantilever Arm	5700-031-50-67
13	2	Rod, Spring	5700-002-29-38
14	2	Spring	5340-109-02-00
15	2	Bolt, Canlilever Hanger Eye 3/8"-16	5306-956-05-00
16	2	Washer, 3/8" ID x 7/8" OD S/S	5311-176-01-00
17	4	Nut, 3/8"-16 S/S Hex	5310-276-01-00
18	2	Screw, 1/4"-20 x 3/4" Lg. S/S	5305-274-04-00
19	4	Washer, 1/4" Stainless Steel	5311-174-01-00
20	2	Spacer, PB Bolt	5700-000-29-40
21	4	Locknut, 1/4"-20 S/S Hex w/Nylon Insert	5310-374-01-00
22	2	Screw 1/4"-20 x 1 1/2" lg stainless Steel	5305-274-23-00
23	2	Sleeve, Cantilever Arm	5700-000-85-69
24	2	Connector, Cantilever Arm	5700-011-90-99
25	2	Cantilever Arm Plug	5340-011-35-00
26	1	Door, Front (Complete Assembly)	5700-002-30-89
26A	1	Door Only, Front	5700-002-29-83
27	6	Door, Guides	5700-111-33-59
28	1	Door, Left Side (Complete Assembly)	5700-002-30-87
28a	1	Door Only, Left Side	5700-002-29-86
29	1	Door, Right Side (Complete Assembly)	5700-002-30-88
29A	1	Right Door Weldment with Studs	5700-002-29-85
30	1	Magnet, Reed Switch	5930-111-51-68
31	2	Locknut, 8-32 S/S Hex w/Nylon Insert	5310-272-02-00

TUB FRONT ASSEMBLY



* Represents an item not shown.



TUB FRONT ASSEMBLY (CONTINUED)/WASH TANK HEATING SYSTEM

ITEM	QTY	DESCRIPTION	Mfg. No.
1	8	Screw, 1/4"-20 x 1/2" Long	5305-274-02-00
2	8	Locknut, 1/4"-20 with Nylon Insert	5310-374-02-00
3	8	Washer, 1/4"-20 ID, S/S, Flat	5311-174-01-00
4	1	Frame Weldment	5700-031-48-01
5	4	Bullet Foot	5340-108-01-03
6	1	Discharge Hose	5700-011-88-24
7	2	Hose Clamp	4730-719-01-37
8	1	Gauge Bracket (Side Mount Control Box Only)	5700-011-48-08
9	1	Thermometer, Wash (Side Mount Control Box Only)	6685-111-40-38
10	1	Thermometer, Rinse (Side Mount Control Box Only)	6685-111-40-39
11	2	Locknut, 10-24 with Nylon Insert	5310-373-01-00
12	1	Decal, Gauge Bracket (Side Mount Control Box Only)	9905-011-50-88
13	1	Thermostat, High Limit	5930-121-71-36
14	2	Thermostat Bracket	5700-011-73-72
15	1	Thermostat, Regulating	5930-121-67-72
16	1	Decal, High Limit	9905-011-84-32
17	1	Decal, Thermostat Regulating	9905-011-84-31
18	4	Locknut, 6-32 with Nylon Insert	5310-373-03-00
19	1	Fitting, 1/4" Imperial Brass	5310-924-02-05
20	1	Wash Heater Gasket	5330-011-47-79
21	4	Lockwasher, 5/16", S/S, Split	5311-275-01-00
22	4	Nut, Hex, 5/16"18, S/S	5310-275-01-00
23	1	Probe, High Water	6680-200-02-68
24	1	Lower Wash Manifold Weldment	5700-031-46-00
25	1	Nipple	5700-021-34-84
*26	1	Clamp, Hose 5 5/8" to 6"	4730-011-34-90
*27	1	Clamp, 1/8" Nylon	5975-601-10-15

WASH TANK HEATING SYSTEM EXPLANATION

The wash tank heater system is electrically connected in the circuit so that it is dependent upon the dishwasher being properly filled with and maintaining a safe water level. The system is made up of two thermostats (mounted in the junction box behind the front panel), a water level probe (mounted in the wash tank), the wash heater contactor (mounted in the control box), and the wash heater itself.

Once the water level control (WL) senses water contact (conductivity) through the water level probe (HP), it energizes the wash heater contactor (R2). This closes the contacts to the wash heater (H2) to provide energy to heat the water in the tank.

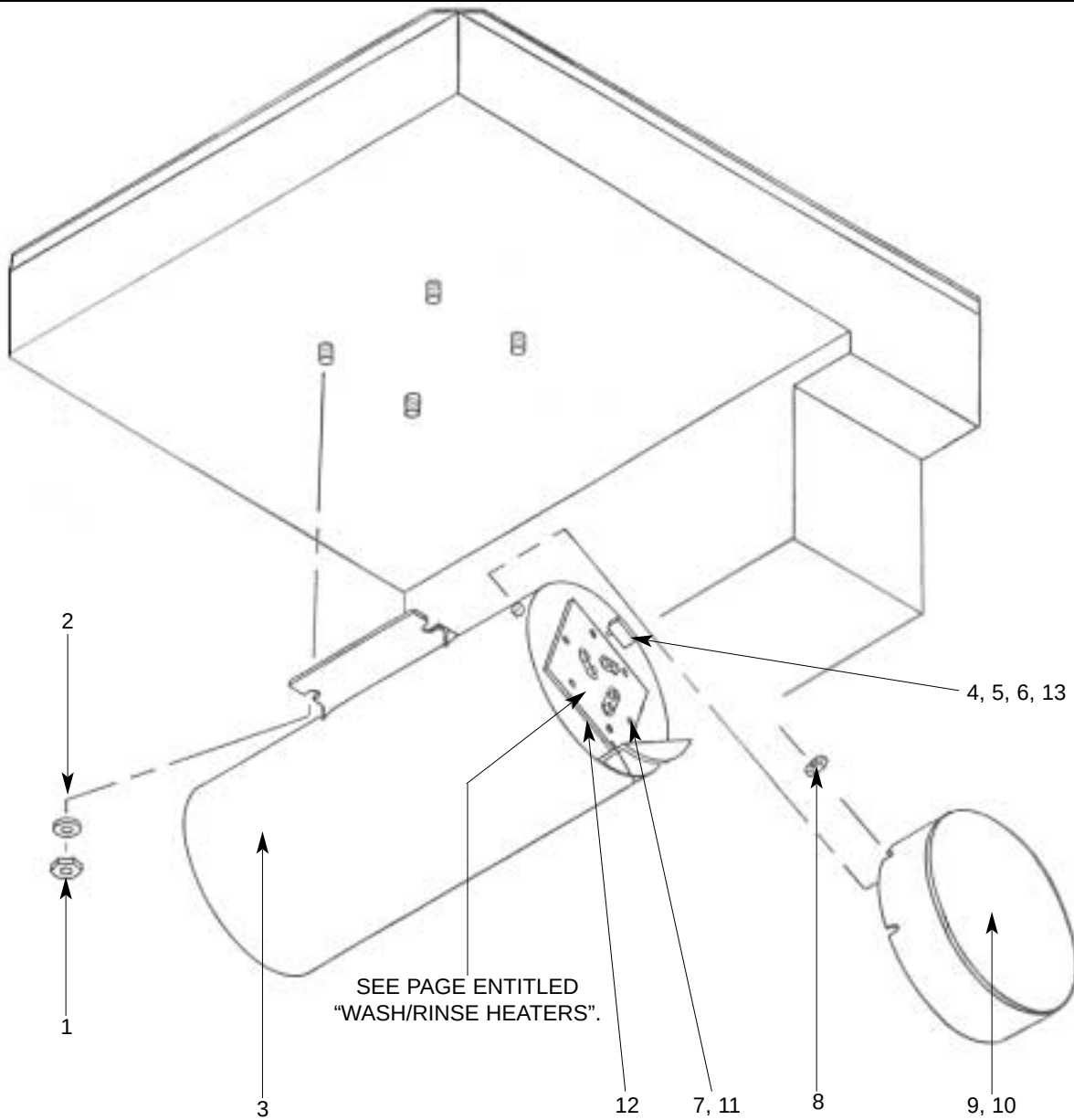
The wash heater thermostat (TS2), which senses water temperature through a capillary bulb in the tank, will maintain tank temperature. When the water temperature reaches 155 degrees F. an N. C. contact in the thermostat opens which de-energizes the wash heater contactor (R2). This shuts down the wash tank heater (H2).

When the water temperature falls below 150 degrees F. the contacts in the thermostat will close and the the wash tank heater (H2) will energize to maintain the water temperature at 155 degrees nominal.

The high limit thermostat (HTLS) with a direct sensing probe prevents damage to the wash tank heater due to over-temperature conditions. Should the wash tank heater (H2) reach a temperature of 210 degrees F., a N.C. contact in the high limit thermostat (HTLS) opens which de-energizes the wash heater contactor (R2). This shuts down the wash tank heater (H2). When this occurs the heater overload light (E2, amber) will come on to indicate a temperature problem.

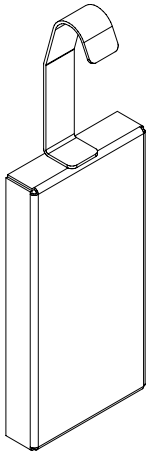
Once the dishwasher has been filled to the correct level, the wash tank heater should operate automatically.

RINSE TANK ASSEMBLY

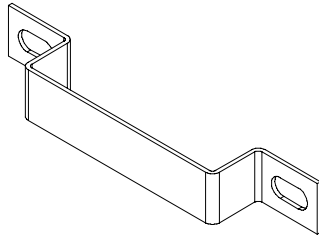


ITEM	QTY	DESCRIPTION	Mfg. No.
1	4	Locknut, 1/4"-20 with Nylon Insert	5310-374-01-00
2	4	Washer, 1/4" ID, S/S, Flat	5311-174-01-00
3	1	Booster Tank Weldment	5700-001-22-02
4	1	Fitting, 1/4" Imperial Brass	5310-924-02-05
5	1	Thermostat Bracket	5700-011-73-72
6	1	Thermostat, Rinse	5930-121-71-29
7	6	Nut, Hex, 5/16"-18	5310-275-01-00
8	1	Locknut, 10-24 with Nylon Insert	5310-373-01-00
9	1	Decal, Warning - Disconnect Power	9905-100-75-93
10	1	Booster Tank Cover Weldment	5700-001-29-30
11	6	Lock Washer, 5/16", Split	5311-275-01-00
12	1	Gasket, Rinse Heater	5330-200-02-70
13	1	Decal, Thermostat Regulating	9905-011-84-31

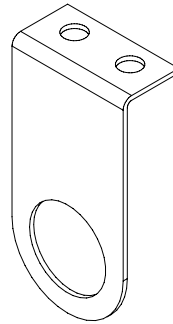
INNER TUB COMPONENTS/TRACK ASSEMBLY



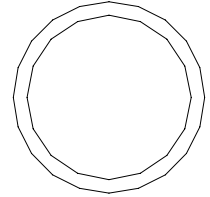
Suction Strain Weldment
5700-001-22-23



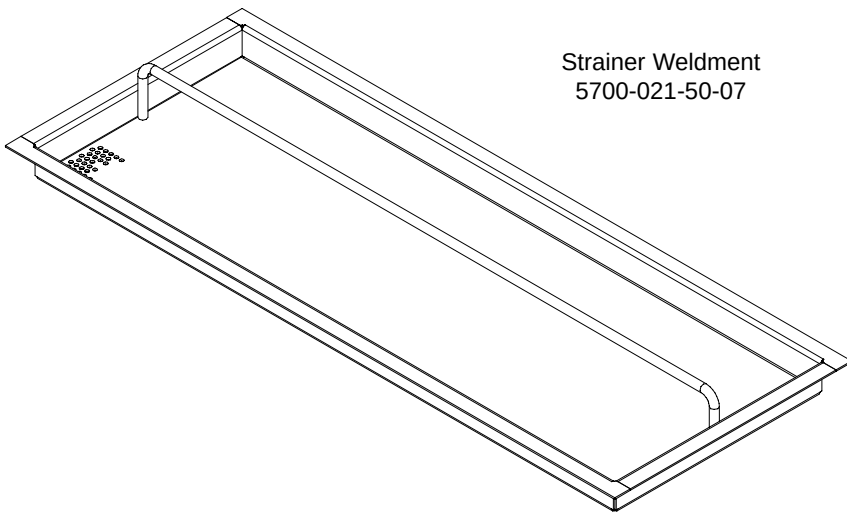
Suction Strain Bracket
5700-001-22-24



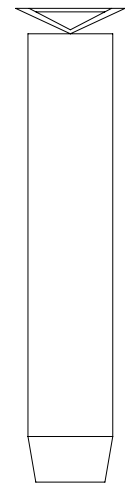
Overflow Support Bracket
5700-001-27-55



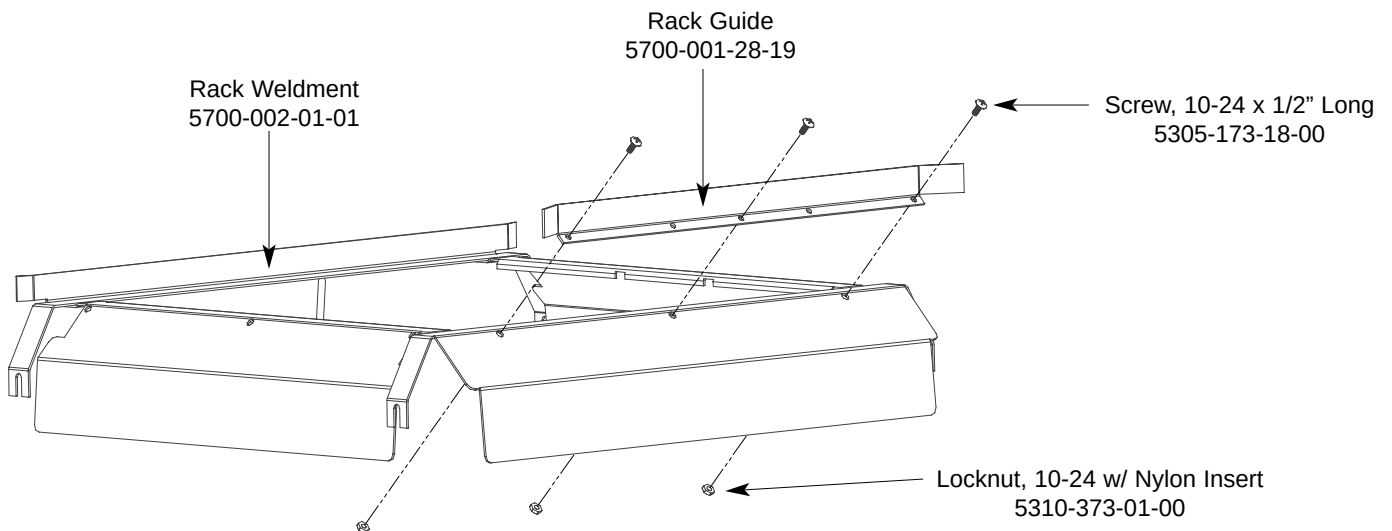
O-Ring
5330-400-05-00



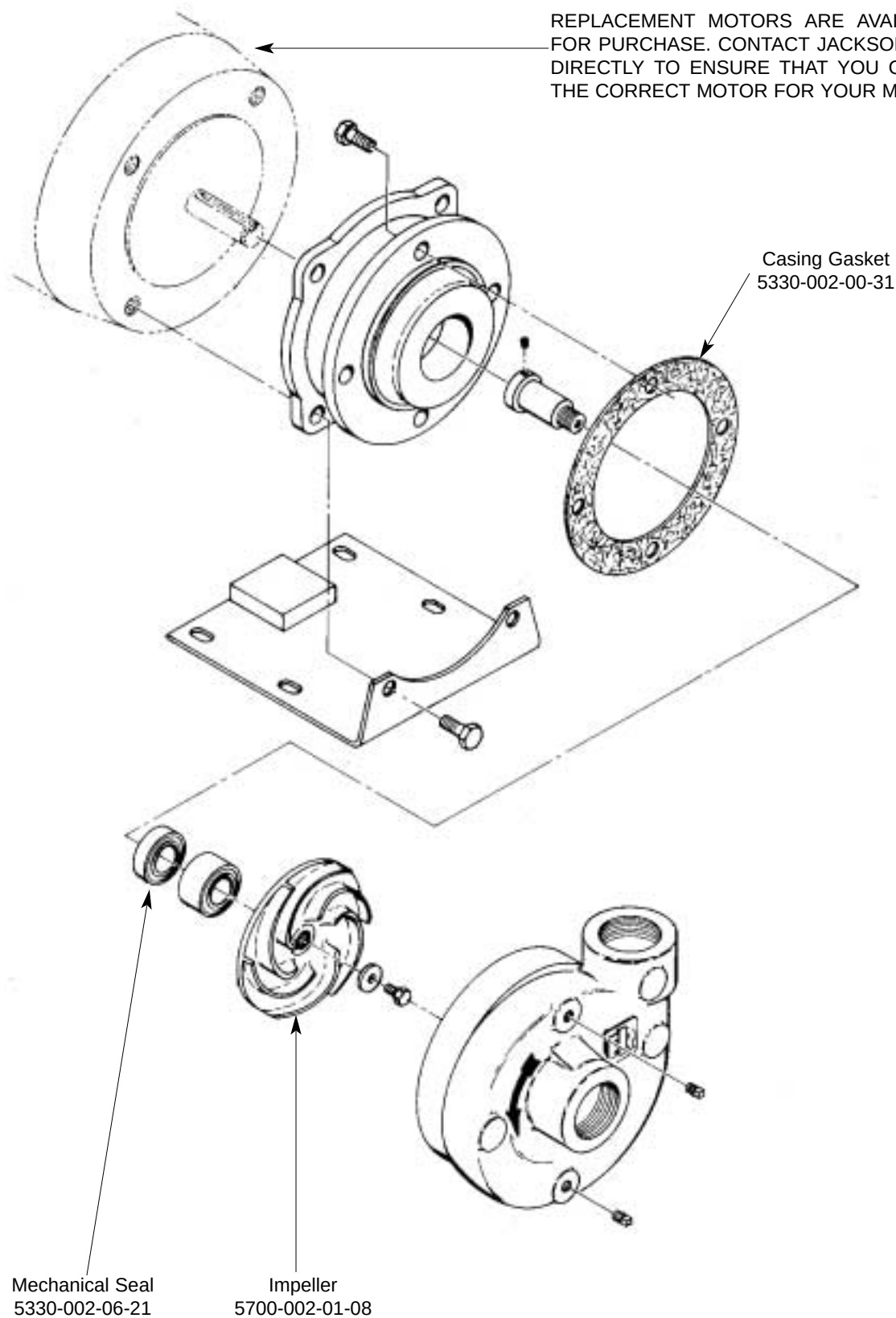
Strainer Weldment
5700-021-50-07



Wash Overflow Weldment
5700-001-25-69



WASH PUMP EXPLODED VIEW



WASH MOTORS

The Tempstar models covered in this manual come supplied with various wash motor assemblies (a wash motor assembly includes the wash motor and the pump end), depending on the characteristics of the machine. To ensure that you order the correct wash motor assembly for the model you are servicing, please refer to the following table:

<u>Model</u>	<u>Volts</u>	<u>Hz</u>	<u>Phase</u>	<u>Wash Motor Assembly</u>
Tempstar	208	60	1	6105-121-35-18
Tempstar	230	60	1	6105-121-35-18
Tempstar	208	60	3	6105-121-35-18
Tempstar	230	60	3	6105-121-35-18
Tempstar	460	60	3	6105-121-64-21
Tempstar SDS	208	60	1	6105-121-35-18
Tempstar SDS	230	60	1	6105-121-35-18
Tempstar SDS	208	60	3	6105-121-35-18
Tempstar SDS	230	60	3	6105-121-35-18
Tempstar SDS	460	60	3	6105-121-64-21
Tempstar NB	208	60	1	6105-121-35-18
Tempstar NB	230	60	1	6105-121-35-18
Tempstar NB	208	60	3	6105-121-35-18
Tempstar NB	230	60	3	6105-121-35-18
Tempstar NB	460	60	3	6105-121-64-21

Important note: When servicing a wash motor, it is important to refer to the wiring schematic found on the motor, to ensure that the motor is wired correctly. Different manufacturers of motors may not use the same wire color codes and therefore, your new motor, which may have been built by someone different than who built your original motor, may not connect using the same wires. Always refer to the wiring diagrams on the motor you are installing. If the motor you are installing has had the schematic removed, contact Jackson MSC immediately for technical support.

Details concerning the Tempstar models wash motor assemblies:

The pumps for the Tempstar models covered in this manual are close coupled centrifugal pumps. The pump casings are made from iron and may be prone to oxidation if still water is left in the casing for an extended amount of time. It is recommended that if the unit is not to be used for such a period, such as for renovation of the installation site, that the casing be drained completely. The impeller is made from stainless steel to resist corrosion and is threaded onto the pump shaft. Water is prevented from travelling down the shaft into the motor by use of a mechanical-type shaft seal. As with all mechanical seals, care must be taken not to damage the sealing surfaces. Mechanical seals should only be replaced by trained service personnel.

The motors chosen to be used on the Tempstar models covered in this manual all have open drip proof construction and are rated with jet pump service factors for continuous duty operation. The motors are all 3/4 HP, 60 Hz, and operate at 3450 RPM.

All motors installed on Tempstar dishmachines have overload protection. Single phase motors will have built-in overload protection and will be capacitor start units. Three phase motors will have external overload protection located in the control box. The overload protection is to protect the motor from over current damage due to electrical or mechanical failure.

It is of vital importance that it be stressed that efficient operation of the wash motor assembly is essential in proper ware washing. The pump must never be ran without water in the casing, for this causes a build-up of heat which can damage the casing gasket and cause the pump to leak. A leaking pump will cause the water level to lower in the machine and will have two detrimental effects: (1) air will be pumped through the wash arms, reducing the dishmachine's ability to wash, and (2) the liquid level control circuit will energize more often, using more water to maintain wash tank level; this will increase the overall cost of operating the unit.

THERMOSTATS/WASH HEATERS/RINSE HEATERS

This unit has a probe-direct sensing type thermostat with fixed set point and adjustable range for both wash and booster tank heat regulating. The same type thermostat is used as the high limit sensor for the wash tank heater. It operates a precision single double throw switch through a lever for close tolerance narrow differential switching capability. The unit has screw driver adjustment and front connect terminals and is mounted by 7/16"-24 thread, Loxit fitting for easy removability and serviceability. The thermostat range is from 140°F to 240°F with a maximum bulb exposure temperature of 300°F. Unit is listed at 12.5 amps at 24/120 VAC.

There are three (3) thermostats on the dishwasher. One monitors the wash tank temperature, the second monitors the rinse water temperature with the third protecting the heater element. Although all are identical in appearance there are different replacement part numbers depending on the function of the thermostat.

Calibration:

The hi-limit thermostat is used to protect the heater element in the event of a run away regulating thermostat or a dry fire situation. It is set for 210°F +0 or -10°F with a fixed set point. **This part is not adjustable.**

The wash tank regulating thermostat will maintain the correct wash water temperature to meet NSF requirements. These specify that the wash be no lower than 150°F. It is set at the factory to energize the tank heater at 155°F and de-energize at 167°F.

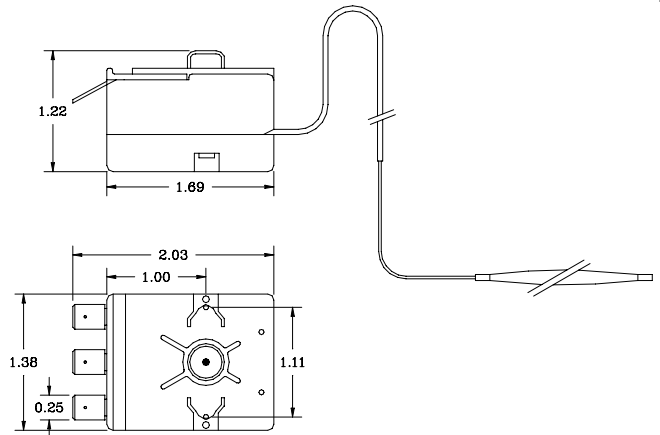
The rinse tank regulating thermostat will maintain the correct rinse water temperature to meet NSF requirements. It is factory set to energize the rinse tank heater at 195°F and de-energize at 200°F.

To order the thermostats:

Thermostat, High Limit	5930-121-71-36
Thermostat, Wash Tank	5930-121-67-72
Thermostat, Rinse Tank	5930-121-71-29

To convert from the old style "bayonette" thermostats, you will need these kits:

Kit, Thermostat, High Limit with Bracket	6401-021-83-86
Kit, Thermostat, Wash Tank with Bracket	6401-021-83-90
Kit, Thermostat, Rinse Tank with Bracket	6401-021-83-83



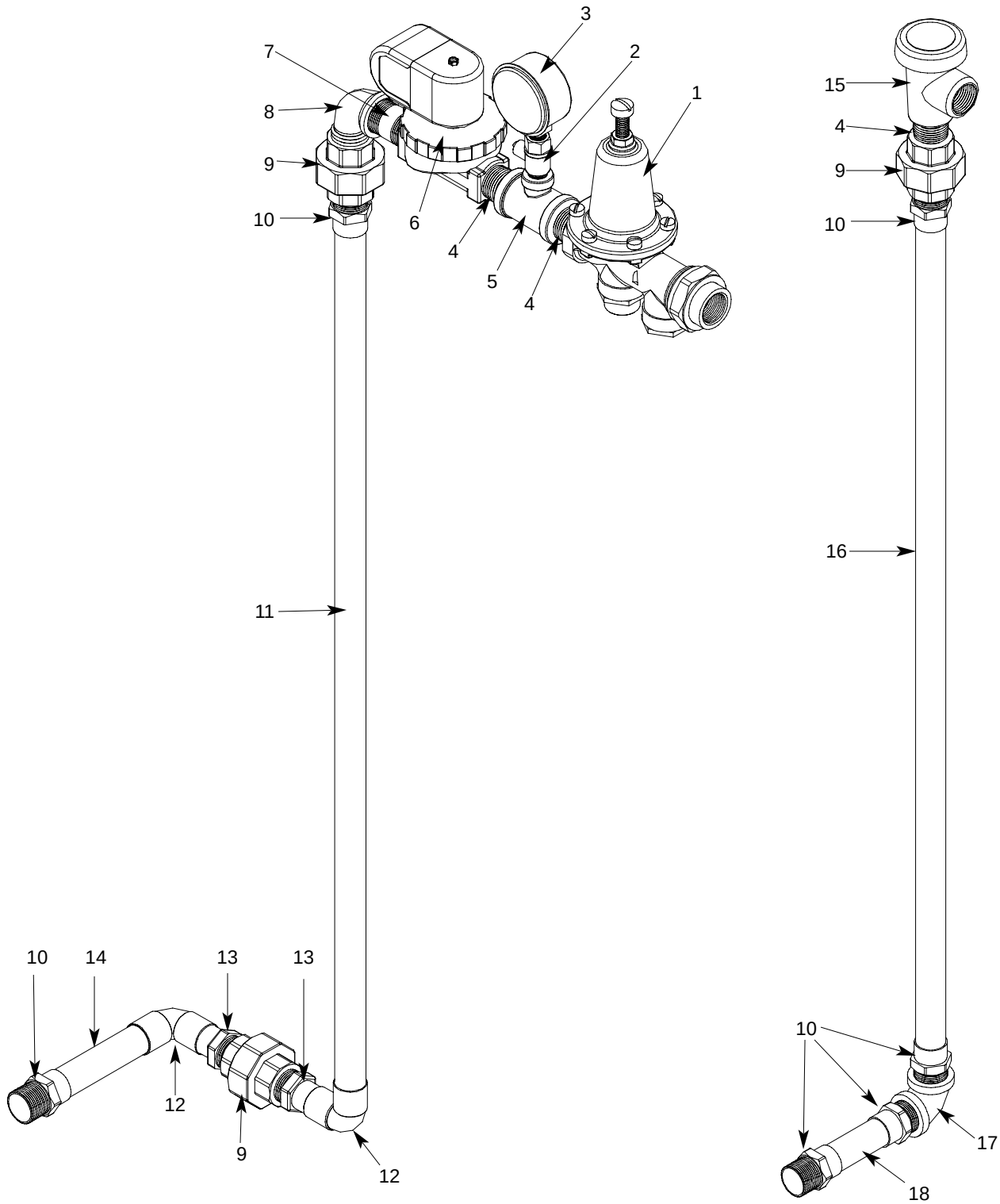
The Tempstar models covered in this manual come supplied with various heaters, depending on the characteristics of the machine. To ensure that you order the correct heater for the model you are servicing, please refer to the following table:

<u>Model</u>	<u>Volts</u>	<u>Hz</u>	<u>Phase</u>	<u>Wash Heater</u>	<u>40°F Rise Rinse Heater (12 KW)</u>	<u>70°F Rise Rinse Heater (14 KW)</u>
Tempstar	208	60	1	4540-121-47-39	4540-121-47-40	4540-121-63-38
Tempstar	230	60	1	4540-121-47-39	4540-121-47-40	4540-121-63-38
Tempstar	208	60	3	4540-121-47-39	4540-121-47-40	4540-121-63-38
Tempstar	230	60	3	4540-121-47-39	4540-121-47-40	4540-121-63-38
Tempstar	460	60	3	4540-121-65-99	4540-100-01-15	4540-121-63-39
Tempstar SDS	208	60	1	4540-121-47-39	4540-121-47-40	4540-121-63-38
Tempstar SDS	230	60	1	4540-121-47-39	4540-121-47-40	4540-121-63-38
Tempstar SDS	208	60	3	4540-121-47-39	4540-121-47-40	4540-121-63-38
Tempstar SDS	230	60	3	4540-121-47-39	4540-121-47-40	4540-121-63-38
Tempstar SDS	460	60	3	4540-121-65-99	4540-100-01-15	4540-121-63-39
Tempstar NB	208	60	1	4540-121-47-39		
Tempstar NB	230	60	1	4540-121-47-39		
Tempstar NB	208	60	3	4540-121-47-39		
Tempstar NB	230	60	3	4540-121-47-39		
Tempstar NB	460	60	3	4540-121-65-99		

INCOMING PLUMBING/OUTLET PLUMBING ASSEMBLY

INCOMING PLUMBING

OUTLET PLUMBING

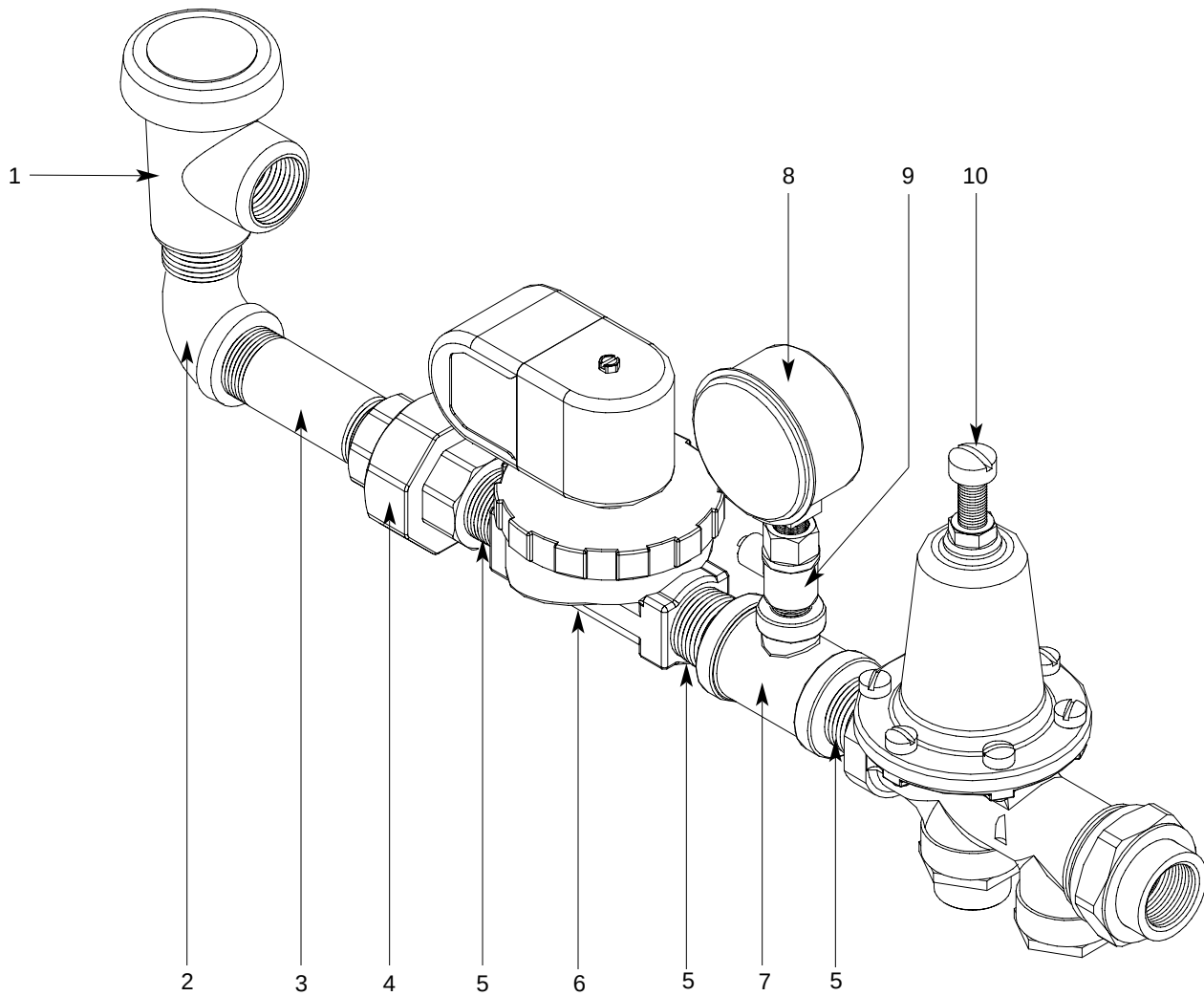


When servicing plumbing components, take care not to damage the threads of each individual item. Damaged threads can cause leaks and loss of pressure, which could adversely effect the performance of the Tempstar dishmachine. It is strongly recommended that teflon thread tape, used in conservative amounts, be applied to threads when joining components together. It is not advised to use thread sealing compounds, sometimes referred to as "pipe dope". Compounds can be ejected from the threads during the tightening process and become lodged in key components, thereby rendering them useless. Some of the components include the solenoid valve and the pressure gauge isolation ball valve.

INCOMING PLUMBING/OUTLET PLUMBING ASSEMBLY

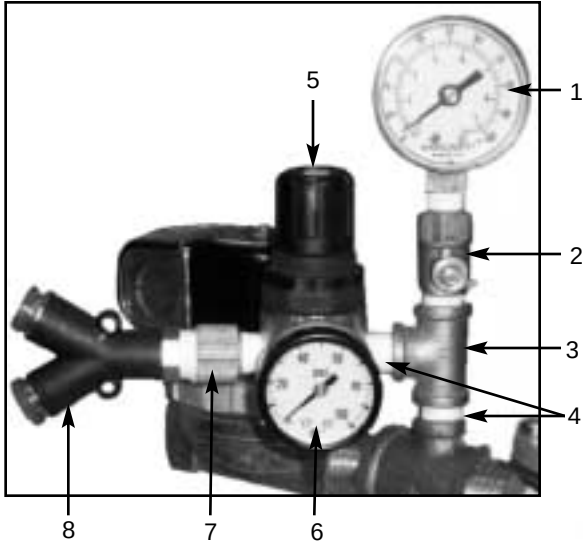
ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Water Pressure Regulator, 3/4" NPT	6685-011-58-22
2	1	Valve, Ball, 1/4" NPT	4810-011-72-67
3	1	Gauge, Pressure, 0-100 PSI	6685-111-88-34
4	2	Nipple, Close, 3/4" NPT	4730-207-34-00
5	1	Tee, Brass, 3/4" NPT x 3/4" NPT x 1/4" NPT	4730-211-04-00
6	1	Valve, Solenoid, 3/4" NPT	4810-100-03-18
7	1	Nipple, Brass, 3/4" NPT x 2" Long	4730-207-46-00
8	1	Elbow, 3/4" NPT, Brass, Street	4730-206-04-34
9	3	Union, 3/4" NPT, Brass	4730-212-05-00
10	6	Adapter, 3/4" Male	4730-401-11-01
11	1	Tube, Copper, 3/4" x 36 1/4" Long	5700-011-58-26
12	2	Elbow, 3/4" - 90 Degree, #707 Copper	4730-406-16-01
13	2	Adapter, 3/4", 604-2	4730-401-10-01
14	1	Tube, Copper, 3/4" x 3 3/4" Long	5700-011-58-28
15	1	Vacuum Breaker, 3/4" NPT	4820-300-08-00
16	1	Tube, Copper, 3/4" x 30 3/4" Long	5700-011-82-28
17	1	Elbow, 3/4" NPT, 90 DEG Brass	4730-206-13-00
18	1	Tube, Copper, 3/4" x 2 7/8" Long	5700-011-76-76

TEMPSTAR NB INCOMING PLUMBING ASSEMBLY

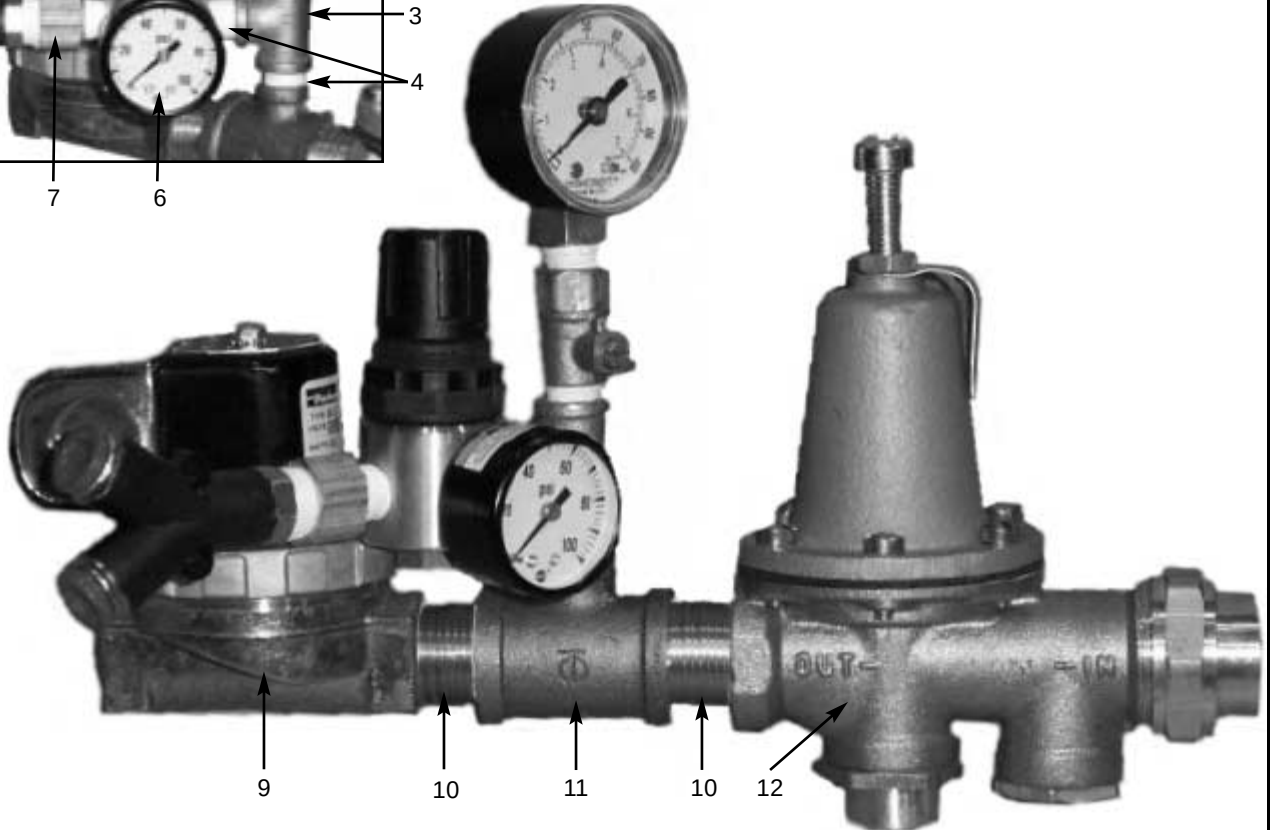


ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Vacuum Breaker, 3/4" NPT	4820-300-08-00
2	1	Elbow, Brass, Street, 3/4" NPT	4730-206-04-34
3	1	Nipple, Brass, 3/4" NPT x 3"	4730-011-38-29
4	1	Union, Brass, 3/4" NPT	4730-212-05-00
5	3	Nipple, Close, Brass, 3/4" NPT	4730-207-34-00
6	1	Valve, Solenoid, 3/4" NPT	4810-100-03-18
7	1	Tee, Brass, 3/4" NPT x 3/4" NPT x 1/4" NPT	4730-211-04-00
8	1	Pressure Gauge, 0-100 PSI	6685-111-59-66
9	1	Valve, Ball, Bronze, 1/4" NPT	4810-011-72-67
10	1	Water Pressure Regulator	6685-011-58-22

TEMPSTAR SDS INCOMING PLUMBING ASSEMBLY

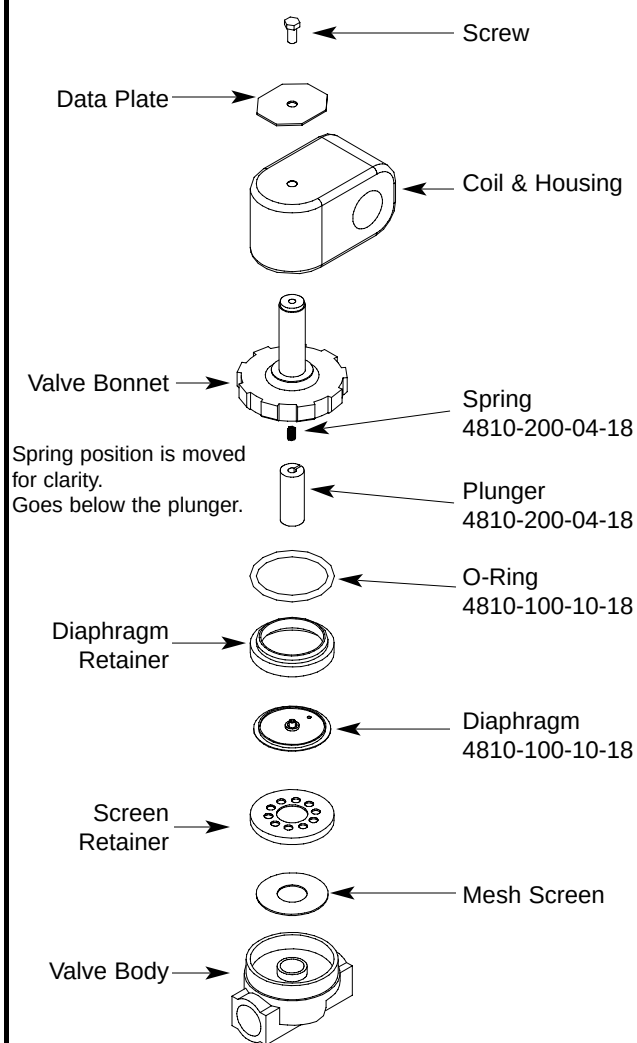


Please refer to the Incoming Plumbing Assembly, component numbers 7 through 14 for the components to connect to the Booster Tank.



ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Gauge, Pressure, 0-100 PSI	6685-111-88-34
2	1	Valve, Ball, 1/4" NPT	4810-011-72-67
3	1	Tee, 1/4" x 1/4" x 1/4" Brass	4730-011-51-20
4	2	Nipple, 1/4" Close Brass	4730-207-02-00
5	1	Regulator, Pressure	6685-111-48-54
6	1	Gauge, Pressure, 0-100 PSI 1/8"	6685-011-48-32
7	1	Reducer, 1/4" Male x 3/8" Female Brass	4730-011-59-40
8	1	Fitting, 3/8" Y-Branch	4730-111-58-21
9	1	Valve, Solenoid, 3/4" NPT	4810-100-03-18
10	2	Nipple, Close, 3/4" NPT	4730-207-34-00
11	1	Tee, Brass, 3/4" NPT x 3/4" NPT x 1/4" NPT	4730-211-04-00
12	1	Water Pressure Regulator, 3/4" NPT	6685-011-58-22

3/4" SOLENOID VALVE & 3/4" NPT VACUUM BREAKER REPAIR PARTS KITS

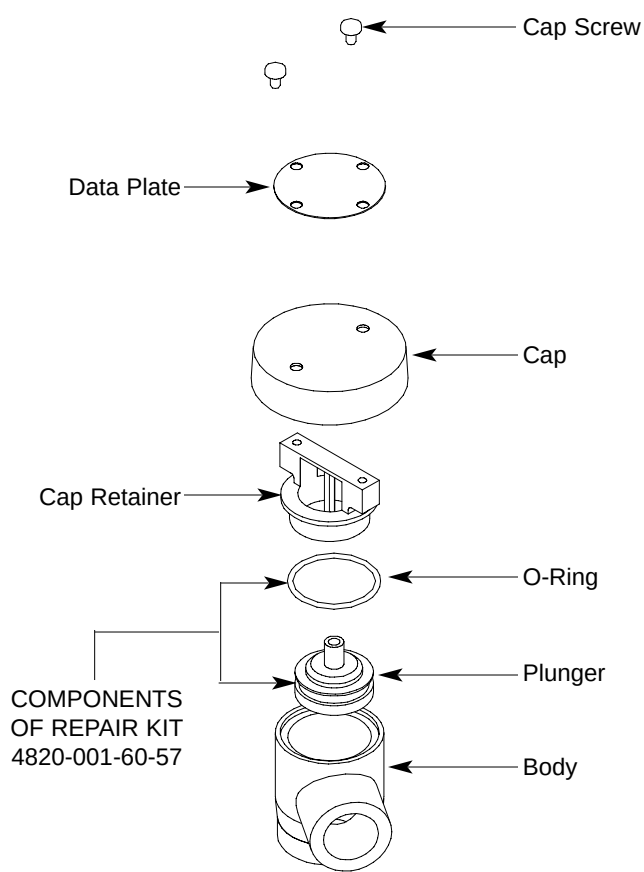


Complete 220 Volt Solenoid Valve Assembly

Mfg. No.: 4810-100-03-18

Coil & Housing only

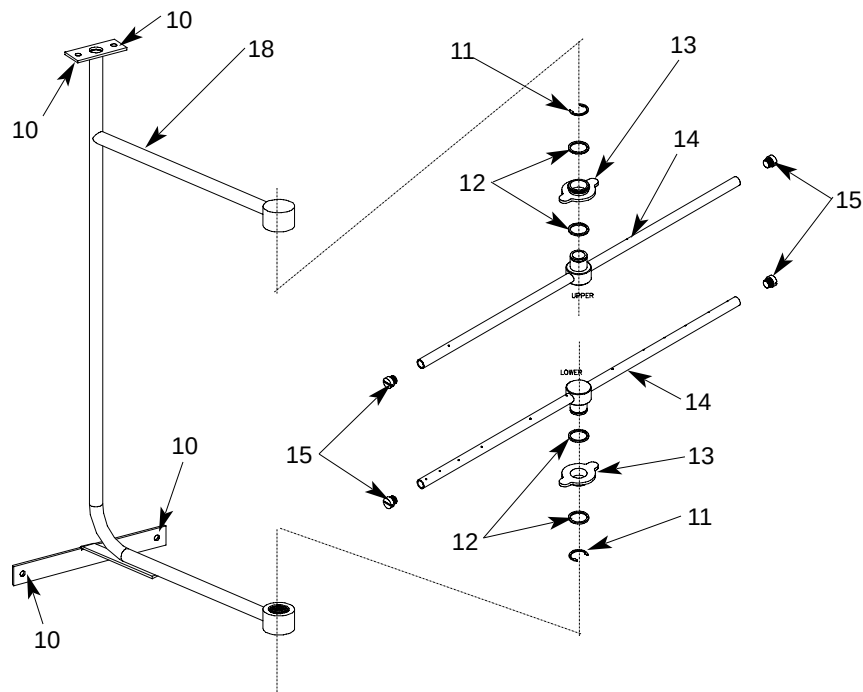
Mfg. No.: 4810-200-02-18



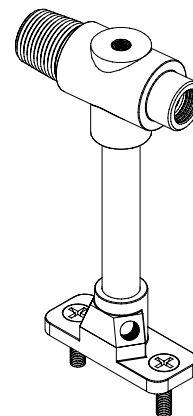
Complete Vacuum Breaker Assembly

Mfg. No.: 4820-300-08-00

WASH & RINSE ARM/MANIFOLD ASSEMBLIES

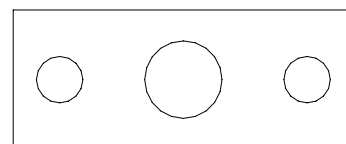


DETAIL "A"
FINAL RINSE ARMS & MANIFOLD

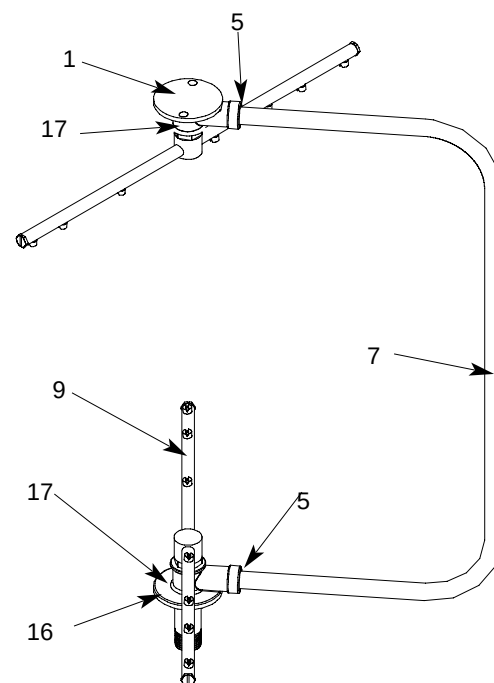
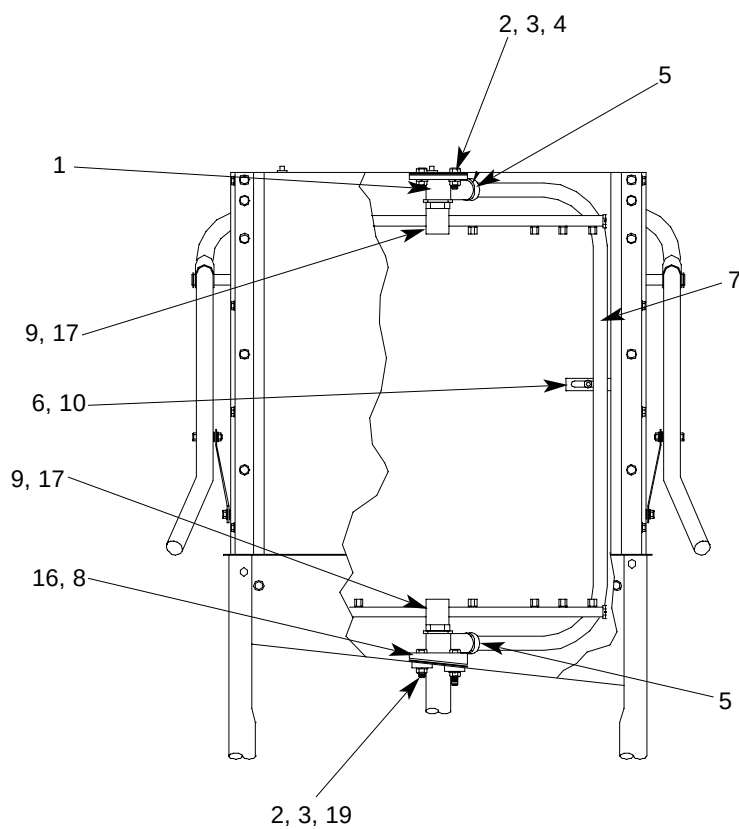


Rinse Injector Weldment
1 per machine
5700-021-47-65

Plug, 1/8" NPT, Brass
3 per Rinse Injector
4730-209-07-37



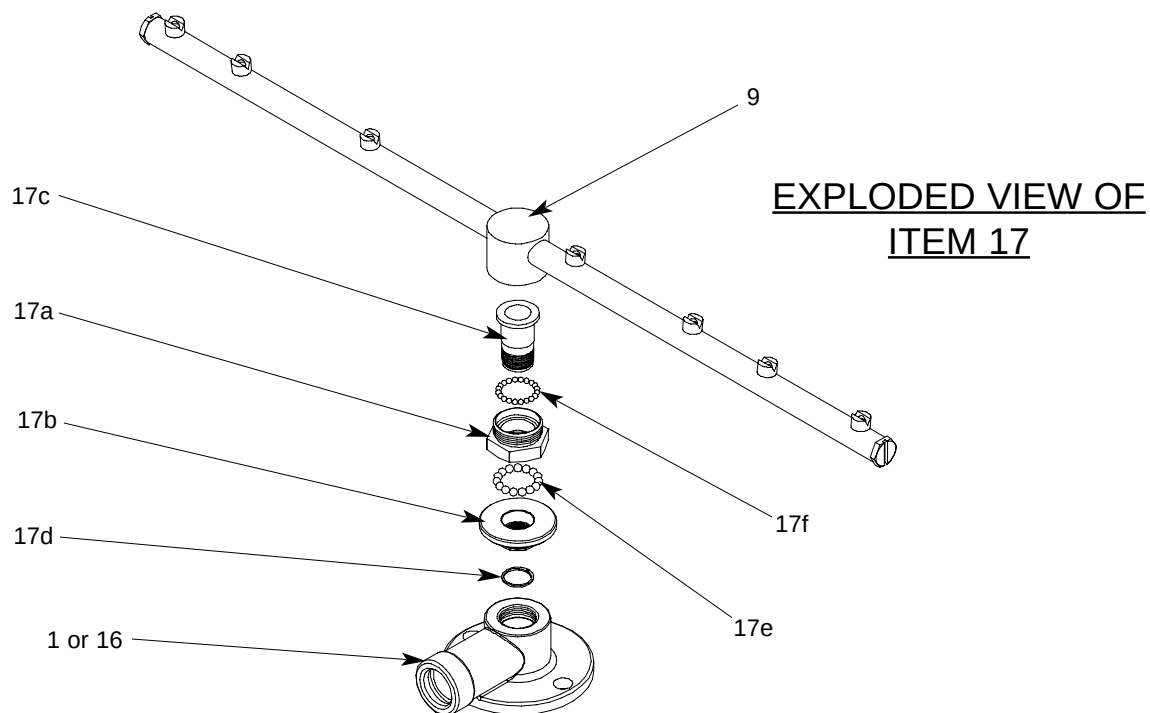
Rinse Injector Gasket
2 per machine
5330-111-42-81



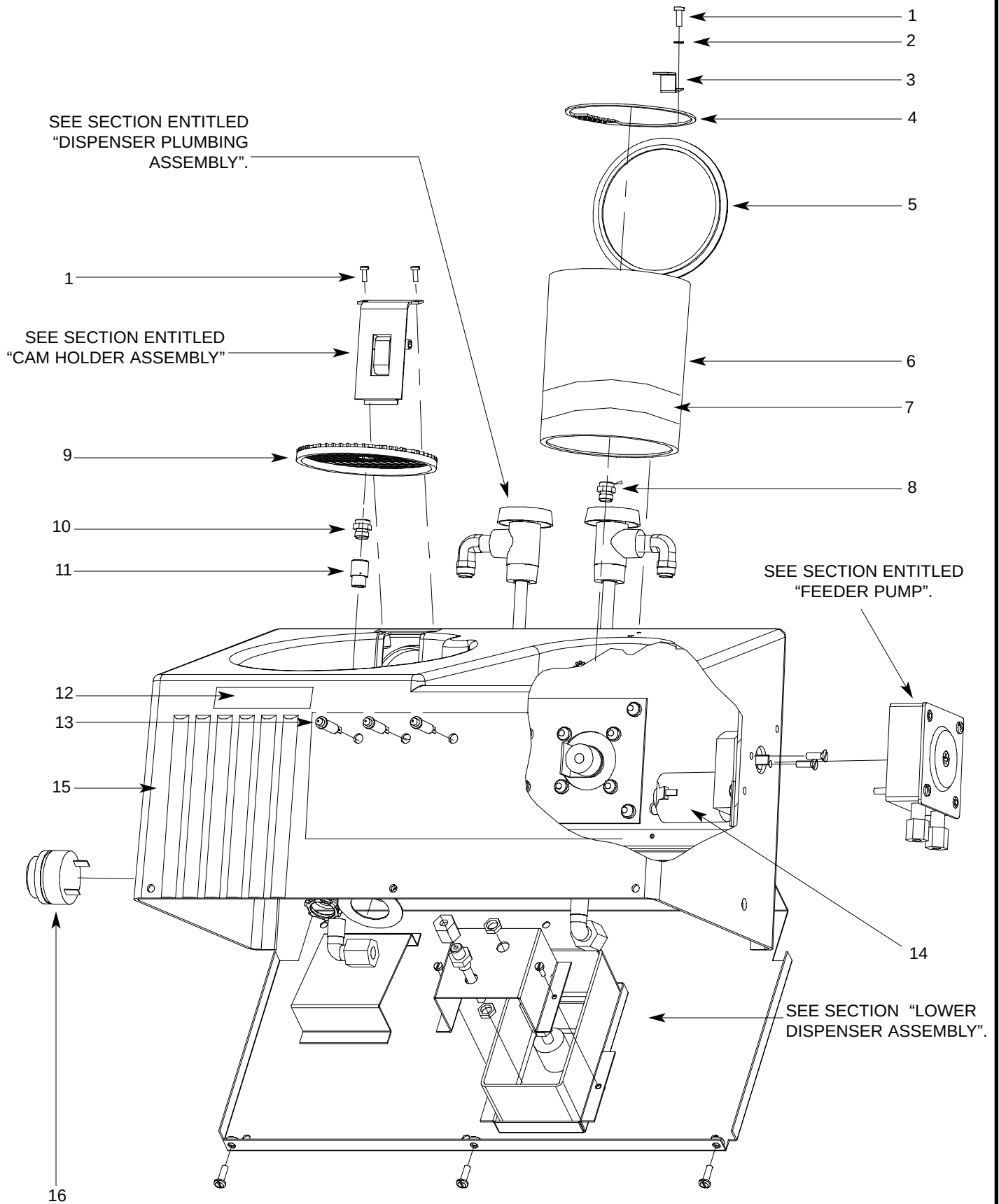
DETAIL "B"
WASH ARMS & MANIFOLD

WASH & RINSE ARM/MANIFOLD ASSEMBLIES (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Upper Manifold	5700-031-34-82
2	4	Nut, 3/8"-16 S/S Hex	5310-276-01-00
3	4	Lockwasher 3/8	5311-276-01-00
4	2	Bolt, Hex 3/8-16 x 7/8" lg	5306-011-36-95
5	2	O Ring	5330-111-35-15
6	1	Positioning Bracket, Manifold Tube	5700-011-34-63
7	1	Tube, Wash Manifold	5700-131-15-07
8	2	Gasket, Manifold	5700-111-35-03
9	2	Wash Arm	5700-021-35-93
10	5	Locknut, 1/4"-20 S/S Hex w/Nylon Insert	5310-374-01-00
11	2	Clip, Retaining, Rinse Head Bushing	5340-112-01-11
12	4	Rinse Arm Washer	5330-011-42-10
13	2	Bushing, Rinse Head	5700-021-33-84
14	2	Rinse Arm	5700-031-88-86
15	4	Plug, Rinse Arm, Stainless Steel	4730-111-60-41
16	1	Lower Wash Manifold	5700-031-46-00
17	2	Bearing Assembly	5700-021-35-97
17a	1	Hub Nut	5700-011-35-94
17b	1	Hub Bushing	5700-011-35-96
17c	1	Hub Spindle	5700-011-35-95
17d	1	Ring, Retainer	5340-011-37-81
17e	15	3/16" Stainless Steel Ball	3120-100-02-00
17f	20	1/8" Stainless Steel Ball	3120-011-37-82
18	1	Rinse Manifold Assembly	5700-021-47-61
19	2	Bolt, Hex 3/8-16 x 1 1/4" lg	5305-276-10-00



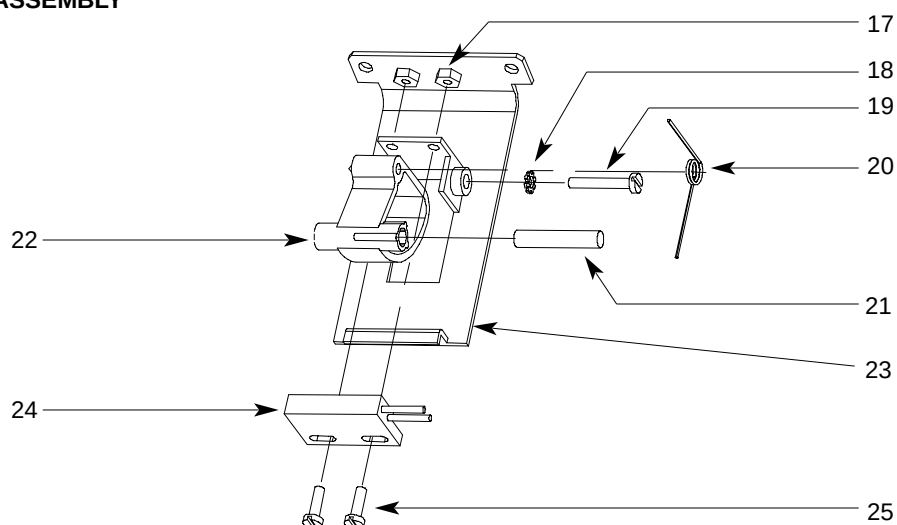
TEMPSTAR SDS DISPENSER ASSEMBLY



TEMPSTAR SDS DISPENSER ASSEMBLY (CONTINUED)

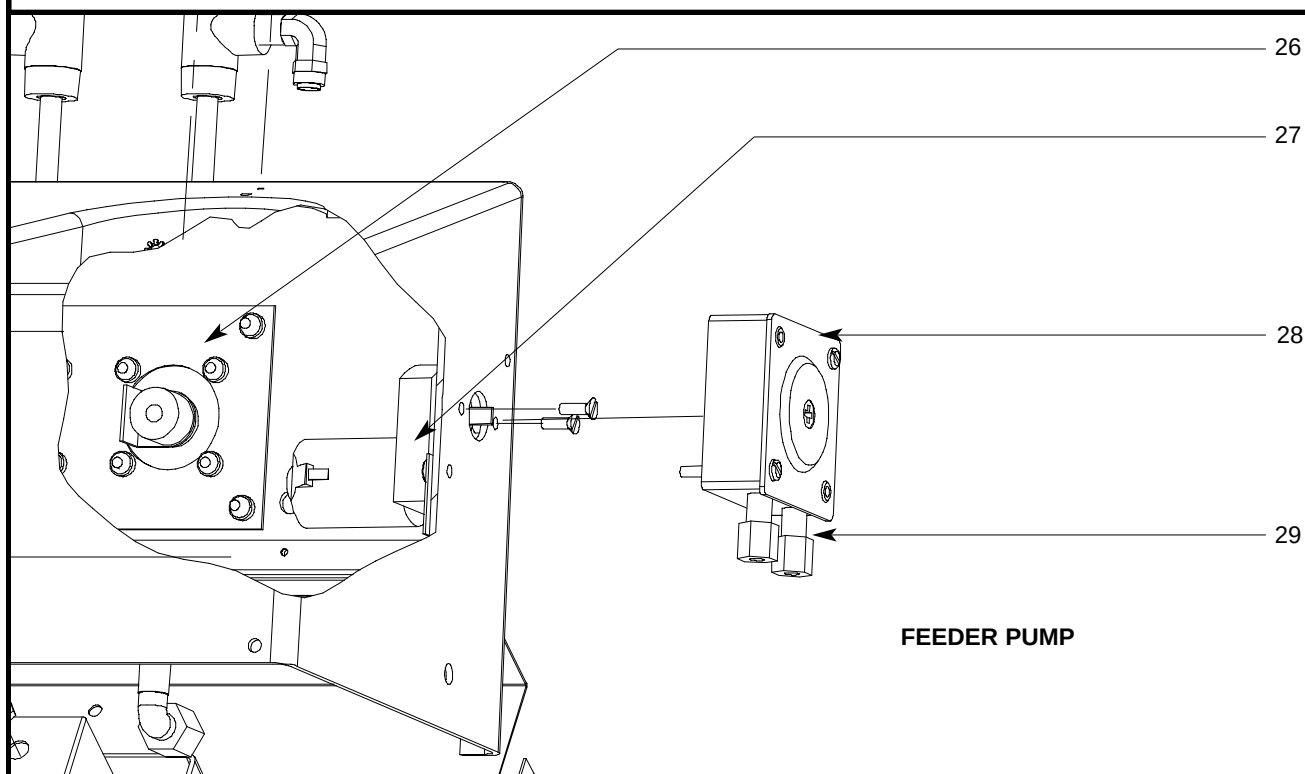
ITEM	QTY	DESCRIPTION	Mfg. No.
1	3	Screw, 6-32 x 3/4" Long	5305-171-07-00
2	1	Lockwasher, #6, External Tooth	5311-271-02-00
3	1	Rinse Cylinder Bracket	5700-011-59-72
4	1	Rinse Additive Screen	5930-011-48-66
5	1	Rinse Cylinder Cover	9515-011-49-01
6	1	Rinse Additive Cylinder	9515-031-49-00
7	1	Decal, Rinse Additive	9905-011-59-80
8	1	Rinse Aid Nozzle	4730-011-50-03
9	1	Detergent Screen	5335-011-48-65
10	1	Detergent Spray Nozzle	4730-011-50-04
11	1	Detergent Flush Pipe	5700-011-51-52
12	1	Decal, Detergent Additive	9905-011-59-79
13	3	Light, Red	5945-011-48-96
14	1	Motor, Feeder Pump	6105-111-51-02
15	1	Dispenser Molding	9515-031-48-62
16	1	Sonalert	5945-011-48-97

CAM HOLDER ASSEMBLY

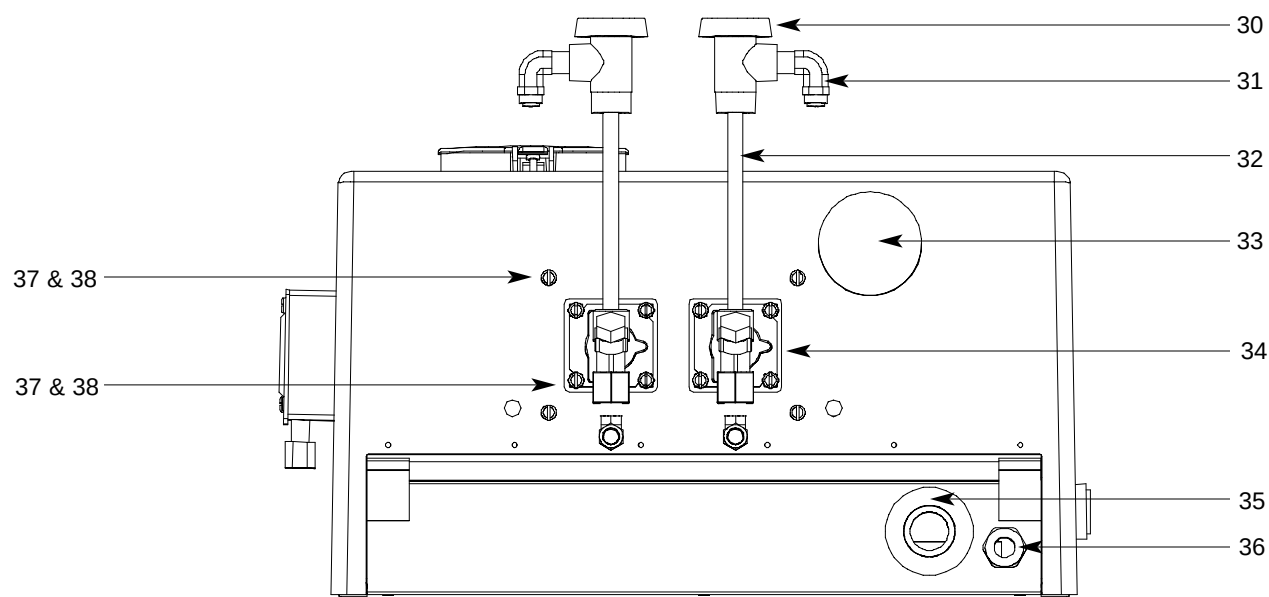


ITEM	QTY	DESCRIPTION	Mfg. No.
17	2	Locknut, 4-40	5310-279-06-00
18	1	Lockwasher, 4-40	5311-011-59-71
19	1	Screw, 4-40 x 3/4" Long	5305-011-59-64
20	1	Spring, .023 Wire	5340-111-58-02
21	1	Magnet, 3/16" x 1" Long Bar	5930-011-48-81
22	1	Holder, Cam Magnet	5340-011-48-80
23	1	Cam Holder	5340-011-59-62
24	1	Switch, 5A	5930-011-48-83
25	2	Screw, 4-40 x 3/8" Long	5305-011-59-70

TEMPSTAR SDS DISPENSER ASSEMBLY (CONTINUED)



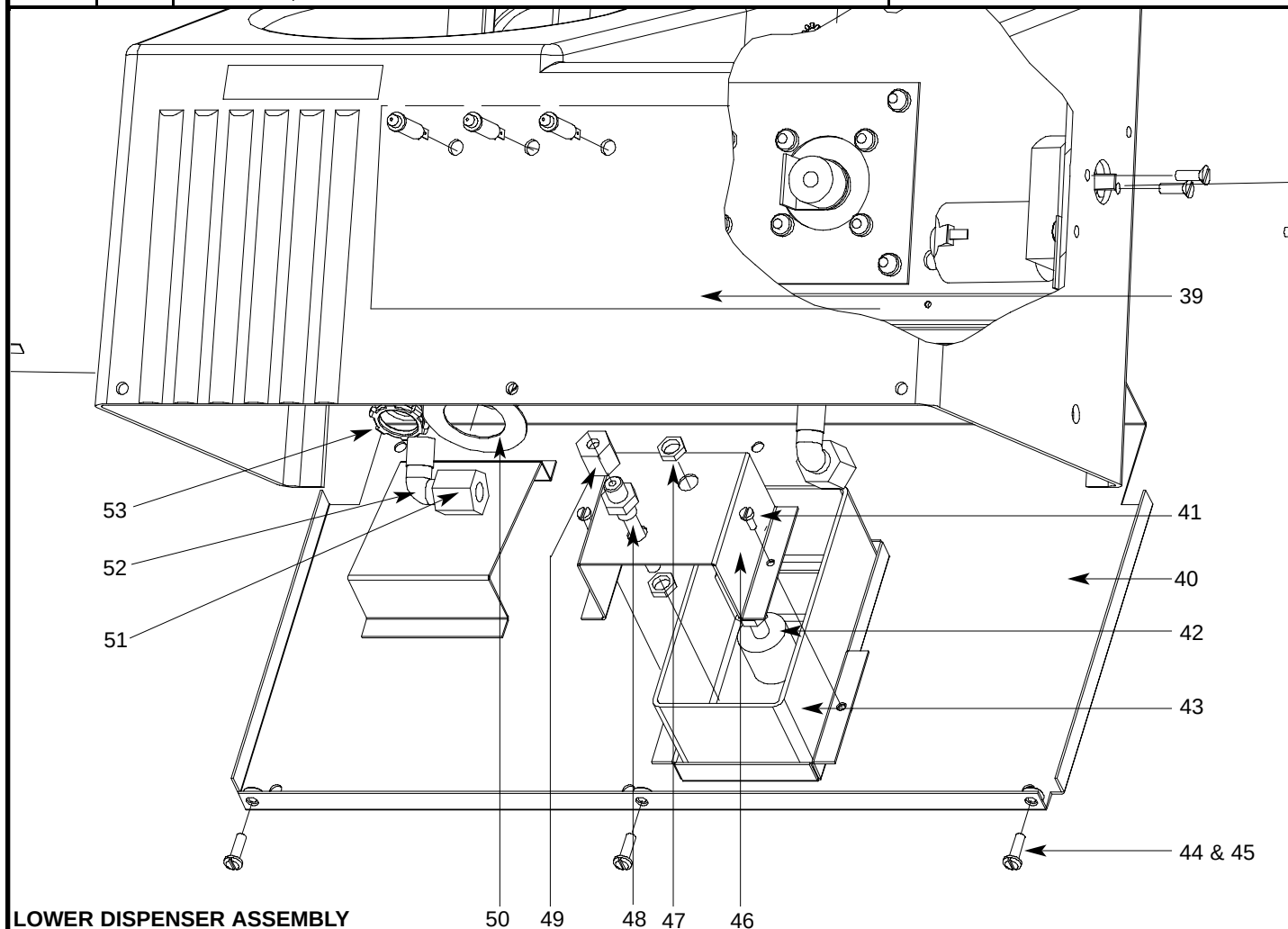
ITEM	QTY	DESCRIPTION	Mfg. No.
26	1	Plate, Solenoid Valve Mounting	5700-031-58-16
27	1	Plate, Pump Mounting	5700-011-57-88
28	1	Peristaltic Pump	4320-111-51-03
29	2	Ferrule Nut, Chemical Tube Connector	4730-609-16-00



DISPENSER PLUMBING ASSEMBLY

TEMPSTAR SDS DISPENSER ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
30	2	1/4" NPT Vacuum Breaker	4810-011-51-62
31	2	Elbow, 3/8" Comp. X 1/4" NPT, 90 Degrees, Brass	4730-111-58-18
32	2	Nipple, 1/4" x 6" Brass	4730-011-79-29
33	1	Plug, Hunky	5975-011-59-49
34	2	Valve, Solenoid	4810-011-48-99
35	1	Grommet, 1.25" O.D. x 1.00" I.D.	5975-111-58-01
36	1	Fitting, Liquid Tight	5975-011-49-03
37	12	Screw, 10-32 x 1/2" Long	5305-011-39-36
38	12	Lockwasher, #10 External Tooth	5311-273-03-00



ITEM	QTY	DESCRIPTION	Mfg. No.
39	1	Decal, Dispenser Front	9905-021-50-18
40	1	Dispenser Mounting Plate	5700-031-50-12
41	2	Screw, 6-32 x 3/8" Long	5305-171-07-00
42	1	Switch, Float	5930-011-48-98
43	1	Reservoir	9515-031-48-63
44	3	Screw, 10-32 x 1/2" Long	5305-011-39-36
45	3	Lockwasher, #10 External Tooth	5311-273-03-00
46	1	Reservoir Clip	5700-021-49-26

TEMPSTAR SDS DISPENSER ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
47	1	Jam Nut, 1/8"-27	5310-011-58-00
48	1	Rinse Additive Pickup Tube	5700-011-50-14
49	1	Ferrule Nut, Chemical Tube Connector	4730-609-16-00
50	1	Panel, Dispenser Sliding Cover	5700-011-51-19
51	1	Fitting, Liquid Tight	5975-011-49-03
52	1	Elbow, 1/4" NPT x 3/8" Comp.	4730-111-59-34
53	1	Insert, 3/8" Tubing P/P	4730-111-59-35
54	1	Thermal Barrier Box Assembly	5700-021-48-14
55	1	Thermal Box Top Weldment	5700-021-50-64
56	1	Thermal Box Bottom Weldment	5700-021-50-65
57	1	Foam, 1" Thick	5640-011-49-07
58	3	Screw, 10-32 x 3/8" Phillips Pan Head	5305-173-26-00
59	3	Lockwasher, #10 Internal Tooth	5311-273-03-00
60	1	Valve, Check	4820-111-51-14
61	1	Fitting, Outlet Elbow	4820-111-51-18
62	1	Nut, P/P For 1/8" Tubing	4730-011-59-45

Other components not shown:

Sensor, Detergent

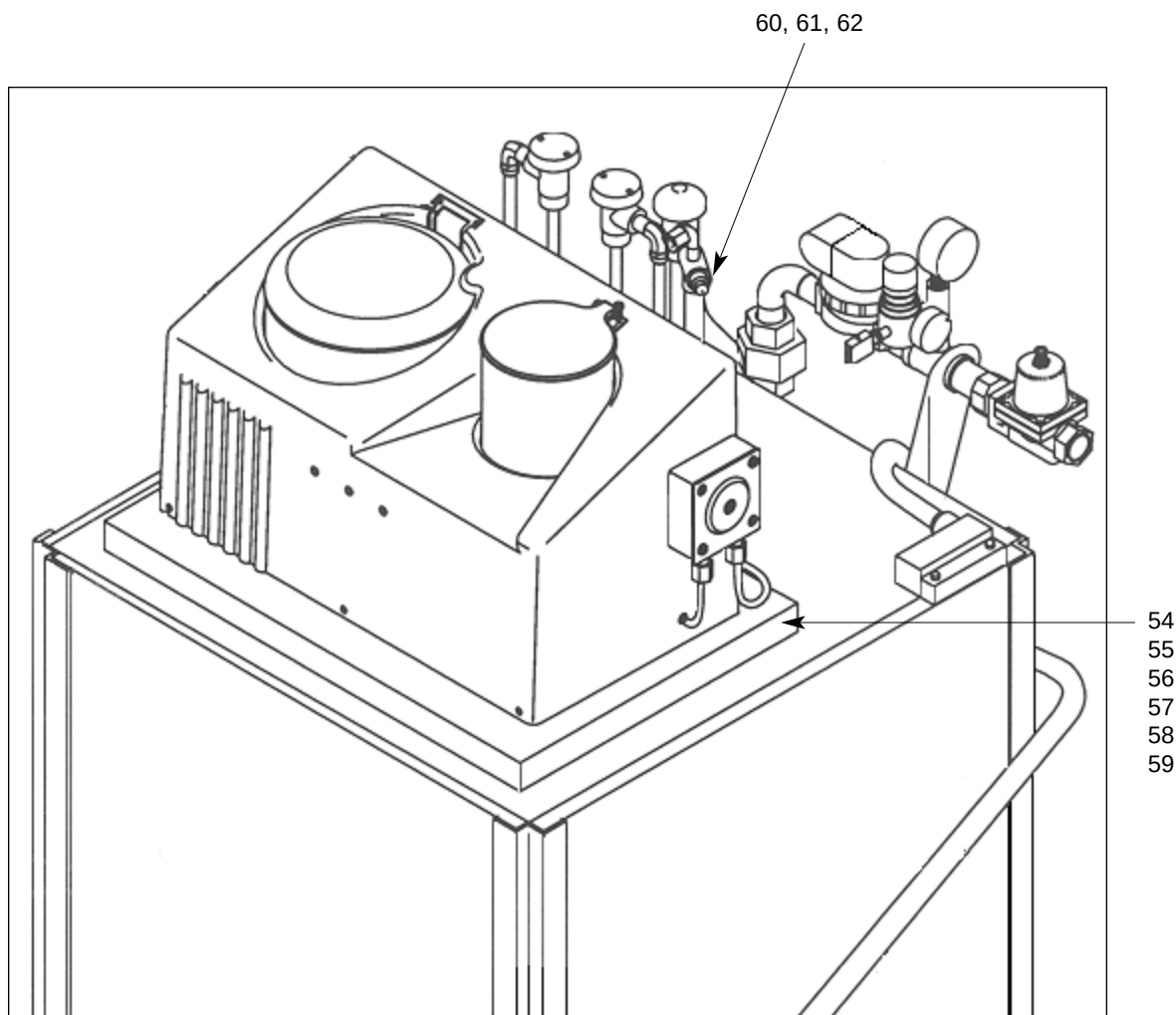
6680-011-49-83

Kit, Detergent Sensor Mounting

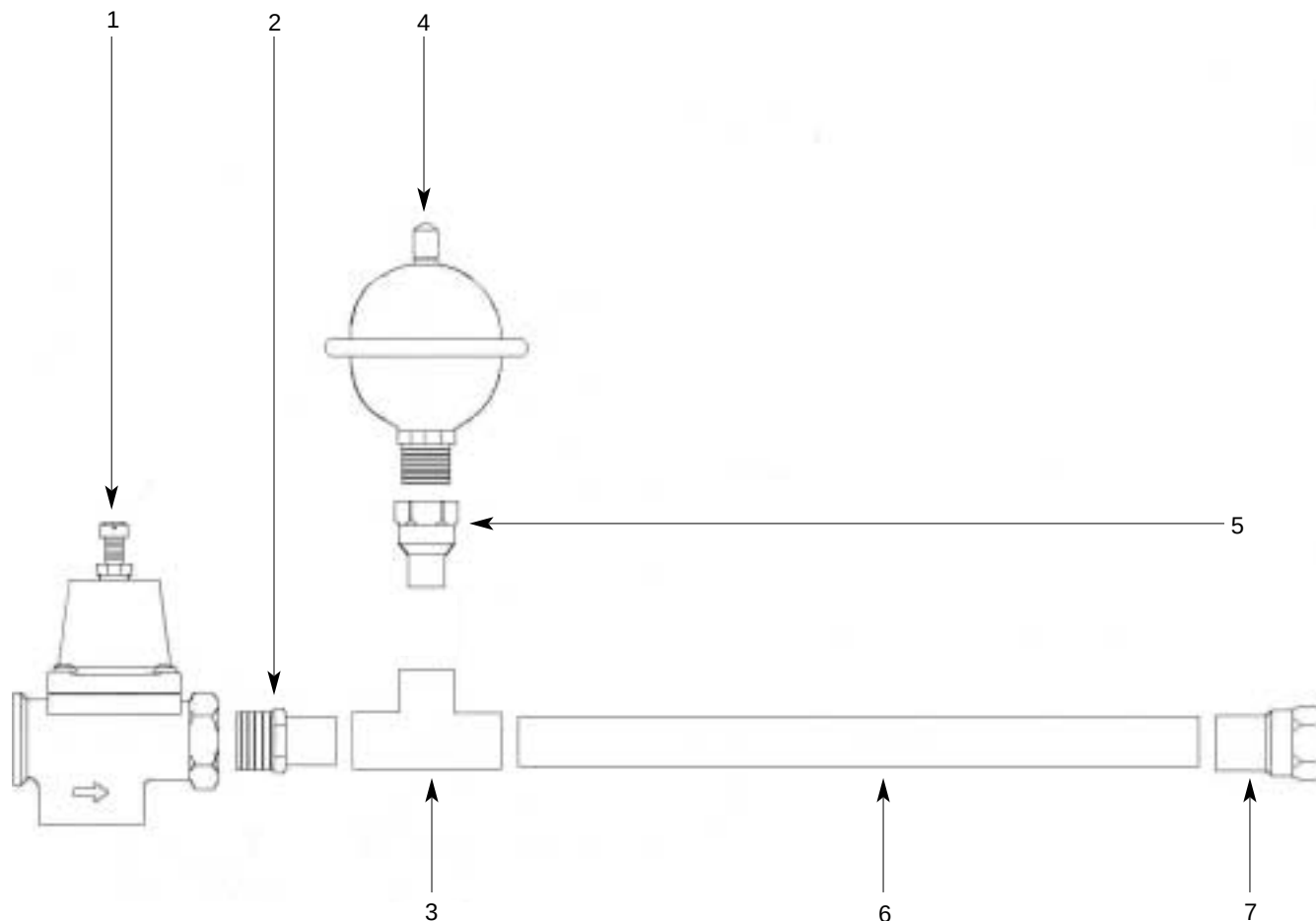
4730-111-51-17

Gasket, 1/8" Thick

5330-021-51-08

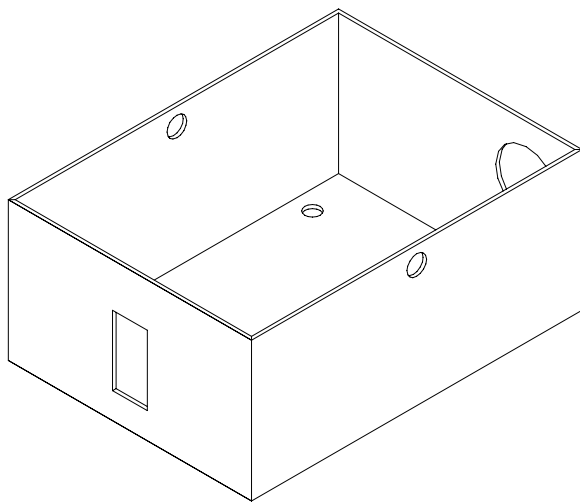


WATER PRESSURE REGULATOR KIT (WPRK) OPTION PLUMBING

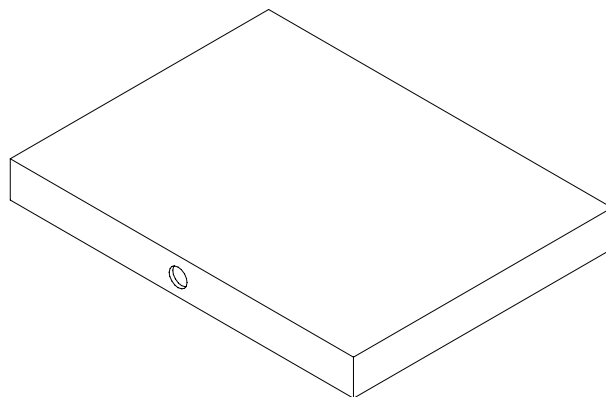


ITEM	QTY	DESCRIPTION	Mfg. No.
1	1	Regulator, Water Pressure, 3/4" NPT	4820-100-01-06
2	1	Adapter, 3/4"	4730-401-10-01
3	1	Tee, 3/4" x 3/4" x 1/2" C x C x C	4730-411-03-01
4	1	Water Hammer Arrestor, 1/2" NPT	6685-100-05-00
5	1	Adapter, 1/2" C to FSPS	4730-401-07-01
6	1	Tube, Copper, 3/4" x 12" Long	5700-021-88-57
7	1	Adapter, #703, 3/4"	4730-401-13-01

SAFETY DOOR INTERLOCK (SDI) OPTION



Safety Door Interlock Box Bottom
5700-001-21-26

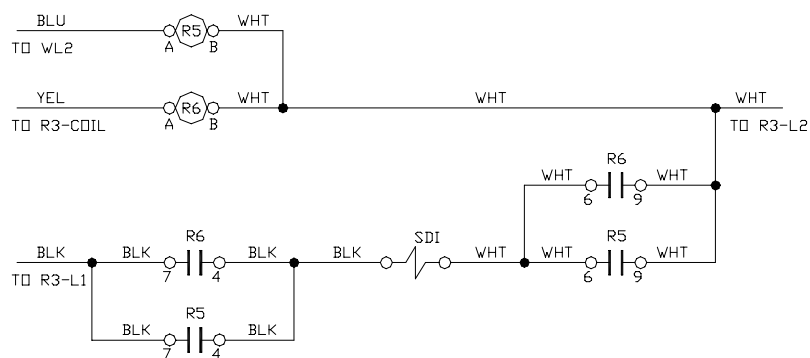


Safety Door Interlock Box Cover
5700-001-21-27

Other Safety Door Interlock (SDI) components (not shown):

Pipe Clamp (found on the side of the machine)	5700-000-35-05
Solenoid, Electrical Interlock Option	4810-100-61-33
Relay	5945-111-47-51

TEMPSTAR SDI OPTION

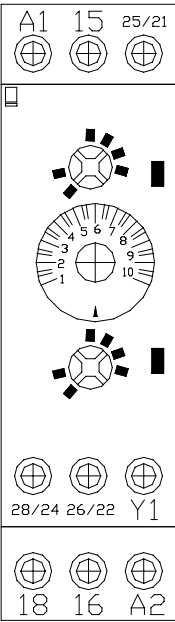


LEGEND

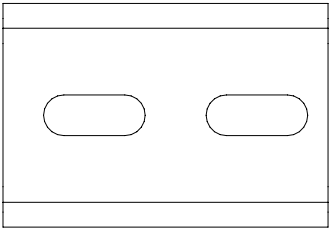
R5	RINSE RELAY
R6	WASH RELAY
SDI	SAFETY DOOR INTERLOCK SOLENOID

09905-002-55-78a

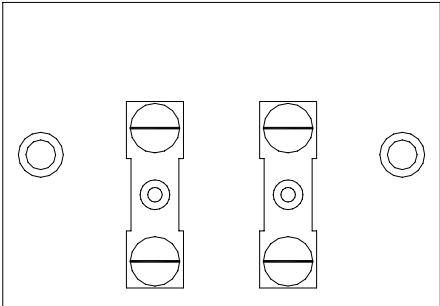
EXHAUST FAN CONTROL OPTION



Delay Timer
5945-011-65-44



2" Din Rail
5700-002-36-09

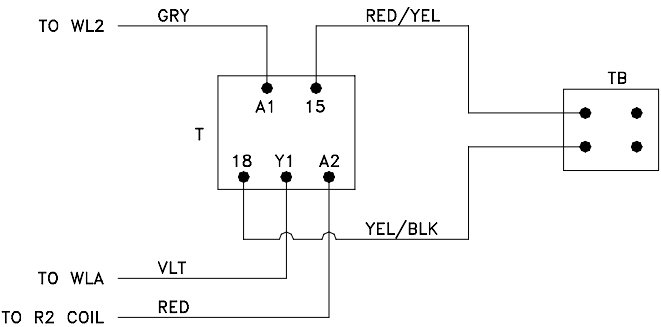


Terminal Board
5940-011-84-41

TEMPSTAR EXHAUST FAN HOOKUP

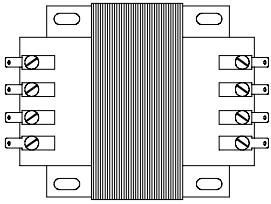
LEGEND

T TIMER
TB TERMINAL BOARD

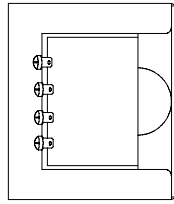


9905-002-54-41

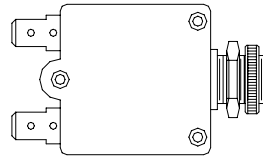
460 VOLT MACHINE TRANSFORMER MOUNTING BOX



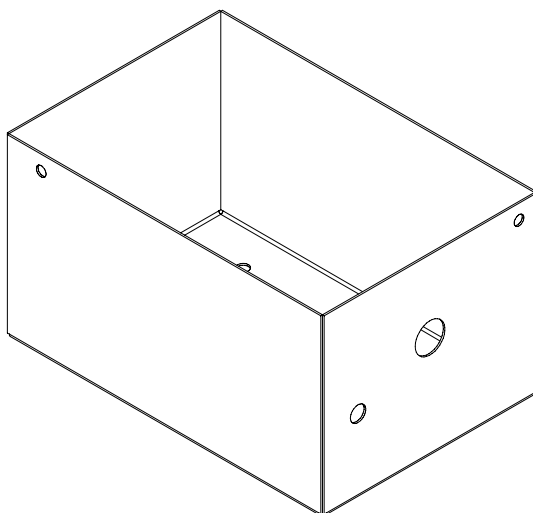
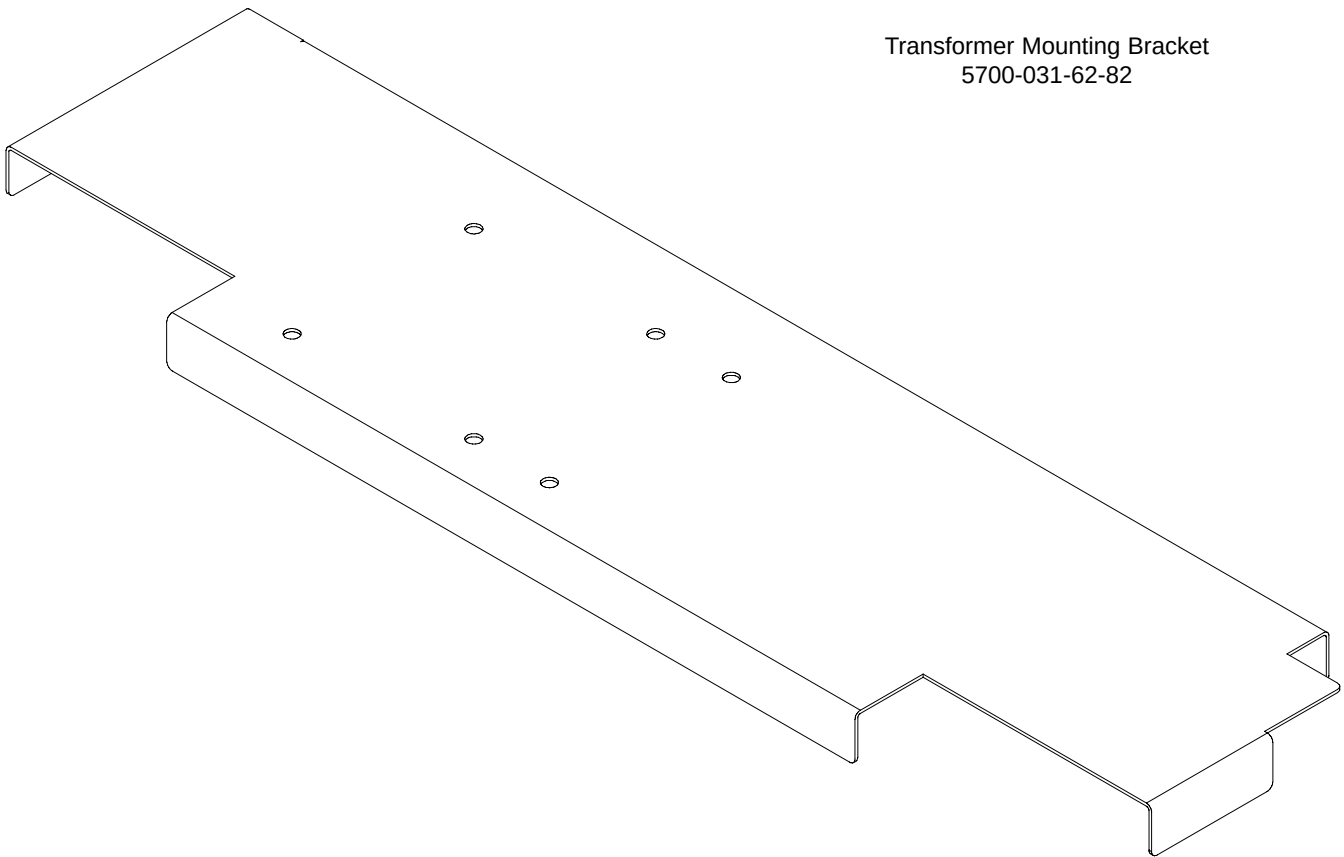
460V Transformer
5950-111-65-93



2 Amp Circuit Breaker
5925-111-64-18



Transformer Mounting Bracket
5700-031-62-82



Transformer Mounting Box
5700-002-10-01

Transformer Mounting Box Top (not shown)
5700-000-78-53

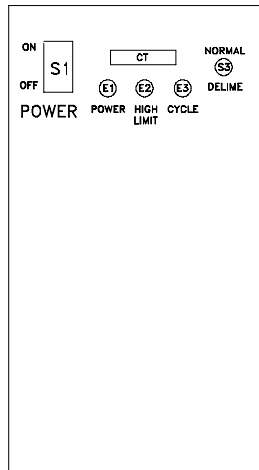
Tempstar (Side Mount) ELECTRICAL DIAGRAM

208 - 230 volt - 50/60 hertz - single/three phase

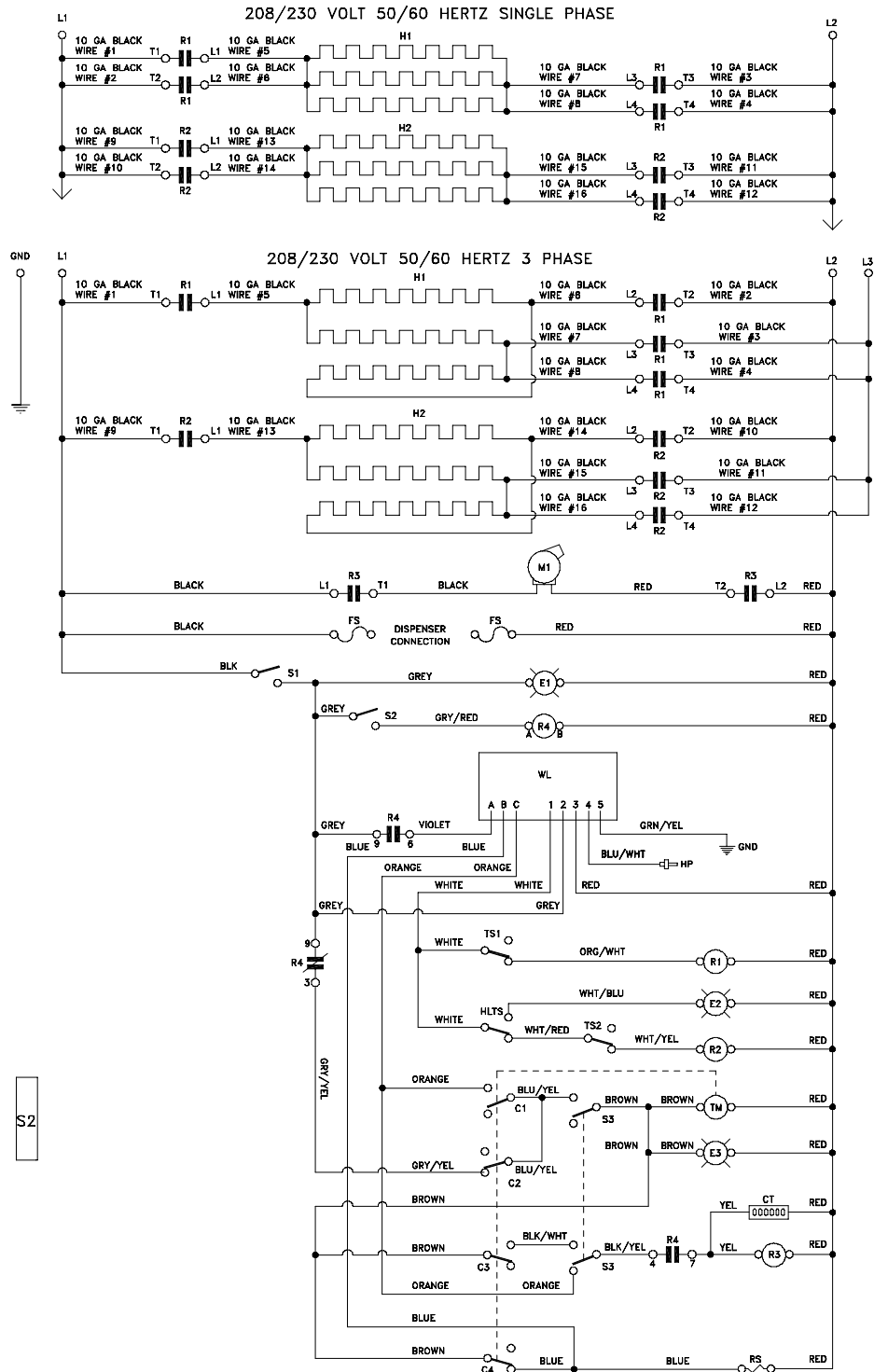
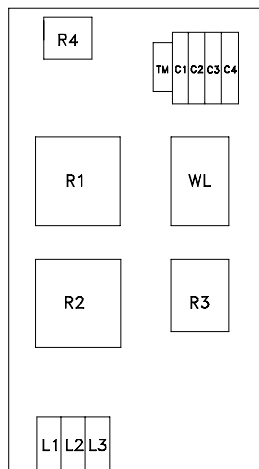
LEGEND

H1	RINSE HEATER
H2	WASH HEATER
M1	WASH MOTOR
R1	RINSE HEATER CONTACTOR
R2	WASH HEATER CONTACTOR
R3	WASH MOTOR CONTACTOR
R4	CONTROL RELAY
S1	POWER SWITCH
S2	DOOR SWITCH
S3	DELIME SWITCH
E1	POWER LIGHT
E2	HEATER OVERLOAD LIGHT
E3	CYCLE LIGHT
TS1	RINSE HEATER THERMOSTAT
TS2	WASH HEATER THERMOSTAT
HLTS	WASH HIGH LIMIT THERMOSTAT
WL	WATER LEVEL CONTROL
HP	HIGH LEVEL PROBE
GND	GROUND
TM	TIMER MOTOR
C1	CYCLE SWITCH
C2	AUTO START RESET SWITCH
C3	WASH CYCLE SWITCH
C4	RINSE/FILL SWITCH
RS	RINSE FILL SOLENOID
CT	COUNTER
FS	DISPENSER FUSE BLOCK

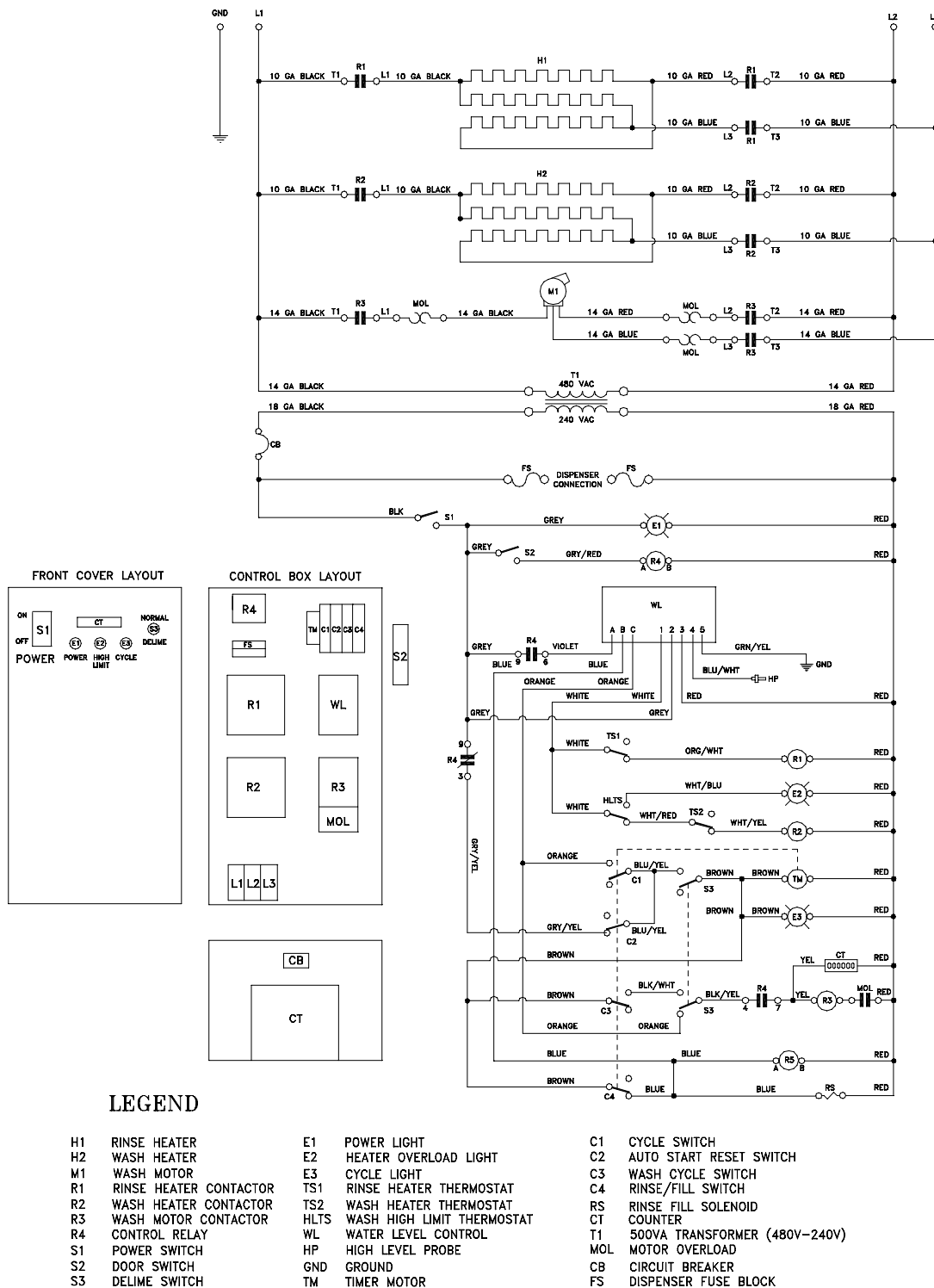
FRONT COVER LAYOUT



CONTROL BOX LAYOUT



Tempstar (Side Mount) ELECTRICAL DIAGRAM 460 volt - 60 hertz - three phase



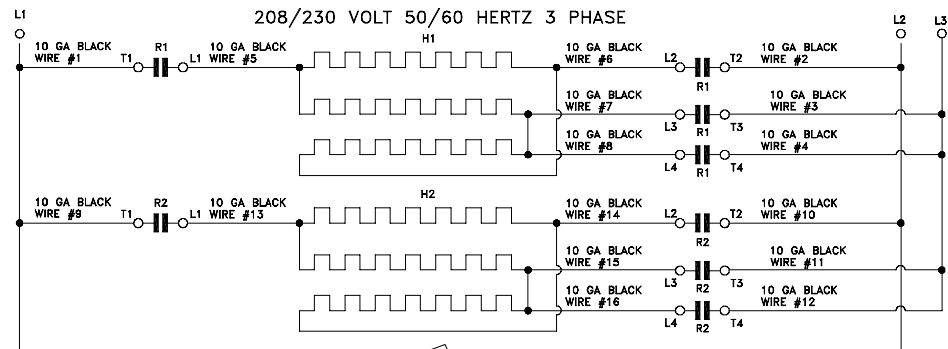
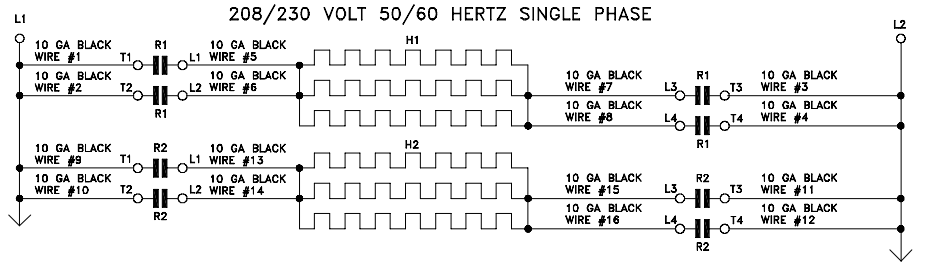
9905-031-66-00

Tempstar (Top Mount) ELECTRICAL DIAGRAM

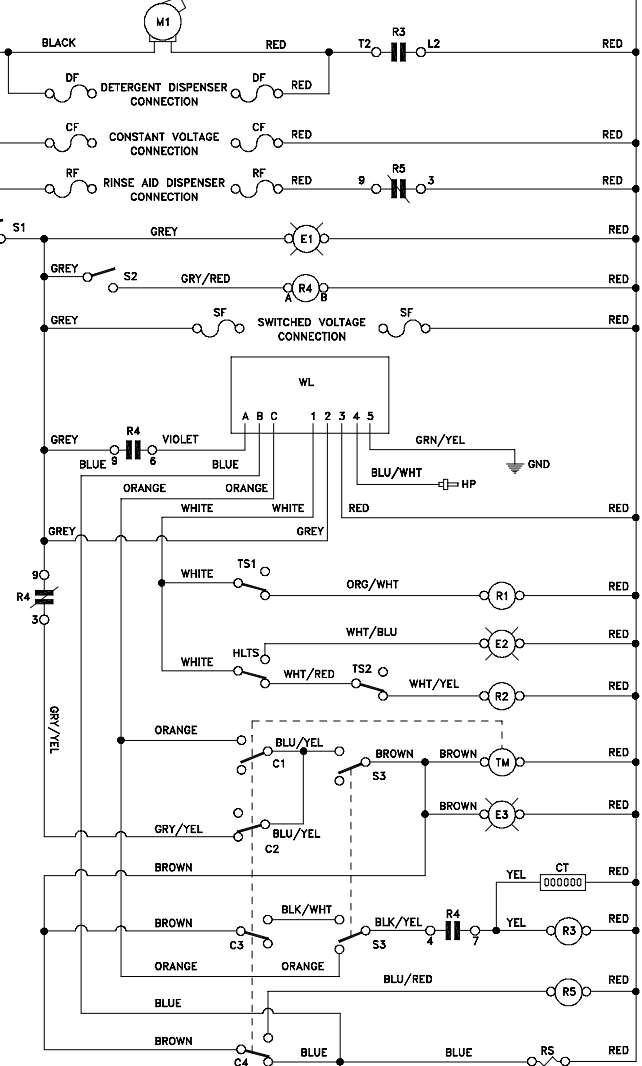
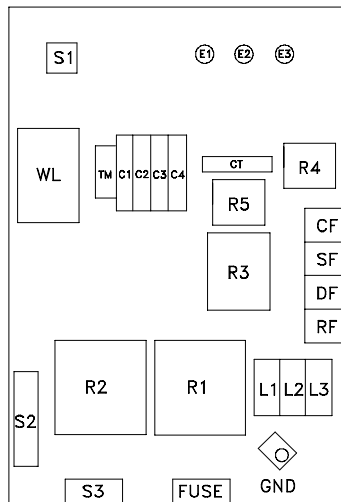
208 - 230 volt - 50/60 hertz - single/three phase

LEGEND

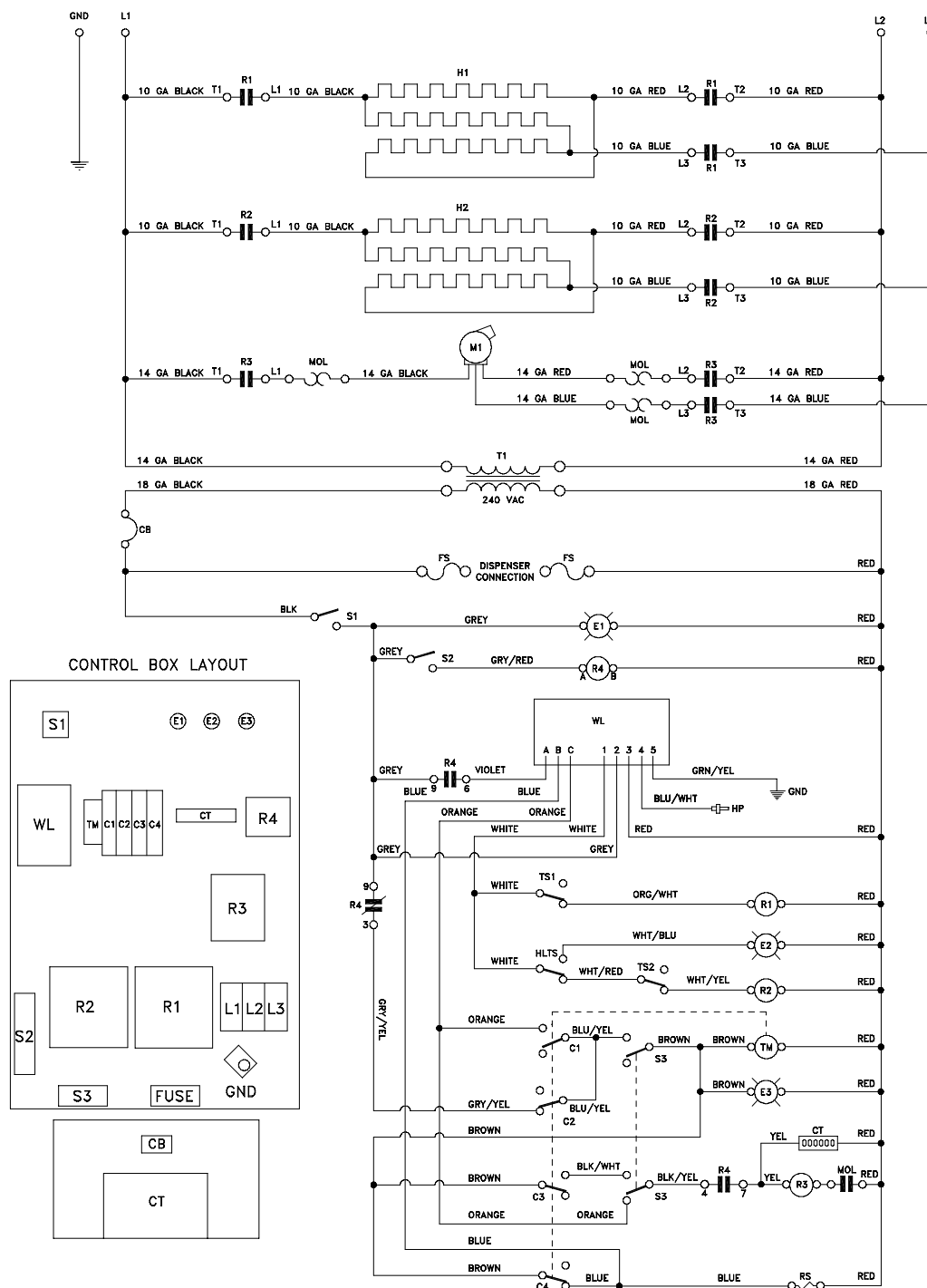
H1	RINSE HEATER
H2	WASH HEATER
M1	WASH MOTOR
R1	RINSE HEATER CONTACTOR
R2	WASH HEATER CONTACTOR
R3	WASH MOTOR CONTACTOR
R4	CONTROL RELAY
R5	RINSE AID RELAY
S1	POWER SWITCH
S2	DOOR SWITCH
S3	DELIME SWITCH
E1	POWER LIGHT
E2	HEATER OVERLOAD LIGHT
E3	CYCLE LIGHT
TS1	RINSE HEATER THERMOSTAT
TS2	WASH HEATER THERMOSTAT
HLTS	WASH HIGH LIMIT THERMOSTAT
WL	WATER LEVEL CONTROL
HP	HIGH LEVEL PROBE
GND	GROUND
TM	TIMER MOTOR
C1	CYCLE SWITCH
C2	AUTO START RESET SWITCH
C3	WASH CYCLE SWITCH
C4	RINSE/FILL SWITCH
RS	RINSE FILL SOLENOID
CT	COUNTER
DF	DETERGENT DISPENSER FUSE
CF	CONSTANT VOLTAGE FUSE
RF	RINSE AID DISPENSER FUSE
SF	SWITCHED VOLTAGE FUSE



CONTROL BOX LAYOUT



Tempstar (Top Mount) ELECTRICAL DIAGRAM 460 volt - 60 hertz - three phase



LEGEND

H1	RINSE HEATER	E1	POWER LIGHT	C1	CYCLE SWITCH
H2	WASH HEATER	E2	HEATER OVERLOAD LIGHT	C2	AUTO START RESET SWITCH
M1	WASH MOTOR	E3	CYCLE LIGHT	C3	WASH CYCLE SWITCH
R1	RINSE HEATER CONTACTOR	TS1	RINSE HEATER THERMOSTAT	C4	RINSE/FILL SWITCH
R2	WASH HEATER CONTACTOR	TS2	WASH HEATER THERMOSTAT	RS	RINSE FILL SOLENOID
R3	WASH MOTOR CONTACTOR	HLTS	WASH HIGH LIMIT THERMOSTAT	CT	COUNTER
R4	CONTROL RELAY	WL	WATER LEVEL CONTROL	T1	CONTROL TRANSFORMER
S1	POWER SWITCH	HP	HIGH LEVEL PROBE	MOL	MOTOR OVERLOAD
S2	DOOR SWITCH	GND	GROUND	CB	CIRCUIT BREAKER
S3	DELIME SWITCH	TM	TIMER MOTOR	FS	DISPENSER FUSE BLOCK

9905-002-35-33

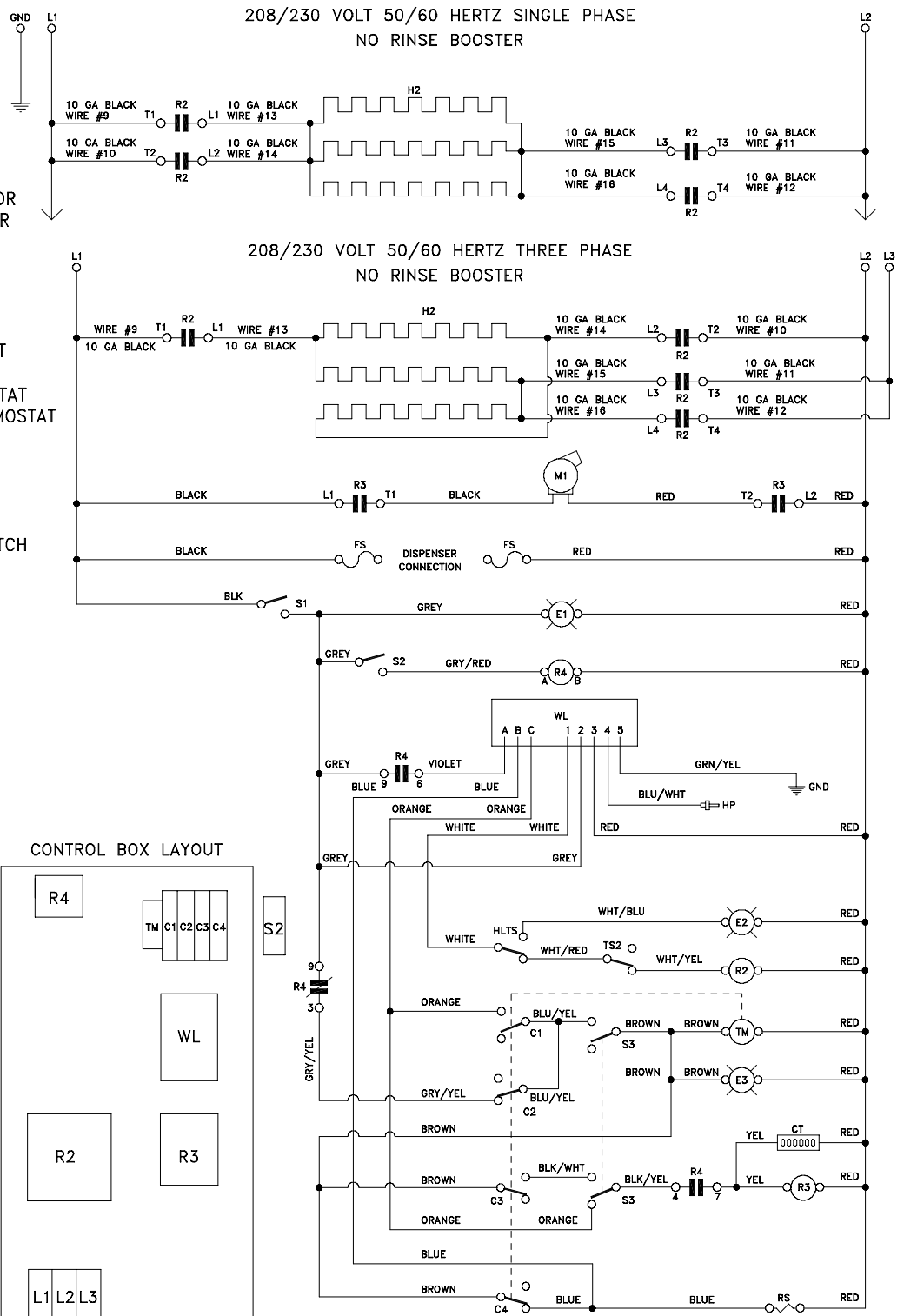
Tempstar NB (Side Mount)

ELECTRICAL DIAGRAM

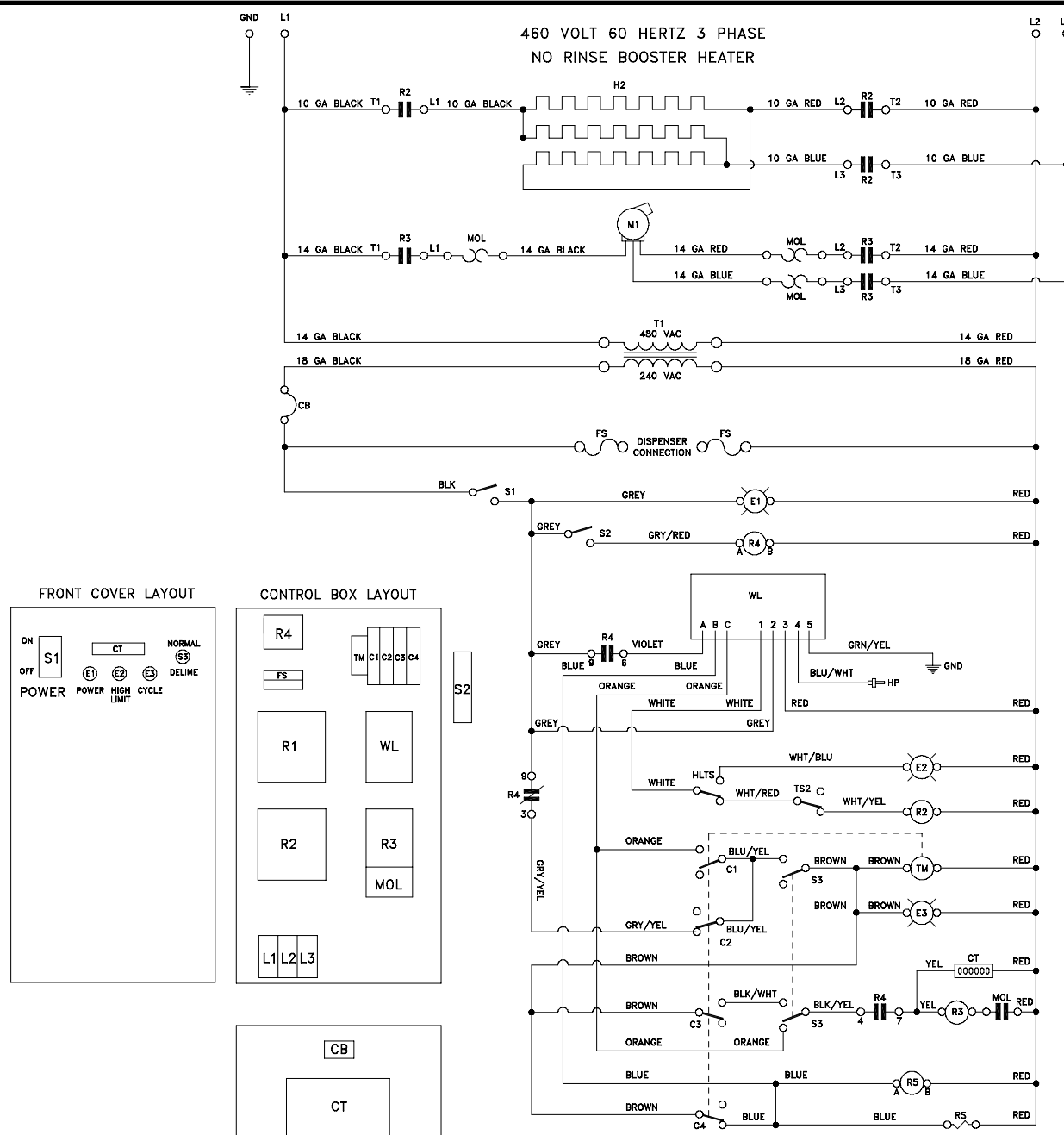
208 - 230 volt - 50/60 hertz - single/three phase

LEGEND

H2	WASH HEATER
M1	WASH MOTOR
R2	WASH HEATER CONTACTOR
R3	WASH MOTOR CONTACTOR
R4	CONTROL RELAY
S1	POWER SWITCH
S2	DOOR SWITCH
S3	DELIME SWITCH
E1	POWER LIGHT
E2	HEATER OVERLOAD LIGHT
E3	CYCLE LIGHT
TS2	WASH HEATER THERMOSTAT
HLTS	WASH HIGH LIMIT THERMOSTAT
WL	WATER LEVEL CONTROL
HP	HIGH LEVEL PROBE
GND	GROUND
TM	TIMER MOTOR
C1	CYCLE SWITCH
C2	AUTO START RESET SWITCH
C3	WASH CYCLE SWITCH
C4	RINSE/FILL SWITCH
RS	RINSE FILL SOLENOID
CT	COUNTER
FS	DISPENSER FUSE BLOCK



Tempstar NB (Side Mount) ELECTRICAL DIAGRAM 460 volt - 60 hertz - three phase



LEGEND

H2	WASH HEATER	E1	POWER LIGHT	C1	CYCLE SWITCH
M1	WASH MOTOR	E2	HEATER OVERLOAD LIGHT	C2	AUTO START RESET SWITCH
R2	WASH HEATER CONTACTOR	E3	CYCLE LIGHT	C3	WASH CYCLE SWITCH
R3	WASH MOTOR CONTACTOR	TS2	WASH HEATER THERMOSTAT	C4	RINSE/FILL SWITCH
R4	CONTROL RELAY	HLTS	WASH HIGH LIMIT THERMOSTAT	RS	RINSE FILL SOLENOID
S1	POWER SWITCH	WL	WATER LEVEL CONTROL	CT	COUNTER
S2	DOOR SWITCH	HP	HIGH LEVEL PROBE	T1	500VA TRANSFORMER (480V-240V)
S3	DELIME SWITCH	GND	GROUND	MOL	MOTOR OVERLOAD
		TM	TIMER MOTOR	CB	CIRCUIT BREAKER
				FS	DISPENSER FUSE BLOCK

Tempstar NB (Top Mount)

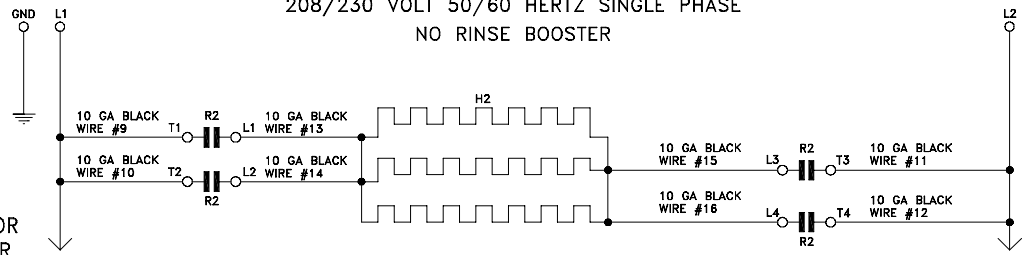
ELECTRICAL DIAGRAM

208 - 230 volt - 50/60 hertz - single/three phase

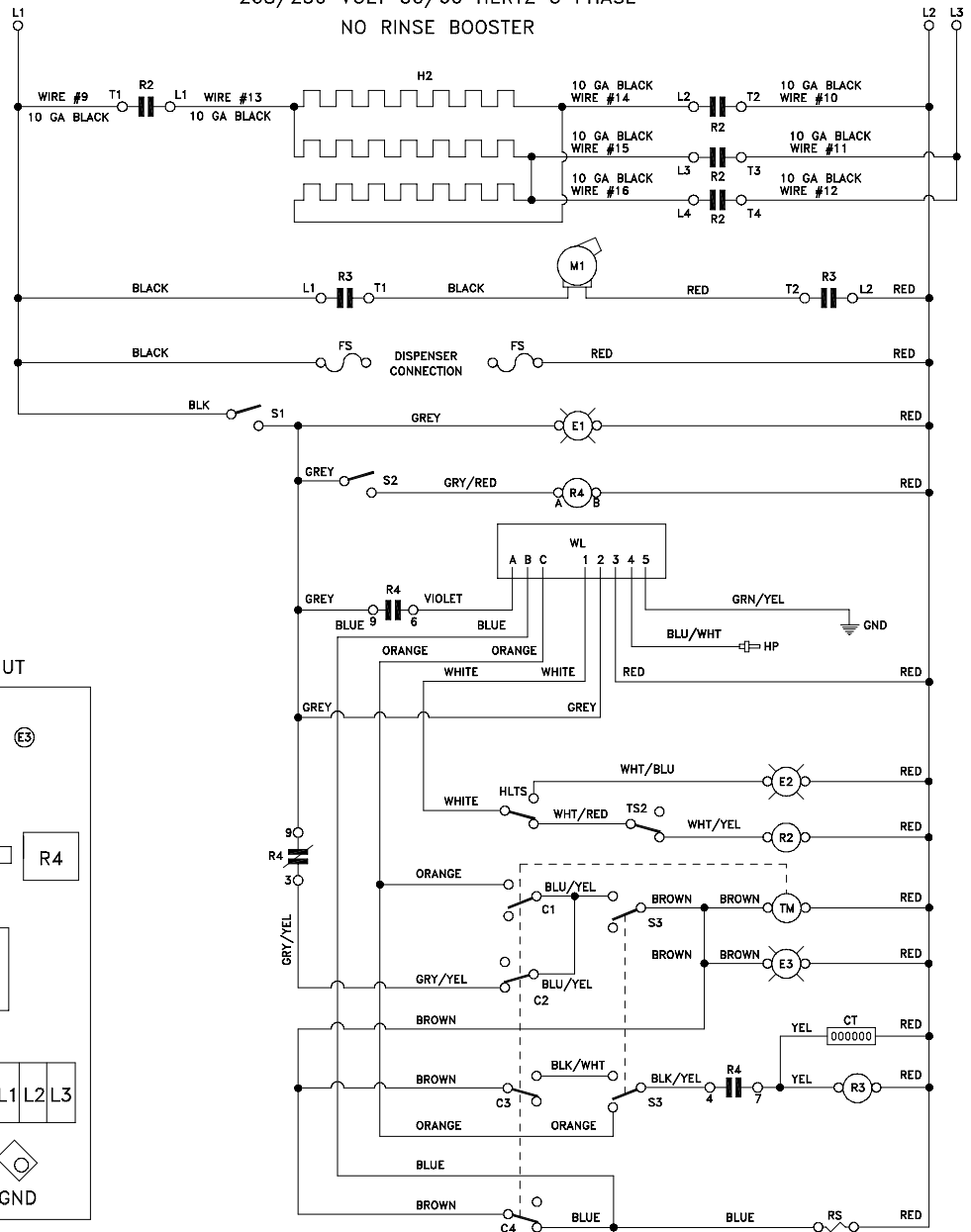
LEGEND

H2	WASH HEATER
M1	WASH MOTOR
R2	WASH HEATER CONTACTOR
R3	WASH MOTOR CONTACTOR
R4	CONTROL RELAY
S1	POWER SWITCH
S2	DOOR SWITCH
S3	DELIME SWITCH
E1	POWER LIGHT
E2	HEATER OVERLOAD LIGHT
E3	CYCLE LIGHT
TS2	WASH HEATER THERMOSTAT
HLTS	WASH HIGH LIMIT THERMOSTAT
WL	WATER LEVEL CONTROL
HP	HIGH LEVEL PROBE
GND	GROUND
TM	TIMER MOTOR
C1	CYCLE SWITCH
C2	AUTO START RESET SWITCH
C3	WASH CYCLE SWITCH
C4	RINSE/FILL SWITCH
RS	RINSE FILL SOLENOID
CT	COUNTER
FS	DISPENSER FUSE BLOCK

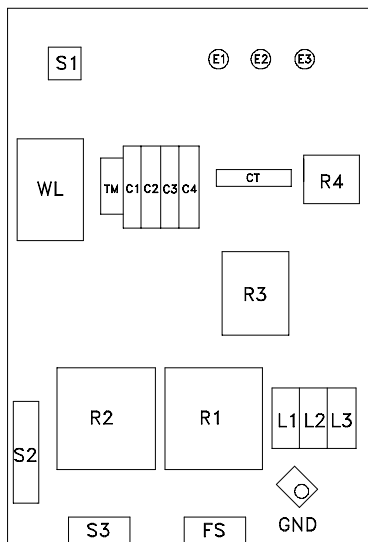
208/230 VOLT 50/60 HERTZ SINGLE PHASE
NO RINSE BOOSTER



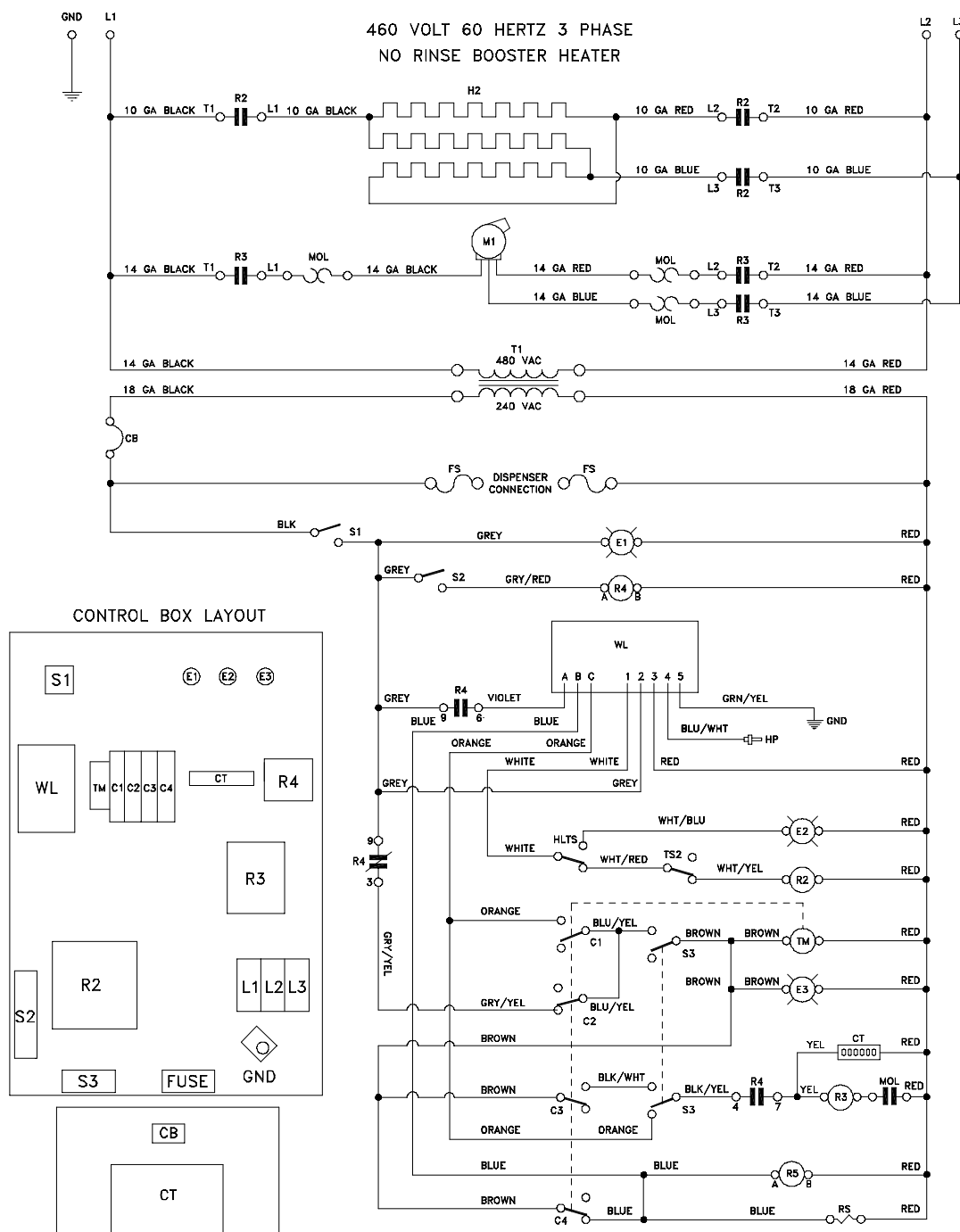
208/230 VOLT 50/60 HERTZ 3 PHASE
NO RINSE BOOSTER



CONTROL BOX LAYOUT



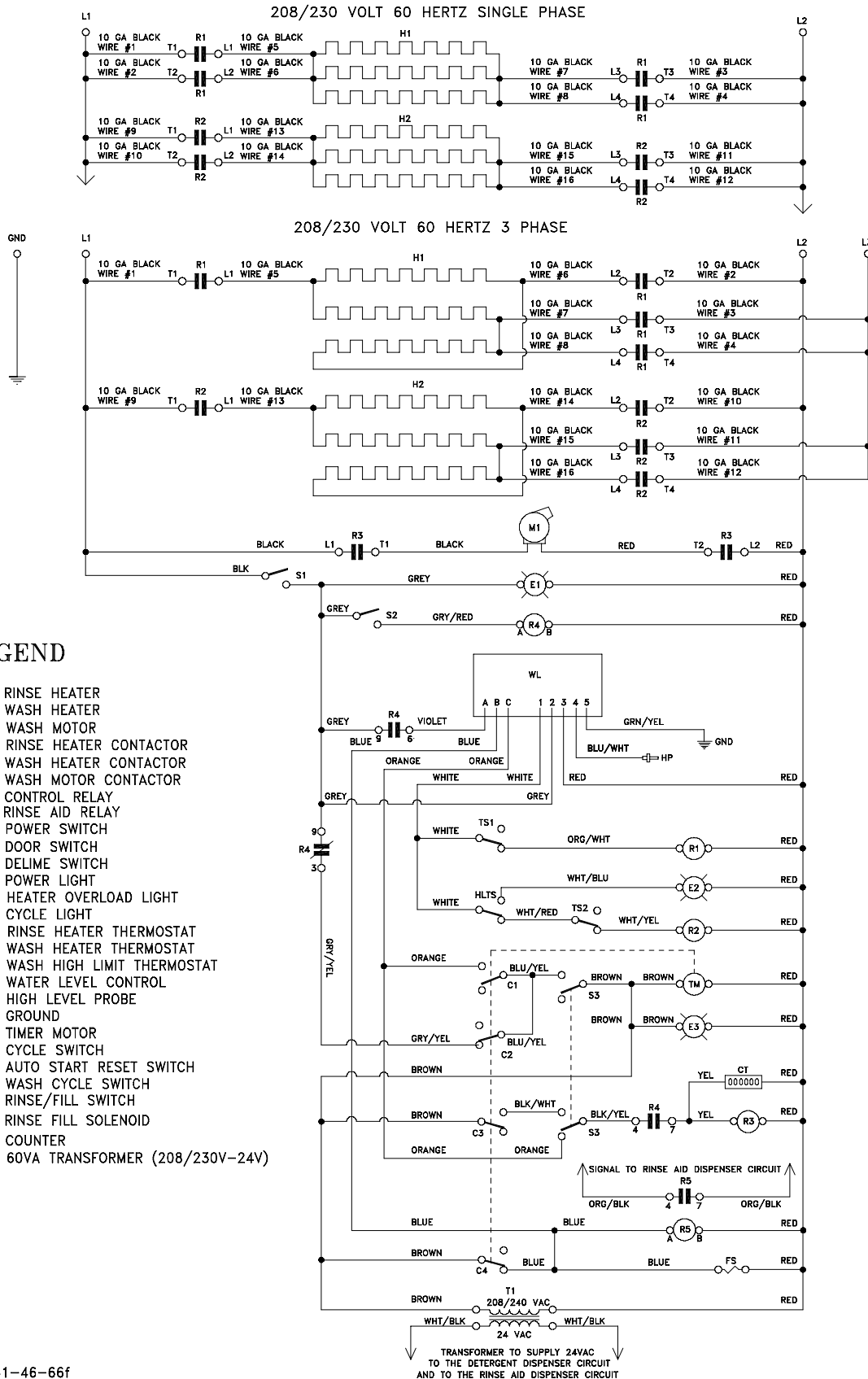
Tempstar NB (Top Mount) ELECTRICAL DIAGRAM 460 volt - 60 hertz - three phase



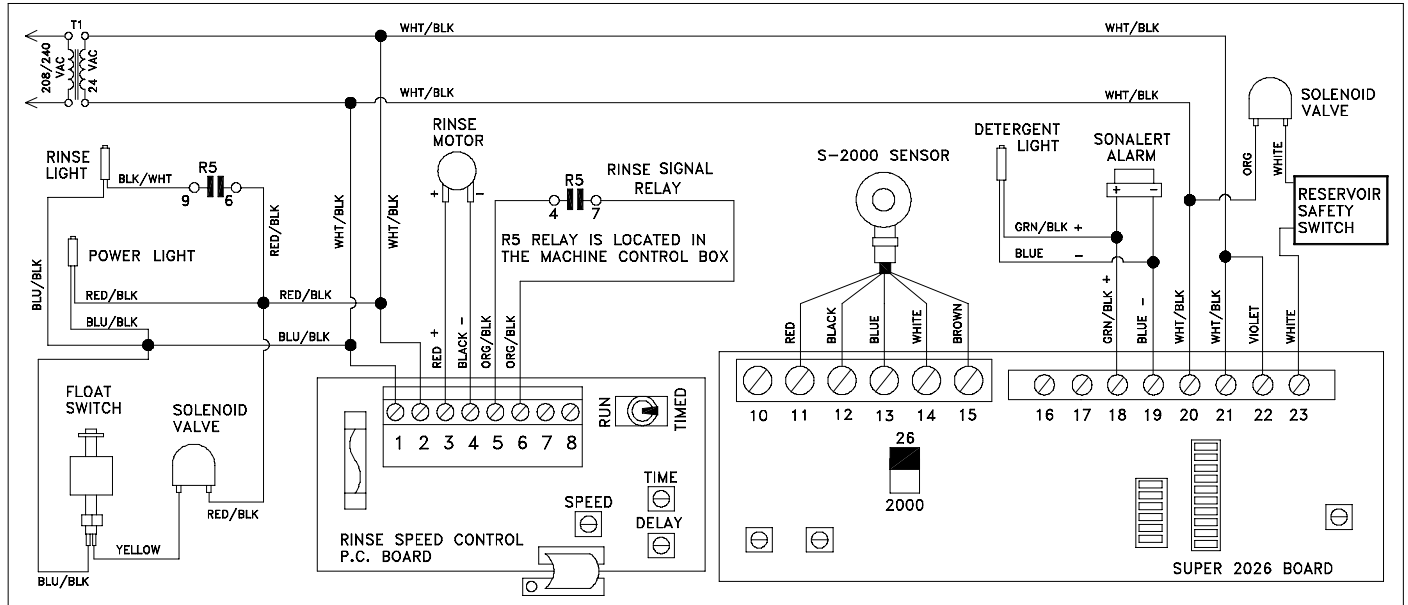
Tempstar SDS

ELECTRICAL DIAGRAM

208 - 230 volt - 60 hertz - single/three phase



TEMPSTAR SDS DISPENSER SCHEMATIC



9905-011-48-52