

Effective: October 2015



# ETAF-3/ETAF-M PDH Series

**ADS UNDERCOUNTER DISHWASHER**

**PARTS MANUAL**



## **American Dish Service**

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The American Dish Service part numbers contained in this publication are replacement parts for equipment listed with governmental and regulatory agencies and are specified to maintain the regulatory mark and certification. These parts must only be replaced by those who are trained in the operation and service of commercial dishmachines. Aftermarket parts or modified parts are not compliant or listed with the standards of governmental and regulatory agencies; aftermarket parts are not authorized by ADS for replacement repairs. ADS will not be responsible for any liability if parts are used in the repair of the machine that are not ADS-specified, by those installing non-certified replacement parts or attempts to change the machine's cycle or operation other than as designed and certified. **Read the warnings and cautions provided below before working on or replacing parts on any ADS equipment.**



**The installation of electrical parts contained in this publication require the following precautions:**

**The electrical power supplied to this machine is an imminent hazard to life that could result in severe bodily injury or death if not properly installed or connected correctly.** When working in the control box or on electrical parts, always disconnect power and perform the appropriate lock-out/tag-out procedure before servicing. Replace the cover to the control box and other protective covers when finished with servicing this equipment before returning the machine to normal operation.

**LOOSE ELECTRICAL CONNECTIONS:** Damage to the equipment can occur if the following precautions are not observed. Before connecting power to the machine, check all electrical terminals in the control box. Screws can loosen in transit. Loose connections on high amp load terminals such as the pump motor and tank heaters will cause wire burning and component damage during operation and will not be covered under ADS warranty.

**"CLEAN CIRCUIT"** means the electrical circuit breaker for the dishmachine supplies no other outlets, machines, or lights. GFCI outlets are not recommended for commercial dishmachines; ADS recommends that a single-rack machine be installed with the wire connection (hard-wired) directly from the circuit breaker. All high temp and conveyor equipment must be hard wired. If a plug and socket are used to provide electrical power to a dishmachine in a commercial kitchen, then according to electrical code it must be a GFCI, but not all GFCIs are the same. They must be rated for the Amp draw for the designed circuit.

**For Reference: The NEC Article 210.8 regarding GFCI Protection (B) Other Than Dwelling Units (2) Commercial and Institutional Kitchens. All 15 and 20A, 125V receptacles installed in kitchens, even those that do not supply the countertop surface, must be GFCI protected.**



**The chemical feeders and controls contained in this publication require the following precautions:**

**READ Manufacturer's Manual before Using this Product. For your safety read and observe all warnings in these instructions.** While performing installation of parts described in this booklet, wear approved Personal Protective Equipment, including chemically resistant gloves and Safety Eye-Wear.

**CHEMICALS:** There are potentially hazardous situations when working with industrial cleaning chemicals for dishmachines. See chemical manufacturer's safe practices and SDS or MSDS sheets for handling and installing chemicals and supply containers.

Chemicals can damage or corrode plumbing and stainless parts of the dishmachine. Do not run chemical lines over controls or plumbing. Always secure chemical lines and check regularly for leaks. **If not properly handled, chemicals can cause serious bodily injury. In the event of chemical contact to skin or eyes; wash immediately with fresh water and seek medical attention.**

**DE-LIMING THE MACHINE: Because of potential hazards resulting from the combination of chlorine with acid solution, only authorized trained individuals must be allowed to de-lime a commercial dishmachine.**

**CONTAINERS:** The ADS chemical delivery system is designed for 5 gallon pails of industrial low-energy chemical products. Always use chemical resistant safety gloves and safety goggles (indirect-vented or non-vented) when changing chemical buckets. Immediately report spills and refer to your chemical suppliers SDS safety data sheet or MSDS material safety data sheet for information if chemical comes in contact with skin or eyes.

Any modifications to the chemical delivery system for smaller containers must include Closed Loop Chemical Containers (spill proof bottles) in a secured racking system. It is the responsibility of the user of the machine to purchase chemicals in spill proof containers. **FAILURE CAN RESULT IN SERIOUS INJURY.** Never place chemicals in open containers or containers that can be easily tipped over when moving or changing product. Failure to do so will void your ADS warranty.

Chemical supplies must be kept in closed delivery containers to avoid spills or contamination. Do not place chemical solutions in open containers or containers that can be easily tipped over in moving or changing.

Do not open the doors while the machine is in operation. Doing so could result in serious bodily injury from spraying hot water and chemicals.



The door lever arm parts in this publication are installed under spring tension and caution is needed whenever parts are changed. Wear safety glasses when working on the doors and lever. Care should be taken when moving, installing, or replacing any door lever arm parts. Use the ADS lever arm tool to unload the door spring during replacement or adjustment. The spring tension suddenly released can result in pinch or blunt trauma, and puncture wounds. If a wound occurs from the release of spring tension, wash the wound area immediately because of the soils that can accumulate on the metal parts and seek medical attention.

## NOTICE

**BEFORE YOU BEGIN:** American Dish Service provides this information as a service to our customers. **Keep all instructions for future reference.** ADS reserves the right to alter or update this information at any time. Should you desire to make sure that you have the most up-to-date information, we would direct you to the appropriate document on our web site: [www.americandish.com](http://www.americandish.com). **It is your obligation as the customer to ensure that the replacement parts for the machine are installed safely and properly, and when completed, the machine is left in proper and safe working order.** Electrical, Plumbing, and Chemical hookup must be performed by a qualified professional who will ensure that the equipment is installed in accordance with all applicable Codes, Ordinances, and Safety requirements. Failure to follow the installation instructions will void the warranty. **ADS assumes no liability or control over the installation of the equipment or replacement parts. Product failure due to improper installation is not covered under the ADS Warranty.**

### Plumbing Parts:

When working on the water inlet manifold, first relieve the water line pressure by turning off the water supply to the machine then energize the machine's fill valve. By doing this the manifold will empty of water. Turn off the electrical power and lock out/tag out the machine. It will then be safe to open the plumbing inlet manifold.

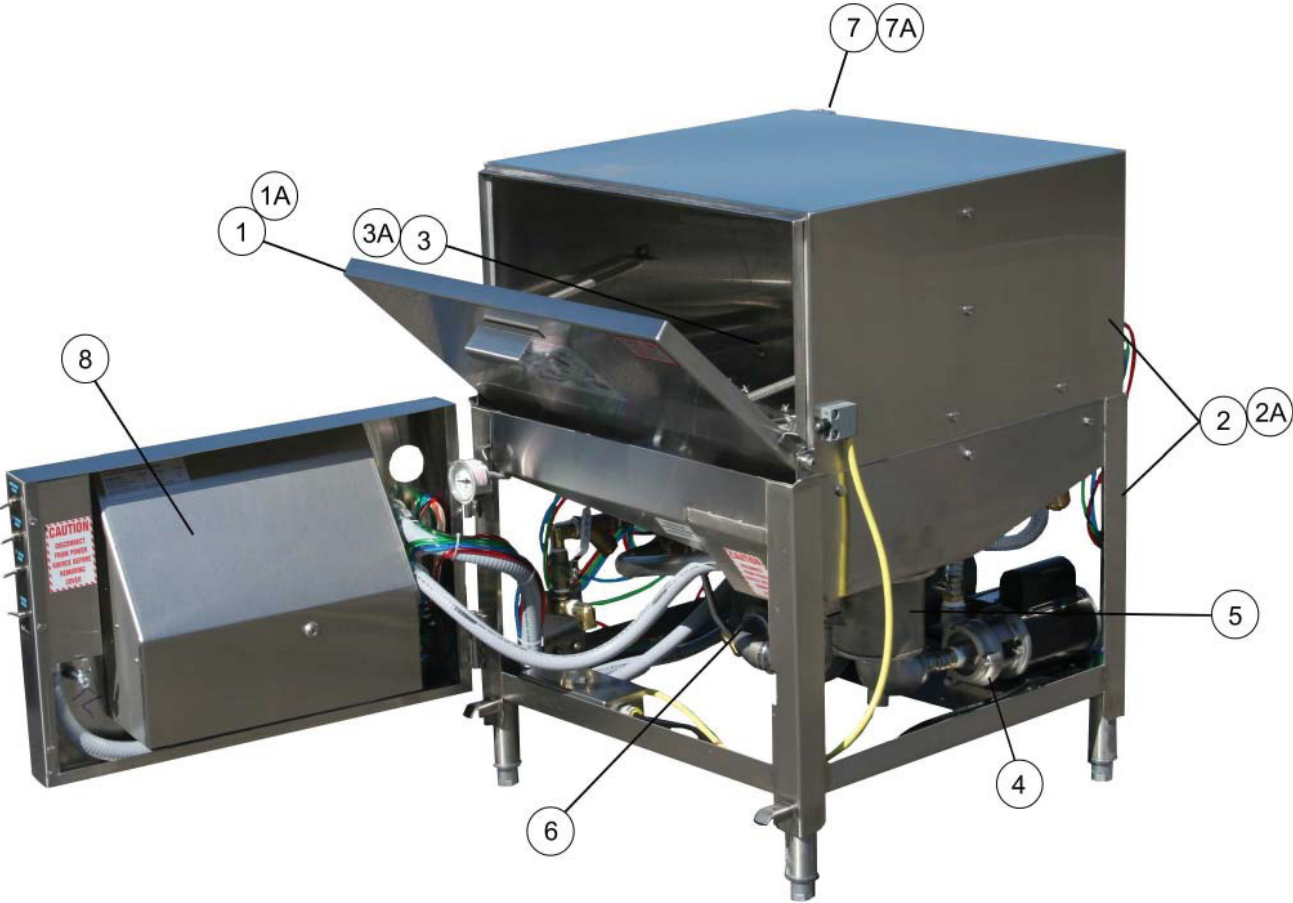
**TANKLESS WATER HEATERS** have shown to be problematic for commercial dishmachines. It has been the experience of ADS that tankless supply systems require multiple units plumbed in sequence with a recirculation loop to achieve proper pressure and temperature.

**Check with the tankless water heater manufacturer, they may recommend a storage tank to guarantee proper flow and line pressure to the machine. Failure to provide adequate water quantity, pressure and temperature to the machine will cause the machine to function improperly and is not the responsibility of ADS. Improperly installing ADS equipment or parts in this manner could void the warranty. All costs associated with providing an adequate water supply to the machine is the sole responsibility of the user.**

Drain replacement parts should not be reduced in size, all drain lines should remain the same size as it exits the dishmachine or larger. If you have questions, call 800-922-2178 or visit our website at [www.americandish.com](http://www.americandish.com).

018-0091 / 022-009

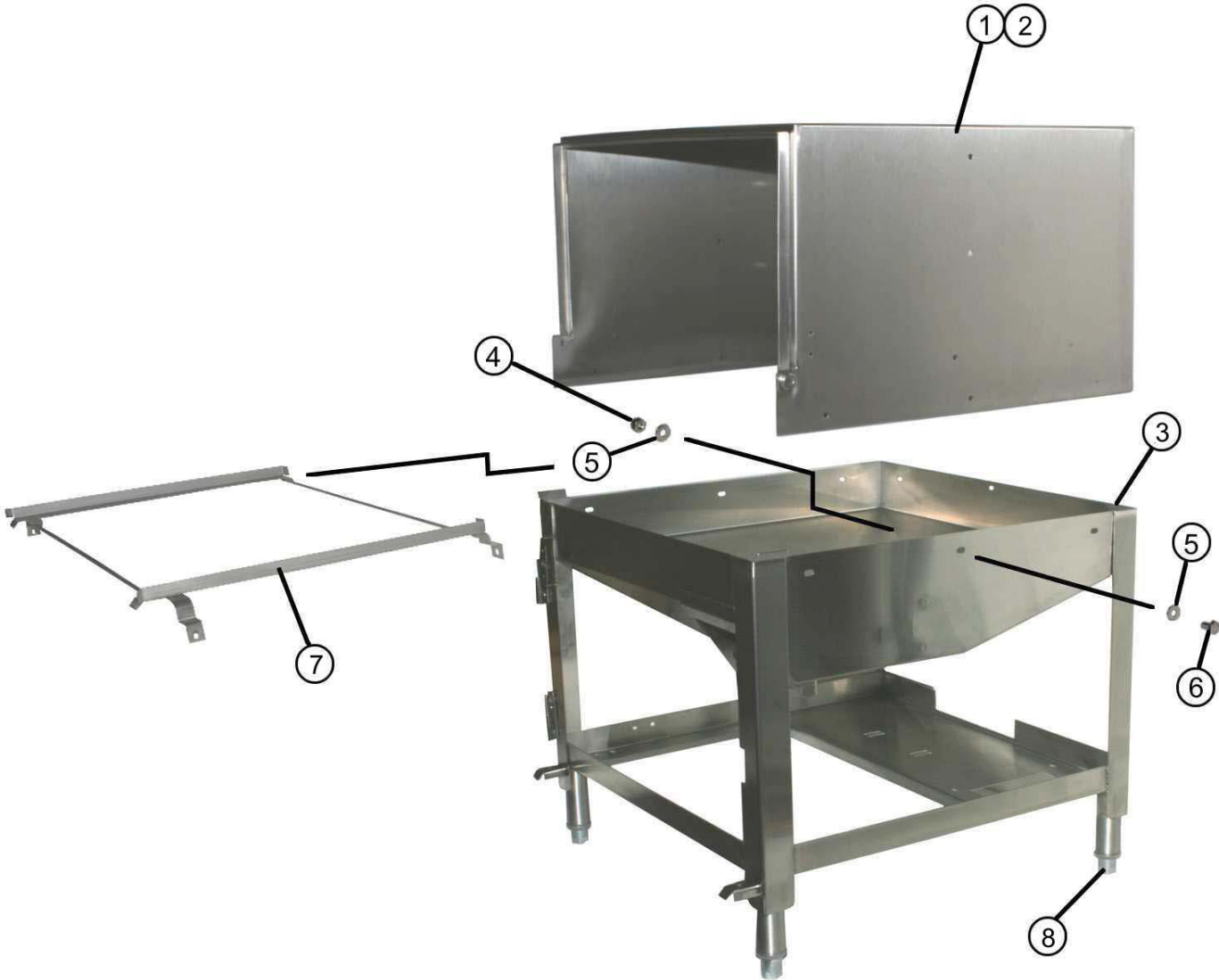
ETAF-3 / ETAF-M PDH Series





# 061-2500/ 061-2600 Cabinet Assembly

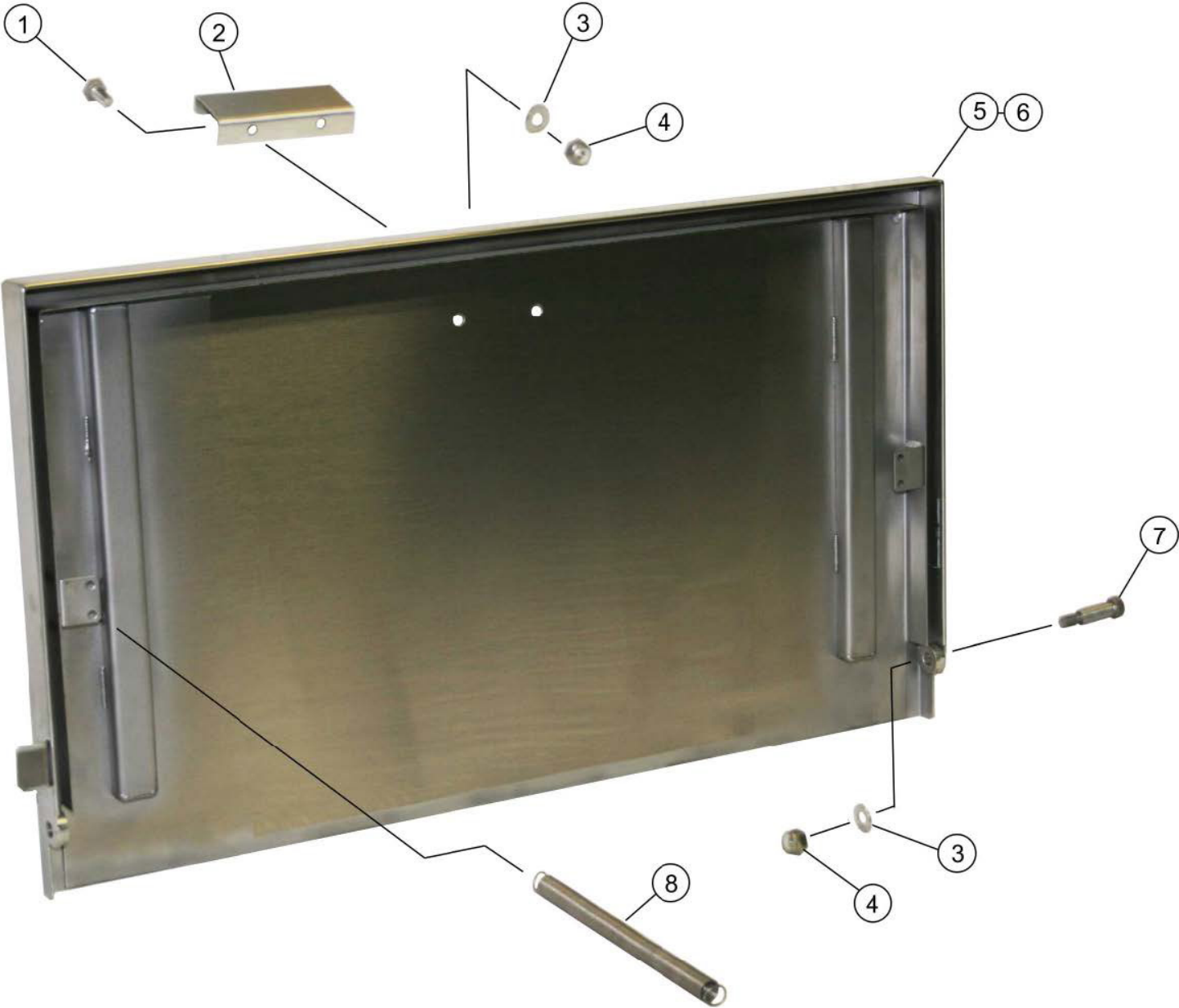
## ETAF-3 / ETAF-M PDH Series





# 067-1200/ 067-0800 Door Actuator Assembly

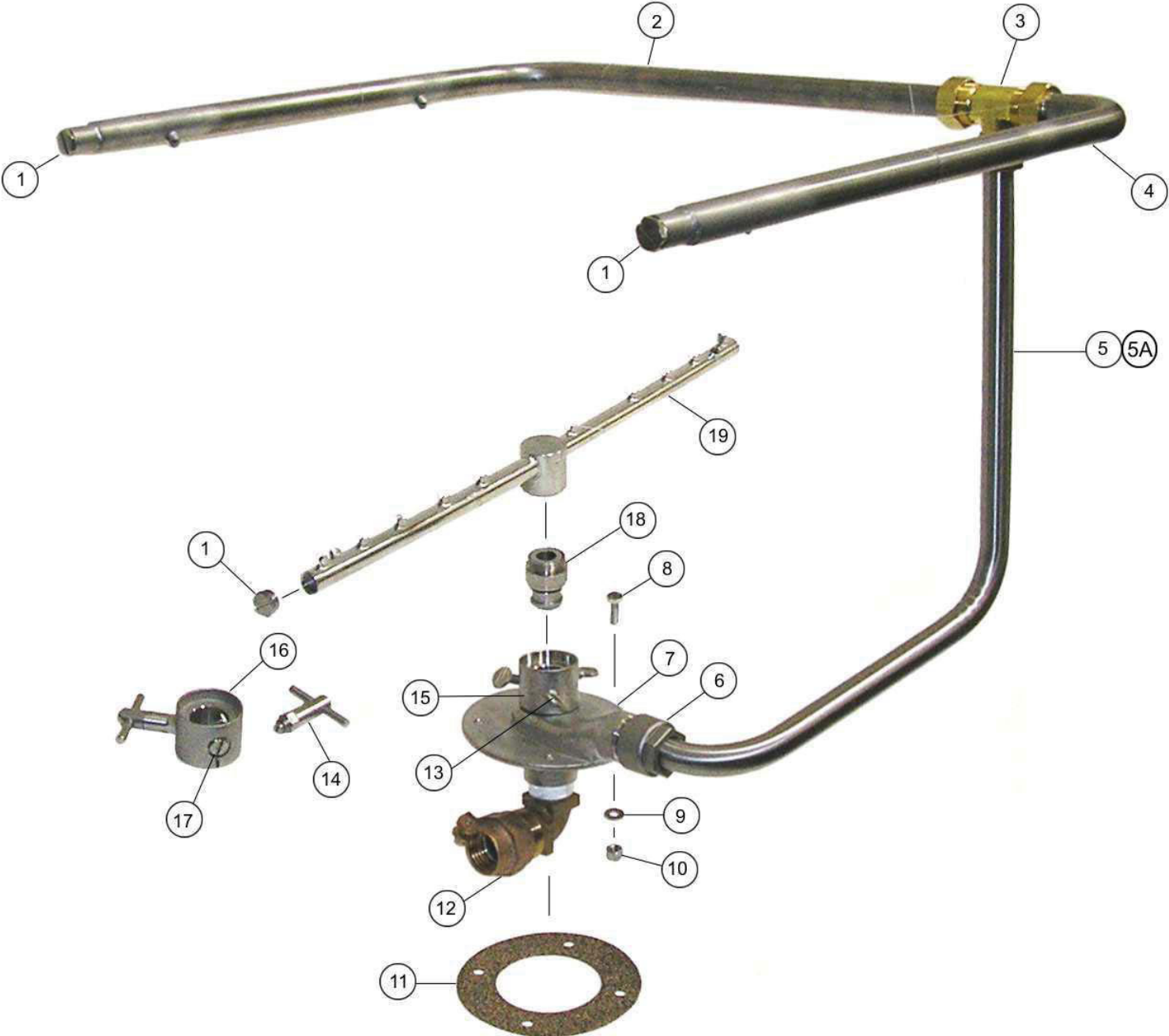
## ETAF-3 / ETAF-M PDH Series





# 062-2200/ 062-2300 Spray System Assembly

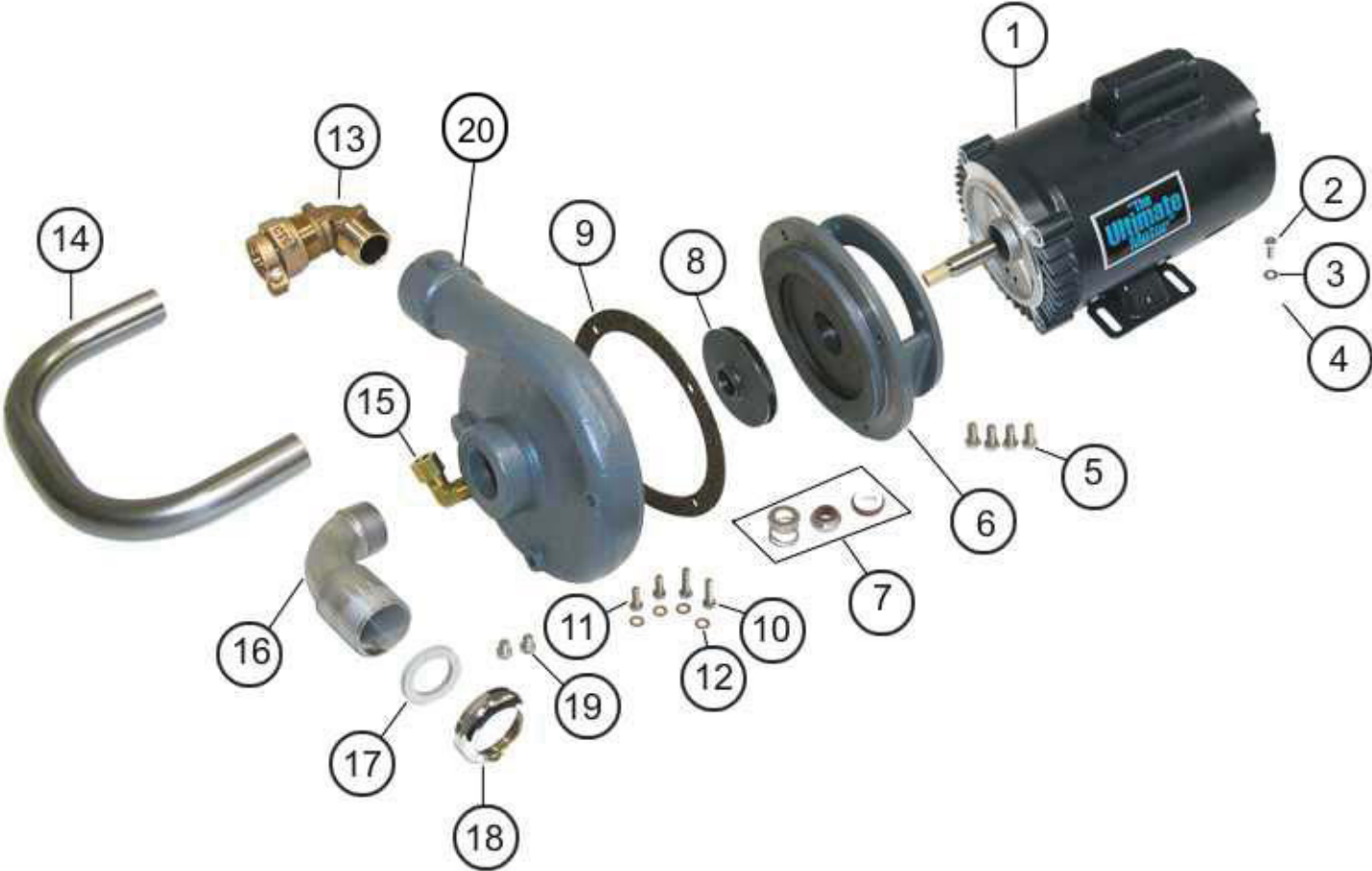
## ETAF-3 / ETAF-M PDH Series





# 063-1500 Recirculating Pump Assembly

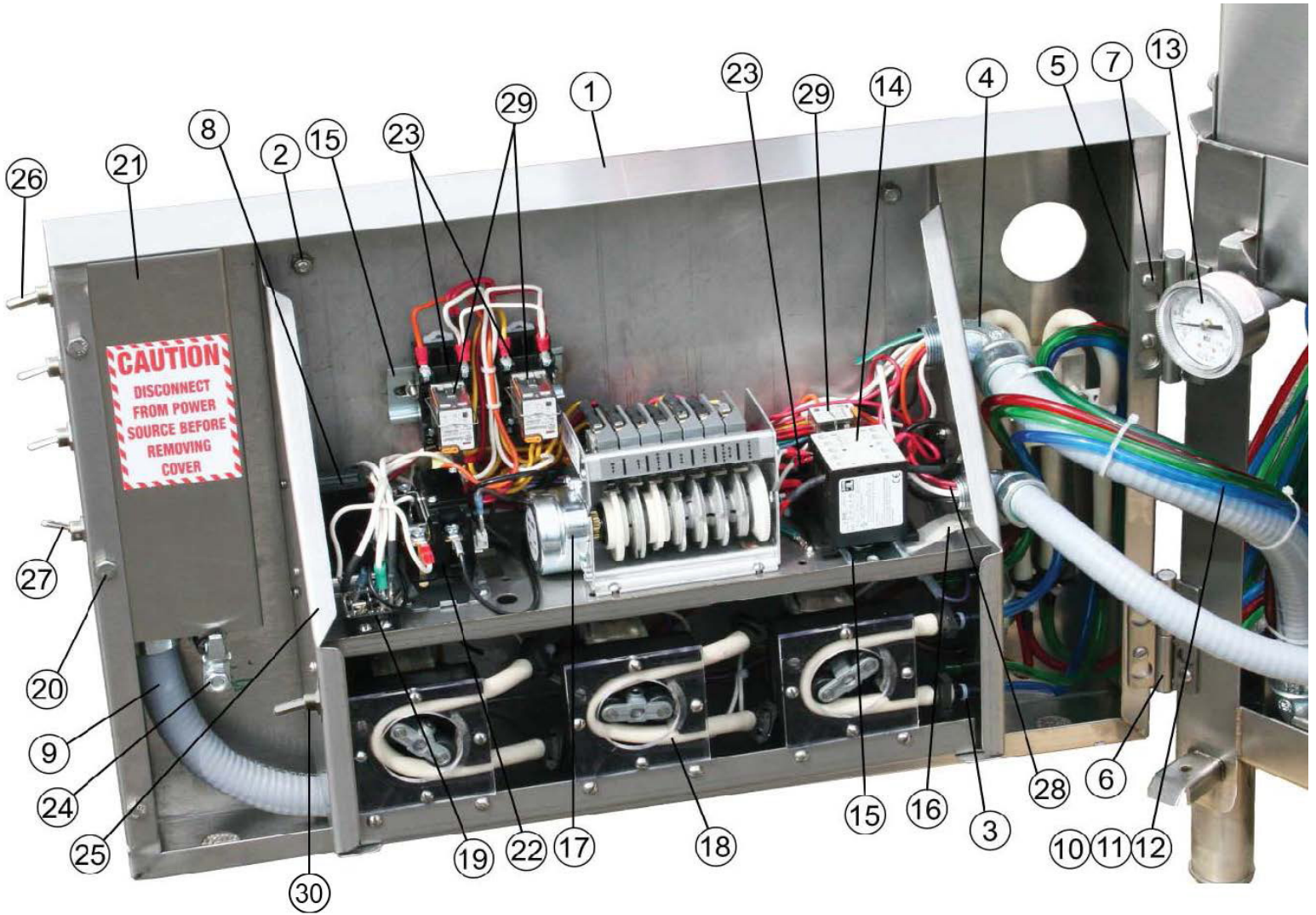
## ETAF-3 / ETAF-M PDH Series





# 064-2901 Control System Assembly

## ETAF-3 / ETAF-M PDH Series



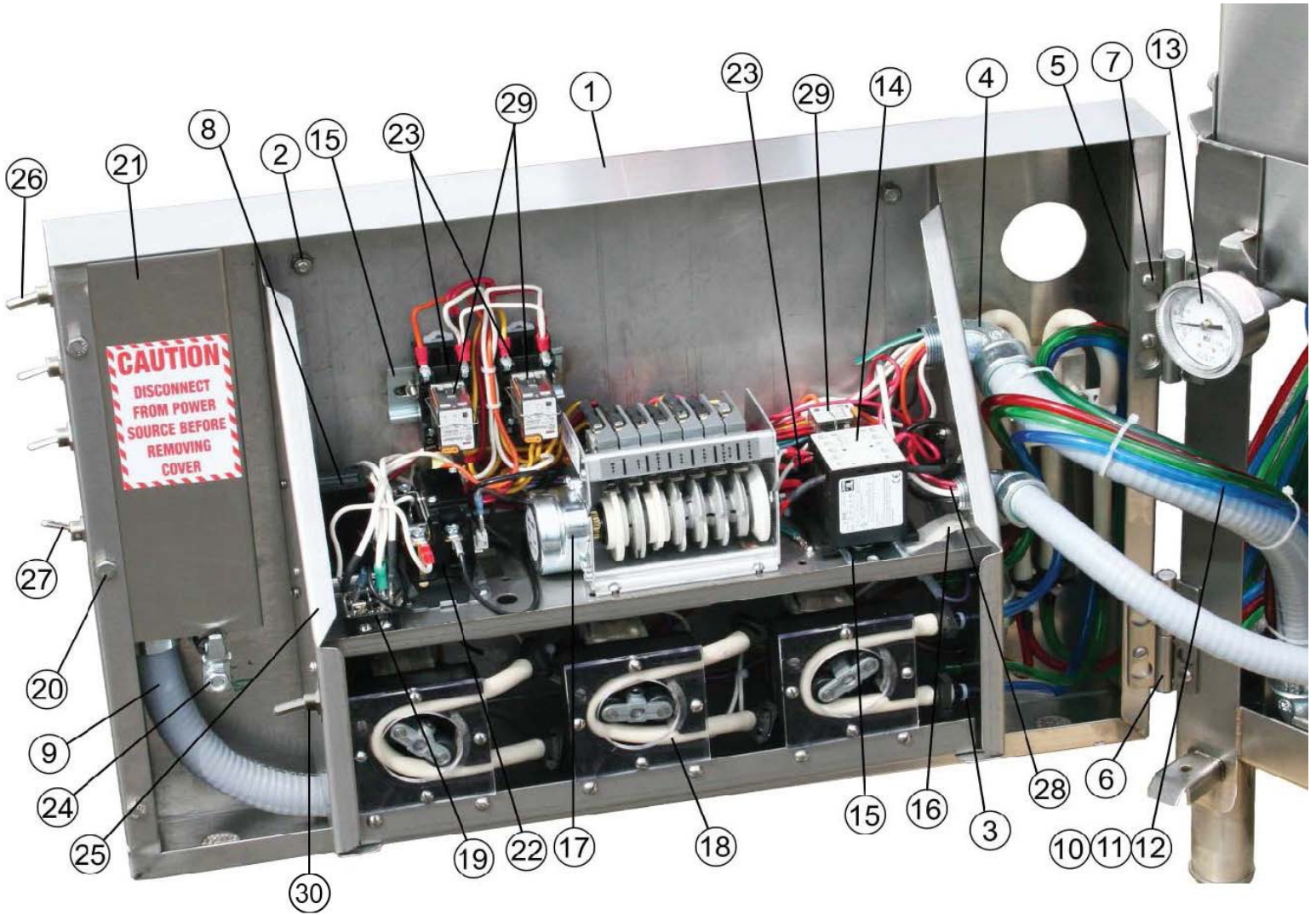
# 064-2901 Control System Assembly

## ETAF-3 / ETAF-M PDH Series

| Ref. No. | Part No. | No. Req. | Description   |
|----------|----------|----------|---|
| 1        | 085-6221 | 1        | Skirt Weldment  |
| 2        | 098-2507 | 4        | Locknut, 1/4"-20, HH, SS                                  |
| 3        | 091-4001 | 6        | Grommet, 1/4" ID  |
| 4        | 091-4140 | 3        | Conduit Fitting, 3/4"x90°, Sealtite                       |
| 5        | 098-2301 | 8        | Locknut, 10-32, SS  |
| 6        | 081-6109 | 2        | Hinge   |
| 7        | 098-1314 | 8        | Bolt, Pan Head, 10-32x1/2", SS                            |
| 8        | 091-3049 | 1        | Electric Counter  |
| 9        | 064-0030 | 1        | Conduit Assembly  |
| 10       | 093-1044 | 1        | Chemical Tube, Blue (Sold by the Foot) (26' per Machine)  |
| 11       | 093-1045 | 1        | Chemical Tube, Green (Sold by the Foot) (26' per Machine) |
| 12       | 093-1046 | 1        | Chemical Tube, Red (Sold by the Foot) (26' per Machine)   |
| 13       | 299-1004 | 1        | Gauge, Temperature, 3' Capillary                          |
| 14       | 091-3082 | 1        | Contactor, Heater   |
| 15       | 091-9105 | 2        | Din Rail, Cut to 3-3/4" Long                              |
| 16       | 099-1004 | 1        | Timer Adjustment Key                                      |
| 17       | 091-3051 | 1        | Timer, 90 Second, 7 Cam                                   |
|          | 091-3005 | OPT      | Timer, 120 Second, 7 Cam                                  |
|          | 091-3078 | OPT      | Timer, 150 Second, 8 Cam                                  |
| 18       | 064-0001 | 3        | Chemical Pump Assembly (Peristaltic)                      |
| 19       | 091-5029 | 1        | Terminal Block 8 Terminals                                |
| 20       | 098-1423 | 3        | Bolt, 1/4"-20x1/2", HH, SS                                |
| 21       | 086-6188 | 1        | Switch Box Cover  |
| 22       | 091-3083 | 1        | Contactor   |
| 23       | 291-3009 | 3        | Socket, Relay   |
| 24       | 099-1017 | 1        | Door Latch Assembly                                       |
| 25       | 081-6418 | 1        | Control Box Assembly (Metal Only)                         |
| 26       | 091-3009 | 3        | Toggle Switch   |
| 27       | 091-3008 | 1        | Master Switch   |
| 28       | 091-5034 | 1        | Wire Harness  |
| 29       | 291-3005 | 3        | Relay, 110V Double Pole                                   |
| N/S      | 087-6416 | 1        | Control Box Cover (See Assembly 064-2904)                 |
| N/S      | 096-1002 | 1        | Control Box Lock w/Key (See Assembly 064-2904)            |

# 064-2901 Control System Assembly

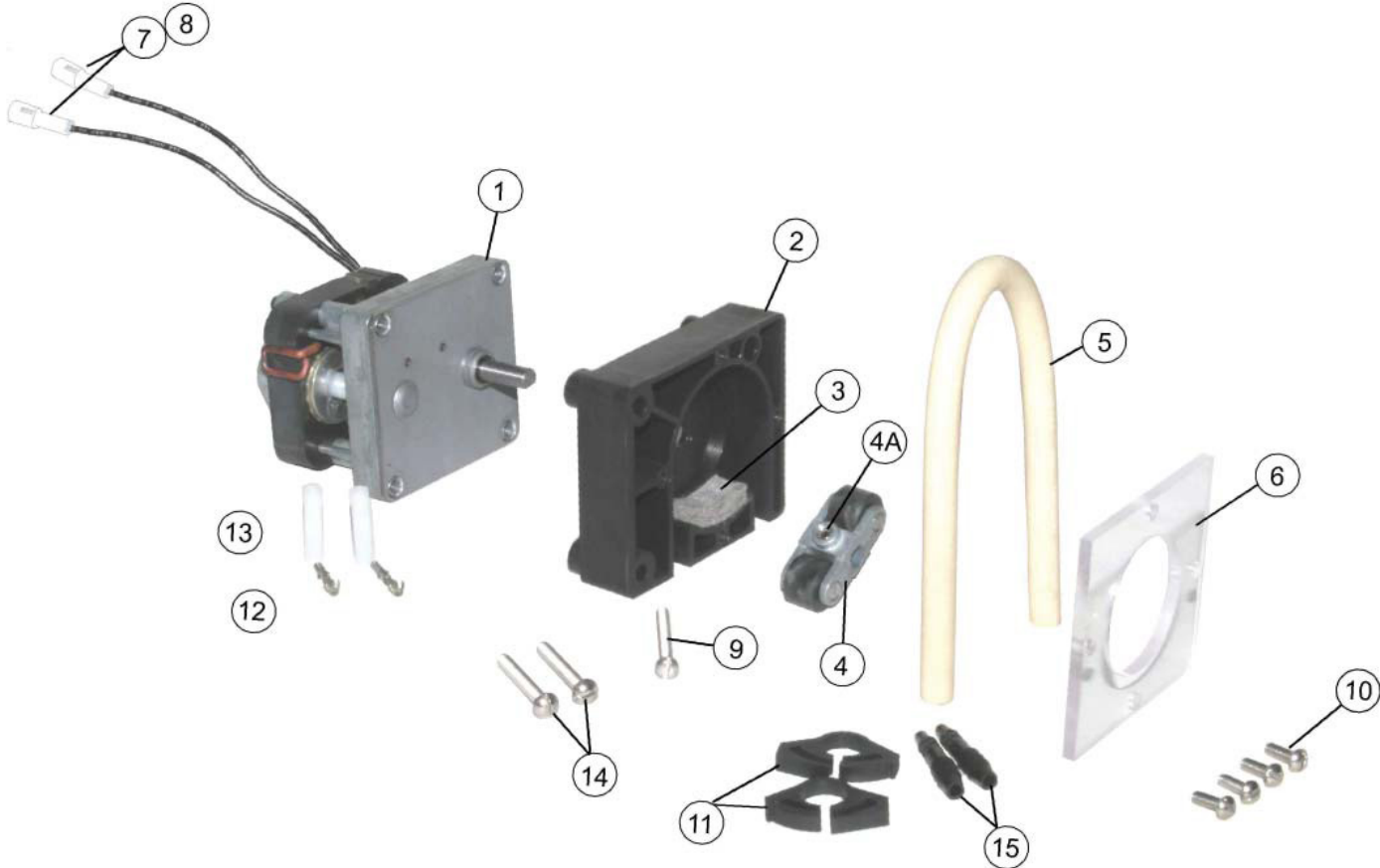
## ETAF-3 / ETAF-M PDH Series





# 064-0001 Chemical Pump Assembly

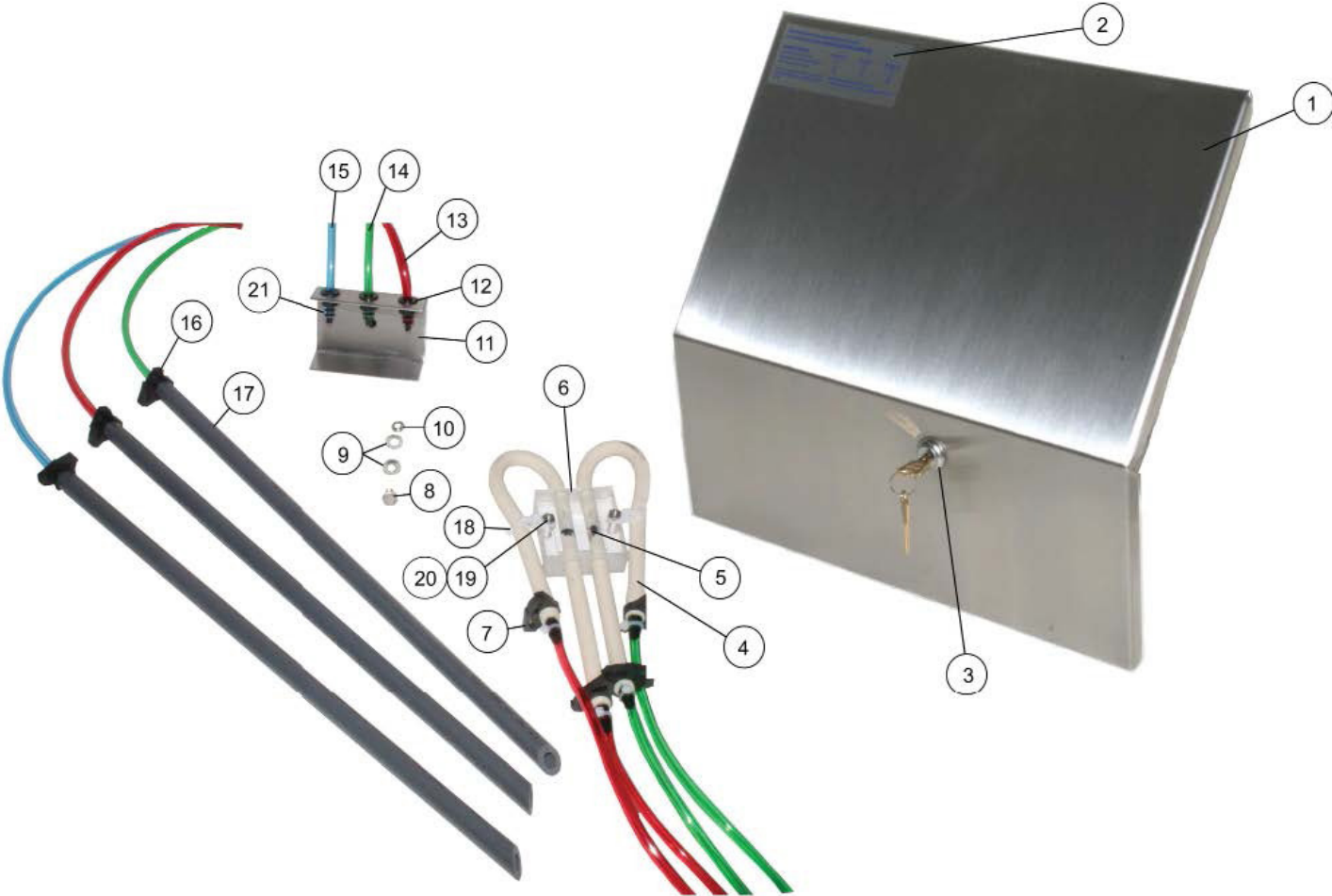
## ETAF-3 / ETAF-M PDH Series





# 064-2902 Control System Accessories

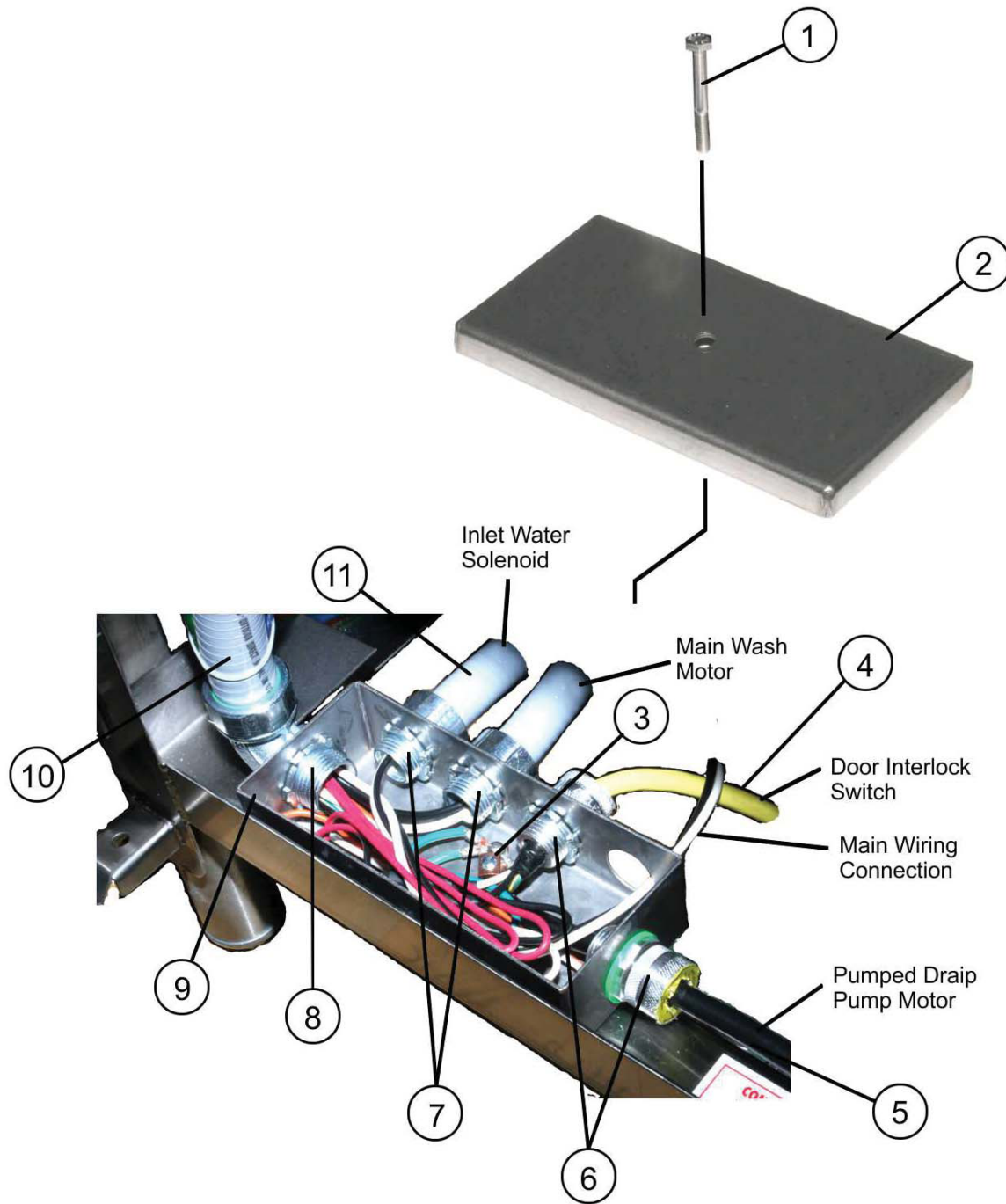
## ETAF-3 / ETAF-M PDH Series





# 064-0036 Conduit Assembly

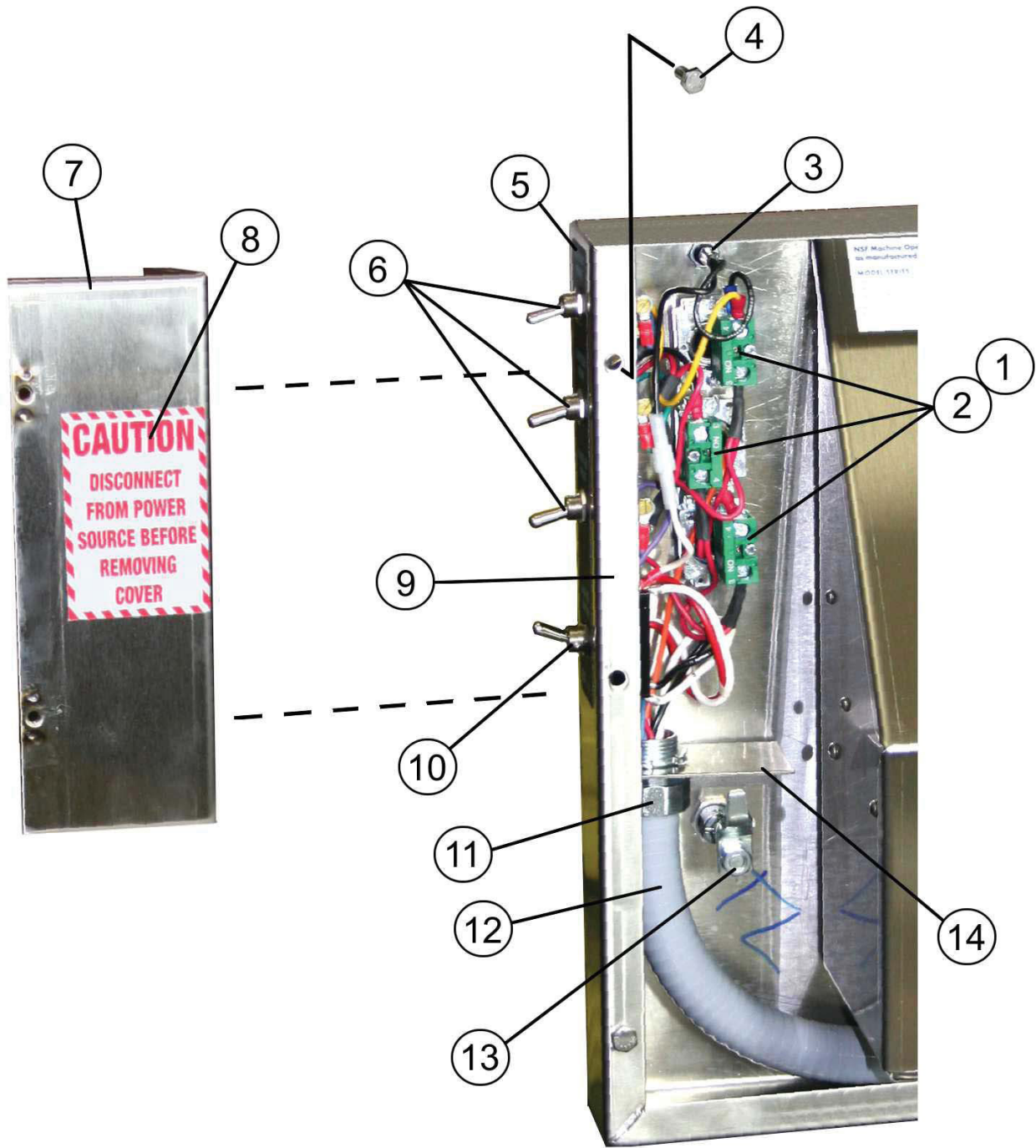
## ETAF-3 / ETAF-M PDH Series





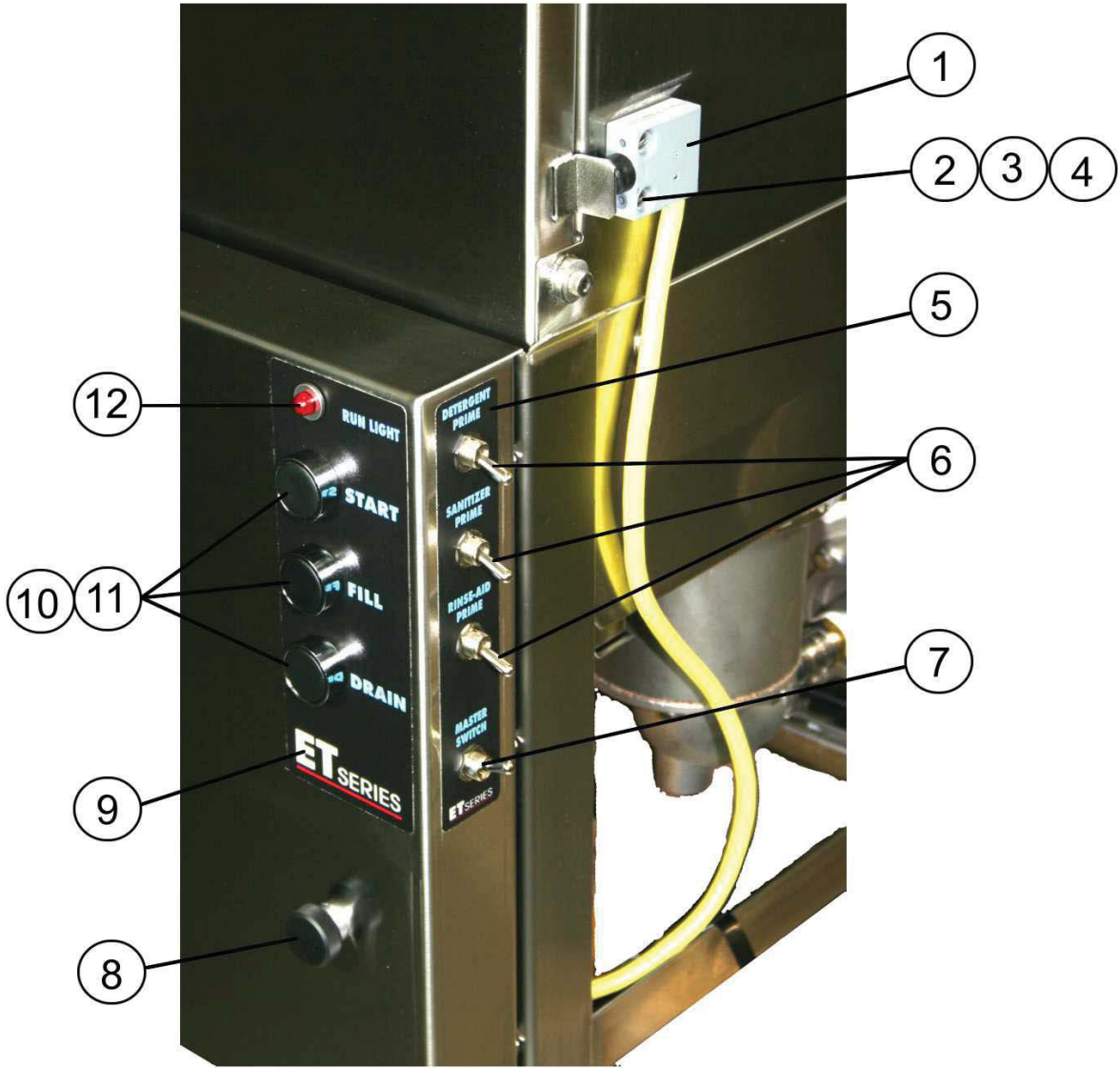
# 064-2903 Control System Assembly Switch Box(Rear)

## ETAF-3 / ETAF-M PDH Series





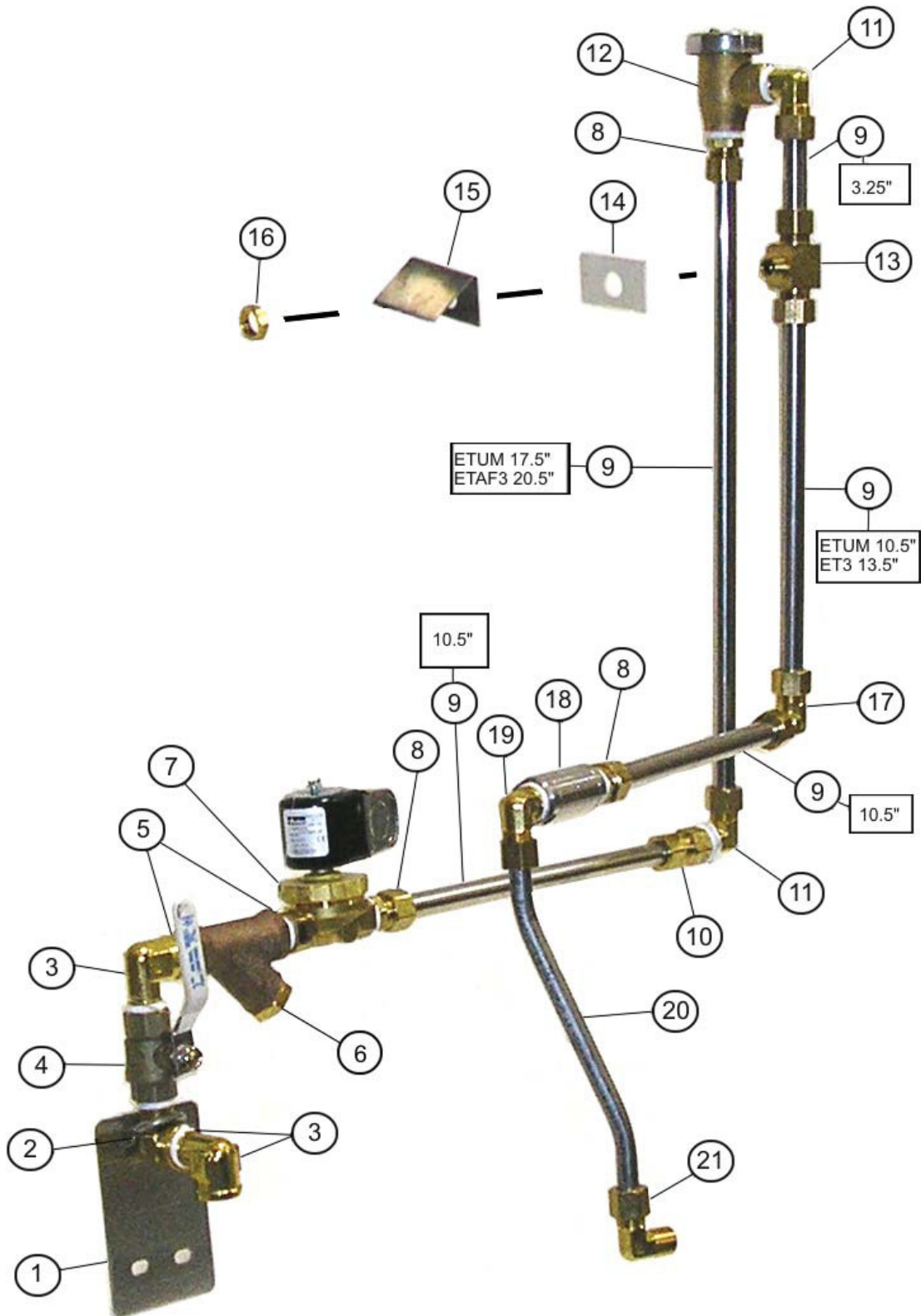
# 064-2904 Control System Assembly Switch Box(Front) ETAf-3 / ETAf-M PDH Series





# 065-1600/ 065-1800 Plumbing Assembly

## ETAF-3 / ETAF-M PDH Series



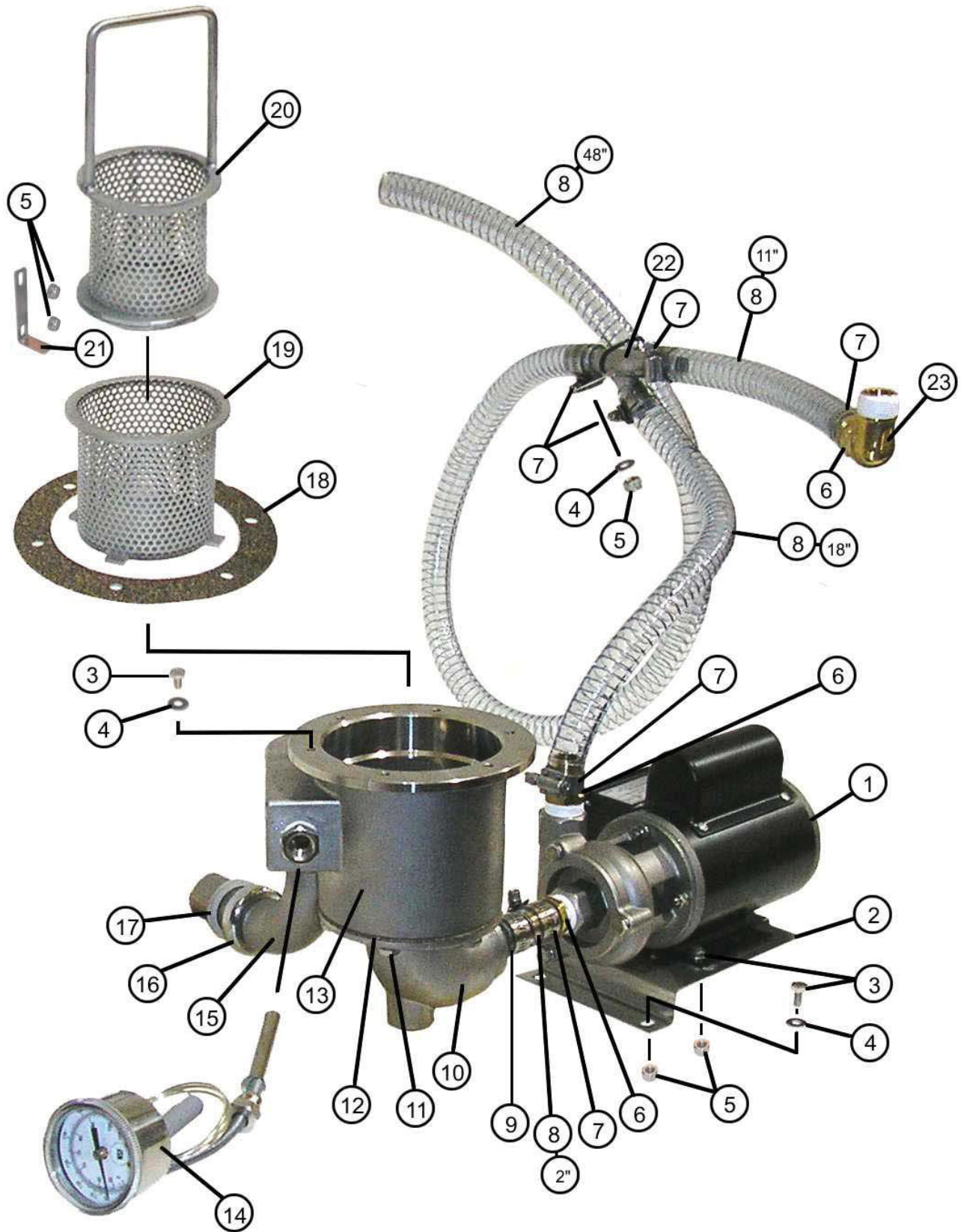
# 065-1600/ 065-1800 Plumbing Assembly

## ETAF-3 / ETAF-M PDH Series

| Ref. No. | Part No. | No. Req. | Description   |
|----------|----------|----------|---|
| 1        | 086-6170 | 1        | Bracket, Plumbing, ET                                   |
| 2        | 098-9026 | 1        | U-Bolt, 1/4"  |
| N/S      | 098-2507 | 2        | Nut, Lock, 1/4"-20 with Nylon Insert                    |
| 3        | 092-1006 | 3        | Fitting, Plumbing Street "L" 1/2"                       |
| 4        | 092-5054 | 1        | Valve, Ball, 1/2"                                       |
| 5        | 292-3003 | 2        | Nipple, 1/2" x Close, SS                                |
| 6        | 092-9001 | 1        | Line Strainer, 1/2" Y Type                              |
| 7        | 092-5015 | 1        | Valve, Water Solenoid Complete - 1/2" G                 |
| 8        | 092-1058 | 3        | Fitting, Plumbing 5/8" Compression x 1/2" MPT           |
| 9        | 094-1040 | Bulk     | Tubing, Plumbing 5/8" OD SS (Sold Per Inch)             |
| 10       | 092-1063 | 1        | Fitting, Plumbing 1/2" FPT x 5/8" Compression           |
| 11       | 092-1100 | 2        | Fitting, Plumbing 5/8" Compression x 1/2" MPT 90° Elbow |
| 12       | 092-5045 | 1        | Valve, Vacuum Breaker 1/2"                              |
| 13       | 092-1102 | 1        | Fitting, Plumbing 5/8" Comp x 5/8" Comp x 3/8" Comp Tee |
| 14       | 089-6304 | 1        | Gasket, L.A. Plumbing                                   |
| 15       | 086-6825 | 1        | Bracket, Spray Deflector, L.A. Plumbing                 |
| 16       | 092-1104 | 1        | Nut, Plumbing 3/8" Compression Locknut                  |
| 17       | 092-1101 | 1        | Fitting, Plumbing 5/8" Comp x 5/8" Comp 90° Elbow       |
| 18       | 092-5027 | 1        | Valve, Check 1/2"                                       |
| 19       | 092-1062 | 1        | Fitting, Plumbing 1/2" Comp x 1/2" MPT 90° Elbow        |
| 20       | 092-3116 | 1        | Tube, Fresh Water Supply, ET                            |
| 21       | 092-1022 | 1        | Fitting, Plumbing 1/2" Comp x 3/8" MPT 90° Elbow        |
| REP      | 092-5049 | 0        | Cap, Vacuum Breaker, 1/2" Watts                         |
| REP      | 092-5047 | 0        | Kit, Vacuum Breaker Repair, 1/2" Watts                  |
| REP      | 092-5051 | 0        | Bonnet & Stem, Vacuum Breaker, 1/2" Watts               |
| REP      | 092-5016 | 0        | Kit, Water Solenoid Valve, 1/2" J/E                     |
| REP      | 092-5025 | 0        | Valve, Water Solenoid, Less Coil, 1/2" J/E              |
| REP      | 092-5017 | 0        | Coil, Water Solenoid Valve, J/E                         |
|          |          |          |   |
|          |          |          |   |
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|          |          |          |   |
|          |          |          |   |

# 065-1600/ 065-1800 Plumbing Assembly

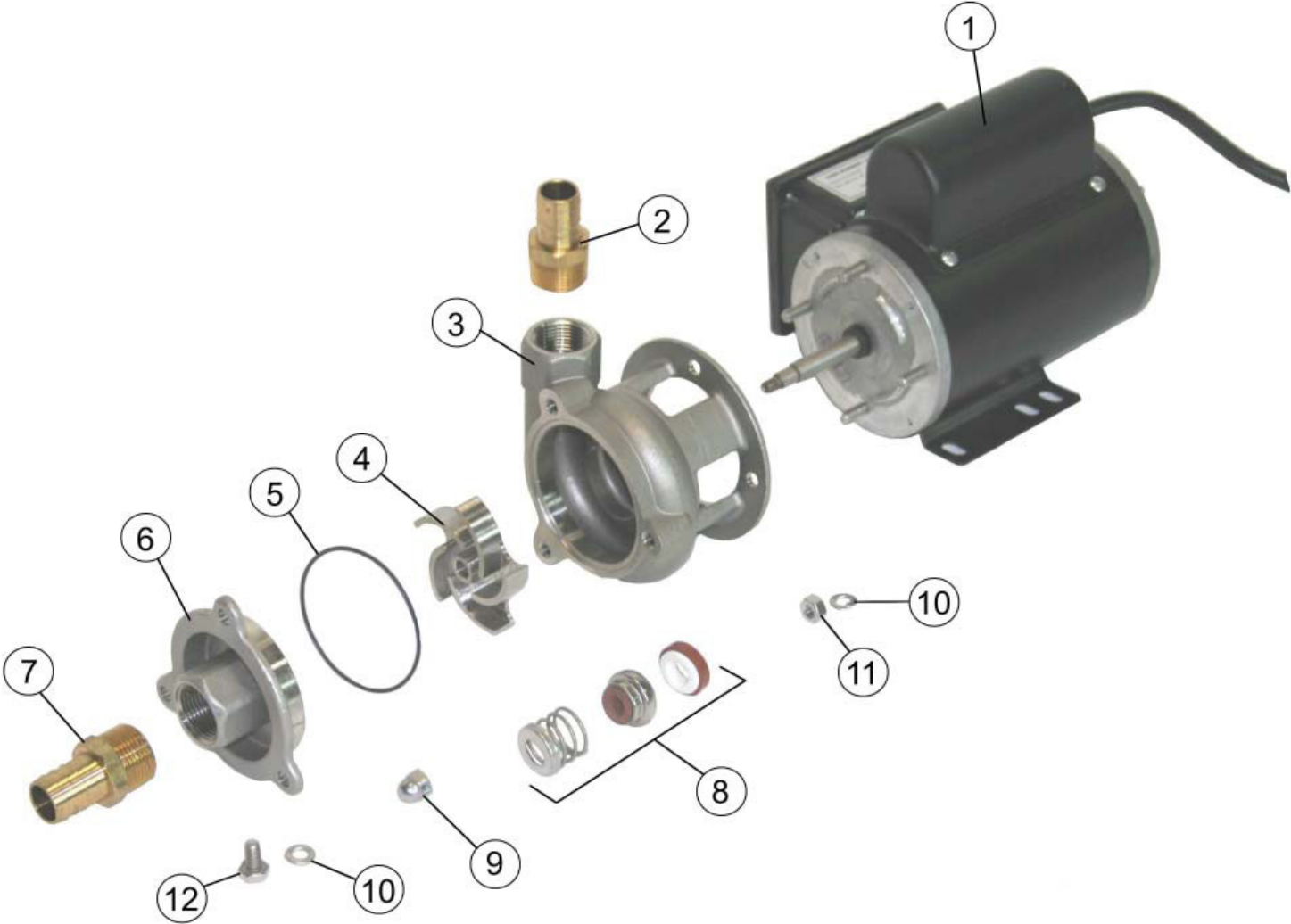
## ETAF-3 / ETAF-M PDH Series





# 063-2900 Drain Pump Assembly

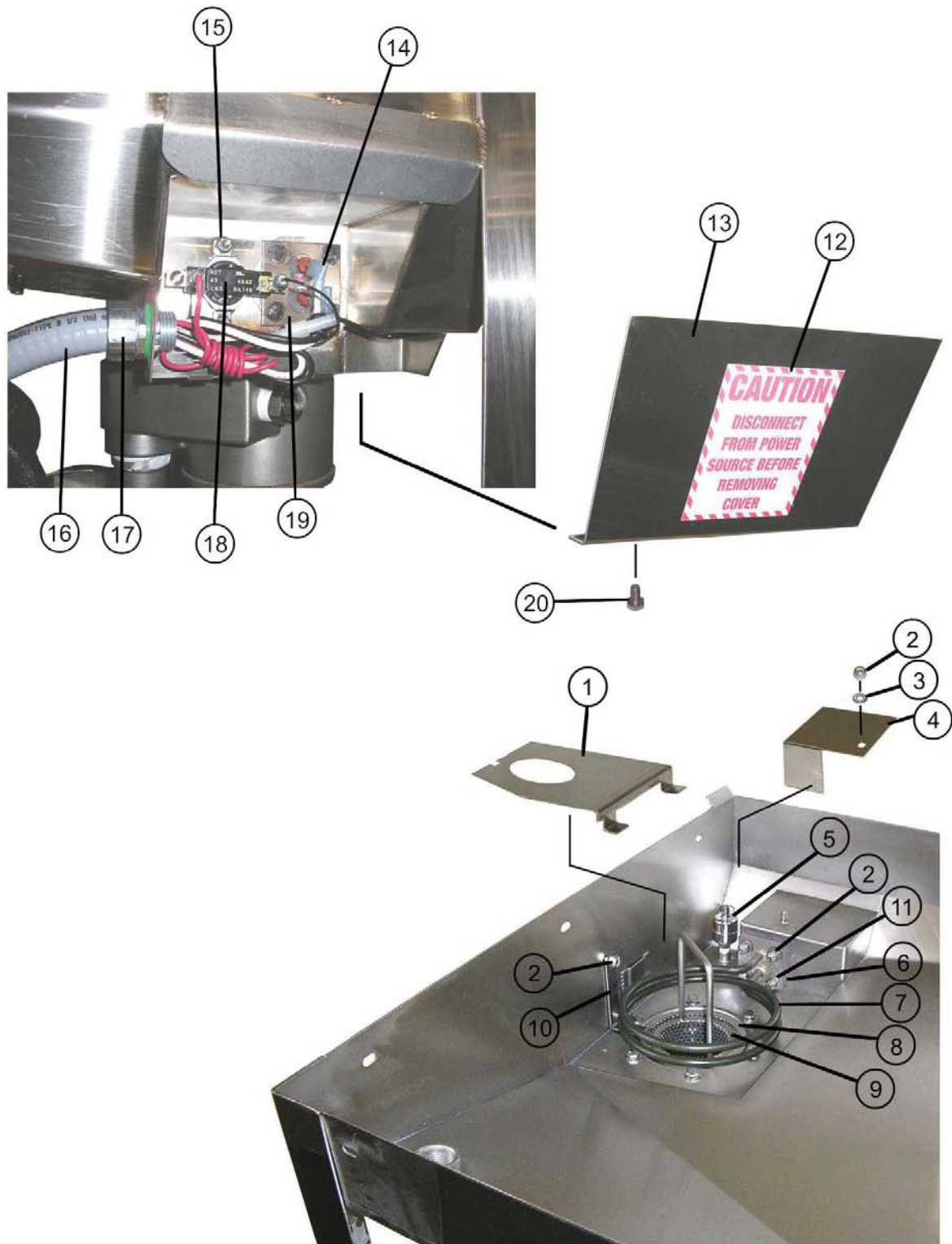
## ETAF-3 / ETAF-M PDH Series





# 068-0400 ET Series Heater Assembly

## ETAF-3 / ETAF-M PDH Series





# 089-9460 ET Series Decal List

## ETAF-3 / ETAF-M PDH Series

### NSF Machine Operational Requirements as manufactured by AMERICAN DISH SERVICE.

| MODEL SERIES:                    | ET-AF-M | ET-A-M | ET-AH-M |
|----------------------------------|---------|--------|---------|
| Seconds per wash cycle:          | 45      | 60     | 75      |
| Seconds per dwell (drain/flush): | 15      | 15     | 15      |
| Seconds per rinse cycle:         | 30      | 45     | 60      |

Wash Temperature: 120° F minimum  
Required: 50 ppm available chlorine 5/96

Rinse Temperature: 120° F minimum  
Total water demand: 2.0 gal per cycle pumped rinse

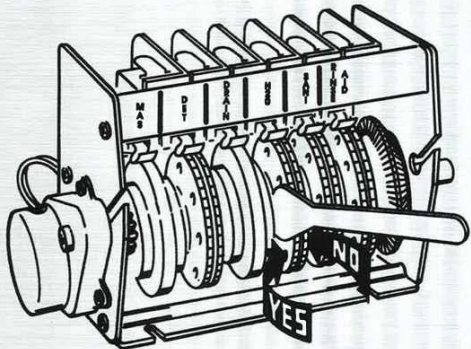
### NSF Machine Operational Requirements as manufactured by AMERICAN DISH SERVICE.

| MODEL SERIES:                              | ET-AF-3 | ET-A-3 | ET-AH-3 |
|--|---------|--------|---------|
| Seconds per wash cycle: (minimum)          | 45      | 60     | 75      |
| Seconds per dwell (drain/flush): (minimum) | 15      | 15     | 15      |
| Seconds per rinse cycle: (minimum)         | 30      | 45     | 60      |

Wash Temperature: 120° F minimum  
Required: 50 ppm available chlorine: minimum 5/96

Rinse Temperature: 120° F minimum  
Total water demand: 2.0 gal per cycle pumped rinse

**CONNECT TO ELECTRICAL SUPPLY SOURCE**  
USING 12-10 AWG COPPER WIRE  
CIRCUIT PROTECTION: 20 AMP CIRCUIT BREAKER  
OR FUSE WITH A 20 AMP RATING



**ADJUST CAM FROM LEFT SIDE ONLY!**  
DO NOT MOVE OR ADJUST RIGHT SIDE  
OF CAM.

### DAILY CLEANING INSTRUCTIONS

NECESSARY TO MAKE MACHINE FUNCTION PROPERLY

INSPECT TOP & BOTTOM SPRAY ARM JETS EACH SHIFT

- REMOVE END PLUG
- USE TOOTHPICK AND PUNCH TRASH INTO ARM
- FLUSH TRASH FROM ARM BY RINSING UNDER FAUCET. REPLACE PLUGS.

**CAUTION:**  
ARM WILL NOT TURN IF END JETS ARE PLUGGED

ET SERIES MINIMUM WATER LEVEL

CLEAN STRAINER SCREEN EVERY SHIFT

- REMOVE SCREEN
- THOROUGHLY CLEAN SCREEN. SCRUB WITH HEAVY BRUSH; RINSE UNDER FAUCET. REINSTALL.

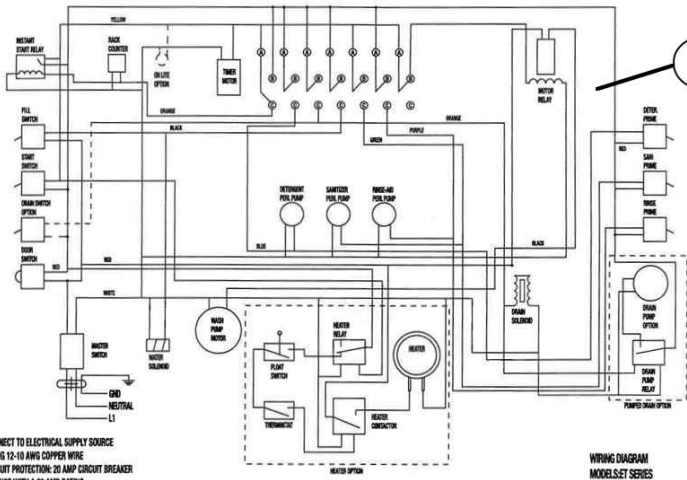
**CAUTION!**  
THIS MACHINE MUST BE DRAINED AND THEN THE MASTER SWITCH TURNED OFF PRIOR TO REMOVING THE DRAIN SCREEN.

MINIMUM WATER LEVEL INDICATED BY LINE

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MAXIMUM WATER LEVEL INDICATED BY OVERFLOW PORT

**CAUTION**  
DISCONNECT FROM POWER SOURCE BEFORE REMOVING COVER



**RUN LIGHT**

**START**

**FILL**

**DRAIN**

**ET SERIES**

**DETERGENT PRIME**

**SANITIZER PRIME**

**RINSE-AID PRIME**

**MASTER SWITCH**

**ET SERIES**



## **American Dish Service**

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**Manufacturer of low and high temperature Commercial  
Dishwashers and Glasswashers**

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