

OWNER's MANUAL for INSTALLATION, OPERATION and MAINTENANCE of **EMC® POWERJET®** AUTOMATIC PARTS WASHERS



Standard Models:

2846E

4046E

5846E

And Option Models:

2846E-SS

4046G

4046E-SS

4046G-SS

5846G

5846E-SS

5846G-SS

**PLEASE READ THIS ENTIRE MANUAL BEFORE SET-UP, CONNECTION and USE
of the **EMC POWERJET** PARTS WASHER, and SAVE FOR FUTURE REFERENCE !**

MODEL NUMBER: _____

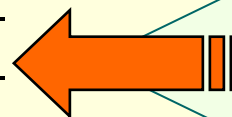
SERIAL NUMBER: _____

PURCHASE DATE: _____

Name of Your DISTRIBUTOR-

-SALES REP, this unit was purchased from: _____

Phone: _____



**Enter Your unit's data Here
and
Save for Future Reference !**

Equipment Manufacturing Corporation
Santa Fe Springs, CA 90670
Website: www.equipmentmanufacturing.com

CAUTION !

Please completely read and review this manual before installation and start-up of the system.

The EMC® POWERJET® is designed for use with **water-based, Non-Flammable fluids only !**

The user is responsible for determining the applicability of their fluid with the materials of construction and function of this unit.

A Qualified Gas Technician should perform the installation and the initial startup and calibration of the GAS Burner assembly, if the unit is so equipped.

Failure to follow cautions and operating procedures contained in this manual may void the warranty and could lead to dangerous and unsafe conditions.

WARNING !

Always disconnect Electrical and Gas utilities prior to servicing the EMC® POWERJET® parts washer.

WARNING

**HOT ! ALLOW TO COOL BEFORE
HANDLING MACHINE OR CONTENTS.**

**THIS MACHINE IS INTENDED
TO PROCESS WATER ONLY.
USER IS SOLELY LIABLE FOR
SUITABILITY OF OTHER LIQUIDS.**

**USE ONLY NON-FLAMMABLE,
NON-TOXIC, WATER SOLUTION
COMPATIBLE WITH OPERATION
& MATERIALS OF CONSTRUCTION**

Electrical Approval Conditions:

1. Not Suitable for Hazardous / Classified Areas
2. This device shall only be installed, maintained and used by authorized and qualified personnel.
3. This equipment shall be permanently grounded in accordance with the National Electrical Code.
4. The final installation of this system shall comply with all the local and national codes.
5. This device is only evaluated for fire and shock hazard, its performance and accuracy have not been investigated.

Notice

The contents of this manual are subject to change without notice. Portions of this document may have been updated. The Manufacturer reserves the right to make equipment changes and improvements which may not be reflected in this document.

We recommend that this document be read in its entirety before any attempt is made to operate the equipment.

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**PLEASE READ THIS ENTIRE MANUAL BEFORE SET-UP,
CONNECTION, AND OPERATION OF YOUR **POWERJET®** PARTS WASHER !**

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ATTENTION !

EMC ® POWERJET® Automatic Parts Washers, equipped with a **Standard 120GPM pump & 1½HP motor** assembly, are shipped from the factory with One Extra/Spare **PUMP SEAL!** (GRAINGER part no. 1R303). **The spare PUMP SEAL is in a small box (1½" x 1½" x 1½"), included in the plastic bag along with this Owner's Manual.**

IMPORTANT ! Please SAVE both the SPARE PUMP SEAL and this MANUAL for future use and reference !

A. Introduction

Congratulations, on your selection of the **EMC ® POWERJET ®** as your choice of **Automatic Parts Washer**. You will find it to be a versatile and reliable labor-saving unit.

B. Description

The **EMC® POWERJET®** is an **aqueous-based Automatic Parts Washer**. It is intended for washing various parts and materials, large and small, using a Heated Water and Soap Solution, at approximately ±160°F to ±180°F depending on the Temperature recommended by your Soap supplier.

C. Receiving & Handling

Immediately upon receipt at your facility, First, Inspect the package for any damage that may have occurred during shipment. If any is found, make note with the Truck Driver making the Delivery, or Call the Freight Carrier.

Prior to the installation and operation of the **POWERJET ®**, Remove the strapping and plastic wrap. Do not remove the **POWERJET ®** from the pallet until Ready to Install the unit. If there is any damage, the following policy and procedures apply:

D. Damaged Merchandise & Freight Claims

When the product is shipped from **EMC**, it is new, undamaged and in operable condition. Once it has left the **EMC** facility, the responsibility for its safe delivery is transferred to the carrier when the carrier signs the shipping papers. When the carrier delivers the product to the customer's dock, it is the responsibility of the customer receiving the shipped goods to make a visual inspection of the items they are receiving. If there is obvious physical damage to the equipment, the customer is responsible for noting the damage on the shipping papers. If the item is received and there are no visible signs of damage, but when the item is opened, damage is found, the customer is responsible for immediately contacting the Freight Company and submitting a "Concealed Damage" claim. Normally the **party who pays the freight files the claim**. The FOB point does not alter the freight claim responsibility.

EMC will not receive any merchandise back from a customer without a Return Authorization.

All shipments to EMC must be sent Freight PREPAID by sender.

EMC will Not accept any Collect shipments.

I. INSTALLATION INSTRUCTIONS

Remove ALL shipment bands and plastic wrap !

The POWERJET unit MUST be removed from Shipping Pallet ! Set-Up POWERJET with ALL 4 Legs and Foot Pads DIRECTLY ON SOLID LEVEL FLOOR !

A. LOCATION & SET-UP :

Position your **EMC POWERJET** Automatic Parts Washer cabinet on level floor. The foot pads at bottom of washer legs are designed only for leveling or bolting the unit to the floor. Use bolt and large washers as shims under foot pads to level the legs. The Foot Pads are Not suitable for and should Not be used for mounting to wheels or casters.

Adjust so the Washer cabinet sits level and square, side to side. This will allow the door to seal properly around the door frame.

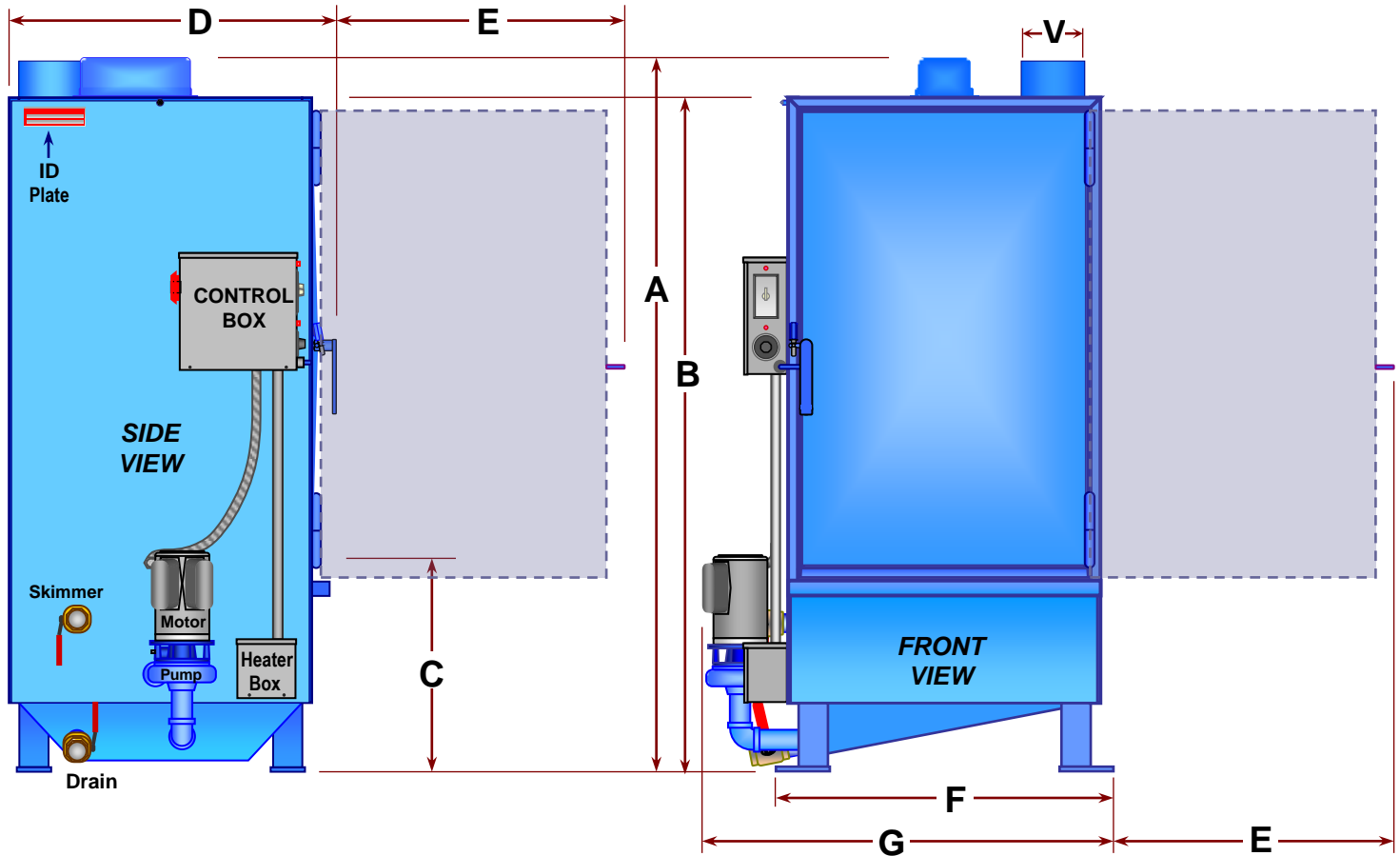
The Cabinet VENT is located on the top right rear of washer. This vent is designed to accommodate expanding air and water vapor, when the washer pump is first turned on. Some additional vent stack may or may not be necessary, according to your preference and location of washer. Since some water vapor (with soap residue) may be emitted from this vent from time to time, and will deposit back down on the washer, or other equipment in the area, walls, personnel, etc., ...you may want to run some additional venting to the outdoors (*straight up thru the roof works best*), OR, if you prefer, up and over, then down to a container where the water can drip into.

! IMPORTANT !

Upper vent sections must be lapped so condensation funnels inward, into the lower vent sections, just the opposite of a Gas Burner exhaust stack.

Otherwise, the water runs down the outside of the stack and under the washer's insulation jacket, eventually dripping from bottom of the washer. **This is often mis-diagnosed as a leak.**

EMC® POWERJET® Cabinet Dimensions

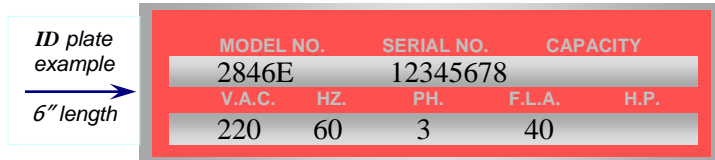


POWERJET® CABINET OVERALL DIMENSIONS

<i>Model</i>	A Total Clearance Height	B Basic Frame Height	C Floor to Top of TurnTable Shelf (Adjustable)	D Depth, Front to Rear	E Door Swing Clearance	F Foot Pad Width, Side to Side	G Total Width, Side to Side	V Vent Stack Inside Diameter
2846	73" ±	69" ±	min. 23½" ±	33" ±	add 30" ±	35" ±	42" ±	6"
4046	73" ±	69" ±	min. 24" ±	45" ±	add 42" ±	47" ±	54" ±	8"
5846	73" ±	69" ±	min. 24½" ±	63" ±	add 60" ±	65" ±	77" ±	12"

II. UTILITIES INSTALLATION

Find your Washer's ID Plate located on the upper left side of the washer cabinet, above and to the rear of the Control Box.



Check your power source, for a properly fused power supply as to Voltage, Phase, Cycles and Amps, as called for on your Washer ID Plate !

Remember:

As shipped from the EMC Factory, ALL 220Volt & 440Volt units are Wired for 3 PHASE operation ONLY !

But,

ONLY the 220Volt unit can be Converted to Single-Phase, very simply at your hook-up and installation.

Requires a Single-Phase pump Motor (standard on most units).

See the Single-Phase Conversion & Wire Diagram on page 15.

1. ELECTRICAL CONNECTION:

To be performed by Qualified Personnel !

WARNING! DISCONNECT and LOCK-OUT POWER PRIOR TO PROCEEDING !

NOTE: Make sure all washer control knobs are in the "OFF" position before connecting washer to utilities.

A. THREE PHASE LINE HOOK-UP:

1. Locate the Heater Contactor inside the Main Control Box at the lower left. (see Wiring Diagrams pages 12 thru 19)
2. LINE HOOK-UP is to the Three Terminals on the LEFT side of the Heater Contactor.

➔ **ATTENTION !**

Here you will find 3 short Test Lead wires or "Pig Tails" used at the Factory for Testing purposes.

These "Pig Tails" also mark the Three Terminals to connect your power source to.

You Must Remove the "Pig Tails" before connecting your power source.

Do NOT connect your power source to these "Pig Tails". Do NOT use "Wire Nuts".

3. Connect to properly fused 220Volt, 60 Hz, 3-Phase (3Ø) power source **as called for on the Washer ID plate.**
OR
Connect to a properly fused 440Volt, 60 Hz, 3-Phase (3Ø) power source **as called for on the Washer ID plate.**

IMPORTANT ! Check that Rotation direction of Pump Motor is Clock-Wise, as viewed from top of Motor! (440Volt units and ALL 3 PHASE pump MOTORS)

4. GROUND Hookup is to the chassis of the washer.

! IMPORTANT !

The chassis of this washer MUST be Properly Grounded !

B. THREE PHASE HEATER HOOKUP:

These Washers have 3 or more Immersion Heaters. Each Heater draws approximately 18 amps each. The Heating Element wires entering the bottom of the main Control Box are colored to represent one Heater per pair of wires with the same color.

Remember:

As shipped from the EMC Factory, ALL 220Volt & 440Volt units are Wired for 3 PHASE operation ONLY !

But,

ONLY the 220Volt unit can be Converted to Single-Phase, very simply at your hook-up and installation.

Requires a Single-Phase pump Motor (standard on most units).

See the Single-Phase Conversion & Wire Diagram on page 15.

To be performed by Qualified Personnel !

WARNING! DISCONNECT and LOCK-OUT POWER PRIOR TO PROCEEDING !

1. The HEATER CONTACTOR is located inside the Main Control Box at the lower left.
2. All 3 terminals on the right side of the Heater Contactor are used.
3. Two Heater Wires of different color connect to each right side terminal.
4. Two Heater Wires of the same color must NEVER go into the same terminal.

2. GAS CONNECTION:

To be performed by Qualified Personnel !

WARNING! DISCONNECT and LOCK-OUT POWER PRIOR TO PROCEEDING !

NOTE: Make sure all washer control knobs are in the "OFF" position before connecting washer to utilities.

1. Gas Heated unit is designed for NATURAL GAS.
2. A separate Gas Line Shut-Off Valve is recommended and should be located near the washer.
3. Connect a Standard Low Pressure 7"-14" W.C. (½PSI max.) Natural Gas line, to the ¾" NPT gas inlet at the back of the Burner housing, (located at the lower left side of washer just forward of the pump & motor).
4. VENT the Gas Burner's Heat & Exhaust Stack, located at the left rear corner of the washer, to the OUTDOORS !
5. For Calibration & Troubleshooting, refer to the Burner Manual.
6. To Convert To PROPANE, refer to Burner Manual, or consult with factory for fuel conversion applications.

(Burner Jet size for Natural Gas is #358)
(Jet size for Propane is #281)

III. PREPARATION

WARNING !

**AVOID DAMAGE TO YOUR WASHER !
READ AND FOLLOW THESE INSTRUCTIONS !**

**EMC Parts Washers are Designed for Use
with Non-Flammable, Water-Soluble SOAP,
with Rust Inhibitors !**

DO NOT use Petroleum Solvents !

**DO NOT allow Accumulation of Washed-Off
Flammable Materials !**

A. SOAP & WATER SOLUTION :

1. **Check with your local chemical suppliers as to the proper soap to use for your cleaning situation.**

Follow your individual soap manufacturer instructions and precautions as to the use and handling of Soap products and Hot water, and the use of protective gear such as: face shields, rubber aprons, gloves, boots, etc., to prevent injury from contact with Soap and HOT parts.

2. **DRY SOAP MUST BE PROPERLY MIXED with WATER !**

! CAUTION !

Undissolved Soap, clumped up on floor of washer, can create a chemical reaction, capable of corroding through the steel floor! . . . (see following section: **B. BULLETIN**)

- A. Soaps must be Pre-mixed with warm water, in a container or bucket, (allow up to 30 min.) . . .
... OR ...
- B. Soaps can be Pre-mixed in the washer, as follows:
 - 1) Fill the Washer with Water, to the proper level
(see section: C. WATER LEVEL)
 - 2) Set Thermostat to 160° F, and bring the water up to Operating Temperature (usually 160° F in most cases)
 - 3) Place proper amount of soap in a pan on the Turn Table.
 - Check with your Soap Supplier * for correct amount of soap to use.
 - 4) Run Washer for up to 30 minutes, until soap is properly mixed (completely dissolved into solution).

! WARNING !

Unit is HOT during operation !

Allow to cool before handling washer and contents.

**Use protective gear such as face shields,
rubber aprons, gloves, boots, etc. !**

footnote: EMC is NOT a Soap Supplier. *

***If you may have received some Soap with your washer,
it was provided by the Distributor / Sales Rep that sold the
unit to you. Call them for more soap.***

Phone: _____

Name: _____

B. BULLETIN:

RUST & CORROSION of PARTS WASHERS with Carbon Steel Components

It is well known that ordinary carbon steel exposed to plain water will oxidize or 'rust'. The vast majority of *Water Based Solution Automatic Parts Washers* are made of Carbon Steel. Although Stainless Steel is available, it's cost often makes it prohibitive.

Therefore, carbon steel Parts Washers are designed for use with *water and soap with rust inhibitors*. The rust inhibitors not only protect the washer cabinet but also the customers steel and iron items being washed in it. Without the proper rust inhibitor, the washer cabinet and the parts you wash in it, will rust!

There are basically 3 reasons why a parts washer will rust:

1. Using a soap, which has ***no*** rust inhibitor in it.
 - Make sure the product being used is designed for this application.
 - If pressed too hard for price, some suppliers will sell a "cheaper" product (i.e. laundry soap).
2. Too little concentration of soap, - which means too little rust inhibitor.
 - Check your water to soap mixing ratio as recommended by the soap manufacturer / supplier.
 - Soap may be carried out on parts being washed.
 - If you only add make up water without additional soap, you have in turn reduced the soap concentration.
3. Often, operators will dump powdered soap into the parts washer with no concern about whether the soap is properly mixed with the water . . . *Despite clear instructions to the contrary in our operator's manual !*
 - The unmixed soap will settle on the washer floor, turning into what may look like "a chunk of concrete" or "a slab of salt". A chemical reaction between the block of solid soap and the floor of the washer can corrode holes in the floor of the washer.
 - Also, since the soap, and its rust inhibitors, are on the floor and not mixed with the water, the interior of the washer may begin to rust.

To wrap up, quite simply, steel will react with what it comes in contact with. Over the years and thousands of washers later, we have only seen steel rust when exposed to things which ordinarily cause rust, *such as . . . water without rust inhibitors !*

Equipment Manufacturing Corporation
Santa Fe Springs, California

C. WATER LEVEL:

1. **Fill and Maintain Water Level to top of Filter Bags.**

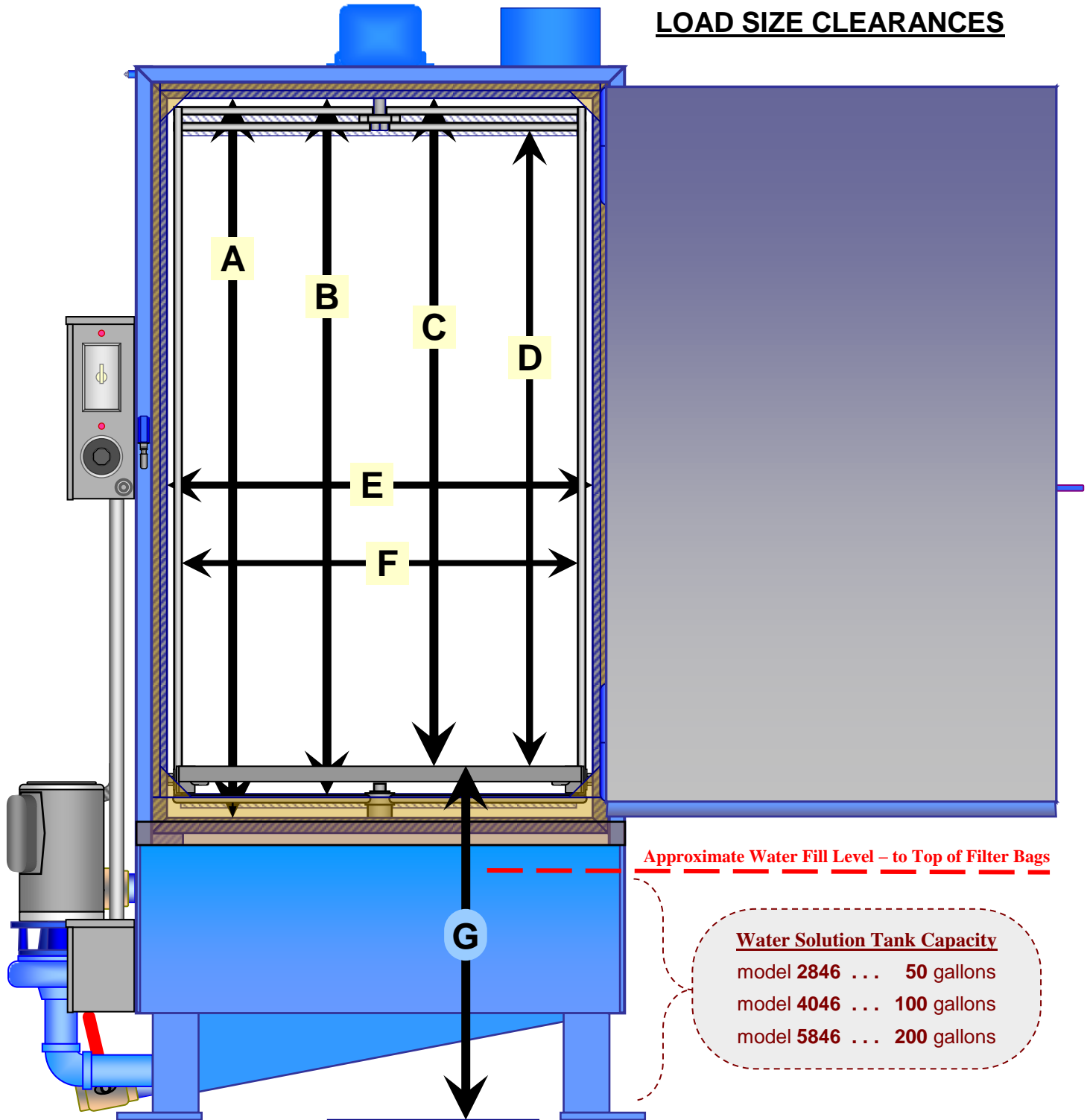
- a) Open the washer door and fill the tank with water using a hose or buckets.
- b) Maximum Water Level is up to the top of Filter Bags, or in the range of the 2" ball valve Variable Weir skimmer.
- c) Washer is equipped with a Low Water Level, Float Switch, Shut-Off System. . . . *Do Not rely on the Low Level Switch for maintenance of Water Level !*
- d) Water Level should be checked each day, until your water usage pattern is established.

HINT:

If Washer fails to operate, check if Water Level is too Low !

WARNING !

If Water Level drops too Low, heating elements can be damaged !

LOAD SIZE CLEARANCES**POWERJET MAXIMUM LOAD SIZE CLEARANCE DIMENSIONS**

Model	A Top Manifold to Bottom Manifold	B Top Manifold to Bottom Rotor Bar	C Top Manifold To Turn Table (Lowest position)	D Top Rotor Bar To Turn Table (Lowest position)	E Manifolds Side to Side	F Rotor Bars Side to Side	G Floor to Turn Table top (Lowest position)
2846	46"	44½"	42¾"	40¾"	28"	25½"	23½"
4046	46"	44½"	42¼"	40¼"	40"	37½"	24"
5846	46"	44" ±	41" ±	40" ±	58"	54"	24½"

IV. OPERATION

*** CAUTION *** Unit is HOT during operation. Allow to cool before handling washer and contents.

A. AUTOMATIC SETTINGS:

1. SEVEN DAY TIMER,

- a. It is located on the REAR of main Control Box
- b. It Allows Heating System and Thermostat to operate.
 - 1) Pull out red or black 'tripper' pins on dial, to set desired "**ON**" times.
 - 2) Turn dial clockwise until the correct time of day lines up with TIME arrow.
 - 3) **Set Thermostat Dial** on front of main control box, heating will now be automatically controlled.

HINT: If all the Timer pins are pushed in, the Heating System will not start !

2. THERMOSTAT:

- A. It is the lower dial knob and indicator light on FRONT of Control Box.
- B. Allows Heating System to HEAT and Maintains the Water Temperature as indicated on dial.
 - 1) **Set Temperature according to your Soap Manufacturers recommendation !**
 - 2) Be sure the Seven-Day Timer is in the **ON** position.
 - 3) The **red light** comes **on** while **heating** and goes **off** when desired **temperature is reached**.

B. START WASH CYCLE:

1. Open washer Door and place your parts to be cleaned on the TurnTable Rotor & Shelf System.
Use the proper parts baskets or racks or fixtures, as needed, to hold or contain, loose or small parts.
2. **Set the Wash Cycle Timer:**
It is the **30-Minute Timer** Knob and Indicator Light, located at the upper front of control box.
 - a. Close the washer Door and secure the latch.
 - b. Rotate 30-Minute Timer switch clockwise to desired time, for your operation and type of soap.
This will activate the Pump and TurnTable Rotor.
The **red light** indicates wash cycle **timer is on**.

CAUTION !

NEVER open washer door before turning **OFF** the Wash Cycle Timer.
NEVER rely on the door safety switch.

CAUTION ! WARNING !

Washer unit is HOT during operation !
Allow the unit and contents to cool before handling.

C. VARIABLE-WEIR OIL SKIMMER:

This is the upper brass 2" Ball Valve with a red handle, located on the left side of the washer.
The lower brass Ball Valve is the Drain.

1. At beginning of each day, or each week, when the **POWERJET** Parts Washer is shut Off, be sure Water Level is in the range of the 2" Ball Valve (Variable Weir Skimmer)
2. Allow enough time for water and oil to separate.
3. Skim Floating Oil, **before operating the pump !**
 - a. Have a container ready for oil to drain into, and place it under brass Ball Valve Weir at side of washer.
 - b. Open ball valve and adjust to the depth of floating oil, so the OIL, not water, runs out and into your container.
4. Remember to **CLOSE** the VALVE **before starting the **POWERJET** !**

V. MAINTENANCE

A. DAILY:

WATER LEVEL:

- 1) Water **MUST** be up to the Top of the Filter Bags or in the range of the 2" ball-valve Variable Weir.
- 2) Maximum level is up to the lower spray manifold.
- 3) Check and top off at the end of **each day**.
- 4) Do Not rely on Low Level Float Switch to maintain proper water level.

WARNING !

If water level drops too low, heating elements can be damaged !

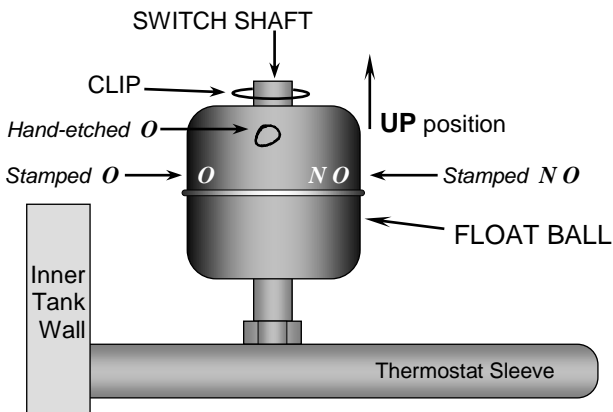
B. WEEKLY, MONTHLY or AS NEEDED:

1. LOW LEVEL SWITCH:

The washer is equipped with a Low Water Level Shutdown Float Switch, located inside the cabinet, near the front lower left, below water level, mounted to thermostat sleeve.
(some Larger POWERJET models have an Access panel)

WARNING: the Switch is very close to Heater Elements!
Wait for washer to cool before inspecting!

- A. Check Float Switch Ball for free up and down movement on shaft. (Float Ball is 2" diam. chrome/silver color)
- B. Float and Shaft must be kept clean to allow free movement.
 1. Remove clip on top of shaft and remove float to clean shaft.
 2. **Float Ball** **MUST** be re-installed in the correct **UP** position.
 - Look around the center line of the Float Ball for the "stamped letters" **NO** (Normally Open) -or- **O** (Open).
 - OR, look for "hand-etched" **O**.
 - This marked half of the Ball must be in the **UP** position.



Caution: Inverting this Float Ball position will **Reverse** the On-and-Off Function of the washer.

2. SPRAY MANIFOLD straight-stream-jet holes:

- A. Clean the straight-stream-jet spray holes periodically.
 1. Use a blast of air, or small wire, or drill bit (no larger than $\frac{7}{64}$ " diameter), to poke out debris clogging up spray jet holes.
 2. Remove wash out plug located in bottom center of spray manifold.
 3. Close door and operate wash cycle timer for 30 seconds.
 4. Replace wash out plug.

Note: The manifold spray jet holes are $\frac{7}{64}$ " diameter,
(just less than $\frac{1}{8}$ " diameter)

B. WEEKLY, MONTHLY or AS NEEDED cont.:

3. WASH AREA FILTER BAGS :

- A) Located below the Turn Table Rotor and spray manifold is the Full Flow Quad Filter system, consisting of 4 re-useable Filter Bags suspended in 4 round receptacles.
- B) Pull up and out each Filter Bag, clean out dirt and debris, inspect condition of bag material, replace back into the 4 round receptacles.

4. DRAINING and CHANGING SOLUTION :

- A) Depending on your particular cleaning situation and volume of activity, the Soap & Water solution in your washer, will need to be changed from time to time. In some cases this can be every week, or twice a month, or once a month, or even less often, but in any situation the solution should not be used beyond 90 days.
- B) Wastewater should be disposed of by approved methods only !
Check with your local authorities !
 - 1) Have suitable container and/or plumbing hooked up to 2" Drain Valve located at bottom left side of washer.
 - 2) Open 2" Drain Valve and allow wash solution to drain out.
 - 3) Pull out and clean all 4 wash area Filter Bags.
 - 4) Hose out any debris left after draining.
 - 5) Close 2" Drain Valve and fill with fresh water and soap solution. (see previous soap mixing instructions)

C. ANNUALLY :

1. Pump motors with grease fittings require one shot of grease twice per year.
2. Rotor Bearing can be greased at the fitting on top left side of unit.
3. Except for door hinges and catch, no other lubrication is required.
4. **Pump Seals will wear out** and eventually will need to be replaced, approximately every 2-3 years.
A spare Pump Seal is included with every new POWERJET equipped with a Standard Pump & 1½HP Motor Assembly. Pump Seals are also available at a **GRAINGER SUPPLY** in your area, . . . **GRAINGER part no.1R303.**

See following two pages on **Pump Seal Replacement !**

D. STORAGE:

If your Parts Washer is not going to be used for an extended period of time (3 months, 6 months, a year or more !), it should be properly prepared for storage, to avoid damage to the unit.

Even though the soap and water solution in the washer has Rust Inhibitor in it, during a period of non-use the soap and inhibitors can precipitate out or settle, and your cabinet will rust and corrode!

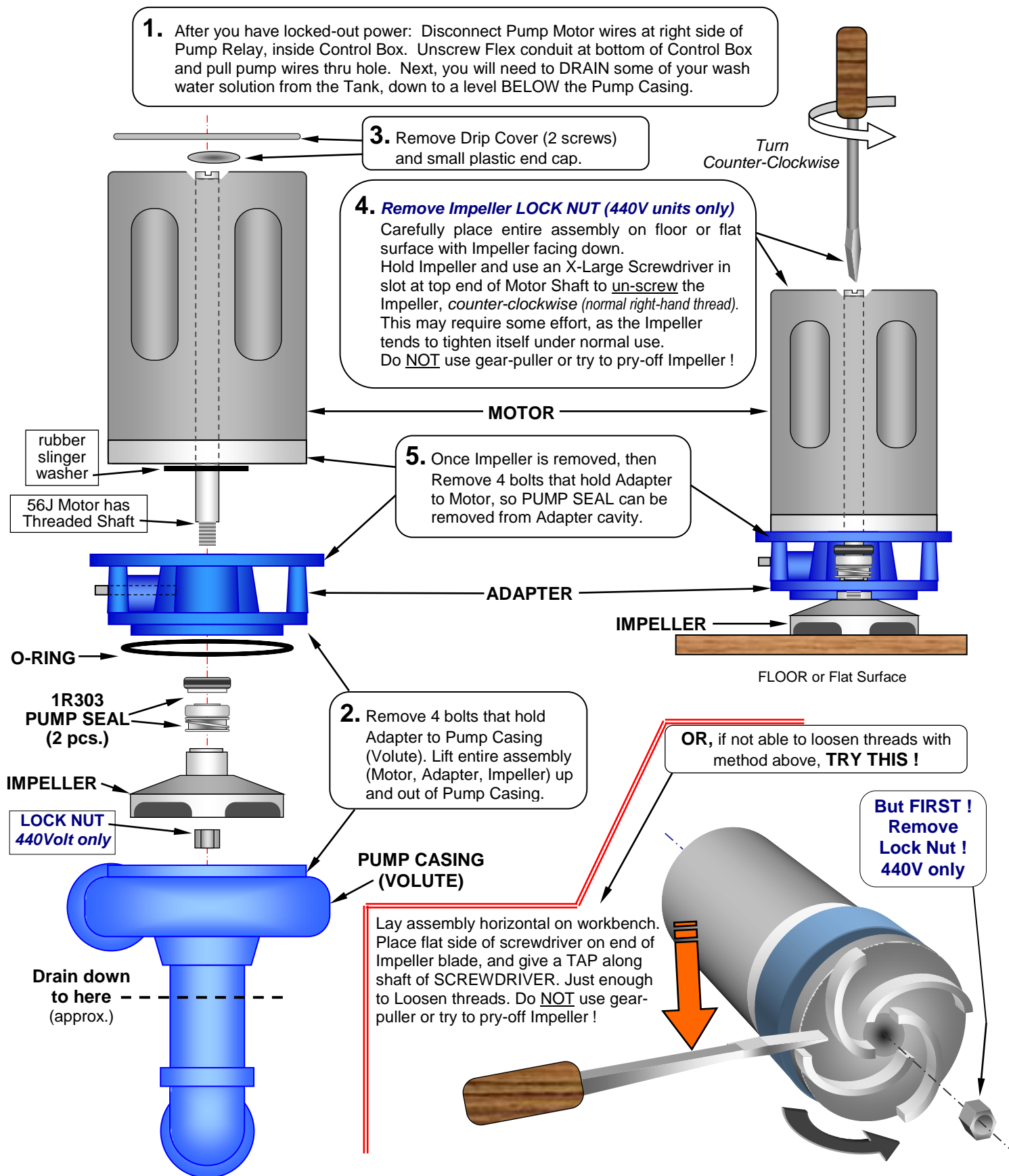
Also, any water left in the tank will induce moisture to cling to the walls inside the cabinet, where rust and corrosion will occur.

1. You will need to drain the unit of all water and soap solution.
Waste Water should be disposed of by an approved means. Check with your local authorities !
2. Remove all debris inside of cabinet and clumps of soap that may have settled to the wash tank floor.
3. Hose out the cabinet walls and tank to rinse off any corrosive substances that may be remaining.
4. Allow the inside of cabinet to DRY thoroughly.
(spray wash area, turntable, and wash tank)
5. Prop open the door of washer, while it is in storage and not being used, so air can circulate into cabinet to keep it dry !

The following info does NOT apply to units equipped with a Heavy Duty SEALLESS Pump & Motor (5HP or 2HP) assembly !

REMOVAL of IMPELLER for Replacement of Standard PUMP SEAL (1R303)

DISCONNECT and LOCK-OUT ELECTRIC POWER TO WASHER BEFORE PROCEEDING !!



The following info does NOT apply to units equipped with a Heavy Duty SEALLESS Pump & Motor (5HP or 2HP) assembly !

INSTALLATION OF STANDARD MECHANICAL PUMP SEAL (Grainger p/n 1R303)

Please Note:

ONE- Extra / Spare **PUMP SEAL** (Grainger part no.1R303) is included and shipped with **EMC POWERJET** units equipped with a standard 120GPM Pump & 1½HP Motor assembly. It is packed in the plastic bag along with this Manual (a small box, 1½"x1½"x1½").

FOR LUBRICATION:

- USE WATER SOLUTION OF SOAP OR DETERGENT.
- DO NOT OVER LUBRICATE.
- NEVER USE PETROLEUM OILS. (e.g. Baby Oil, Mineral Oil, etc.)(Seal manufacturer's recommendation)
- But, any Lubrication is better than none.

CAUTION: This seal is a precision product and should be handled accordingly.
Be especially careful of the lapped sealing face of the rotary washer and stationary seat.

LAPPED RUNNING FACES:

The lapped running face of the rotary seal head and stationary seat must be treated with care. KEEP CLEAN, DO NOT SCRATCH. Use a clean, soft cloth during installation. Protect the faces. Install both the seat and rotary square to the shaft. Check stationary seat installation from behind seat cavity for squareness.

STATIONARY SEAT:

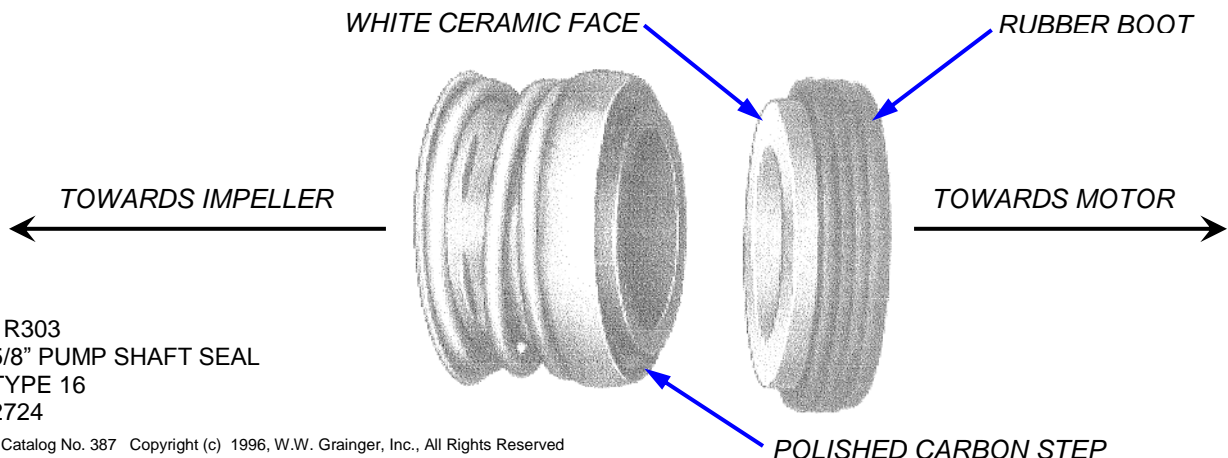
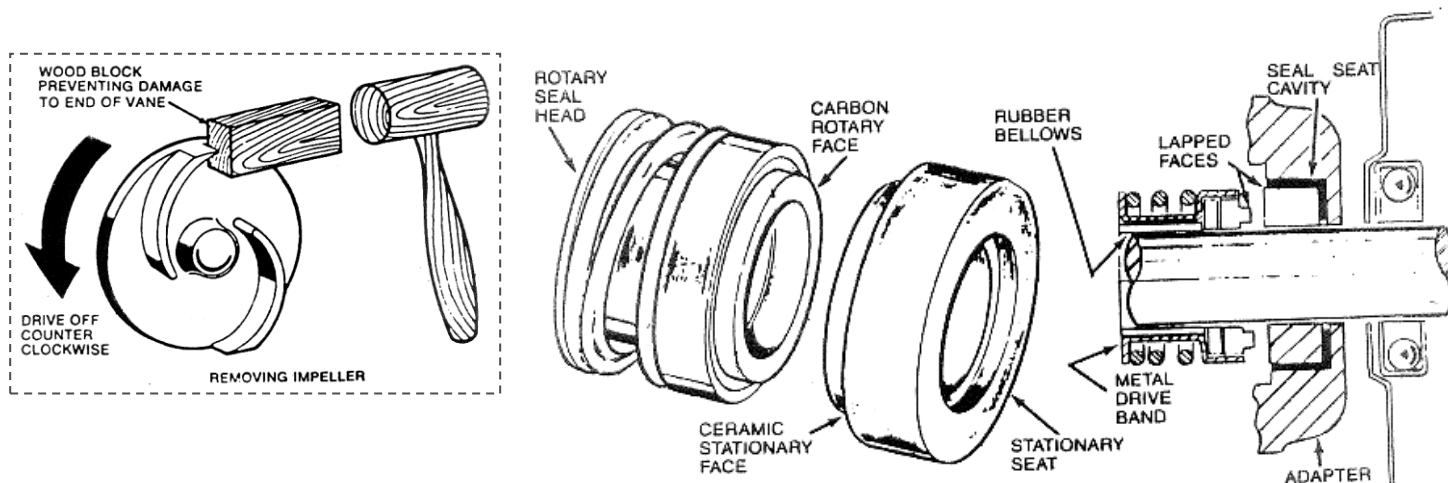
Clean seal cavity in pump adapter. Lubricate rubber "O" -Ring or rubber cup and press seat firmly and squarely into seal cavity with lapped face up. Must be pushed square and all the way into the cavity. Be careful not to scratch lapped face. Use a clean, soft cloth to protect seal face.

ROTARY SEAL HEAD

Clean, Polish and Lubricate shaft or shaft sleeve. Check lapped faces on stationary seat and rotary seal head. Be certain no dirt is on either face. Lubricate rubber bellows. Slide rotary seal head on shaft. Press on metal drive band until the two faces touch. Install impeller. This will compress the spring to proper height. This compression assures the proper pressure on the lapped running faces.

CAUTION

Never run the lapped faces dry. The liquid being pumped insures proper lubrication.
In some cases a short running period is required to clear up slight leakage.

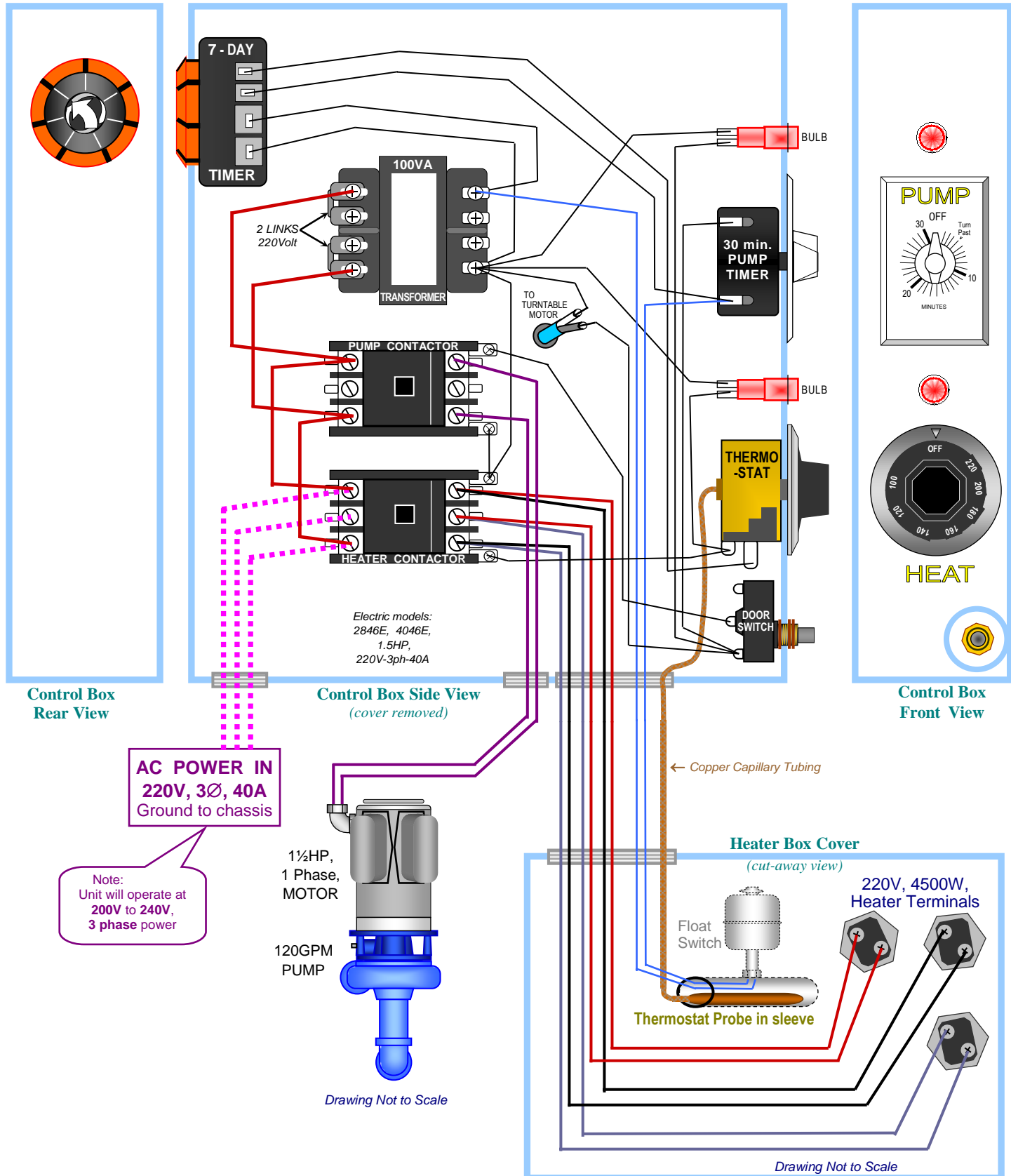


Item #: 1R303
Desc: 5/8" PUMP SHAFT SEAL
Add'l Info.: TYPE 16
Page: 2724

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Wiring Diagram for : EMC® POWERJET®		
dwg: PJ-2846E-4046E-1.5HP-220V-3PH-40A BC-06-22-2004	AUTOMATIC PARTS WASHER	For Models: 2846E and 4046E
standard Electric Heated	with standard 1½HP pump Motor (1Ø)	220Volt / 3Ø (three phase) / 40Amps

Drawing Not to Scale



Instructions for **POWERJET®**, 220Volt - 3phase

CONVERSION to SINGLE PHASE

EMC® POWERJET® models 2846E and 4046E, 220VOLT units, are wired at the Factory for 220Volt / **3 PHASE** / 60 cycle / 40 Amp - AC Power Hook-up !

ONLY these **220VOLT, 3-PHASE** units, equipped with a standard 1½HP **Single-Phase** pump Motor, can be Converted to run on **SINGLE-PHASE** power, . . at Your Hook-Up and Installation !

(an Optional Sealless Pump with a **5HP**, Single-Phase Motor, is also available, on 4046 and 5846 units, for additional cost)

ONLY QUALIFIED PERSONNEL SHOULD PERFORM ELECTRICAL CONNECTIONS !

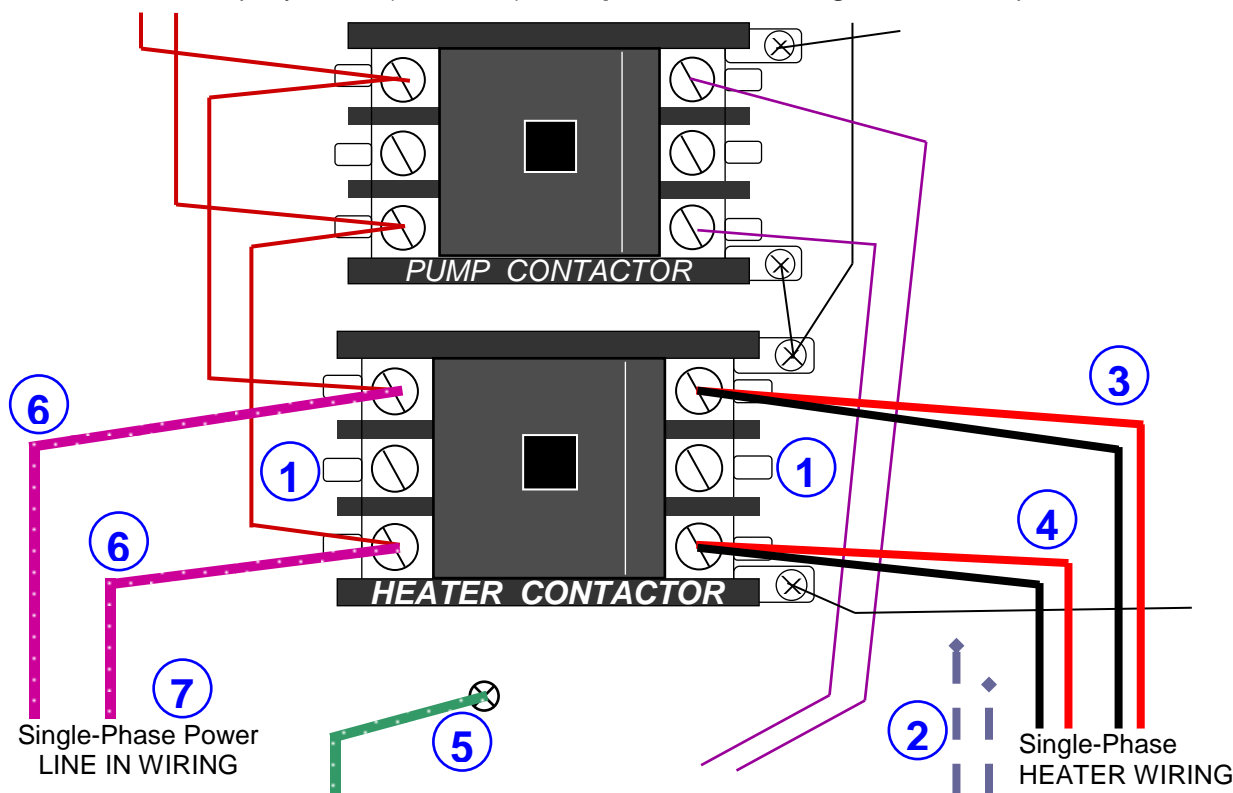
CAUTION: DIS-CONNECT and LOCK-OUT ALL POWER BEFORE PROCEEDING !

Single Phase HEATER WIRING:

- ① The center terminals on both the left and the right sides of the HEATER CONTACTOR will NOT be used.
- ② One Pair of Heater Wires each of the same color (i.e. red & red, OR white & white, OR black & black) are taped off and NOT used.
- ③ Two Heater Wires, each of a different color (i.e. black & red, OR white & red, OR black & white), connect to the top right side main terminal of the Heater Contactor.
- ④ The Two Remaining Heater Wires, (also each of a different color), connect to the bottom right side main terminal of the Heater Contactor.

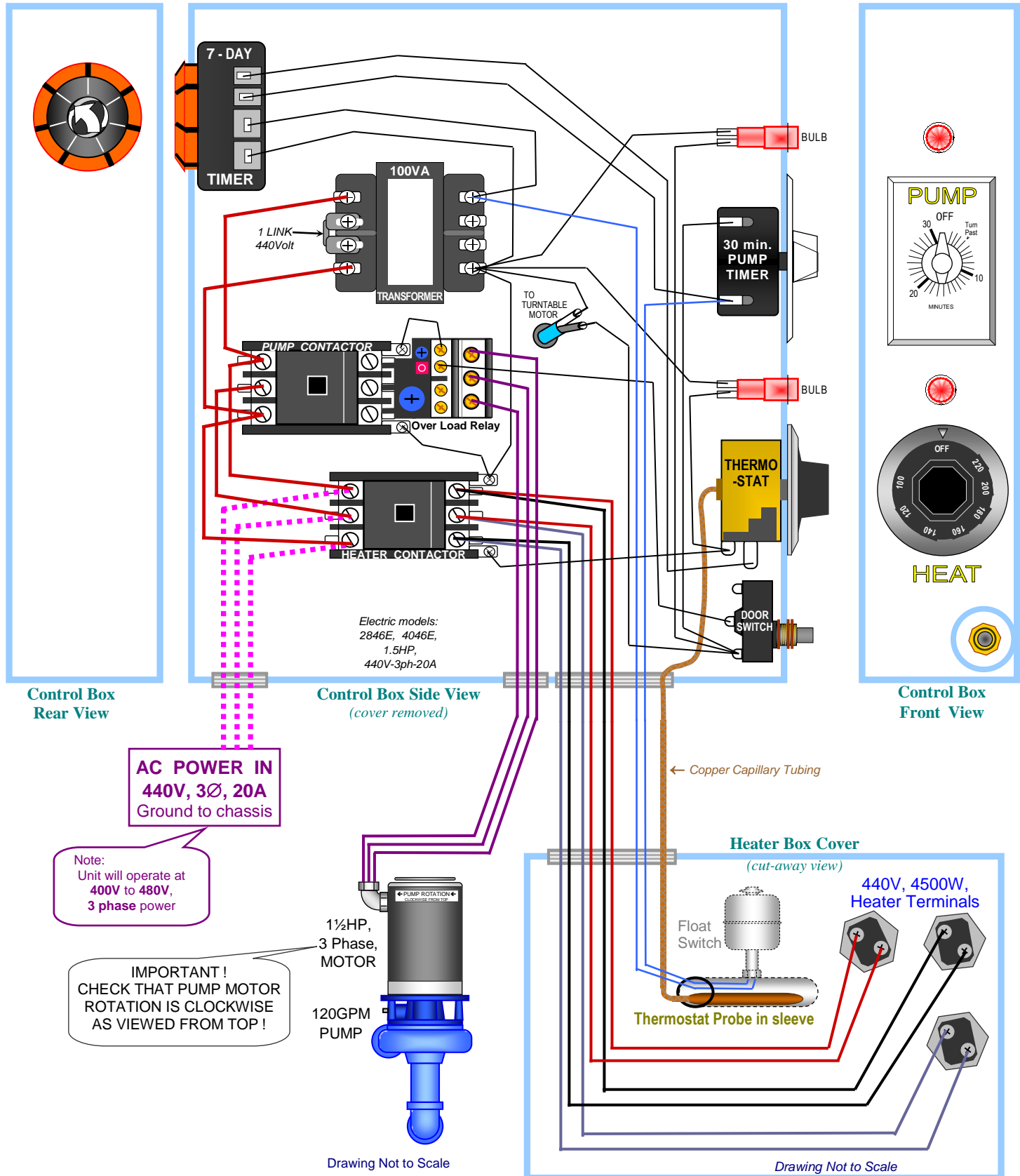
Single Phase Power LINE IN WIRING:

- ⑤ GROUND connection is to the chassis (same as the Three-Phase hook-up).
- ⑥ LINE IN (220V-Single-Phase, AC power) connection is to the upper and lower main terminals on the left-hand side of the Heater Contactor.
- ⑦ Connect to a Properly Fused (breakered) **50Amp, 220V, 60Hz, Single-Phase**, AC power source.



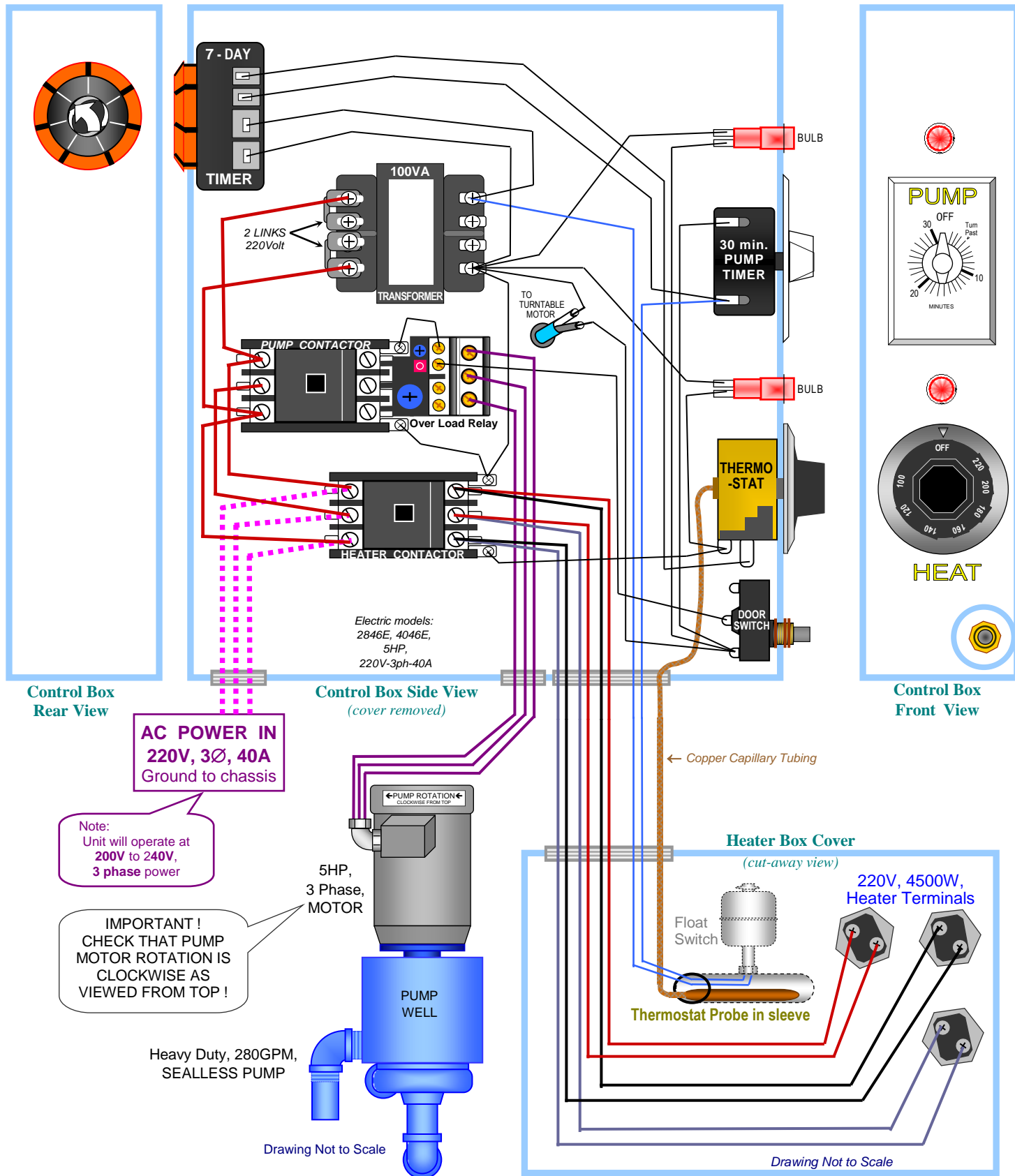
Wiring Diagram for :		
dwg: PJ-2846E-4046E-1.5HP-440V-3PH-20A BC-10-07-2004	EMC® POWERJET® AUTOMATIC PARTS WASHER	For Models: 2846E and 4046E
Electric Heated (440V)	with 1½HP pump Motor (3Ø)	440Volt / 3Ø (three phase) / 20Amps

Drawing Not to Scale



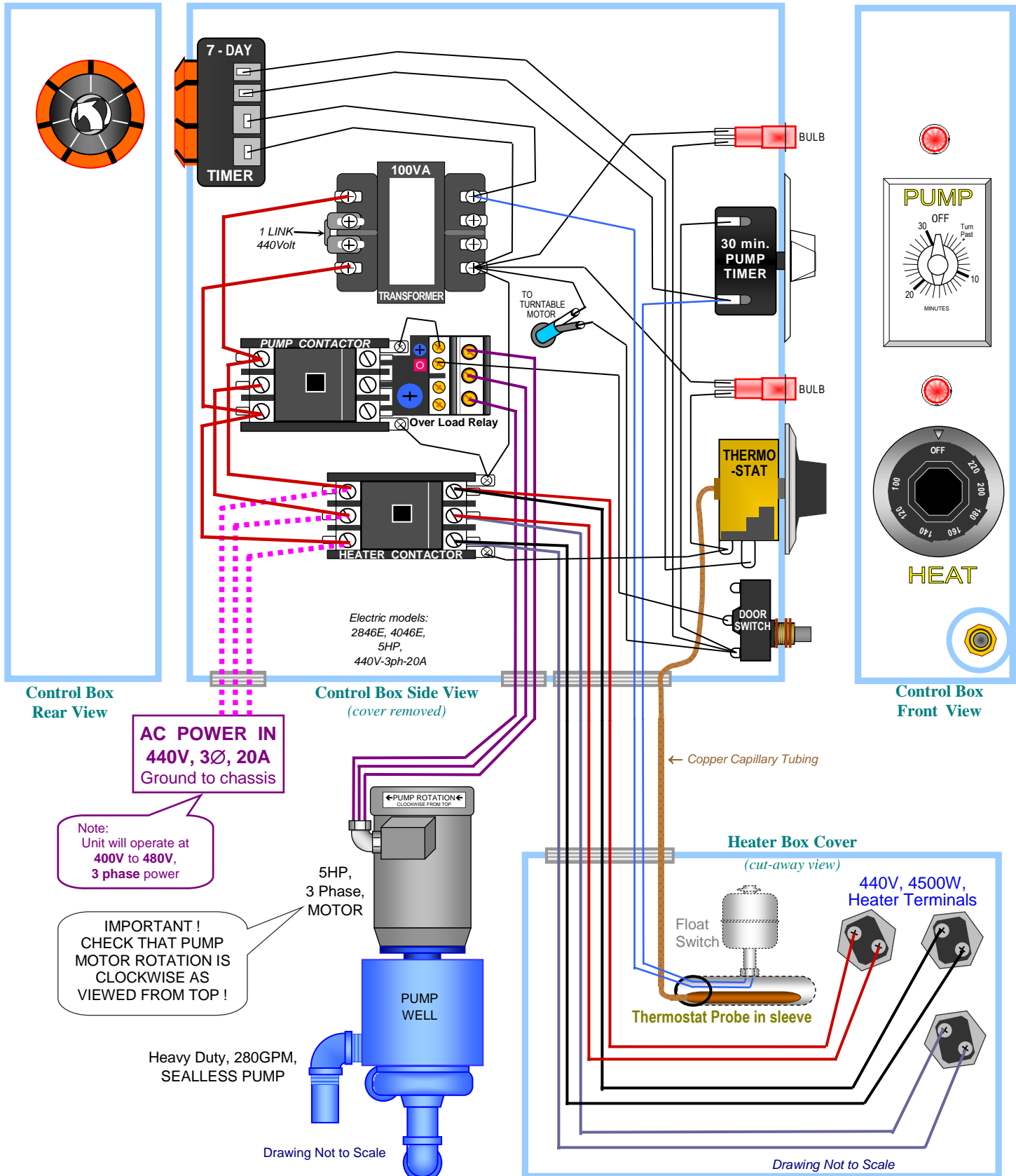
Wiring Diagram for : EMC® POWERJET®		For Models: 2846E and 4046E
dwg: PJ-2846E-4046E-5HP-220V-3PH-40A BC-03-23-2005	AUTOMATIC PARTS WASHER	
standard Electric Heated	with Optional 5HP pump Motor (3Ø)	220Volt / 3Ø (three phase) / 40Amps

Drawing Not to Scale



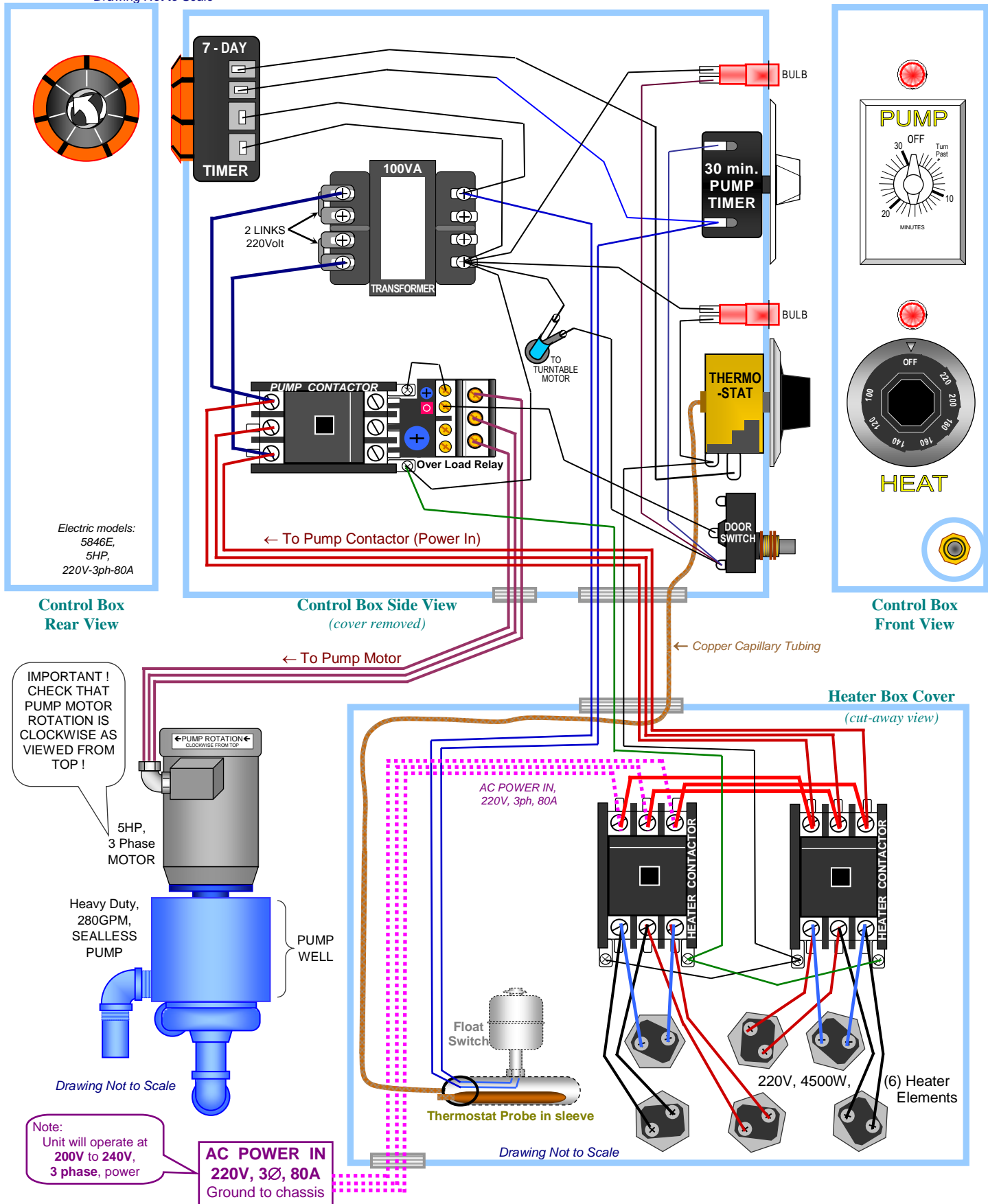
Wiring Diagram for :		EMC® POWERJET®	For Model: 2846E and 4046E
dwg: PJ-2846E-4046E-5HP-440V-3PH-20A BC-03-23-2005		AUTOMATIC PARTS WASHER	
Electric Heated (440V)	with Optional 5HP pump Motor (3Ø)	440Volt / 3Ø (three phase) / 20Amps	

Drawing Not to Scale



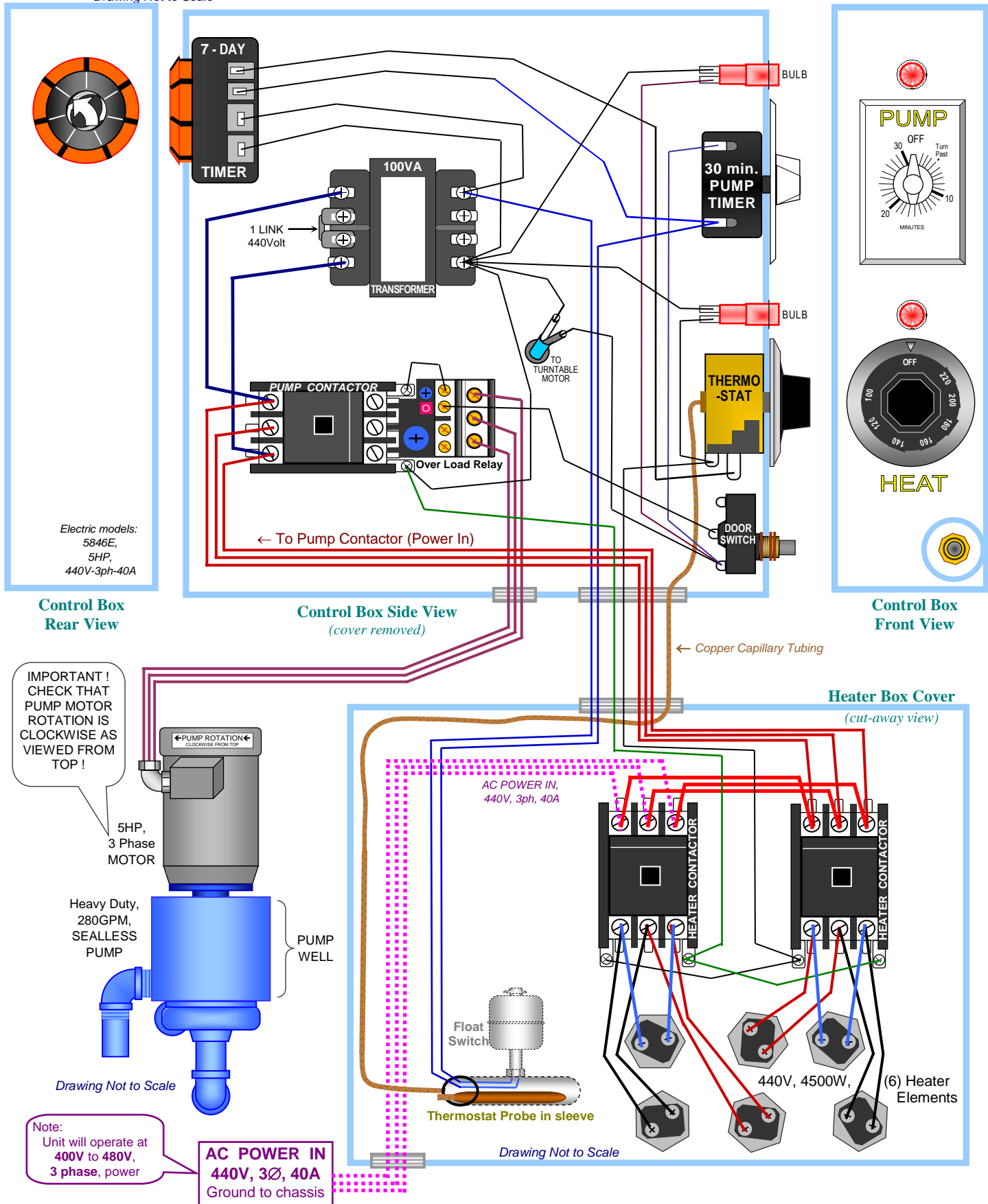
Wiring Diagram for : EMC® POWERJET®		model: 5846E
dwg: PJ-5846E-5HP-220V-3PH-80A BC-07-06-2005	AUTOMATIC PARTS WASHER	
standard Electric Heated	with standard 5HP pump Motor (3Ø)	220Volt / 3Ø (three phase) / 80Amps

Drawing Not to Scale



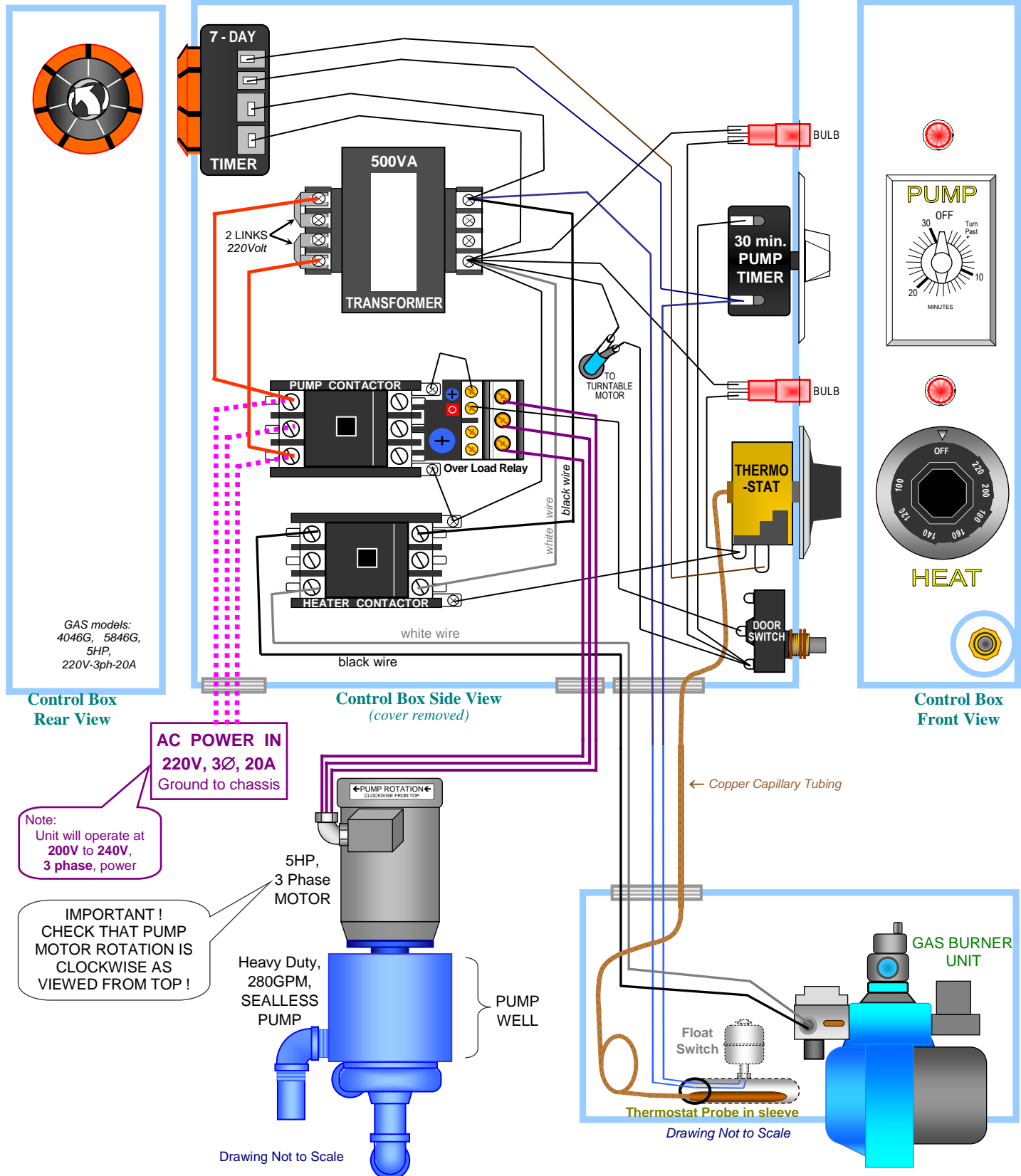
Wiring Diagram for : EMC® POWERJET®		model: 5846E
dwg: PJ-5846E-5HP-440V-3PH-40A BC-07-06-2005	AUTOMATIC PARTS WASHER	
Electric Heated (440V)	with standard 5HP pump Motor (3Ø)	440Volt / 3Ø (three phase) / 40Amps

Drawing Not to Scale



Wiring Diagram for : EMC® POWERJET®		models : 4046G and 5846G
dwg: PJ-4046G-5846G-5HP-220V-3PH-20A BC-07-06-2005	AUTOMATIC PARTS WASHER	
GAS Heated	with 5HP pump Motor (3Ø)	220Volt / 3Ø (three phase) / 20Amps

Drawing Not to Scale



PARTS & ACCESSORIES for models 2846 – 4046 – 5846

POWERJET® SYSTEM - Replaceable Parts and Accessories available at EMC

EMC Item No.	Name of Part and Details
SOLUTION SAVER™ SYSTEM	
PJ112	2" BALL VALVE for Drain or Skimmer
PJ116	FILTER BAGS 100 micron (fine) ...Not available at EMC anymore, ...available at Grainger p/n 4BB84
PJ117	FILTER BAGS 400 micron (medium) Not available at EMC anymore, ...available at Grainger p/n 4BB94
PJ118	FILTER BAGS standard 800 micron (coarse) ...also available at Grainger p/n 4BB98
ROTOR DRIVE SYSTEM	
PJ119-s	TOP COVER for TurnTable Drive Assembly, covers GearMotor and Bearing with 5" Pulley and 20" Belt (4L200 belt)
PJ119-L	Large TOP COVER .. for 10" Pulley with 36" Belt (3L360), on model 4046 or Larger (since 3-'015, ..begin s/n9296215)
PJ120	DRIVE MOTOR, with 2" Pulley attached at EMC, ..just the Motor Only (no pulley) is available at Grainger p/n 3M095 or 1MBF4
PJ121	MOTOR MOUNT BRACKET ... for smaller 5" Pulley with 20" Belt
PJ121-LB	Motor Draw Bolt L-BRACKET (hardware kit) ... for larger 10" Pulley with 36" Belt
PJ122-20	DRIVE BELT ... 20" belt for ALL units with 5" Pulley, belt no. 4L200
PJ122-36	DRIVE BELT ... 36" belt for units with 10" Pulley, belt no. 3L360
ROTOR BEARING ASSEMBLY	
PJ123	JAM NUT ... (shorter nut)
PJ124-5	ROTOR PULLEY (Driven Pulley) 5" Pulley (since 9-'05), fits ALL units with a 4L200 Belt (20") Grngr p/n 3X917
PJ124-10	ROTOR PULLEY (Driven Pulley) 10" Pulley ..on model 4046 and larger (since March 2015) (begin s/n9296215)
PJ126	SPINDLE NUT ... (taller nut)
PJ127	ROLLER BEARING CONE & CUP ASSEMBLY
PJ128	STAND-OFF SHIMS, under Bearing – 2 pieces
PJ129	SPINDLE SEAL ... 3/4" ID, grooved "O"-ring rubber seal
PJ130-5.5	SPINDLE BOLT ... 3/4" x 5 1/2" Grade 8
PJ130-5.5-SS	SPINDLE BOLT ... 3/4" x 5 1/2" Grade 8 - STAINLESS Steel
EASY RACK® FIXTURING SYSTEM	
TTS28	TurnTable SHELF ... for model 2846, and other heights
TTS40	TurnTable SHELF ... for model 4046, and other heights
TTS58	TurnTable SHELF ... for model 5846, and other heights
524PB	Parts BASKET, ...standard size, ...fits ALL models, 5 1/2" deep x 24" diameter
531PB	Parts BASKET, ...option size, ...fits model 4046 & 5846, . . . 5 1/2" deep x 31" diameter (for old model 100)
537PB	Parts BASKET, ...option size, ...fits model 4046 & 5846, . . . 5 1/2" deep x 37" diameter
553PB	Parts BASKET, ...option size, ...fits model 5846, 5 1/2" deep x 53" diameter
24PT	shallow Parts TRAY ... fits ALL models, 3/8" deep x 24" diameter
31PT	shallow Parts TRAY ... fits model 4046 & 5846, . . . 3/8" deep x 31" diameter
37PT	shallow Parts TRAY ... fits model 4046 & 5846, . . . 3/8" deep x 37" diameter
53PT	shallow Parts TRAY ... fits model 5846, 3/8" deep x 53" diameter
1010SPB	Small Parts BASKET, . . . 8" deep + 5" handle x 10" diameter
1216SPB	Small Parts BASKET, . . . 12" deep x 16" diameter
PJ131-xxxx	TurnTable ROTOR -2846, -4046, -5846, etc.
PJ132	ROTOR CLAMP
PJ133	Threaded PIN
PJ134	Threaded "L"
PJ135	Threaded HOOK
PJ136	All Threaded CROSS BAR
PJ137	PARTS CLAMP
PJ138	SWING ARM
PJ139	4-way Threaded "CROSS" (FFFF)
PJ140	3-way Threaded "CROSS" (FFF)
PJ141	3-way Threaded "TEE" (FFM)
THERMAL GUARD™ SYSTEM	
PJ170-xxxx	VENT DAMPER RUBBER FLAPPER -2846, -4046, -5846, etc.
PJ171-xxxx	DOOR SEAL -2846, -4046, -5846, -xxxx (..and other lengths)
PJ172	DOOR HANDLE
PJ173	DOOR LATCH PIN

PARTS & ACCESSORIES for models 2846 – 4046 – 5846

THESE COMPONENTS available at EMC® and ALSO available at GRAINGER

EMC Item No.	Name of Part	Details	Ship Weight	Grainger p/n
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CABINET TANK ITEM

PJ108	FLOAT SWITCH	for Low Water Level shutdown	1	2A551
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CONTROL BOX ITEMS

PJ202	TRANSFORMER 100 VA	for ELECTRIC ONLY	5	4R822
PJ204	CONTACTOR	1 for Heaters or 1 for pump Motor	3	5B109
PJ204-A44	OVER LOAD RELAY	for 440V olt, 3-Phase units with std 1½HP pump Motor	1	3EA44
PJ204-A46	OVER LOAD RELAY	for 440V olt, 3-Phase units with 5HP Sealless pump Motor	1	3EA46
PJ204-A11	OVER LOAD RELAY	for 220V olt, 3-Phase units with 5HP Sealless pump Motor	1	3EA11
PJ205	DOOR Micro-SWITCH	"Door Safety Switch"	1	6X288
PJ207	30 minute TIMER	Pump Timer	1	2E175

OTHER Replaceable COMPONENTS available at EMC® OR from Sales Distributor

EMC Item No.	Name of Part	Details	Ship Weight
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CONTROL BOX ITEMS

PJ-SS7C	7-Day TIMER - DIGITAL- * DISCONTINUED *	Intermatic SS7C Digital Timer - * DISCONTINUED *	N/A
PJ201-RP	7-Day TIMER - ANALOG (standard 2008)	with RED set pins, *replacement for Digital above*	1
GPJ203	TRANSFORMER 500 VA	for GAS units ONLY	
PJ206	Indicator BULB	2 bulbs per unit	1
PJ208	THERMOSTAT	with copper capillary tubing and heat probe sensor	1
PJ208-K	Thermostat KNOB	degrees-numbered dial knob	1

STANDARD PUMP & MOTOR ITEMS

PSK300	PUMP SEAL KIT	includes: 2 Seals with 2 Lube packs, and 1 O-Ring	
PJ301-1ph	Std. Pump MOTOR, 220V, 1-phase	1½HP , 56J-ODP	25
PJ301-3ph	Std. Pump MOTOR, 440V, 3-phase	1½HP , 56J-ODP	25
PJ302	Std. PUMP ASSEMBLY	cast iron Volute & motor-Adapter, Impeller, Seal	23
PJ303	Std. Pump SEAL	2 piece seal, 1R303 at Grainger	1
PJ304	Std. Pump O-RING	4½" diameter rubber O-ring	1
PJ305	Std. Pump IMPELLER	4¾" diameter	3
PJ306	Std. Pump ADAPTOR (upper end)	"adapts" motor to pump – cast iron	8
PJ307	Std. Pump VOLUTE (lower end)	Pump inlet and outlet – cast iron	12

ELECTRIC HEATING ELEMENTS

220LWD4500	Low Watt Density HEATER Element	220V , 4500W	3
440LWD4500	Low Watt Density HEATER Element	440V , 4500W	3
Use Teflon Tape on brass threads			

SEALLESS PUMP & MOTOR ITEMS

SLP321-3ph	SealLess Pump MOTOR, 3-phase, 5HP	220V or 440V, 3-phase , MOTOR Replacement	85
SLP321-1ph	SealLess Pump MOTOR, 1-phase, 5HP	220V, 1-phase , MOTOR UpGrade -220V only	85
SLP322	SealLess Pump GREASE SEAL	Nat'l Seal No.471192, at Auto Parts or Bearing & Seal stores, ..Not at EMC	
SLP323	SealLess Pump & Motor ADAPTOR	12" cast iron column, upper end	21
SLP324	SealLess Pump WELL	10"diam.x 10"deep, fittings custom fit & welded at EMC	16
SLP325	SealLess Pump Well Gasket Sealer	Use 3M brand 5200 Poly-Urethane Sealer	
SLP326	SealLessPump THROTTLE SLEEVE	(motor shaft bushing)	1
SLP327	SealLess Pump IMPELLER	5½" diameter	3
SLP328	SealLess PUMP CASE (VOLUTE)	cast iron case, lower end	18
SLP329	SealLessPump PLUMBING HOSE	1½" to 1½", with hose clamps	1

PARTS & ACCESSORIES for models 2846 – 4046 – 5846

WAYNE GAS BURNER PARTS, for GAS Heated units only !

WAYNE Part No.	NAME of PART	Details	Approx. Ship Wt
62377C	GAS BURNER ASSEMBLY	Wayne model HSG400	35
62374-004	GAS VALVE	Jet size #358 Natural Gas (<i>propane is smaller</i>)	3
62402	ORIFICE HOUSING		
62401-001	ORIFICE GASKET		1
62759-002	PRIMARY CONTROL	Burner "BRAIN"	1
62390-002	FLAME SENSOR PROBE		1
62411-028	Flame Sensor to Brain WIRE		1
61951-001	ELECTRODE BRACKET		1
62391-002	ELECTRODE	" Spark Plug "	1
62909-001	IGNITION WIRE		1
62407-001	IGNITION TRANSFORMER	7300V	5
60186-004	24 Volt TRANSFORMER		2
63263-005	Pressure / Vacuum SWITCH	2 1/4" diam. Black & White plastic disk	1
	Clear Hose - for above switch	1/4" x 9 1/2" Length	1
100968-002	Hose Barbed Fitting - for above	1/4" hose x 1/4"-20thread	1
20627	BLOWER MOTOR	1/7 HP, Frame 48M	
62406-002	Blower Motor RELAY SWITCH		1
100371-KIT	OFF CYCLE DAMPER PLATE and	BRACKET KIT	
100373-KIT	PRIMARY AIR DAMPER KIT with	INDICATOR	
62624-005	Nameplate Decal		1
62484-001	Burner Instruction Manual		1
EMC part no. HSG-BC	Burner COVER	Factory made at EMC® (Not available from Wayne)	

Also, . . Burner Parts are available at:

WAYNE COMBUSTION 219-425-9200
Fort Wayne, Indiana, USA

WHERE TO ORDER PARTS

You can order Parts from your Distributor / Sales Rep, who sold the POWERJET unit.

Your Sales Distributor name: _____

phone: _____

or,

You can order parts from the **EMC** factory,

POWERJET® TROUBLESHOOTING GUIDE		
SYMPTOM	POSSIBLE CAUSE	REMEDY
Water is Not getting Hot.	Thermostat setting. Water Level is Too Low. 7 Day Timer setting. Heater Element(s) damaged. GAS Burner Not Firing.	Set Thermostat, see page 8. Check and Maintain proper Water Level, see page 6 and 9. Check Timer settings, see page 8. Replace Heater Element(s). Call the Factory or a Qualified Gas Technician.
Water Pump won't come on. OR, intermittently "Surges" On and Off.	Water Level is Too Low. (Float Switch) Low Level Float Switch is stuck, OR, is in "Reversed" position. 30 Minute Pump Timer setting.	Check and Maintain proper Water Level, see page 6 and 9. Clean Float Switch Shaft, see page 9. Set Pump Timer, see page 8.
Absolutely Nothing Works !	Loss of Electric Power In. Water Level is Too Low. Low Level Float Switch is stuck. OR, is in "Reversed" position. 7 Day Timer setting.	Check your Breaker, see page 5. Check and Maintain proper Water Level, see page 6 and 9. Clean Float Switch Shaft, see page 9. Check Timer settings, see page 8.
TurnTable Rotor Not turning, or intermittent	Object jammed in Rotor and Manifold. Drive Belt slipping on Pulley. Belt DriveMotor Not functioning.	Check for Loose Parts sticking out. Adjust Drive Belt tension. Replace Belt DriveMotor. (GearMotor)
Leaking around cabinet, or water puddles on ground.	Vent Stack hook-up improper or non-exist. Open Door condensate run-off. Rubber Door Seal worn-out or damaged.	Vent sections to funnel inward, see page 3. Level the cabinet and door, see page 3. Replace Rubber Door Seal.
Parts Not getting clean.	Clogged Jet-Spray holes in Manifold. Filter Bags are full of debris, or damaged. Soap & Water Solution is old. Debris clog at Pump Intake or Impeller.	Clean the Jet-Spray holes, see page 9. Clean out Filter Bags or replace, see page 9. Time to change Solution, see page 9. Check Pump Intake and clear any debris.
Leaky or Noisy Pump & Motor	Pump Seal is worn out.	Replace Pump Seal, see pages 9, 10 & 11.
Pump Seals wear out too often.	Water Level is Too Low. (Seal runs dry and burns out) Soap & Water Solution is too dirty & gritty. Filter Bags are full of debris, or damaged.	Check and Maintain proper Water Level, see page 6 and 9. Change Solution & rinse out debris, see page 9. Clean out Filter Bags or replace, see page 9.
Rust or Corrosion, inside of tank wash area, on parts, or on tank floor.	Improper Type of Soap being used. Soap & Water Solution NOT Pre-Mixed.	Use Soap with Rust Inhibitor, see page 6. Properly Mix Soap & Water, see page 6.

CAUTION !

Please completely read and review this manual before installation and start-up of the system.

The EMC® POWERJET® is designed for use with **water-based, Non-Flammable fluids only !**

The user is responsible for determining the applicability of their fluid with the materials of construction and function of this unit.

A Qualified Gas Technician should perform the installation and the initial startup and calibration of the GAS Burner assembly, if the unit is so equipped.

Failure to follow cautions and operating procedures contained in this manual may void the warranty and could lead to dangerous and unsafe conditions.

WARNING !

Always disconnect Electrical and Gas utilities prior to servicing the EMC® POWERJET® parts washer.

WARNING

**HOT ! ALLOW TO COOL BEFORE
HANDLING MACHINE OR CONTENTS.**

**THIS MACHINE IS INTENDED
TO PROCESS WATER ONLY.
USER IS SOLELY LIABLE FOR
SUITABILITY OF OTHER LIQUIDS.**

**USE ONLY NON-FLAMMABLE,
NON-TOXIC, WATER SOLUTION
COMPATIBLE WITH OPERATION
& MATERIALS OF CONSTRUCTION**

Electrical Approval Conditions:

1. Not Suitable for Hazardous / Classified Areas
2. This device shall only be installed, maintained and used by authorized and qualified personnel.
3. This equipment shall be permanently grounded in accordance with the National Electrical Code.
4. The final installation of this system shall comply with all the local and national codes.
5. This device is only evaluated for fire and shock hazard, its performance and accuracy have not been investigated.

Notice

The contents of this manual are subject to change without notice. Portions of this document may have been updated. The Manufacturer reserves the right to make equipment changes and improvements which may not be reflected in this document.

We recommend that this document be read in its entirety before any attempt is made to operate the equipment.

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WARRANTY & LIMITATION OF LIABILITY

NOTE: EQUIPMENT MANUFACTURING CORPORATION (EMC) MAKES NO WARRANTY CONCERNING APPLICABILITY OF THE EQUIPMENT TO ANY PARTICULAR FLUID. FINAL DETERMINATION OF APPROPRIATENESS OF THIS EQUIPMENT FOR ANY USAGE IS THAT OF THE CUSTOMER.

EMC through its Distributor warrants each new product sold by it to the initial user to be free of defects in material and workmanship for a period of One Year from the date of sale of the equipment. F.O.B. Santa Fe Springs, CA.

EMC will provide a new **part** or repaired **part**, at its election, in place of any **part** that is found, upon inspection, to be defective in material and workmanship during the period described above. Purchaser must present proof of purchase (and purchase date) at the time of exercising this warranty.

This warranty does not apply to failures occurring as a result of incompatibility of fluid type to material of construction, abuse, misuse, negligent repairs, corrosion, and normal wear and tear, alteration or modifications made to the product without express written consent of **EMC** or failure to follow the recommended operating practices and maintenance procedures as provided in the product's operating and maintenance publications.

The warranty provided herein does not apply to equipment sold hereunder but manufactured by others as they are warranted by their respective manufacturers directly to the user, as electric motors, engines and magnetic starters.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND THERE ARE NO WARRANTIES, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

LIMITATION OF LIABILITY

The remedies of the user set forth under the provisions of warranty outlined above are exclusive and total liability of **EMC** or its Distributor with respect to this sale or the equipment and service furnished hereunder, in connection with the performance or breach thereof, or from the sale, delivery installation, or repair or technical direction covered by or furnished under this sale, whether based on contract, warranty, negligence, indemnity, strict liability or otherwise shall not exceed the purchase price of the unit of equipment upon which such liability is based.

EMC shall in no event be liable to the user, any successor in interest or any beneficiary or assignee relating to this sale for any consequential, incidental, indirect, special or punitive damages arising out of this sale or any breach thereof, or any defects in, or failure of, or malfunction of the equipment under this date whether based upon loss of use, lost profits or revenue, interest, lost goodwill, work stoppage, impairment of other goods, loss by reason of shutdown or non-operation, increased expenses of operation, cost of purchase of replacement power or claims of user or customers of the user for service interruption whether or not such loss or damage is based on contract, warranty, negligence, indemnity, strict liability or otherwise.

I have read the **EMC** instructions and agree that they will be followed carefully. I also agree that the equipment will be used at my own risk and agree to hold harmless and indemnity from all claims for damages and liabilities resulting from its improper use.

PLEASE PROVIDE YOUR PURCHASE INFORMATION:

Purchase Date: _____ Serial No.: _____ Model No.: _____

Name of SALES DISTRIBUTOR this unit was purchased from : _____

YOUR COMPANY Name : _____

Address : _____ Phone : _____

State,City,Zip : _____ FAX : _____

EMAIL: _____

Customer Signature : _____ Print Name : _____

Please fill-in the lines above, and send a signed copy to **EMC**, and keep a copy of this page for your file.

Send via **FAX** or **Mail** to: **Equipment Manufacturing Corporation**
 14930 Marquardt Avenue
 Santa Fe Springs, CA 90670
FAX: 562 – 623 – 9342
Email: office@equipmentmanufacturing.com