ElectroMechanical Timer Controlled Washer-Extractor

Technical Manual

Version 2.01

3-Speed Pushbutton Operated

Model
UW85M-3

Serial Number

Serial No.s 23225 & Higher
P/N 230494

INSTALLATION ▪ OPERATION ▪ PARTS ▪ SERVICE AND MAINTENANCE

UW85M-3 WASHER-EXTRACTOR

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WARNING

This machine must be installed, adjusted and serviced by qualified electrical maintenance personnel familiar with the construction and operation of this type of machinery. They must also be familiar with the potential hazards involved. If this warning is not observed, personal injury or equipment damage resulting in voiding the warranty may result.

IMPORTANT

If a delta supply system is used, the high leg should be connected to the red wire (I-3) in the electrical junction box on this machine. If three-phase service is not available and a "roto phase" or other phase adder is used, the artificial leg must be connected to the red wire. If this caution is not observed, equipment damage resulting in voiding the warranty will result.

WARNING

Be absolutely certain that a ground wire from a proven earth ground is connected to the chassis ground lug provided in the electrical junction box on this machine. Without proper grounding, personal injury from electric shock may occur and machine malfunctions may be evident. Note: computer controlled machines must have a proper ground to prevent computer malfunctions.

CAUTION

Replace any and all panels that are removed to perform service and maintenance procedures.

Do not operate the machine with guards or parts missing, or with broken parts.

Do not bypass any safety devices.

All information, illustrations, and specifications contained in this manual are based on the latest product information available at the time of printing. The illustrations contained herein are intended as a guide and may not exactly depict all models. We reserve the right to make changes at any time without notice.

WARNING

Attempt no entry until basket has come to a complete stop.

Failure to do so may result in serious injury.

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SAFETY CHECKLIST

☐ **BEFORE INITIAL START UP** of a UniMac washer- extractor --- perform the following safety checks:

Make sure that all electrical and plumbing connections have been made in accordance with applicable codes and regulations.

Make sure the machine is properly grounded electrically.

Make sure the machine has proper flexible water fill and drain connections of the proper size and length with no kinks and securely attached and/or clamped.

☐ **BEFORE MACHINE IS PLACED IN OPERATION,** door safety interlock must be checked for proper operation as follows:

When washer is energized electrically and in operation, the loading door is locked in the closed position and cannot be opened. Verify this by attempting to open the loading door when the machine is operating. If necessary, check door safety interlock and microswitches for proper operation, or consult the service manual, or call a qualified service technician.

When washer loading door is open, it is not possible to start the machine. Verify this by attempting to start the washer with door open. Also, close the door without locking it and it should not be possible to start the washer with the door not locked. If necessary, check door lock microswitch for proper operation, or consult the service manual, or call a qualified service technician. If additional information is required, contact your local distributor or call the UniMac Company.

☐ **IMPORTANT:** Door safety interlock must be checked daily in accordance with above procedure.

WARNING

Before servicing any UniMac equipment,
Make certain it is disconnected from
The electrical power source.
Never allow operation of the machine when any safety device is malfunctioning.
Never bypass safety devices.

CAUTION

You should be careful working with machinery every day and should be even more careful around electrical components. A few helpful safety rules can save you and your personnel from serious electrical injuries.

Unless the instructions state that adjustments are to be made, or trouble shooting performed with the machine in operation, lock out the main power panel and lock out the power supply to the control module.

WARNING

Dangerous voltages are present in control modules and at motor terminals. Only qualified personnel familiar with electrical test procedures, test equipment, and safety precautions should attempt adjustments and do trouble shooting.

KEY TO SYMBOLS USED IN THIS MANUAL

The lightning flash and arrowhead within the triangle is a warning sign alerting you of the presence of dangerous voltage.

The exclamation point within the triangle is a warning sign alerting you of important instructions concerning the machine and possible dangerous conditions.

This warning symbol alerts you to the presence of possibly dangerous drive mechanisms within the machine. Guards should always be in place when the machine is in operation. Be careful when servicing the drive.

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INTRODUCTION

I.1 GENERAL

The washer-extractor covered by this manual, UW85M-3, is designed to meet the varying demands of modern on premise laundries.

The machine is manufactured with emphasis on reliability and quality for long life. The cylinder, shell and enclosures are all stainless steel.

The machine has predetermined washing programs selected with a pushbutton selector switch for HOT, WARM, COLD and COLD GENTLE cycles. The programs are designed to handle different fabrics at different temperatures and amounts of water.

The machine is equipped for connection to a HOT and a COLD water supply. One connection is provided for the HOT and one for the COLD. The connections are hose bib type.

I.2 SPECIFICATIONS

CRITERIA	UW 85 3-SPEED	
DIMENSIONS		
width	41 1/2 in.	1054 mm
depth	48 in	1219 mm
height	66 in	1676 mm
WEIGHT		
net	1630 lbs.	739.4 kg
gross	1710 lbs.	775.7 kg
CYLINDER		
volume	14.13 cu. ft.	400 liter
diameter	36 in.	914 mm
depth	24 in	610 mm
wash speed	44 rpm	44 rpm
drain speed	44rpm	44rpm
medium speed	262 rpm	262 rpm
extract speed	524 rpm	524 rpm
G-factor extract	140	140
MOTOR POWER		
wash speed - HP	1.2 hp	0.89 kw
drain speed - HP	n.a.	n.a.
medium speed - HP	3.5 hp	2.6 kw
extract - HP	4.5 hp	3.3 kw
MOTOR SPEED		
wash speed - RPM	540 60Hz	430 50Hz
extract speed - RPM	3490 60Hz	2920 50Hz
WATER CONNECT		
size	3/4 in	DN20
oper. pressure	10-120 psi	0.5-8 bar
recom. pressure	30-85 psi	2-6 bar
max. temperature	200 °F	90 °C
STEAM CONNECT		
size	1/2 in n.p.t.	DN15 mm
max. pressure	120 psi	8 bar
DRAIN CONNECT		
I. D. size	2 @ 3 in.	2 @ 75 mm
SHIPPING VOLUME	110.4 cu. ft.	3.13 m^3

TABLE I-1

Standard voltage is 208-240/60/3 four wire plus ground with 115 volt controls.

All information, illustrations, and specifications contained in this manual are based on the latest product information available at the time of printing. The illustrations contained herein are intended as a guide and may not exactly depict all models. We reserve the right to make changes at any time without notice.

I.3 PRINCIPLES OF OPERATION

The UW85 3-speed machine utilizes one 2-speed and one single speed motor to drive the cylinder via a V-belt drive in all speeds. The cylinder is supported with two self-aligning double row spherical roller bearings installed in separate housings mounted on a special design gamma A-frame.

A balance switch is installed between the faces of the A-frame to signal the electrical controls to slow the machine when a severely out of balance load occurs during extract.

Water is injected into the machine through electromechanical water valves controlled by the program timer. The timer also controls the drain, door lock and selects the water levels according to the programmed cycle. Vacuum (siphon) breakers are installed in the water inlet plumbing to prevent back flow of water.

Two normally open motorized drain valves are used to retain the water in the machine during the wash, soak and rinse steps. The drain valves are normally open and close when power is applied. When power is removed, the valves open automatically. The normally open drain valve permits the machine to drain in the event of a power failure.

The cylinder is designed with four lifters or ribs that lift the laundry from the bath solution when the cylinder rotates at slow speed and allows the laundry to tumble back into the bath. This mechanical action accomplishes the washing function. The cylinder is perforated allowing the water to pass through and drain from within during the wash step and extract.

Electrical controls for the machine are installed in a stainless steel control module mounted on top of the machine. Access to the controls is possible by removing the screws from the module cover, lifting the cover and pulling to the rear. Access to all controls for service is from the top and front except for the balance switch, water valves and motor connections.

A stainless steel door is provided for loading and unloading. A door lock system prevents opening of the door when water is in the machine and prevents operation when the door is open.

The stainless steel supply dispenser consists of four compartments which contain 32 ounce plastic supply cups that hold either liquid or dry supplies. Supplies are placed in the cups prior to the start of each cycle. A nozzle is provided to flush the supplies from the cups with water at the proper time in the cycle. **The cups should not be removed when attaching a central supply system.**

UniMac
Limited Warranty

UniMac Company, Inc. warrants to the original purchaser that this machine will be free from defects in material or workmanship for a period of twelve (12) months. Any part of the machine which, upon inspection by UniMac, is found to have failed in normal operation as a result of such defects within twelve (12) months from the date of installation (or eighteen (18) months from the date of original shipment, whichever occurs first), will be repaired or replaced by UniMac, at its option, without charge for such part.

UniMac further warrants to the original purchaser that the stainless steel basket, shaft, and backplate, as well as the steel gamma A-frame and base frame, will be free from defects in material or workmanship for a period of five (5) years. Any of these parts which, upon inspection by UniMac, are found to have failed in normal operation as a result of such defects within sixty (60) months from the date of installation (or sixty-six (66) months from the date of original shipment, whichever occurs first), will be repaired or replaced by UniMac, at its option, without charge for such parts. This five-year limited warranty will run concurrently with, and will surpass the normal warranty period for other parts and components.

All parts for which repair or replacement is requested under this warranty must be returned to our factory at Marianna, Florida, with shipping charges prepaid. Parts returned to a customer will be shipped F.O.B., Marianna, Florida.

The following items are exceptions to the warranty:

1. The warranty applicable to V-belts and drain valve pinch hoses is limited to a period of ninety (90) days from the date of installation.
2. The warranty shall be voided if the machine is installed, maintained, or operated in any manner not in accordance with procedures, instructions, and specifications furnished in writing by UniMac.
3. The warranty provided for the basket, shell, seal, and bearings shall be voided if the machine is used for drywash or any wash process utilizing abrasive materials or abrasive compounds in the basket.
4. There is specifically excluded from this warranty damage to any part of the machine caused by corrosion resulting from the use of concentrated chemicals.
5. There are specifically excluded from this warranty labor and service charges incurred in the removal and replacement of any parts found to be defective under the terms of this warranty.
6. UniMac specifically disclaims any liability for consequential or incidental damages attributable to the failure of any part of the machine.
7. UniMac will not pay for any repairs unless authorized by its representatives in writing.

UniMac reserves the right to make changes in design or in the construction of our machines (including purchased components) without obligation to change any machine previously manufactured by us.

THE FOREGOING SHALL CONSTITUTE THE SOLE AND EXCLUSIVE REMEDY OF ANY PURCHASER OF THIS MACHINE FOR BREACH OF WARRANTY, AND IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, EXCEPT AS HEREIN SPECIFICALLY STATED.

UniMac Company, Inc.
595 Industrial Park Drive
Marianna, Florida, U.S.A. 32446

UniMac
Limited Labor Warranty

UniMac Company, Inc., through its distributor organization, warrants to the original purchaser of this machine, any labor required to correct a defect in materials or workmanship that proves, upon inspection by UniMac, to be defective within ninety (90) days from the date of installation.

The following are exceptions to, or conditions of this Limited Labor Warranty:

1. This warranty shall be voided by, and shall not cover labor charges resulting from any failure to install, operate, or maintain the equipment in accordance with the UniMac Limited Parts Warranty, the Operating Instructions and Service Manual or other procedures, instructions, or specifications furnished in writing by UniMac, nor shall it cover labor charges required for computer programming.
2. This warranty shall not obligate UniMac or its authorized distributor to provide routine maintenance procedures nor shall it cover labor charges incurred in the repair or replacement of parts damaged by a failure of the owner to perform the manufacturer's recommended routine maintenance procedures.
3. Services provided under this warranty shall be performed by UniMac's authorized distributor during normal business hours.
4. Shipping charges incurred in delivering parts shown to be defective to UniMac or incurred in the delivery of replacement or repair parts shall be the responsibility of the owner.
5. UniMac or its authorized distributor reserves the right to request that minimum check procedures be performed by equipment operators before a warranty service call is made.
6. UniMac shall not pay for labor charges which have not been authorized in writing by UniMac or by its authorized distributor.
7. This warranty shall run concurrently with the term of UniMac's limited parts warranty. It shall not be considered to extend the term of the limited parts warranty.
8. No liability is assumed by UniMac or its authorized distributor consequential or incidental damages attributable to the failure of any part of the equipment.

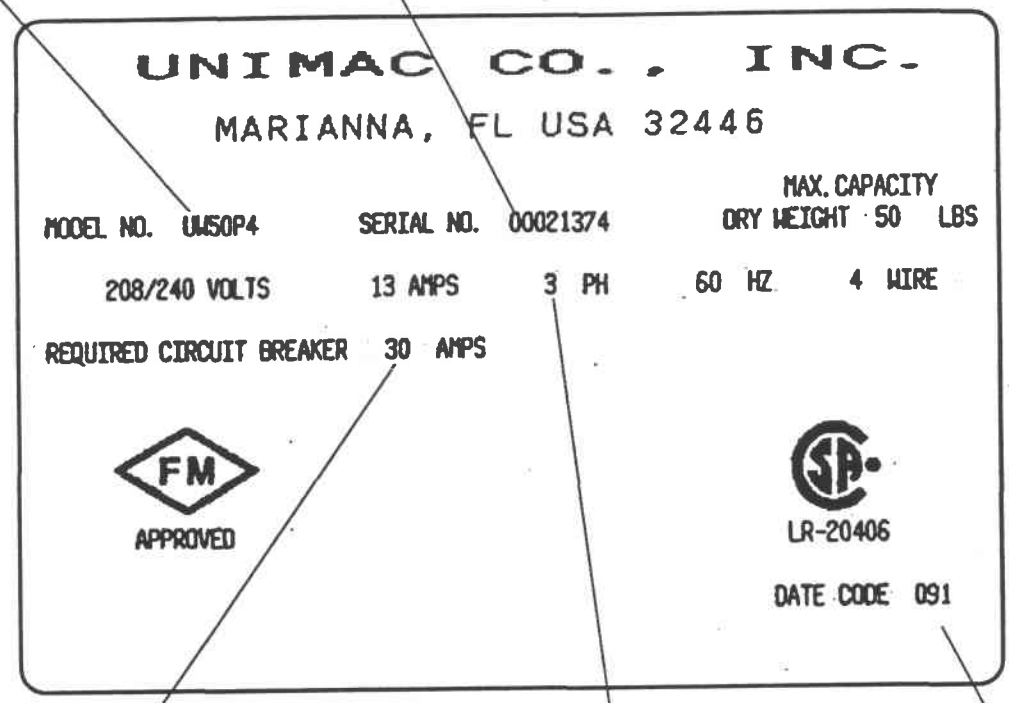
UniMac reserves the right to make changes in design or in the construction of our machines (including purchased components) without obligation to change any machine previously manufactured by us.

THE FOREGOING SHALL CONSTITUTE, AS TO THE COST OF LABOR INCURRED IN THE REMOVAL AND REPLACEMENT OF PARTS FOUND TO BE DEFECTIVE UNDER THE TERMS OF THIS WARRANTY, THE SOLE AND EXCLUSIVE REMEDY OF ANY PURCHASER OF THIS MACHINE FOR BREACH OF WARRANTY, AND IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY.

UniMac Company, Inc.
3595 Industrial Park Drive
Marianna, Florida, U.S.A. 32446

MODEL NUMBER

SERIAL NUMBER FOR YOUR INDIVIDUAL MACHINE. A RECORD OF YOUR MACHINE IS ON FILE. **ALWAYS** PROVIDE SERIAL NUMBER & **COMPLETE** MODEL NUMBER WHEN ORDERING PARTS OR WHEN SEEKING TECHNICAL ASSIS-



MIDDLE LINE INDICATES ELECTRICAL CONNECTION DATA

DATE CODE - INDICATES THE DATE OF MANUFACTURE FOR YOUR MACHINE

INDICATES REQUIRED CIRCUIT BREAKER SIZE FOR ELECTRICAL CONNECTION. **DO NOT USE FUSES.**

NOTE:
THE I.D. DECAL IS LOCATED ON THE RIGHT SIDE OF THE CONTROL MODULE.

OPTION CODE

E= ELECTRIC HEAT.
F= SINGLE PHASE MOTOR.
K= AIR OPERATED DRAIN VALVE.
L= 2 WATER LEVEL SWITCHES.
M= 3-SPD. MACHINE W/ MED. SPIN ONLY.
N= TRANSFORMER PRO VIDED FOR 3-WIRE SER- VICE.
S= STEAM HEAT.
T= MANUAL OVERRIDE CONTROLS.
X= BALANCE DELAY CONTROL.

UNDERSTANDING YOUR MODEL NUMBER

UW50PS-2

INDICATES MACHINE TYPE (UNIWASH)

INDICATES MACHINE CAPACITY (POUNDS - DRY WEIGHT)

INDICATES TYPE OF ELECTRICAL CONTROL

INDICATES TYPE OF OPTIONS IF ANY

INDICATES MACHINE SPEED CAPABILITIES

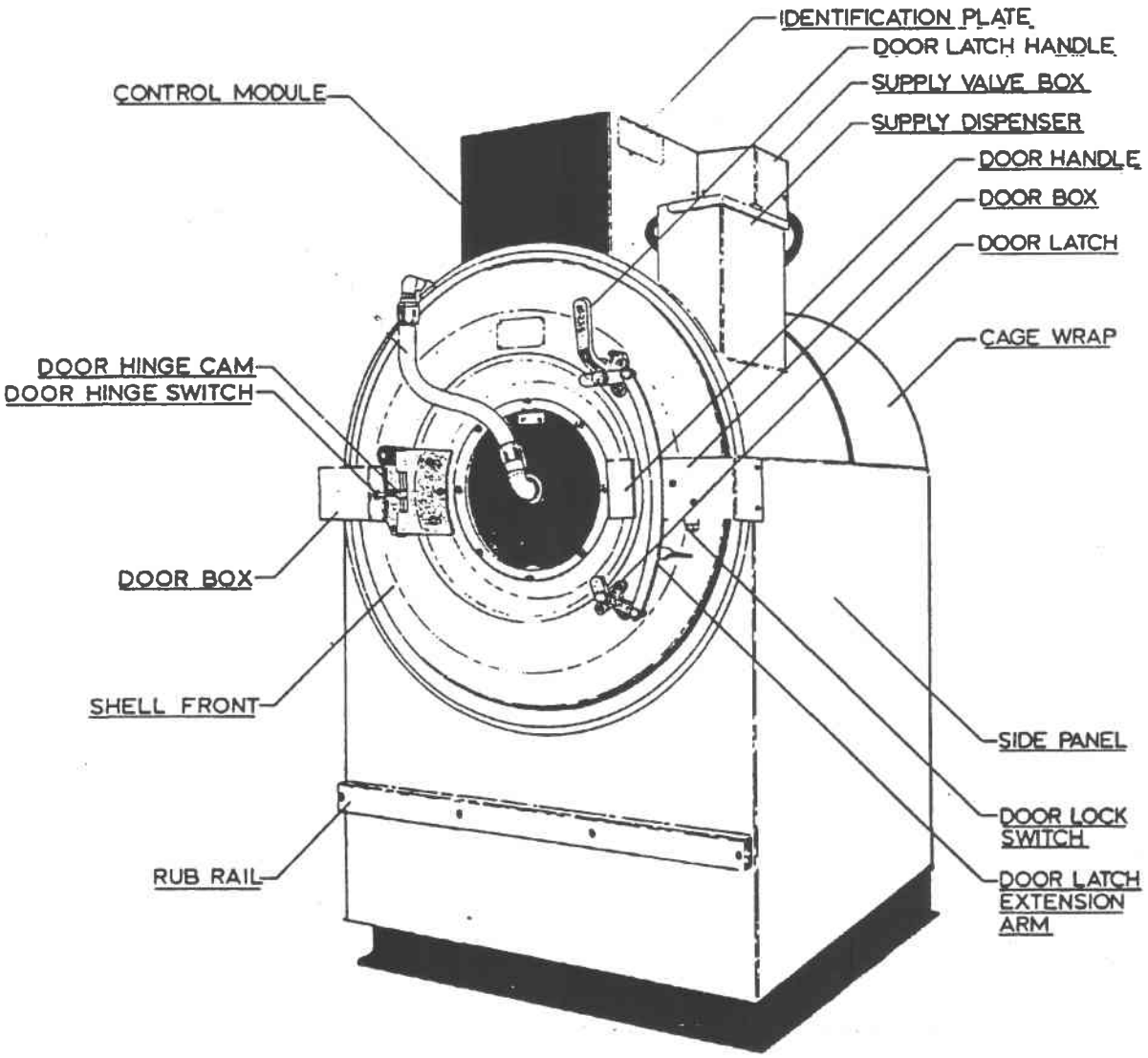


FIGURE I-A: UW85M-3 FAMILIARIZATION GUIDE

INSTALLATION

II.1 GENERAL

Procedures covered in this section are applicable to the UW85M-3 washer-extractors, laundry. The machine is designed to be bolted in position to a concrete floor on a specially prepared base frame or anchor bolts. Concrete floors must be a minimum of 12 inches thick and solid.

II.2 DIMENSIONS

The dimensions for the machine are shown on the illustrations found on page 21. Use these illustrations to allow proper space for installation of the machines. Be sure to allow a minimum of 24 inches at the rear and 18 inches at the sides for maintenance, inspection and adjustment.

II.3 UNCRATING

Remove the crate (or shrink wrap) from machine .

The wood skid is removed by removing the carriage bolts holding the skid to the bottom frame of the machine. Do not remove the skid until the machine has been placed adjacent to the place it will occupy.

II.4 INSPECTION

As soon as the crate (shrink wrap) is removed, the washer-extractor and each component should be inspected for shipping damage. If any parts are found damaged, they must be replaced before installation.

If damage is noted when the machine is delivered, notation should be made on the freight bill. If damage is discovered after the machine is delivered, the transportation company must be called to make an inspection. This request must be made within 15 days of date of delivery. Claims should be filed against the transportation company for this damage after the machine has been repaired. If the machine is damaged beyond repair, it should be refused.

Note: Our responsibilty for shipment reaching its destination in a satisfactory condition ends with the delivery of the machine in good order to the transportation company. All machines should be inspected upon receipt and before they are signed for.

II.5 DAMAGE CLAIM

If the machine or any part of the machine is damaged and a claim is to be filed, the following documents should be presented to the delivering carrier:

1. Original freight bill.
2. Original bill of lading.
3. Copy of original invoice on which machine was purchased.
4. Inspection Report, if damage is of a concealed nature.
5. Invoice on which replacement parts are purchased.
6. Express receipt or freight bill on any replacement parts.

II.5 DAMAGE CLAIM (Continued)

7.Salvage receipt (general receipt) from truck line if there are parts, which are salvageable, turned over to the carrier.

If damage is suspected, a notation on the freight bill reading "Carton scuffed may contain damage" and signed by the delivering carrier will protect you from a damage claim. This notation should be put on before delivering carrier leaves your premises. This notation **must** be on the carrier's copy and your copy of the freight bill.

If a damage claim is to be filed, present the above documents to the delivering carrier.

II.6 MACHINE FOUNDATION

The machine must be secured to a foundation or floor of adequate construction. Detail must be stressed with all foundation work to insure a stable unit installation, eliminating possibilities of excessive vibration. The machine must be anchored to a smooth level surface so that the entire base of the machine is supported and rests on the mounting surface. Do not support the machine on only four points. Anchor bolts must be a minimum of 3/4 inch diameter, grade 2. **See II.10, Mechanical Installation, page 18.**

A base designed to elevate the UW85 to a comfortable and more accessible height for loading and unloading laundry may be used. Care must be exercised in the design of such a base due to the force exerted by the machine during extract.

Static and dynamic loads on the floor or foundation are shown in table II-1 below. This table can be used as a reference when designing floors and foundations.

FLOOR LOAD DATA

MODEL	FLOOR LOAD AT EXTRACTION SPEED		FREQUENCY OF DYNAMIC LOAD	MAXIMUM STATIC AND DYNAMIC FLOOR LOAD				MOUNTING BOLT SIZE	
	lbs.	kN	CYCLES (Hz)	lbs.	kN	lbs./sq. ft.	kN/m^2	inch	mm
UW85-3	2302 ± 2580	10.24 ± 10.6	8.73	4682	20.83	374.9	17.95	3/4	M20

TABLE II-1

Note!!

Machine must be installed on concrete floor, floor must be minimum of 12" thick
Do not mount on wooden floors. Do not install above ground floor.
Floor must be solid.

II.7 ELECTRICAL INSTALLATION

The UW85 is provided with a thermal overload protector in the drive motor windings and a separate fuse for the control circuit. However, a separate three phase circuit breaker must be installed for protection against shorts. DO NOT USE FUSES.

For proper over current protection, the circuit breaker should be a 50 AMP capacity unit rated for 208-240 volts and should be a three phase breaker so that in the event that one leg should be removed from the machine, all three legs will be disconnected to prevent damage to the motor.

WARNING!!

Turn off power and water before attempting any maintenance, repairs, or service, or before opening any service panel or door.

This machine must be connected and grounded in accordance with the National Electric Code and/or any other applicable code.

The machine should be connected to an individual branch circuit not shared with lighting or other equipment. The connection should be shielded in a liquid tight or approved flexible conduit with proper conductors of proper size and insulation in accordance with the National Electric Code or other applicable codes. The wire for the service connection should be a minimum size of 6 gauge (AWG) for 208-240 volt installations. See table II-2.

The connections should be made by a qualified electrician and in accordance with the wiring diagram provided with the machine.

When the machine is started, check that the cylinder rotates in the correct direction during the spin (extract) step, i.e., clockwise as seen from the front of the machine. If the machine rotates in the wrong direction, two of the lines are to be interchanged at the power connection terminal (reverse L1 and L2 - **do not** reverse L3).

ELECTRICAL CONNECTION DATA

MODEL	VOLT	PHASE	CYCLE	MAX AMPS
UW-85	240	3	60	15

CIRCUIT BREAKER	WIRE SIZE
50 AMP	6 AWG

FOR MACHINES WITH OTHER VOLTAGES

VOLT	MAX. AMPS	WIRE SIZE	CIRCUIT BREAKER
440-480	9	8 AWG	30 AMP
380-415	9	8 AWG	30 AMP

TABLE II-2

Use wire size indicated in table II-2 for runs up to 50 feet. Use next larger size for runs of 50-100 feet. Use 2 sizes larger for runs greater than 100 feet. This protects against voltage drop which would result in a reduction of starting torque.

Electrical connections are made at the J-box located on the rear of the control module. The machine must be connected to the proper electrical supply

II.7 ELECTRICAL INSTALLATION (Continued)

shown on the identification plate attached to the side of the control module.

For personal safety and proper operation, the machine **must be grounded** as per state and local codes. In the absence of these codes, grouding must conform with National Electric Code, article 250-95. The ground connection must be to a **proven** earth ground at the location service panel and/or to a **grounded metal cold** water pipe.

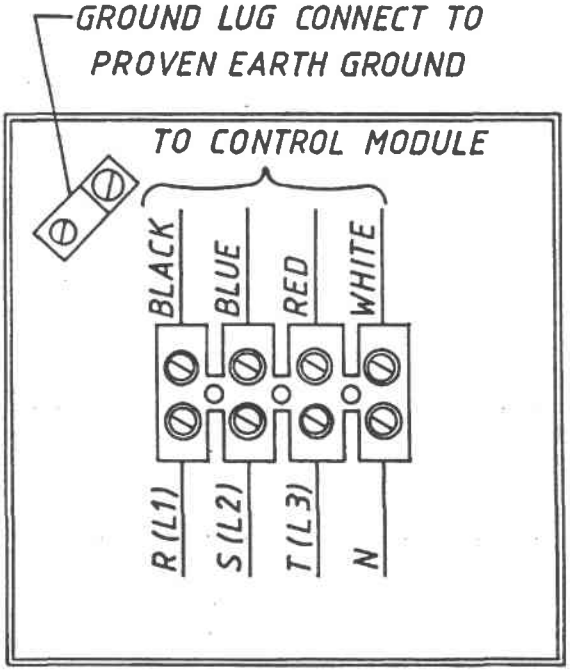


FIGURE II-A: J-BOX MONTED ON REAR OF CONTROL MODULE

Do not connect the ground to the neutral (N-white wire) leg at the J-box terminal strip. If the machine is intended for 4-wire service, a neutral leg **must** be provided by the power company. **Do not** connect the neutral leg to the ground lug.

If a Delta Supply System is used, the high leg **must** be connected to the **red wire (L3)** at the J-box terminal strip. If three phase service is not available and a Roto-Phase or other phase adder is used, the artifical leg **must** be connected to the **red wire (L3)**.

Improper connections will result in equipment damage and will void the warranty. It is your responsibility to have all electrical connections made by a properly licensed and competent electrician to assure that the electrical installation is adequate.

Rotation should be clockwise in spin. To change direction of rotation, interchange the **black (L1)** and **blue (L2)** leads.

II.8 WATER CONNECTION

Separate hot and cold plumbing lines (one inch diameter pipe or larger) with individual shut-off valves must be provided. Hot water should be a minimum of 160 degrees Fahrenheit. Best performance will be realized if water is provided at a pressure of 30-85 psi. Although the machine will function properly at a lower pressure, excessive fill times will occur.

1. Use flexible hoses or equivalent flexible lines. The hoses should hang in a large loop. Do not allow to kink.

2. Flush the water system and check filters in machine inlet hoses for proper fit and cleanliness before connecting.

II.8 WATER CONNECTION (Continued)

The UW85 has a total of two hose connections. Each hose is connected to a hot or cold water faucet with a 3/4" hose bib. Each machine requires incoming water connections as follows:

Two 3/4" faucets with 3/4" hose bib connected to one 3/4" hot water faucet line and one 3/4 cold water faucet line.

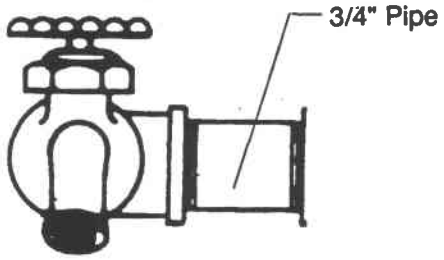


FIGURE II-B: TYPICAL COLD WATER SUPPLY PLUMBING (REPEAT FOR HOT WATER)

Each of the above hoses should have a screen filter installed to keep rust and other foreign particles out of the solenoid valves. These connections should be supplied by a hot and a cold water line of at least 3/4" size for each. Installation of additional washers will require proportionately larger water lines (see table II-3). Suitable air cushions should be installed in supply lines to prevent "hammering". If the water pressure is above 60 psi, flexible copper tubing should be used in place of the rubber hoses.

TABLE II-3

WATER AND DRAIN LINE REQUIREMENTS

NUMBER MACHINES	PIPE SIZES	MIN. DRAIN
1	3/4"	4" I.D.
2	1"	5" I.D.
3	1 1/2"	5" I.D.
4	2"	6" I.D.
5	2"	6" I.D.
6	2"	6" I.D.

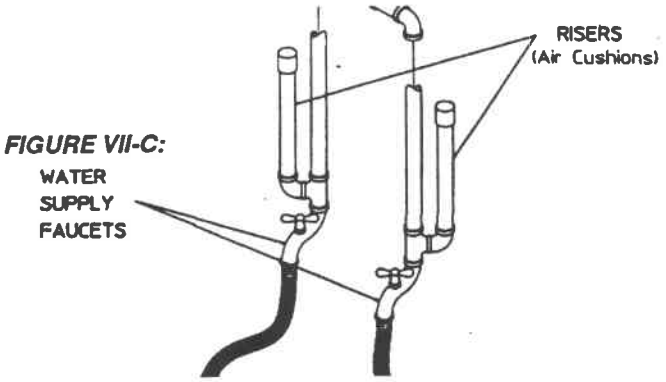


FIGURE VII-C:

II.9 DRAIN CONNECTION

Providing an adequate drain arrangement and capacity is essential. Ideally, the machine should dump through a 3" pipe directly into a sump or floor drain.

Connection to a drain must be vented to prevent an air-lock or siphon effect and **must be flexible.** Increasing drain hose length, installing elbows or causing bends will decrease drain flow rate which might harm washer performance. If the drain arrangement is inadequate, the machine will not extract properly nor will it discharge all the water. If proper drain line size is not available or practical, a surge tank of adequate design would be required.

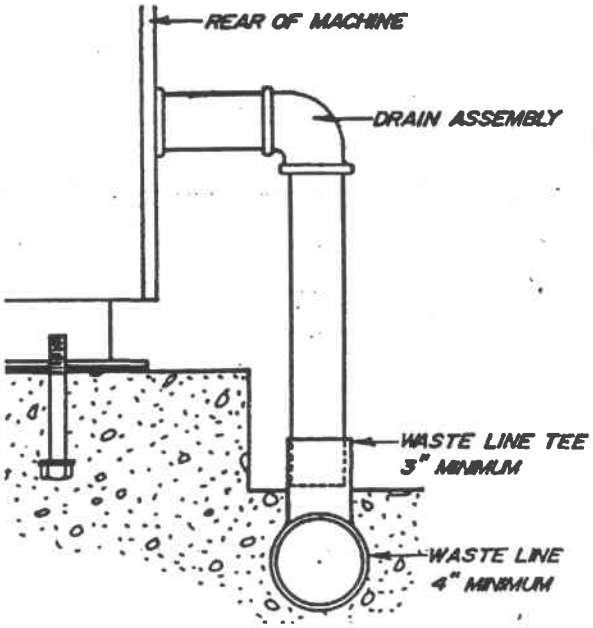


FIGURE II-D: TYPICAL DRAIN CONNECTION

II.9 DRAIN CONNECTION(Continued)

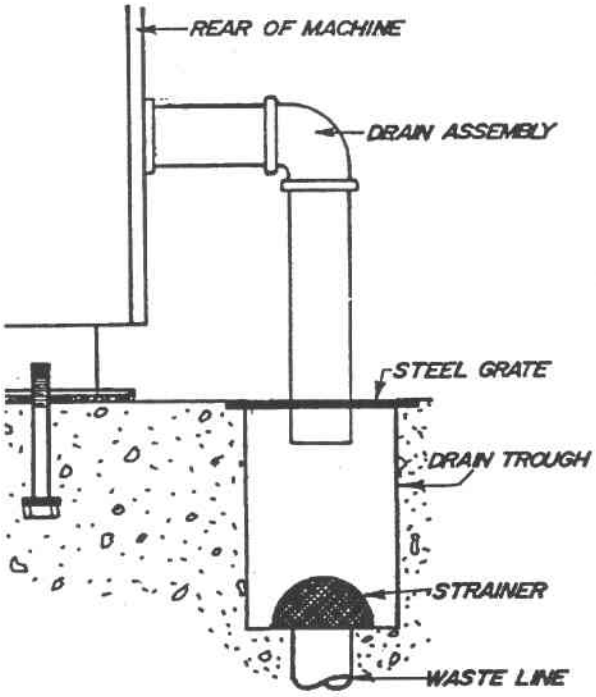


FIGURE II-E: TYPICAL TROUGH DRAIN ARRANGEMENT

A surge tank should also be used in conjunction with a sump pump when gravity drainage is not possible.

At the rear of the machine, on a centerline 16 7/8" from the floor, are two 3" PVC pipe connections for the drain. Drainage is by gravity.

II.10 MECHANICAL INSTALLATION

A proper foundation is absolutely necessary for the UW85M due to its high extract speed and the G-force exerted.

A bolt kit is available as an option consisting of eight 3/4" bolts, 8" long, which should be imbedded in a reinforced concrete floor that is a minimum of 12" thick.

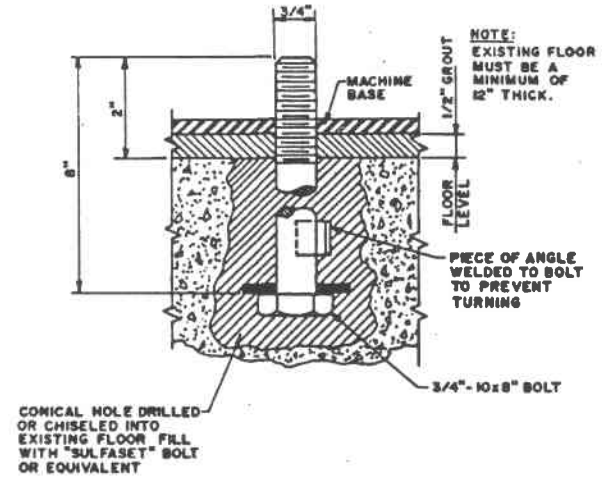


FIGURE II-F TYPICAL METHOD OF MOUNTING USING INDIVIDUAL MOUNTING BOLTS.

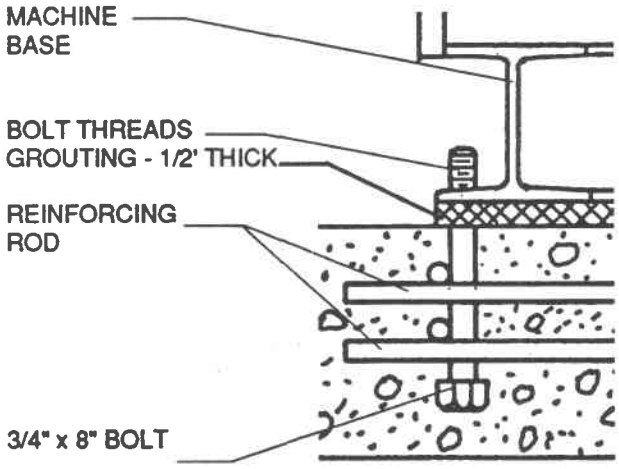


FIGURE II-G: TYPICAL METHOD OF MOUNTING USING BASE FRAME

The threaded end of the bolts should extend 2" above the suface of the floor. A diagram showing the location of these bolts is shown on page 20 of this manual. A bolt locator fixture (base frame), consisting of a rigid welded assembly made of reinforcing rod welded to the eight 3/4" bolts which may be imbeded in the concrete as one piece is also avaiable as an option (see figure II-G). Be sure the bolt threads also extend 2"above the floor.

II.10 MECHANICAL INSTALLATION(Continued)

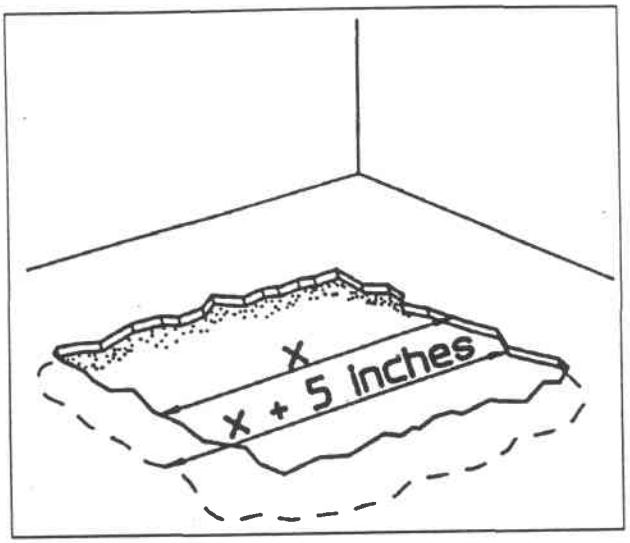


FIGURE II-H: X = 5 FEET

If the existing floor is not reinforced concrete a minimum of 12" thick over a solid base, it will be necessary to cut a hole through existing floor approximately 6 feet square and excavate to a depth of 12 " from top of existing floor. Slope the edges of the hole outwards so that the hole is pyramid shaped. Excavate under existing floor 5 inches beyond the required 6 feet square all around. See figure II-H where x= 6 ft.

Refill with 12" of reinforced concrete. Imbede mounting bolts or base frame when pouring concrete. Make sure that the bolt threads extend 2" above the floor level.

After the foundation for the machine has been prepared and the concrete has cured, proceed as follows:

1. Place the machine adjacent to the foundation. Do not attempt to move the machine by pushing on the sides. Always use a pry bar or other device at the bottom of the machine. Remove the wood skid.

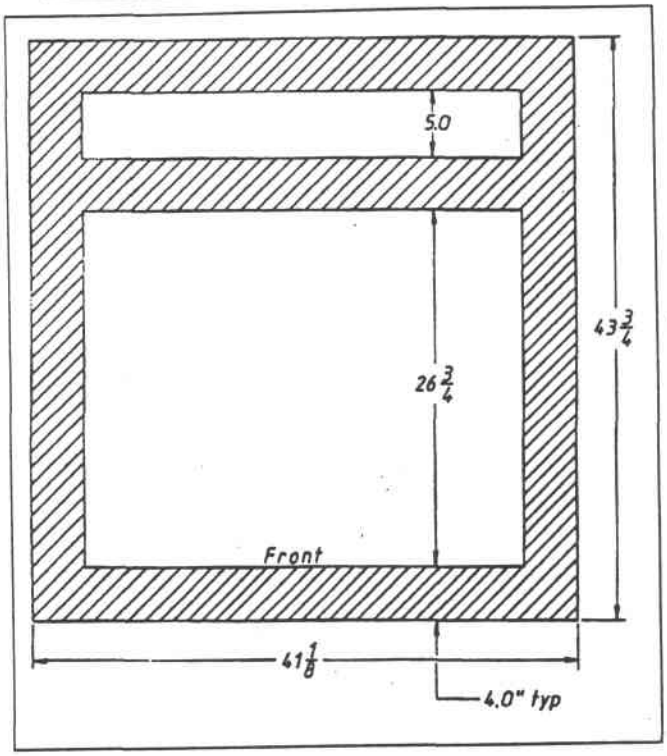


FIGURE II-I: GROUTING DIAGRAM - APPLY GROUT IN ALL SHADED AREAS UNDER FRAME MEMBERS. REMOVE COVER PANELS FOR ACCESSS.

2. Set machine over bolts and shim the machine so that it sets level and is 1/2" off the floor. Apply machine grout between the floor and **all frame members** of the base of the machine (remove front panel and expanded metal back panel to gain access to **all frame members**). Force grout under machine base until **all voids are filled (see Grouting Diagram, figure II-I).** Leave a small opening for water drainage at the rear of the machine. **Do not omit this step**

II.10 MECHANICAL INSTALLATION(Continued)

3. After grout has cured, place washers and nuts on bolts and tighten securely. Be sure nuts are tightened evenly all around. DO NOT DISTORT MACHINE BY BOLTING DOWN ON AN UNEVEN FLOOR SURFACE.

Make sure to re-tighten the anchor bolts after a few days of operation.

II.11 CONTROL FUNCTION TEST PROCEDURE

In the machine, you will find the warranty registration card, the wiring diagram and other pertinent material. The warranty card should be filled out and returned to UniMac Company. The other material should be removed and put in a safe place for future reference as needed.

The machine should be cleaned when the installation is completed, and a function test executed without a load in the machine as follows:

1. Check power supply for correct characteristics as to voltage, phase and cycles to be sure they are correct for the machine.

2. Open manual water shut-off valves to the machine.

3. Turn on electric power.

4. Check the door interlock by opening the loading door (press and hold the door unlock button) and attempt to start the machine in the normal manner. The machine must not start while the door is open.

Close the door without fully locking it. Attempt to start the machine. The machine must not start without the door being closed and fully locked.

Close and lock the door and start the machine. Attempt to open the door while the machine is operating. The door must remain locked and can not be opened while the machine is opeating.

5. Run a complete cycle and check operation of water inlet valves, drain and spin (extract) functions.

6. Rotation must be clockwise in spin (extract) step. If not, reverse line L1 and L2 at the J-box.

II.12 DIMENSIONS

	inch	mm
A	41 1/2	1055
B	41 1/8	1045
C	66	1676
D	43 3/4	1111
E	48	1200
F	29	737
G	1	25
H	60 1/4	1530
J	16 7/8	430

TABLE II-4: DIMENSIONS

Note: Dimensions are approximate and subject to normal manufacturing tolerances. If exact dimensions are needed for construction purposes, request certified drawings from the factory.

Dimensions are subject to change without notice. Use flexible connections only.

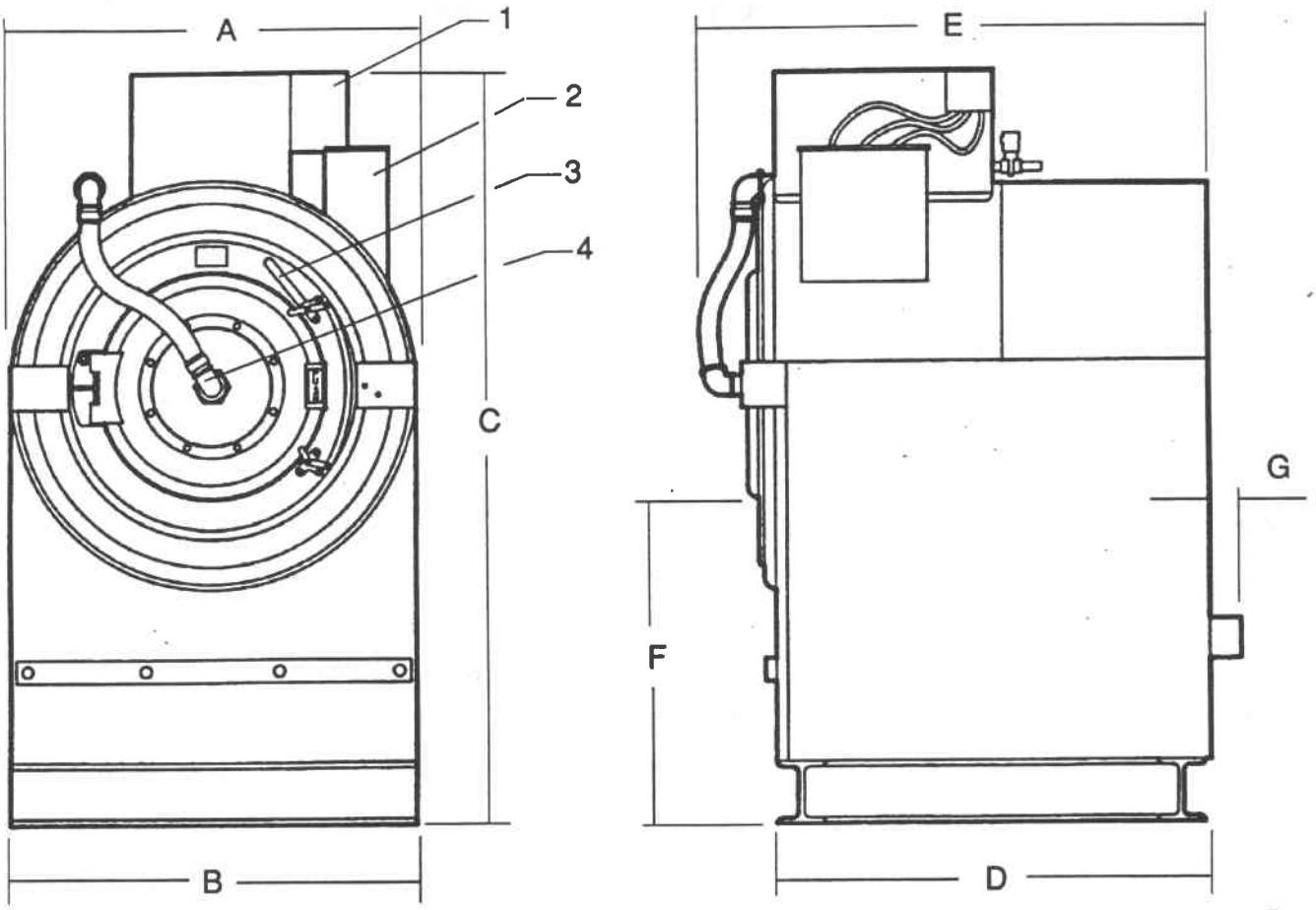
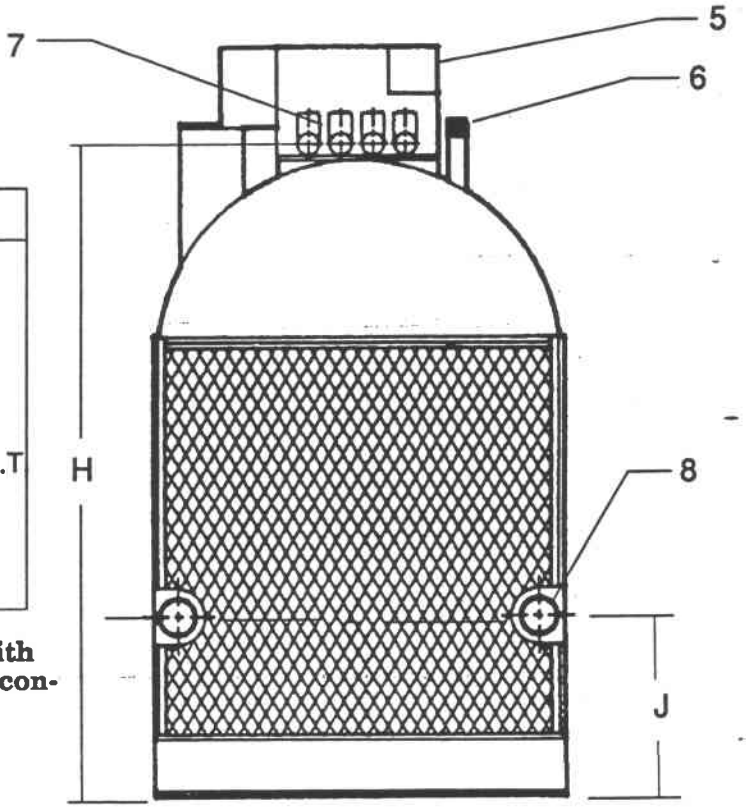


FIGURE II-J: DIMENSION VIEWS



NO.	DESCRIPTION
1	SUPPLY VALVE BOX
2	AUTO. SUPPLY INJECTION
3	DOOR HANDLE
4	NOT USED
5	ELECTRICAL J-BOX
6	NOT USED
7	WATER INLET VALVES* - 3/4" N.P.T
8	DRAIN - 3 " PVC
	*The UW85M has only two inlet valves.

The UW85M is not equipped with Spray Rinse. The illustrations contained herein are intended as a guide and may not exactly depict all models. We reserve the right to make changes at any time without notice.

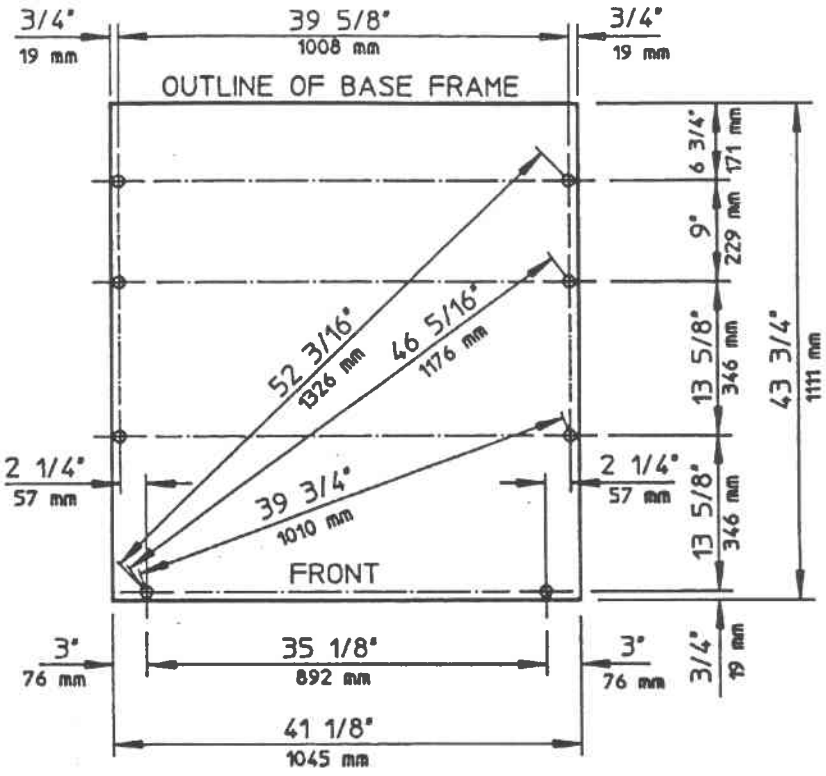


FIGURE VII-K: MOUNTING BOLT LAYOUT

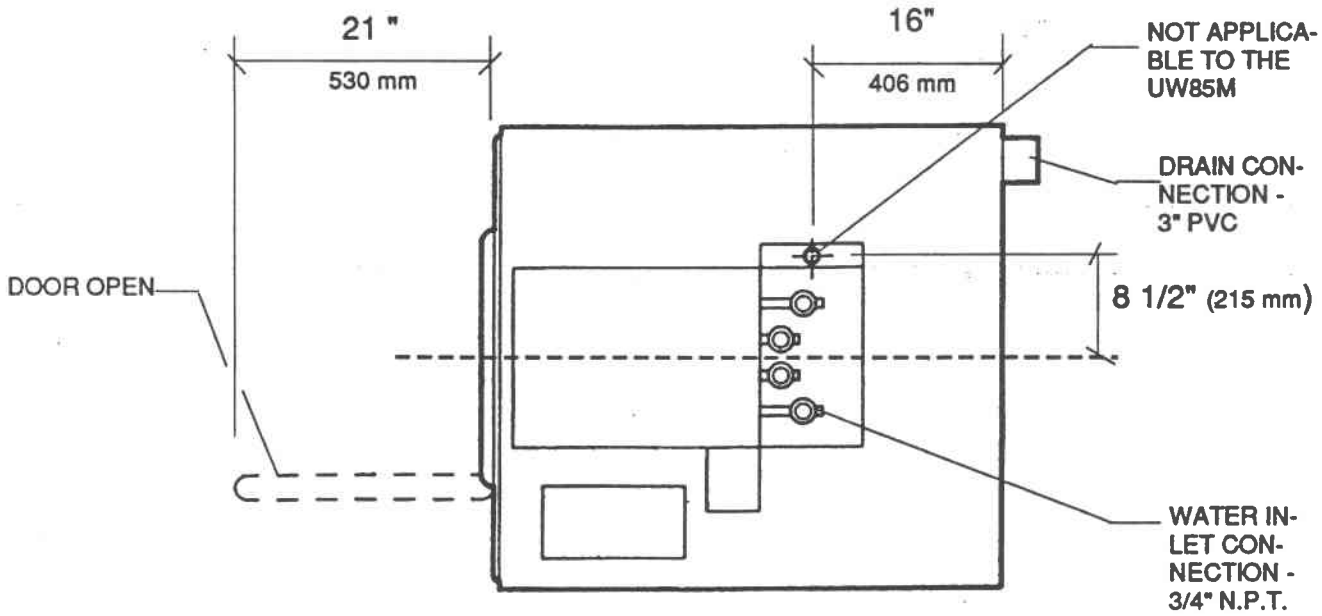


FIGURE VII-L: TOP VIEW

OPERATING INSTRUCTIONS

III.1 TURN ON

Turn on the main power source (circuit breaker or cut off switch).

Now press the "ON-OFF" rocker switch located on the front panel of the control module and the switch will illuminate.

III.2 LOADING

To load the washer, wait 30 seconds after turning on and use left hand to press the door unlock button located on the front of the control panel. Use right hand to turn door handle to the right. The door can then be opened.

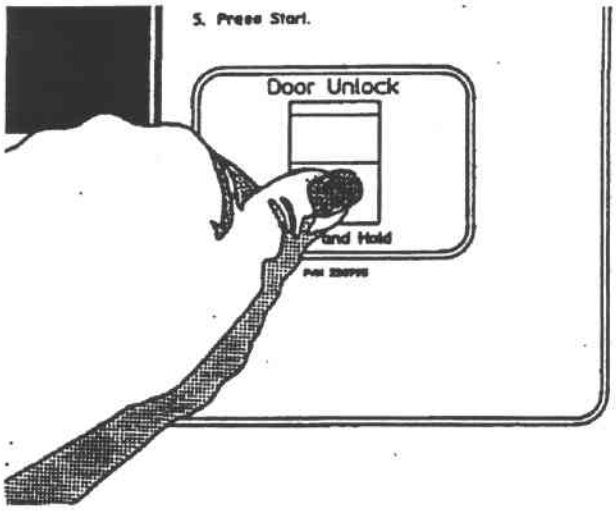


FIGURE III-A: DOOR UNLOCK BUTTON - PRESS AND HOLD.

Load linen until the machine is full. Partial loads are a waste of energy, water and chemicals and cause greater machine wear than full loads. If you do not have enough to fill the basket, wait until a full load is available. Partial loads, if necessary, should only occur at the end of the day. Even then, they can usually be held until the next day when more linen is received.

Note: If stringy items such as mop heads, etc. are to be washed, laundry nets should be used in order to prevent fouling of seals and drains.

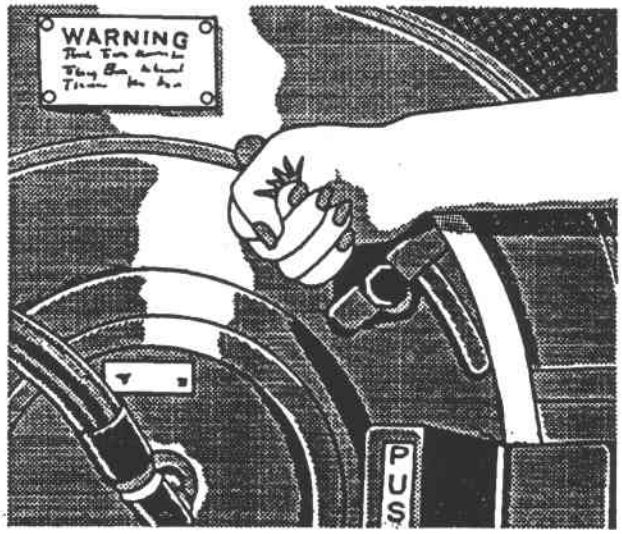


FIGURE III-B: DOOR HANDLE - TURN TO RIGHT

Once loading is complete (you cannot overload the machine as far as harm to the machine is concerned; however, overloading can cause improper mechanical action and an inferior quality wash), close and lock the door making sure that all fabric is inside the basket. Push the door closed enough to compress the door gasket, then rotate the door handle counter-clockwise (to the left) as far as it wil go. The machine should not start or run if the door is not both closed and locked.

III.3 SELECT and START CYCLE

Select the cycle that you wish to run (WHITE, PERM'T PRESS, COLORS or BRIGHT COLORS) by pressing the appropriate button on the control module front.

Next, press the "START" button. The machine timer will advance to start the

III.3 SELECT and START CYCLE (Continued)

cycle selected and the red "ON" light located on the right of the control panel will illuminate.

Directly underneath the "ON" light is a light labeled "WASH". This light will be illuminated during all pre-wash, wash and rinse steps when the machine is filled with water and agitation is ocurring. A light labeled "BLEACH" is located directly underneath the "WASH" light and will be illuminated after fill is reached during the wash step to indicate the correct time during the cycle to add bleach. Located to the left of the "ON" and "BLEACH" lights is a visible cycle indicator dial. By observing the cycle indicator, the step of the cycle being executed may be determined. Therefore, the remaining cycle time and steps may be anticipated. If the "START" button is pressed and held, the timer will fast advance through the cycle.

WARNING

Do not attempt to open door until basket has stopped. Serious injury could result.

III.4 CYCLES OF OPERATION

The machine's pushbutton cycle selector switch provides a selection of four complete automatic cycles.

Wash and rinse fill temperatures are automatically controlled by the timer depending upon the cycle selected.

"HOT" WASH (WHITE)

After the machine has started, the door is automatically locked, the drain valve will close and the hot and cold water valve will open to fill the machine with warm water to a predetermined water level controlled by the level switch. When the level is reached, the water-valve will close, and the wash motor will begin its reversing rotation - 12 seconds forward, 3 seconds pause, then 12 seconds reverse (the motor rotates only in forward during fill). When the water level is reached, the program timer will advance one step every 30 seconds. Supplies (detergents, bleach, softeners, etc.) may be added through the supply dispenser lid on top of the machine after water level is reached. The "BLEACH" light will be illuminated during the wash step indicating the correct time to add bleach if desired.

The machine will prewash the laundry articles for 2 minutes. After the prewash step, the drain will open and the machine will drain. The drain valve will then close and the hot water valve will open to fill the machine with hot water to a predetermined water level controlled by the level switch. The machine will now wash the laundry articles for 4 minutes. After the wash step, the drain will open and the machine will drain and the first intermediate spin starts (30 seconds). When the spin is finished, the cold valve will open and fill the machine to a preset high water level for the first rinse. The rinse will last for 11/2 minutes and ends with a drain step and another 30 second intermediate spin. A second rinse equal in time to the first is then executed by the program timer followed by a third rinse of equal time. When water level is reached during the third rinse, the "SOFTENER" light will be illuminated indicating the correct time to add softener. The last two rinses are cold.

After the final rinse, the drain is opened followed by a final spin (extract) for four

III.4 CYCLES OF OPERATION (Continued)

minutes. After the spin, a 30 second shake-out is provided to loosen the load. After the shake-out, the machine stops, the red "ON" light is extinguished and the door can be opened so that the laundry articles can be removed. (See sequence chart, page 35)

"WARM" WASH(PERMANENT PRESS)

The "WARM" program is executed in the same total time as the "HOT" program.

It has a warm prewash, a warm wash, followed by three cold rinses, and a final spin step. The only difference is the wash step calls for warm water.

"COLD" WASH (COLORS)

Again, this program is the same in time as the "HOT" program. The prewash is cold, the wash step is warm and all three rinses are cold.

"COLD GENTLE" WASH (BRIGHT COLORS)
This program is the same in time as the others, but all steps are cold.

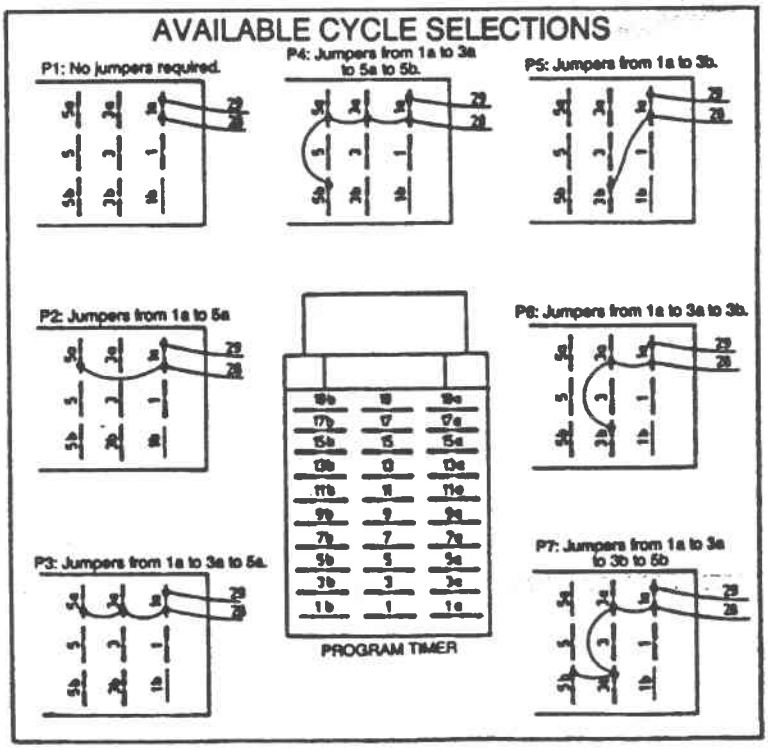
SECTION III - OPERATING INSTRUCTIONS

TABLE III-1: PROGRAMMING SELECTIONS

NOTE: THE MACHINE IS SHIPPED WITH PROGRAM P3.

AVAILABLE PROGRAM SELECTION							
	P1	P2	P3	P4	P5	P6	P7
SOAK	4	2	2	2	—	—	—
WASH	8	8	4	4	8	4	4
RINSE 1	1.5	1.5	1.5	1.5	1.5	1.5	1.5
RINSE 2	1.5	1.5	1.5	1.5	1.5	1.5	1.5
RINSE 3	1.5	1.5	1.5	1.5	1.5	1.5	1.5
FINAL SPIN	4	4	4	2	4	4	2
ONLY JUMPERS REQUIRED	NONE	1A to 5A	1A to 3A to 5A	1A to 3A to 5A to 5B	1A to 3B	1A to 3A to 3B	1A to 3A to 3B to 5B
CYCLE TIME	27.5	25.5	21.5	19.5	22.5	18.5	16.5

FIGURE III-C: PROGRAMMING CHART



NOTE: CYCLE TIMES DO NOT INCLUDE FILL TIMES.

TABLE III-2: CYCLE SEQUENCE

OPERATION	TIME MIN.'S	WATER LEVEL	PROGRAM (WATER TEMP)			
			HOT	WARM	COLD	COLD GENTLE
PREWASH	2	HIGH	WARM	WARM	COLD	COLD
DRAIN	1					
WASH	4	LOW	HOT	WARM	WARM	COLD
DRAIN	1					
EXTRACT	0.5					
RINSE 1	1.5	HIGH	WARM	WARM	COLD	COLD
DRAIN	1					
EXTRACT	0.5					
RINSE 2	1.5	HIGH	COLD	COLD	COLD	COLD
DRAIN	1					
EXTRACT	0.5					
RINSE 3	1.5	HIGH	COLD	COLD	COLD	COLD
DRAIN	1					
FINAL EXTRACT	4					
SHAKE-OUT	0.5					

IV.1 GENERAL

UW85 washer-extractor front, side, and cage wrap panels as well as the control module and shell are constructed of Type 304 corrosion resistant stainless steel. The machine is mounted on a welded base frame which supports the bearings, cylinder, and shell. The frame is built of I-beam, channel and angle iron for rigidity.

Both front and rear main bearings are self-aligning double row spherical roller bearings installed in heavy cast housings. The front and rear bearings are filled with a oil-saturated solid lubricant pack which fills virtually all of the bearing cavity. The bearings are lubricated for life and need no further lubrication.

The stainless steel cylinder is attached to a high tensile strength AISI-C-1042 polished steel shaft and is supported by the two bearings and held in place by the bearing set screws.

The shell is securely attached to the gamma frame and is bolted to the front of the frame. The shell has a drain sump to which the drain valve is connected.

The door is attached to the shell by means of a hinge. The door has a latching mechanism that mates with a door interlock system mounted in the two door boxes (see page 12).

All electrical control components are housed in a separate control module mounted on top of the shell. The controls are accessible by removing the top cover from the control module.

Two inlet valves are mounted behind the control module and consist of one hot and one cold valve.

IV.2 COMPONENT FUNCTION

A. MANUAL START SWITCH
The manual start switch provides a means for allowing the operator to operate the machine by turning the machine on and pressing "START".

B. CYCLE SELECTOR SWITCH
A push button system for selection of four different wash programs and temperatures.

C. CYCLE INDICATOR
Used for visual indication of the elapsed time and position of the wash cycle step by step.

D. DOOR
The door has an automatic door locking mechanism which remains locked throughout the complete wash cycle.

E. AUTOMATIC SUPPLY DISPENSER
The automatic supply dispenser and lid are mounted on right side of the shell and are used to add chemical supplies to the wash solution at the appropriate time. The supply dispenser consists of four compartments; each containing a water injection nozzle and a 32 ounce plastic supply cup. Each nozzle is connected to a water supply valve.

IV.2 COMPONENT FUNCTION (Continued)

F. CYLINDER
Made of perforated stainless steel and supported by the bearings mounted on the frame. Includes four perforated lifting ribs with a 1/2" stainless tie rod through each lifter. Has a 3/4" thick steel back plate which adds strength and contributes to the flywheel effect during extract.

G. SHELL
Made of Type 304 stainless steel and supported by the Gamma A-frame and the front of the frame. Provides mounting for the control module and retains the wash solution.

H. BEARINGS
Two permanently lubricated and sealed double row spherical roller bearings mounted in cast iron housings.

I. WASH AND SPIN MOTORS
A single speed motor provides the reversing wash speed and one 2-speed motor provides the high speed extract, see page 39, VII.7.

J. V-BELT DRIVE(S)
The V-belts are adjusted by sliding the motor(s) along the motor mounting plate(s). The drive configuration is such that the wash motor is mechanically connected by means of a V-belt drive to the extract motor through which power is transmitted to the cylinder pulley.

K. WATER VALVES
One hot and one cold 3/4" solenoid operated water valves is provided to fill the machine. The valves are controlled by the program timer and water level control.

L. DRAIN VALVE
Two motorized 2 1/2" inch I.D. drain valves are provided. They are controlled by the computer.

M. CONTROL MODULE
All electrical controls (timer, contactors, water level switches, and door unlock switch) are provided in a stainless steel enclosure mounted on top of the shell. It is provided with conduit connections for safe and reliable connection to the drive motors. The electrical power source is connected to the J-box on the back of the control module.

N. SEAL
Consists of a brass collar assembled on the cylinder shaft and held in place with set screws. The collar provides a flange for mounting a ceramic ring which makes contact with a spring-loaded phenolic face seal enclosed in a nylon housing mounted on the rear of the shell. The brass collar contains two internal O-rings which maintain contact with the cylinder shaft.

O. DOOR BOXES
The left door box encloses the door hinge switch which makes contact with the door hinge cam when the door is not closed. The right door box houses the door lock switch which makes contact with the door latch extension arm when the door is fully closed. The right door box also contains the door unlock solenoid which unlocks the door when the machine has stopped (see page 12).

SAFETY RULES

V.1 GENERAL

This section is the most important section in the manual. It describes the safety and maintenance rules applicable to anyone servicing or operating the machine.

WARNING

This machine must be installed, adjusted and serviced by qualified electrical maintenance personnel familiar with the construction and operation of this type of machinery. They must also be familiar with the potential hazards involved. If this warning is not observed, personal injury or equipment damage resulting in voiding the warranty may result.

WARNING

Improper and inadequate maintenance, poor machinery housekeeping and willful neglect or bypassing of safety devices may result in accidents.

To assure the safety of operators of the machine, the following maintenance checks must be performed on a daily basis:

1. Prior to operating the machine, check to make certain all warning signs are present and legible. Missing or illegible ones must be replaced immediately. Be sure you have spares available.

2. Check the door interlock as follows:

   A. Open the door of the machine and attempt to start in the normal manner.

   B. Close the door and start the machine. While it is operating, attempt to open the door. The door will remain locked.

   C. Upon completion of the cycle, immediately check that the cylinder has stopped and the door can be opened after the red "ON" light goes out.

3. Be sure to keep the machine in proper working order. Follow all maintenance and safety procedures. Use original spare parts to avoid safety problems.

V.2 SAFETY RULES CHECK LIST

A. Make yourself acquainted with the appropriate sections of this manual before attempting any repair or maintenance of the machine. Read all instructions before using the machine.

B. Always turn off power and water supply before servicing.

C. Do not overload the machine.

D. Do not open door when cylinder is in motion or if it contains water.

E. Do not bypass any safety devices in this machine.

F. Repair immediately all seepage from the machine due to faulty gaskets, etc.

SECTION V - SAFETY RULES

V.2 SAFETY RULES CHECK LIST (Continued)

G. Do not spray the machine with water. Short circuiting and serious damage may result.

H. Do not use volatile or flammable substances in or near this machine.

I. Keep all panels in place. They protect against shock and injury and add rigidity to the machine

J. Make sure that all warning signs are present and legible. Replace immediately if lost or damaged.

K. Do not attempt to operate a machine if any of the following occurs:

1. Excessively high water level.

2. If machine is not connected to a properly grounded circuit.

3. If the door does not remain securely locked during the entire cycle.

WARNING

Do not operate machine with safety devices bypassed or inoperative.

Do not open door until cylinder has stopped rotating. Serious injury may result.

WARNING

HIGH TEMPERATURE

The surface of this machine may be hot enough to cause injury. If machine is equipped with auxiliary steam or electric heat, the surface temperature can reach 200 Degrees F.

Always read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings or precautions. To reduce the risk of poisoning or chemical burns, keep them out of reach of children at all times (preferably in a locked cabinet).

MAINTENANCE

VI.1 GENERAL

This section covers preventive maintenance. Even if preventive maintenance has been reduced to a minimum by the careful design of this machine and the choice of components, it is necessary to maintain and keep the machine clean. This will prolong the life of the machine and avoid hours of probable service.

VI.2 DAILY

A. Check door lock and interlock before starting operation.

B. Clean automatic supply dispenser and lid inside and out with mild detergent. Rinse with clean water.

C. Clean the shell, front and side panels with mild detergent. Rinse with clean water.

D. Check drain for leaks and proper opening.

E. Check loading door for leaks. Clean the door seal of all foreign matter.

F. Leave loading door open to air out the machine at the end of the cycle and at the end of the day.

WARNING

Before performing any maintenance, make sure that the main power to the machine is switched off and locked out.

IMPORTANT:

Replace any and all panels that were removed to perform daily or monthly maintenance.

VI.3 MONTHLY

A. Check V-belt for wear, proper tension and alignment.

B. Check motor mounting bolts and clean lint from motor.

C. Check all water connections and hose connections for leaks. Tighten or replace as needed.

D. Remove and clean water inlet valve and hose screen filters. Replace if worn or damaged.

E. Check anchor bolts - tighten if necessary.

F. Wipe clean the inside of the washer and check that all electrical components are free of moisture and dust.

CAUTION: To help avoid personal injury, take care when doing any maintenance or making any check or repair. Follow manufacturer's instructions for all materials used during service and maintenance of this machine. If used or handled improperly, they can be hazardous. Improper or incomplete service can also affect the machine and result in personal injury, or damage to the machine and may void the warranty. If you have any question about carrying out some service, have the work done by a skilled technician.

VI.4 CARE AND MAINTENANCE OF STAINLESS STEEL

The following points on the care and maintenance of stainless steel surfaces should be observed in order to maintain the natural beauty and prolong its' service life.

1. Cleanliness is of utmost importance. Common deposits of dirt and grease can be quickly removed with a detergent and water. Whenever possible, the metal should be thoroughly rinsed and dried after washing. Periodic cleaning will maintain the bright surface appearance and help prevent corrosion.

2. Deposits that adhere to the surface of the stainless steel should be removed especially from crevices and corners. When using abrasive cleaners, always rub in the direction of the polish lines or "grain" of the stainless steel to avoid scratch marks showing. Never use ordinary steel wool or steel brushes on stainless steel. Iron particles from steel wool and brushes made of carbon steel amy become imbedded in the surface, causing rust. Use stainless steel wool or soft non-metal bristle brushes.

3. Contact with dissimilar metals should be avoided whenever possible. This will help prevent galvanic corrosion when salty or acidic solutions are present.

4. Discolorations or heat tint from overheating may be removed by scouring with a powder or by employing special chemical solutions.

5. Salty or acidic solutions should not be allowed to evaporate and dry on stainless steel. They may cause corrosion. Wash off the solution after using.

6. Permanent direct contact with other materials, such as wood or carbon steel should be avoided.

7. Sanitizers or sterilizing solutions should not be left in stainless steel equipment for prolonged periods of time. These solutions often contain chlorine which may cause pitting corrosion. The stainless should be cleaned and rinsed thoroughly after using.

8. Rust appearing on stainless steel sometimes leads to the belief that the stainless is rusting. The source of the rust may actually be some iron or steel part not made of stainless, such as a nail or screw. One remedy is to paint all carbon steel parts with a heavy protective coating. Stainless steel fasteners should be employed whenever possible.

CAUTION: Follow the manufacturer's advice whenever cleaning agents or other chemicals are used, inside or outside the machine. Some cleaners may be poisonous or flammable, and improper use may cause personal injury or damage. Do not use volatile cleaning solvents such as: acetone, lacquer thinners, enamel reducers, etc. Never use carbon tetrachloride, gasoline, benzene, or naptha for any cleaning purpose.

SERVICE PROCEDURES

VII.1 GENERAL

This section covers information regarding service and function of the various components of the machine. Further information and service bulletins regarding specific repairs can be obtained from the factory.

WARNING

Shut off power and water before attempting any maintenance, repairs or service, or before opening any service panels.

VII.2 ELECTRICAL TESTING

For electrical testing, an AMP-meter and a VOLT/OHM meter is required. (See figure VII-A)

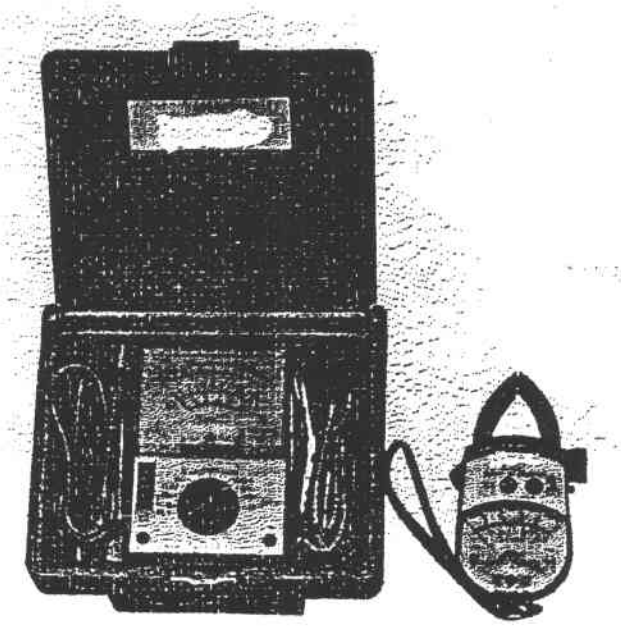


FIGURE VII-A: VOLT/OHM METER & AMP-METER

The AMP-meter can be used to detect excessive electrical current draw which causes overloads on breakers and fuses. The AMP-meter clamps around the current carrying wire (see instructions furnished with your meter from meter manufacturer).

The VOLT/OHM meter will measure volts when set on "VOLT". It will measure ohms (resistance) when set on "OHM". This setting can also be used when the meter is used for continuity testing.

As mentioned in safety warnings, the power to the machine must be disconnected before servicing. Wires should be disconnected from the component or components being checked. Using the OHM-meter, test leads are placed in contact with terminals being checked.

For example:
In checking the door lock switch or any other switch, set the OHM-meter to the "OHM" scale as outlined in the meter's operating instructions. Place one lead on each terminal as shown in figure VII-B and depress the switch button. If the switch is making contact, the needle on the meter will move towards the "0" end of the ohm scale. This indicates continuity through the switch. When the switch button is released, the needle will move back to its original position. Continuity through wires, etc. can be tested in the same manner.

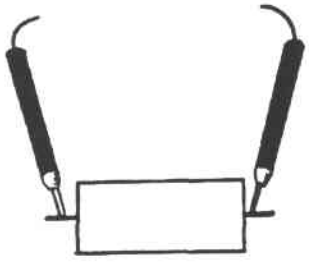


FIGURE VII-B:

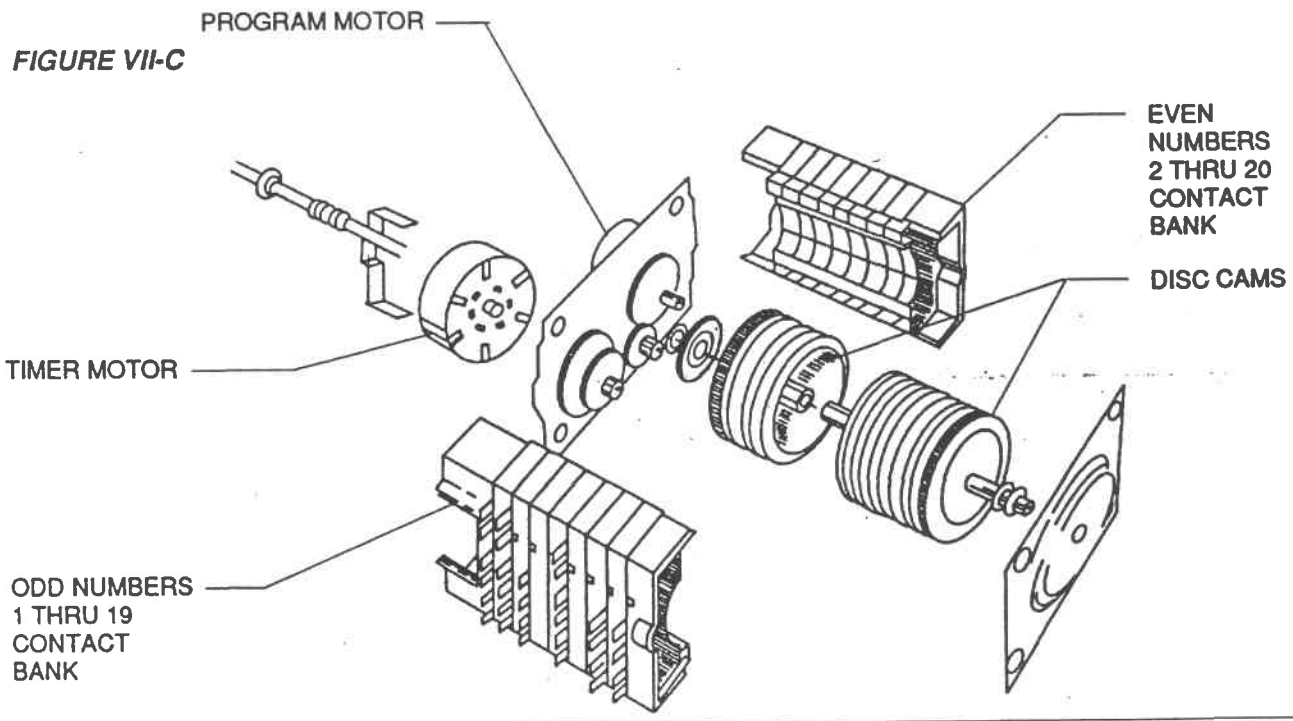
VII.2 PROGRAM TIMER

The program timer (see figure VII-C) has two assemblies of disc cams. These assemblies are capable of operating independently on the same shaft. The two cam assemblies are driven by two timer motors through a system of gears. Each contact is a single pole double throw switch.

The timer motor on the 1 thru 19 contact bank side turns the cam assembly that controls the reversing functions, the wash motor relay and the electric impulses for the program motor driving the 2 thru 20 contact bank side. This program motor controls the program functions of the machine from start to stop.

The reversing cam assembly will make one revolution every three minutes. It causes the wash motor to reverse 4 times per minute. The motor rotates in forward direction 12 seconds, pauses for 3 seconds, and rotates in reverse direction for 12 seconds and so on for the length of the cycle step (except for the "COLD GENTLE" cycle during which the motor pauses for 12 seconds and rotates for 3 seconds to achieve a "gentle wash" action). The reversing cam sends an impulse to the program timer every 30 seconds so it can advance through the program.

FIGURE VII-C



NOTE

Do not attempt to manually energize wash relay during operation of the machine. Reversing contacts will burn and cause a short circuit.
Always operate machine according to its program.

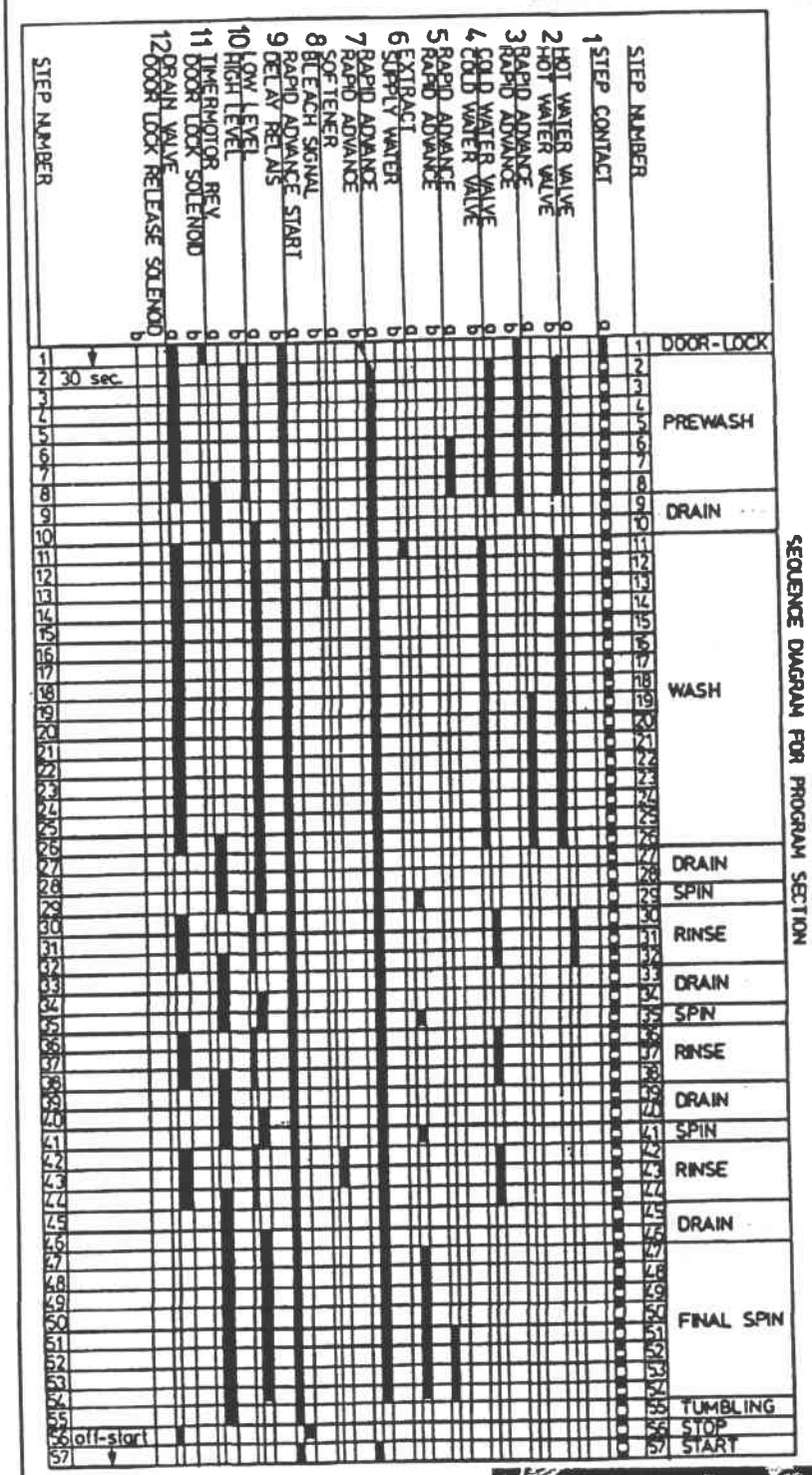


FIGURE VII-D: SEQUENCE DIAGRAM FOR PROGRAM SECTION

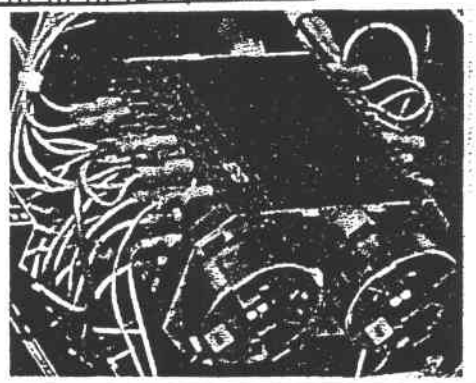


FIGURE VII-F: PROGRAM TIMER

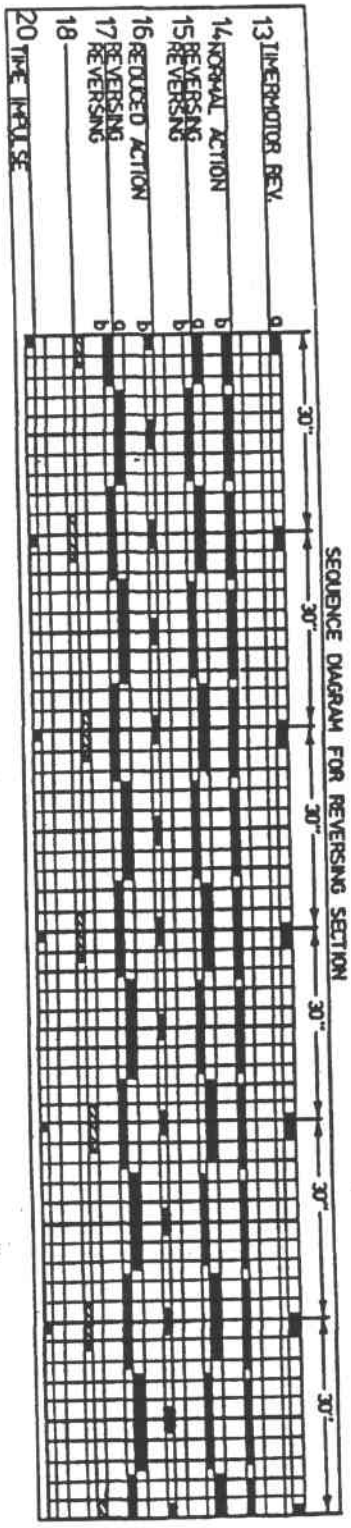


FIGURE VII-E: SEQUENCE DIAGRAM FOR REVERSING SECTION

VII.2 PROGRAM TIMER (Continued)

Timer contact set 14 to 14b operates the wash contactor (and Motor) for about 12 seconds followed by a three (3) second pause. During this pause, contacts 15 and 17 reverse connections to change the motor direction for the next 12 second run period. This reversing sequence repeats for the duration of the wash (or rinse) periods. Once every 30 seconds, timer contact set 20 to 20b closes to provide power to the program advance timer motor to step the program cam bank (sets 1 - 12) ahead in the cycle.

The timer motor is held to the timer with an easily removable clamp (see figure VII-C). Only timer motors and complete timers are available as spare parts. If contacts are burned are broken in the

TIMER SEQUENCE CHARTS

Timer contact charts for both cam assemblies on page 35 indicate the relative positions of each contact set for each 30 second increment of the program cycle. An open increment block represents an open contact set. A shaded block indicates contact closure at that point in the cycle (see page 35).

TIMER TERMINAL LAYOUT

Each timer contact set is a single pole, double throw switch. The common terminals are located in the middle row on each side of the timer. The left panel contains the odd numbered control sets (1, 3, 5, 7, 9, 11, 13, 15, 17, 19). The even numbered contact sets (2, 4, 6, 8, 10, 12, 14, 16, 20) are on the right side panel. There is no #18 set. Brass buss bars connect timer terminals 1, 3, 5, 7, 9, 11, 13, 11a & 13a and 15b & 17b on the left timer panel. Terminals 2, 4, 6 and 8, 10, 12, 14, 16 are connected on the right panel.

VII.3 SELECTOR SWITCH

The machines are provided with a temperature selector switch controlling a number of contacts. When each button is pressed, the other buttons are released. The various programs and water temperatures are selected by the switch in conjunction with the program timer. If none of the buttons are pushed, the program will be: WASH-WARM, ALL RINSES - COLD.

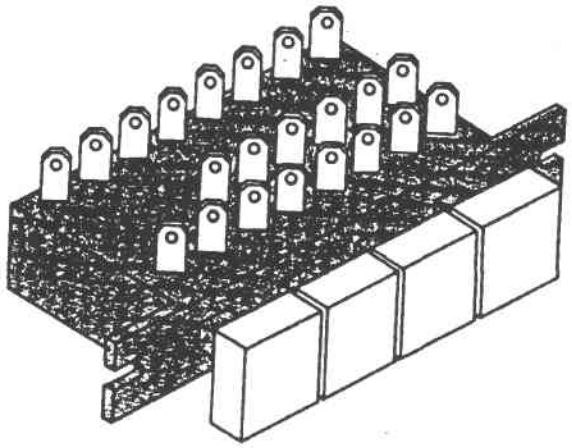


FIGURE VII - G: SELECTOR SWITCH

VII.4 CONTACTORS

The wash and spin contactors are different. The contactor consists of a moveable core, a solenoid and a contact assembly. The contactor may be disassembled by loosening two screws on the sides. The coils are rated for 110/120 V, 60 Hz or 110 V, 50 Hz service.

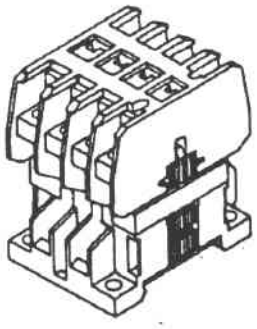


FIGURE VII-H: CONTACTOR

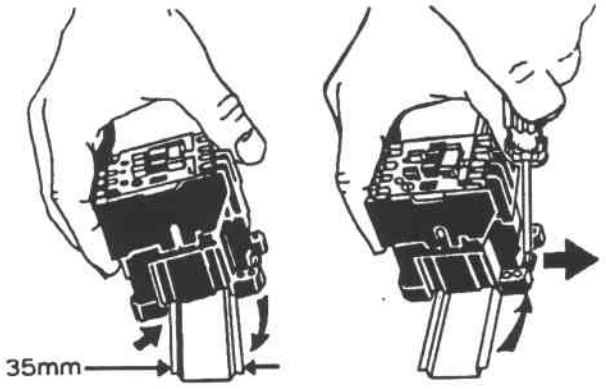


FIGURE VII-J: METHOD OF CONTACTOR REMOVAL

√ SERVICE TIPS:

1. Only complete contactors and coils are available as spare parts.

2. If the contactor does not energize, check the coil for continuity or short circuit.

3. If the contacts are burned or pitted, replace complete contactor.

4. If the contactor hums, it indicates a problem with the core system. Replace complete contactor.

5. If contactor sticks, check for sticky substance on core surfaces. Clean core carefully with grease dissolving solvent. Also check contacts. Replace contactor if problem still exists.

6. If a short circuit occurs in the motor or anywhere downstream of the contactor, the contacts should be inspected for damage. The contacts may be welded or severely burned. Replace complete contactor.

VII.5 BELTS AND PULLEYS

The machine is provided with two drive motors. The wash motor has a single output shaft to which is attached a drive pulley through which the wash motor transmits power via a multiple V-belt drive to a pulley on the input shaft of the extract motor. The extract motor, in turn, has an output shaft on the opposite end with a drive pulley attached through which power is transmitted via a separate multiple V-belt drive to a large drive pulley on the cylinder shaft.

The belts are tightened by loosening the motor mounting bolts and sliding the motor along the motor mounting plate until proper belt tension is obtained. Jack screws are provided on the motor mounting plate(s) to assist in moving the motor to tension the belt. The belt tension should be checked monthly.

When replacing belts, loosen the appropriate motor mounting bolts and threaded jack screws that affect the tension for that particular belt. Do not force belts off by using a pry bar and turning the pulley. This practice will result in damaged belts and will lead to premature belt failure.

Never replace one belt out of a set of identical belts used in a multiple V-belt drive. Always install all new belts within a set even if only one belt needs to be replaced.The belts are replaced in matched sets. Belts from different manufacturers should not be used within a matched set. Replacement belts for your machine must be of the same type and style for proper operation. Incompatible belts will lead to premature belt and pulley failure and may not properly transmit torque to the machine. Always check pulley alignment after replacing belts and re-check belt tension after motor mount bolts and jack screws are secure. Re-check tension on newly installed belts after 24 hours of operation.

Inspect and replace any pulley if any of the following conditions are observed:

1. Worn V-groove side walls (walls should be straight, not cupped).

2. Chipped or broken V-groove side walls.

3. Shiny groove bottoms (indicates V-belt is bottoming out in groove)

To remove the pulley, refer to figure VII-S and step 2 of VII.12.

To check alignment of any pulley, stretch a string starting from the smaller pulley to the large pulley (points A, B, C, and D as shown in figure VII-K). By starting with the smaller pulley, the degree to which the pulleys are misaligned will be more evident. If the string touches A, B, C and D, the pulleys are aligned.

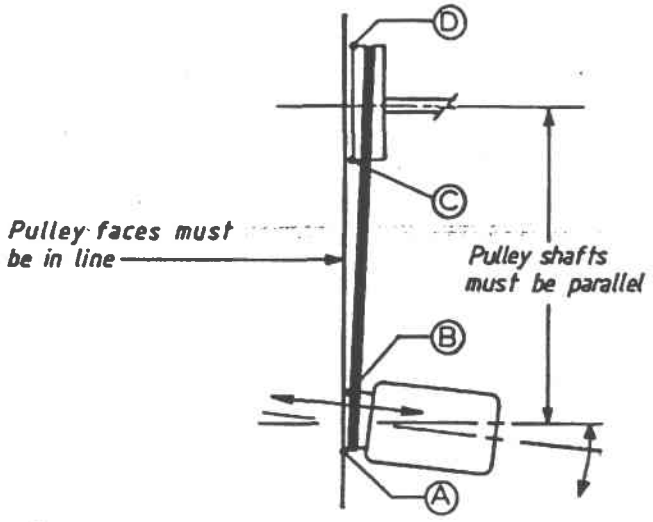


FIGURE VII-K: PULLEY ALIGNMENT

VII.6 DRAIN VALVE

The drain valve consists of a motor, a pinch hose, lift tube and bar, return springs, and a valve arm attached to the motor. The drain valve is normally open which means it closes when power is applied. When power is removed, the valve opens automatically. The normally open drain valve permits the machine to drain in the event of a power failure. The drain valve is controlled by the timer.

√ SERVICE TIPS

1. Check the motor winding for continuity or short circuit or abnormal drop in voltage.

2. Check that the shaft and rotor of the motor turns freely.

3. Check that the valve is closing and does not bind. Foreign matter might be stuck inside the drain pinch hose. A daily check for leakage is also recommended.

Cleaning:

Quarterly cleaning of the valve is recommended.

VII.7 DRIVE MOTORS & BRAKING

The UW-85M-3 is equipped with two three phase asynchronous motors. The wash motor is a single speed, 12 pole motor while the extract motor has two sets of windings and two speeds. Medium speed spin is 4 pole, and the high speed spin (extract) winding is 2 pole.

There is a thermal overload protector embedded in the windings. This acts as a normally closed switch which opens when the winding overheats. When the overload protector opens, power to the controls is removed preventing damage to the motors caused by overheating and/or an over load condition.

The wash motor is 12 pole Y-connected with a 540 RPM idling speed.The reversing action is achieved by changing two of the phases every 15 seconds at wash speed and is accomplished by the microcomputer.

The extract (spin) motor is 2 and 4 pole Delta connected, with an idling RPM of 1650 at medium speed and 3350 at high speed. When the shorting contactor is energized, the 4 pole Delta connection is changed to 2 pole Wye.

Braking for the machine is accomplished by energizing the slow speed (wash) windings.

√ SERVICE TIPS

1. If the motor has a high magnetic noise, check voltage. Also, the rotor could be out of alignment in the stator.

2. If a motor has reduced torque, check that current draw in each leg is the same. If off more than 15%, the motor winding or power to the machine is faulty.

3. If the motor does not receive power, check thermal overload in motor. Check wash and spin contactors.

4. If burned or open windings are suspected, check with an OHM-meter. All three legs must register the same amount of resistance (ohms).

VII.8 WATER LEVEL PRESSURE SWITCH

The machine is provided with two single contact water level pressure switches. One switch controls high level and the other controls low level.

The switches are set for a predetermined low and high water level in the machine at the factory. The switches are controlled by the program timer according to the cycle selected. The timer turns the water inlet valves on and keeps them on until the level (high or low) is reached in the machine. The level switch is connected to a rubber air chamber attached to the shell sump. This air chamber acts as an air reservoir so that water does not rise into the tube connecting the switch with the air chamber. A rise in pressure differential is created in the air chamber as the machine fills with water and results in a deflection of the level switch diaphragm.

The pressure switch has a pre-set trip point and a reset point. The low level reset point acts as a safety for spin. The spin contactor cannot energize until the low level reset point is reached, thus preventing the machine from going into spin (extract) with water in the machine.

The pressure switch is pre-set at the factory, but can, if necessary, be adjusted for other levels.

Adjustment screws turned approximately one-half turn will affect the water level approximately one inch. Be very conservative with adjustments - over-adjustment will create problems in reliability of operation. Do not tighten or loosen the adjustment screws too far. All adjustments should be made with the screw located in the center of the level switch. Do not adjust the screw offset to the side of the switch. The switch mounted lower in the control module controls low level. The water level should be set with no load in the washer. If the level is set to high, water will run out the overflow and never shut off. If the level is set too low, the switch will not re-set to the empty position after the drain has opened.

CAUTION

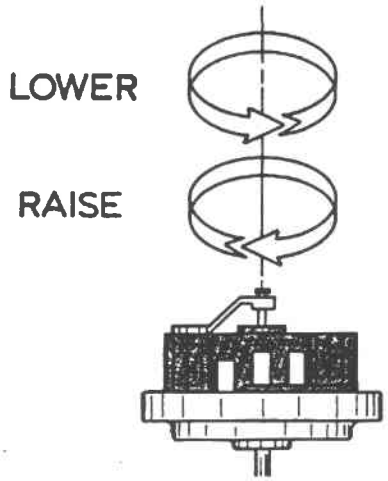
The level switch is electrically "hot" when power is on the controls. Use an insulated screwdriver to perform adjustments.

1. To increase the high water level, turn high level switch adjustment screw clockwise (see figure VII-L).

2. To decrease the high water level, turn high level adjustment screw counter-clockwise.

3. To change the low water level, adjust low level switch adjustment screw in the same manner.

FIGURE VII-L: METHOD OF WATER LEVEL ADJUSTMENT.



VII.8 WATER LEVEL PRESSURE SWITCH (Continued)

√ SERVICE TIPS

1. If water does not turn off to the machine, check air chamber and air tube to pressure switch for blockage or leakage. The system must be air tight. Sometimes detergent will build up in the air chamber.

2. If machine does not fill, check for continuity at the pressure switch.

For the UW85, high water level is set at the factory at the bottom of the door glass. Low level is set at 1" to 2" above the conical edge of the cylinder back.

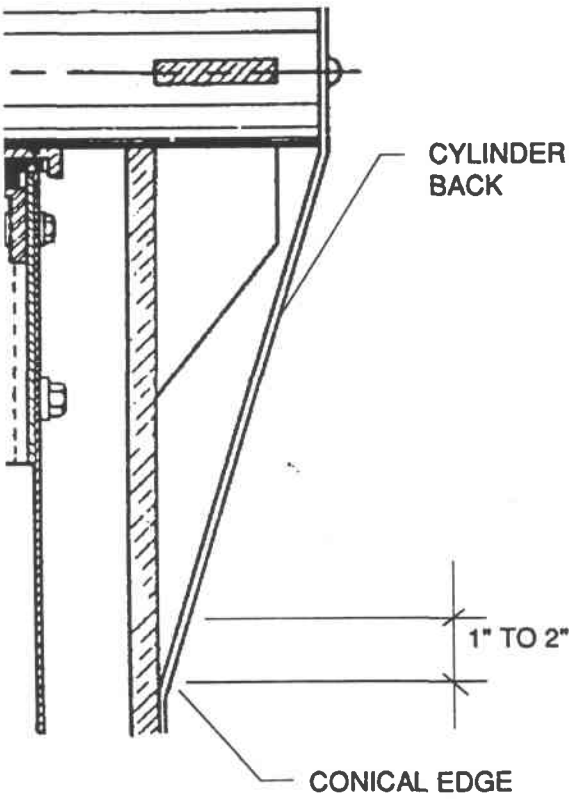


FIGURE VII-M: LOW WATER LEVEL

Insert UW Water Cosumption Chart

VII.9 INLET VALVES

Two electric solenoid valves similar to the one shown in Figure VII-N are used on the UW85M-3 to control the water inlet for the fill steps.

In clean water, the valve will work problem free. A strainer is installed in the inlet hoses to provide protection against dirt entering the valve.

Observe that half of the valves on your machine are labelled for "hot" and half for "cold" water connection; however, the valves are identical.

When assembling the water valve after repairs, please note that excessive tightening of the coupling nut will distort the valve body and cause the piston to jam. Do not use a "cheater bar" or hammer to tighten. If the valve has been hit with a hammer, most likely the valve body will be distorted and the entire valve must then be replaced.

If a leak is noted between bonnet and body, loosen coupling nut until the bonnet can be turned slightly. Tighten the coupling nut observing the warning in the previous paragraph. This procedure may have to be repeated.

When ordering repair parts for a water valve or ordering a complete valve, be sure to indicate whether your machine is equipped with 120 volt or 220 volt valves. Repair kits and replacement solenoids are available for the valves.

√ SERVICE TIPS

If the valve does not open or close, check the following:

1. Check power to the solenoid - use the voltmeter. Check for abnormal drop in voltage.

2. Check the solenoid for short circuit or failure in the coil. Check the coil for continuity.

3. Check that the water pressure corresponds to the rated pressure for the machine.

4. Check the plunger tip for damage.

5. Check for dirt or other foreign matter under the seat of the piston if the water does not shut off when power is removed from the valve.

6. Check for leaking air tube to the water level switch or obstructions in the air tube.

7. To determine if the problem with the valves is electrical or mechanical, remove power from the machine while the problem is occurring. If the water continues to flow, the problem is mechanical (dirt, distorted valve body, etc.).

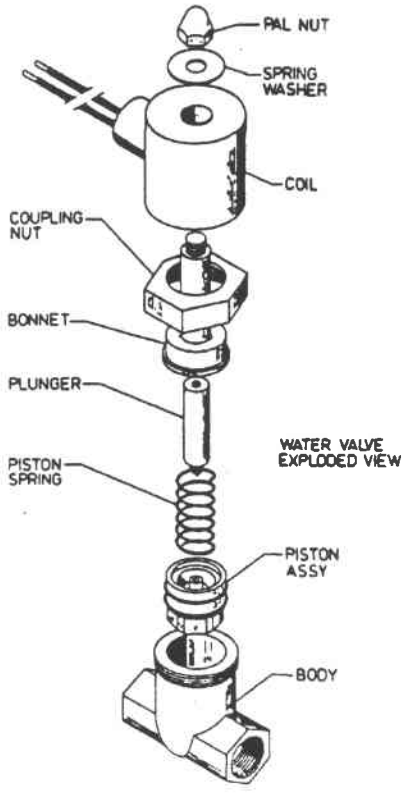


FIGURE VII-N:

VII.10 VACUUM BREAKER

Your UW85 is equipped with one vacuum breaker assembly similar to the one shown in Figure VII-O.

The purpose of the breaker is to prevent back-siphoning of polluted water into a potable water supply in the event of a system failure.

When the water supply valve ahead of the breaker is closed, or when it is open and a negative pressure is created in the water supply line (no water), the disc float drops due to gravity, opening the atmospheric vent under the cap and at the same time closing the orifice opening. This prevents the creation of a vacuum in the discharge line from the breaker and prevents back-siphoning.

As water flows through the breaker,, it lifts the disc float and closes the atmospheric vent against water leakage. **Water pressure must be adequate to effectively seal the disc float against the atmospheric vent. If adequate water pressure is not available, leaks at the atmospheric vent may occur.**

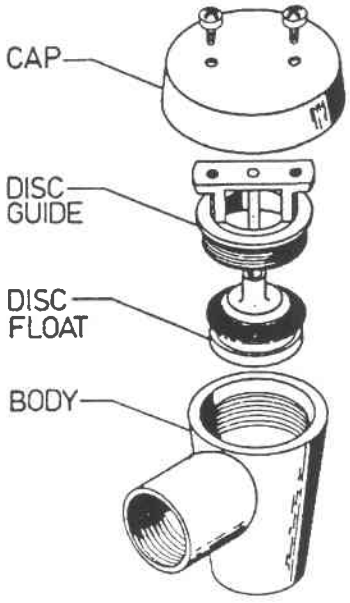


FIGURE VII-O:

VII.11 OUT OF BALANCE SWITCH

A switch, attached inside the gamma A-frame of the machine between the front and rear bearing plates, is designed to detect potential severe out of balance vibration during the extract step.

The switch is tripped by an actuating bolt installed in the opposite bearing plate. The clearance gap between the switch and the actuating bolt should be set so that an .008 inch (.20 mm) feeler gauge can be inserted between the switch and the bolt without actuating the switch. It should not be possible to insert a .010 inch (.25 mm) gauge without actuating the switch. A flat feeler gauge may be used to set the gap, however, a step-type feeler gauge will provide more accurate settings. Set the switch with power removed from the machine and listen carefully for the sound of the contacts being tripped in the switch.

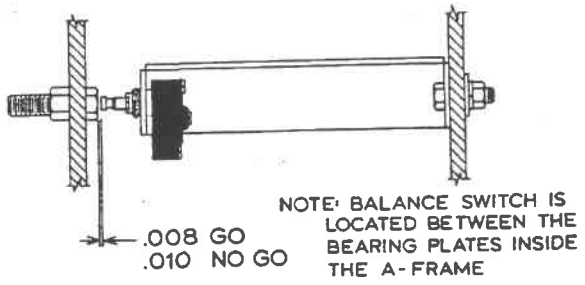


FIGURE VII-P: BALANCE SWITCH

VII.12 BEARINGS, SHAFT SEAL & CYLINDER

The UW85 cylinder is a welded unit and can not be separated from the backplate and shaft assembly. Do not attempt to separate any part of this unit.

The cylinder shaft protrudes through the rear of the shell and provides means of attaching and transmitting the drive to the cylinder (See Figure VII-Q). This shaft is supported by two double-row spherical roller bearings mounted on the rear faces of two heavy steel bearing plates. The bearings are sealed, permanently lubricated and self-aligning to allow for any slight misalignment between the two. Mounting bolts for the bearings are 3/4"-16 x 2 3/4" for the front bearing and for the rear, all grade 5 bolts and nuts with hardened washers under each bolt head and nut per bearing. The front mounting bolts and the rear are torqued to 285 foot-pounds.

A seal configuration is provided to prevent the loss of water from the shell (See Figure VII-R). The seal consists of a fixed spring-loaded phenolic ring (#6) against which rides a rotating ceramic ring (#2). This ceramic ring is adhered to a brass collar (#1) which is locked to the cylinder shaft by means of two set screws (#10). The brass collar contains two replaceable O-rings (#5) which provide sealing between the inside of the collar and the shaft. The ceramic ring is fastened to the brass collar with an industrial adhesive.

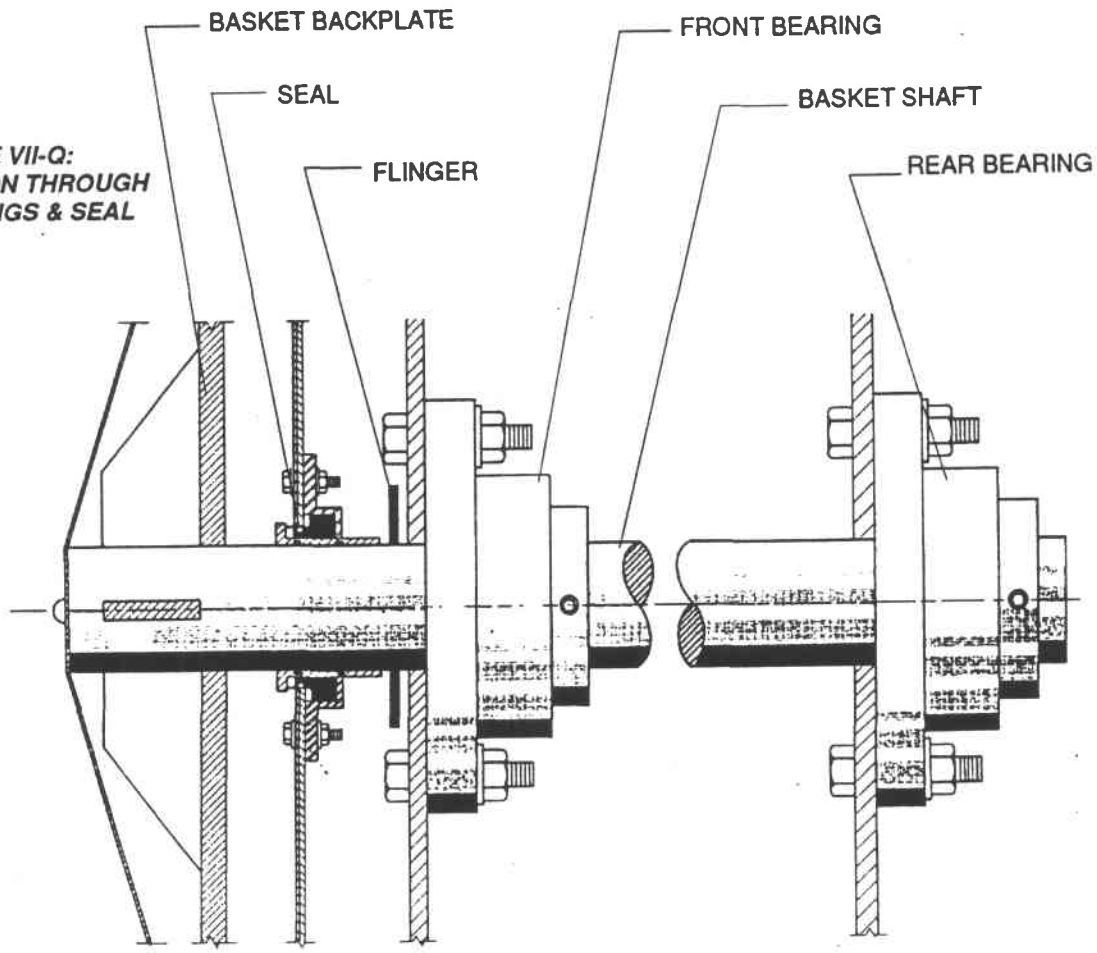


FIGURE VII-Q: SECTION THROUGH BEARINGS & SEAL

VII.12 BEARINGS, SHAFT SEAL & CYLINDER

Neoprene is the material used for the surrounding body of the phenolic ring within which several stainless steel coil springs provide a means of pre-loading against the ceramic ring. The brass collar is forced against the phenolic ring until the phenolic ring is depressed 1/16" to 1/8".

The phenolic ring with its' body are assembled with a very light press fit into a nylon housing (#7) by means of which the seal is mounted on the outside rear of the shell with stainless bolts, nuts, and bartite washers. A rubber circular "flinger" rides on the shaft between the seal and front bearing (Figure VII-Q) to prevent any droplets of water from reaching the bearing. A "scupper" cup is provided attached to the shell reinforcement plate directly underneath the seal to catch any escaping water and route it into the drain system.

In the event that the cylinder should need to be removed from the machine to replace the basket, seal, or front bearing, the following procedure may be observed:

WARNING

To reduce risk of electric shock and bodily injury before performing any maintenance, make sure that the main power to the machine is turned off and locked out.

1. The first step is to remove the top rear cover and the rear expanded metal panel from the machine (for reference, see Fig. H, Illustration 721196 in the Repair Parts section of this manual).

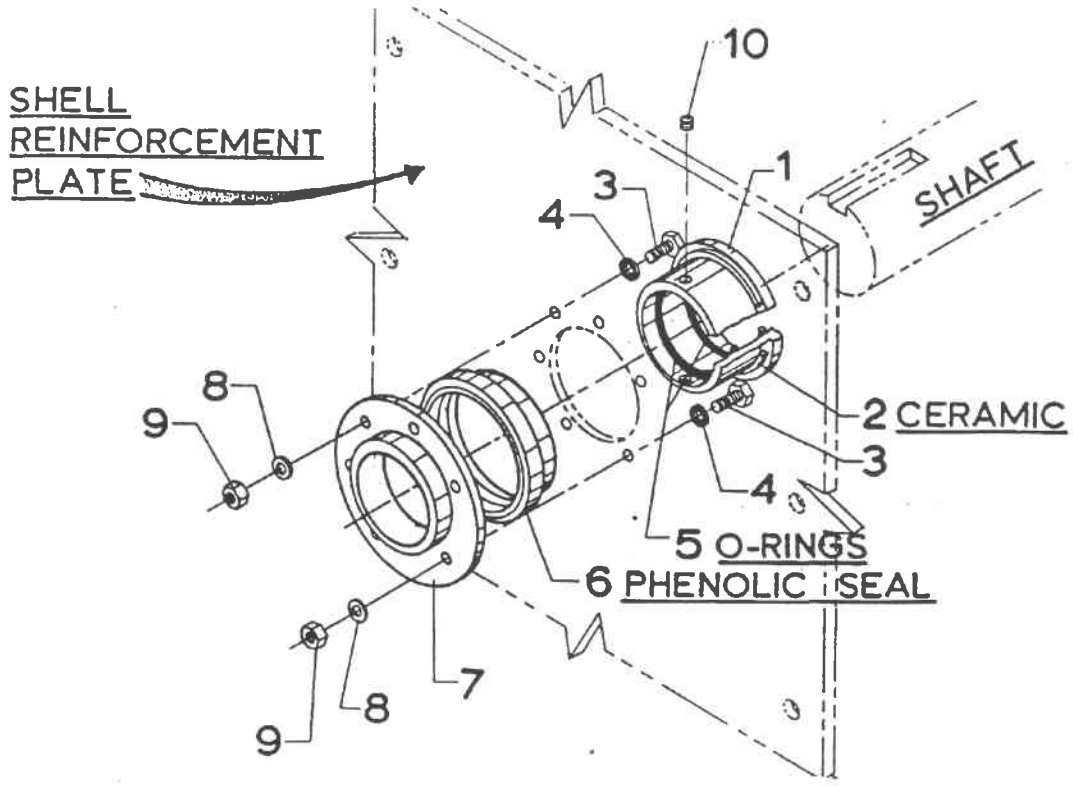


FIGURE VII-R: DETAIL OF SEAL ASSEMBLY

VII.12 BEARINGS, SHAFT SEAL & CYLINDER (Continued)

2. Now remove the drive belts from the large cylinder drive pulley. Remove the bolts from the drive pulley hub and re-insert them in the threaded holes provided in the hub. Tighten the bolts in the threaded holes equally until the bolts force the pulley from the hub.

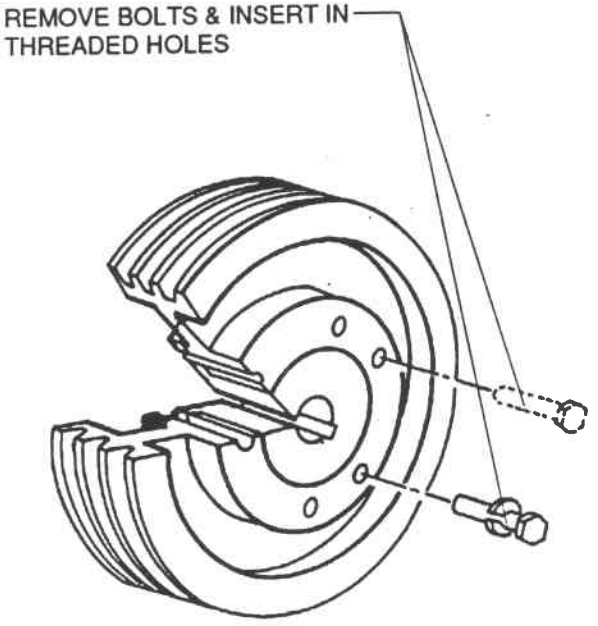


FIGURE VII-S: PULLEY REMOVAL

Do not strike the pulley with a hammer or other instrument. Pull the hub, key and pulley from the shaft and set them aside.

3. Loosen the set screws in the locking collars of the front and rear bearings. Lubricate entire shaft and apply oil between bearing inner race and shaft.

4. Locate the brass seal collar and the three set screws that lock it to the shaft. Remove the set screws. If the cylinder is pulled out without removing these set screws, the phenolic seal will be damaged.

5. Remove the side panels from the machine. Now locate the right and left door boxes at the front of the machine and remove the screws from the top and bottom of the boxes. Slide the boxes out until they are free of their mounting brackets. If the side panels were removed, there should be sufficient slack in the wires to the boxes to allow them to be rested on the base frame of the machine.

6. The shell band bolts will now be exposed at the horizontal right and left centers of the shell front. Loosen and remove the bolts and the two halves of the shell band taking care not to damage the shell band seal underneath. Take note of the 3 inch V-shaped stainless steel seal shields under the butt ends of the shell band. Be sure these shields are replaced at these locations upon re-assembly. Note the position of the butt ends of the shell band seal and mark this location on the shell front with a grease pencil. Remove the seal taking care not to tear or stretch it.

Using a small flat file, make a notch in two positions on the shell front and shell so that the shell front may be installed in the exact same position. The shell front may now be removed. The front is sealed with RTV sealant and a slight bond may exist. Be sure to reseal with RTV when re-assembling the machine.

7. Assuming that the cylinder shaft was lubricated as instructed in step #3, grasp the locking collar of the front and rear bearing in turn with a pipe wrench and attempt to rotate the shaft within the bearing inner race by grasping the front of the cylinder and turning while holding race stationary. In extreme cases, the bearing may have to be cut off before the cylinder can be removed if it is froze to the shaft .

VII.12 BEARINGS, SHAFT SEAL & CYLINDER (Continued)

Two square holes are provided in the rear bearing plate to enable the use of a large wheel puller to assist in forcing the cylinder shaft through the bearing races if needed. If the wheel puller is used, tighten the puller until the shaft moves enough to allow the cylinder to be pulled by hand.

8. Remove the cylinder slowly and carefully to avoid damaging the seal.

CAUTION

The cylinder assembly is very heavy. Be sure adequate facilities are available to handle and lift the assembly to prevent personal injury and/or damage to the machine.

Slide the cylinder and shaft assembly forward until the shaft clears the seal. Once the cylinder is clear, inspect the condition of the brass collar and ceramic ring. If damage is evident, replace the unit. Inspect the phenolic seal assembly attached to the shell. If damage is evident, replace the unit.

9. If the front bearing is to be replaced, loosen and remove the bolts and nuts from the bearing. Lift the bearing from within the A-frame. **DO NOT loosen or remove the rear bearing at this time.** Inspect the bearing bolts, nuts, and hardened washers. If damaged or questionable, replace.

The new bearing will be torqued down in two steps with a torque wrench and, therefore, will require that the bolts and nuts, if not replaced, at least be in good condition and that the threads in both be **clean** and **dry**.

Install the new front bearing and snug the bolts and nuts down. Be sure that the hardened washers under the bolt heads and nuts were not omitted. Torque the bearing bolts with a reliable torque wrench evenly working from diagonally opposing sides to 150 foot-pounds. Repeating the same sequence, re-torque all the bolts to 285 foot-pounds. Go back over all the bolts and re-check, making sure that all four bolts are evenly torqued to 285 foot-pounds.

10. Clean the cylinder shaft and remove all burrs and rough spots. Lubricate the shaft. The shaft **must** be absolutely smooth so that it will slide through the bearings.

When re-installing the cylinder, it is recommended that an anti-seize compound (such as Fel-Pro C5-A Anti-Seize) be applied to the inside of the bearing bores to prevent later seizure to the shaft.

Re-install the brass seal collar on the shaft after the shaft is adequately lubricated. Carefully replace the cylinder assembly in the shell and insert the shaft into the seal taking care not to damage the seal. Align the shaft through the bearings and gently push the assembly in until the cylinder bottoms out. Do not tighten the locking collars on the bearings at this time.

12. Replace the shell front taking note of the marks made in step #6 to be sure the part is replaced in its' original position.

VII-13 DOOR AND DOOR GASKET

The door consists of a stainless steel ring to which is mounted the door glass, door gasket, and the door handle.

When the door is closed, pressure is applied against the gasket to seal the door to the shell front. Shims are placed under the hinge and/or door lock lugs to adjust the pressure applied on the gasket.

√ SERVICE TIPS

1. If the door leaks, adjust the number of shims under the hinge and/or door lock lugs.

2. Clean sealing surface of the door gasket regularly to prevent leaks.

3. Do not clean gasket or other rubber materials with oil or other petroleum-based products.

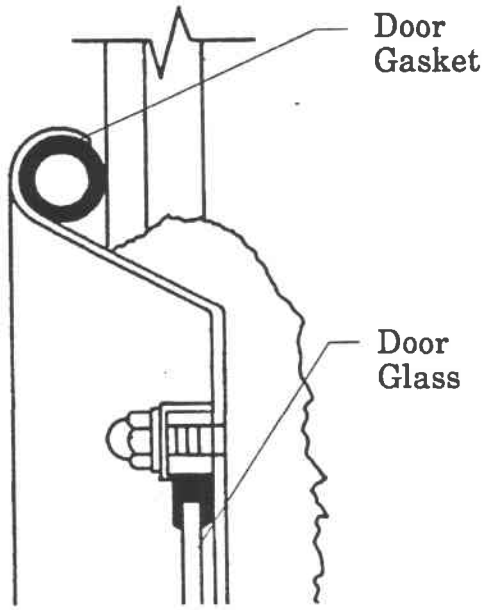


FIGURE VII-T: DOOR AND DOOR GASKET

INTENTIONALLY LEFT BLANK

TROUBLE SHOOTING

VIII.1 GENERAL

This section is dedicated to the probable cause and solution to various problems which may occur during the life of the machine.

BEFORE TROUBLE SHOOTING, CHECK THE FOLLOWING:

1. Be sure all services to the machine are operating properly and that fuses are not blown and water is connected to the machine.

2. **BEFORE PROCEEDING, DISCONNECT ELECTRIC POWER TO THE MACHINE.**

3. Check for any loose wires or connections which may affect the machine.

4. Be sure to electrically isolate a component when testing it for continuity since a false reading may be obtained from the electrical path of another component.

SYMPTOM	PROBABLE FAULT	REMEDY
Machine won't start	No current to machine	Check main fuse or circuit breaker on power supply.
		Check control circuit fuse on the control module.
		Check for broken or disconnected electrical wires.
	Door lock switch not made.	Check door lock switch operation & actuators.
		Check continuity on switch and at terminals in the control module.
		Be sure door is both closed & locked.
	Defective switches in the program timer.	Check for continuity across contacts 9-9a and 7-7a when timer is in step one or two.
	Defective program timer motor.	Replace motor.

SECTION VIII - TROUBLE SHOOTING

SYMPTOM	PROBABLE FAULT	REMEDY
Machine does not operate at wash speed.	No current to motor through contactor.	Check power supply to contactors & coils.
		Check and replace contactor coils or complete contactors as required.
	Motor thermal protector tripped.	Automatically resets after 15-30 minutes. Check reason for overheating.
	Defective program timer contacts.	Check for continuity between timer contacts 14-14b and 16-16b. Check auxiliary contact on spin contactor.
	Reversing section contacts in program timer defective.	Check reversing timer motor. Check timer contacts 15 to 17 to a and b for continuity.
		Check contact 14 - 14b and 16 - 16b for continuity.
	Motor inoperative.	Check motor leads and ensure that motor receives power. If power is correct replace motor if necessary.
Motor runs, but cylinder rotates slowly, or not at all.	Cylinder jammed by foreign objects.	Check for free rotation by hand. Remove foreign object (may require disassembly of machine).
	Loose or worn drive belts.	Replace belts and/or check tension.
	Hinge microswitch open.	Make sure door is both closed & locked. Check actuator adjustment.
	Motor pulley loose or off motor shaft.	Check pulley - tighten set screw. If necessary replace key.
	Drive belt broken.	Check and replace drive belt if necessary.
	Motor speed incorrect.	Make sure full power is available to the motor. Check for low voltage condition.
Door leaks.	Insufficient pressure on door gasket.	Adjust number of shims under door hinge and door latchs.
	Damaged door gasket.	Inspect & replace door gasket.
	Foreign matter on door gaket.	Inspect & clean door gasket as required.

SYMPTOM	PROBABLE FAULT	REMEDY
Motor does not operate at extract speed.	Extract contactor inoperative.	Check power supply to contactors & coils.
		Check coils and contactor functions.
	Thermal overload protector in motor tripped.	Automatically resets after 15 - 30 minutes. If not, replace motor. Investigate reason for overheating.
	Water level switch has not reset.	Check level switch, adjust or replace. Check air chamber and hoses to switch.
	Defective program timer contacts	Check timer contacts 5 - 5a for continuity.
	Drain will not open.	Check drain valve - might be stuck in closed position. Check drain line for free flow.
Motor momentarily starts on and off in extract.	Machine is not draining fast enough.	Check drain valve and drain of the machine.
Machine will not fill with water.	No water from service lines.	Check shut-off valves on main supply.
	.Clogged inlet valve strainers.	Remove supply hoses and check strainers in valves - clean if clogged.
	Inoperative inlet valves.	Check solenoids for proper function. Check for trash in inlet valves. Clean or replace screens as required.
Machine will not drain.	Clogged drain valve.	Check for free flow.
	Inoperative drain valve.	Check drain valve - might be stuck in closed position or clogged.
Machine will not hold water.	Inoperative drain valve.	Check drain valve motor. Check drain valve for foreign matter which could keep valve open.
	Program timer drain contacts defective.	Check timer contacts 12 - 12a for continuity.

SECTION VIII - TROUBLE SHOOTING

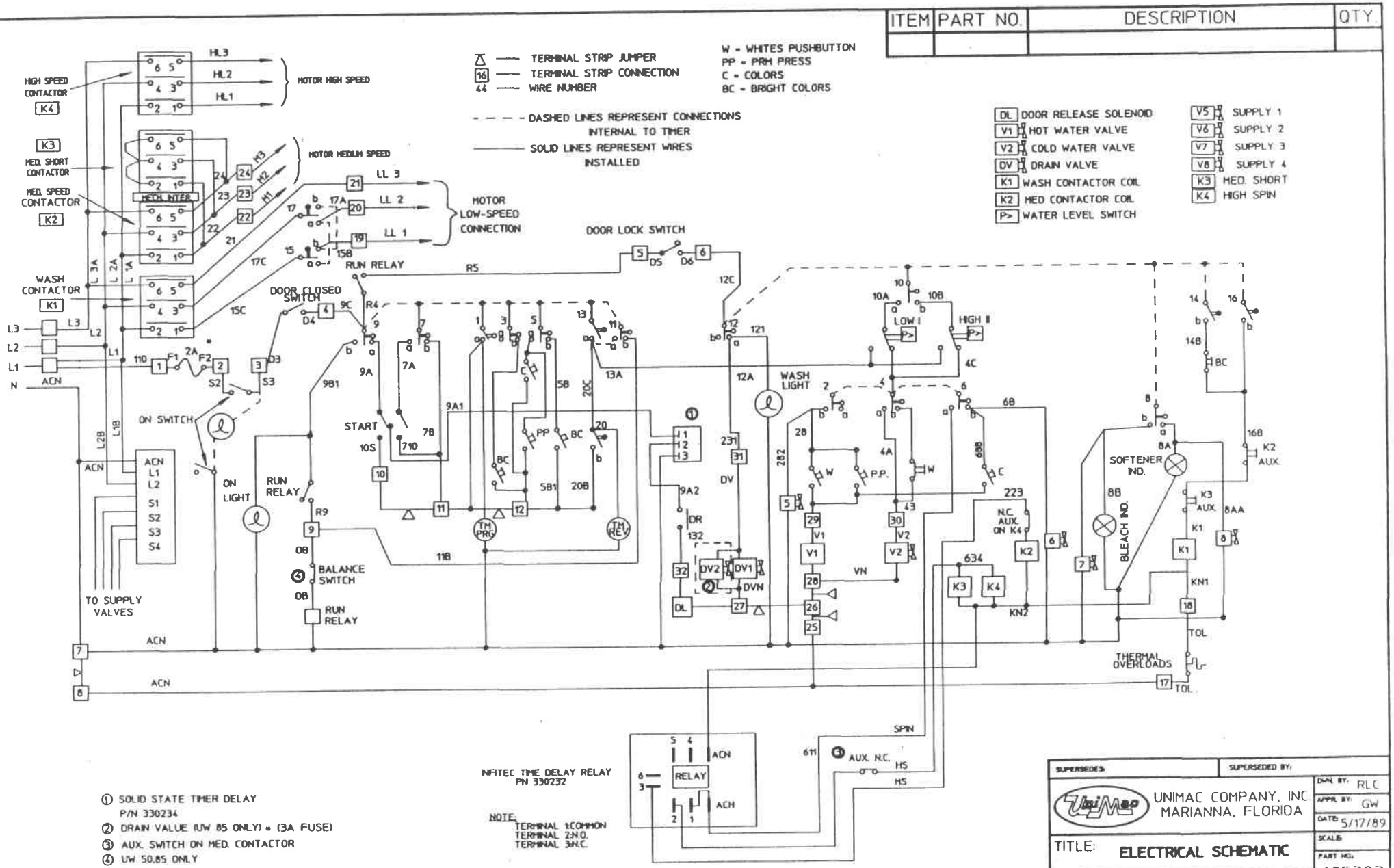
SYMPTOM	PROBABLE FAULT	REMEDY
Excessive vibration and/or noise during spin.	Inadequate foundation or loosened mounting bolts.	Tighten bolts. Be sure foundation is adequate for machine.
Program timer won't advance.	Insufficient water supply to machine	Water supply lines must be of adequate size.
		Water pressure is too low - increase if possible.
	Level switch defective.	Check for continuity on level switch contacts 11 - 13 or 21 - 23 when water level is reached. Check air trap and hoses to level switch.
	Defective timer gears.	Replace timer.
Program timer advances continuously through program.	Door lock not activated.	Check door lock switch for continuity or if stuck - replace if necessary.
		If door is closed timer will automatically advance to zero position and is ready for a new cycle.
Excessive cycle time.	Clogged or damaged inlet hose screens.	Check inlet hose screens - clean & replace as required.
	Clogged drain or inadequate drain system.	Drain lines or system must be free flowing and of adequate size.
Water level too high.	Level control switch inoperative or out of adjustment.	Adjust level control or replace if necessary.
	Air trap or hoses to level control leaks.	Check & correct for leaks in hoses and air trap.
	Level control.	Check that level control switch contacts 11 - 12 defective or 21 - 22 will open when level is reached.
Water level too low.	Level control switch inoperative or out of adjustment.	Adjust level control or replace if necessary.

WIRING DIAGRAMS

This section contains wiring diagrams for the UW85M-3. Page 56 shows drawing number 605383 depicting the standard UW85M-Series wiring schematic for 208-240V/ 3ph/60Hz 4-wire 120 volt control models. Page 57 shows drawing number 605396 depicting wiring for 440-480V/3ph/60Hz 3-wire 120 volt contol models only. Page 58 shows drawing number 605893 depicting wiring for 220-240V/3ph/50Hz 3-wire models with 220 volt controls only. Page 59 shows drawing number 605808 depicting wiring for 380-415V/3ph/50Hz 4-wire models with 220 volt controls only. Page 60 shows drawing number 601896 depicting control transformer wiring for 208-240 Volt, 3-wire (no neutral) equipped models only.

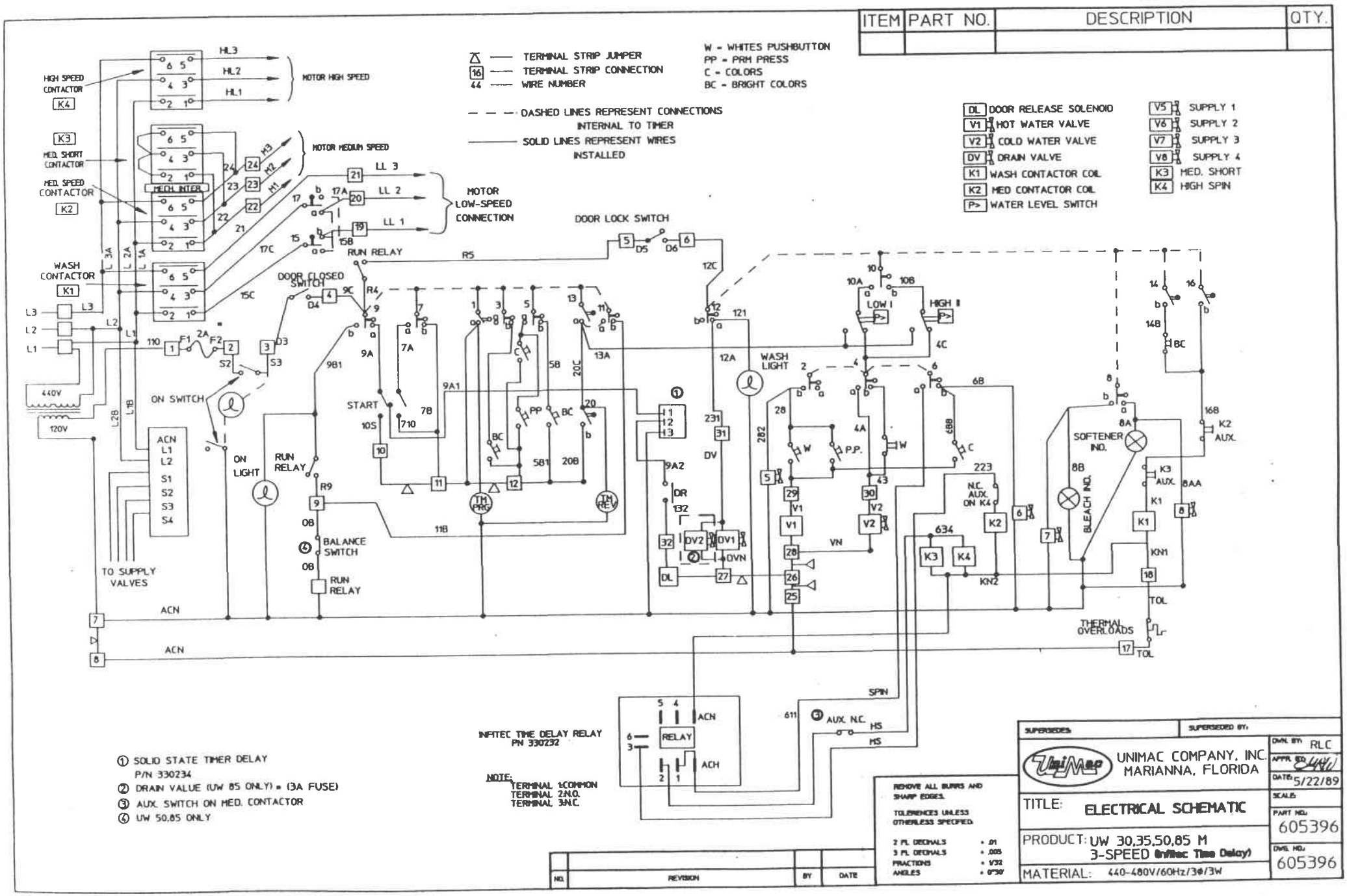
The wiring diagrams are generic in nature and may not exactly depict the options or special configuration of your machine. They are included as a guide to assist in trouble shooting.

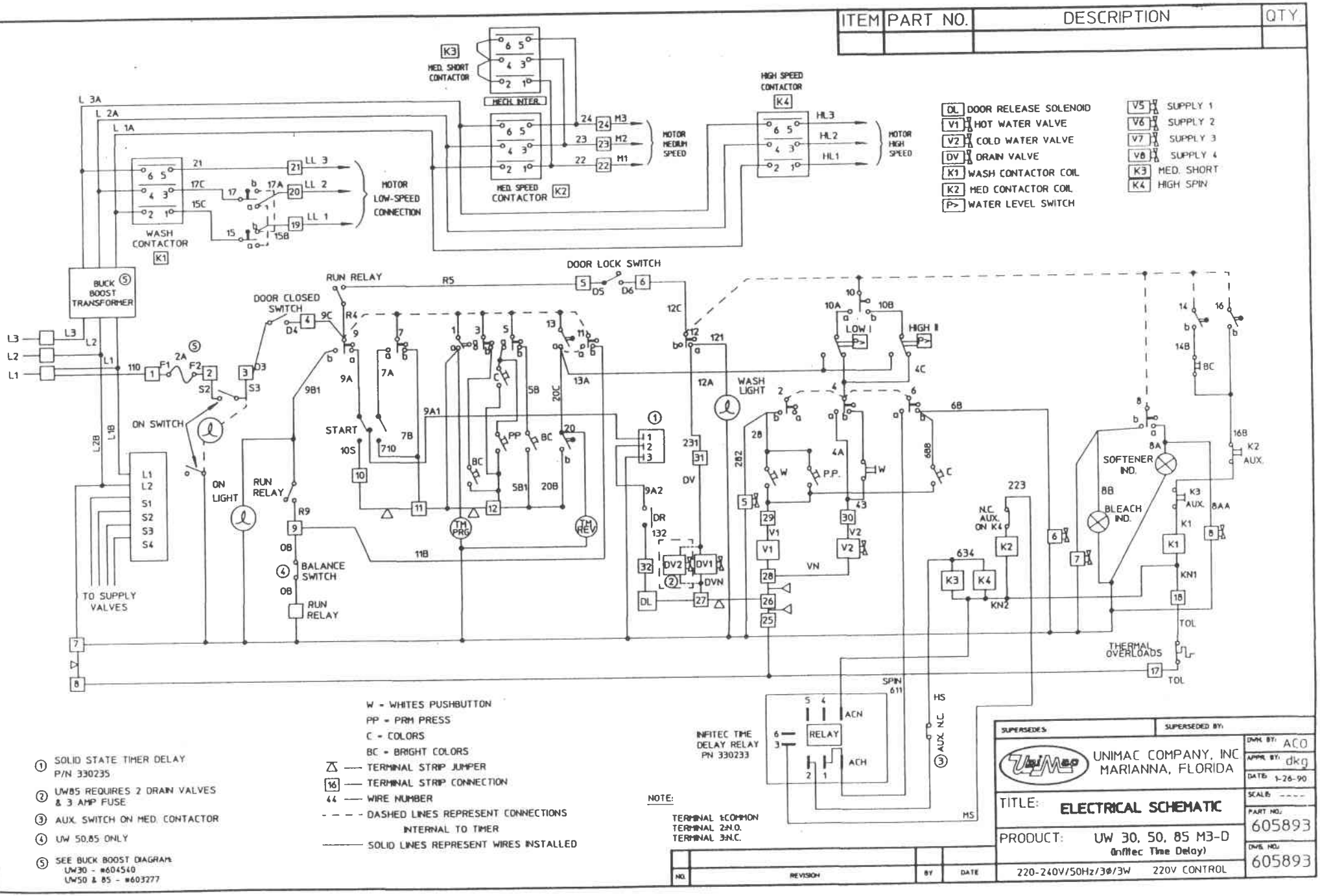
ITEM	PART NO.	DESCRIPTION	QTY



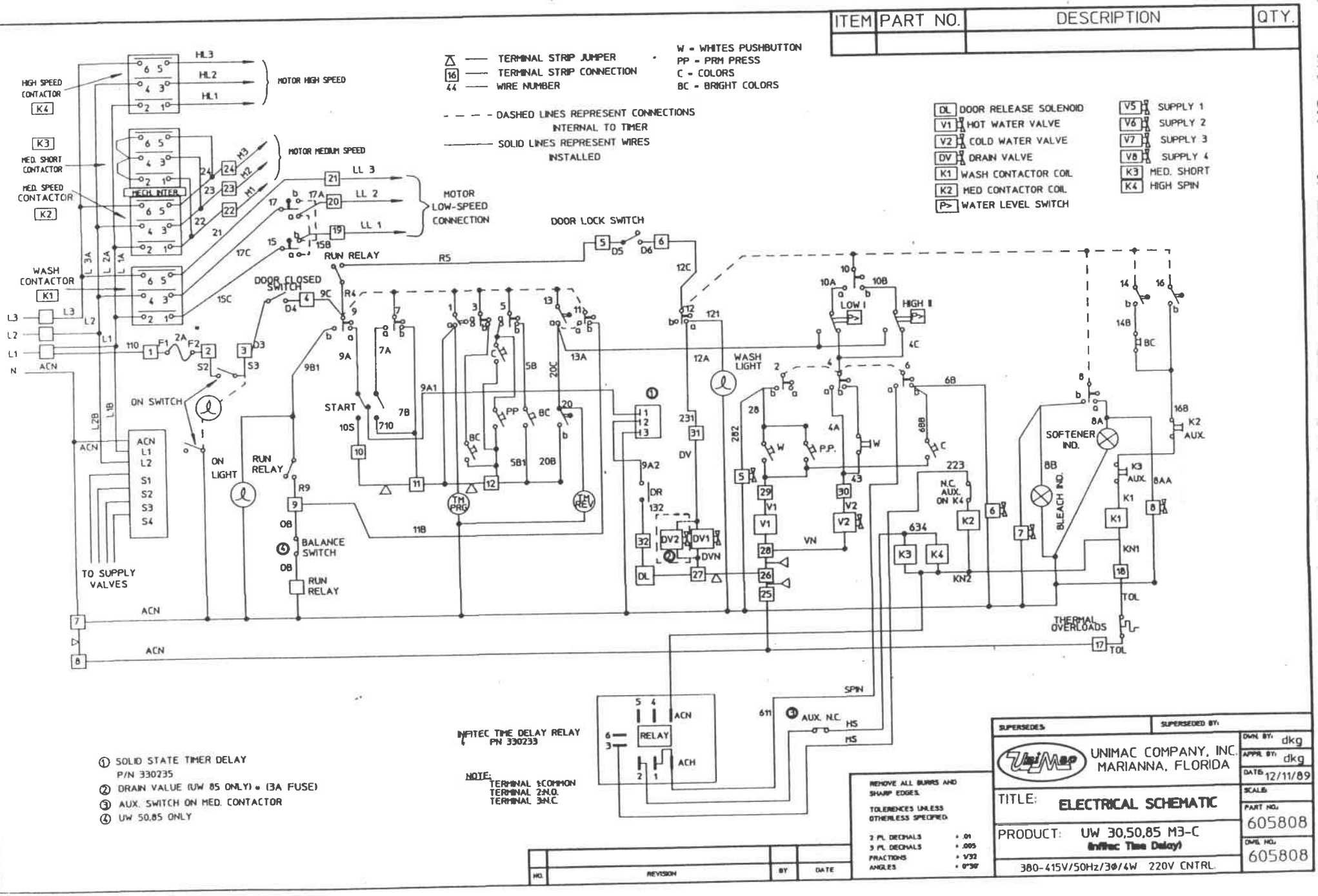
NO.	REVISION	BY	DATE
A	DELETED 35 FROM DRAWING ECN 309	ACO	1-17-90

SUPERSEDES:	SUPERSEDED BY:
UNIMAC COMPANY, INC MARIANNA, FLORIDA	DWN. BY: RLC; APPR. BY: GW; DATE: 5/17/89; SCALE:
TITLE: ELECTRICAL SCHEMATIC	PART NO.: 605383
PRODUCT: UW 30, 50, 85 M3-A (A) (Infitec Time Delay)	DWG. NO.: 605383
MATERIAL: 208-240V/60Hz/3Ø/4W	


ITEM | PART NO. | DESCRIPTION | QTY.
W = WHITES PUSHBUTTON
PP = PRM PRESS
C = COLORS
BC = BRIGHT COLORS
TERMINAL STRIP JUMPER
TERMINAL STRIP CONNECTION
WIRE NUMBER
DASHED LINES REPRESENT CONNECTIONS INTERNAL TO TIMER
SOLID LINES REPRESENT WIRES INSTALLED
DL DOOR RELEASE SOLENOID
V1 HOT WATER VALVE
V2 COLD WATER VALVE
DV DRAIN VALVE
K1 WASH CONTACTOR COIL
K2 MED CONTACTOR COIL
P> WATER LEVEL SWITCH
V5 SUPPLY 1
V6 SUPPLY 2
V7 SUPPLY 3
V8 SUPPLY 4
K3 MED. SHORT
K4 HIGH SPIN
HIGH SPEED CONTACTOR K4
MED. SHORT CONTACTOR K3
MED. SPEED CONTACTOR K2
WASH CONTACTOR K1
MOTOR HIGH SPEED
MOTOR MEDIUM SPEED
MOTOR LOW-SPEED CONNECTION
DOOR LOCK SWITCH
DOOR CLOSED SWITCH
RUN RELAY
WASH LIGHT
ON SWITCH
ON LIGHT
START
BALANCE SWITCH
SOFTENER IND.
BLEACH IND.
N.C. AUX. ON K4
THERMAL OVERLOADS
TO SUPPLY VALVES
440V
120V
ACN
INFITEC TIME DELAY RELAY PN 330232
NOTE: TERMINAL 1:COMMON TERMINAL 2:N.O. TERMINAL 3:N.C.
① SOLID STATE TIMER DELAY P/N 330234
② DRAIN VALUE (UW 85 ONLY) = (3A FUSE)
③ AUX. SWITCH ON MED. CONTACTOR
④ UW 50,85 ONLY
SUPERSEDES
SUPERSEDED BY:
UNIMAC COMPANY, INC. MARIANNA, FLORIDA
DWN. BY: RLC
APPR. BY:
DATE: 5/22/89
SCALE:
TITLE: ELECTRICAL SCHEMATIC
PART NO.: 605396
PRODUCT: UW 30,35,50,85 M 3-SPEED (Infitec Time Delay)
DWG. NO.: 605396
MATERIAL: 440-480V/60Hz/3Φ/3W
REMOVE ALL BURRS AND SHARP EDGES.
TOLERANCES UNLESS OTHERWISE SPECIFIED.
2 PL DECIMALS ± .01
3 PL DECIMALS ± .005
FRACTIONS ± 1/32
ANGLES ± 0°30'
NO. | REVISION | BY | DATE


ITEM | PART NO. | DESCRIPTION | QTY.
K3 MED. SHORT CONTACTOR
MECH. INTER.
MED. SPEED CONTACTOR K2
HIGH SPEED CONTACTOR K4
MOTOR MEDIUM SPEED
MOTOR HIGH SPEED
MOTOR LOW-SPEED CONNECTION
WASH CONTACTOR K1
L 3A
L 2A
L 1A
LL 3
LL 2
LL 1
HL3
HL2
HL1
M3
M2
M1
OL DOOR RELEASE SOLENOID
V1 HOT WATER VALVE
V2 COLD WATER VALVE
DV DRAIN VALVE
K1 WASH CONTACTOR COIL
K2 MED CONTACTOR COIL
P> WATER LEVEL SWITCH
V5 SUPPLY 1
V6 SUPPLY 2
V7 SUPPLY 3
V8 SUPPLY 4
K3 MED. SHORT
K4 HIGH SPIN
BUCK BOOST TRANSFORMER
DOOR LOCK SWITCH
DOOR CLOSED SWITCH
RUN RELAY
ON SWITCH
ON LIGHT
START
WASH LIGHT
LOW I
HIGH II
SOFTENER IND.
BLEACH IND.
BALANCE SWITCH
TO SUPPLY VALVES
TM PRG
TM REV
DV
DR
DL
DV1
DV2
DVN
VN
N.C. AUX. ON K4
KN1
KN2
THERMAL OVERLOADS
TOL
SPIN
HS
INFITEC TIME DELAY RELAY PN 330233
ACN
ACH
RELAY
AUX. N.C.
W = WHITES PUSHBUTTON
PP = PRM PRESS
C = COLORS
BC = BRIGHT COLORS
TERMINAL STRIP JUMPER
TERMINAL STRIP CONNECTION
WIRE NUMBER
DASHED LINES REPRESENT CONNECTIONS INTERNAL TO TIMER
SOLID LINES REPRESENT WIRES INSTALLED
① SOLID STATE TIMER DELAY P/N 330235
② UW85 REQUIRES 2 DRAIN VALVES & 3 AMP FUSE
③ AUX. SWITCH ON MED. CONTACTOR
④ UW 50,85 ONLY
⑤ SEE BUCK BOOST DIAGRAM UW30 - #604540 UW50 & 85 - #603277
NOTE:
TERMINAL 1:COMMON
TERMINAL 2:N.O.
TERMINAL 3:N.C.
NO. | REVISION | BY | DATE
SUPERSEDES | SUPERSEDED BY:
UNIMAC COMPANY, INC MARIANNA, FLORIDA
DWN. BY: ACO
APPR. BY: dkg
DATE: 1-26-90
SCALE: ----
TITLE: ELECTRICAL SCHEMATIC
PART NO.: 605893
PRODUCT: UW 30, 50, 85 M3-D (Infitec Time Delay)
DWG. NO.: 605893
220-240V/50Hz/3Ø/3W 220V CONTROL

ITEM	PART NO.	DESCRIPTION	QTY.



△ —— TERMINAL STRIP JUMPER
16 —— TERMINAL STRIP CONNECTION
44 —— WIRE NUMBER

W = WHITES PUSHBUTTON
PP = PRM PRESS
C = COLORS
BC = BRIGHT COLORS

- - - - DASHED LINES REPRESENT CONNECTIONS INTERNAL TO TIMER

——— SOLID LINES REPRESENT WIRES INSTALLED

DL	DOOR RELEASE SOLENOID	V5	SUPPLY 1
V1	HOT WATER VALVE	V6	SUPPLY 2
V2	COLD WATER VALVE	V7	SUPPLY 3
DV	DRAIN VALVE	V8	SUPPLY 4
K1	WASH CONTACTOR COIL	K3	MED. SHORT
K2	MED CONTACTOR COIL	K4	HIGH SPIN
P>	WATER LEVEL SWITCH		

① SOLID STATE TIMER DELAY P/N 330235
② DRAIN VALVE (UW 85 ONLY) • (3A FUSE)
③ AUX. SWITCH ON MED. CONTACTOR
④ UW 50,85 ONLY

NO.	REVISION	BY	DATE

REMOVE ALL BURRS AND SHARP EDGES.

TOLERENCES UNLESS OTHERWISE SPECIFIED

2 PL DECIMALS	± .01
3 PL DECIMALS	± .005
FRACTIONS	± 1/32
ANGLES	± 0°30'

SUPERSEDES:

SUPERSEDED BY:

UNIMAC COMPANY, INC.
MARIANNA, FLORIDA

DWN. BY: dkg
APPR. BY: dkg
DATE: 12/11/89

TITLE: ELECTRICAL SCHEMATIC

SCALE:

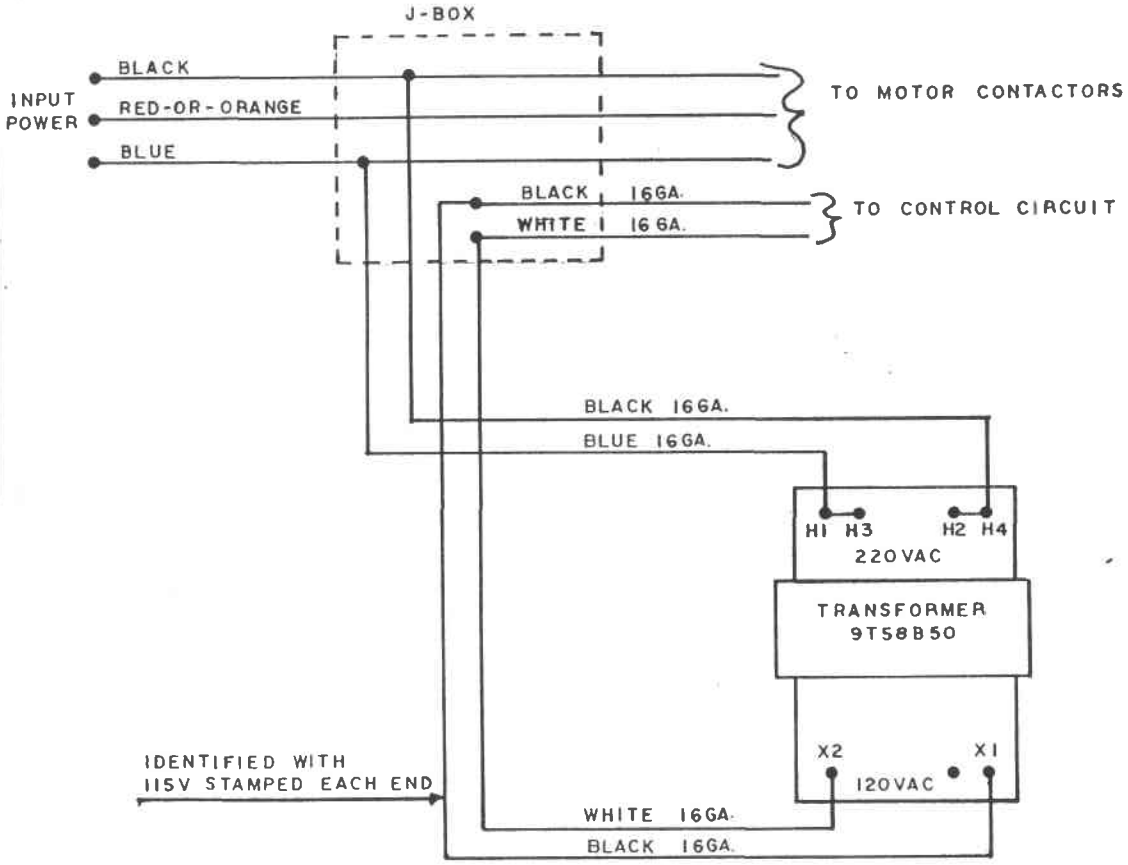
PART NO. 605808

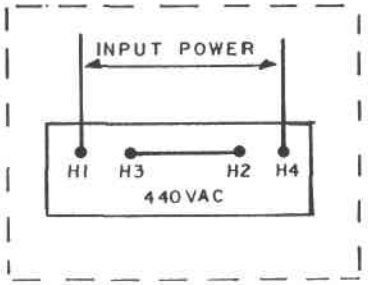
PRODUCT: UW 30,50,85 M3-C
(Infitec Time Delay)

DWG. NO. 605808

380-415V/50Hz/3Ø/4W 220V CNTRL

INPUT:
208-240-60Hz 3 WIRE, 120 VAC CONTROL
440-480-60Hz 3 WIRE, 120VAC CONTROL





TRANSFORMER HOOKUP
FOR 440 VAC INPUT

UNIMAC COMPANY INC. MARIANNA, FLORIDA	UniMac
Scale:	Drwn by: HH
Date: 4-11-83 Approved by:	Revised:
Title: 3 WIRE 3Ø SUPPLY	

PARTS LISTS & ILLUSTRATIONS

X.1 ORDERING PARTS

Parts may be ordered direct from the factory.

When ordering parts, supply the following information:

1. Exact Model Number.
2. Description of Part.
3. Part Number.
4. Quantity Needed.
5. Voltage of Machine.
6. Serial Number of Machine.

The Model Number and Serial Number, plus any pertinent electrical information, are found on the Identification Plate attached to the machine.

For prompt assistance and information, please call our factory.

The Parts Department has four direct telephone lines to serve you. Expedite your order by dialing **(904) 526-2724.**

X.2 USING THE PARTS LISTS

The Parts Lists are printed with illustrations on the left-hand page and the corresponding parts list on the right-hand page (except for large format fold-out drawings). The illustrations are composed of item-numbered exploded drawings. A bracket embracing several parts indicates these parts are stocked in sets and that all the parts in a set should be used for the service operation in question.

The parts list page is composed of a heading and a number of columns for parts information. The machine model, illustration title, corresponding illustration number, issue number and date of issue are found in the heading. The various columns contain information such as the item number (corresponding to the illustration), quantity used, part number, description, previous part number (if any), and any pertinent notes.

The quantity column is subdivided into three to distinguish the parts belonging to variants or models of the basic design. The contents of the respective column will be identified with the following sign: ┌----------
This refers to the description column where the corresponding variant is specified.

The description column contains the specific names of the parts to be used when ordering. If a part is included in a higher assembly or is part of a kit, the description of the part will be indented to the right in relation to the description of the assembly or kit and preceded by this symbol - ■.

The notes column will show the beginning and/or ending serial number on which the corresponding part is used along with any other necessary information. If the beginning serial number is listed followed by a dash (-), the corresponding part is considered as being used on all machines thereafter.

If a particular part is used as an exact replacement item for an obsolete part, the obsolete part being superseded is listed in the previous part number column.

SECTION X - PARTS LISTS & ILLUSTRATIONS

CAUTION: During maintenance, any fasteners used to replace older ones must have the same measurements and strength as those removed, whether metric or customary. The numbers on the heads of metric bolts and on the surface of metric nuts indicate their strength. Customary bolts use radial lines to show this, while most customary nuts do not have strength markings. Fasteners taken from the machine should be saved for re-use in the same spot when possible. Where a fastener cannot be used again, take care to choose a replacement that matches the old one. For information and help, contact your UniMac distributor or call the factory.

Some fasteners used in the design of this machine are dimensioned in the metric system. Many are very close in dimension to well-known customary fasteners in the inch system. Mismatched or incorrect fasteners can result in damage to the machine or possible personal injury.

CAUTION: To help avoid personal injury, take care when doing any maintenance or making any check or repair. Follow manufacturer's instructions for all materials used during service and maintenance of this machine. If used or handled improperly, they can be hazardous. Improper or incomplete service can also affect the machine and result in personal injury, or damage to the machine and may void the warranty. If you have any question about carrying out some service, have the work done by a skilled technician.

All information, illustrations, and specifications contained in this manual are based on the latest product information available at the time of printing. The illustrations contained herein are intended as a guide and may not exactly depict all models. We reserve the right to make changes at any time without notice.

Orders for replacement parts may be placed:

By telephone: (904) 526-2724 (four lines)

By telefax: (904) 526-2735

By mail: 3595 Industrial Park Dr.
Marianna, Florida 32446

Our Customer Service Department is open Monday through Friday from 8:00 A. M. to 5:00 P.M. Central time.

With each motor order, our Customer Service Department **must** be given the following information:

1. Machine model number.
2. machine serial number.
3. Motor description, i.e. wash or ex - tract.
4. Motor manufacturer, i.e. Elmo, Century, Leroy Somer, Arco, or Baldor.

UniMac cannot be responsible for return freight on parts ordered incorrectly.

The designation "N. L. A." indicates that a part is no longer available.

Prices quoted are F. O. B. Marianna, Florida, U. S. A.

Customers may arrange for payment by one of the following methods:

Method	Acceptance
VISA or MasterCard	World-wide
*Check in advance	World-wide
Wire transfer	World-wide
**C. O. D.	United States
Money order	World-wide

*Checks must clear our bank prior to parts being released. This can take 10 or more working days.

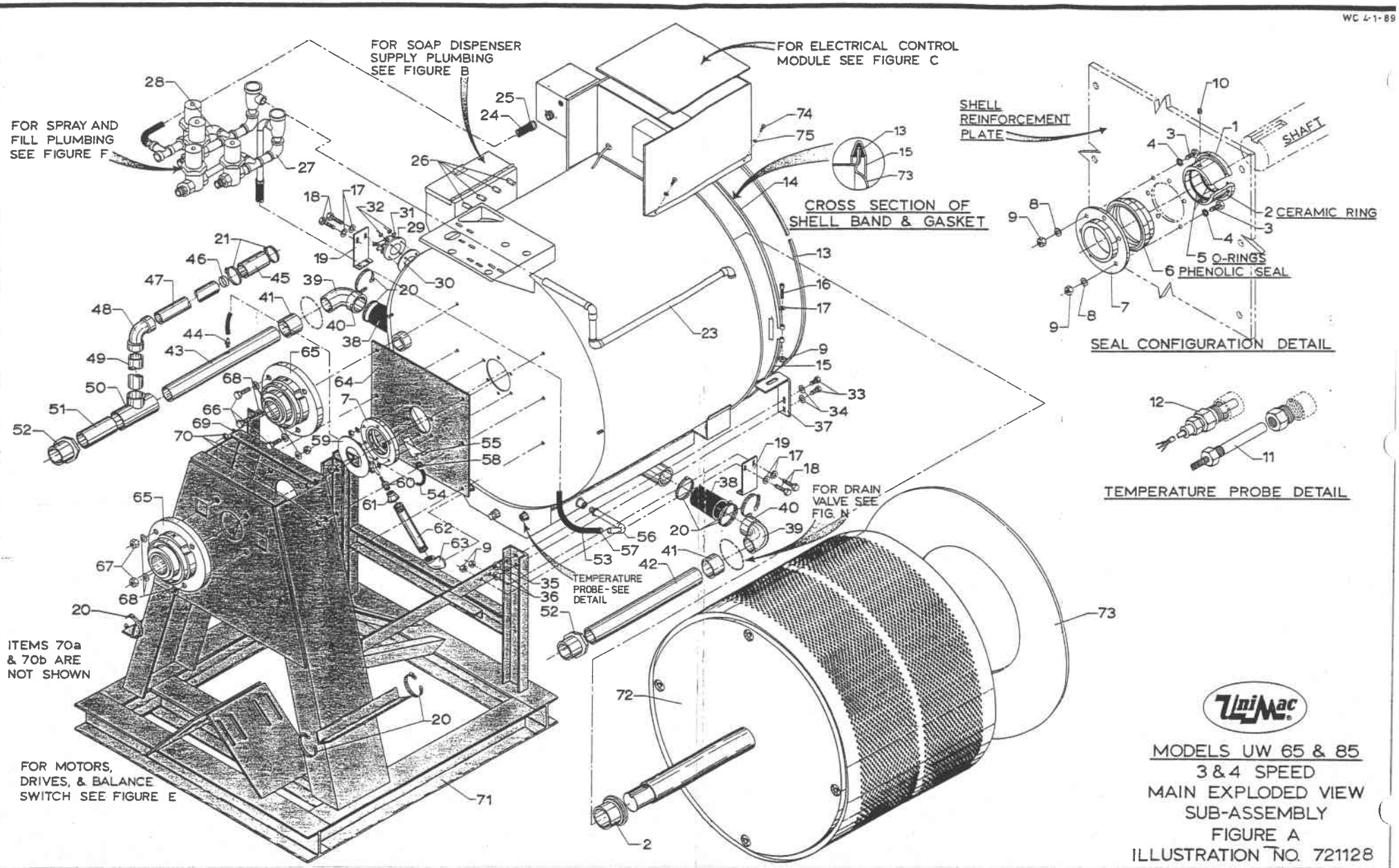
**C. O. D. can only be used in the United States.

If you have any questions, please call our Customer Service Department.

	MAIN EXPLODED VIEW SUB-ASSEMBLY FIGURE A MODELS UW65 & UW85	ILL NO. 721128 ISSUE 1 DATE 05/11/89 SHEET 1 OF 3

ITEM	QUANTITY UW65	QUANTITY UW85	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	1	1	100300	Brass Collar		
2	1	1	100215	Ceramic Ring		
3	6	6	430935	Bolt, 1/4"-20		
4	6	6	431112	Bartite Washer		
5	2	2	170202	"O" Ring		
6	1	1	100202	Phenolic Seal		
7	1	1	601360	Seal Holder		
8	6	6	430322	Lock Washer, 1/4"		
9	12	12	430317	Nut, 1/4"-20		
10	3	3	430917	Set Screw		
11				Not used		
12				Not used		
13	1	1	170120	Gasket, Shell Front		
14	1	1	603910	Shell Band - Top Half		
15	1	1	603911	Shell Band - Bottom Half		
16	2	2	430500	Bolt		
17	6	6	430317	Flat Washer, 1/4"		
18	4	4	430935	Bolt, 1/4"-20 x 1"		
19	2	2	602075	Support Bracket		
20	10	10	200201	Hose Clamp		
21	2	2	200213	Hose Clamp		
22	1		603732	Shell Assembly		
		1	603697	Shell Assembly		
23				Not used		
24	1	1	610506	Hose, Supply Box Inlet		
25	2	2	200205	Hose Clamp		
26	4	4	730168	Soap Injector Nozzle Kit		
27	1		604058	Fill Plumbing Manifold, UW65 - 110 V.		
	1		603829	Fill Plumbing Manifold, UW65 - 220 V.		
		1	603831	Fill Plumbing Manifold, UW85 - 110 V.		
		1	604113	Fill Plumbing Manifold, UW85 - 220 V.		
28				Not used		
29	1	1	150351	ASD Nozzle		
30	1	1	170138	Gasket, ASD Nozzle		
31	4	4	431123	Washer		
32	4	4	430232	Nut		

WC 4-1-89



UniMac

MODELS UW 65 & 85
3 & 4 SPEED
MAIN EXPLODED VIEW
SUB-ASSEMBLY
FIGURE A
ILLUSTRATION NO. 721128

UniMac

MAIN EXPLODED VIEW
SUB-ASSEMBLY
FIGURE A
MODELS UW65 & UW85

ILL NO. 721128
ISSUE 1
DATE 05/11/89
SHEET 2 OF 3

ITEM	QUANTITY UW65	QUANTITY UW85	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
33	6	6	430924	Bolt		
34	6	6	430301	Washer		
35	6	6	430305	Washer		
36	6	6	430205	Nut		
37	2	2	601806	Bracket		
38	2	2	610076	Hose, 3 1/2" x 4" Lg.		
39	2	2	420505	Street Ell, 2 1/2" Galv.		
40	2	2	420301	Coupling, 2 1/2" Galv.		
41	2	2	422700	Half Coupling, 2 1/2" Galv.		
42	1	1	610039	Drain Pipe, 2 1/2" x 30 1/2" Lg.		
43	1		610095	Drain Pipe, 2 1/2" x 17 1/2" Lg.		
		1	610040	Drain Pipe, 2 1/2" x 22 1/4" Lg.		
44	1	1	421929	Hose Barb, Brass		
45	1	1	610210	Hose, 2 3/8" x 4" Lg.		
46	1	1	601349	2" Insert		
	1	1	610034	Overflow Pipe, 2" x 13" Lg.		
	1	1	422900	Slip Elbow, 2"		
	1	1	610035	Overflow Pipe, 2" x 17" Lg.		
50	1	1	422803	Tee, 2 1/2' x 2 1/2" x 2" Slip		
51	1		610036	Drain Pipe, 2 1/2" x 10 1/2" Lg.		
		1	610093	Drain Pipe, 2 1/2" x 4 1/2" Lg.		
52	2	2	422602	Reducer Bushing, 3" x 2 1/2"		
53	1	1	610507	Bottom Fill Hose		
54	1	1	610508	Scupper Hose		
55	1	1	601629	Scupper		
56	1	1	610256	Bottomn Fill Tube Assembly		
57	2	2	202222	Hose Clamp		
58	2	2	200202	Hose Clamp		
59	1	1	100204	Slinger		
60	1	1	421910	Hose Barb, Brass 3/8" x 1 /4"		
61	1	1	420200	Bell Reducer, 1" x 3/8" Galv.		
62	1	1	420111	Nipple, 1" x 10" Lg. Galv.		
63	1	1	422313	Elbow, 1" x 1/2"		
64	1	1	601359	Back Plate		
65	2	2	100128	Bearing Assembly		
66	8	8	430123	Bolt		
67	8	8	430202	Nut		
68	8	8	430326	Washer		

UniMac®	**MAIN EXPLODED VIEW SUB-ASSEMBLY FIGURE A MODELS UW65 & UW85**	ILL NO. 721128 ISSUE 1 DATE 05/11/89 SHEET 3 OF 3

ITEM	QUANTITY UW65	QUANTITY UW85	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
69	6	6	430212	Nut		
70	6	6	430321	Washer		
70A	6	6	430924	Bolt (Shell to Back Plate)		Not Shown
71	1		601560	Frame Assembly UW65		
		1	601638	Frame Assembly UW85		
72	1		603732	Basket & Shaft UW65		
		1	603697	Basket & Shaft UW85		
73	1	1	602470	Shell Front		

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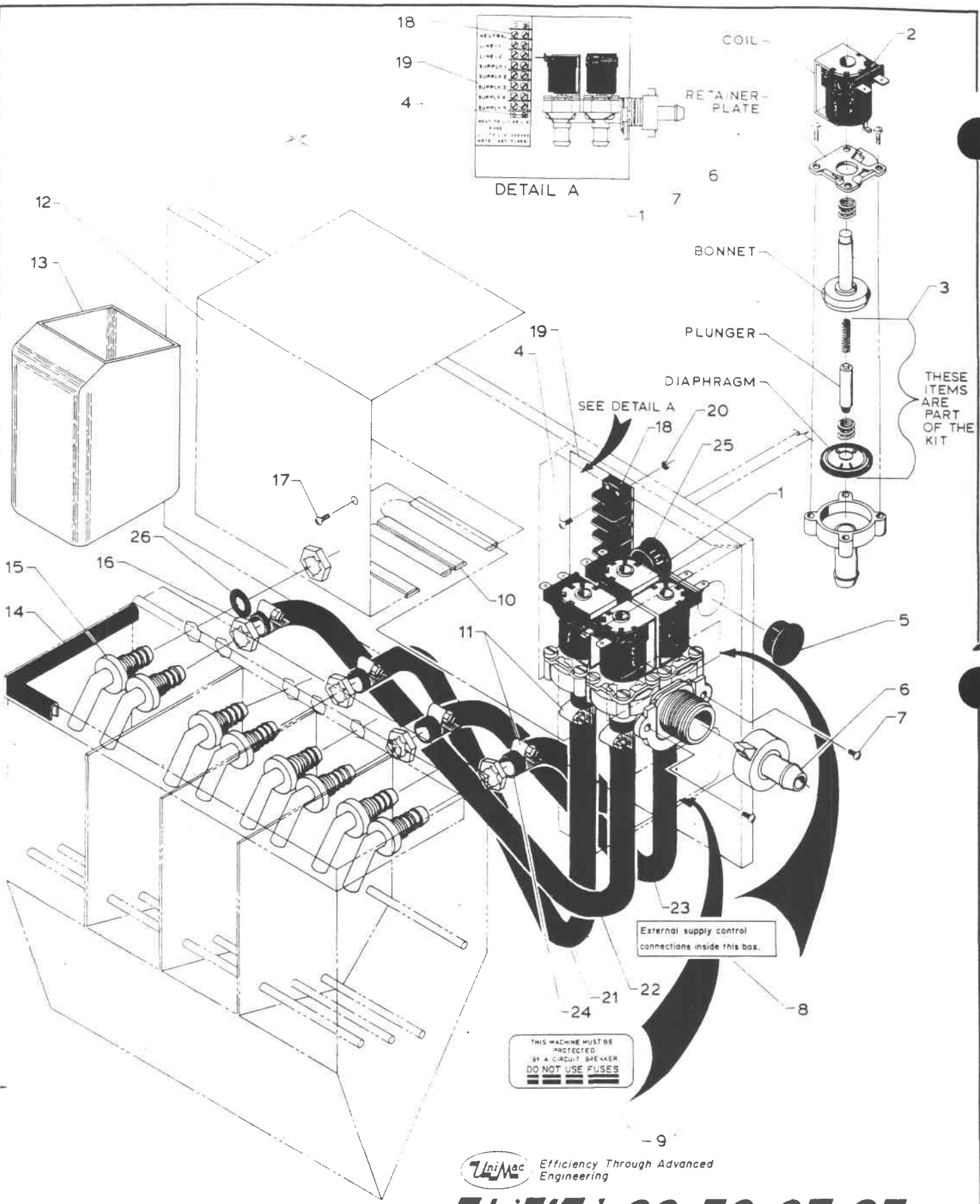


UniMac *Efficiency Through Advanced Engineering*

UniWash 30-50-65-85

SOAP DISPENSER SUPPLY PLUMBING

FIGURE B

ILLUSTRATION NO. 721154

UniMac®	**SOAP DISPENSER SUPPLY PLUMBING** **FIGURE B** **MODEL UW85**	ILL NO. 721154 ISSUE 1 DATE 8/12/88 SHEET 1 OF 1

ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	1	380715	Supply Valve - Complete, Four Way,110V/120V, 50/60 Hz		
1	1		Supply Valve - Complete - Four Way-220V, 50/60 Hz		
2	4	380900	Coil, Solenoid, 110V/120V, 50/60 Hz		
2	4	380917	Coil, Solenoid, 200-240V/60Hz 220V/50Hz		
3	4	730135	Repair Kit		
4	2	430916	Screw, Stainless Stl., #6-32 x 1/2"		
5	1	140527	Connector, 3/4" Plug		
6	1	200302	Connector, Hose, Female		
7	2	430948	Screw, Stainless Stl., M4 x 8		
8	1	230606	Decal, External Supply Control		
9	1	230301	Decal		
10	1	170402	Trim - 1ft.		
11	8	200202	Clamp, Hose #6		
12	1	603650	Cover, Supply Valve Box		
13	4	191004	Dispenser Cup, 32 Ounce		
14	1	170400	Trim, Vinyl - 1.5ft.	170400	
15	8	380300	Nozzle, Injection, Soap		
	8	430224	Nut, Pal, Pltd., 1/2"-13		
	2	430152	Screw, Pltd., #8 x 3/8"		
18	1	140738	Board, Terminal		
19	1	230622	Decal, Extenal Supply		
20	2	431401	Nut, Brass, #6-32		
21	1	610088	Hose - 23"		
22	1	610086	Hose - 18.5"		
23	1	610398	Hose - 17"		
24	1	610196	Hose - 12"		
25	1	140909	Bushing, Insulator, Nylon		
26	8	170208	"O"-Ring - Injector Nozzle		

PRODUCT UPDATE

POLYPROPYLENE SUPPLY DISPENSER (INSERT FOR MACHINE MANUALS)

APPLIES TO: UW35-85 EQUIPPED WITH POLYPROPYLENE SUPPLY DISPENSER

Your UniWash machine has been equipped with a new state-of-the-art supply dispenser that is made of rugged polypropylene to meet the rigorous demands of today's high tech chemical formulas. This new material is the most chemically resistant substance available. The material, design and function of this dispenser has been achieved through consultation with major chemical supply companies. Polypropylene was recommended over stainless steel for its superior chemical tolerance. A stainless steel mounting shroud was used to maintain the overall integrity of the polished stainless steel appearance.

This improved supply dispenser design was implemented on UW35*, UW50, UW65, and UW85 models in December, 1992. This change has made a big difference in flexibilty, economy, and durability.

Flexibility is increased because more configurations of supply dispensing are possible.

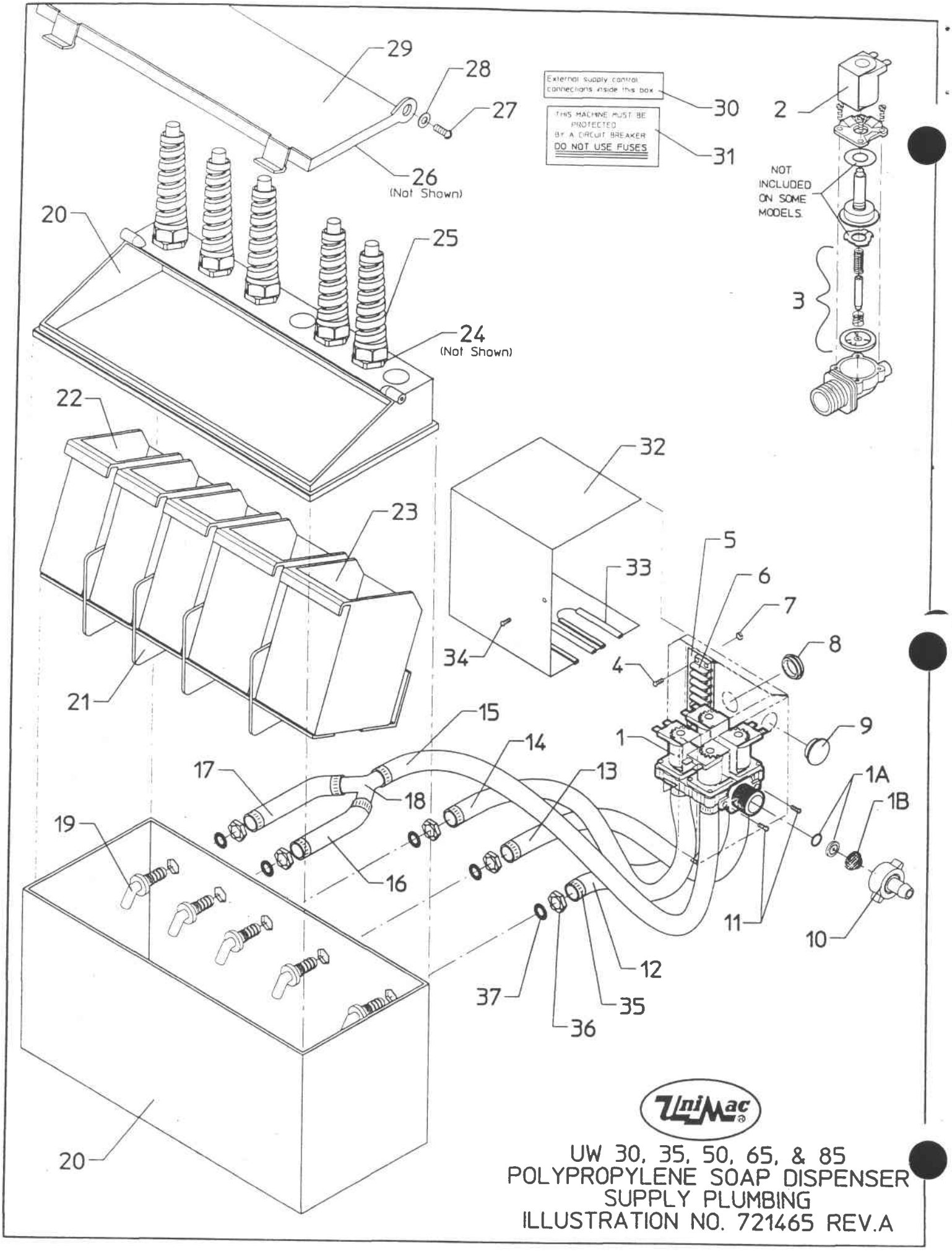
* A fifth flush valve has been added to allow five signal outputs and five flushes as standard.
* The dispenser comes set up for four dry supply dispensing, and can easily be altered for four liquid supply dispensing. See page four for instructions on changing WE6 prompting from liquid to dry supplies.
  (See Illustration 721460 for installing liquid chemical supply lines.)
* Additional signal outputs are available as options.
* A siphon tube ensures that no liquid is left in the liquid supply cups.
* A high capacity five powder flushdown is also available through the UniMac Company Parts Department.

If your polypropylene dispenser ever needs replacement:

* The new assembly can be replaced for less than $100 in parts cost as it requires no cutting or welding on the shell.
* Downtime is significantly reduced as the new dispenser is much simpler to replace.
* Ease of replacement means a specialist is not needed to do the work. Any competent technician can do it quickly and easily.

*1993 introduction

3595 Industrial Park Drive, Marianna, Florida 32446-9458



UW 30, 35, 50, 65, & 85
POLYPROPYLENE SOAP DISPENSER
SUPPLY PLUMBING
ILLUSTRATION NO. 721465 REV.A

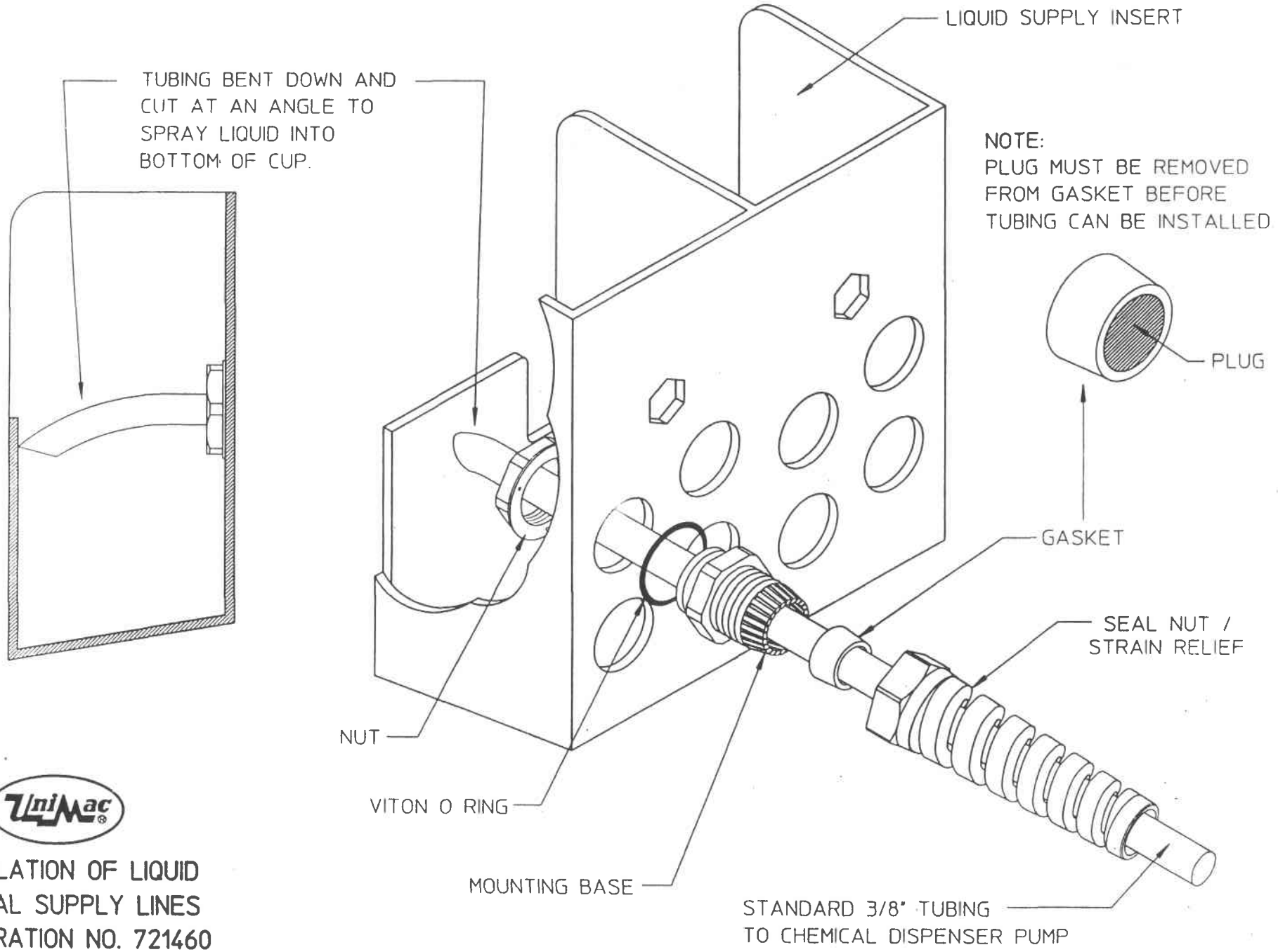
UniMac

POLYPROPYLENE SOAP DISPENSER SUPPLY PLUMBING MODELS UW35, 50, 65 & 85

ILL NO. 721465
ISSUE 2
DATE 01/11/94
SHEET 1 OF 1

ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	1	380715	Supply Valve, Complete, 4-Way, 110/120V 50/60Hz		
1a	1	380106	Flow Restrictor, 8 Liter		
1b	1		Screen (Not Available Seperately)		
2	4	380900	Solenoid, 4-Way Valve, 110/120V 50/60Hz		
3	4	380938	Repair Kit, 4-Way Valve, 10mm		
4	2	430916	Screw		
5	1	230622	Decal		
6	1	140738	Terminal Block		
7	2	431022	Nut		
8	1	140909	Insulator Bushing		
9	1	140527	Plug		
10	1	200302	Hose Connector, Hot Water		
11	2	430948	Screw		
12	1	610226	Hose, 15"		
13	1	610226	Hose, 15"		
14	1	610086	Hose, 18.5"		
15	1	610444	Hose, 18"		
[illegible]	1	610096	Hose, 8"		
[illegible]	1	610197	Hose, 10"		
[illegible]	1	422808	Y Connector		
19	5	380300	Supply Nozzle		
20	1	150383	Polypropylene Supply Dispenser		
21	1	150388	Dry Supply Insert		
22	3	150385	Cup, 20 oz.		
23	2	150386	Cup, 32 oz.		
24	5	170215	O-Ring		
25	5	140340	Strain Relief Connector		
26	*	170158	Supply Dispenser Lid Gasket (* Order by foot)		
27	2	430917	Screw		
28	2	431133	Washer		
29	1	150384	Supply Dispenser Lid		
30	1	230606	Decal		
31	1	230301	Decal		
32	1	608960	Valve Box Cover		
33	1	170402	Trim, 1 Ft.		
34	2	430152	Screw		
35	12	200202	Hose Clamp		
36	5	430224	Nut, Supply Nozzle		
37	5	170208	O-Ring		

FOR UW MACHINES WITH POLYPROPYLENE SUPPLY DISPENSER



UniMac®

INSTALLATION OF LIQUID CHEMICAL SUPPLY LINES
ILLUSTRATION NO. 721460

NEW UW POLYPROPYLENE SUPPLY DISPENSER

(Insert for current UW manuals)

System prompting of supply type.

System will be prompted for dry supply as standard from the factory, for use with the redesigned polypropylene dispenser placed in production January 12, 1994.

You may prompt the WE6 computer for either dry (powdered) supplies or for liquid supplies. If prompted for dry supplies, the WE6 simply energizes the programmed supply output. If prompted for liquid supplies, the WE6 automatically energizes the auxiliary 1 output (A1) along along with the programmed supply output to flush liquid supply compartment every time Supply 1 - 5 is programmed.

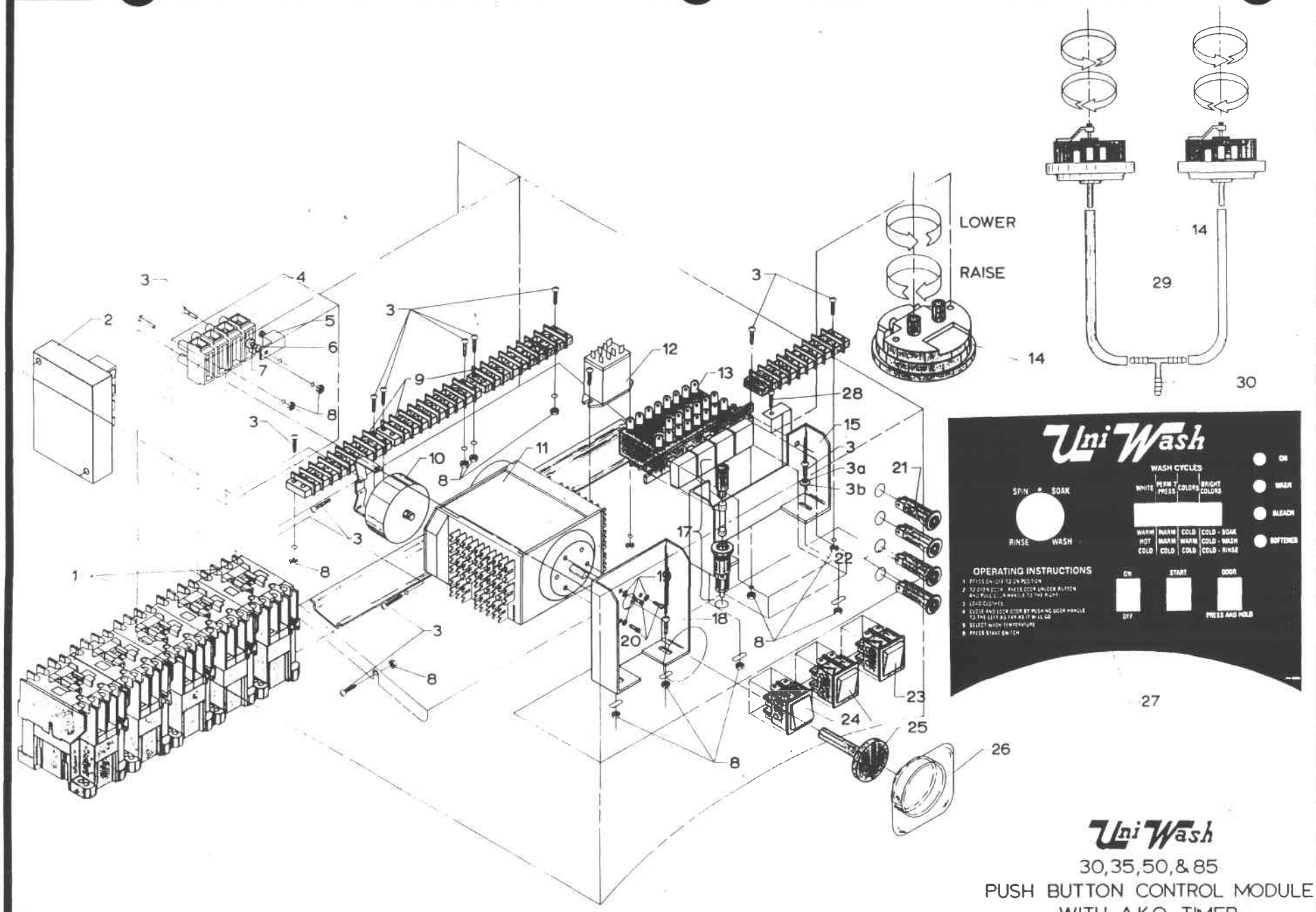
Procedure for changing supply prompting (to dry supplies).

(1) Place the WE6 in program mode. Display will show "CYC_XX". Where XX represents the most recently selected cycle number.
(2) Press the following keys in order: "AUXILIARY","2","9". Display will show either "°CEN" or "°FAR".
(3) Press "ENTER". Display will show "1DRAIN" or "2DRAIN".
(4) Press "ENTER". Display will show "NO ADV" or " ADV".
(5) Press "ENTER". Display will show "NO MAN" or "MANUAL".
(6) Press "ENTER". Display will show "L SUPP" or "D SUPP". "L SUPP" means that the WE6 is prompted for liquid supplies, and "D SUPP" means the WE6 is prompted for dry supplies.
(7) Press "0" key to change, if desired. When prompted as desired, press "ENTER". Display will show "USEDnn", where nn represents the number of cycles which have been run.
(8) Press "ENTER" again to exit system prompting.

Return WE6 to run mode if no further programming changes are required.

UniMac®

SUPPLY PROMPTING
ALL UW WITH
POLYPROPYLENE DISPENSER
ILLUSTRATION NO. 721479



Uni Wash

30,35,50,& 85

PUSH BUTTON CONTROL MODULE

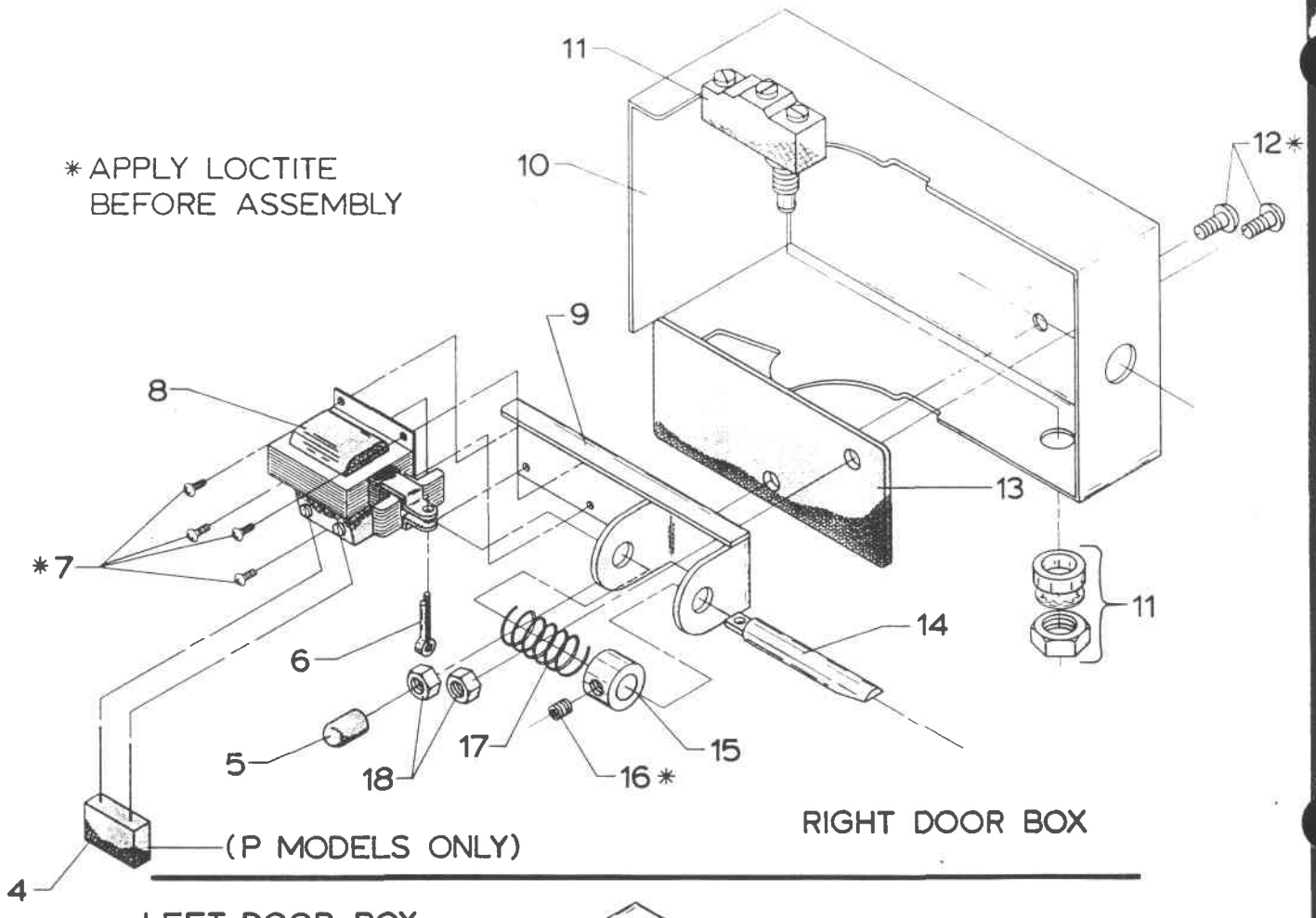
WITH A.K.O. TIMER

FIGURE C

ILLUSTRATION NO. 721221

UniMac	**PUSHBUTTON CONTROL MODULE WITH AKO TIMER FIGURE C MODELS UW85M**	ILL NO. 721221 ISSUE 1 DATE 4/11/89 SHEET 1 OF 1

ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	2	330146	■ Contactor - Fwd/Rev - 110V NX 101		
1	2	330147	■ Contactor - Fwd/Rev - 220V NX 101		
1	3	330148	■ Contactor - Med/Sh/High - 110V A-24		
1	3	330149	■ Contactor - Med/Sh/High - 220V A-24		
2	1	330333	Time Delay - 45 Seconds		
3	22	430916	Screw		
3A	4	431113	Star Washer		
3B	4	430311	Washer		
4	1	140746	Power Input Terminal Block		
5	1	140734	Ground Connector		
6	1	431106	Star Washer		
7	1	430903	Screw		
8	22	431401	Nut		
9	4	140730	Terminal Strip		
10	2	160539	■ Timer Motor - 110V		
10	2	160538	■ Timer Motor - 220V		
11	1	160301	■ Program Timer - Complete - 110V		
	1	160300	■ Program Timer - Complete - 220V		
	1	330227	■ Drain Relay - Midland-Ross - 110V		
	1	330230	■ Drain Relay - Midland-Ross - 220V		
13	1	340410	Selection Switch - Pushbutton		
14	2	340308	Level Switch - High & Low Level		
15	1	604213	Swtich Bracket		
16	1	350140	Fuse - 2 amp		
17	1	350304	Fuseholder		
18	1	604215	Timer Bracket		
19	4	431123	Washer		
20	3	430948	Screw		
21	1	350410	■ Signal Light - Red - 110V		
21	1	350404	■ Signal Light - Red - 220V		
22	3	350409	■ Signal Light - Yellow - 110V		
22	3	350406	■ Signal Light - Yellow - 220V		
23	2	340412	Switch - Start/Door Unlock		
24	1	340411	Switch - On/Off - Red		
25	1	150315	Dial Indicator		
26	1	150310	Dial Indicator Cover		
27	1	230687	Decal - Pushbutton Control		
28	1	430928	Screw		

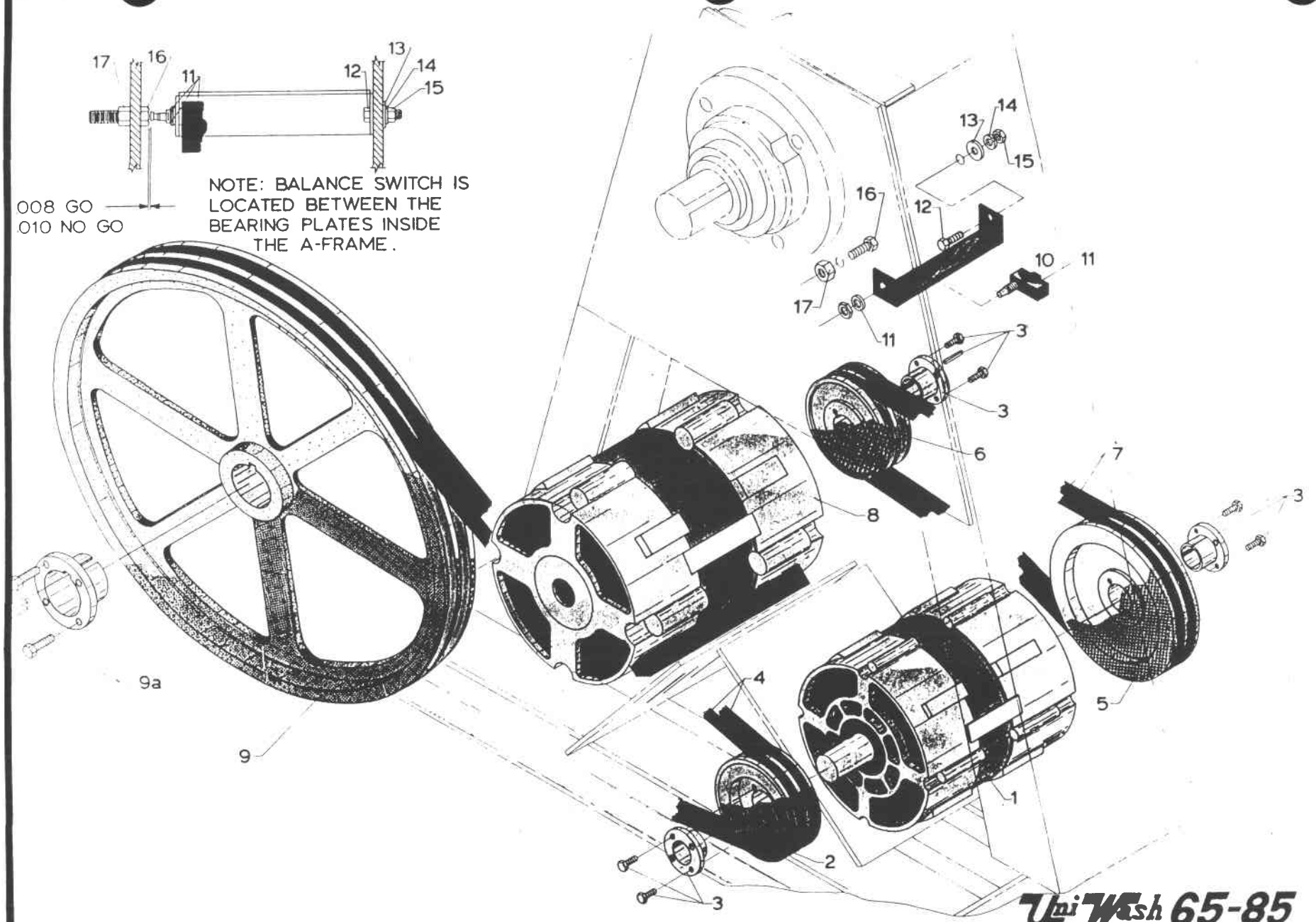


MODELS UW 65 & 85
RIGHT AND LEFT DOOR BOXES
FIGURE D
ILLUSTRATION NO. 721194

RIGHT AND LEFT DOOR BOXES
FIGURE D
UNIWASH MODELS UW65 & 85

ILL NO. 721194
ISSUE 1
DATE 03/08/89
SHEET 1 OF 1

ITEM	QUANTITY		PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
		UW65				
		UW85				
1	1	1	340901	Microswitch - Door Hinge	5036	
2	1	1	340913	Pushrod - Door Hinge Microswitch	5037	
3	1	1	601202	Door Box - Left	1202	
4	1	1	330217	RC Filter Network		
5	1	1	190300	Plastic Cap		
6	1	1	431201	Cotter Pin		
7	4	4	430917	Screw		
8	1	1	300101	Door Unlock Solenoid - 110V		
8	1	1	300105	Door Unlock Solenoid - 220V		
9	1	1	601663	Door Lock Bracket		
10	1	1	604523	Door Box - Right	1020	
11	1	1	340900	Microswitch - Door Handle	5038	
12	2	2	430925	Screw		
[illegible]	1	1	170135	Door Unlock Solenoid Gasket		
	1	1	601081	Door Lock Pin		
	1	1	601190	Door Lock Collar		
16	1	1	430502	Set Screw		
17	1	1	310119	Door Lock Spring		
18	2	2	430211	Nut		



UniWash 65-85

MOTORS, DRIVE, AND BALANCE SWITCH

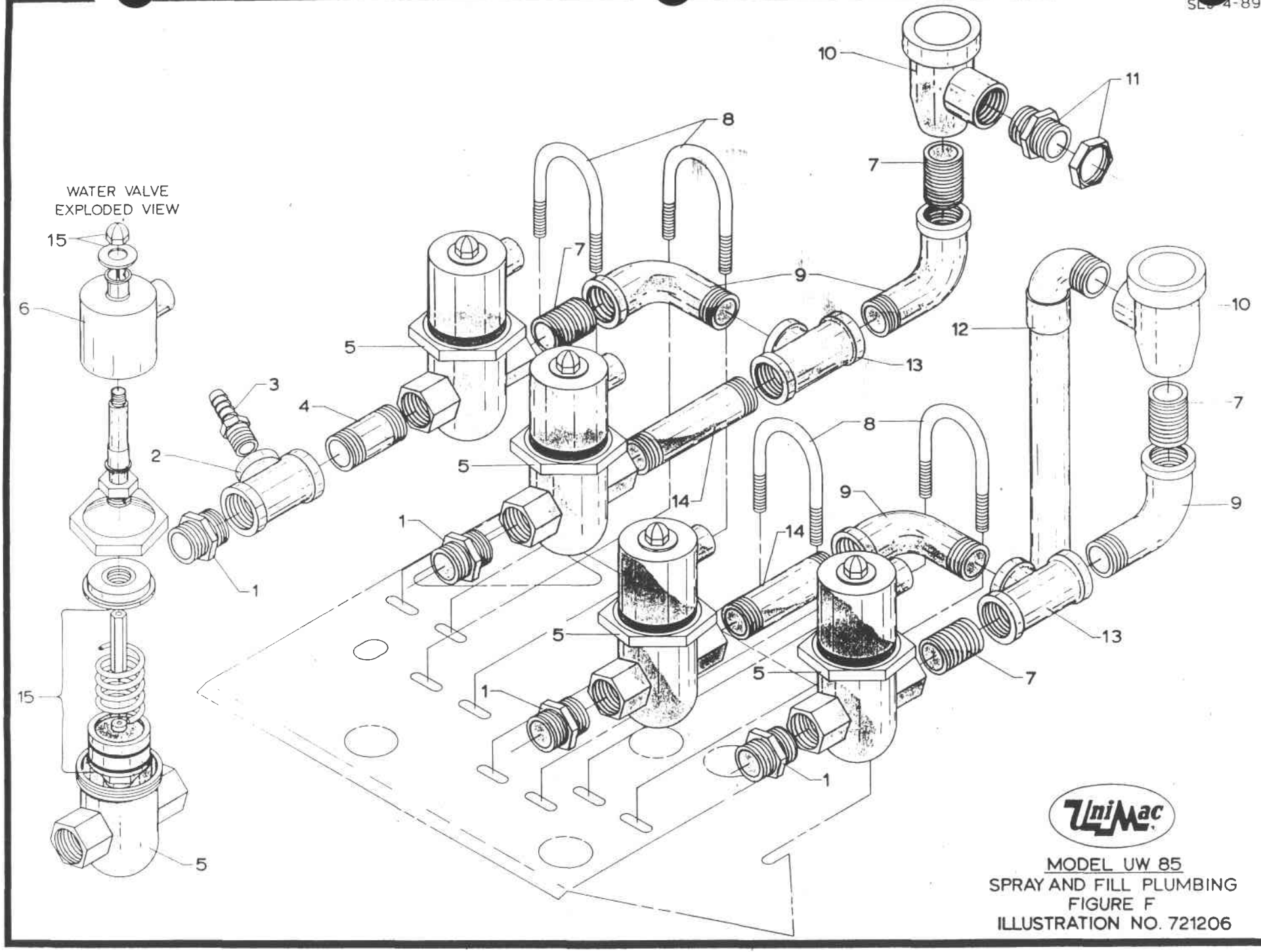
FIGURE E

ILLUSTRATION NO. 721204

MOTORS, DRIVE, & BALANCE SWITCH
FIGURE E
UW85 3-SPEED

ILL NO.	721204
ISSUE	1
DATE	03/08/89
SHEET	1 OF 1

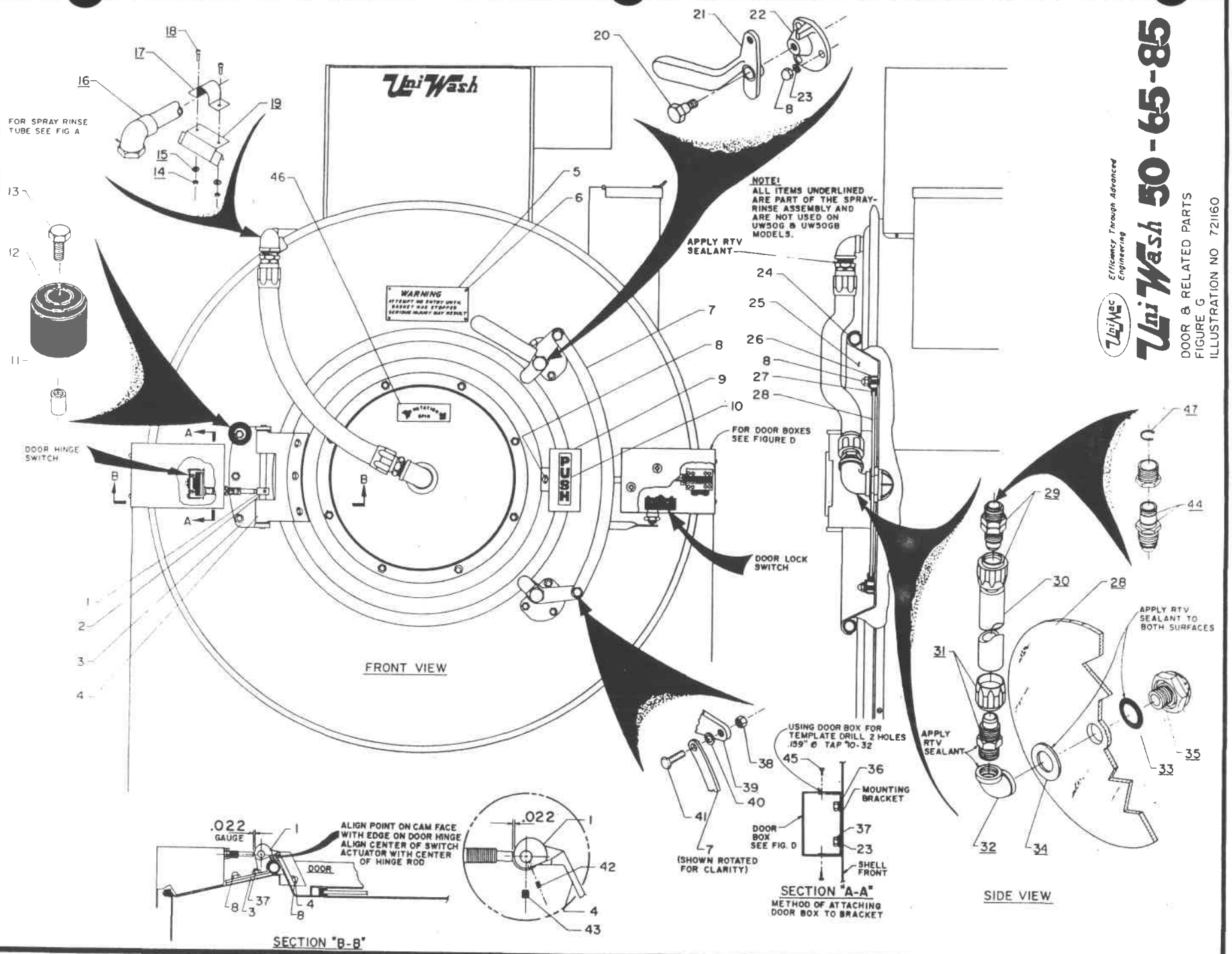
ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	1	220308	■ Motor, Extract, 208-240V/3Ph /60Hz		
	1	220309	■ Motor, Extract, 380-415V/3Ph/50Hz (440-480/3Ph/60Hz)		
2	1	280134	■ Pulley, Drive, 2BK40H, 60 Hz		
		280161	■ Pulley, Drive, 2BK50H, 50 Hz		
3	3	280212	Bushing, Pulley, H-1 1/4		
4	2	280309	V-Belt, Main Drive, BX-100		
5	1	280160	Pulley, Drive, 2TB80H		
6	1	280141	Pulley, Drive, 2BK45H		
7	2	280312	V-Belt, Short Drive, BP-46		
8	1	220203	■ Motor, Wash, 208-240V/3Ph/60Hz		
	1	220204	■ Motor, Wash, 380-415V/3Ph/50Hz (440-480/3Ph/60Hz)		
9	1	280133	Pulley - Basket, 2TB250		
9A	1	280213	Pulley Bushing, Q1- 2 7/16		
10	1	601750	Bracket, Balance Switch		
11	1	340906	Microswitch, Balance		
12	1	430900	Bolt		
13	1	430301	Flatwasher		
	1	430305	Lockwasher		
	1	430205	Nut		
	1	430124	Bolt		
17	1	430206	Nut		



MODEL UW 85
SPRAY AND FILL PLUMBING
FIGURE F
ILLUSTRATION NO. 721206

UniMac®	**FILL PLUMBING** **FIGURE F** **MODEL UW85M**	ILL NO. 721206 ISSUE 1 DATE 3/14/89 SHEET 1 OF 1

ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	2	421909	Hose Adaptor		
2	1	420402	Tee		
3	1	421930	Hose Barb		
4	1	420106	Nipple		
5	2	380702	Fill Valve w/Solinoid - 120V		
5	2	380703	Fill Valve w/Solenoid - 240V		
6	2	380901	Solenoid Only - 120V		
6	2	380902	Solenoid Only - 240V		
7	2	420105	Nipple		
8	2	200402	U-bolt with plate and nuts		
9	2	420502	Street Elbow		
10	1	380800	Vacuum Breaker		
11			Not used		
12	1	610260	Top Fill Tube		
13	1	420403	Tee		
14	1	420108	Nipple		
	2	380915	Fill Valve Repair Kit		
			The UW85M has only two inlet valves and does not require item #11. The UW85M is not equipped with Spray Rinse.		



Efficiency Through Advanced Engineering

Uni Wash 50-65-85

DOOR & RELATED PARTS
FIGURE G
ILLUSTRATION NO 721160

UniMac

DOOR & RELATED PARTS
FIGURE G
MODELS UW50, UW65, & UW85

ILL NO. 721160
ISSUE 2
DATE 12/06/89
SHEET 1 OF 2

ITEM	QUANTITY			PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
	UW50	UW65	UW85				
1	1	1	1	601088	Cam		
2	1	1	1	601815	Door Hinge Pin		
3	1	1	1	601245	Door Butt		
4	1	1	1	601045	Door Hinge		
5	1	1	1	230200	Warning Tag		
6	4	4	4	431210	Rivet		
7	1			601056	Extension Arm		
7		1	1	602256	Extension Arm		
8	20	20	20	430214	Nut		
9	1	1	1	602112	Push Handle Bracket		
10	1	1	1	230303	Label		
11	1	1	1	430416	Bushing		
12	1	1	1	601307	Door Bumper		
13	1	1	1	430103	Bolt		
	2	2	2	431401	Nut		
					Not used		
16					Not used		
17					Not used		
18					Not used		
19					Not used		
20	2	2	2	430168	Bolt		
21	1	1	1	601741	Door Handle		
22	1	1	1	601744	Top Latch Bracket		
23	27	27	27	431100	Washer		
24	1	1	1	170144	Gasket	170126	
25	1	1	1	601318	Door		
26	1	1	1	601239	Retainer Ring		
27	1	1	1	170117	Door Glass Seal		
28					Not used		
28	1			290201	Glass		
29					Not used		
30					Not used		
30		1	1	610067	Hose		
31					Not used		
32					Not used		
33					Not used		
34					Not used		
35					Not used		

ITEM	QUANTITY			PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
	UW50	UW65	UW85				
36	6	6	6	430317	Washer		
37	6	6	6	431005	Nut		
38	2	2	2	430205	Nut		
39	1	1	1	601742	Lower Door Latch		
40	2	2	2	431118	Washer		
41	1	1	1	430927	Bolt		
42	2	2	2	430501	Set Screws		
43	2	2	2	430502	Set Screws		
44					Not used		
45	4	4	4	430904	Screw		
46	1	1	1	230652	Decal - Rotation Spin		
47					Not used		

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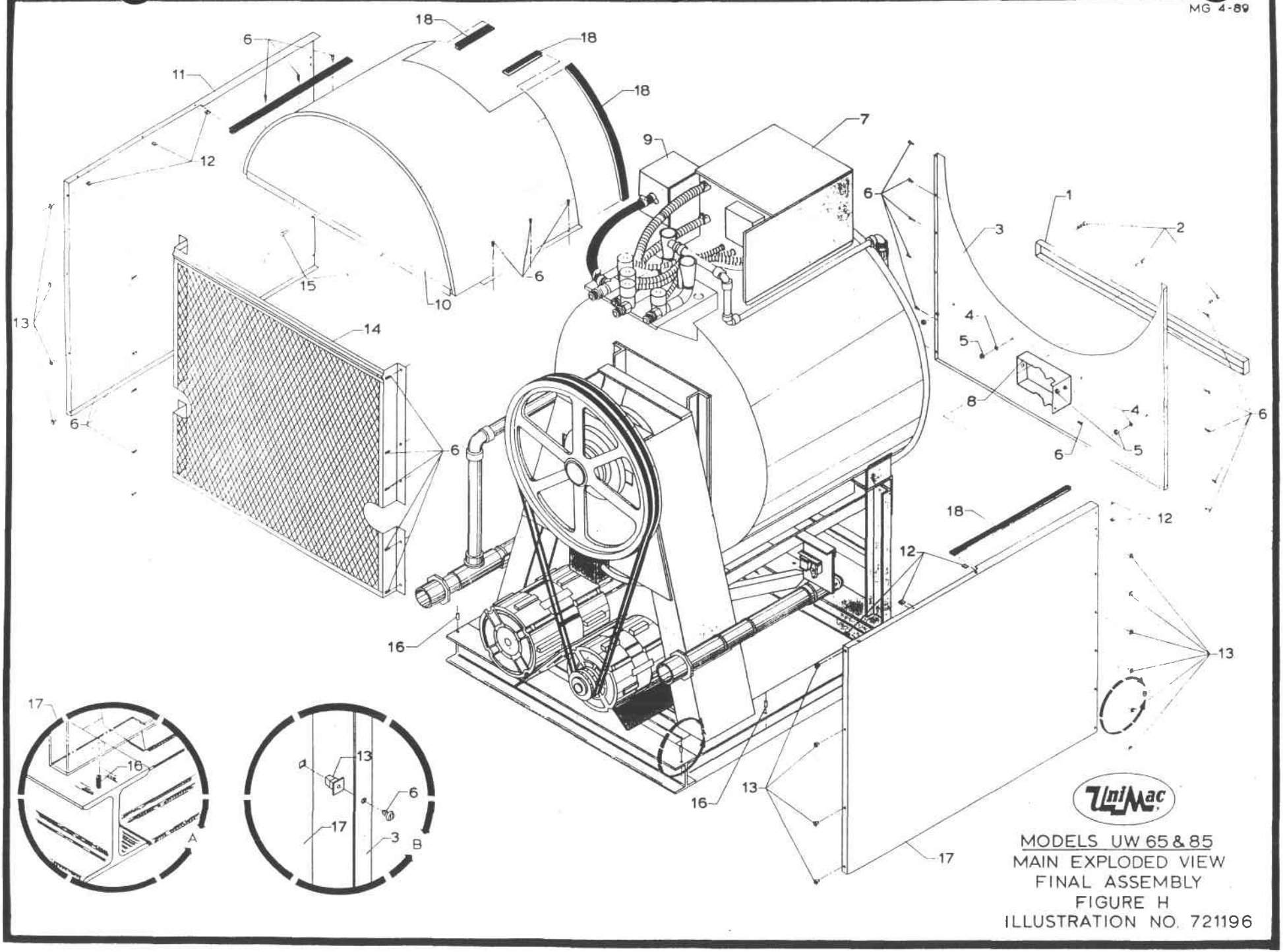
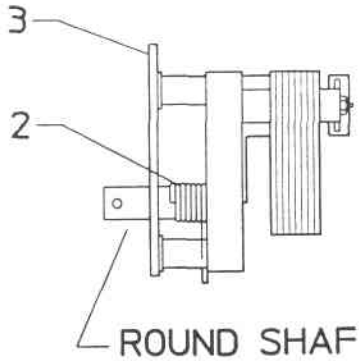


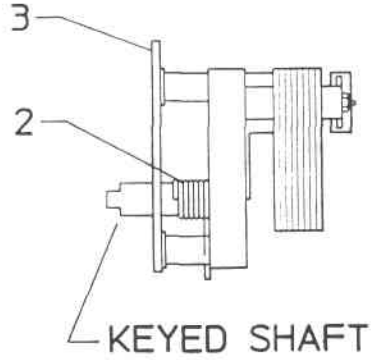
MODELS UW 65 & 85
MAIN EXPLODED VIEW
FINAL ASSEMBLY
FIGURE H
ILLUSTRATION NO. 721196

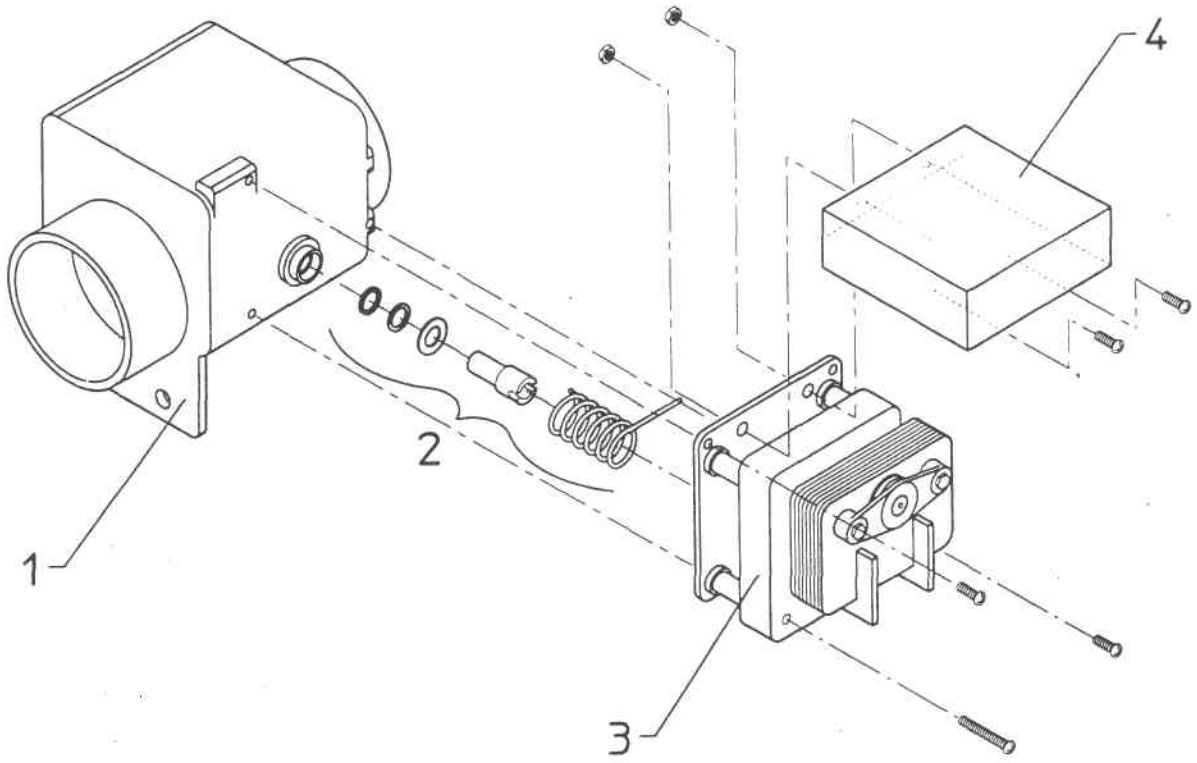
MAIN EXPLODED VIEW
FINAL ASSEMBLY
FIGURE H
MODELS UW65 & 85

ILL NO. 721196
ISSUE 1
DATE 3/22/89
SHEET 1 OF 1

ITEM	QUANTITY UW65	QUANTITY UW85	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	1	1	601236	Rub Rail		
2	3	3	430921	Bolt		
3	1	1	601198	Front Panel		
4	3	3	430317	Washer - Lock		
5	3	3	430215	Nut - Fiberlock		
6	28	28	430901	Screw		
7	1	1	601037	Lid		
8	1	1	601202	Left Door Box		
8A	1	1	601201	Right Door Box (Not Shown)		
9	1	1	603650	Valve Box Cover - 4-Way Supply Valve		
10	1		604035	Cage Wrap		
10		1	603703	Cage Wrap		
11	1		602893	Right Side Panel		
11		1	602894	Right Side Panel		
12	10	10	430606	Tinnerman Nuts		
	20	20	431804	Enclosed Screw Grommet		
	1	1	604088	Back Panel		
	2	2	430152	Screw		
16	6	6	430415	Roll Pin		
17	1		602009	Left Side Panel		
17		1	602894	Left Side Panel		
18	6	6	170400	Trim Lock		order by foot







UniMac

ALL UW
BALL DRAIN VALVE ASS
ILLUSTRATION NO. 721488

UniMac

BALL DRAIN VALVE ASSEMBLY
MODELS UW35, 50, 65, 85 & 125

ILL NO. 721488
ISSUE 1
DATE 01/21/94
SHEET 1 OF 1

ITEM	QUANTITY		PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
				- UW35		
				- UW50, 65, 85 & 125		
-	1		380602	Drain Valve, Complete, 2", NO, 110V 60 Hz		
-	1		380604	Drain Valve, Complete, 2", NO, 208-230V 50-60Hz		
-		1	380600	Drain Valve, Complete, 3", NO, 110V 60 Hz		
-		1	380608	Drain Valve, Complete, 3", NO, 220V 50-60Hz		
1	1		380920	■ Valve Body, 2"		
		1		■ Valve Body, 3" - Not available seperately		
2	1	1	380918	■ Main Drive Shaft and Seal Kit		
3	1	1	380943	■ Motor, Drain Valve, 110V, 60 Hz, Keyed Shaft		
	1	1	380932	■ Motor, Drain Valve, 110V, 60 Hz, Round Shaft		
	1	1	380944	■ Motor, Drain Valve, 220V, 50 Hz, Keyed Shaft		
	1	1	380933	■ Motor, Drain Valve, 220V, 50 Hz, Round Shaft		
4	1		602761	Cover, Drain Valve Motor		

REV. 3-22-88 wc

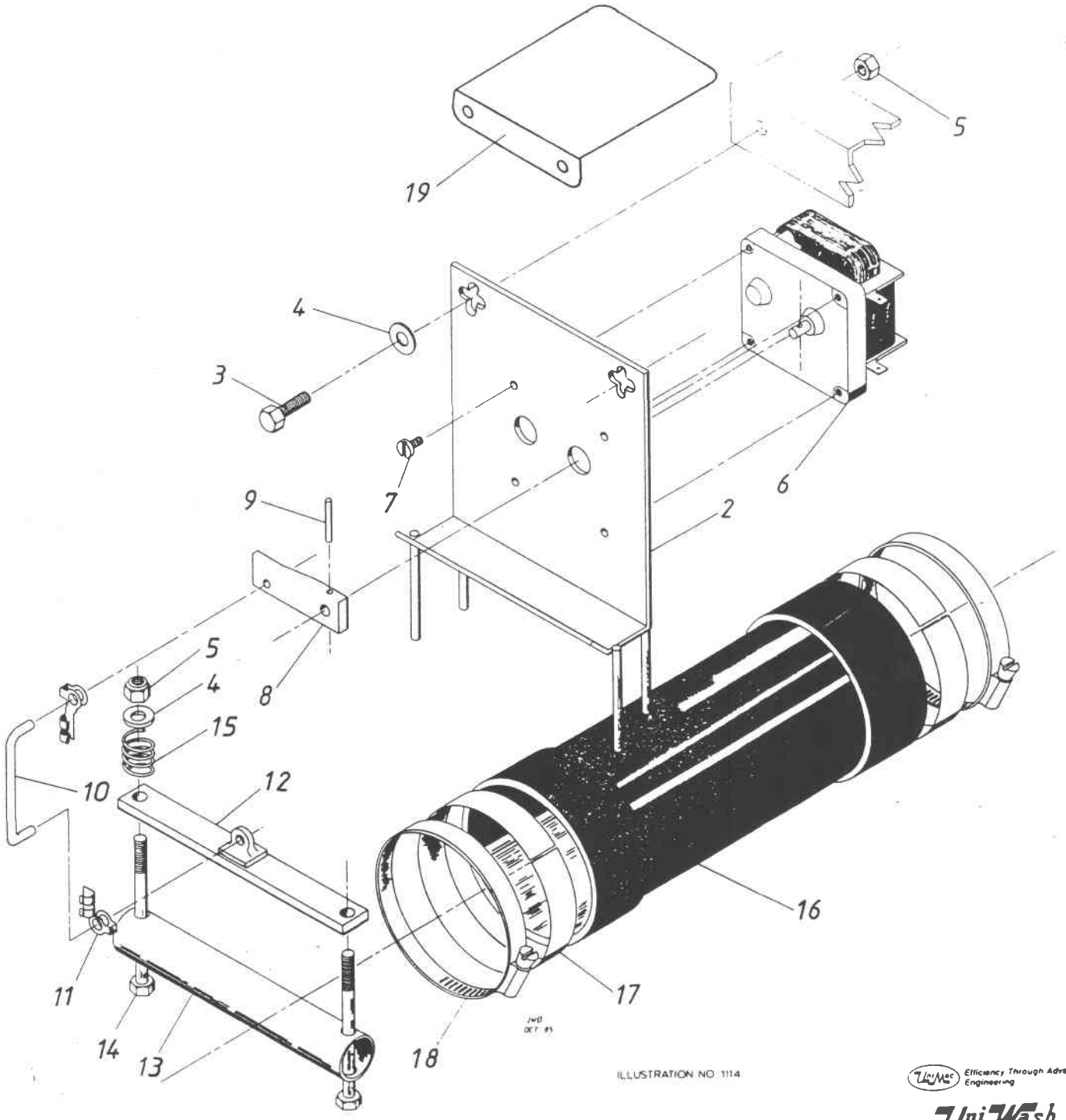


ILLUSTRATION NO 1114

UniMac Efficiency Through Advanced Engineering

UniWash

MOTORIZED DRAIN VALVE

FIGURE N·

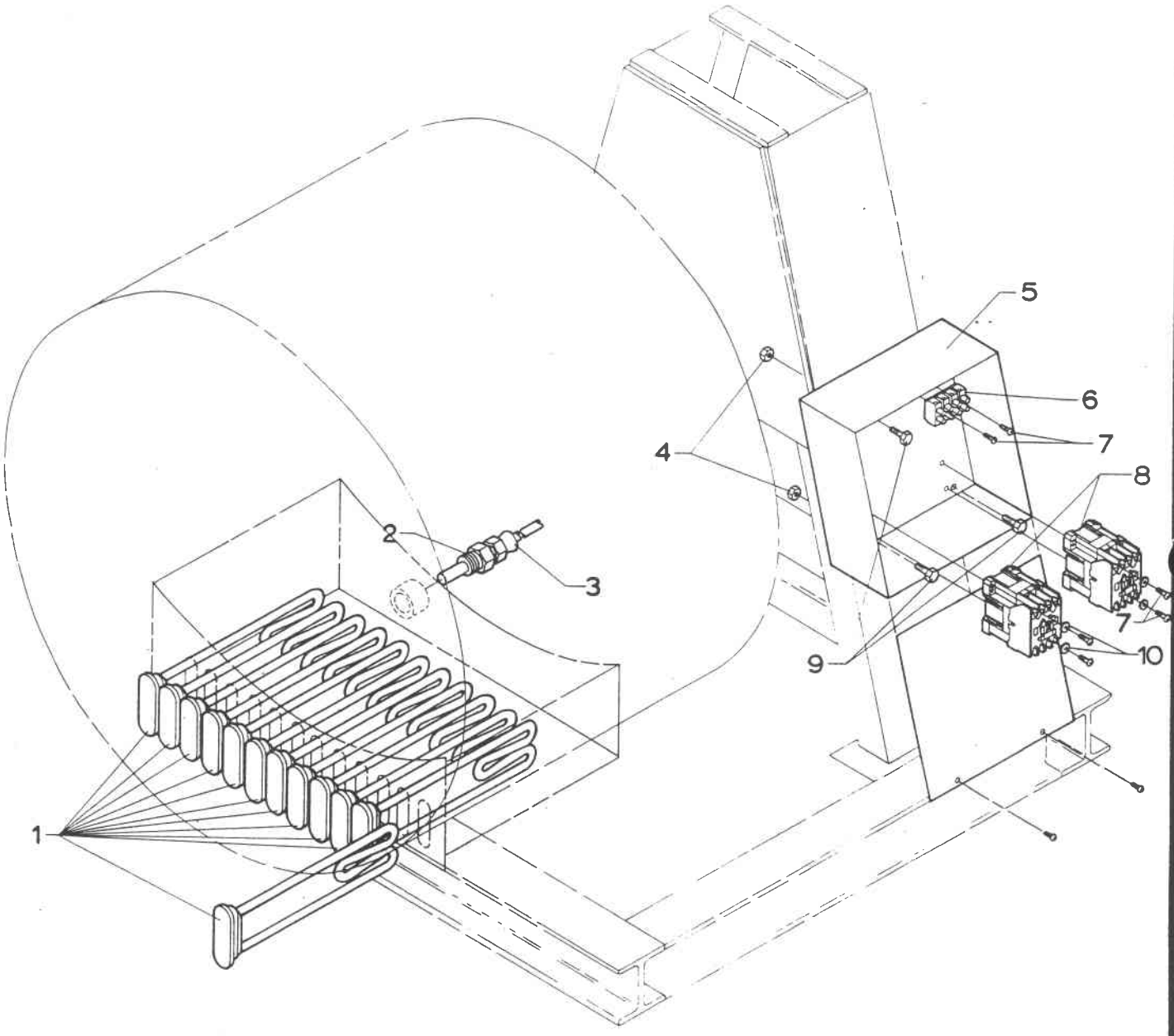
721114

UniMac®

MOTORIZED DRAIN VALVE
FIGURE N
MODEL UW 85

ILL NO. 721114
ISSUE 2
DATE 8/26/88
SHEET 1 OF 1

ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1		730001	Drain Valve Kit-115V 60Hz		
1		730002	Drain Valve Kit-220-240V 50/60Hz		
2	2	602351	■ Drain Valve Bracket		
3	4	430103	■ Bolt	3149	
4	8	430317	■ Washer	3148	
5	8	430215	■ Nut	3061	
6	2	380932	■ Drain Valve Motor-115V 60Hz		
6	2	380906	■ Drain Valve Motor-220-240V 50/60Hz		
7	8	430920	■ Screw		
8	2	602222	■ Drain Valve Arm		
9	2	431204	■ Pin		
10	2	602274	■ Drain Valve Linkage Arm		
11	4	431205	■ Clevis Clip		
12	2	603441	■ Drain Valve Lift Bar		
13	2	602101	■ Drain Valve Lift Tube		
14	4	430101	■ Bolt	3079	
15	4	310101	■ Spring	4462	
	2	200126	■ Hose	4463	
	4	601244	■ Chafe Strip	1244	
	4	200201	■ Hose Clamp	7018	
19	2	602372	■ Drain Valve Motor Cover		



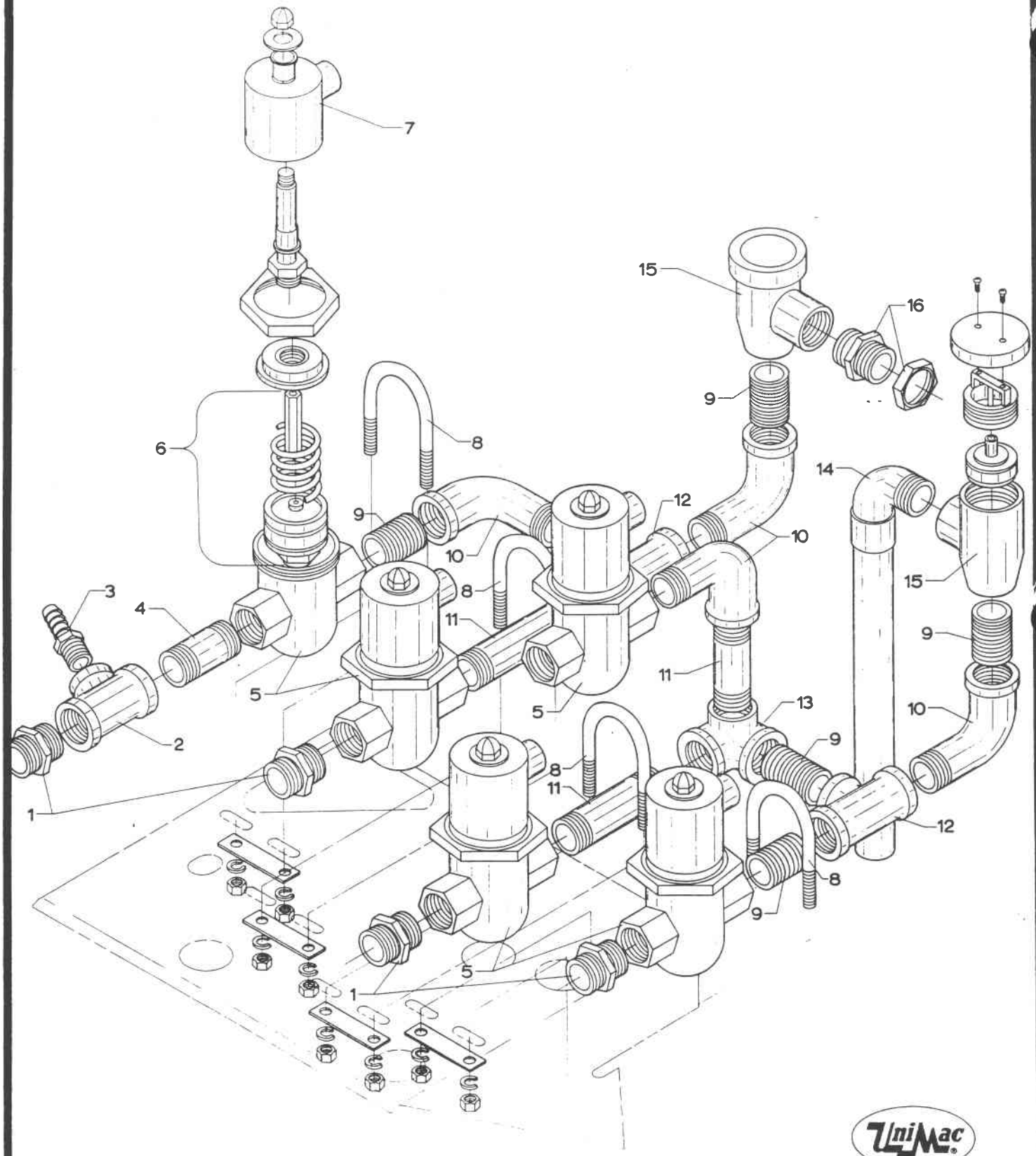
ALL UW MODELS
ELECTRIC HEAT OPTION
FIGURE O
ILLUSTRATION NO. 721273

UniMac®

ELECTRIC HEAT OPTION
FIGURE O
ALL UW MODELS EXCEPT UW 125

ILL NO. 721273
ISSUE 1
DATE 6/20/90
SHEET 1 OF 1

ITEM	QUANTITY			PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
	UW 30 & 35	UW 50 & 65	UW 85				
1	3	6	9	360203	Heating Element		
2	1	1	1	421936	Bushing, 1/2 x 3/8 Reducer		
3	1	1	1	370606	■ Temperature Probe (P Models Only)		
3	1	1	1	290101	■ Temperature Probe & Thermometer (R Models Only)		
4	3	3	3	430215	Nut,1/4 - 20 Fiberlock		
5	1	1	1	140413	Electrical Box		
6	1	1	1	140746	4 Way Block		
7	6	6	6	430938	Screw, Rd. Hd., #6-32 x 1" Stainless		
8	2	2	2	330150	■ 120 V Contactor		
8	2	2	2	330151	■ 220 V Contactor		
9	3	3	3	430107	Bolt, Hex Hd., 1/4 - 20 x 1" Pltd.		
10	4	4	4	430311	Washer, # 8 Flat		



UW 85
WATER REUSE OPTION
FIGURE P
ILLUSTRATION NO. 721277

UniMac®

WATER REUSE OPTION
FIGURE P
ALL UW 85 MODELS

ILL NO. 721277
ISSUE 1
DATE 8/16/90
SHEET 1 OF 1

ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	4	421909	Adaptor, Hose, 3/4" x 3/4"		
2	1	420402	Tee, Galvanized, 3/4" x 3/4" x 1/2"		
3	1	421930	Barb, Hose, Brass, 1/2" x 1/2"		
4	1	420106	Nipple, Galvanized, 3/4 x 2-1/2"		
5	5	380702	Valve, Water, Brass, 3/4", 110V		
5	5	380703	Valve, Water, Brass, 3/4", 240V		
6		380915	Kit, Hays, Repair, 3/4"		
7	5	380901	Coil for Solenoid Valve, 120V		
7	5	380902	Coil for Solenoid Valve, 240V		
8	4	200401	Clamp, U-Bolt, #5		
9	5	420105	Nipple, Galvanized, 3/4" x Close		
10	4	420502	Elbow, Street, Galvanized, 90 Deg, 3/4"		
11	3	420108	Nipple, Galvanized, 3/4 x 4"		
12	2	420403	Tee, Galvanized, 3/4		
13	1	420509	Elbow, Galvanized, 3/4", 90 deg		
14	1	610260	Assembly, Fill, Top		
15	2	380800	Valve, Vacuum Breaker, Brass, 3/4"		
	1	422106	Connector, Tube, Brass, 7/8 x 3/4"		

NOTES

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UniMac

Commercial Laundry Equipment

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