Raytheon Appliances

Washer Extractor

Models UM100, UM202, & UM1202

Top Loading

Applies to Serial Number 26116

TECHNICAL

Technical Publications
P O Box 990
Ripon, WI 54971-0990

Part No. 230401
Version 2.01

UM 100, 202, & 1202 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 (L-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 the machine is conveniently located and properly leveled.

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,** lid safety interlock must be checked for proper operation as follows:

When washer is energized electrically and in operation, the lid must be locked in the closed position and the extractor basket must be rotating in the proper direction (clockwise). Verify this by attempting to open the lid when the machine is operating. Then turn extractor off and check to see that basket is stopped before lid can be opened. If necessary, check lid lock microswitch for proper operation - consult the service manual.

When extractor lid is open, it is not possible to start the extractor. Verify this by attempting to start the extractor with lid open. If additional information is required, contact your local distributor or call the UniMac Company.

☐ **IMPORTANT:** Lid 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 machine.

WARNING

Dangerous voltages are present in contactor box 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.

INTRODUCTION

I.1 GENERAL

This manual is designed as a guide to operating and maintaining your UniMac washer-extractor. It also serves as an aid to troubleshooting, identifying and ordering replacement parts and includes special instructions for adjustment and replacement of key parts.

Read and be sure you understand this manual and any other literature included with your machine before attempting to start the machine. For warranty purposes, be absolutely sure that the specifications of your installation equal or surpass the installation specifications called for in this manual. Incorrect installation may void the warranty.

Keep this manual, along with any other literature which accompanied the machine, in a safe place for ready reference. The first copy is included with your machine. Additional copies are available at a nominal charge.

Parts and service are available through your area distributor or dealer. For the name of your area representative, call the factory.

We take pride in the equipment we manufacture. Our distributors represent us with confidence. Call on us whenever we may be of service.

I.2 SPECIFICATIONS

CRITERIA	UM 100		UM 202		UM 1202	
DIMENSIONS						
length	40 in.	927 mm	60 in	1087 mm	100 in	1184 mm
depth	29 1/2 in	846 mm	29 1/2 in	1064 mm	29 1/2 in	1153 mm
height	40 1/2 in	1397 mm	40 1/2 in	1530 mm	40 1/2 in	1594 mm
WEIGHT						
net	400 lbs.	181.44 kg	460 lbs.	208.65 kg	860 lbs.	390.09 kg
gross	450 lbs.	204.12 kg	510 lbs.	231.33 kg	960 lbs.	435.45 kg
CYLINDER						
volume	1.09 cu. ft.	30.87 liter	1.09 cu. ft.	30.87 liter	1.09 cu. ft.	30.87 liter
diameter	16 1/8 in.	409 mm	16 1/8 in	409 mm	16 1/8 in.	409 mm
depth	9 1/4 in	235 mm	9 1/4 in	235 mm	9 1/4 in	235 mm
extract speed	1580 rpm	1350 rpm	1580 rpm	1350 rpm	1580 rpm	1350 rpm
G-factor spin	571	571	571	571	571	571
MOTOR POWER						
wash speed - HP	1 @ 0.33 hp	0.13 kw	2 @ 0.33 hp	0.3 kw	3 @ 0.33 hp	0.4 kw
extract speed - HP	1 @ 1.0 hp	0.75 kw	1 @ 1.0 hp	0.75 kw	2 @ 1.0 hp	0.75 kw
MOTOR SPEED						
wash speed - RPM	1725 60Hz	1450 50Hz	1725 60Hz	1450 50Hz	1725 60Hz	1450 50Hz
extract speed - RPM	1580 60Hz	1350 50Hz	1580 60Hz	1350 50Hz	1580 60Hz	1350 50Hz
WATER CONNECT						
size	1/2 in	DN15	1/2 in	DN15	1/2 in	DN15
oper. pressure	10-150 psi	0.5-8 bar	10-150 psi	0.5-8 bar	10-150 psi	0.5-8 bar
recom. pressure	60-80 psi	2-6 bar	60-80 psi	2-6 bar	60-80 bar	2-6 bar
max. temperature	200 °F	90 °C	200 °F	90 °C	200 °F	90 °C
DRAIN CONNECT						
I. D. size	2 in.	50 mm	2 in.	50 mm	2 in.	50 mm

Use three phase circuit breakers only.

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.

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.

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 agitators is limited to a period of ninety (90) days from 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. There is specifically excluded from this warranty damage to any part of the machine caused by:
   A. The use of the machine for drywash or any wash process utilizing abrasive material or abrasive compounds; or,
   B. Corrosion resulting from the use of concentrated chemicals.
4. 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.
5. UniMac specifically disclaims any liability for consequential or incidental damages attributable to the failure of any part of the machine.
6. 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.
3595 Industrial Park Drive
Marianna, Florida, U.S.A. 32446-9458

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.

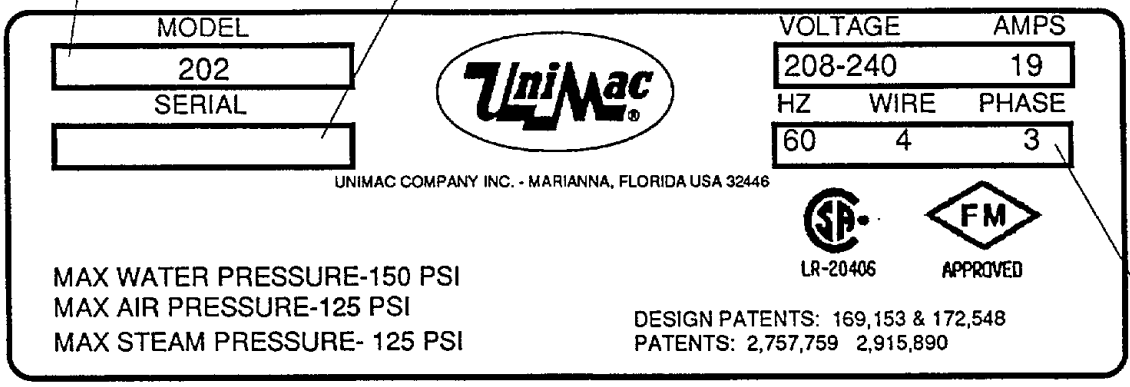
UniMac reserves the right to make changes in design or in the construction of our machines (including purchased components) without obligation to change any machine previously manufactured by us.

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. 32446-9458

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 ASSISTANCE.



INDICATES ELECTRICAL CONNECTION DATA

NOTE:
THE I.D. DECAL IS LOCATED ON THE FRONT SIDE ON THE CONTROL PANEL.

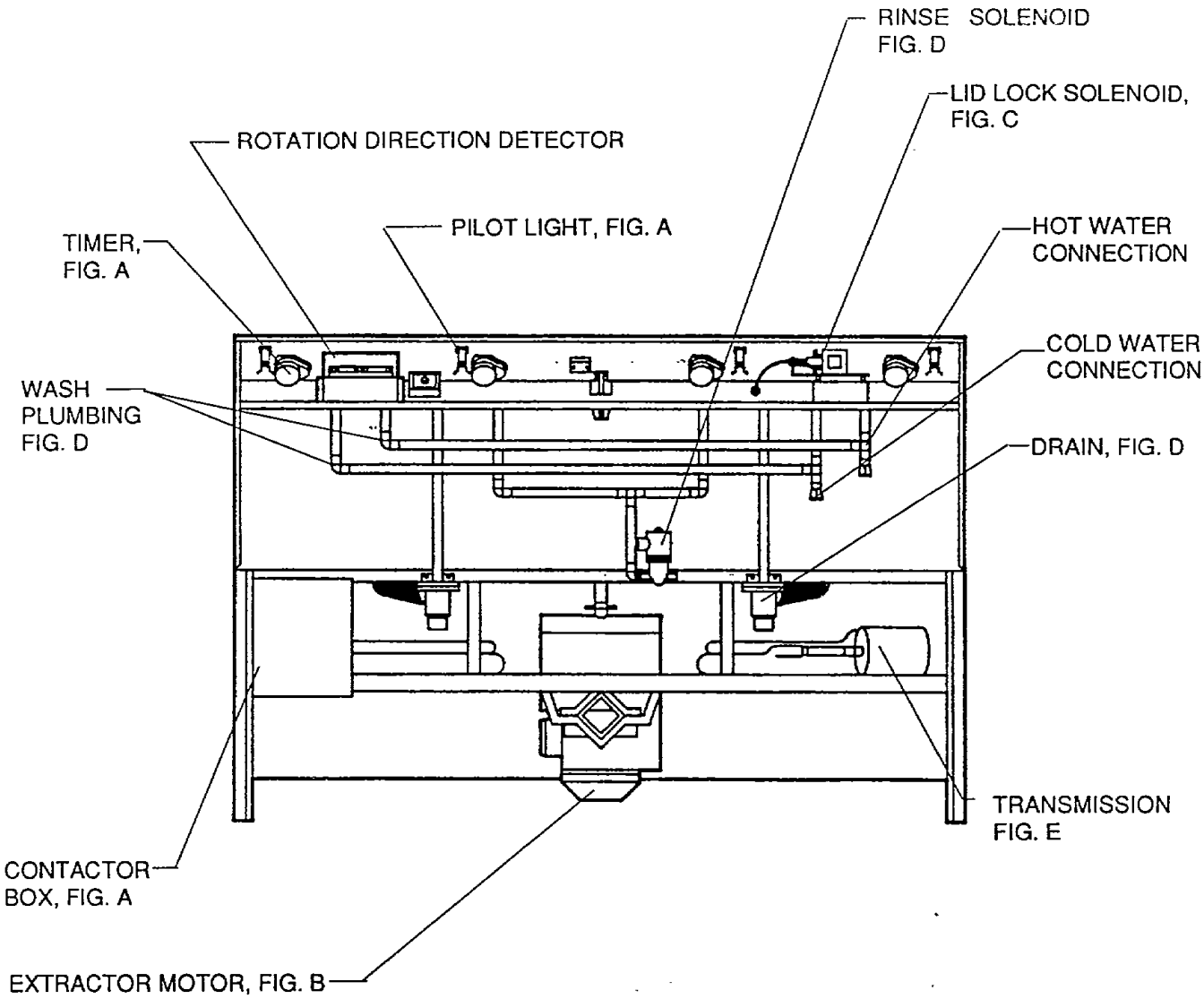


FIGURE I-A: UM 202 FAMILIARIZATION GUIDE

INSTALLATION

II.1 GENERAL

Procedures covered in this section are applicable to the UM 100, 202, and 1202 washer-extractor. Lift the machine from skid base, set into position and level. Bolting to floor is optional. After positioning machine, extractor basket should be placed on extractor basketball and turned by hand until the basket seats properly.

II.2 DIMENSIONS

The dimensions for the machine are shown on the illustrations found on page 18. Use these illustrations to allow proper space for installation of the machines.

II.3 UNCRATING

Remove the crate from machine .

Note: Manual will be found inside crated 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 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.

7.Salvage receipt (general receipt)

II.5 DAMAGE CLAIM (Continued)

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 ELECTRICAL INSTALLATION

The UniMac washer-extractor is designed for 4-wire, 208-240V, 60 cycle, 3 phase service. The service breaker should be 20 Amps for model UM 100 machines (UM 202 requires 30 Amps, UM 1202 requires 20 and 30 Amps). The control voltage is 115V along with the agitator motor(s). The only 3 phase component is the extractor motor.

If a Delta Supply System is used, the high leg **must** be connected to the **orange wire** at the J-box. 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 **orange wire.**

Rotation of the extractor basket should be clockwise as indicated by the arrow on the lid. To change direction of rotation of the extractor, interchange the black and blue leads.

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.

For personal safety and proper operation, the machine **must be grounded** as per state and local codes. In the absence of these codes, grounding 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.

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

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.

ELECTRICAL CONNECTION DATA

MODEL	VOLT	PHASE	CYCLE	MAX AMPS
UM 100	240	3	60	11
UM 202	240	3	60	19
UM1202	240	3	60	30

MODEL	CIRCUIT BREAKER	WIRE SIZE
UM 100	20 AMP	10 AWG
UM 202	30 AMP	10 AWG
UM 1202	20/30 AMP	10 AWG

TABLE II-1

FOR MACHINES WITH OTHER VOLTAGES (UM 202)

VOLT	MAX AMPS	WIRE SIZE	CIRCUIT BREAKER
200-250	19	10 AWG	30 AMP
440-480	16	10 AWG	30 AMP
380-415	10	10 AWG	25 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.

Installation Shall Conform With Local Codes Or, In Absence Of Local Codes, With The National Electric Code Ansi/ nfpa No. 70-1981. Overloaded Or Undersized Lines, Or Any Low Voltage Condition Will Burn Out Motors And Solenoid Windings.

WARNING !!

Be Certain That A Ground Wire From A Proper Earth Ground Is Connected To The Green Chassis Ground Lead Provided In The J-box. Without Proper Grounding, Personal Injury From Shock May Occur And Machine Malfunctions May Be Evident.

II.7 WATER CONNECTION

Rigid pipe connections are not recommended.

Water supply lines should not be less than 3/4" (UM 100 and 202) or 1" (UM 1202), otherwise a pressure drop to washing compartments and rinse jets may result. Under normal pressure (30-40 P.S.I.) the solenoid valve will pass ten gallons of water per minute to rinse jets. NOTE: Dirt or sediment in water lines may cause solenoid valve to stick open. If this occurs, clean by removing housing and solenoid coil, then remove plunger from valve body. Clean and reassemble.

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.

Each hose is connected to a hot or cold water faucet with a 3/4" hose bib.

Vacuum breakers and check valves should be installed when required by local codes.

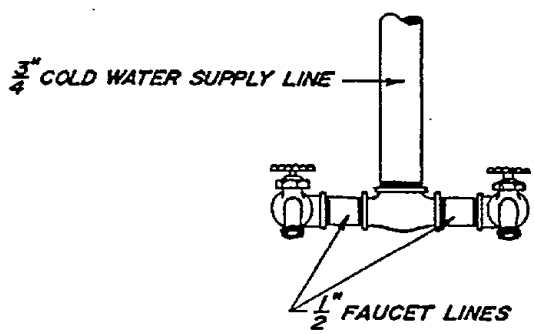


FIGURE II-A: TYPICAL COLD WATER SUPPLY PLUMBING (REPEAT FOR HOT WATER)

Each of the 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" (UM 100 and 202) or 1" (UM 1202) 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" (Fig. II-B). If the water pressure is above 60 psi, flexible copper tubing should be used in place of the rubber hoses.

WATER AND DRAIN LINE REQUIREMENTS (100/202)		
NUMBER MACHINES	PIPE SIZE	DRAIN SIZE
1	3/4"	2"
2	1"	3"
3	1 1/4"	4"
4	1 1/2"	4"
5	1 1/2"	4"
6	2"	4"
7	2"	6"
8	2"	6"
9	2"	6"
10	2"	6"

TABLE II-2

WATER AND DRAIN LINE REQUIREMENTS (1202)		
NUMBER MACHINES	PIPE SIZE	DRAIN SIZE
1	1"	3"
2	1 1/2"	4"
3	2"	4"

TABLEII-4

II.7 WATER CONNECTION (Continued)

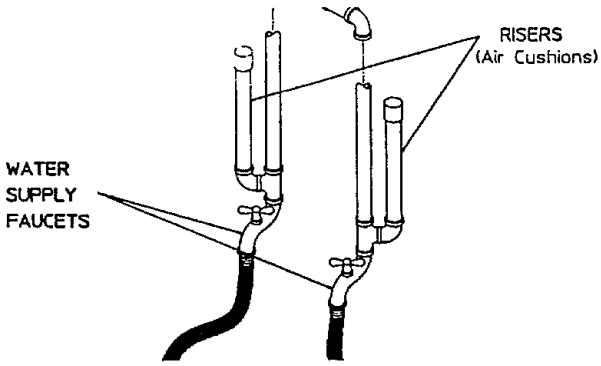


FIGURE II-B

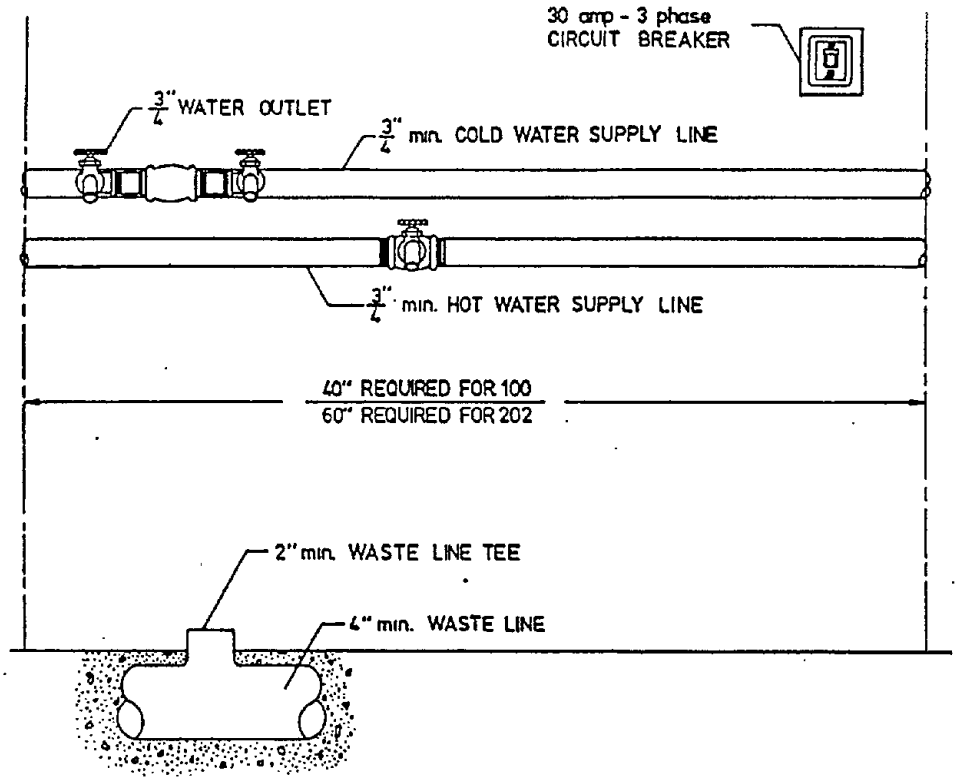
II.8 DRAIN CONNECTION

Providing an adequate drain arrangement and capacity is essential. Ideally, the machine should dump through a 2" (UM 100 and 202) or 3" (UM 1202) pipe directly into a sump or floor drain.

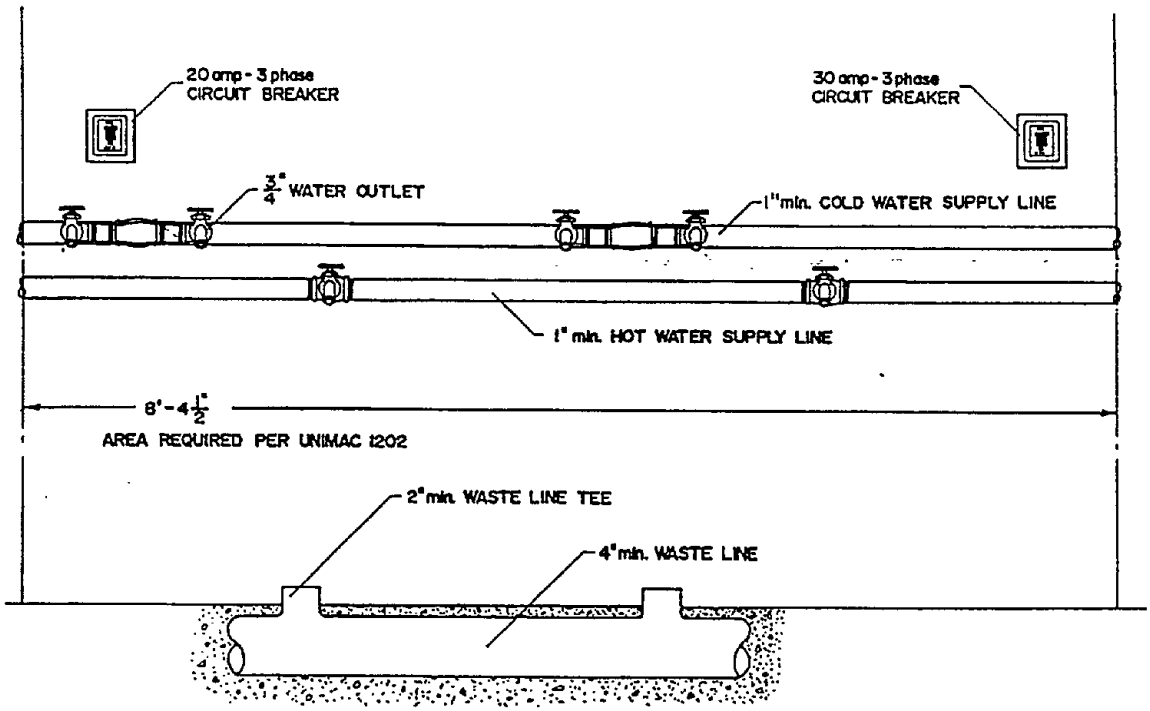
Connection to a drain must be vented to prevent an air-lock or siphon effect and **must be flexible**. Increasing drain hose length, installing elbows or causing bends will decrease drain flow rate which might harm washer performance. If the drain arrangement is inadequate, the machine will not extract 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.

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

UM 100/202



UM 1202



II.9 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 lid interlock by opening the lid and attempt to start the extractor in the normal manner. The extractor must not start while the lid is open.

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

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

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.10 DIMENSIONS

UM 202	inch	mm
A	60	1524
B	24	609.6
C	18 3/8	466.7
D	17	431.8
E	16 1/2	419.1
F	29 1/2	749.3
G	20 1/2	520.7
H	40 1/2	1028.7

TABLE II-4: DIMENSIONS

UM 100	inch	mm
A	40	1016
B	24	609.6
C	18 3/8	466.7
D	17	431.8
E	16 1/2	419.1
F	29 1/2	749.3
G	20 1/2	520.7
H	40	1016

NO.	DESCRIPTION
1	FAUCET
2	AGITATOR
3	EXTRACTOR BASKET
4	CONTROL PANEL

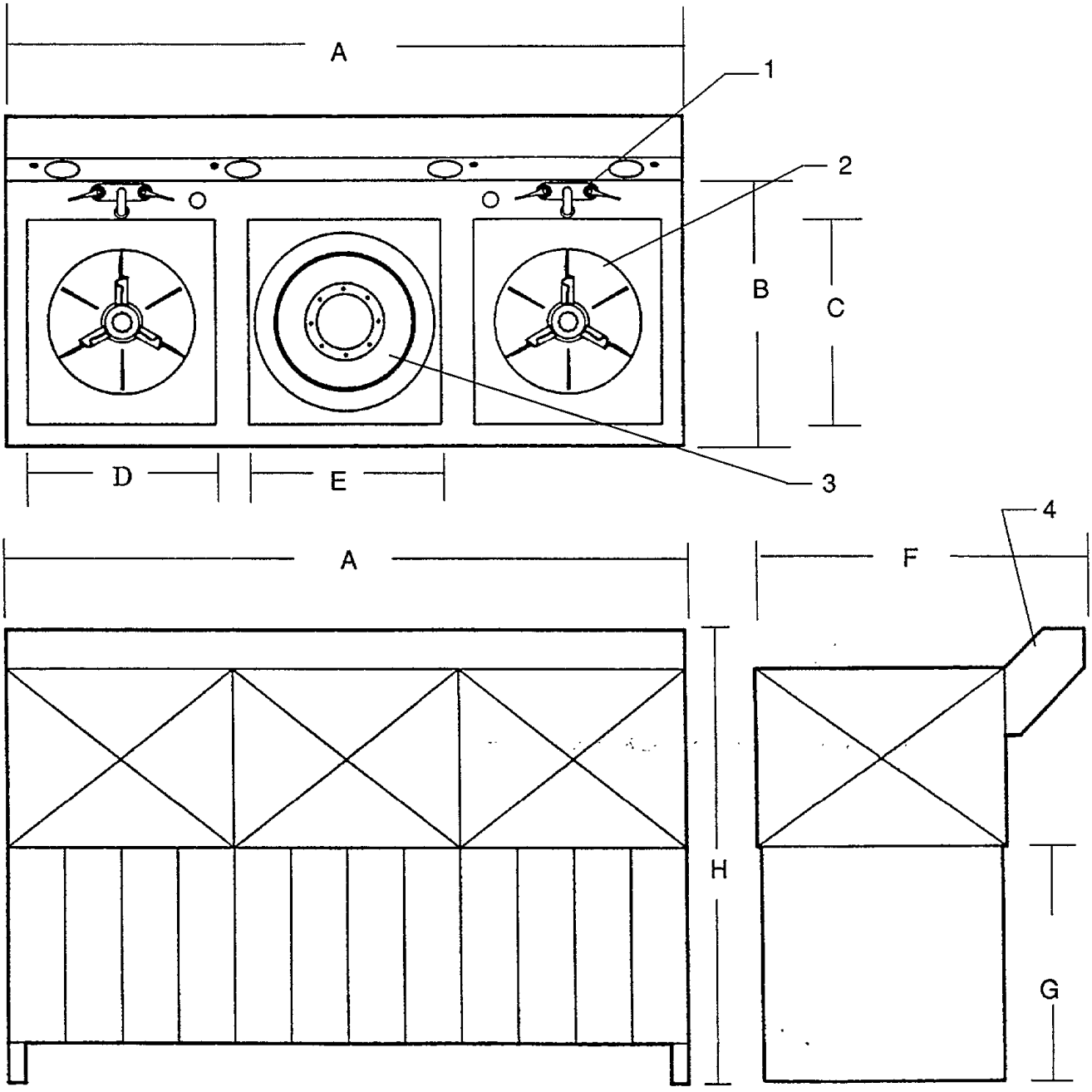


FIGURE II-D: DIMENSION VIEWS

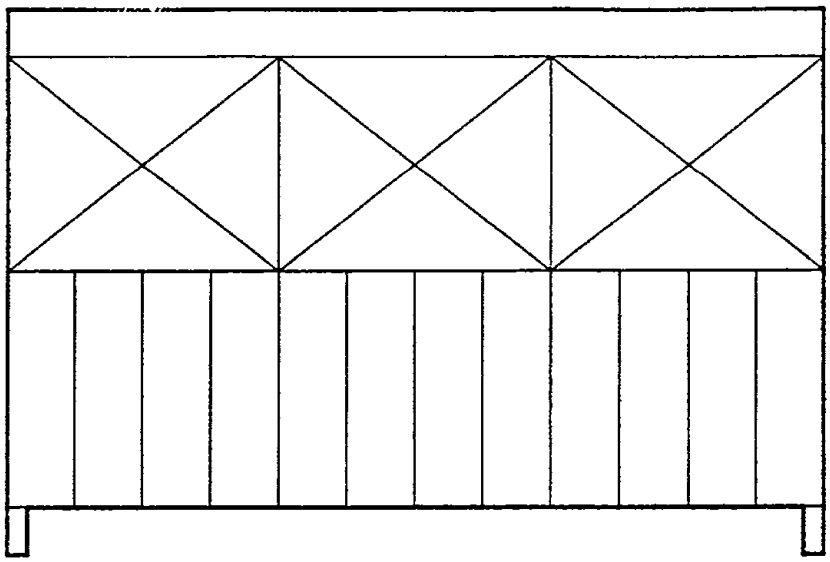


FIGURE VII-E: FRONT VIEW (UM 202)

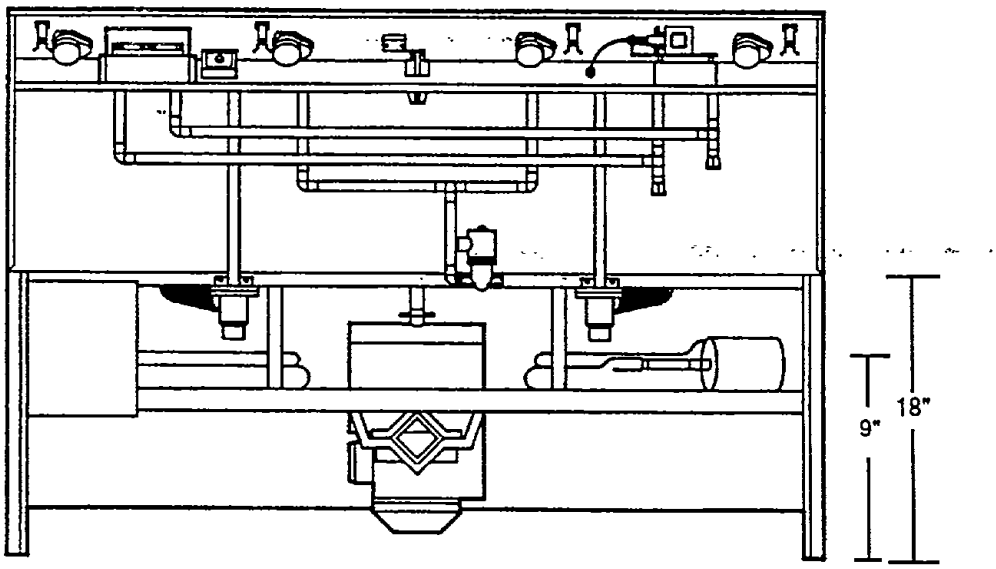


FIGURE VII-E: BACK VIEW (UM 202)

OPERATING INSTRUCTIONS

III.1 TURN ON

Turn on the main power source (breaker panel or cut-off switch on the wall). The UniMac control panel is in full view and all controls at easy to reach arm level. Timer dials are clearly marked for selection of settings. Neon signal lights operate in conjunction with all timers. Controls are positive and easy to operate.

III.2 HOW TO LOAD AND USE WASH COMPARTMENT

UniMac wash compartments are rectangular, a design which permits maximum agitation and gentle squeeze action for thorough soil removal. Compartments operate independently of each other and may be used separately or simultaneously. Each compartment has a 12-pound dry weight capacity. Excessive loading prevents thorough washing action and slows production.

First close drain valve of compartment to be used. Next open hot and cold water faucets to desired temperature and fill compartment to top of agitator fins for a 12-pound load. Then add required amount of detergent (if bleach is desired, use ONLY liquid bleach) and set wash timer at approximately one-half minute. This assures thorough mixing and immediate washing action throughout the load.

When timer cuts off, place washables in compartment so pattern resembles sections of a grapefruit when cut in half. This assures proper washing action. When compartment is loaded, set wash timer as required. Pilot light comes on and washing begins immediately. At completion of wash cycle, pilot light and motor cut off and load is ready for rinse-extraction.

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.

III.3 HOW TO LOAD AND USE RINSE EXTRACTOR

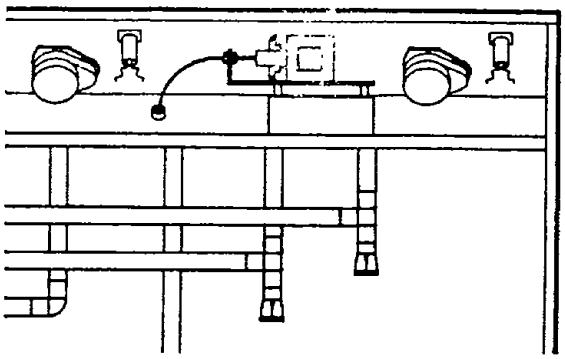
At completion of wash cycle, washables are placed into rinse-extractor basket which will hold a 12-pound load.

When a mixed load is to be rinse-extracted, first place loosely woven washables, then sheets, pillow slips and other closely woven articles. Articles should always be placed so they are inside and below top rim of basket. Arrange washables in extractor basket so pattern resembles sections of a grapefruit when cut in half. This assures proper load adjustment and thorough rinse-extraction.

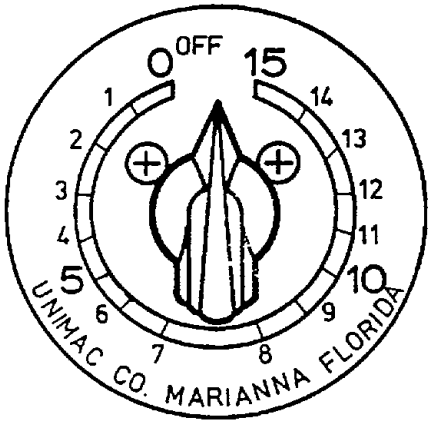
When extractor is loaded, close cover and set extractor timer for desired time; then set rinse timer. There is an automatic time delay which allows a short extract time before the rinse valve opens.

On dual timer machines, setting rinse time automatically sets extract and rinse delay time. When rinse and extract cycles are completed, pilot light, rinse valve and extract motor cut off.

To stop basket before end of cycle, turn extractor timer to off position. Wait until basket stops, press lid lock release button and raise cover.

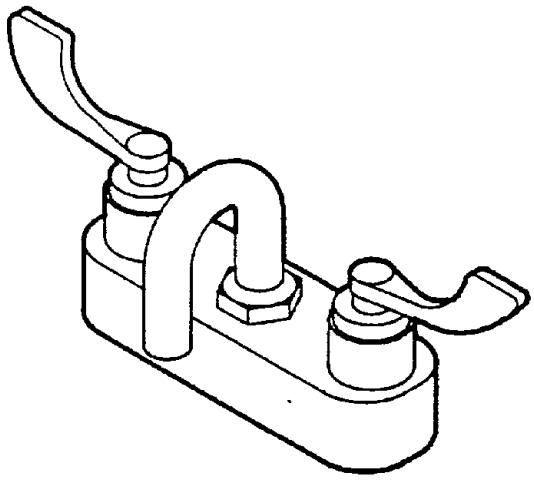


III.4 LID LOCK
Extractor lid cannot be opened while basket is spinning. When basket stops, push lid lock release button to open lid.

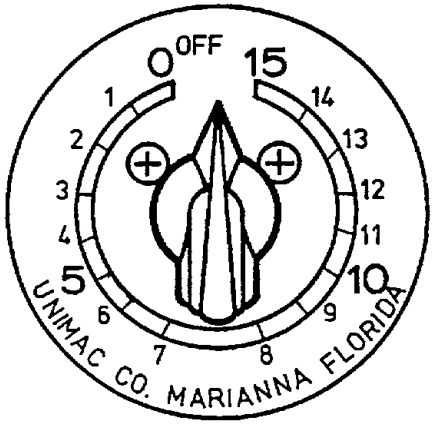


III.5 WASH TIMERS
Timers are calibrated from 0 to 15 minutes. Cycles will vary according to fabric and degree of soil. For average soil, timers are set 6 to 8 minutes. A shorter cycle may be used for lightly soiled washables.

III.6 DRAINS
Gravity drains are designed to drain water fast without the use of pumps.



III.7 FAUCETS
Fast flow faucets are especially designed with non-siphoning air gap outlets and permit selection of desired water temperature.



III.8 EXTRACT/ RINSE TIMERS
After washables have been placed in extractor basket, extractor timer is set at 5 minutes. This provides maximum removal of rinse water from most washables. Rinse timer is set at 2 1/2 to 3 minutes depending upon water conditions. The 2 1/2 minute rinse cycle is adequate with soft water. Dual timers (optional) combine control of rinse and extract automatically.

III.9 WASHING BY CLASSIFICATION

The recommendations under ***How to Use Wash Compartments (III.2), How to Use Rinse-Extractor (III.3),*** and the following information are based on years of research and study. If they are followed carefully, finer work will be produced easier and faster.

Any good detergent will give adequate and economical results.

UniMac is the only equipment designed for actual custom washing of every type fabric and washable. It permits a wide margin in the use of detergents and other supplies, and in the selection of load weights. Washables vary in size and weight and while the ideal load is approximately 12 pounds, smaller loads may be processed.

Washing by classification produces the finest quality. Recommended loads for sheets and pillow slips are based on count. Because of the many different weights and sizes of fluff dry washables, table linens and similar articles, it is not possible to recommend count loads. The operator should weigh each load of such washables until approximate count has been determined. As the operator becomes experienced with UniMac procedure, it is then possible to load by judgment instead of count or weight.

FLUFF DRY WASHABLES

Bath mats, bath towels, face cloths, spreads, mop heads, rugs, athletic and camp washables.

Wash compartments and rinse-extractor each have a 12-pound dry weight capacity.

SET TIMERS

Wash .....6 minutes

Extract .....5 minutes

Rinse .....3 minutes

NO-IRON WASHABLES

SHEETS

Wash compartments and rinse extractor each have a capacity for eight single or six double sheets. Place one sheet in each corner of wash compartment and one each on opposite sides of compartment.

SET TIMERS

Wash ..... 4 minutes

Extract ..... 4 minutes

Rinse ..... 2 minutes

PILLOW SLIPS

Wash compartments and rinse-extractor each have a capacity for thirty-five standard size pillow slips.

SET TIMERS

Wash ..... 8 minutes

Extract ..... 4 minutes

Rinse ..... 2 minutes

TABLE CLOTHS AND NAPKINS

Wash compartments and rinse-extractor each have a 12-pound dry weight capacity.

SET TIMERS

Wash ..... 8 minutes

Extract ..... 4 minutes

Rinse ..... 2 minutes

SPECIALTIES

BLANKETS

The number of blankets for each load is determined by size, material and weight. While it may be possible to launder six or eight light weight cotton sheet blankets per each load, two heavier blankets might comprise a load.

To process a load of blankets, the two wash compartments and extractor are used in the following manner:

Fill left wash compartment with warm water to top of agitator fins. Then add enough detergent to produce a heavy suds. Set wash timer at approximately one-half minute to thoroughly mix detergent and water. Place blankets in compartment and set timer at 5 minutes. When timer cuts off, place blankets in extractor and set extract timer at 4 minutes and rinse timer at 3 minutes.

DRAPES

Drapes are subject to direct rays of sun. This weakens fabric and fades colors. Wash in cool or luke warm water.

SET TIMERS

Wash ..... 5 minutes

Extract ..... 5 minutes

Rinse ..... 3 minutes

UNIFORMS

SET TIMERS

Wash ..... 8 minutes

Extract ..... 4 minutes

Rinse ..... 2 minutes

MECHANICAL & ELECTRICAL DESIGN

IV.1 GENERAL

UM machines are manufactured in three models. These are the 100, 202, and 1202. This equipment is capable of washing, rinsing, and extracting up to 100 pounds (dry weight) of washables per hour (150 pounds for 202 models and 200 pounds for the 1202). The front and side panels as well as the main body of the machine are constructed of Type 304 corrosion resistant stainless steel. The machine is mounted on a welded base frame which supports the extractor motor and transmission assembly. The frame is constructed of 1 1/2 x 1 1/2 x 1/8 angle steel members.

The main body, made of 20 gauge stainless steel, is securely attached and bolted to the front of the frame. The main body has a drain sump to which the drain valve is connected.

The extractor lid, made of transparent lexan, is attached to the main body by means of a hinge. The lid has a latching mechanism that mates with a lid interlock system mounted in the front main body. The lid lock is released by a solenoid mounted in the back of the control panel.

All electrical motor control components are housed in a contactor box mounted on the back of the frame. The controls are accessible by removing the cover.

One rinse water inlet valve is mounted on the lower back portion of the machine. Normally, the valve is connected to a cold water source. A mixing valve may be installed (not furnished by Uni-Mac) to allow warm rinses.

IV.2 COMPONENT FUNCTION

A. CONTACTOR BOX
The Contactor Box is located on the rear of the frame. This houses the electrical motor control components.

B. WASH/RINSE TIMERS
The Wash and Rinse Timers, located on the control panel, are calibrated from 0 to 15 minutes for variation in settings.

C. TURBO JET SPRAY NOZZLES
The Jetspray Nozzles, located in the upper corners of extractor compartment, eject pressurized rinse water onto the Jetspray Ball.

D. TURBO JETSPRAY BALL
The Jetspray Ball, located in the center of the extractor lid, diffuses the rinse water from the spray nozzles into a fine spray mist for a thorough rinsing.

E. LID LOCK ASSEMBLY
The Lid Lock Assembly secures the extractor lid to the Main Body. This assembly remains locked during the entire extract cycle.

F. EXTRACTOR BASKET
The Extractor Basket, located in the extractor compartment, is constructed of perforated stainless steel and spins at a constant 1580 RPM.

G. MAIN BODY
The Main Body is made of Type 304 stainless steel and supported by a welded frame made of 1/8" angle iron. It consists of separate rectangular wash and extract compartments specially designed for maximum effectiveness.

IV.2 COMPONENT FUNCTION (Continued)

H. AGITATORS

The Agitators, made of heat resistant polypropylene and cast in permanent type mold maintain a weight of less than four pounds to prevent excessive wear on the splines and transmission gear. These agitators are independently operated by 1/3HP motors and are located in the wash compartments.

I. EXTRACTOR MOTOR

The Extractor motor, located under the Main Body, has vertical suspension on rubber cushions to eliminate vibration. This motor will operate at a speed of 1580 RPM and produce G-Forces of 571G's.

J. WATER VALVE

One 1/2" solenoid operated water valve is provided for the spray rinse. The valve is controlled by the rinse timer.

K. DRAIN VALVE

A 2 1/2" inch I.D. drain valve is provided. This valve is a quick opening type requiring no packing glands, with neoprene rubber valve discs. It is manually controlled by means of a knob located in front of the control panel.

L. TRANSMISSION

The Transmission Assemblies, located below each wash compartment, have a 1/3HP motor and provides independent operation of the wash compartments.

M. FAUCETS

The hot and cold Water Faucets, located behind the wash compartments, are designed with non-siphoning air gap outlets.

N. RINSE PLUMBING

The Rinse Plumbing is located on the rear of the machine.

O. CONTROL PANEL

The Control Panel is easily accessible from all sides. It contains the Wash and Rinse Timers, Signal Lights, and the Identification Decal (For more information on decal, see page 9).

P. SIGNAL LIGHTS

The Neon Signal Lights, located on the Control Panel, are electric and work in conjunction with the Wash and Rinse Extract Timers. The rinse-extract pilot light will remain on until the extractor basket stops automatically at the end of the cycle.

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 lid of the machine and attempt to start in the nor mal manner.

   B. Close the lid and start the extractor. While it is operating, attempt to open the lid. The lid must remain locked.

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 lid when extractor is in motion.

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

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

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 lid does not remain securely locked during the entire extract cycle.

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).

WARNING

Do not operate machine with safety devices bypassed or inoperative.

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

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 lid lock and interlock before starting operation.

B. Clean the main body, front and side panels with mild detergent. Rinse with clean water.

C. Check drain for leaks and proper opening.

D. Clean the lid of all foreign matter.

E. Leave lid 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. Clean lint from motors.

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

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

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

F. Check the basketball to see if it needs grease. If the basket does not rock easily and does not return to the level position when pushed down on one side, add grease to top of nylon basketball cap.

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 may 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)

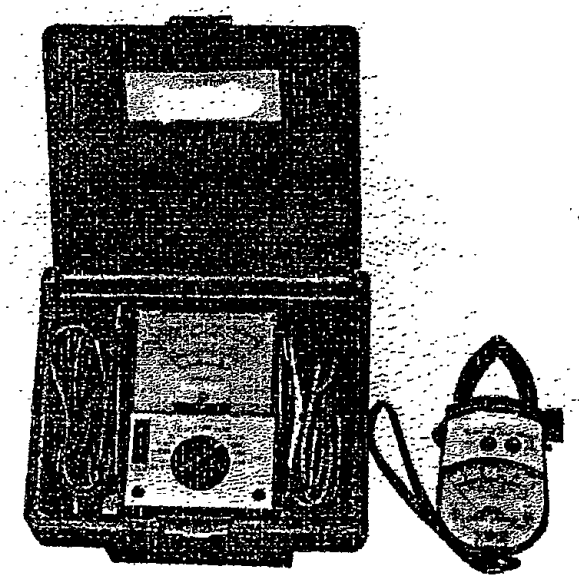


FIGURE VII-A: VOLT/OHM METER & AMP-METER

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 lid 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.

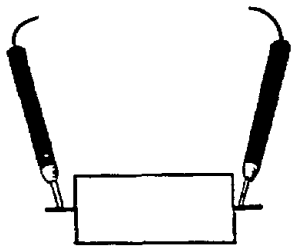


FIGURE VII-B

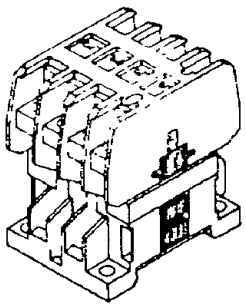


FIGURE VII-C: CONTACTOR

VII.3 CONTACTORS

The contactors are located in a special enclosure mounted on the lower back of the machine. The contactors consist 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.

√ 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.

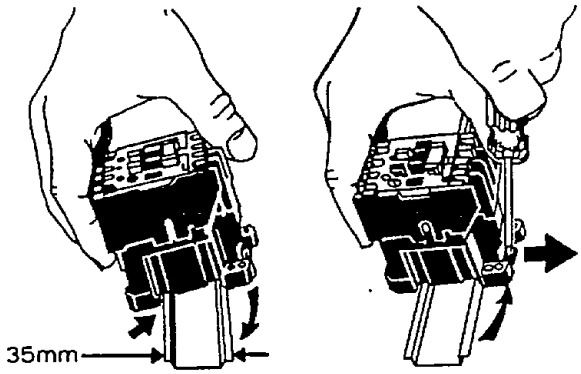
3. If the contacts are burned or pitted, replace complete contactor.

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.

FIGURE VII-D: METHOD OF CONTACTOR REMOVAL



VII.4 DRAIN VALVE

The drain valve consists of a valve body, disc, brass rod, and actuator knob. The drain valve is manually operated.

√ SERVICE TIP
Check that the valve is closing and does not bind. Foreign matter might be stuck inside the drain. A daily check for leakage is recommended.

VII.5 DRIVE MOTORS & BRAKING

The UM 100 is equipped with one agitator motor (single phase, 4 pole) and 1 extract motor (3 phase, 4 pole). The UM 202 has two agitator motors (single phase, 4 pole) and one extract motor (3 phase, 4 pole).

There is a thermal overload protector embedded in the extract motor windings. This acts as a normally closed switch which opens when the winding overheats. When the overload protector opens, power to the control circuit is removed, deenergizing the contactors and preventing damage to the motors caused by overheating and/or an over load condition. The thermal overload will automatically reset after the motor cools.

The agitator or wash motor operates at 1725 RPM (60Hz). Reversing is accomplished through a transmission, yielding 60 "agitations" per minute.(One "agitation" means the agitator shaft rotates 180 degrees clockwise, followed by 180 degrees counterwise.) Each wash motor is thermally protected internally. The thermal overload will automatically reset after the motor cools.

The extract motor also operates at 1580 RPM (60Hz), 4 pole delta connected. The basket is directly driven by the extract motor.

Braking for the machine is accomplished by "plugging" the extract motor (deenergizing the forward contactor and energizing the reverse contactor). As soon as the electronic motion direction detector recognizes a change of direction, the reverse contactor is deenergized.

WARNING

Do not attempt to open the extractor lid until the basket has stopped. Serious injury may occur if access is attempted while basket is rotating. Do not remove the lid and do not bypass or defeat any of the safety devices furnished with the machine.

√ 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 contactors.

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

WATER CONSUMPTION CHART IN GALLONS *(LITERS)* ALL UM MODEL WASHER-EXTRACTORS

WATER LEVEL inches *(cm)*	VOLUME gallons *(liters)*
0	0.01 *(.2)*
1 *(2.5)*	2.0 *(7.6)*
2 *(5.1)*	3.9 *(14.9)*
3 *(7.6)*	5.9 *(22.3)*
4 *(10.2)*	7.8 *(29.6)*
5 *(12.7)*	9.8 *(36.9)*
6 *(15.2)*	11.7 *(44.3)*
7 *(17.8)*	13.6 *(51.6)*
8 *(20.3)*	15.6 *(58.9)*
9 *(22.9)*	17.5 *(66.2)*
10 *(25.4)*	19.4 *(73.5)*
11 *(27.9)*	21.4 *(80.9)*
12 *(30.5)*	23.3 *(88.2)*

*Allowance is made for filling the drain line up to the wash compartment (0 inches). Water consumption figures are based on an empty machine (no load).

■ To allow for saturation of dry load = Add 0.25 gal/ lb. (2.01/kg) to appropriate figure from above.

VII.6 INLET VALVES

One rinse solenoid valve similar to the one shown in Figure VII-E is used on the UM 100, 202 (There are two on the 1202) to control the water inlet for the spray rinse 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.

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. Also, be sure the mating surface between the bonnet and the valve body is free of dirt and lint.

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. 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.).

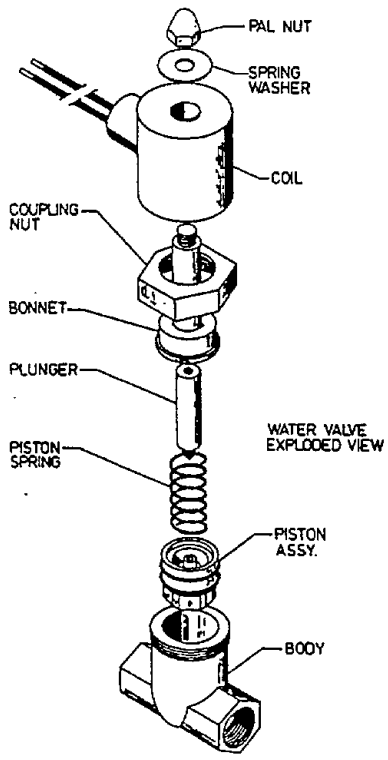


FIGURE VII-E

VII.7 VACUUM BREAKER

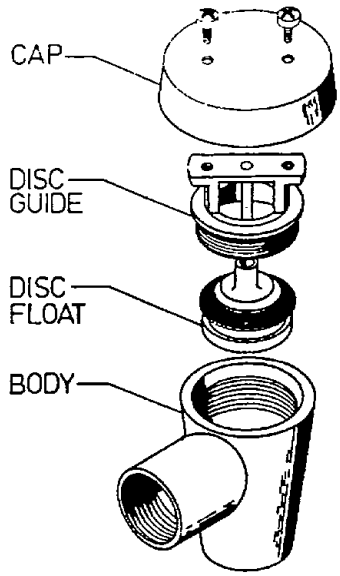


Figure VII-F

In specialized situations, UM 100, 202, 1202 are equipped with one vacuum breaker assembly similar to the one shown in Figure VII-F. (This is not a standard item.)

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 changes state 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.

VII.8 ROTATION DETECTOR

The Rotation Direction Detector consists of a control unit mounted inside the control panel and a sensor unit mounted on the cover end of the extract motor. The sensor unit detects direction of rotation of the extract motor shaft by "reading" magnets implanted in the proximity wheel mounted on the extract motor shaft. The Rotation Detector senses the cessation of forward rotation of the extract motor and the beginning of reverse rotation when the reverse contactor is energized at the end of the extract cycle. When reverse rotation is detected, power is removed from the reverse contactor and the extract cylinder stops.

When replacing or adjusting the rotation detector, observe the following procedure:

1. Rotate the extractor slowly by hand clockwise (viewed from the top). LED 2 should light followed by LED 1 and the Relay LED should be on. Rotate the extractor faster and observe the flickering of LEDs 1 and 2; both should flicker at the same rate. A slight adjustment may be necessary to obtain even flickering. Keep the sensor spacing set with the spacer gauge and move the sensor slightly left or right and retighten.

2. Slowly rotate the extractor counterclockwise, LED 1 should light followed by LED 2. When LED 2 lights the Relay LED should immediately turn off. Verify that the relay is switching properly between C (common) and N.O. and N.C.

3. When the controller is functioning as described, replace all covers except extractor bottom cover.

4. Turn power on and run the extractor through a normal cycle to verify proper operation.

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 an electrical path of another component.

SYMPTOM	PROBABLE FAULT	REMEDY
UniMac will not operate.	Power off	Turn main switch "on" at main disconnect. Check fuses or circuit breakers and wiring to machine.
No agitation in wash compartment-pilot light "OFF".	Wiring	Check for disconnected wire.
	Timer	Check and replace timer microswitch
No agitation in wash compartment - pilot light "ON".	Motor	Remove drive coupling, see if motor runs independently, if not, check wiring to motor. Wait for motor to cool - may be thermal overload.
	Transmission	If motor operates, check for transmission defect by rotating transmission input shaft.
	Drive Block or	If agitator shaft is turning but agitator is not, check for worn or broken drive block or agitator.

SYMPTOM	PROBABLE FAULT	REMEDY
No agitation in wash compartment - pilot light "ON".(Cont.)		MODELS EQUIPPED WITH MAYTAG TRANSMISSIONS ONLY.(50HZ)
	V-belt	Check V-belt from agitator motor to transmission for breakage or slippage.
	Motor	Remove V-belt, see if motor runs independently, if not, check wiring to motor. Wait for motor to cool - may be thermal overload.
		If motor operates, check for transmission defect by rotating pulley (by hand) in clockwise direction.
Agitation continues, timer will not advance.	Timer	Check control knob for binding against face plate, tighten face plate screws. Reset control knob for more clearance. Check timer motor rotation through small hole at back of timer motor. If not rotating, check connection of timer motor leads. If not corrected, replace complete timer.
Water level lowers during wash cycle.	Drain valve	Rotate drain valve knob to clean seats if leaks persist; disassemble valve, check and clean valve seat. Check condition of drain valve disc. Replace if necessary.
Extractor and rinse inoperative.	2 Amp fuse	Check and replace.
	Lid micro switch or micro switch adjustment	Check micro switch and micro switch adjustment. Switch should click "ON" and "OFF" when lid is raised and lowered one to two inches above closed position. Screw should depress switch when lid is closed. If adjustment does not correct problem, switch must be replaced.
	Wiring	Check wiring to micro switch.
	Thermal overload	Wait to cool down.

SYMPTOM	PROBABLE FAULT	REMEDY
Extractor operates, rinse will not operate.	Water supply	Check water supply to machine. Make sure bib faucet is completely open.
	Solenoid valve	Loose wire or burned out coil.
	Wiring	Check wiring from timer to solenoid valve.
	Timer	Check timer, replace if necessary.
	Time Delay Relay	Check for defective time delay, replace if necessary.
Rinse operates, extractor will not operate.	Wiring	Check wiring from circuit breaker box to timer.
	Timer	Check timer, replace if necessary
	Motor	Be sure motor cools down, thermal overload may have tripped. Check wiring from timer to extractor.
Insufficient water in rinse spray.	Water supply	Check bib faucet, turn "ON" full.
	Water pressure	Water pressure should be minimum of 30 p.s.i. when all valves are on in wash and rinse compartment. NOTE: Water jet streams should hit plastic ball of lid at mid-point for proper rinsing.
	Filter screen	Check for trash in filter screen of rubber water supply hose. Clean or replace. NOTE: If no screen present, solenoid may contain trash. Clean and replace.
Extractor and rinse continue to operate when lid is raised.	Lid micro switch	Check micro switch by raising and lowering lid about one to two inches above closed position. Check with OHM meter to be sure switch is operating properly. Replace, if defective.
Extractor continues to operate.	Timer	Control knob binding against face plate, tighten face plate screws. Reset control knobs for more clearance. Check timer motor rotation through small hole at back of timer motor. If not rotating, check connectionof timer motor leads. If not corrected, REPLACE COMPLETE TIMER.

SYMPTOM	PROBABLE FAULT	REMEDY
Rinse continues to operate.	Timer	Control knob binding against face plate. Tighten face plate, tighten face plate screws. Reset control knob for more clearance. Check timer motor rotation through small hole at back of timer motor. If not rotating, check connection of timer motor leads. If not corrected, REPLACE COMPLETE TIMER.
	Solenoid	Valve stuck. Tap lightly to loosen trash in valve, remove and clean. Check rubber hose for filter screen. Clean or replace if damaged or missing.
Dirt or rust spots on items at completion of rinse-extract (usually in imprint of extractor basket).	Rust or foreign matter in water supply	A filter must be installed in rinse hose.
Extractor lid will not open.	Lid lock solenoid	Replace, if defective.
	Push switch	Replace, if defective.
	Cable dirty	Clean.
	Cable broke	Replace, if defective.
Extractor motor stops, then reverses (3 phase only).	Rotation Director Detector	Check adjustment of rotation detector. Check for proper operation.
Extractor motor will not start (3 phase only).	Motor contactor	Check forward contactor and replace, if defective.
	N.O. auxiliary contactor	Check and replace, if defective.
	2 Amp fuse	Check and replace.
Extractor motor will not stop except by coasting (3 phase only).	Lid Switch	Seepage 38
	Reversing contactor	Check and replace, if defective.
	Rotation Detector	See above.
	N.C. auxiliary switch	Check and replace, if defective.
	Incorrect motor rotation	Motor must run clockwise-reverse 2 wires.

NOTICE

Only qualified Technicians/Electricians should connect power to this equipment.

WARNING!

When connecting input power leads to machine, be sure basket rotates clockwise. Otherwise, safety mechanisms may not function properly and cause severe injury. If basket rotates counter clockwise, swap L1 and L2 at junction box to reverse rotation of basket.

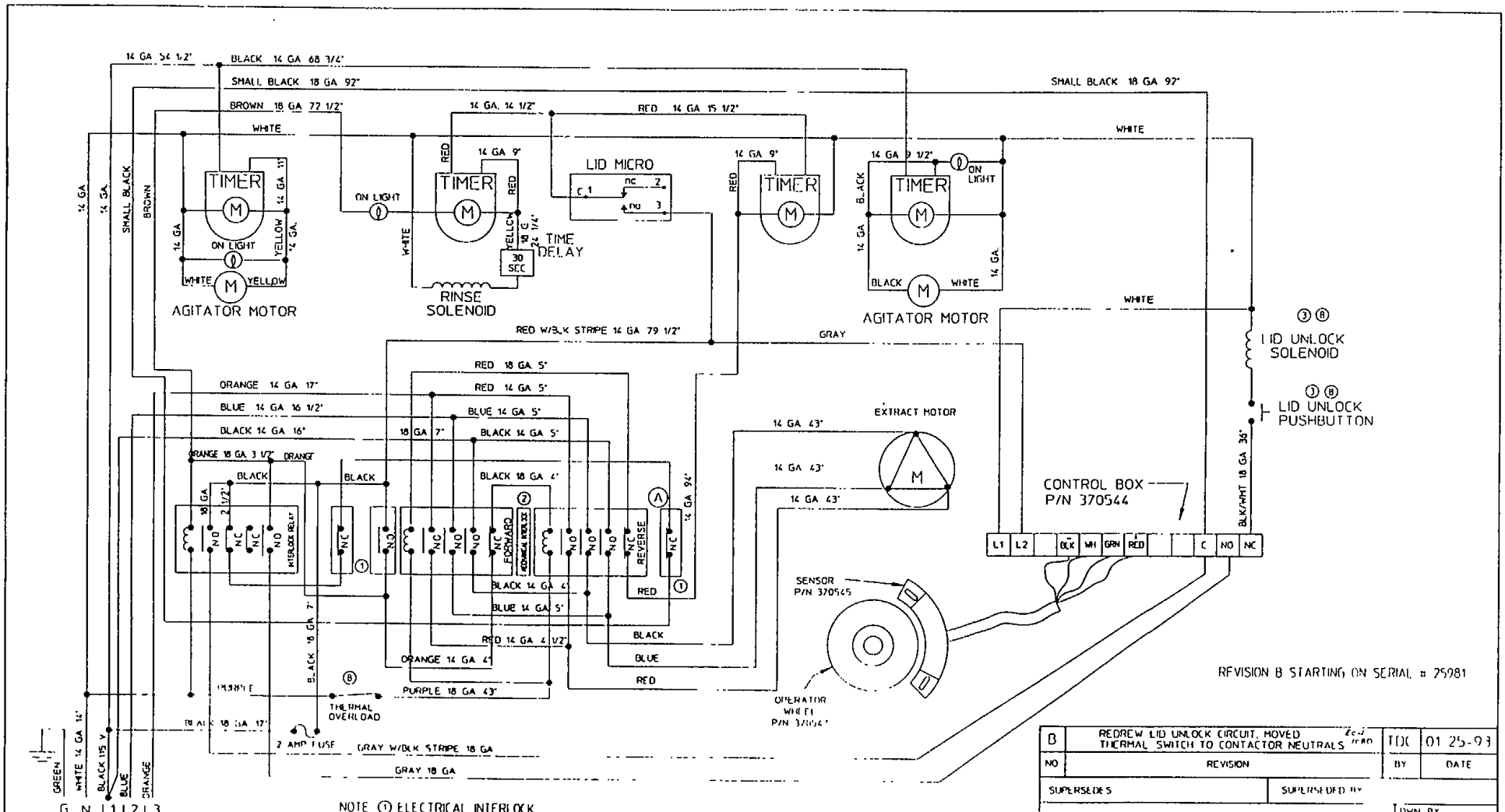
FOR YOUR INFORMATION

Lid unlock button is activated by motion detector relay to only operate if basket has completely stopped and rotated slightly in reverse.

If lid unlock button is inoperable, turn extract timer on for two seconds and return to off position. Lid can then be opened.

ECN #1080 - STARTING WITH S/N 25981

JKB 1-27-93



REVISION B STARTING ON SERIAL # 25981

NOTE ① ELECTRICAL INTERLOCK
② FORWARD & REVERSE MECHANICALLY INTERLOCKED
③ LID UNLOCK BUTTON IS ACTIVATED BY MOTION DETECTOR RELAY TO ONLY OPERATE IF BASKET HAS COMPLETELY STOPPED AND ROTATED SLIGHTLY IN REVERSE
IF LID UNLOCK BUTTON IS INOPERABLE TURN EXTRACT TIMER ON FOR TWO SECONDS AND RETURN TO OFF POSITION LID CAN THEN BE OPENED

WARNING!

WHEN CONNECTING INPUT POWER LEADS TO MACHINE, BE SURE BASKET ROTATES CLOCK WISE OTHERWISE SAFETY MECHANISMS MAY NOT FUNCTION PROPERLY AND CAUSE SEVERE INJURY IF BASKET ROTATES COUNTER CLOCK WISE SWAP L1 AND L2 AT JUNCTION BOX TO REVERSE ROTATION OF BASKET

B	REDREW LID UNLOCK CIRCUIT, MOVED THERMAL SWITCH TO CONTACTOR NEUTRALS	TDC	01-25-93
NO	REVISION	BY	DATE
SUPERSEDES	SUPERSEDED BY		

UNIMAC COMPANY INC
MARIANNA, FLORIDA

DWN BY S BRO
APPR BY BRT
DATE 7/27/88
SCALE

TITLE WIRING DIA. WITH PROXIMITY SENSOR

PART NO 604419

PRODUCT UM 100 & 202

DWG NO 604419

MATERIAL 208/240 V 3Ø 4 WIRE

WIRING DIAGRAMS

This section contains wiring diagrams for the various models and voltages of UniMac washer-extractors.

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.

Page 42 - 440/ 60 with standard timer (Drawing 604427)

Page 43 - 440/ 60 with combination timer (Drawing 605196)

Page 44 - 440/ 60 with pushbutton start (Drawing 605778)

Page 45 - 208-240/60/3 4 wire with standard timer (Drawing 605357)

Page 46 - 208-240/60/3 4 wire with combination timer (Drawing 604424)

Page 47 - 208-240/60/3 4 wire with pushbutton start (Drawing 605439)

Page 48 - 240/50/3 3 wire with standard timer (Drawing 605197)

Page 49 - 240/50/3 3 wire with combination timer (Drawing 605198)

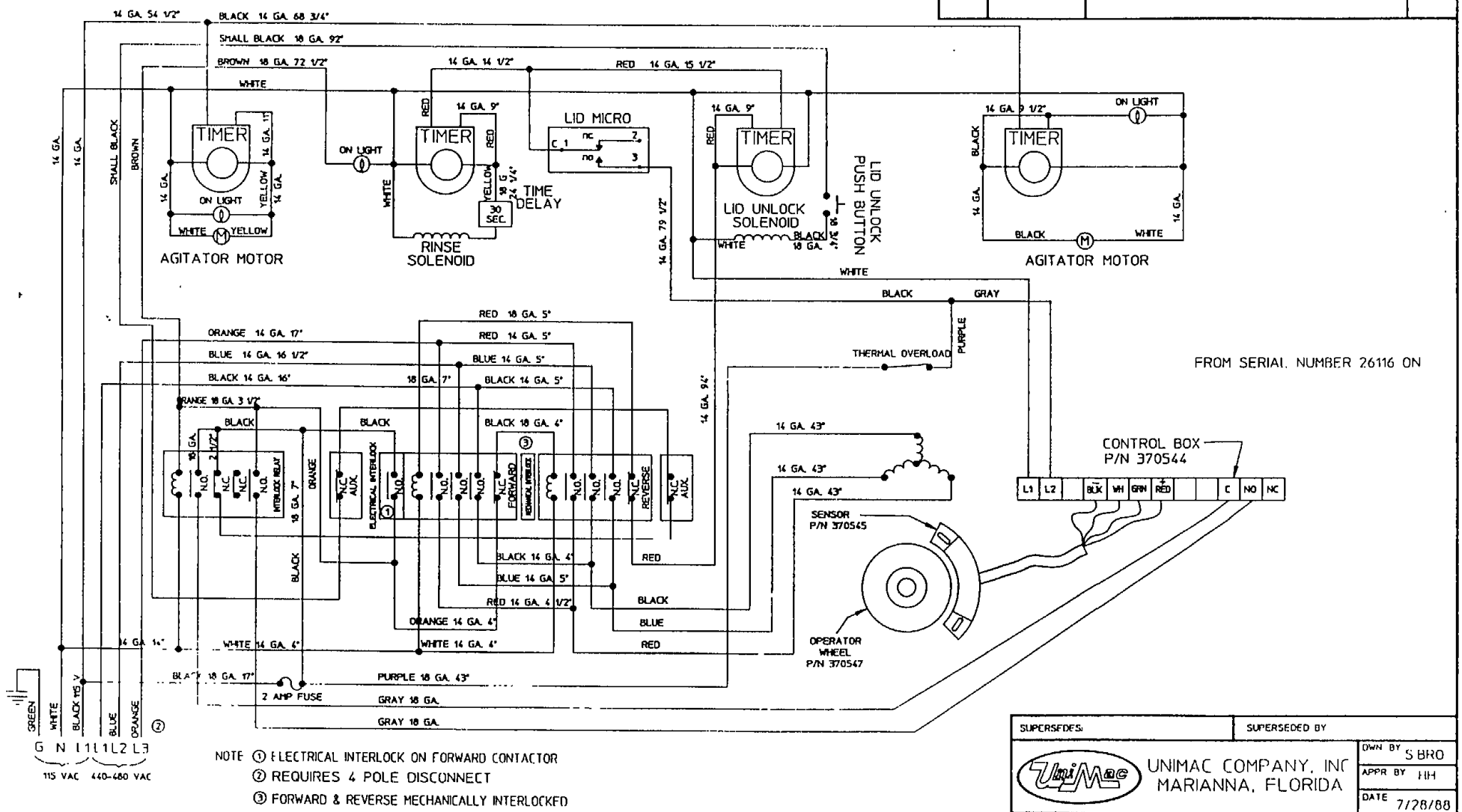
Page 50 - 220/50/3 3 wire with combination timer (Drawing 605195)

Page 51 - 380-415/50 4 wire with standard timer (Drawing 604426)

Page 52 - 380-415/50 3 wire with combination timer (Drawing 605194)

Page 53 - 200/50/3 3 wire with standard timer (Drawing 605204)

ITEM	PART NO.	DESCRIPTION	QTY.



NOTE ① ELECTRICAL INTERLOCK ON FORWARD CONTACTOR
② REQUIRES 4 POLE DISCONNECT
③ FORWARD & REVERSE MECHANICALLY INTERLOCKED

NO.	REVISION	BY	DATE
A	ADDED 2 AUX CONT. NC ON FORWARD & REVERSE CONT	ACO	11-2-89

SUPERSEDES:	SUPERSEDED BY

UNIMAC COMPANY, INC
MARIANNA, FLORIDA

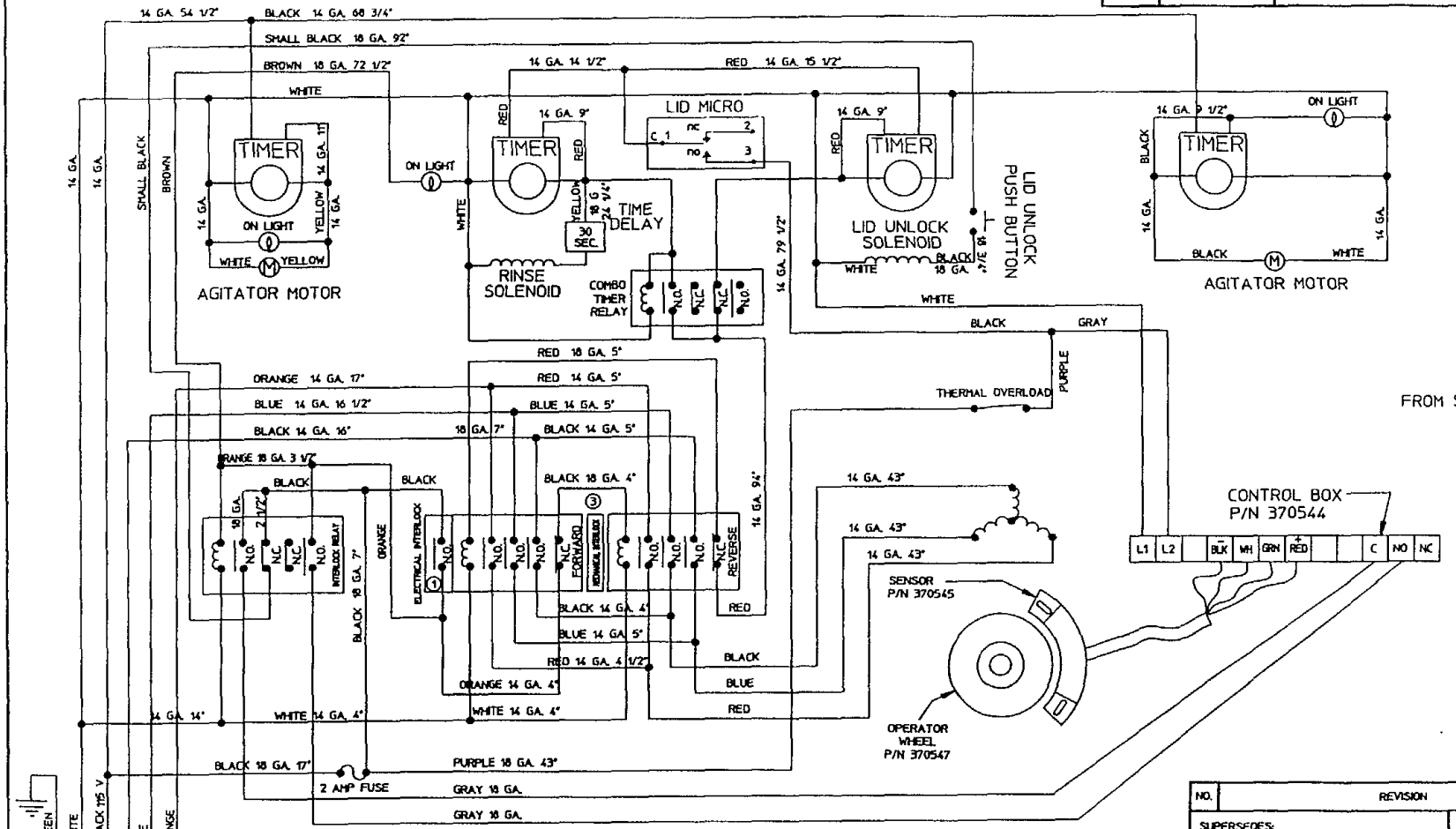
DWN BY	S BRO
APPR BY	HH
DATE	7/28/88
SCALE	
PART NO	604427
DWG NO	604427

TITLE: WIRING DIA. WITH PROXIMITY SENSOR

PRODUCT: UM 100 & 202

MATERIAL: 115 VAC/440-480 VAC 60 Hz

ITEM	PART NO.	DESCRIPTION	QTY.



NOTE: ① ELECTRICAL INTERLOCK ON FORWARD CONTACTOR
② REQUIRES 4 POLE DISCONNECT
③ FORWARD & REVERSE MECHANICALLY INTERLOCKED

NO.	REVISION	BY	DATE
SUPERSEDES:		SUPERSEDED BY:	

BLANK SIZE:

REMOVE ALL BURRS AND SHARP EDGES

TOLERENCES UNLESS OTHERLESS SPECIFIED:

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

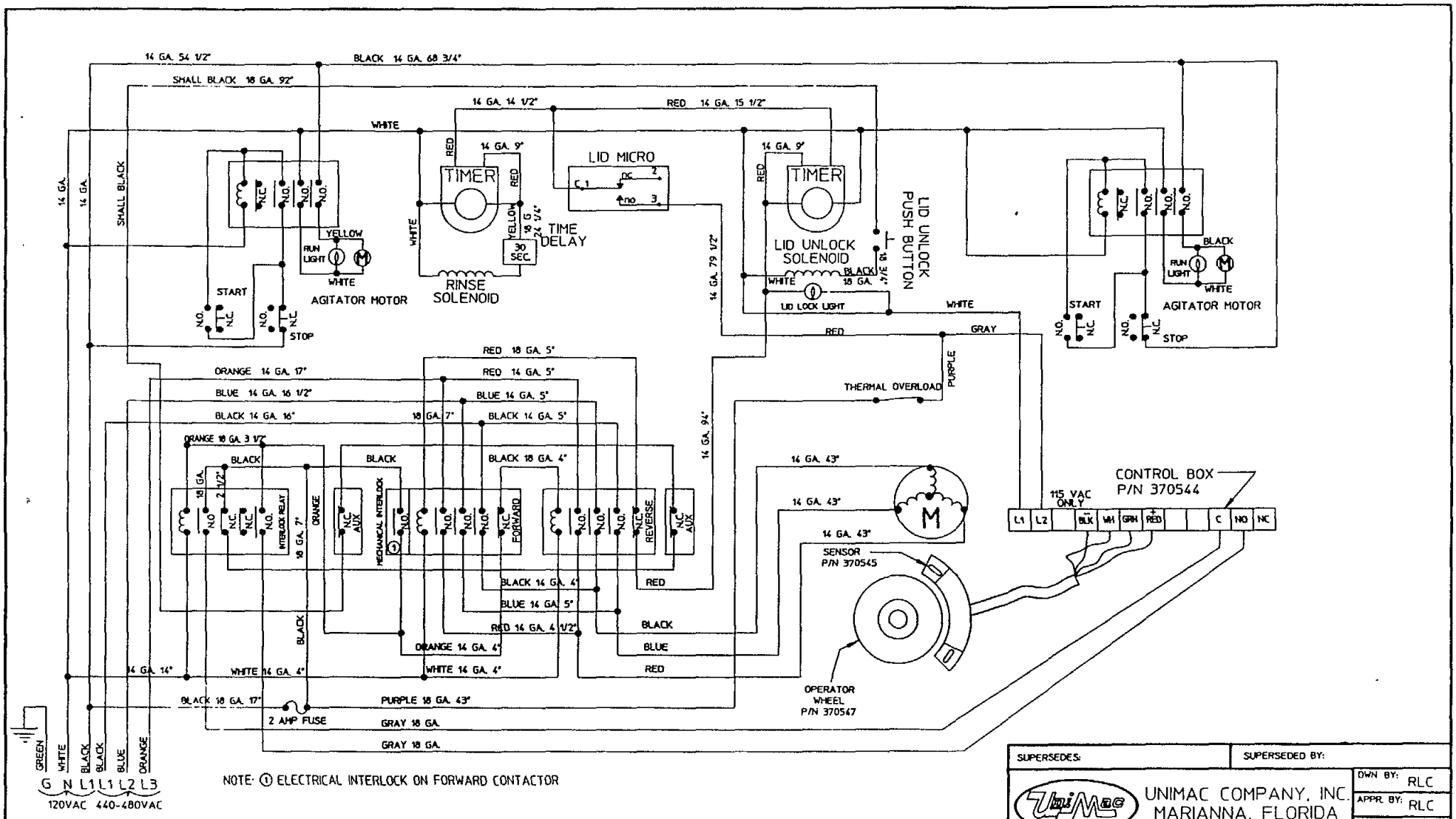
UNIMAC COMPANY, INC.
MARIANNA, FLORIDA

TITLE: WIRING DIA. WITH PROXIMITY SENSOR & COMBO TIMER

PRODUCT: UM 100 & 202

MATERIAL: 115 VAC/440-480 VAC 60 Hz

DWN. BY: RLC
APPR. BY: RLC
DATE: 2/23/89
SCALE
PART NO.: 605196
DWG. NO.: 605196

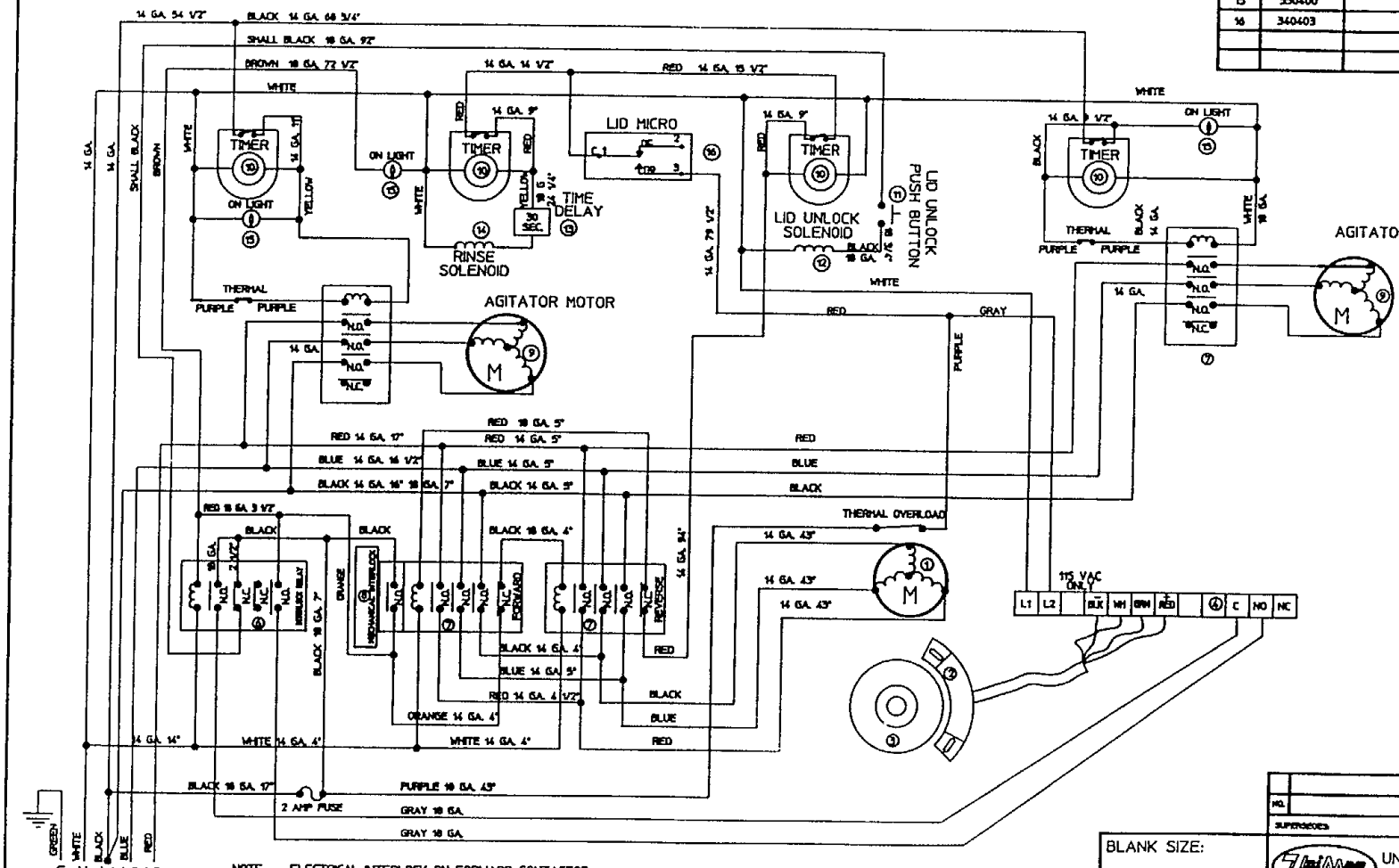


NOTE: ① ELECTRICAL INTERLOCK ON FORWARD CONTACTOR

NO.	REVISION	BY	DATE

SUPERSEDES:	SUPERSEDED BY:
UNIMAC COMPANY, INC. MARIANNA, FLORIDA	DWN BY: RLC APPR BY: RLC DATE: 11/9/89
TITLE: ELECTRICAL SCHEMATIC	SCALE
PRODUCT: UM 100 & 202 WITH START/STOP BUTTON	PART NO: 605778
120V/440V/60Hz/3Ø/4W	DWG NO. 605778

ITEM	PART NO.	DESC	QTY.
1	220200	EXTRACT MOTOR/V2HP/208-240V/60HZ/3PH	1
2	370545	PROXIMITY SENSOR	1
3	370547	PROXIMITY WHEEL	1
4	370544	PROXIMITY CONTROL UNIT	1
6	330109	CONTACTOR IC2-07-22E (120V)	1
7	330110	CONTACTOR IC2-16-A01 (120V)	4
8	330111	MECHANICAL INTERLOCK	1
9	220210	WASH MOTOR/V3HP/208-240V/60HZ/3PH	2
10	330329	MANUAL CONTROL TIMER (120V)	4
11	340903	LID MICR-SWITCH	1
12	300106	LID UNLOCK SOL	1
13	330203	TIMER DELAY	1
14	380700	RINSE SOL	1
15	350400	INDICATOR LIGHT	2
16	340403	LID UNLOCK PUSH BUTTON	1



FROM SERIAL NUMBER 26483 ON

NOTE: ELECTRICAL INTERLOCK ON FORWARD CONTACTOR

NO.	REVISION	BY	DATE
SUPERSEDES		SUPERSEDED BY	

BLANK SIZE:

REMOVE ALL BURRS AND SHARP EDGES

TOLERANCES UNLESS OTHERWISE SPECIFIED

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

UNIMAC COMPANY, INC.
MARIANNA, FLORIDA

DWN. BY: RLC
APPR. BY: RLC
DATE: 5/3/89
SCALE:

TITLE: WIRING DIAGRAM

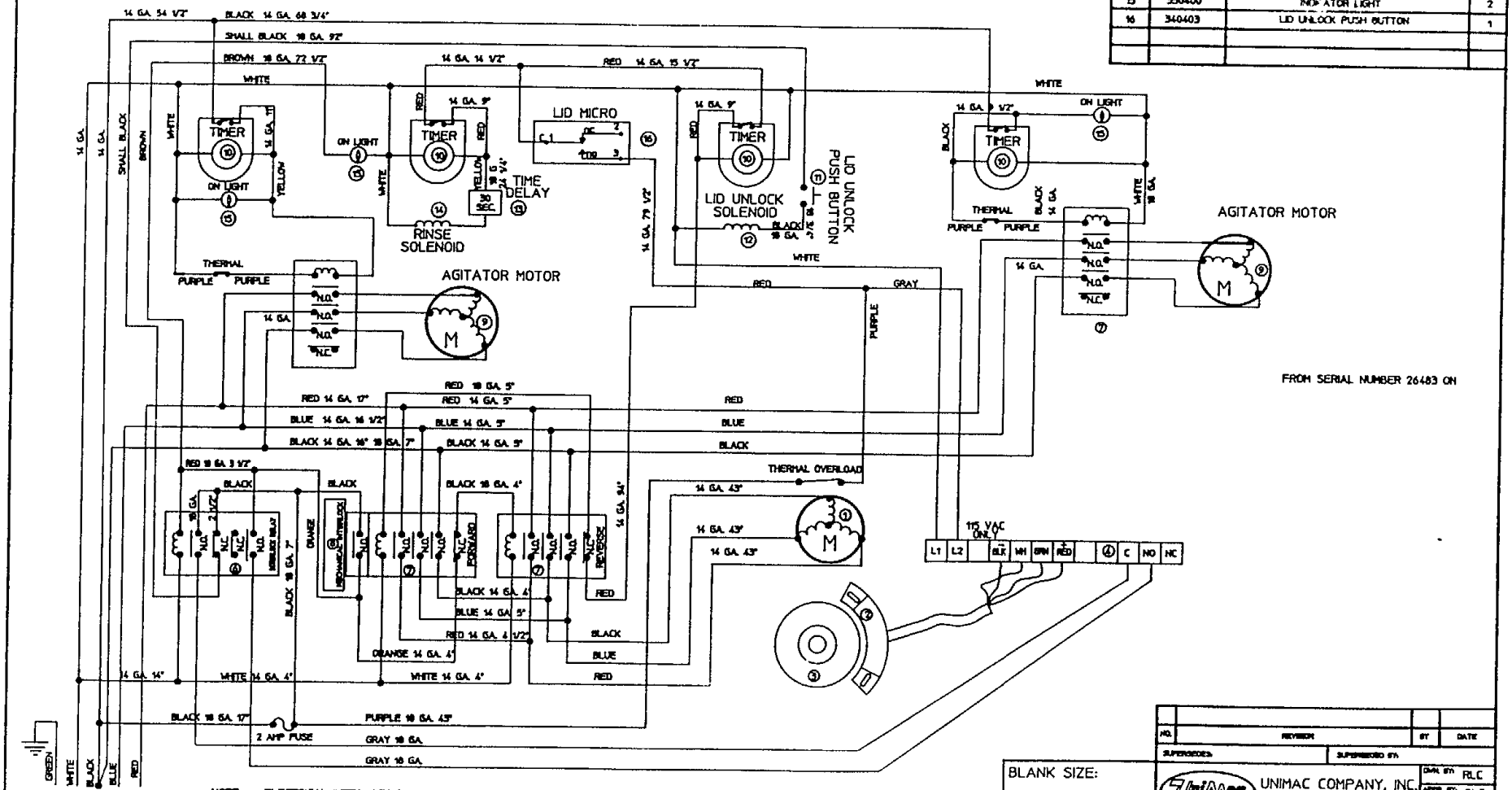
PART NO. 605357

PRODUCT: UM 100 & 202 WITH PROXIMITY SENSOR

DWG. NO. 605357

MATERIAL: 208-240/60Hz/3Ø/4W

ITEM	PART NO.	DESCRIPTION	QTY.
1	220200	EXTRACT MOTOR/V2HP/208-240V/60HZ/3PH	1
2	370545	PROXIMITY SENSOR	1
3	370547	PROXIMITY WHEEL	1
4	370544	PROXIMITY CONTROL UNIT	1
6	330109	CONTACTOR K2-07-22E (120V)	1
7	330110	CONTACTOR K2-16-A01 (120V)	4
8	330111	MECHANICAL INTERLOCK	1
9	220210	WASH MOTOR/V3HP/208-240V/60HZ/3PH	2
10	330329	MANUAL CONTROL TIMER (120V)	4
11	340903	LID MICR-SWITCH	1
12	300106	LID UNLOCK SOL.	1
13	330203	TIMER DELAY	1
14	380700	RINSE SOL.	1
15	350400	INDICATOR LIGHT	2
16	340403	LID UNLOCK PUSH BUTTON	1



BLANK SIZE:

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
SUPERSEDES		SUPERSEDED BY	

UNIMAC COMPANY, INC.
MARIANNA, FLORIDA

DWN. BY: RLC
APPR. BY: RLC
DATE: 5/3/89
SCALE:

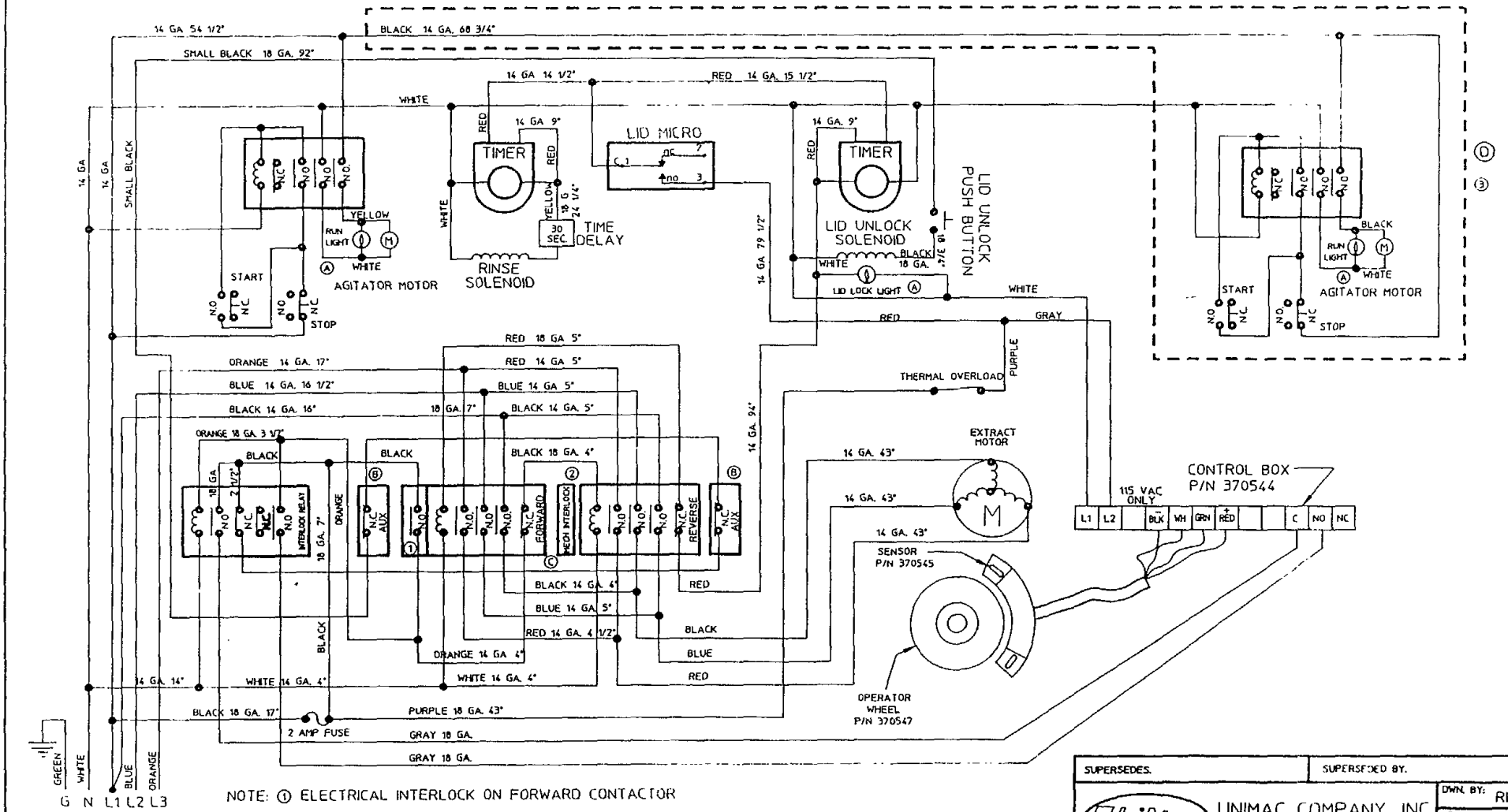
TITLE: WIRING DIAGRAM

PART NO. 605357

PRODUCT: UM 100 & 202 WITH PROXIMITY SENSOR

DWG. NO. 605357

MATERIAL: 208-240/60Hz/3Ø/4W



NOTE: ① ELECTRICAL INTERLOCK ON FORWARD CONTACTOR
② FORWARD & REVERSE MECHANICALLY INTERLOCKED
Ⓓ ③ ADDITIONAL AGITATOR ON 202 ONLY

NO.	REVISION	BY	DATE
D	ADDED NOTE 3 PER ECN 618.	DGB	04-12-91
C	MOVED MECH INTER. INTO CORR. POSITION ECN 294	ACO	12-19-89
B	ADDED 2 AUX CONTACTS (NC) ON FWD & REV CONT.	ACO	10-25-89
A	ADDED RUN & LID LOCK LIGHTS	RLC	8/31/89

SUPERSEDES. | SUPERSEDED BY.

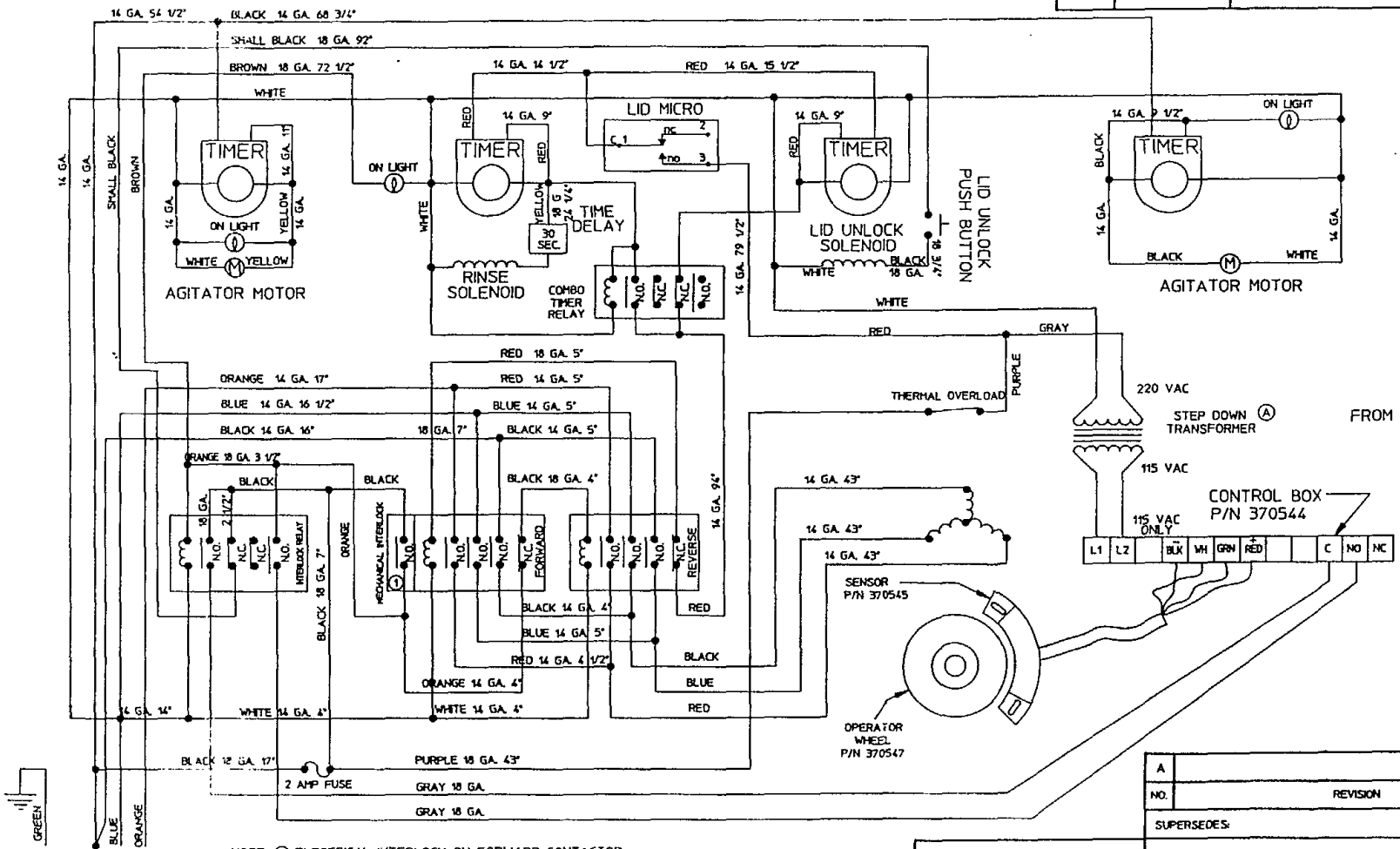
UNIMAC COMPANY, INC.
MARIANNA, FLORIDA

DWN. BY: RLC
APPR. BY: RLC
DATE: 6/14/89
SCALE: 2 2
PART NO.: 605439
DWG. NO.: 605439

TITLE: ELECTRICAL SCHEMATIC

PRODUCT: UM 100 & 202
WITH START/STOP BUTTON
208-240V/60Hz/3Ø/4W 110V CTRL

ITEM	PART NO.	DESCRIPTION	QTY.



FROM SERIAL NUMBER 26116 ON

NO.	REVISION	BY	DATE
A			

SUPERSEDES: SUPERSEDED BY:

BLANK SIZE:

REMOVE ALL BURRS AND SHARP EDGES

TOLERENCES UNLESS OTHERLESS SPECIFIED:

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

UNIMAC COMPANY, INC
MARIANNA, FLORIDA

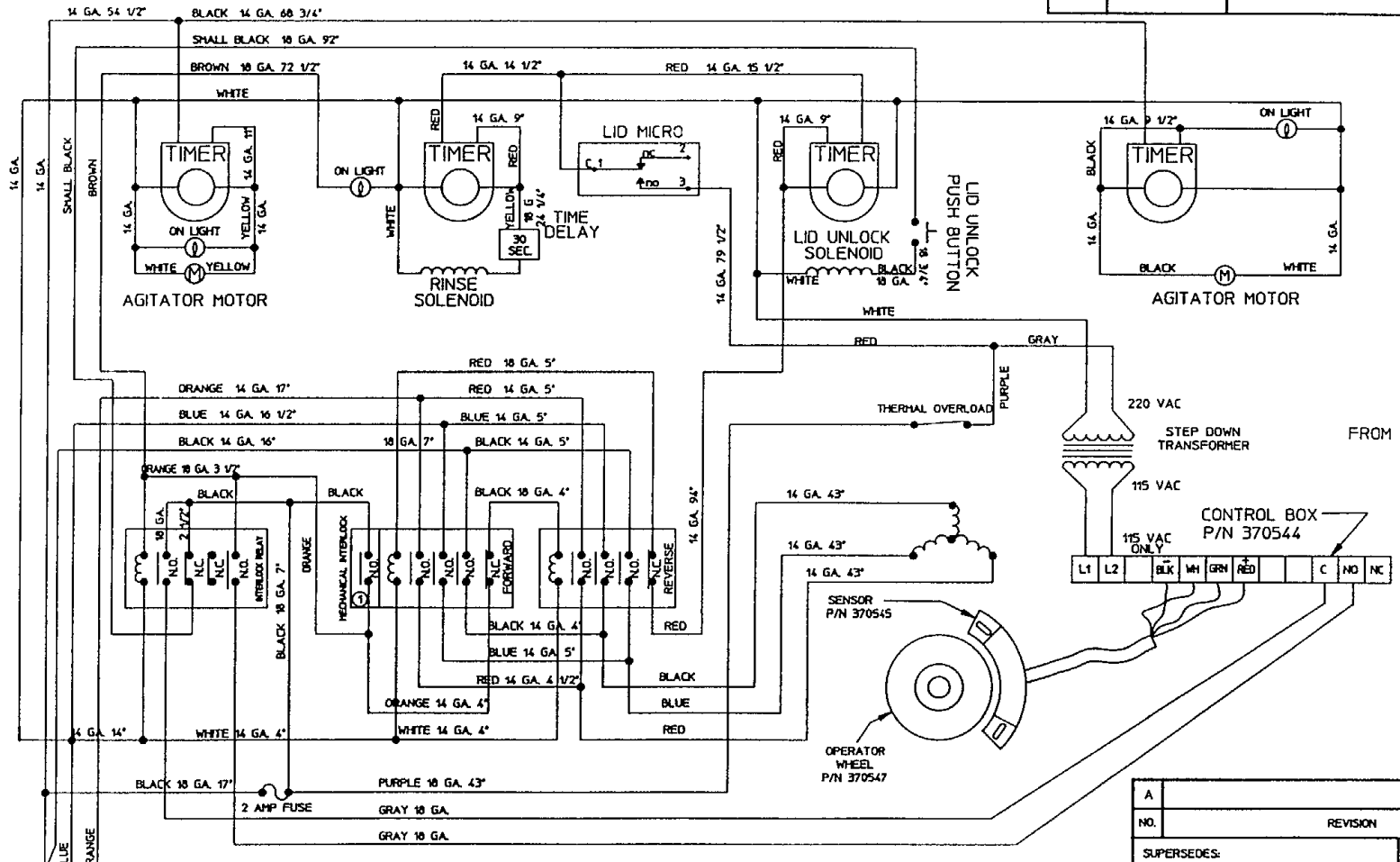
TITLE: WIRING DIA. WITH PROXIMITY SENSOR & COMBO TIMER

PRODUCT: UM 100 & 202

MATERIAL: 240 VAC 50Hz 3W

DWN. BY: TDA
APPR. BY: RLC
DATE: 2/23/89
SCALE
PART NO.: 605198
DWG NO.: 605198

ITEM	PART NO.	DESCRIPTION	QTY.



FROM SERIAL NUMBER 26116 ON

NOTE: ① ELECTRICAL INTERLOCK ON FORWARD CONTACTOR

NO.	REVISION	BY	DATE
A			

SUPERSEDES: SUPERSEDED BY.

BLANK SIZE:

REMOVE ALL BURRS AND SHARP EDGES.

TOLERENCES UNLESS OTHERLESS SPECIFIED:

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

UNIMAC COMPANY, INC.
MARIANNA, FLORIDA

DWN. BY: TDA
APPR BY: TDA
DATE: 2/22/89
SCALE:

TITLE: WIRING DIA. WITH PROXIMITY SENSOR

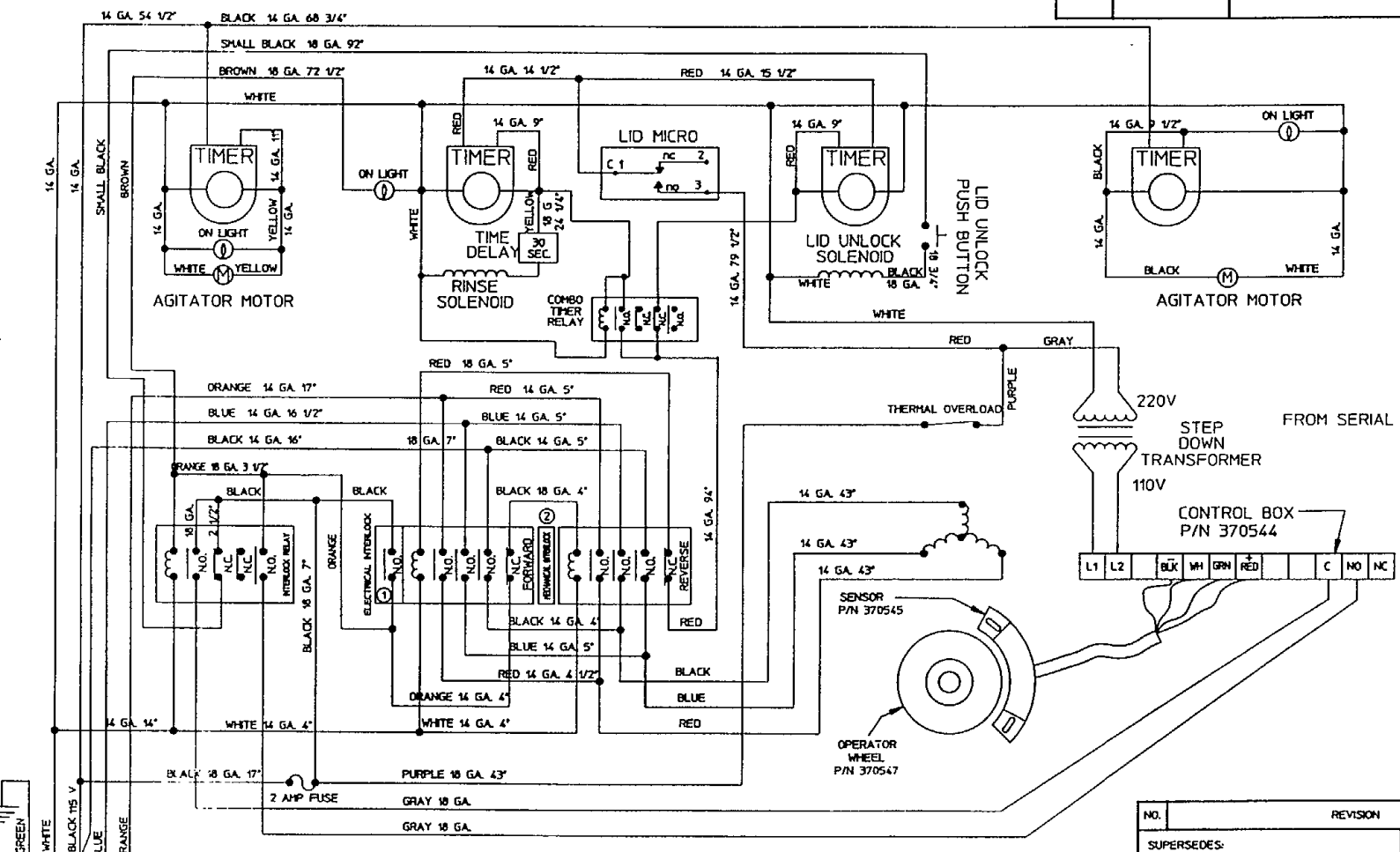
PART NO.: 605197

PRODUCT: UM 100 & 202

DWG. NO.: 605197

MATERIAL: 240 VAC 50Hz 3W

ITEM	PART NO.	DESCRIPTION	QTY.



NOTE: ① ELECTRICAL INTERLOCK ON FORWARD CONTACTOR
② FORWARD & REVERSE MECHANICALLY INTERLOCKED

NO.	REVISION	BY	DATE
SUPERSEDES:		SUPERSEDED BY:	

BLANK SIZE:

REMOVE ALL BURRS AND SHARP EDGES

TOLERENCES UNLESS OTHERLESS SPECIFIED:

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

UNIMAC COMPANY, INC
MARIANNA, FLORIDA

DWN BY TDA
APPR BY
DATE 2/22/89
SCALE

TITLE: WIRING DIA. WITH PROXIMITY SENSOR & COMBO TIMER

PART NO. 605195

PRODUCT: UM 100 & 202

DWG NO. 605195

MATERIAL: 220/50/3Ø/3W

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, or FAX 1-904-526-2735.**

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.

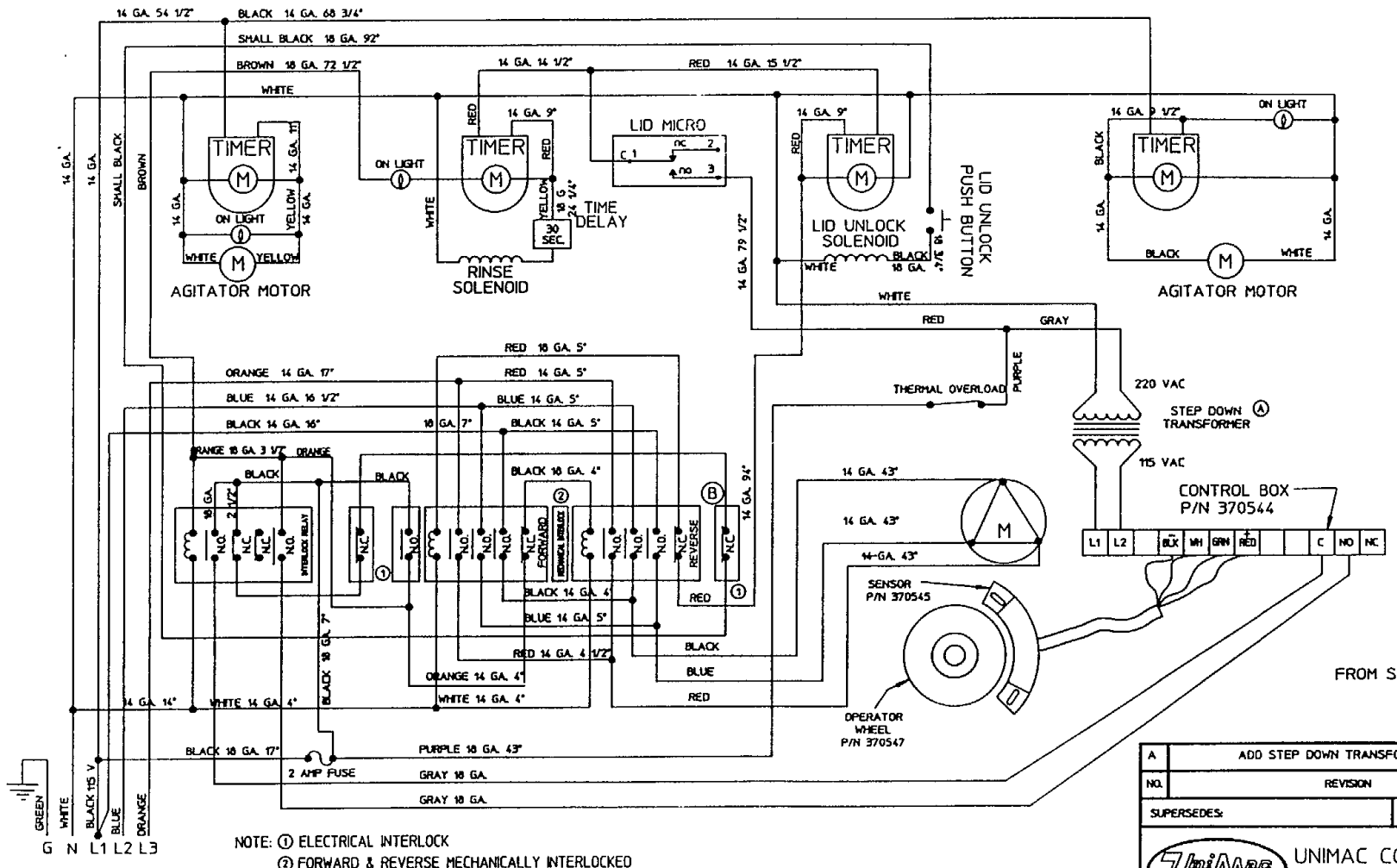
SECTION X - PARTS LISTS & ILLUSTRATIONS

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.



FROM SERIAL NUMBER 26653 ON

NOTE: ① ELECTRICAL INTERLOCK
② FORWARD & REVERSE MECHANICALLY INTERLOCKED

NO.	REVISION	BY	DATE
A	ADD STEP DOWN TRANSFORMER	SB	9/20/88
B	ADDED TWO AUX. CONTACTORS	JDT	8/14/89

SUPERSEDES: SUPERSEDED BY:

UNIMAC COMPANY, INC.
MARIANNA, FLORIDA

DWN. BY: S.BRO.
APPR. BY: HH
DATE: 7/27/88
SCALE:

TITLE: ELECTRICAL SCHEMATIC

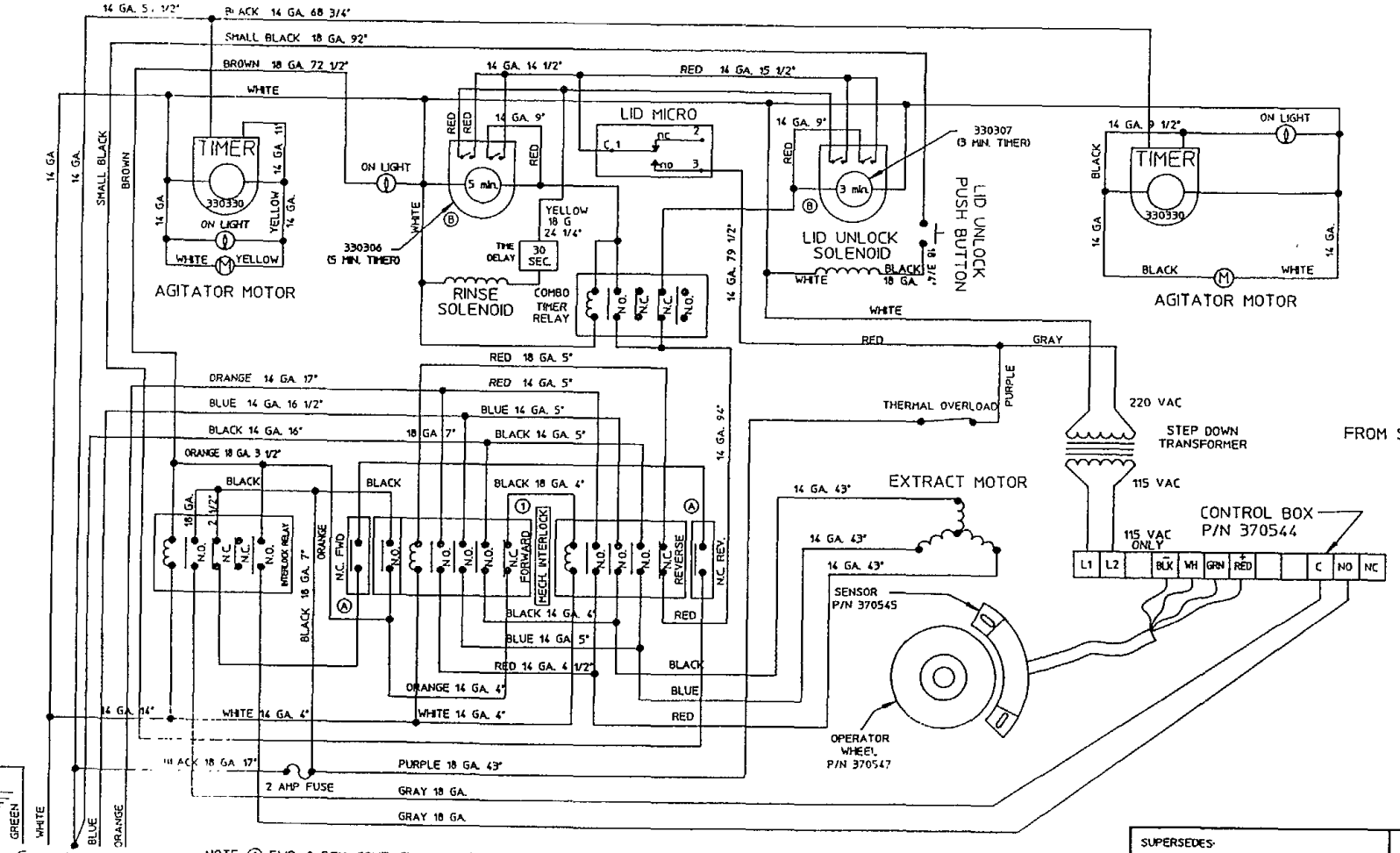
PART NO.: 604426

PRODUCT: UM 100 & 202

DWG. NO.: 604426

380-415V/50Hz/3Ø/4w 120V CONTL.

ITEM	PART NO.	DESCRIPTION	QTY.



NOTE. ① FWD & REV CONTACTORS ARE MECH INTERLOCKED

NO.	REVISION	BY	DATE
B	RVSD, SHOW CORR. COMBO TIMER CONFIG ECN 387	ACO	5-16-90
A	ADDED N.C. INTERLOCKS, ECN 195	SBF	4/30/90

SUPERSEDES: | SUPERSEDED BY:

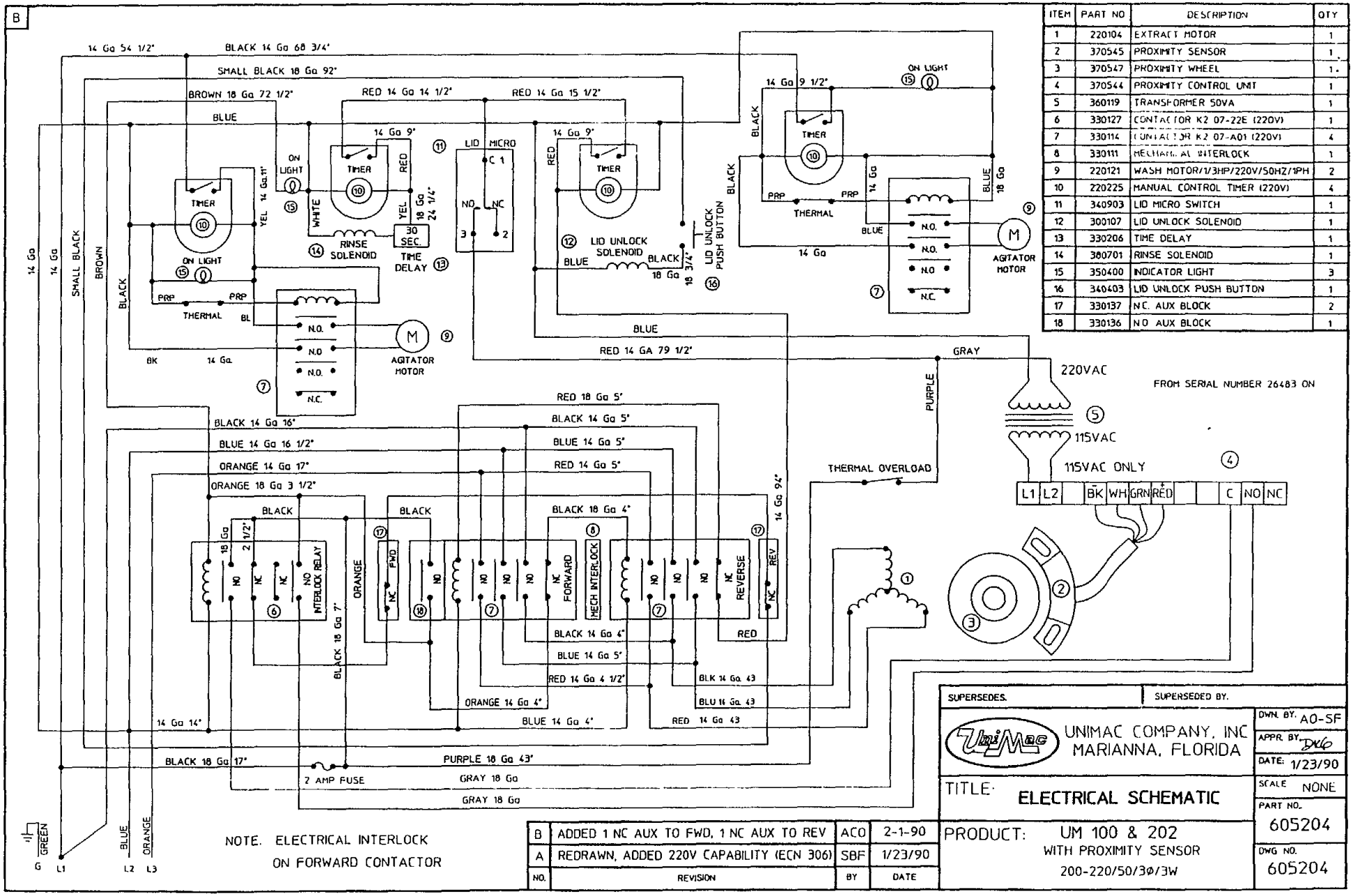
UNIMAC COMPANY, INC.
MARIANNA, FLORIDA

TITLE: WIRING DIA. WITH PROXIMITY SENSOR & COMBO TIMER

PRODUCT: UM 100 & 202-C

MATERIAL: 380-415 VAC 50Hz

DWN BY: RLC
APPR. BY:
DATE: 3/29/89
SCALE:
PART NO: 605194
DWG. NO. 605194



ITEM	PART NO	DESCRIPTION	QTY
1	220104	EXTRACT MOTOR	1
2	370545	PROXIMITY SENSOR	1
3	370547	PROXIMITY WHEEL	1
4	370544	PROXIMITY CONTROL UNIT	1
5	360119	TRANSFORMER 50VA	1
6	330127	CONTACTOR K2 07-22E (220V)	1
7	330114	CONTACTOR K2 07-A01 (220V)	4
8	330111	MECHANICAL INTERLOCK	1
9	220121	WASH MOTOR/1/3HP/220V/50HZ/1PH	2
10	220225	MANUAL CONTROL TIMER (220V)	4
11	340903	LID MICRO SWITCH	1
12	300107	LID UNLOCK SOLENOID	1
13	330206	TIME DELAY	1
14	360701	RINSE SOLENOID	1
15	350400	INDICATOR LIGHT	3
16	340403	LID UNLOCK PUSH BUTTON	1
17	330137	N.C. AUX BLOCK	2
18	330136	N.O AUX BLOCK	1

NO.	REVISION	BY	DATE
B	ADDED 1 NC AUX TO FWD, 1 NC AUX TO REV	ACO	2-1-90
A	REDRAWN, ADDED 220V CAPABILITY (ECN 306)	SBF	1/23/90

SUPERSEDES. | SUPERSEDED BY.

UNIMAC COMPANY, INC
MARIANNA, FLORIDA

TITLE: ELECTRICAL SCHEMATIC

PRODUCT: UM 100 & 202
WITH PROXIMITY SENSOR
200-220/50/3Ø/3W

DWN. BY. AO-SF
APPR. BY. DKG
DATE: 1/23/90
SCALE NONE
PART NO. 605204
DWG NO. 605204

Orders for replacement parts may be placed:

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

By telefax: (904) 526-2735

By mail: 3595 Industrial Park Drive
Marianna, Florida 32446
9458

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.

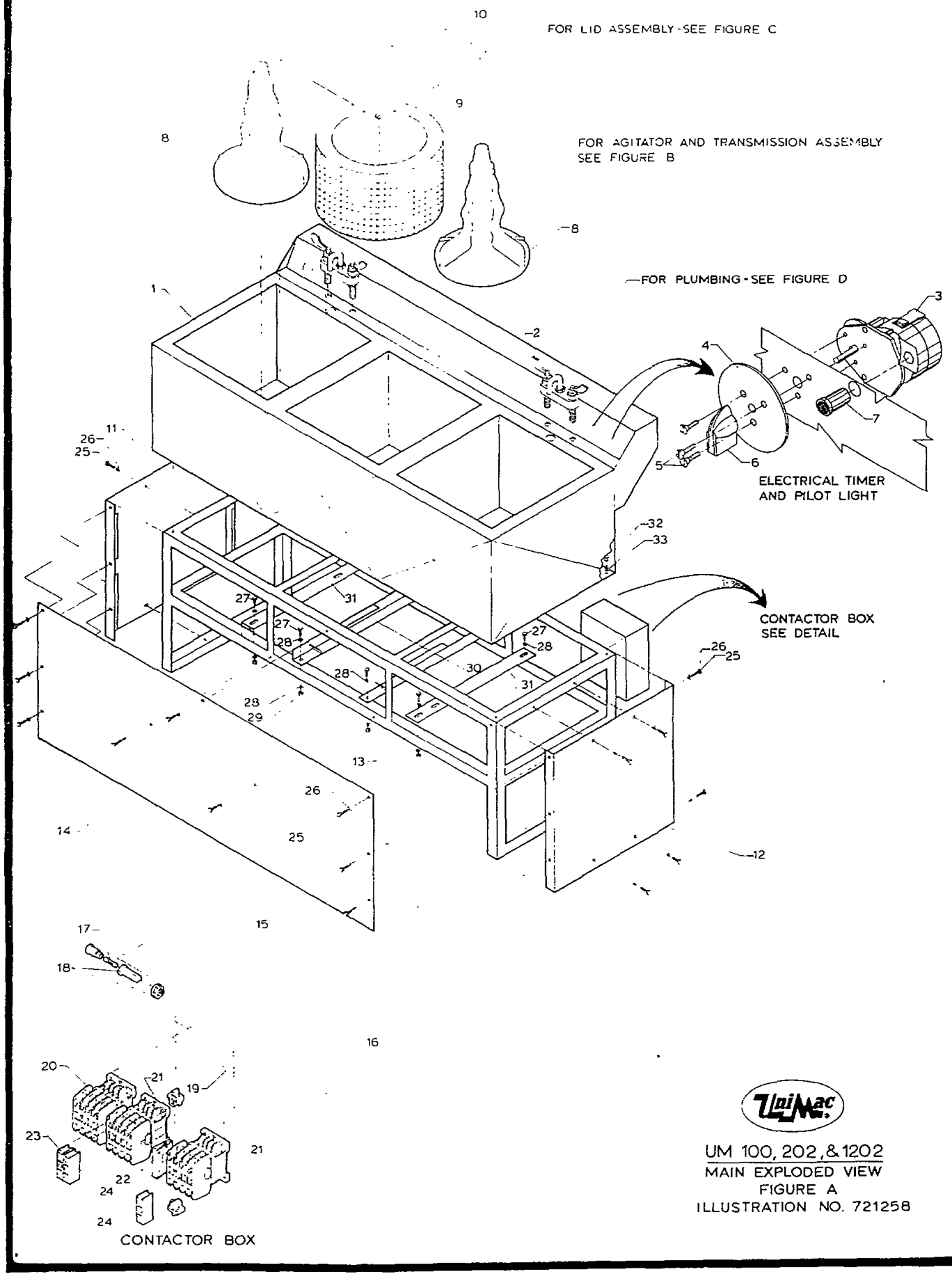
Customers may arrange for payment by one of the following methods:

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.



UM 100, 202, & 1202
MAIN EXPLODED VIEW
FIGURE A
ILLUSTRATION NO. 721258

UniMac®	MAIN EXPLODED VIEW FIGURE A MODEL UM 100/ 202/ 1202	ILL NO. 721258 ISSUE 1 DATE 10/18/89 SHEET 1 OF 1

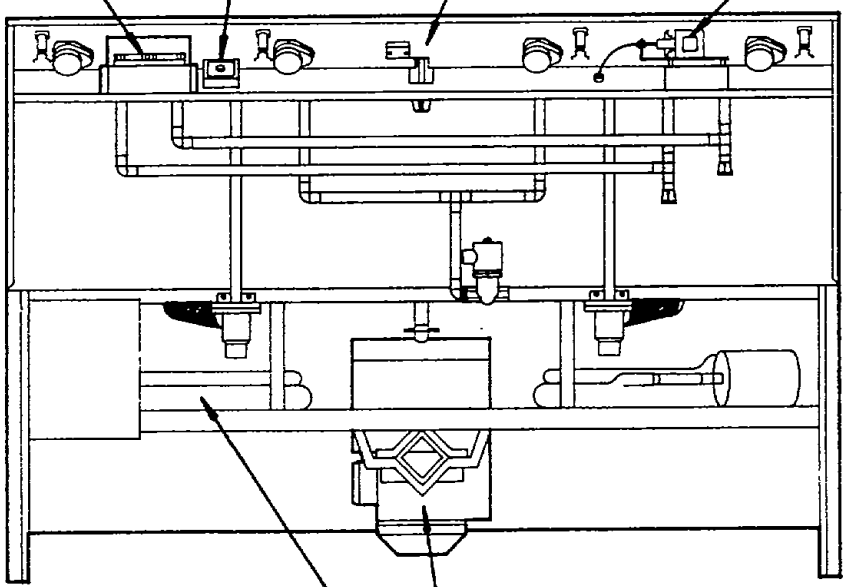
ITEM	QUANTITY			PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
					UM 100		
					UM 202		
					UM 1202		
1	1		1	602493	Tub, UM 100		
		1	1	602494	Tub, UM 202		
2	1	2	3	602680	Faucet Assembly		
3	2	4	6	330329	Timer, 15 Minute 110V 50/60Hz.		
	2	4	6	330325	Timer, 15 Minute 220V 50/60Hz.		
4	2	4	6	330507	Dial Plate		
5	6	12	18	430990	M4 Screw		
6	2	4	6	330506	Knob, Timer		
7	2	4	6	350400	Indicator Light		
8	1	2	3	180300	Agitator		
9	1	1	2	602568	Basket, Extractor		
10	1		1	602659	Lid Only, UM 100		
				730019	Lid Assembly Kit-Complete		
		1	1	602660	Lid Only, UM 202		
				730020	Lid Assembly Kit-Complete		
	1	1	2	601156	End Panel, Left UM 100/202/1202		
	1	1	2	602496	End Panel, Right UM 100/202/1202		
13	1		1	601260	Frame, UM 100		
		1	1	601259	Frame, UM 202		
14	1		1	601090	Front Skirt Panel, UM 100		
		1	1	601140	Front Skirt Panel, UM 202		
15	1	1	2	140413	Contactor Box		
16	1	1	2	140400	"J" Box		
17	1	1	2	350104	Fuse, 2 Amp		
18	1	1	2	350304	Fuseholder		
19	1	1	2	610083	Contactor Mtg. Rail, 7 3/4" Length		
20	1	1	2	330109	Relay K2-07-A22 110 V		
	1	1	2	330127	Relay K2-07-A22 220 V		
21	2	2	4	330110	Contactor K2-16 110 V		
	2	2	4	330114	Contactor K2-16 220 V		
22	1	1	2	330111	Mechanical Interlock		
23	1	1	2	330136	Auxilliary Contactor HN-10		
24	2	2	4	330137	Auxilliary Contactor HN-01		
25	33	33	66	430926	Screw		
26	33	33	66	431104	Washer		
27	6	8	14	430116	Bolt, 3/8"-16 x 1"		
28	12	16	28	430301	Washer, 3/8"		
29	6	8	14	430218	Nut, 3/8"-16		
30	2	2	4	601486	Extractor Motor Rail		
31	1	2	3	605403	Transmission Hanger		

PROXIMITY CONTROL UNIT
PART NO. 370544
SEE WIRING DIAGRAMS
AND MOTORS FIGURES C-1 & C-2

LID & HINGE ASSEMBLY
SEE FIGURE D

SOLID STATE TIME DELAY
P.N. 330203-120V
P.N. 330206-220V

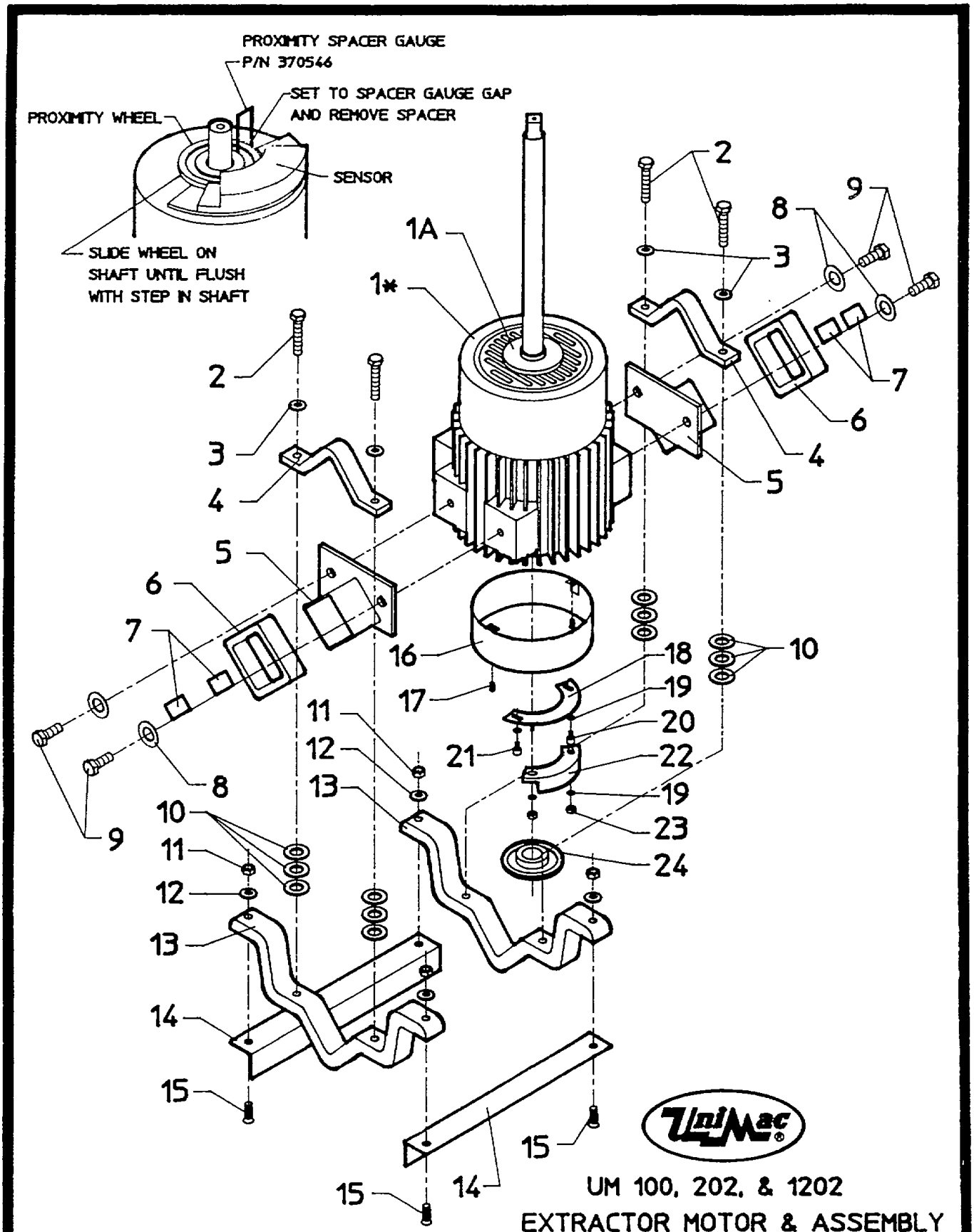
LID LOCK SOLENOID
SEE FIGURE G



TRANSMISSION-SEE FIGURE E

MOTOR-SEE FIGURE C-1 (ELMO)
FIGURE C-2 (BALDOR)

UM 100, 202, & 1202
FAMILIARIZATION GUIDE
FIGURE B
ILLUSTRATION NO. 721271

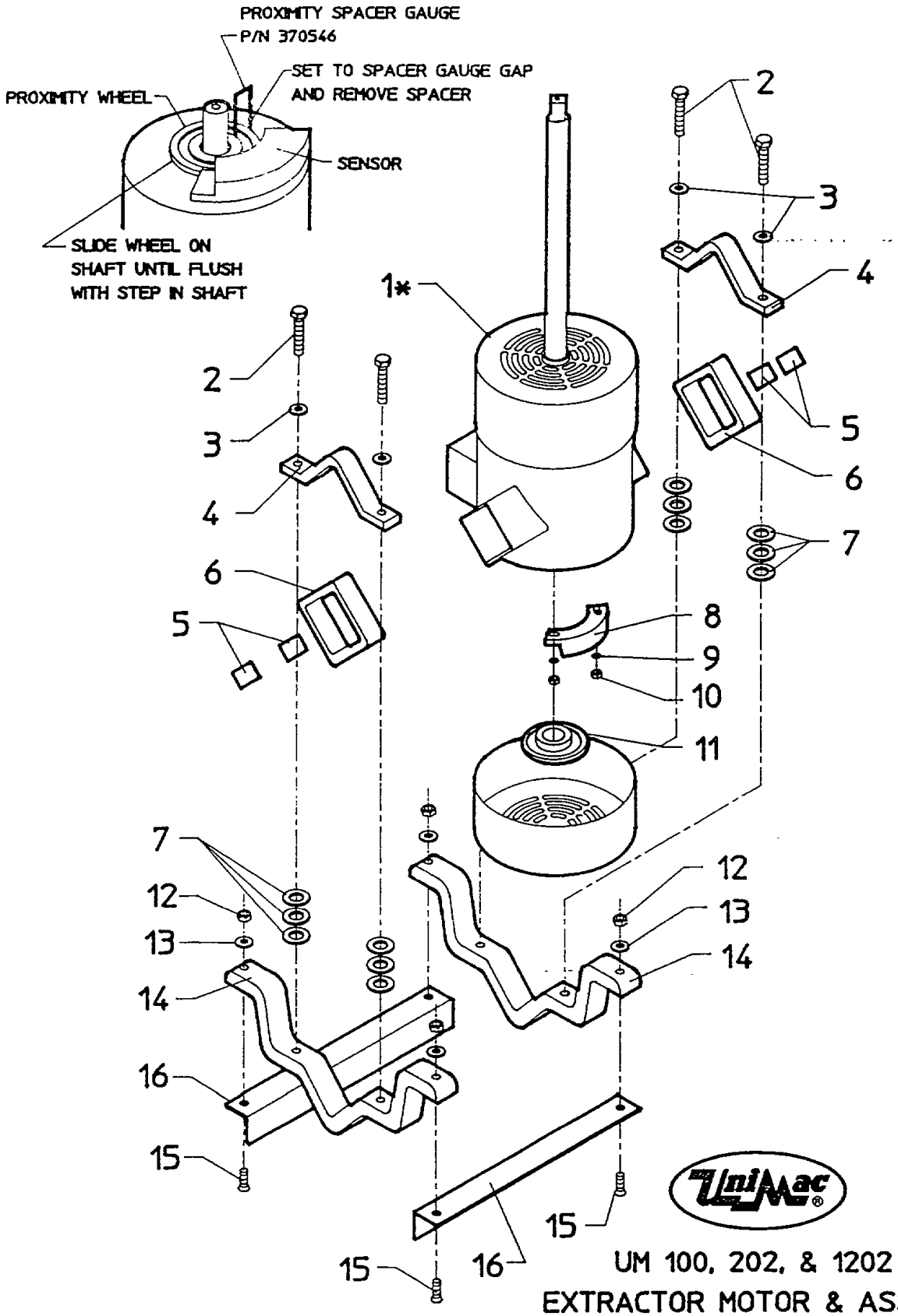


UM 100, 202, & 1202
EXTRACTOR MOTOR & ASSEMBLY
FIGURE C-1
ILLUSTRATION NO. 721260

*PLEASE SPECIFY ELMO MOTOR

UniMac®	EXTRACTOR MOTOR AND ASSEMBLY FIGURE C-1 UM 100/202/1202	ILL NO. 721260 ISSUE 1 DATE 3/14/90 SHEET 1 OF 1

ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	1	220200	Extractor motor, 1 sp., 208-240V/3/60, Elmo		
1a	1	100206	Flinger		
2	4	430104	Bolt, zinc, 5/16-18 x 1 1/2		
3	4	430321	Washer, split lock, pltd. 5/16		
4	2	601387	Cap, trunnion		
5	2	601050	Ear, motor support		
6	2	170100	Trunnion rubber		
7	4	601167	Clip, z		
8	4	430314	Washer, lock, pltd., 1/2		
9	4	430100	Bolt, pltd., 1/2-13 x 1		
10	12	430301	Washer, pltd., 3/9		
11	4	430211	Nut, pltd., 1/4-20, hex		
12	4	430322	Washer, split lock, pltd., 1/4		
13	2	601375	Frame, trunnion		
14	2	601182	Angle, trunnion frame		
15	4	430112	Screw, pltd., 1/4-20 x 1, sltd.		
16	1	604254	Assembly, cover, sensor		
17	2	430920	Bolt, 10-32 x 1/2"		
	1	603921	Bracket, extractor sensor		
	2	430312	Washer, flat, pltd., #10		
	2	430521	Screw, black, M4 x 10		
21	2	430520	Screw, black, M6 x 10		
22	1	370545	Proximity sensor		
23	2	430232	Nut, fiber lock, pltd., 8-32		
24	1	370547	Proximity wheel		
			* For Use With Elmo Motors Only		



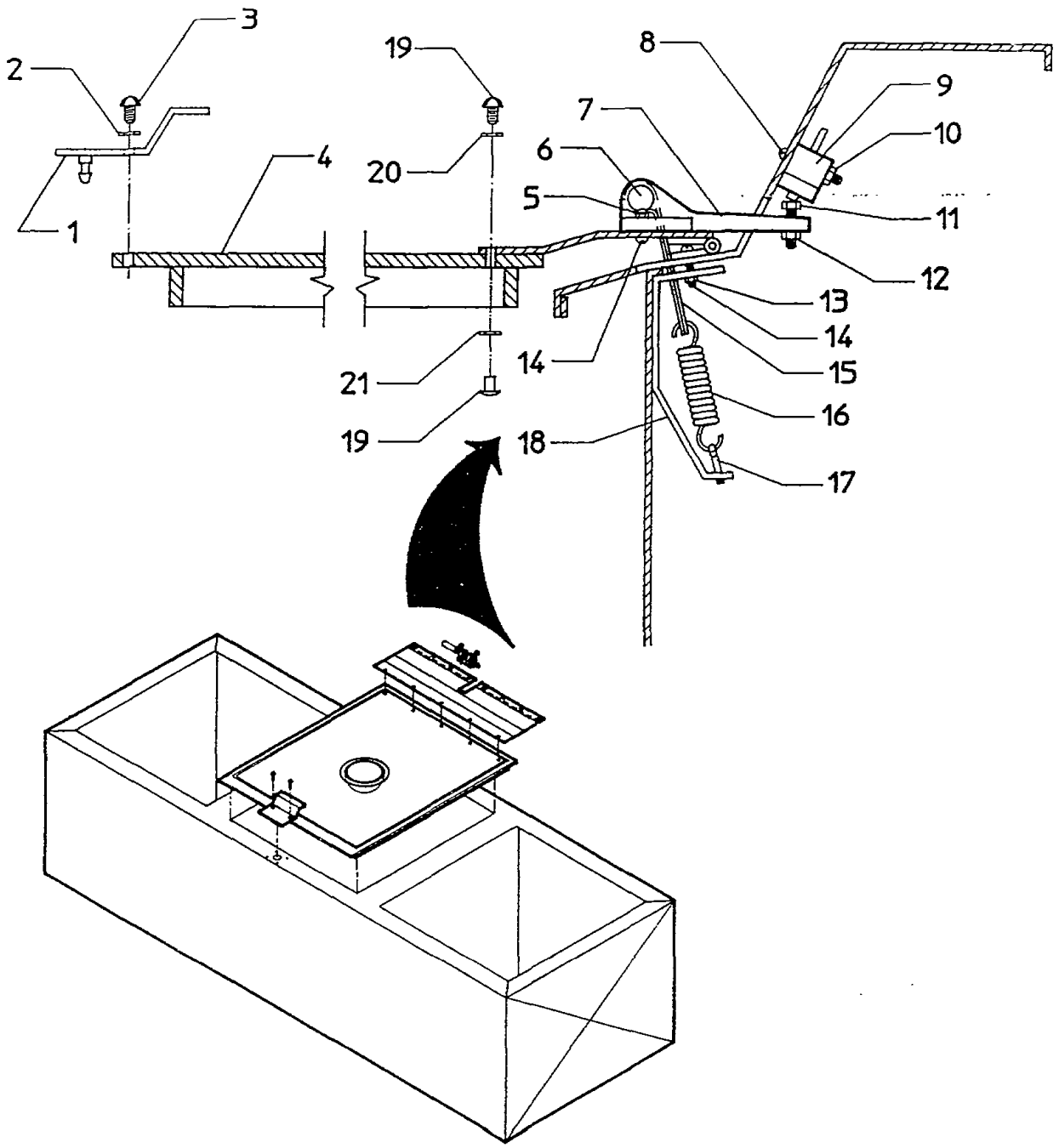
UM 100, 202, & 1202
EXTRACTOR MOTOR & ASSEMBLY
FIGURE C-2
ILLUSTRATION NO. 721272

*PLEASE SPECIFY BALDOR MOTOR

EXTRACTOR MOTOR AND ASSEMBLY
FIGURE C-2
UM 100/ 202/ 1202

ILL NO. 721272
ISSUE 1
DATE 3/14/90
SHEET 1 OF 1

ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	1	220200	Extractor Motor, 1 Sp., 208-240V/3/60, Baldor		
2	4	430104	Bolt, Zinc, 5/16-18 X 1 1/2		
3	4	430321	Washer, Split Lock, Pltd. 5/16		
4	2	601387	Cap, Trunnion		
5	4	601167	Clip, Z		
6	2	170100	Trunnion Rubber		
7	12	430301	Washer, Flat, Pltd., 3/8		
8	1	370545	Proximity Sensor		
9	2	430312	Washer, Flat, Pltd., #10		
10	2	430106	Screw, Pltd., 10-32 X 1/2", Sltd., Round Hd		
11	1	370547	Proximity Wheel		
12	4	430211	Nut, Pltd., 1/4-20		
13	4	430322	Washer, Split Lock, Pltd., 1/4		
14	2	601375	Frame, Trunnion		
15	4	430112	Screw, Pltd., 1/4-20 X 1, Sltd., Counter Sunk Hd.		
16	2	601182	Angle, Trunnion Frame		
			*For Use With Baldor Motor Only		

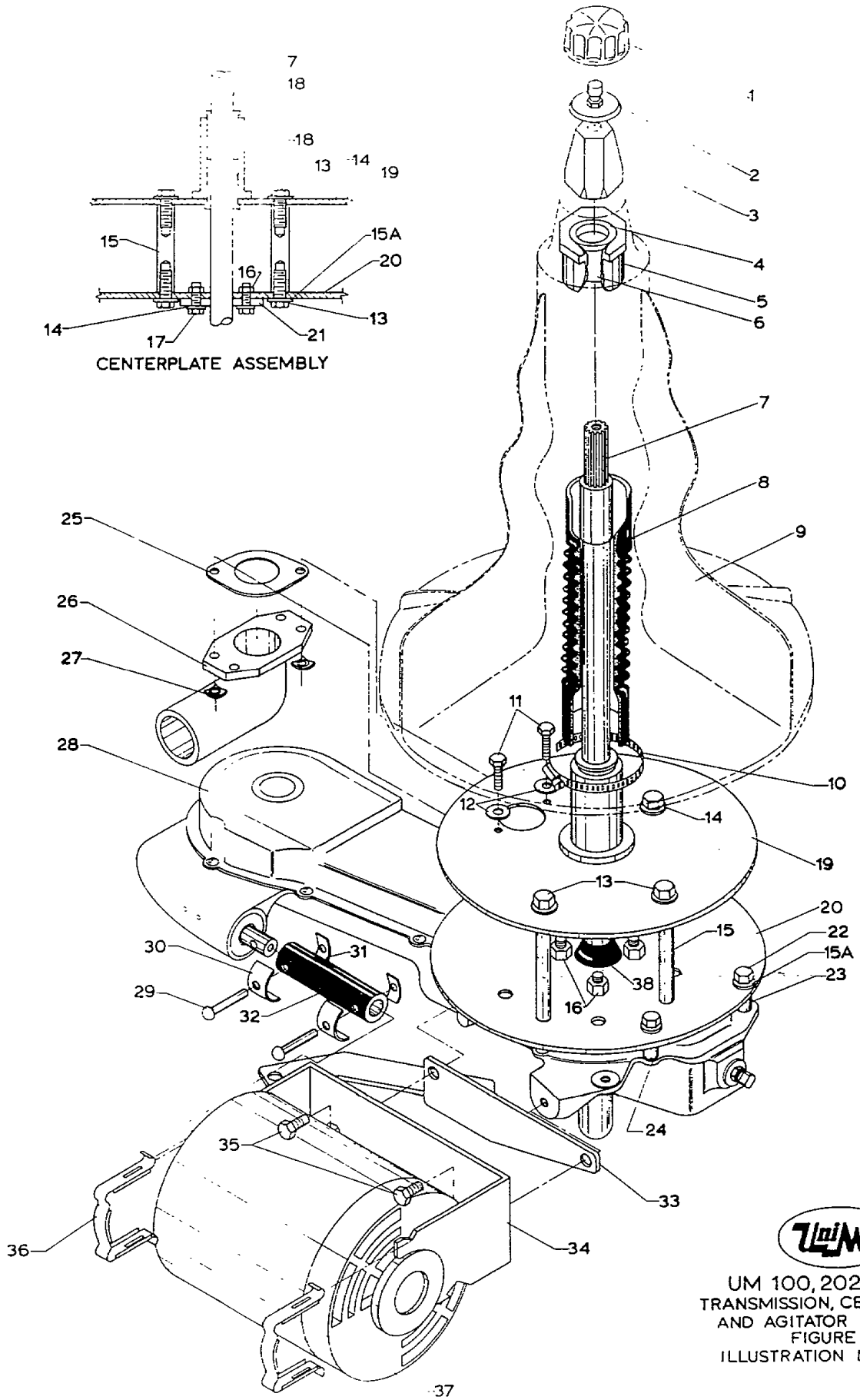


UM 100, 202, & 1202
LID & HINGE ASSEMBLY
FIGURE D
ILLUSTRATION NO. 721261

UniMac®	**LID AND HINGE ASSEMBLY** **FIGURE D** **UM 100/ 202/ 1202**	ILL NO. 721261 ISSUE 1 DATE 4/20/90 SHEET 1 OF 1

ITEM	QUANTITY			PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
	UM 100	UM 202	UM 1202				
1	1	1	2	605387	Handle, Lid		
2	1	1	2	431102	Washer, SplitLock, Stainless Steel, #10		
3	1	1	2	430920	Screw, Stainless Steel, 10-32 x 1/2,		
4	1		1	602659	Extractor Lid		
4		1	1	602660	Extractor Lid		
*				730019	Kit, Extractor Lid		
				602659	■ Extractor Lid		
				431106	■ Washers		
				230201	■ Warning Plate		
*				730020	Kit, Extractor Lid		
				602659	■ Extractor Lid		
				431106	■ Washers		
				230201	■ Warning Plate		
	2	2	4	430217	Nut, Acorn, Nickle Plated, 8-32		
	1	1	2	601947	Hinge, Saddle		
	1	1	2	430944	Screw, Stainless Steel, 6-32 x 1,Slotted		
9	1	1	2	340903	Microswitch		
10	1	1	2	431401	Nut, Brass, 6-32		
11	1	1	2	430939	Screw, Stainless Steel, 1/4-20 x 3/4		
12	1	1	2	431005	Nut, Stainless Steel, 1/4-20, Hex		
13	1	1	2	431400	Screw, Stainless Steel, 8-32, Hex		
14	1	1	2	430903	Screw, Stainless Steel, 8-32 x 3/8		
15	1	1	2	601033	Bracket, Spring		
16	1	1	2	310122	Spring, Lid		
17	1	1	2	431202	Pin, Cotter, Stainless Steel, 1/8 x 3/4, Sq		
18	1	1	2	601958	Bracket, Spring, Lid Lock		
*				730087	Post and Screw Kit		
19	5	5	10	430147	■ Post 8-32 x 1 1/4 ■ Screw, 5/16		
20	5	5	10	431104	■ Washer, Lock, Stainless Steel, 1/4"		
21	5	5	10	431106	■ Washer, Lock, Stainless Steel, #8		

CENTERPLATE ASSEMBLY



UM 100, 202, & 1202
TRANSMISSION, CENTERPLATE
AND AGITATOR ASSEMBLY
FIGURE E
ILLUSTRATION NO. 721251

TRANSMISSION, CENTERPLATE, AND AGITATOR ASSEMBLY FIGURE E MODELS UM 100/202/1202

ILL NO. 721251
ISSUE 1
DATE 11/2/89
SHEET 1 OF 2

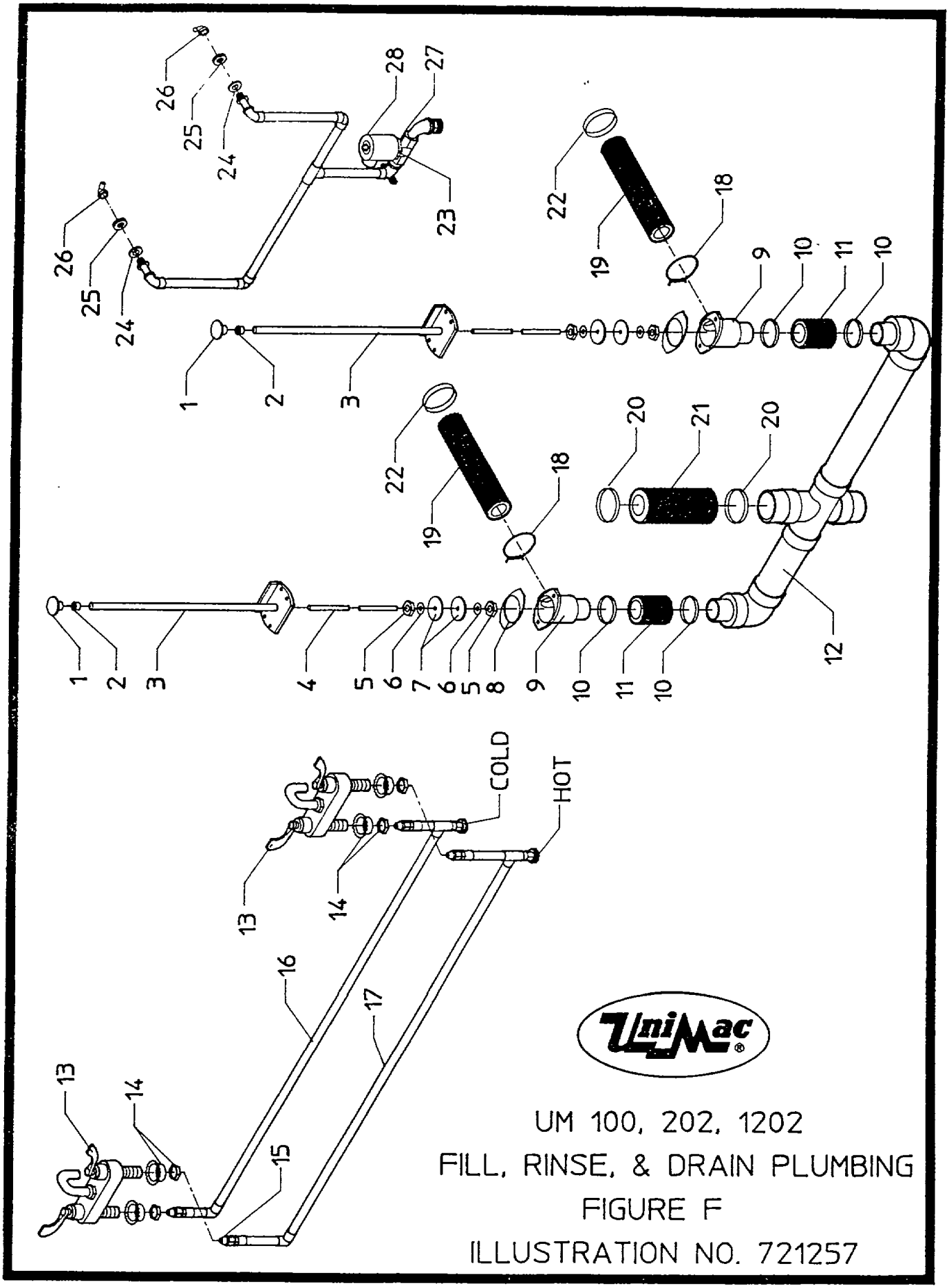
ITEM	QUANTITY			PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
	UM 100	UM 202	UM 1202				
*	1	2	3	730341	Kit, Transmission, Dexter with solid shaft		ser # 23990-
*	1	2	3	730238	Kit, Centerplate-Dexter		
1	1	2	3	180301	Agitator Cap	7071	
2	1	2	3	180303	Agitator Drive Block Screw		
3	1	2	3	180302	Drive Block	7075	
*	1	2	2	602508	Assembly, Bearing, Top		
4	1	2	3	100200	■ Seal	7074	
5	1	2	3	602197	■ Top Bearing Assembly		
6	1	2	3	130325	■ Oilite Bronze Bushing		
7	1	2	3	602409	Agitator Shaft With Sleeve		
8	1	2	3	200124	Flex Hose		
9	1	2	3	180300	Agitator		
10	1	2	3	200200	Hose Clamp		
	2	4	6	430906	Bolt, 1/4"-20 x 7/8"		
	2	4	6	431112	Washer, Bartite, 1/4"		
	6	12	18	430107	Bolt, 1/4"-20 x 1"		
14	9	18	27	431116	Washer, 5/16"		
15	3	6	9	180481	Stand-off		
15A	5	8	11	431105	Washer, Flat, S.S. 5/16"		
16	3	6	9	430212	Nut, Plated, 5/16"-18		
17	3	6	9	430946	Bolt, 5/16"-18 x 1"		
*	1	2	3	730238	Centerplate Kit		
18	2	4	6	100121	■ Oilite Bronze Bushing (only available in kit)		
19	1	2	3	604876	■ Centerplate (only available in kit)		
20	1	2	3	604863	Bottomplate		
21	1	2	3	320316	Spacer, Bottomplate to Transmission		
22	2	4	6	430178	Bolt, Plated, 5/16"-18 x 2 1/2"		
23	1	2	3	605335	Spacer, Centerplate, Short Stand-off		
24	1	2	3	180480	Spacer, Centerplate, Standoff		
25	1	2	3	170501	Gasket		
26	1	2	3	150302	Drain Elbow		

UniMac®

TRANSMISSION, CENTERPLATE, AND AGITATOR ASSEMBLY FIGURE E MODELS UM 100/202/1202

ILL NO. 721251
ISSUE 1
DATE 11/2/89
SHEET 2 OF 2

ITEM	QUANTITY			PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
	UM 100	UM 202	UM 1202				
27	2	4	6	430204	Lock Nut		
28	1	2	3	180200	Dexter Transmission-Complete		
29	2	4	6	180433	Transmission Stud Coupling		
30	2	4	6	180437	Transmission Clip Coupling		
31	2	4	6	180438	Transmission Spring Nut		
32	1	2	3	180432	Transmission Flex Coupling		
33	1	2	3	604864	Motor Spacer Bracket		
34	1	2	3	180404	Motor Mounting Bracket		
35	2	4	6	430127	Bolt, Motor Support		
36	2	4	6	200400	Spring Clip, Motor Mounting		
37	1	2	3	220100	Motor, Agitator 115V 60Hz 1 Phase		1/3HP
37	1	2	3	220121	Motor, Agitator 220V 50Hz 1 Phase		1/3HP
37	1	2	3	220210	Motor, Agitator 208-240/60/3		
38	1	2	3	180453	Watershed, Transmission		



UM 100, 202, 1202

FILL, RINSE, & DRAIN PLUMBING

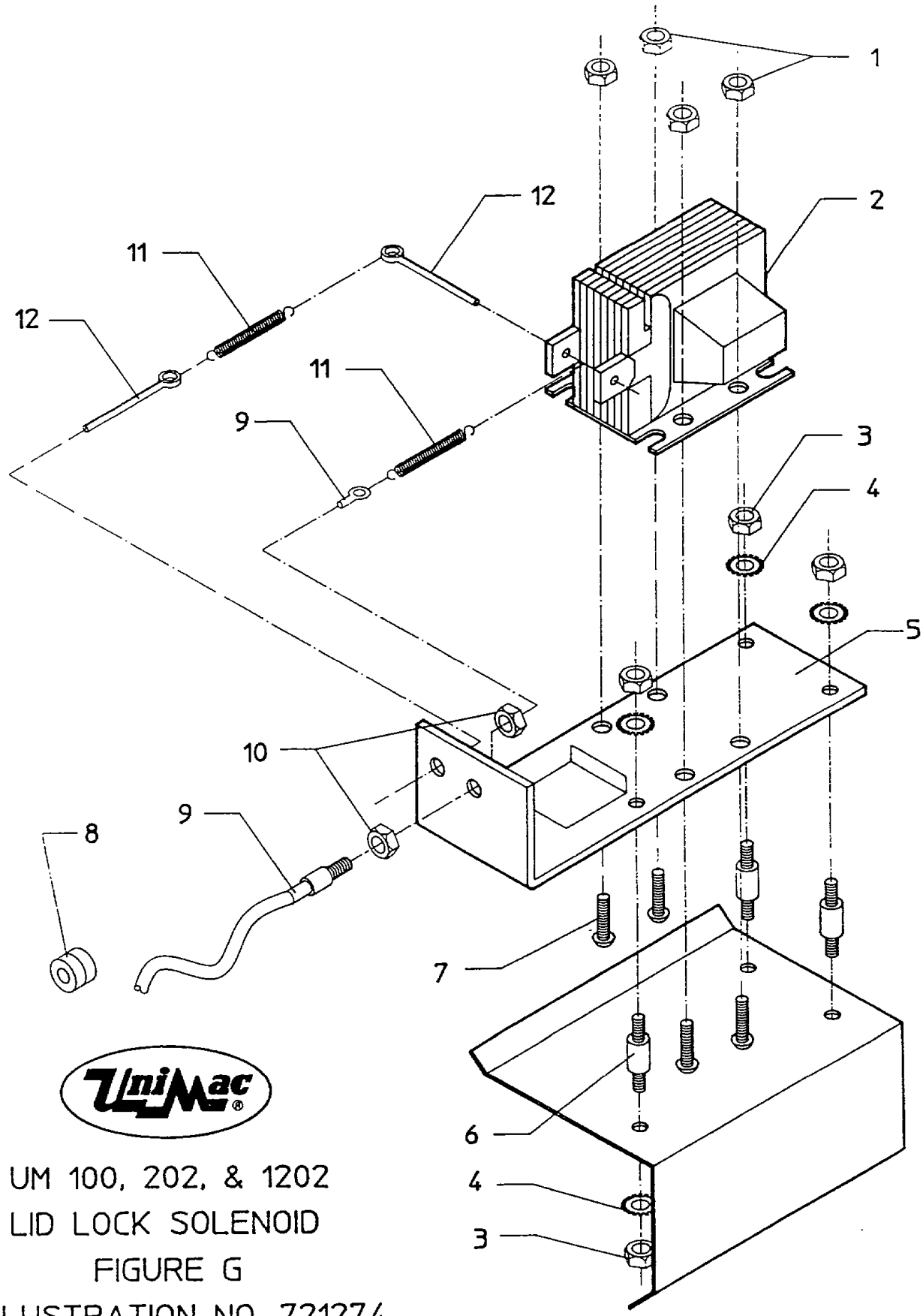
FIGURE F

ILLUSTRATION NO. 721257

FILL, RINSE, AND DRAIN PLUMBING
FIGURE F
UM 100/202/1202

ILL NO. 721257
ISSUE 1
DATE 3/30/90
SHEET 1 OF 1

ITEM	QUANTITY			PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
	UM 100	UM 202	UM 1202				
1	1	2	3	190101	Push-Pull Black Knob		
2	1	2	3	170605	Grommet, Plastic, Bushing		
3	1	2	3	602396	Assembly, Valve, Drain		
4	1	2	3	601388	Rod, Drain Valve, Brass		
5	2	4	6	431402	Nut, Lock, Brass, 5/16		
6	2	4	6	431500	Washer, Brass, 5/16		
7	2	4	6	170107	Drain Valve Disc		
8	1	2	3	170500	Gasket, Drain Valve		
9	1	2	3	150301	Valve, Drain		
10	2	4	6	200209	Clamp, Hose, Size 64		
11	1	2	3	610072	Hose, Water, 1 5/8 ID X 2 1/2		
12		1	1	601504	Manifold, Valve, Drain		
12	1		1	601457	Manifold, Drain		
13	1	2	3	602680	Assembly, Faucet		
	2	4	6	190921	Hardware, Faucet		
	2	4	6	421935	Tailpiece		
	1		1	604439	Plumbing, Manifold, Wash/Cold, UM100		
16		1	1	602490	Plumbing, Manifold, Wash/Hot, UM 202		
17		1	1	602487	Plumbing, Wash/Cold, UM 202		
17	1		1	602489	Plumbing, Manifold, Wash/Hot, UM 100		
18	1	2	3	200211	Clamp, Hose, Drain, Size 32		
19	1	2	3	610071	Hose, Water, 1 5/8 ID x 9"		
20	1	2	3	200213	Clamp, Hose,Size 40		
21	1	1	2	610084	Hose, Conduit, 2 3/8 ID x 2.75 OD x 6		
22	1	2	3	200211	Clamp, Hose, Drain, Size 32		
23	1	1	2	602675	Assembly, Plumbing, Rinse, 110V		
24	2	2	4	431502	Washer, Wrought, Brass		
25	2	2	4	170603	Grommet, Rubber, 1/4" x 7/8"		
26	2	2	4	601512	Nozzle, Spray Rins		
27	1	1	2	380700	Spray Valve, 1/2" with solenoid 110V		
27	1	1	2	380701	Spray Valve, 1/2" with solenoid 220V		
28	1	1	2	380900	Solenoid only, Spray valve 110V		
28	1	1	2	380901	Solenoid only, Spray valve 220V		

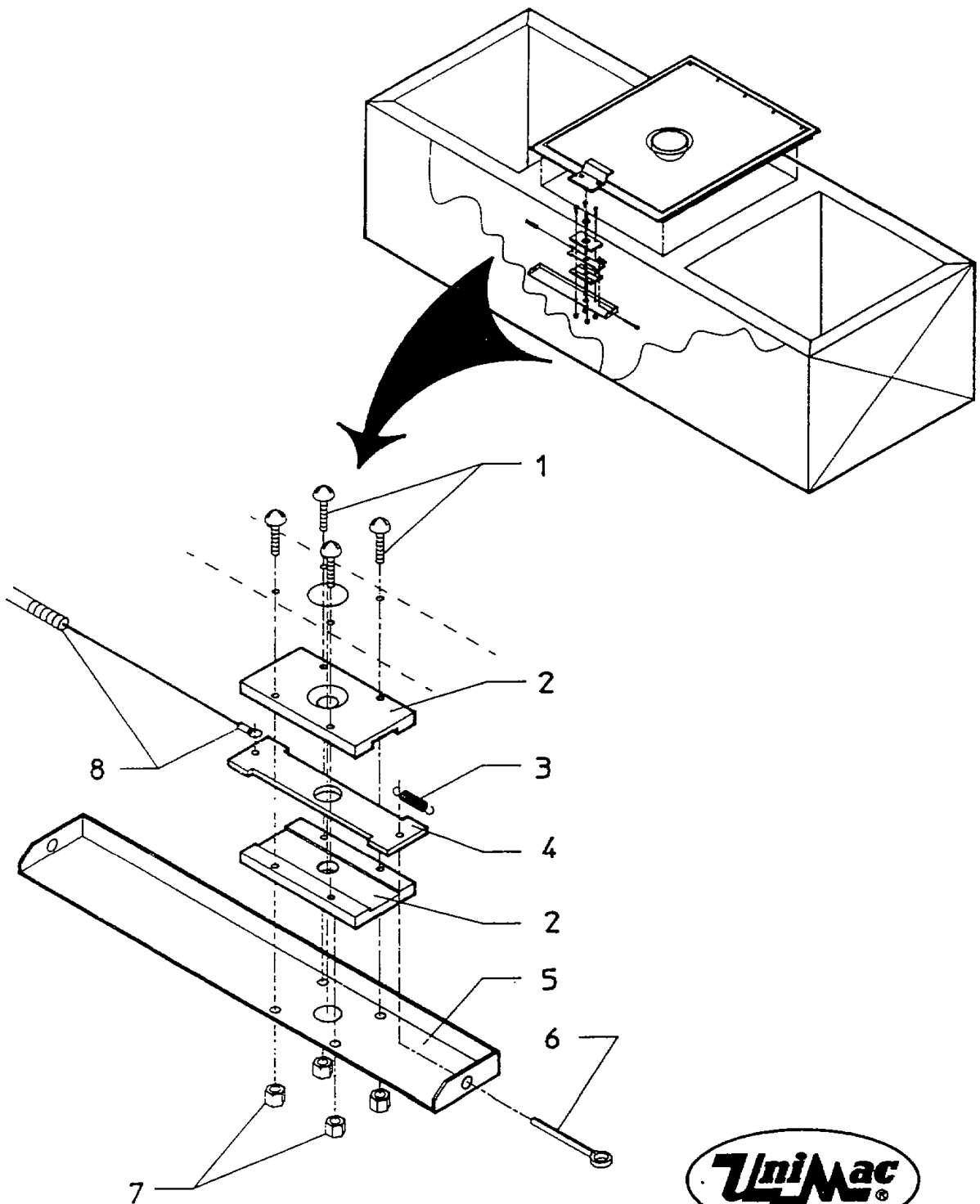


UM 100, 202, & 1202
LID LOCK SOLENOID
FIGURE G
ILLUSTRATION NO. 721274

LID LOCK RELEASE SOLENOID
FIGURE G
UM 100, 202, 1202

ILL NO. 721274
ISSUE 1
DATE 4/11/90
SHEET 1 OF 1

ITEM	QUANTITY			PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
					UM 100		
					UM202		
					UM 1202		
1	4	4	8	430220	Nut, Fiber Lock, Plated, 10-32		
2	1	1	2	300106	Solenoid, Lid Lock, 120V		
2	1	1	2	300107	Solenoid, Lid Lock, 240V		
3	6	6	12	431400	Nut, Brass, #8-32, Hex		
4	6	6	12	431106	Washer, Lock, Ext. Tooth, Stainless Steel, #8		
5	1	1	2	602483	Assembly, Bracket, Mount		
6	3	3	6	432200	Rubber Mount, #8-32		
7	4	4	8	430106	Screw, Plated, 10-32 x 1/2",		
8	1	1	2	170601	Grommet		
9	1	1	2	190800	Cable, Lid Lock, 40-3/4"		
10	2	2	4	430209	Nut, Plated, 1/4-28, Hex		
11	2	2	4	310105	Spring, Lid Lock, 1/4 x 037 x 1-1/8		
12	2	2	4	430401	Cotter Pin, Plated, 1/8" x 1 1/2"		



UM 100, 202, & 1202
LID LOCK ASSEMBLY
FIGURE H
ILLUSTRATION NO. 721275

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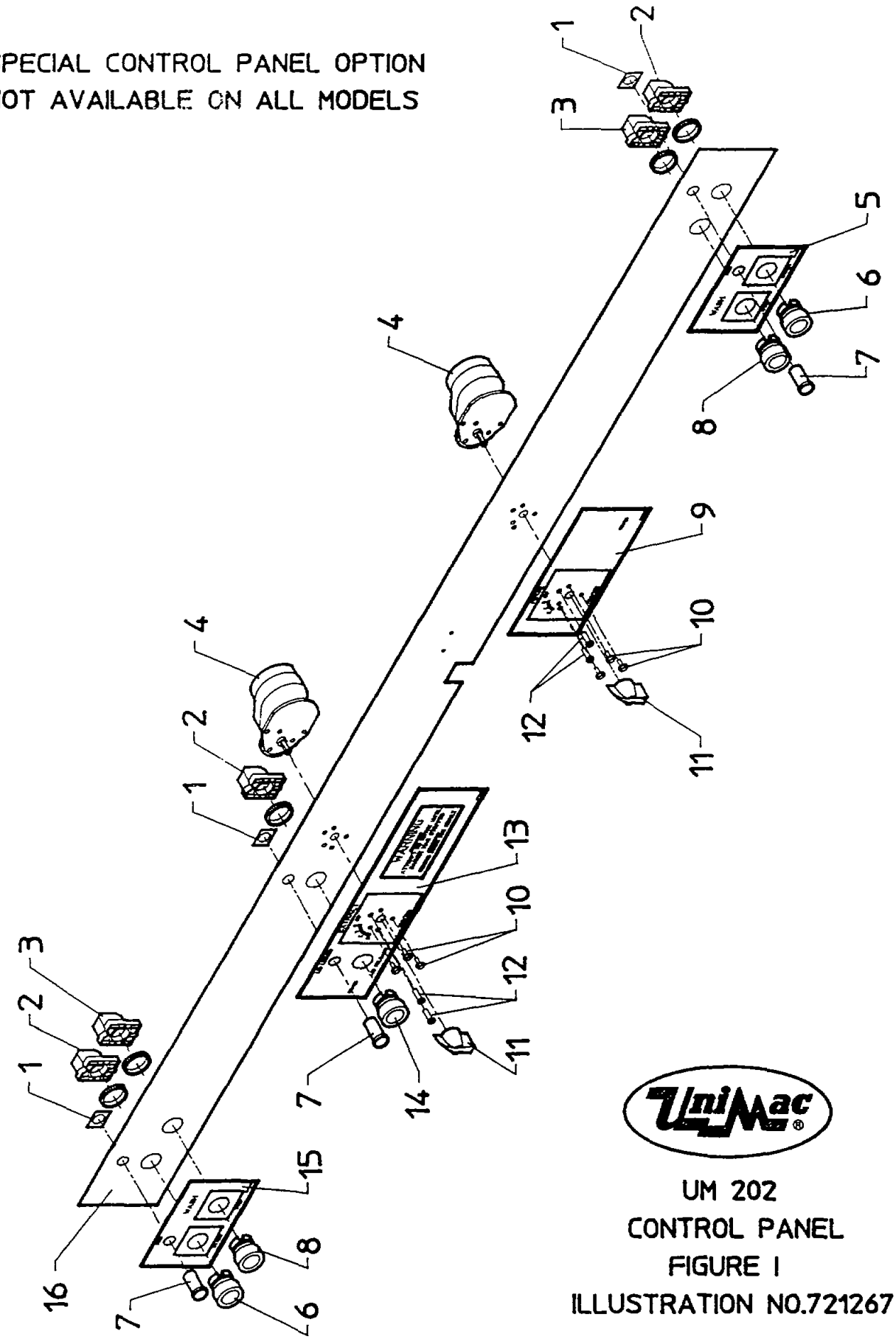
LID LOCK ASSEMBLY
FIGURE H
UM 100/202/1202

ILL NO. 721275
ISSUE 1
DATE 4/20/90
SHEET 1 OF 1

ITEM	QUANTITY			PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
	UM 100						
		UM 202					
			UM 1202				
1	4	4	8	430994	Screw, Stainless Steel, 10-32 x 3/4		
2	1	1	2	602513	Carrier, Slide, Lid Lock		
3	1	1	2	310128	Spring, Lid Lock, Stainless Steel		
4	1	1	2	602514	Slide, Lid Lock		
5	1	1	2	605388	Bracket, Support, Cable, Stainless Steel		
6	1	1	2	431216	Pin, Cotter, Stainless Steel, 1/16 x 3/4		
7	4	4	8	431017	Nut, Stainless Steel, 10-32, Fiber Lock		
8	1	1	2	190800	Cable, Lid Lock, 40-3/4		
					*This assembly is effective beginning with serial #26643		

SPECIAL CONTROL PANEL OPTION
NOT AVAILABLE ON ALL MODELS



UM 202
CONTROL PANEL
FIGURE 1
ILLUSTRATION NO.721267

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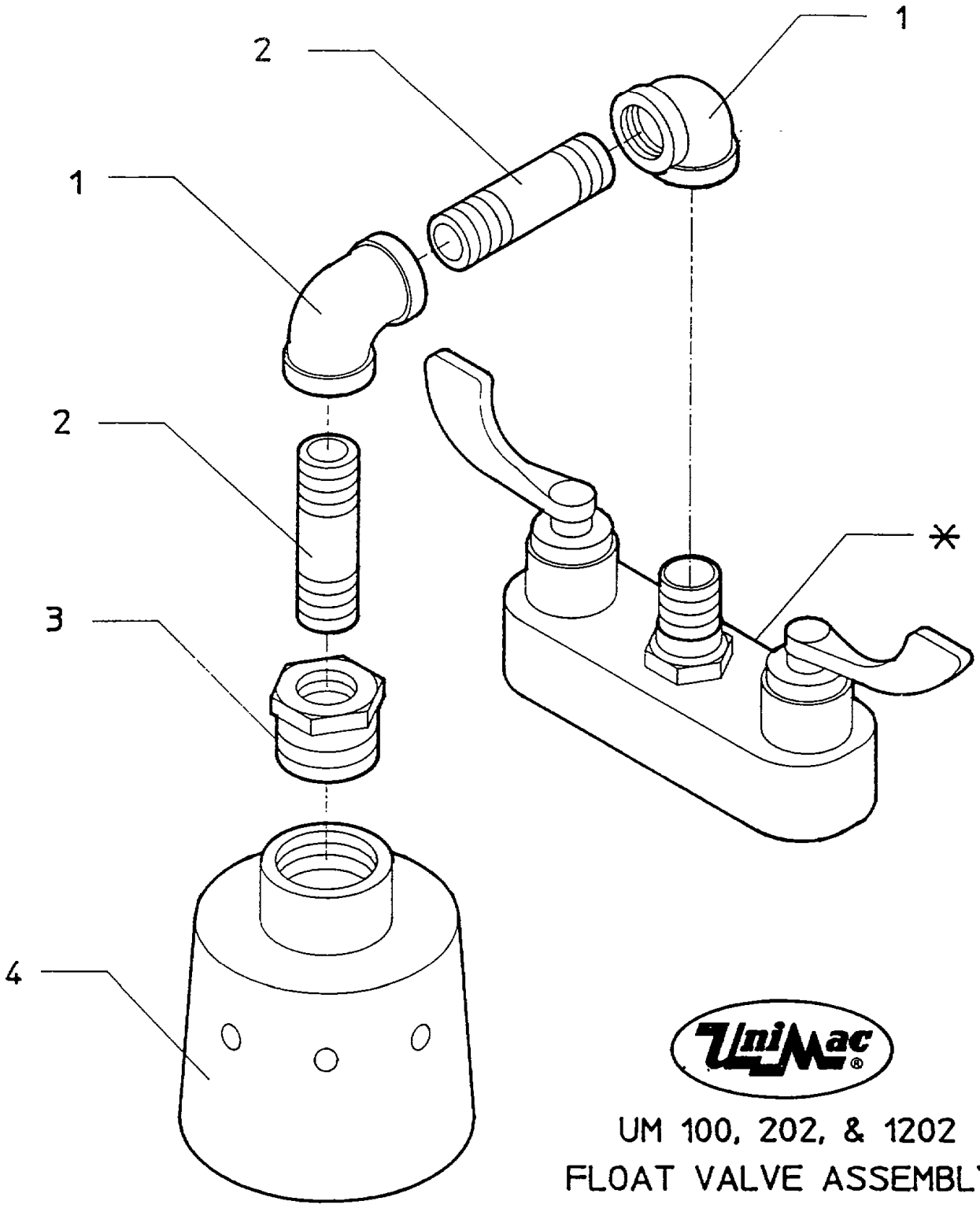
CONTROL PANEL
FIGURE I
UM 202

ILL NO. 721267
ISSUE 1
DATE 2/7/90
SHEET 1 OF 1

ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
1	3	430604	Nut, Push, Arched Rectangle		
2	3	330153	Contactor, Block, N.O., 20 Amp		
3	2	330154	Contactor, Block, N.C., 20 Amp		
4	2	730201	Kit, Timer, 15 Min., 110V 60Hz		
4	2	730202	Kit, Timer, 15 Min., 220-240V 50/60Hz		
5	1	230773	Decal, Wash/Run, Right		
6	2	340420	Switch, Push Button, Green		
7	3	350400	Light, Indicator, Red Neon		
8	2	340421	Switch, Push Button, Red		
9	1	230731	Decal, Rinse		
10	6	430998	Screw, Stainless Stl., M4 x 8, Slotted, Truss Hd		
11	2	330506	Knob, Timer		
12	4	432213	Rivnut, Aluminum, 6-32, A6B75		
13	1	230730	Decal, Extract		
14	1	340422	Switch, Push Button, Black		
15	1	230732	Decal, Wash/Run, Left		
16	1	605708	Clock Panel		

SPECIAL FLOAT VALVE OPTION
NOT AVAILABLE ON ALL MODELS



UM 100, 202, & 1202
FLOAT VALVE ASSEMBLY
FIGURE J
ILLUSTRATION NO. 721266

FLOAT VALVE ASSEMBLY
FIGURE J
UM 100/ 202/ 1202

ILL NO.	721266
ISSUE	1
DATE	2/6/90
SHEET	1 OF 1

ITEM	QUANTITY	PART NO.	DESCRIPTION	PREVIOUS PART NO.	NOTES
*	1	730357	Kit, Faucet, Float - Complete		
1	1	422315	■ Elbow, Brass, 1/2",90 deg.		
2	1	421947	■ Nipple, Brass, 1 x 1/2"		
3	2	422004	■ Bushing, Brass, 1/2" x 1"		
4	2	380401	■ Valve, Float		