

REIMERS ELECTRA STEAM, INC.

P.O. BOX 37
4407 MARTINSBURG PIKE
CLEAR BROOK, VA 22624
PHONE: 703-662-3811 FAX: 703-665-8101

05-01-93

READ THIS FIRST

CAUTION:

READ ALL INSTRUCTIONS BEFORE INSTALLATION/OPERATION.

ENSURE BLOWDOWN PROPERLY/SAFELY PIPED.

DO NOT POSITION FACE/BODY OVER FILL FUNNEL.

STAND CLEAR OF SAFETY VALVE & SCALDING STEAM.

NEVER OPEN FILL VALVE WHEN UNIT IS UNDER PRESSURE.

VALVES/PIPES ARE HOT WHEN UNDER PRESSURE OR HEATING UP. DO NOT TOUCH.

IF A LEAK IS EVIDENT

STEAM FITTINGS CAN BECOME LOOSE DURING SHIPMENT & SUBSEQUENTLY LEAK.

IT IS EASY TO RESOLVE THESE LEAKS IF YOU ARE CAREFUL.

1. ENSURE BOILER IS COLD/DRAINED & HAS NO PRESSURE/ELECTRICITY.
2. TIGHTEN *PACKING NUT GENTLY 1/4TH OF A TURN.

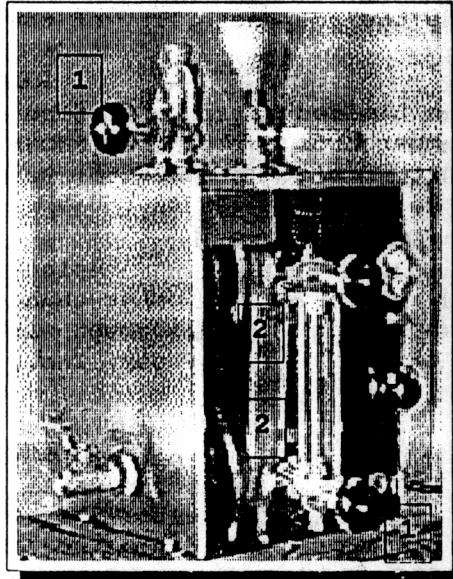
CAUTION: DO NOT OVERTIGHTEN, AS THIS WILL RESULT IN GAUGE GLASS

BREAKAGE OR IN VALVE STEM FREEZING & VALVE FAILURE

3. FILL BOILER & OPERATE NORMALLY.
4. OBSERVE FOR MORE LEAKS & REPEAT STEPS 1 & 2 AS REQUIRED.

PACKING NUT LOCATIONS

1. ON EACH VALVE STEM UNDER HANDLE
2. TOP & BOTTOM OF GAUGE GLASS



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LIMITED WARRANTY - STEAM GENERATORS

Reimers Electra Steam, Inc. warrants the following products of its own manufacture against defects in materials and workmanship under normal use and service. This warranty is in lieu and excludes all other expressed or implied warranties or merchantability of fitness for any particular use. No person is authorized to extend the terms of this warranty or assume any other liability except by written statement signed by an officer of Reimers Electra Steam, Inc., Clear Brook, Virginia 22624.

WARRANTY PERIOD:

The pressure vessel and electrical & mechanical components are warranted for one year from date of shipment from Reimers Electra Steam, Inc., in Clear Brook, VA 22624.

LIMITATIONS:

Products must be installed, used and maintained in accordance with our instructions, including reasonable and necessary maintenance by the user. Users are responsible for the suitability of the products to their application. There is no warranty damage resulting from improper installation, abuse, power failure, fire, flood, lightening, improper water, misuse, improper specification, misapplication or other operating conditions beyond our control or parts that are normally expendable in usual course of operation. Claims against carriers for damage in transit must be filed by the buyer. Reimers liability, if any, will not exceed the price of Reimers products claimed to be defective.

Components manufactured by any supplier other than Reimers shall bear only that warranty made by the manufacturer of that product and service for that warranty shall be the responsibility of that manufacturer and not Reimers.

REMEDY:

Claims under this Limited Warranty must be made by obtaining a Return Authorization Number from our office (PHONE: 703-662-3811, FAX: 703-665-8101) & returning the defective part, freight prepaid to: Reimers Electra Steam, Inc., 4407 Martinsburg Pike, Clear Brook, Virginia 22624

Defective items will be repaired or replaced as necessary within a reasonable time without charge, other than incidental charges such as freight prepayment. Such repair or replacement within a reasonable time is the exclusive remedy available from Reimers Electra Steam, Inc., under this Limited Warranty.

CONSEQUENTIAL DAMAGES:

Reimers Electra Steam, Inc., is not liable for labor costs incurred in the removal, reinstallation, or unauthorized repair of the product, or for damages of any type whatsoever, including incidental and/or consequential damages.

THIS WARRANTY SUPERSEDES ALL PREVIOUS WARRANTIES.

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OPERATING INSTRUCTIONS FOR JR. STEAM GENERATORS

The REIMERS JR. is a portable, hand-filled steam generator with a 2 gallon capacity, for operation at pressures from 5 to 85 PSI. Designed to the ASME Boiler Code & registered with the National Board of Boiler Inspectors, it is safe when installed, maintained, and used properly. Standard equipment includes: steam gauge, steam valve, blowdown valve, water-fill funnel/valve, check valve, safety valve, water level gauge, adjustable thermostat, low water cut off & electric cord/plug. OPTIONAL: steam jet with foot chain release or electric solenoid valve.

CAUTIONS: READ ALL INSTRUCTIONS BEFORE INSTALLATION/OPERATION.

VALVES/PIPES ARE HOT WHEN UNDER PRESSURE OR HEATING UP. DO NOT TOUCH.

ADJUSTMENTS: All controls have been set at the factory and should require no adjustments.

MODIFICATION/MISUSE: Any modification or misuse of this unit could result in a dangerous situation. Reimers Electra Steam, Inc. is not liable for any product that has been modified or improperly used.

REGISTRATION: Most states & cities require boiler registration/inspection.

Check with local government authorities.

REPAIR: Repair of this unit must be attempted only by experienced personnel. For repair instructions see the included information.

INSTALLATION

PIPE INSTALLATION: Steam piping must be of black pipe, not galvanized. Work must be done by an experienced steamfitter. All state/local codes must be met.

ELECTRICAL: All wiring must be in accordance with the National Electric Code and any local codes that may apply. Wiring must be done by a competent, certified electrician. Use only copper wire.

WATER: Ensure that all electrical components (Electric Foot Switches, etc.) are in a dry location not subject to steam or water.

BLOWDOWN VALVE: When the blowdown valve is utilized a large volume of hot water and steam is discharged. Ensure that this valve is properly piped for this discharge. State and local codes must be met as applicable.

SAFETY VALVE: Safety valve is designed to discharge hot steam when the set pressure is exceeded. Ensure that the discharge port is pointing toward the back of the unit away from the operator and any aisles.

OPERATION

1. Make sure thermostat knob is in off position.
2. Close blowdown valve (left side of unit).
3. Open fill valve under funnel & release air from unit by opening steam valve.

CAUTION: DO NOT POSITION FACE/BODY OVER FILL FUNNEL.

NEVER OPEN FILL VALVE WHEN UNIT IS UNDER PRESSURE.

4. Pour water into funnel until it reaches the "Fill Level" mark behind the gauge glass. Do not overfill. Close fill valve.

NOTE: Overfilling will cause dirt and rust to be carried into the steam lines and onto goods. It will also cause the steam release valve to leak.

5. Connect electric cord to grounded 120 volt outlet.
6. Turn the thermostat dial clockwise to #10 & push Manual Reset. The light will stay on until the preset working pressure is reached.
7. When the water level gets low, the unit will shut off. To refill, turn off thermostat & allow steam pressure to drop to zero. Fill with water as in 3 & 4.
8. Push Manual Reset after refilling.

MAINTENANCE & SAFETY NOTICE

To prevent possible cracking of the plastic gauge glass protector (Part #02691), the two brass nuts at the top & bottom of gauge glass should be tightened until no leakage, then further tightened just enough to ensure nut is flat on each side (left & right) when viewed from the front.

This allows room for the gauge glass protector to shrink slightly in service without cracking.

PRECAUTIONS

Make no adjustments to the gauge glass unless the steam cleaner is unplugged, drained, all pressure is off the unit, and the unit is "cold to the touch".

Never operate the unit without the gauge glass protector (Part #02691) in place.

MAINTENANCE

CAUTION: REPAIR MUST BE BY EXPERIENCED PERSONNEL. ENSURE BOILER IS COLD/DRAINED AND HAS NO PRESSURE/ELECTRIC. ALL ELECTRICAL/STEAM SAFETY PRECAUTIONS MUST BE TAKEN.

TO BLOWDOWN: (FREQUENCY-MINIMUM ONCE PER WEEK)

CAUTION: STAND CLEAR OF SCALDING WATER/STEAM. ENSURE BLOWDOWN PROPERLY/SAFELY PIPED.

1. Turn power off, allow pressure to drop to 5 psig, & open blowdown valve.

TO ADJUST STEAM PRESSURE: (FREQUENCY-FACTORY PRESET/SELDOM REQ'D)

CAUTION: STAND CLEAR OF SAFETY VALVE & SCALDING STEAM.

1. Be sure there is water in unit and that electric power is on.
2. Turn thermostat dial to full-on position, pull dial straight off (do not pry).
3. Use a small screwdriver, turn screw 1/8th of a turn inside of thermostat stem:
 - a. Counter clockwise to increase pressure. b. Clockwise to reduce pressure
4. When light goes out, this indicates maximum pressure for setting.

NOTE: Turn thermostat to lower number for temporary adjustment.

TO TEST SAFETY VALVE: (FREQUENCY-MINIMUM ONCE PER MONTH)

CAUTION: STAND CLEAR OF SAFETY VALVE & SCALDING STEAM.

NOTE: Safety valve should be tested at min. operating pressure. If discharge pipe is required, it should not be smaller than valve outlet & must be rigidly supported.

1. Hold trip lever open for five seconds in order to flush off valve seat.
2. Permit valve to "slap" shut. (If leakage evident, repeat test or replace valve)

TO TEST ELEMENT: (CONDITION) Unit will not operate (amber light on/unit not hot) when filled with water & thermostat set at #10.

1. VOLTAGE TEST = read 120 volts cross element.

If no voltage reading, TEST THERMOSTAT. If voltage reads 120V, (GO TO STEP #2)

2. AMPERAGE TEST = read 12.5 amps on each element wire. If no amp reading, replace element(PART # MBJ-1500A). **NOTE:** Prefer #MBJ4-1500A(ELEMENT/THERMOSTAT COMBO)

TO TEST THERMOSTAT: (CONDITION) Unit will not operate (amber light not on/unit not hot) when filled with water & thermostat set at #10.

CAUTION: USE ONLY INSULATED ELECTRICAL WIRE FOR JUMPER.

DISCONNECT ELECTRICAL POWER WHEN ATTACHING JUMPER.

1. BYPASS THERMOSTAT = Jump terminals of thermostat with insulated wire.

If light comes on, replace thermostat (PART # 02361)

NOTE: Prefer #MBJ4-1500A(ELEMENT/THERMOSTAT COMBO)

If light not on, TEST LOW WATER CUTOFF.

TO TEST LOW WATER CUTOFF: (CONDITION) If boiler will not operate (amber light not on/unit not hot) when filled with water & thermostat set at #10 & Manual Reset is pushed.

CAUTION: USE ONLY INSULATED ELECTRICAL WIRE FOR JUMPER.

DISCONNECT ELECTRICAL POWER WHEN ATTACHING JUMPER.

1. BYPASS CIRCUIT BOARD = Jump circuit board terminals COM & NO. This suspends low water protection. If light comes on, GO TO STEP #2 If not on, CONTACT FACTORY.
2. BYPASS PROBE ONLY = Jump G-LLCO. This will bypass probe. If light comes on, GO TO STEP #2A If light not on, replace circuit board (PART #03465)
- 2A. CHECK PROBE FOR MINERAL DEPOSITS

CAUTION: ENSURE BOILER IS COLD/DRAINED & HAS NO PRESSURE/ELECTRIC.

1. Remove probe cover/probe from top of unit
2. Clean probe rod with emery cloth
3. Reinstall probe & check wires for loose connections.

TO REPLACE GAUGE GLASS: (FREQUENCY = MINIMUM ONCE PER YEAR)

CAUTION: ENSURE BOILER IS COLD/DRAINED & HAS NO PRESSURE/ELECTRIC.

BE CAREFUL NOT TO BREAK GLASS

1. Close gauge glass valves (top and bottom).
2. Open petcock on bottom fixture of drain glass.
3. Loosen nuts at top and bottom of glass.
4. Slide glass up, pull out on bottom of glass and remove.
5. Install glass by reversing above procedure.

NOTE: Always install new rubber washers.

TO REPLACE HEATING ELEMENT:

CAUTION: ENSURE BOILER IS COLD/DRAINED & HAS NO PRESSURE/ELECTRIC

1. Remove right side panel of cabinet.
2. Disconnect and label terminal wires.
3. Remove 4 nuts from element flange and pull out heating element.
4. Remove bulb from element (see thermostat instructions) DO NOT TO KINK BULB!
5. Clean flange surface before installing new element & gasket.

TO REPLACE THERMOSTAT:

CAUTION: ENSURE BOILER IS COLD/DRAINED & HAS NO PRESSURE/ELECTRIC

1. Remove right side panel of cabinet,
2. Remove heating element & untie bulb from element rod.
3. Remove brass nut beside element terminal.
4. Pull untied bulb through hole in element flange.
5. Reverse procedure, being careful not to kink new bulb.(DRWG. #W1422 ATTACHED)

NOTE: BULB MUST BE TIED TO ELEMENT USING SPACERS/WIRES SUPPLIED & PROPERLY POSITIONED

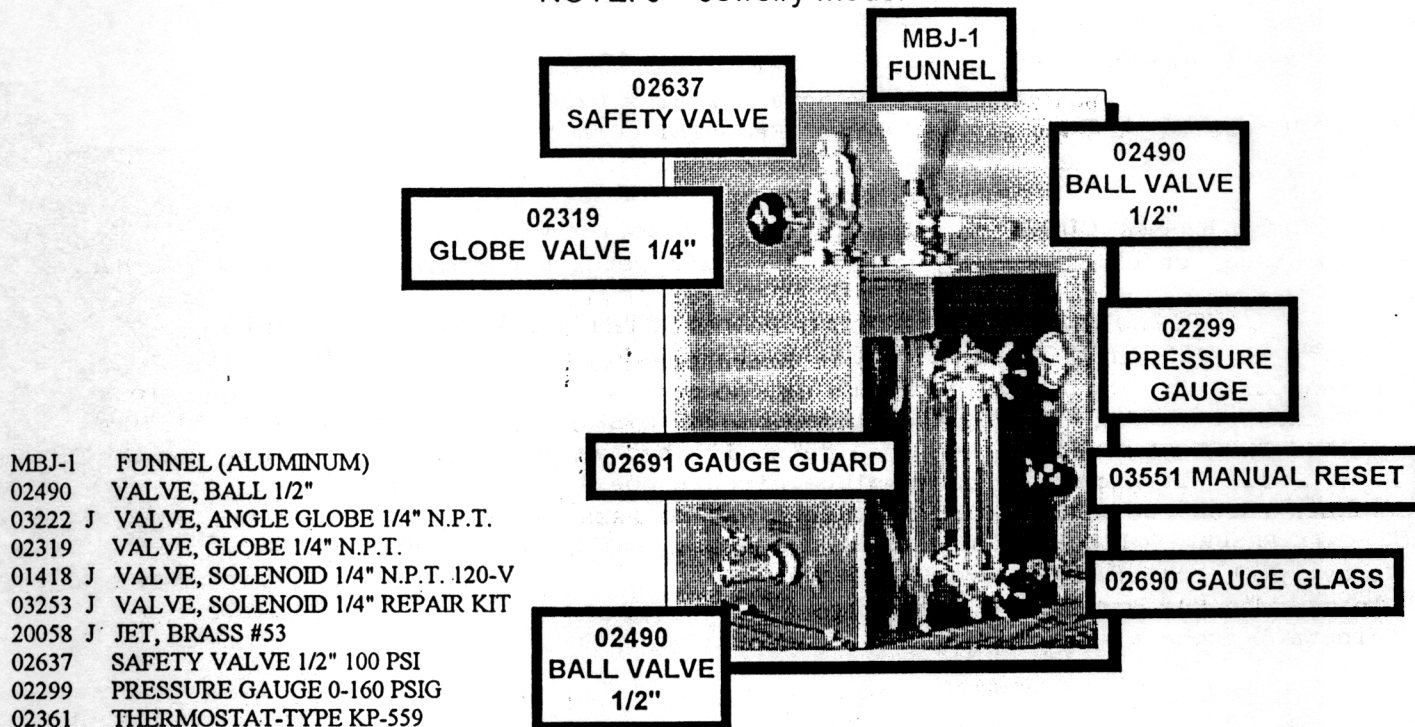
NOTE:

ASME DATA PLATE IS LOCATED ON RIGHT SIDE OF PRESSURE VESSEL
BEHIND LABEL STAMPED WITH NATIONAL BOARD NUMBER OF UNIT.

PARTS LIST FOR MODEL JR. STEAM GENERATOR

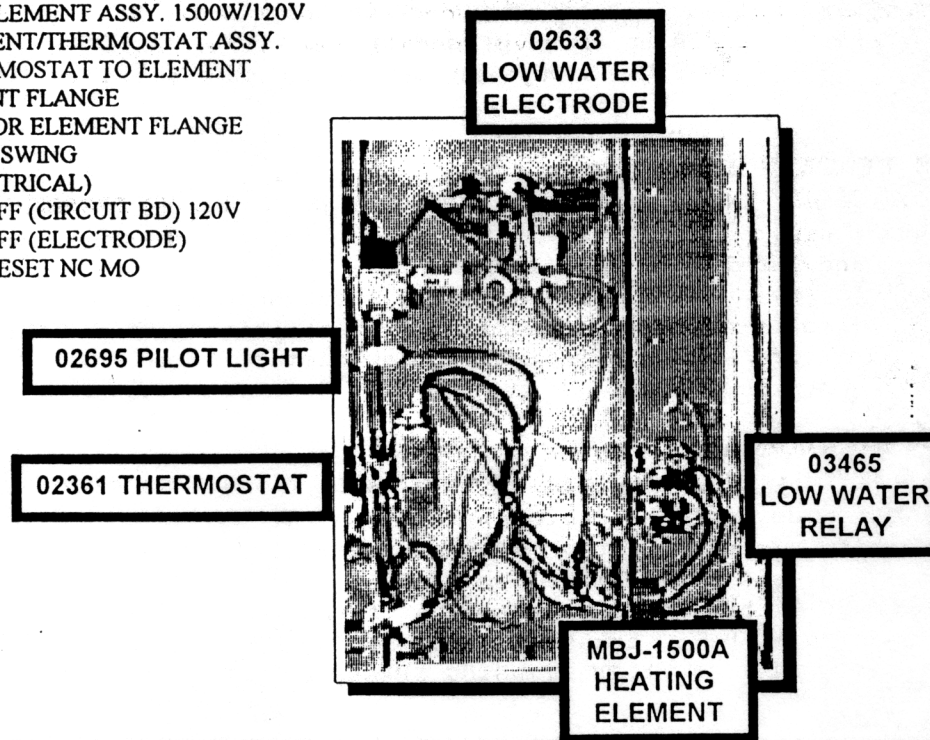
PHONE 703-662-3811 FAX 703-665-8101

NOTE: J = Jewelry Model



EXTERIOR PARTS

- 02695 PILOT LIGHT-AMBER-120 VOLT
- 03266 CORD 3-WIRE W/SLEEVES, PLUG CAP 120V
- 02396 GAUGE GLASS FIXTURE SET
- 02006 GAUGE GLASS WASHER (RUBBER)
- 02448 GAUGE GLASS WASHER (BRASS)
- 02690 GAUGE GLASS 5/8" X 7" (PYREX)
- 02691 GAUGE GUARD FOR 7" GLASS
- MBJ-1500A HEATING ELEMENT, 1500W/120-V
- MBJ4-1500A THERMOSTAT/ELEMENT ASSY. 1500W/120V
- 02281 GASKET FOR ELEMENT/THERMOSTAT ASSY.
- MBJ-16 KIT ATTACH THERMOSTAT TO ELEMENT
- 03084 STUDS FOR ELEMENT FLANGE
- 01314 NUTS FOR STUDS FOR ELEMENT FLANGE
- 02462 VALVE, CHECK 1/2" SWING
- 347 J FOOT SWITCH (ELECTRICAL)
- 03465 LOW WATER CUT OFF (CIRCUIT BD) 120V
- 02633 LOW WATER CUT OFF (ELECTRODE)
- 03551 SWITCH MANUAL RESET NC MO



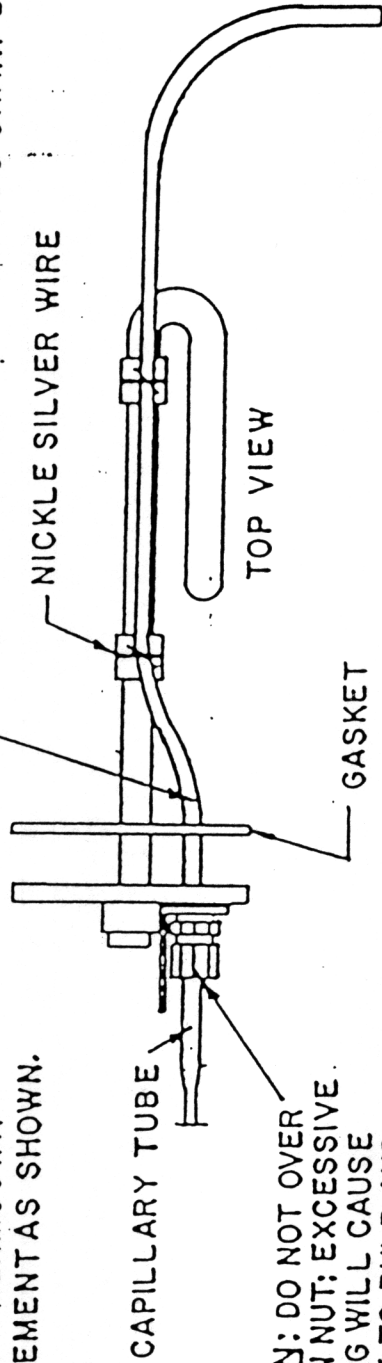
INTERIOR PARTS

(REMOVE RIGHT PANEL FOR ACCESS)

IMPORTANT HEATING ELEMENT
BE INSTALLED WITH THERMOSTAT
BULB TO TOP OF ELEMENT AS SHOWN.

REV.	DATE	BY	CHKD.	DESCRIPTION
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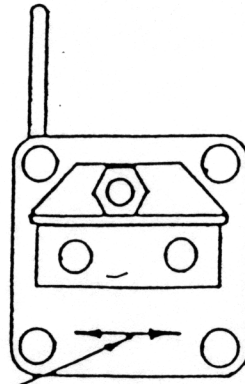
BULB (TO BE INSTALLED WITH NO SHARP BENDS)
NICKLE SILVER WIRE



TOP VIEW

CAUTION: DO NOT OVER
TIGHTEN NUT; EXCESSIVE
TIGHTENING WILL CAUSE
DAMAGE TO BULB AND
DIASTAT.

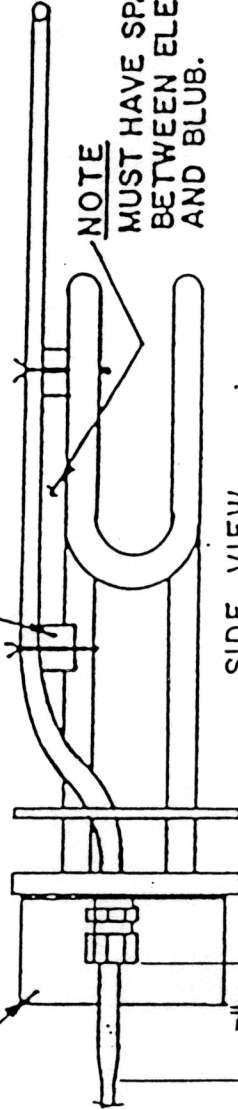
MOUNT FLANGE IN
THIS POSITION



END VIEW

INSULATING PAPER

COPPER SPACER



SIDE VIEW

NOTE
MUST HAVE SPACE
BETWEEN ELEMENT
AND BULB.

$\frac{3}{4}$ "
APPROX.

TOLERANCES

FRACTIONS

DECIMAL

ANGLE

MATERIAL

Reimers ELECTRA STEAM, INC.

CLEARBROOK, VA. 22824 - 703/662-3811

JR STEAM GENERATOR
HEATING ELEMENT WITH ATTACHED
THERMOSTAT BULB

DRN. <i>APR 11 1979</i>	SCALE	DWG. NO.	REV.
CHKD. <i>PPB/abk</i>	—	W1422	
DATE <i>10/11/79</i>			

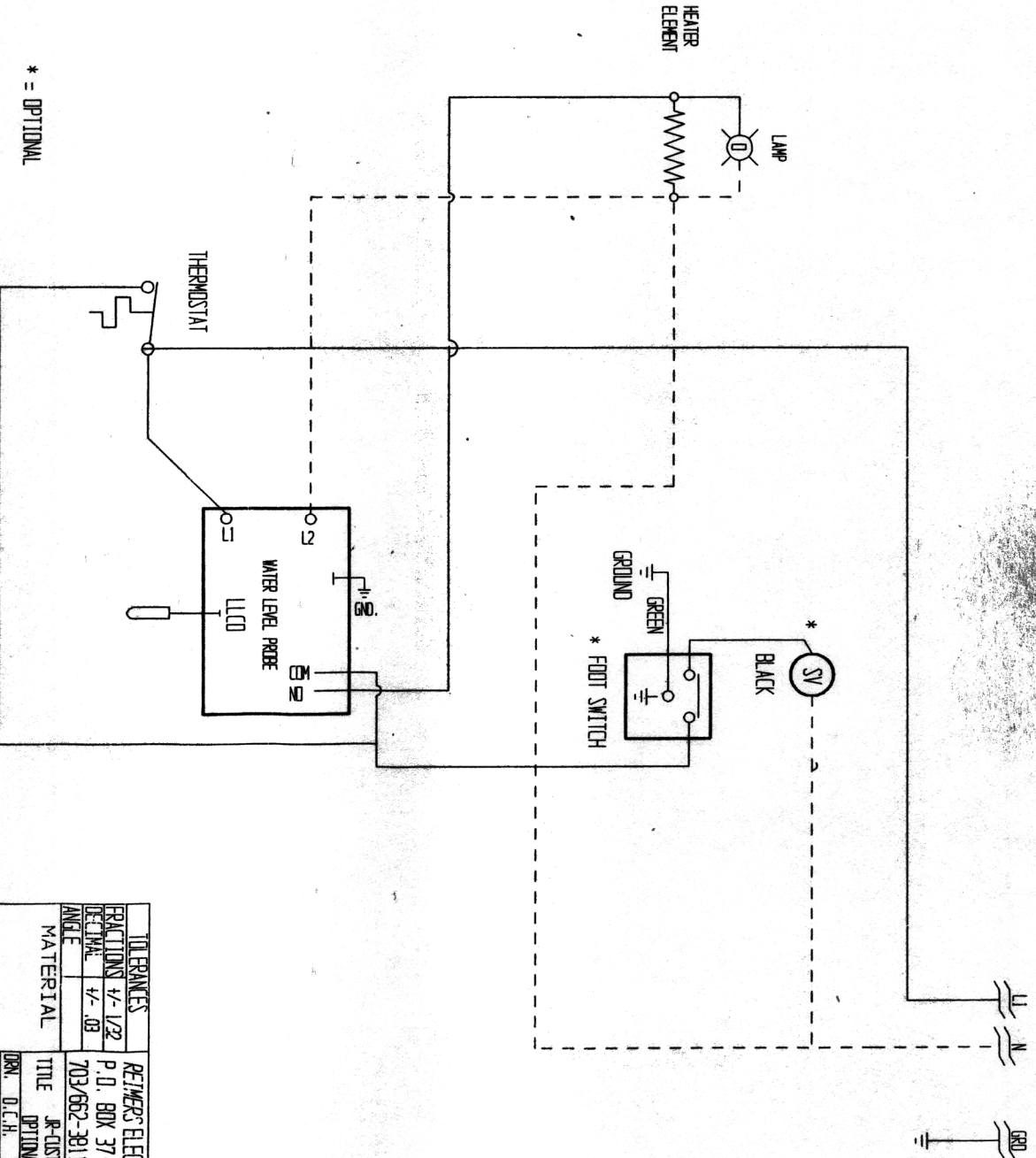
IMPORTANT

THIS DRAWING IS TO SUCCEED ALL DRAWINGS
AND LITERATURE PRIOR TO OCTOBER 1, 1979.

REV	DATE	BY	CHKD	DESCRIPTION
A	07/25/90	DB	ASB	ADDED P.T. SWITCH & LAMP
B	07/27/90	DB		REPAIRED NEUTRAL LINE
C	07/20/91	DB		DELETED SWITCH/LIGHT

LEGEND
 LI _____
 N - - - - -

* = OPTIONAL



TOLERANCES		REIMERS ELECTRA STEAM, INC.	
FRACTIONS	+/- 1/32	P.O. BOX 37 CLEAR BROOK, VA. 22624	
DECIMAL	+/- .03	703/662-3811 (FAX 703/665-8101)	
ANGLE			
MATERIAL		TITLE JR-CUSTOM 120V V/AUTO RESET &	
DRN.	D.C.H.	SCALE	DN6 NO.
CHKD.	R24		
DATE	07/01/90		W1589
REV			
C			