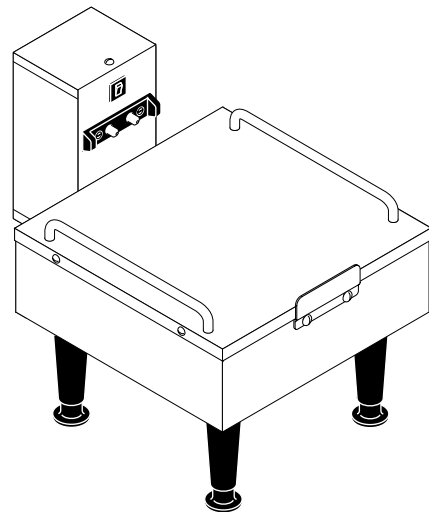
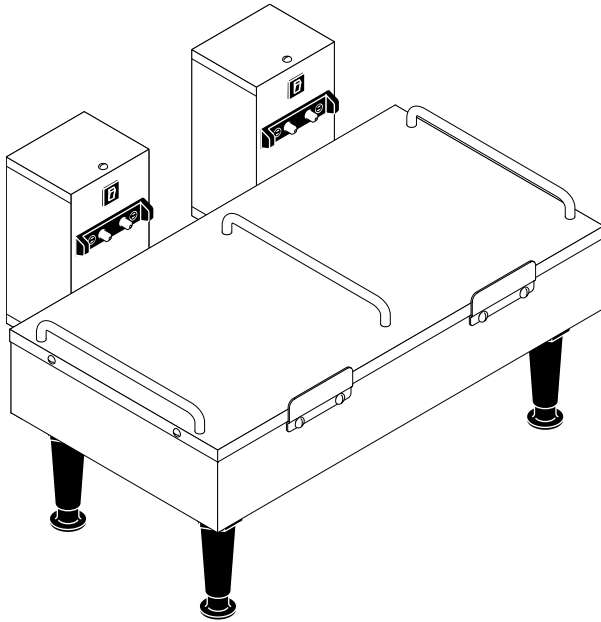


# **BUNN**®

## ***1SH & 2SH STAND***



## **OPERATING & SERVICE MANUAL**

### **BUNN-O-MATIC CORPORATION**

POST OFFICE BOX 3227

SPRINGFIELD, ILLINOIS 62708-3227

PHONE: (217) 529-6601 FAX: (217) 529-6644

To ensure you have the latest revision of the Operating Manual, or to view the Illustrated Parts Catalog, Programming Manual, or Service Manual, please visit the Bunn-O-Matic website, at [www.bunn.com](http://www.bunn.com). This is absolutely FREE, and the quickest way to obtain the latest catalog and manual updates. For Technical Service, contact Bunn-O-Matic Corporation at 1-800-286-6070.



## **BUNN-O-MATIC COMMERCIAL PRODUCT WARRANTY**

Bunn-O-Matic Corp. ("BUNN") warrants equipment manufactured by it as follows:

- 1) Airpots, thermal carafes, decanters, GPR servers, iced tea/coffee dispensers, MCP/MCA pod brewers thermal servers and Thermofresh servers (mechanical and digital)- 1 year parts and 1 year labor.
- 2) All other equipment - 2 years parts and 1 year labor plus added warranties as specified below:
  - a) Electronic circuit and/or control boards - parts and labor for 3 years.
  - b) Compressors on refrigeration equipment - 5 years parts and 1 year labor.
  - c) Grinding burrs on coffee grinding equipment to grind coffee to meet original factory screen sieve analysis - parts and labor for 4 years or 40,000 pounds of coffee, whichever comes first.

These warranty periods run from the date of installation BUNN warrants that the equipment manufactured by it will be commercially free of defects in material and workmanship existing at the time of manufacture and appearing within the applicable warranty period. This warranty does not apply to any equipment, component or part that was not manufactured by BUNN or that, in BUNN's judgment, has been affected by misuse, neglect, alteration, improper installation or operation, improper maintenance or repair, non periodic cleaning and descaling, equipment failures related to poor water quality, damage or casualty. In addition, the warranty does not apply to replacement of items subject to normal use including but not limited to user replaceable parts such as seals and gaskets. This warranty is conditioned on the Buyer 1) giving BUNN prompt notice of any claim to be made under this warranty by telephone at (217) 529-6601 or by writing to Post Office Box 3227, Springfield, Illinois 62708-3227; 2) if requested by BUNN, shipping the defective equipment prepaid to an authorized BUNN service location; and 3) receiving prior authorization from BUNN that the defective equipment is under warranty.

**THE FOREGOING WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTY, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF EITHER MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** The agents, dealers or employees of BUNN are not authorized to make modifications to this warranty or to make additional warranties that are binding on BUNN. Accordingly, statements by such individuals, whether oral or written, do not constitute warranties and should not be relied upon.

If BUNN determines in its sole discretion that the equipment does not conform to the warranty, BUNN, at its exclusive option while the equipment is under warranty, shall either 1) provide at no charge replacement parts and/or labor (during the applicable parts and labor warranty periods specified above) to repair the defective components, provided that this repair is done by a BUNN Authorized Service Representative; or 2) shall replace the equipment or refund the purchase price for the equipment.

**THE BUYER'S REMEDY AGAINST BUNN FOR THE BREACH OF ANY OBLIGATION ARISING OUT OF THE SALE OF THIS EQUIPMENT, WHETHER DERIVED FROM WARRANTY OR OTHERWISE, SHALL BE LIMITED, AT BUNN'S SOLE OPTION AS SPECIFIED HEREIN, TO REPAIR, REPLACEMENT OR REFUND.**

In no event shall BUNN be liable for any other damage or loss, including, but not limited to, lost profits, lost sales, loss of use of equipment, claims of Buyer's customers, cost of capital, cost of down time, cost of substitute equipment, facilities or services, or any other special, incidental or consequential damages.

392, AutoPOD, AXIOM, BrewLOGIC, BrewMETER, Brew Better Not Bitter, BrewWISE, BrewWIZARD, BUNN Espresso, BUNN Family Gourmet, BUNN Gourmet, BUNN Pour-O-Matic, BUNN, BUNN with the stylized red line, BUNNlink, Bunn-OMatic, Bunn-O-Matic, BUNNserve, BUNNSERVE with the stylized wrench design, Cool Froth, DBC, Dr. Brew stylized Dr. design, Dual, Easy Pour, EasyClear, EasyGard, FlavorGard, Gourmet Ice, Gourmet Juice, High Intensity, iMIX, Infusion Series, Intellisteam, My Café, Phase Brew, PowerLogic, Quality Beverage Equipment Worldwide, Respect Earth, Respect Earth with the stylized leaf and coffee cherry design, Safety-Fresh, savemycoffee.com, Scale-Pro, Silver Series, Single, Smart Funnel, Smart Hopper, SmartWAVE, Soft Heat, SplashGard, The Mark of Quality in Beverage Equipment Worldwide, ThermoFresh, Titan, trifecta, Velocity Brew, A Partner You Can Count On, Air Brew, Air Infusion, Beverage Bar Creator, Beverage Profit Calculator, Brew better, not bitter., BUNNSource, Coffee At Its Best, Cyclonic Heating System, Daypart, Digital Brewer Control, Nothing Brews Like a BUNN, Pouring Profits, Signature Series, Tea At Its Best, The Horizontal Red Line, Ultra are either trademarks or registered trademarks of Bunn-O-Matic Corporation.

## USER NOTICES

Carefully read and follow all notices on the equipment and in this manual. They were written for your protection. All notices are to be kept in good condition. Replace any unreadable or damaged labels.

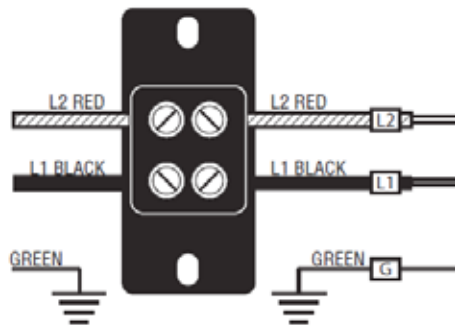
<b>⚠ WARNING</b>
DO NOT OVERLOAD CIRCUIT. ALWAYS ELECTRICALLY GROUND THE CHASSIS OR ADAPTOR PLUG. DO NOT DEFORM PLUG OR CORD. FOLLOW NATIONAL AND LOCAL ELECTRICAL CODES. KEEP COMBUSTIBLES AWAY.
FAILURE TO COMPLY RISKS EQUIPMENT DAMAGE, FIRE OR SHOCK HAZARD.
READ THE ENTIRE OPERATING MANUAL BEFORE USING THIS PRODUCT <small>00986.0000E 5/98 ©1994 Bunn-O-Matic Corporation</small>

00986.0000

## ELECTRICAL REQUIREMENTS

The stands have an attached cordset and requires 2-wire grounded service rated 100V or 120 volts ac, single phase, 90 watts total for the 1SH, 180 watts total for the 2SH, or 2-wire grounded service rated 230 volts ac, single phase, 90 watts total for the 1SH, 180 watts total for the 2SH.

**WARNING** - The unit must be disconnected from the power source until specified in Initial Set-Up.  
**Refer to Data Plate on the Housing, and local/national electrical codes to determine circuit requirements.**



230 volt ac Models

**Note:** This electrical service consists of 2 current carrying conductors (L1 and L2) and a separate conductor for earth ground.

## CE REQUIREMENTS

- This appliance must be installed in locations where it can be overseen by trained personnel.
- For proper operation, this appliance must be installed where the temperature is between 5°C to 35°C.
- Appliance shall not be tilted more than 10° for safe operation.
- An electrician must provide electrical service as specified in conformance with all local and national codes.
- This appliance must not be cleaned by water jet.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given instructions concerning use of this appliance by a person responsible for its safety.
- Children should be supervised to ensure they do not play with the appliance.
- If the power cord is ever damaged, it must be replaced by the manufacturer or authorized service personnel with a special cord available from the manufacturer or its authorized service personnel in order to avoid a hazard.
- Machine must not be immersed for cleaning.

## CLEANING

The use of a damp cloth rinsed in any mild, nonabrasive, liquid detergent is recommended for cleaning all surfaces on Bunn-O-Matic equipment.

## TROUBLESHOOTING

A troubleshooting guide is provided to suggest probable causes and remedies for the most likely problems encountered. If the problem remains after exhausting the troubleshooting steps, contact the Bunn-O-Matic Technical Service Department.

- Inspection, testing, and repair of electrical equipment should be performed only by qualified service personnel.
- All electronic components have 120 - 240 volt ac and low voltage dc potential on their terminals. Shorting of terminals or the application of external voltages may result in board failure.
- Intermittent operation of electronic circuit boards is unlikely. Board failure will normally be permanent. If an intermittent condition is encountered, the cause will likely be a contact or a loose connection at a terminal or crimp.

### WARNING

- Exercise extreme caution when servicing electrical equipment.
- Disconnect power source when servicing, except when electrical tests are specified.
- Follow recommended service procedures.
- Replace all protective shields or safety notices.

<b>Problem</b>	<b>Probable Cause</b>	<b>Remedy</b>
Server will not heat	1. No power or incorrect voltage.	Be sure the stand is connected to the power source.
	2. Circuit breaker	A) Check and reset if necessary
		B) Refer to Service - Circuit breaker for test procedures. See page 4
	3. Receptacle contact	Clean or replace. See page 5
	4. Transformer	Refer to Service - Transformer for test procedures. See page 7
5. Rectifier	Refer to Service - Rectifier for test procedures. See page 6	

## SERVICE

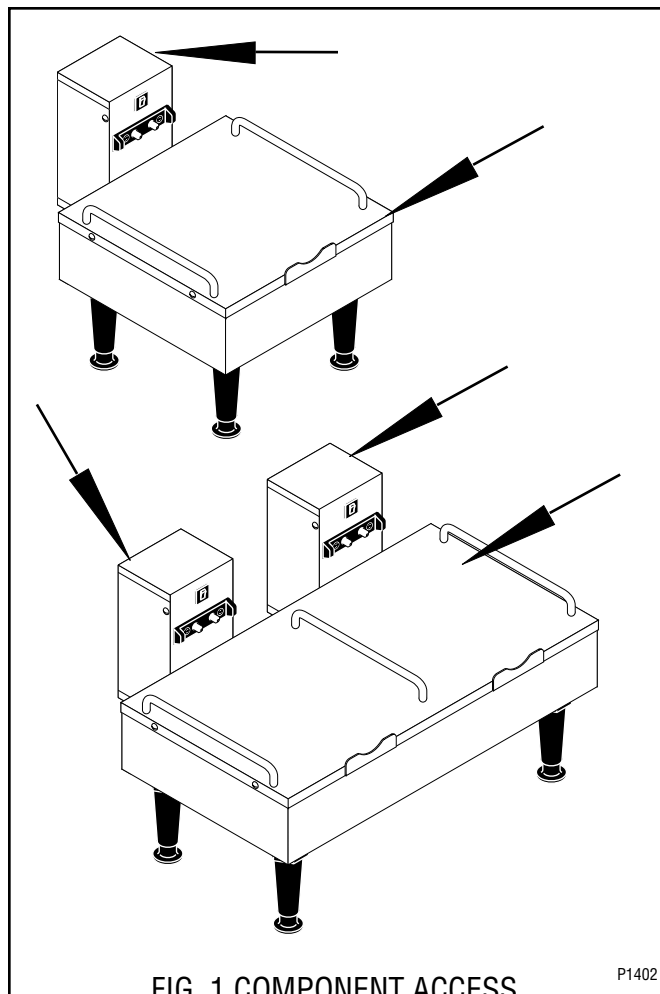
This section provides procedures for testing and replacing various major components used in these stands should service become necessary. Refer to Troubleshooting for assistance in determining the cause of any problem.

**WARNING** - Inspection, testing, and repair of electrical equipment should be performed only by qualified service personnel. The stands should be unplugged when servicing, except when electrical tests are required and the test procedure specifically states to connect the stand to the power source.

### COMPONENT ACCESS

**WARNING** - Disconnect the stand from the power source before the removal of any panel or the replacement of any component.

All components are accessible by the removal of the receptacle cover and the stand cover.



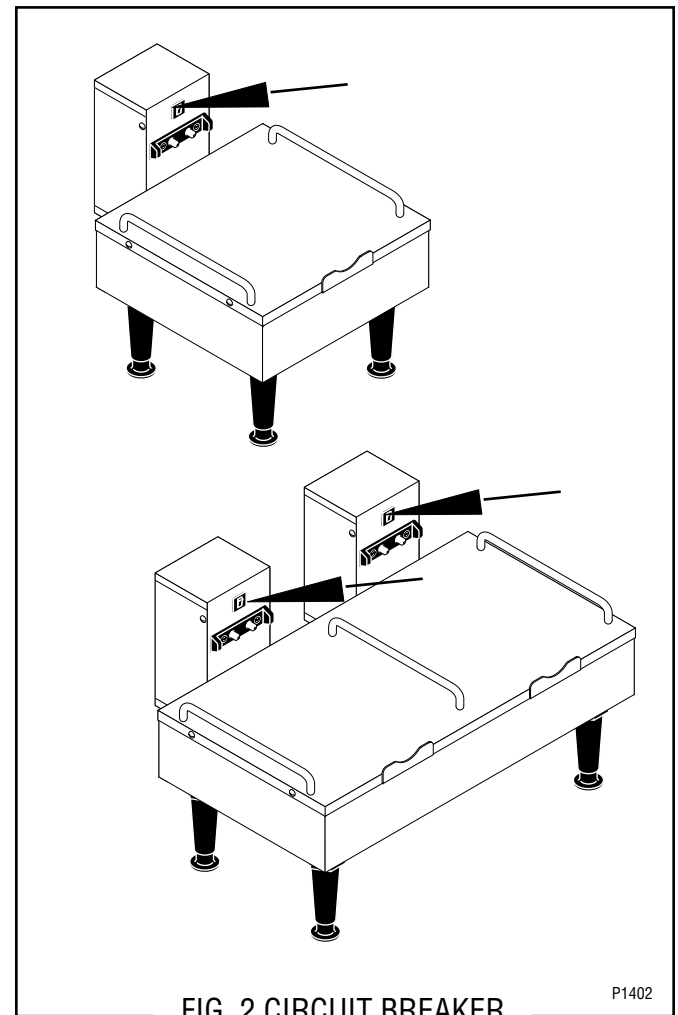
The receptacle cover is attached with four #6-32 truss head locking screws.

The stand cover is attached with four #6-32 truss head locking screws.

### Contents

Circuit Breaker .....	5
Receptacle (Spring Contacts).....	6
Rectifier .....	7
Transformer .....	8
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### CIRCUIT BREAKER



### Location

The circuit breaker(s) is located on the upper part of the receptacle bracket just above the spring contact receptacle(s) assembly.

## SERVICE (cont.)

### Test Procedures

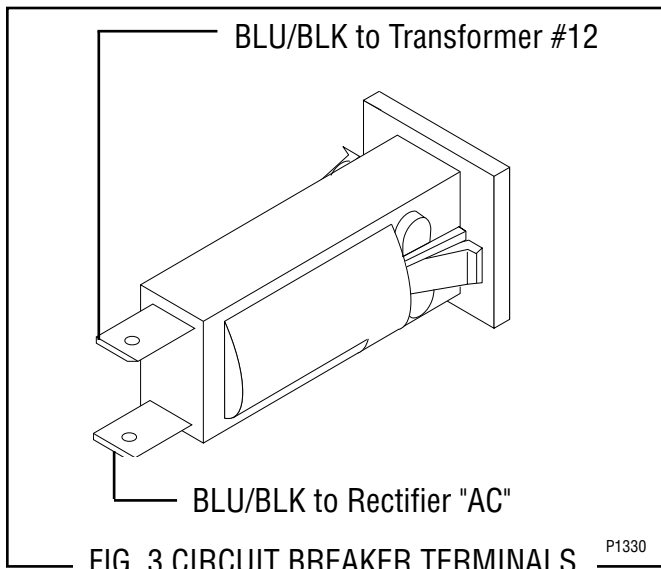
1. Disconnect the stand from the power source.
2. Remove the wires from the circuit breaker.
3. Check for continuity between the circuit breaker terminals. Continuity must be present between the terminals.

If continuity is present as described the circuit breaker is functioning properly.

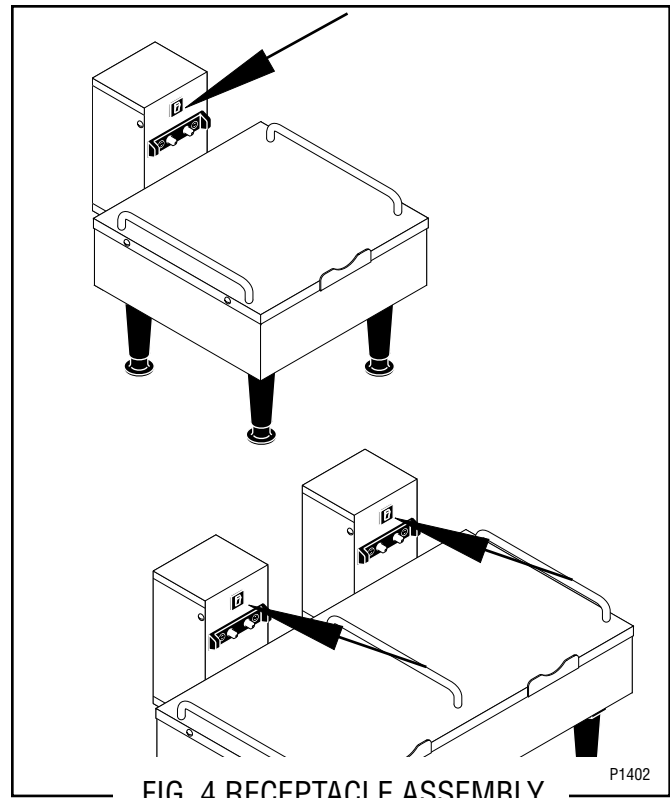
If continuity is not present as described, press reset button and repeat step #3, if continuity is not present as described, replace the circuit breaker.

### Removal and Replacement:

1. Remove the wires from the circuit breaker.
2. Compress the clips on the back side of the receptacle bracket and gently push the circuit breaker through the opening in the receptacle bracket.
3. Push the new circuit breaker into the opening in the receptacle bracket until the clips snap into position.
4. Reconnect the wires to the circuit breaker.
5. Refer to Fig. 3 when reconnecting the wires.



## RECEPTACLE ASSEMBLY (SPRING CONTACT)



### Location:

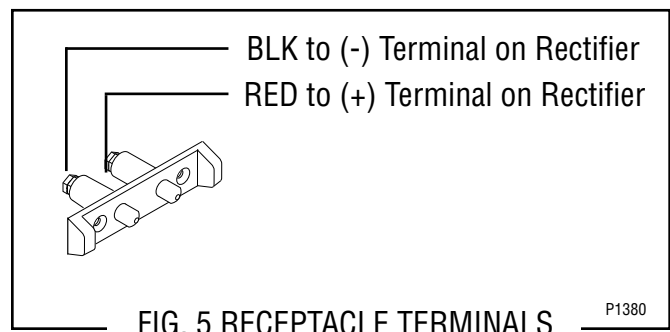
The receptacle assembly is located on the lower front of the receptacle bracket just below the circuit breaker.

### Test Procedures:

1. Clean or replace spring contacts.

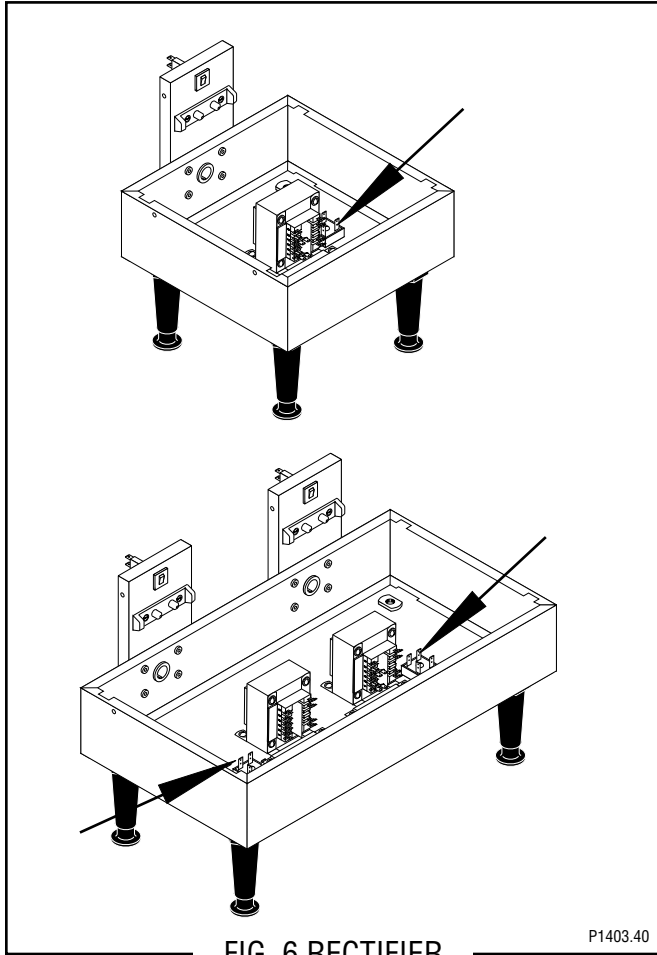
### Removal and Replacement:

1. Disconnect the stand from the power source.
2. Disconnect the wires from the receptacle assembly.
3. Remove the two #6-32 flat head screws securing the receptacle to the receptacle bracket.
4. Remove and discard receptacle.
5. Install new receptacle in the receptacle bracket and secure with two #6-32 flat head screws..
6. Refer to Fig. 5 and reconnect the wires.



## SERVICE (cont.)

### RECTIFIER



#### Location:

The rectifier(s) is located inside on the right side of the stand housing just to the right of the transformer for 1SH Stand and on the right and left side of the stand housing for 2SH Stand.

#### Test Procedures:

1. Disconnect the stand from the power source.
2. Remove the red wire and the black wire from the rectifier.
3. Check the voltage across the (+) and (-) terminals on the rectifier with a voltmeter. Connect the stand to the power source. The indication must be 24 volts dc.
4. Disconnect the stand from the power source.

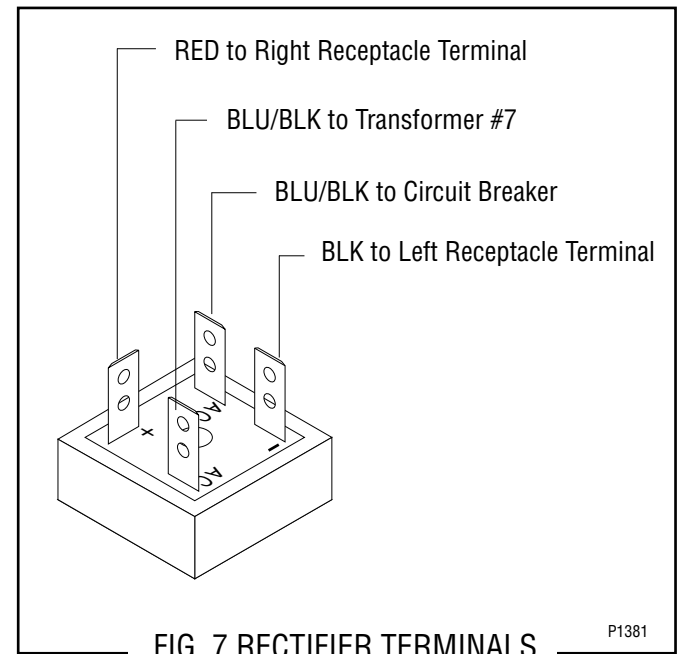
If voltage is present as described, the rectifier is operating properly.

If voltage is not present as described, refer to the stand wiring diagrams and check the stand wiring harness.

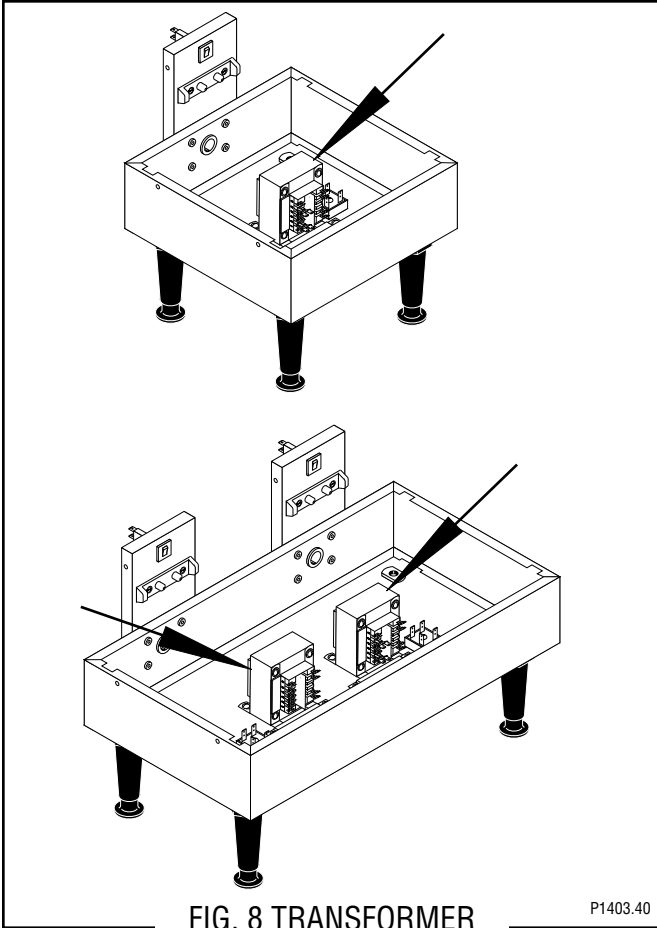
## RECTIFIERS (cont.)

#### Removal and Replacement:

1. Disconnect the wires from the rectifier.
2. Remove the #6-32 truss head screw securing the rectifier to the stand housing.
3. Remove the rectifier and discard.
4. Install new rectifier in the stand housing and secure with a #6-32 truss head screw.
5. Refer to Fig 7 and reconnect the wires.



## SERVICE (cont.) TRANSFORMER



5. Disconnect the blue/black wires from terminals #7 and #12 on the transformer.
6. Check the voltage across terminal #7 and #12 of the transformer with a voltmeter. Connect the stand to the power source. The indication must be 24 volts ac.

If voltage is present as described the transformer is operating properly.

If voltage is not present as described, replace the transformer.

### Removal and Replacement:

1. Disconnect all the wires from the transformer.
2. Remove the four #6-32 screws securing the transformer and mounting strap to the stand housing.
3. Remove transformer and discard.
4. Install new transformer in the stand housing securing with four #6-32 screws and mounting strap.
5. Refer to Fig. 9 when reconnecting the wires.

### Location:

The transformer(s) is located in the stand housing on the base plate.

### Test Procedures:

1. Disconnect the stand from the power source.
2. Disconnect the black wire from terminal #5 and the white or red wire from terminal # 6.
3. Check the voltage across the black and white or red wire with a voltmeter. Connect the stand to the power supply. The indication must be:
  - a.) 100 volts ac for two wire 100 volt models.
  - b.) 120 volts ac for two wire 120 volt models.
  - c.) 200 to 240 volts ac for two wire 200 or 240 volt models.
4. Disconnect the stand from the power supply.

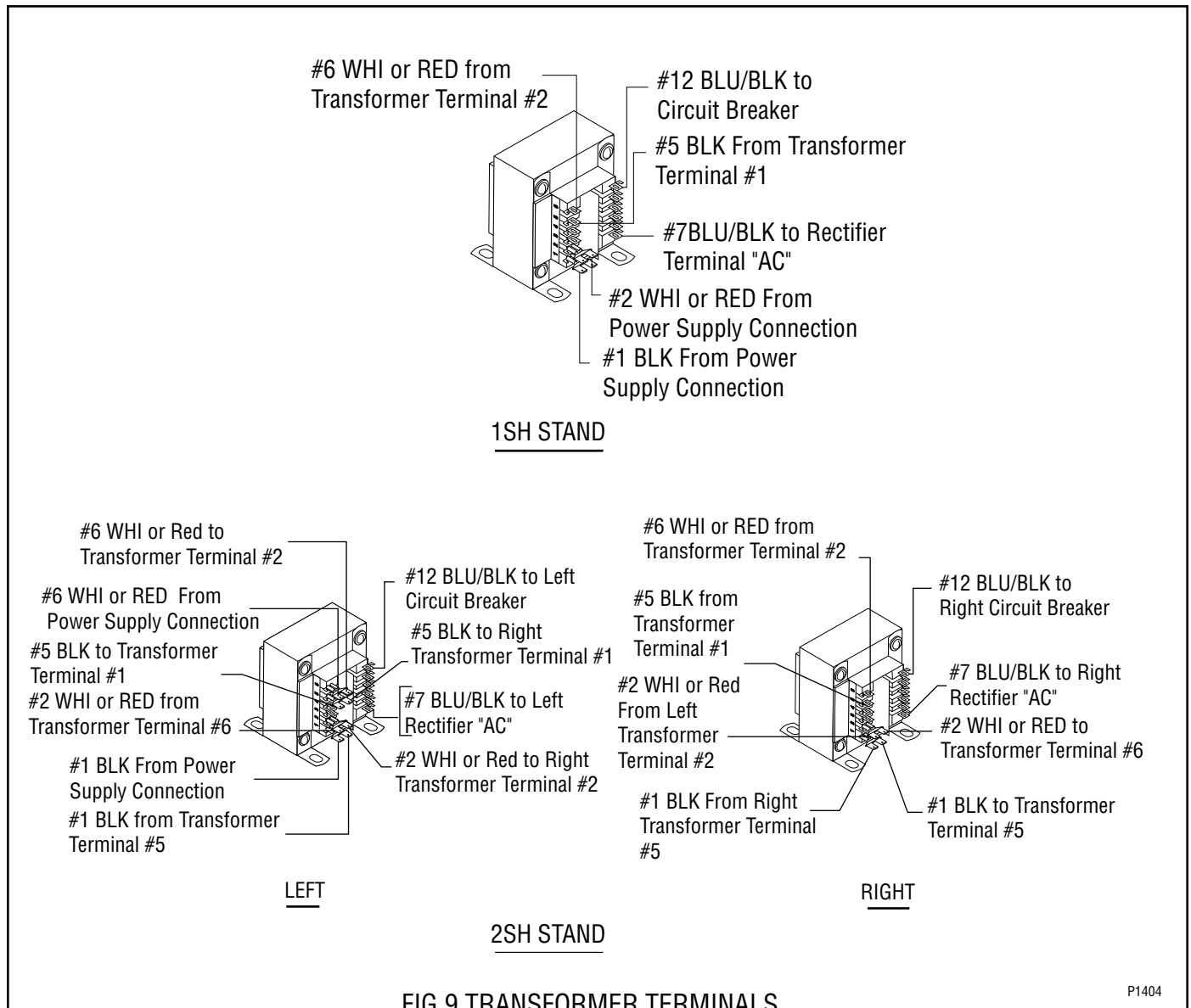
If voltage is present as described reconnect the wires and proceed to #5.

If voltage is not present as described, refer to the wiring diagrams and check the stand wiring harness.



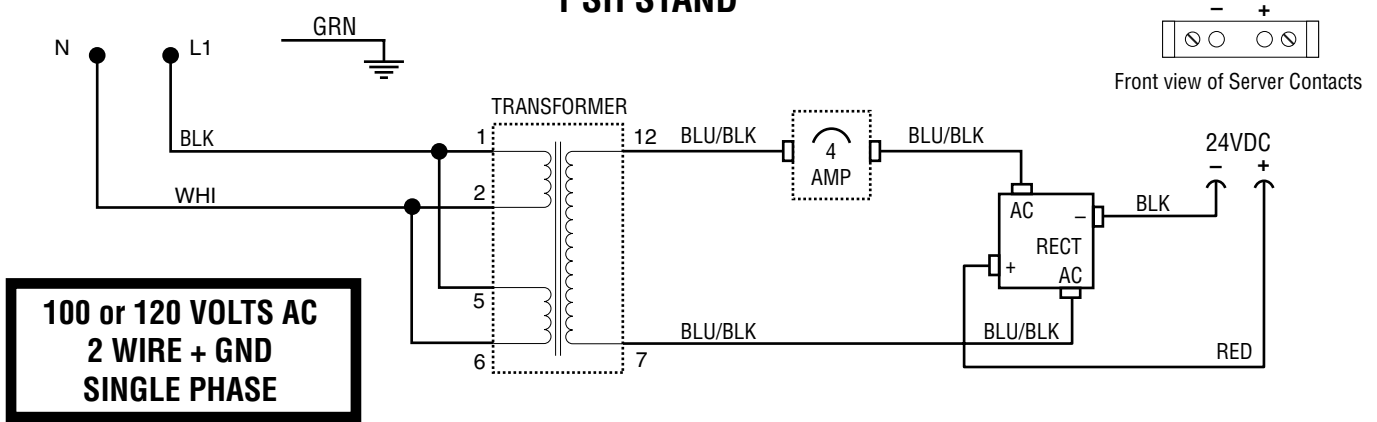
**SERVICE (cont.)**

**TRANSFORMER (cont.)**

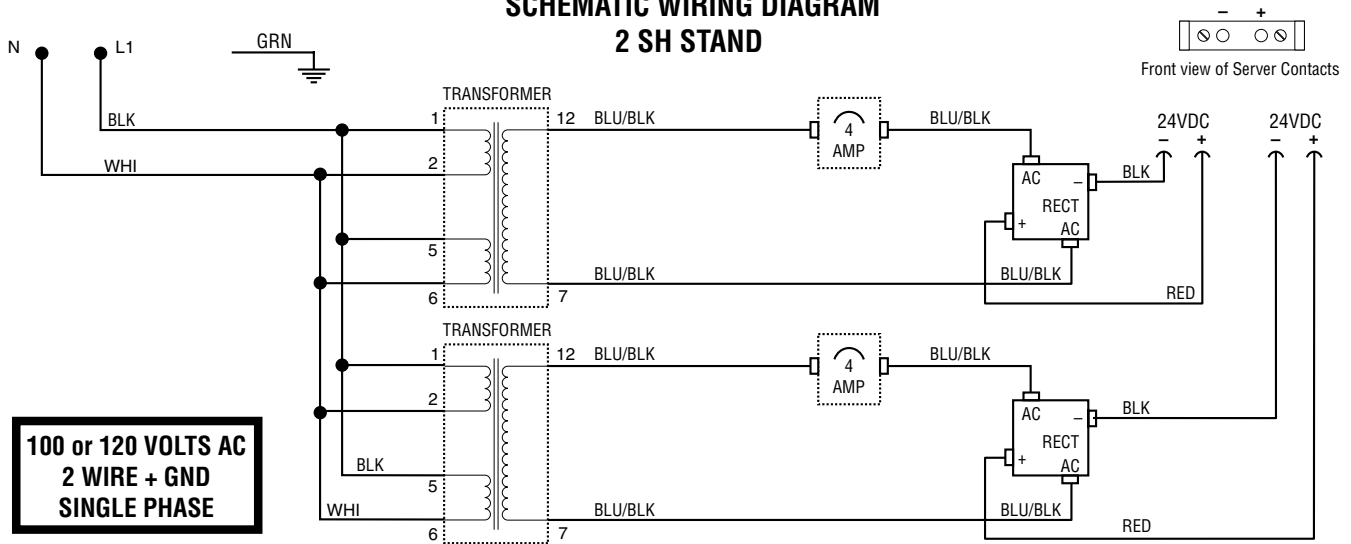


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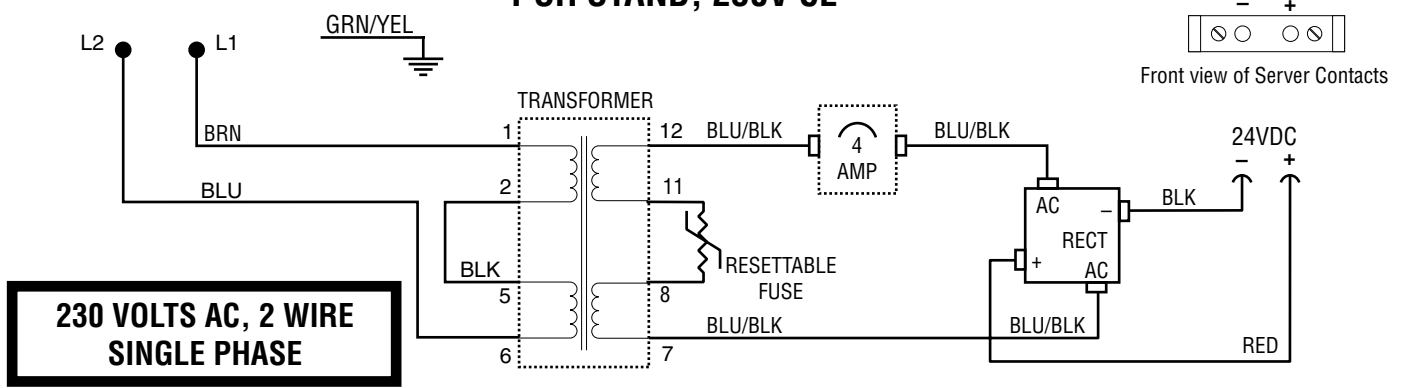
## SCHEMATIC WIRING DIAGRAM 1 SH STAND



## SCHEMATIC WIRING DIAGRAM 2 SH STAND



## SCHEMATIC WIRING DIAGRAM 1 SH STAND, 230V CE



## SCHEMATIC WIRING DIAGRAM 2 SH STAND, 230V CE

