



SERVICE & PARTS MANUAL

Bar-B-Q Boss® Pressure Smoker

Models BC71 and BC73

Be sure ALL installers read, understand, and have access to this manual at all times.



Smokaroma® is a registered trademark.

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FOR YOUR SAFETY

Do not use or store gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance. Improper installation, adjustments, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

For the sake of safety and clarity, the following words used in this manual are defined as follows:



Indicates an imminently hazardous situation which, if not avoided, will result in serious injury or death.



Indicates a hazardous situation which, if not avoided, could result in serious injury or death.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

All adjustments and repairs shall be made by an authorized Broaster Company representative.



Failure to read and understand this manual completely could result in serious injury or death. Be sure ALL operators read, understand and have access to this manual at all times.



Rags or paper containing cooking oil can catch fire if exposed to heat. Laundering will not remove the oil. Dispose of all oil-soiled papers and rags in a trash container that is in a ventilated area away from all cooking equipment or other heat sources such as direct sunlight.

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1 - WARNING LABELS

CAUTION - HOT



001327

2 - ELECTRIC POWER SUPPLY

ELECTRICAL SAFETY



Many parts of this section pertain to checking and repairing electrical components. High Voltage will be encountered in several instances. Only persons trained and equipped for checking high voltage shall undertake such repairs.

If no component operates, check main power supply. Be sure main circuit breaker is ON and main fuses are good.

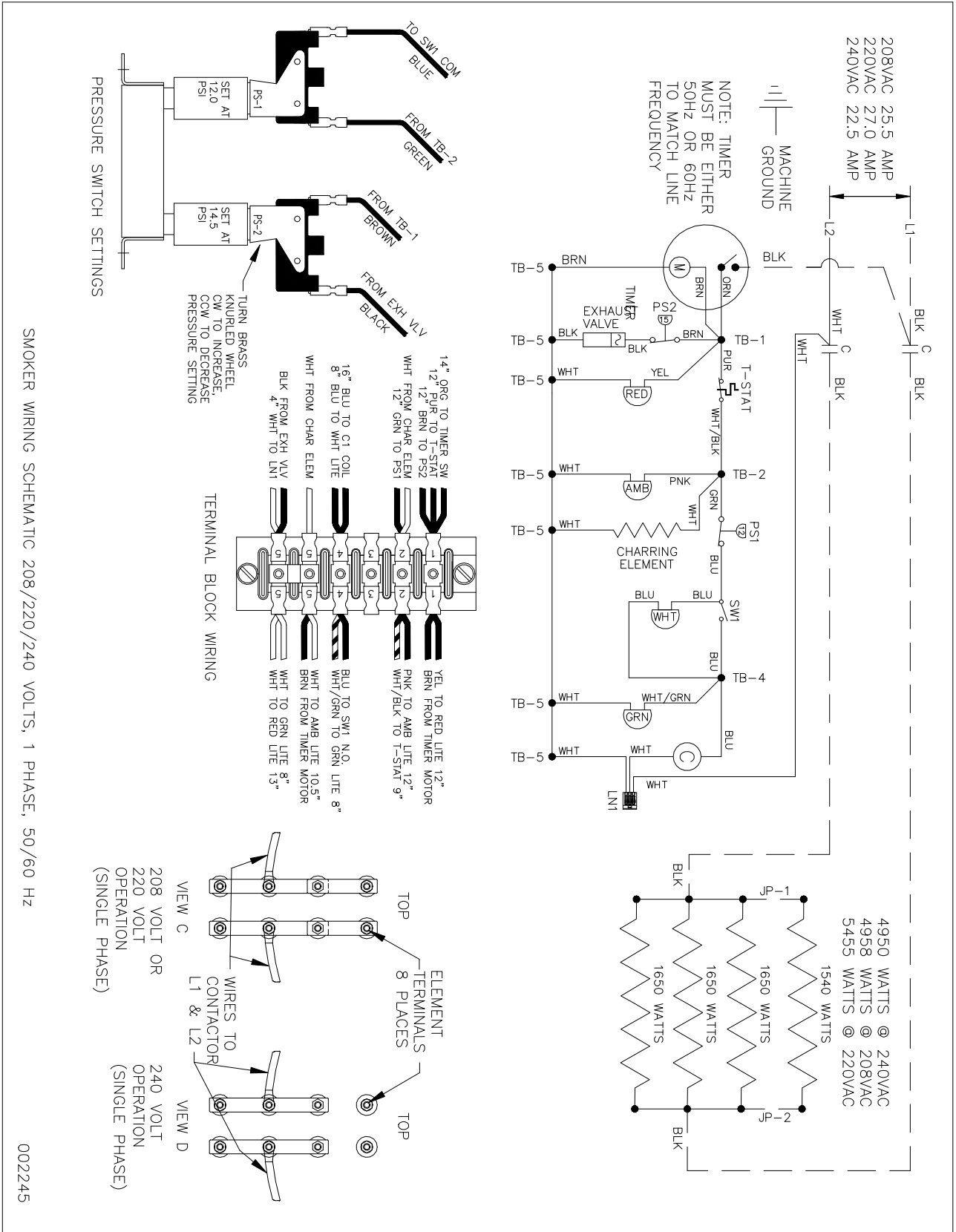
Correct voltage is specified on the specification plate located on the rear panel. It will be either 208V or 240V for domestic units and 220V for export units.

If the unit will not turn on, perform the following:

1. Disconnect main power supply.
2. Be sure all connections are tight. If power supply is proper, see TROUBLESHOOTING section.

ACCESS FOR SERVICE

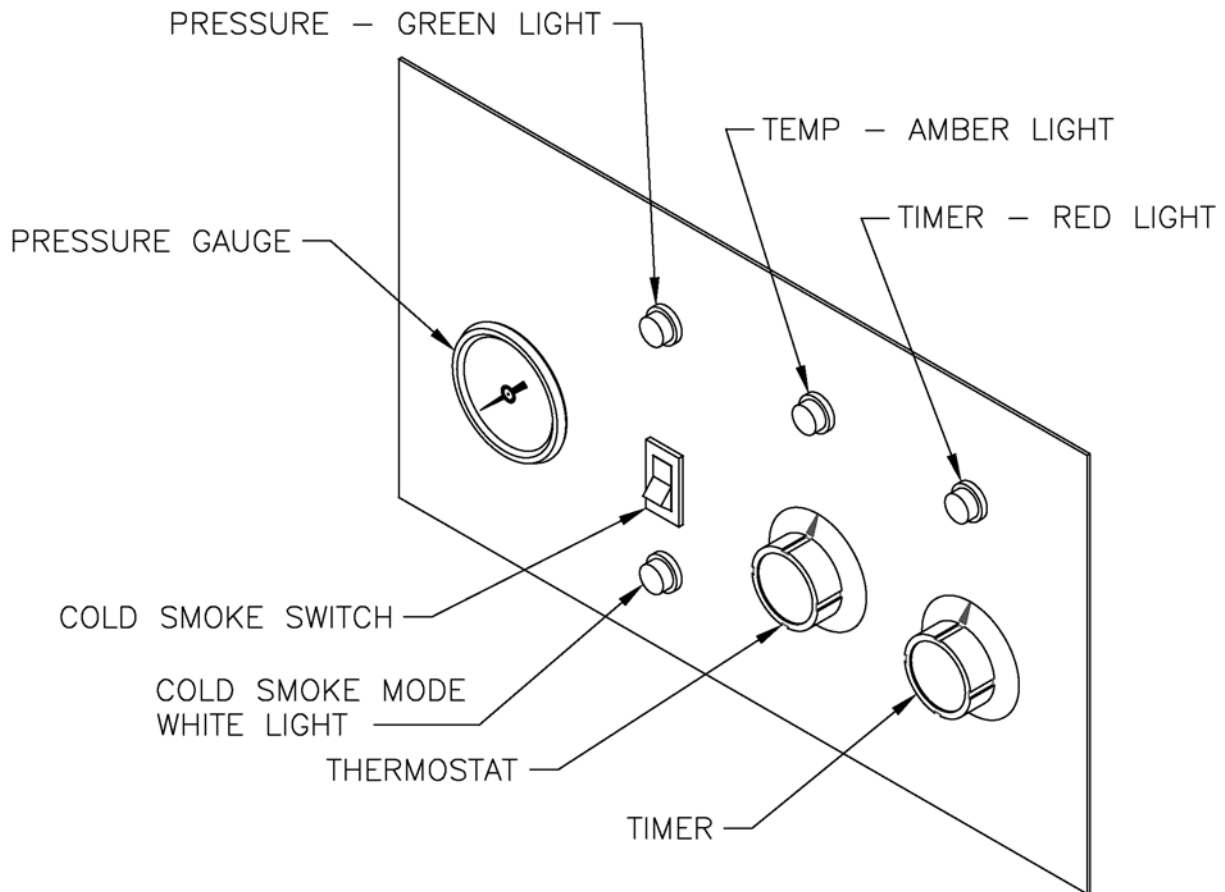
For access to the electrical compartment, remove rear cover.



1



3 - CONTROL PANEL



PRESSURE GAUGE: Indicates the pressure present in the Cooking Well.

PRESSURE - GREEN LIGHT: Illuminates when the THERMOSTAT and TIMER are set and the COLD SMOKE SWITCH is off. And also when Pressure Switch #1 is closed sending power to the elements.

TEMPERATURE - AMBER LIGHT: Illuminates when the THERMOSTAT and TIMER are set and when the thermostat is calling for heat.

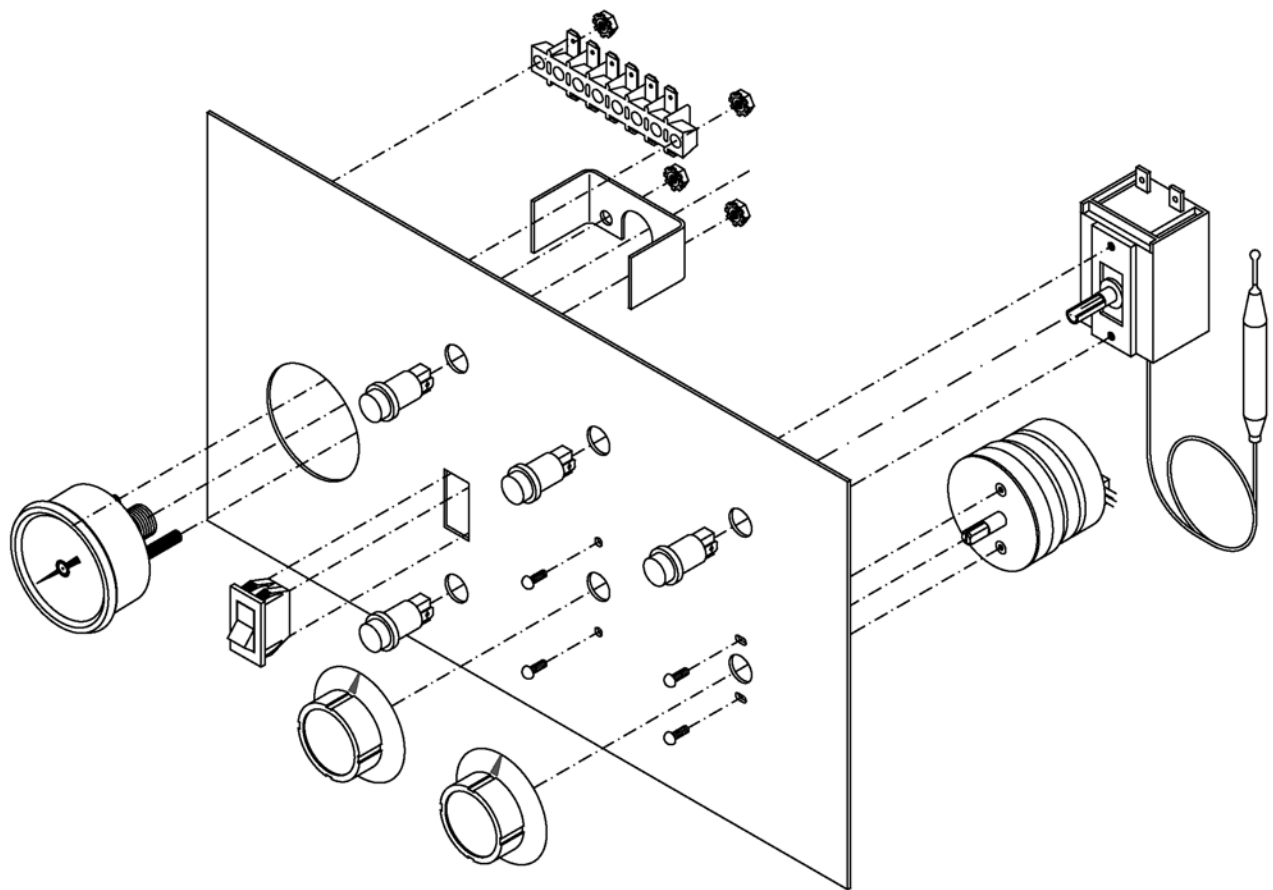
TIMER - RED LIGHT: Illuminates when the TIMER is set.

TIMER: Sets the product cook time. When the timer is set, it provides power to the control circuit.

THERMOSTAT: Puts the smoker in either BAR-B-Q or HOLD mode. When set, provides power to the power relay/contactors to the heating elements.

COLD SMOKE SWITCH: Puts the smoker into Cold Smoke Mode.

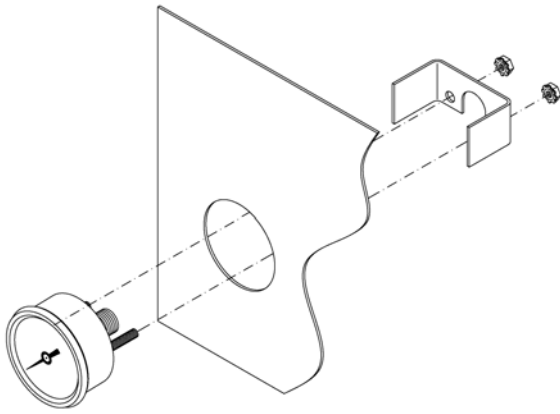
COLD SMOKE - WHITE LIGHT: Illuminates when the TIMER and THERMOSTAT are set and the COLD SMOKE SWITCH is on.



ACCESS FOR SERVICE

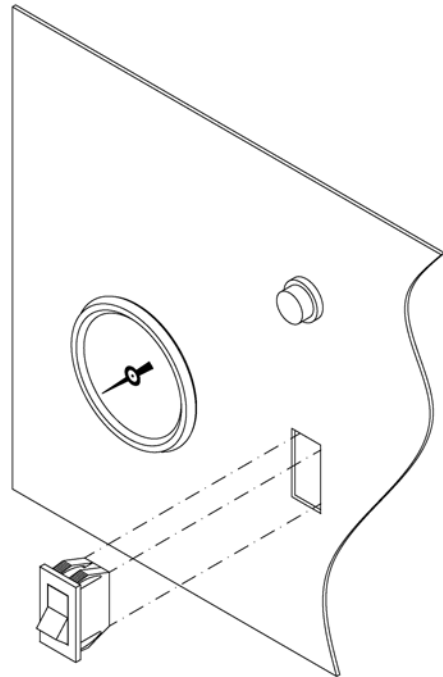
1. Unplug power cord.
2. Remove rear cover of unit.

PRESSURE GAUGE

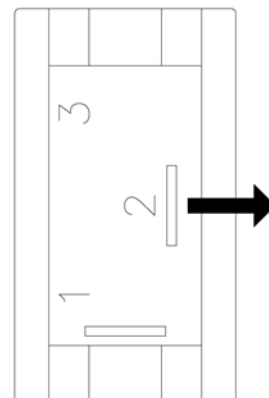


1. See ACCESS FOR SERVICE.
2. Disconnect the hose from the fitting on the back of the pressure gauge.
3. Remove the (2) mounting nuts and the mounting clamp from the gauge.
4. Pull gauge out of control panel from the front.
5. Remove fitting from back of gauge.
6. Install new pressure gauge in reverse order.

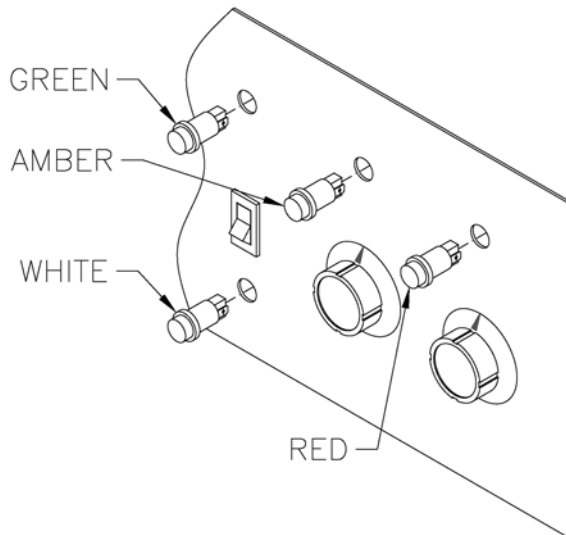
COLD SMOKE SWITCH



1. See ACCESS FOR SERVICE.
2. Remove blue wires from switch.
3. The switch is removed from the front of the control panel. To remove the switch, depress the keepers on the top and bottom of the switch and push switch out toward the front of the panel.
4. To install the new switch make sure the center pole is toward the right as you look at the back of the unit. (see diagram below)



LIGHTS



1. See ACCESS FOR SERVICE.
2. Remove the wires from the light being replaced.
3. Depress the keepers and push the light out of the control panel.
4. Install the new light in reverse order. Push light in until the chrome ring is flush with the front of the control panel.

TERMINAL BLOCK

Replacing the terminal block can be done in one of two ways.

Method 1 (recommended)

1. Remove the (2) nuts holding the block in place then remove the terminal block leaving the wires connected to the old block.
2. Mount the new terminal block and secure with the original mounting nuts.

NOTICE

Terminals 5 & 6 are jumpered together and should be toward the right end when facing the back of the control panel.

3. Transfer the wires from one terminal to the same terminal on the new terminal block.

Method 2

1. Remove the wires from the terminal block.
2. Remove the (2) mounting nuts and pull out the old terminal block.
3. Mount the new terminal block and secure with the original mounting nuts.

NOTICE

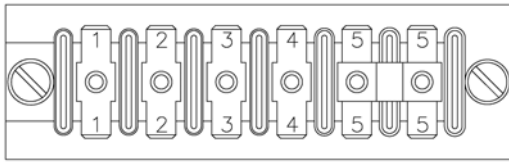
Terminals 5 & 6 are jumpered together and should be toward the right end when facing the back of the control panel.

4. Reinstall the wires on the new terminal block. See wiring diagrams in section 2 of this manual for correct wire connections to the terminal block)

4 - ELECTRICAL COMPONENTS

NOTICE

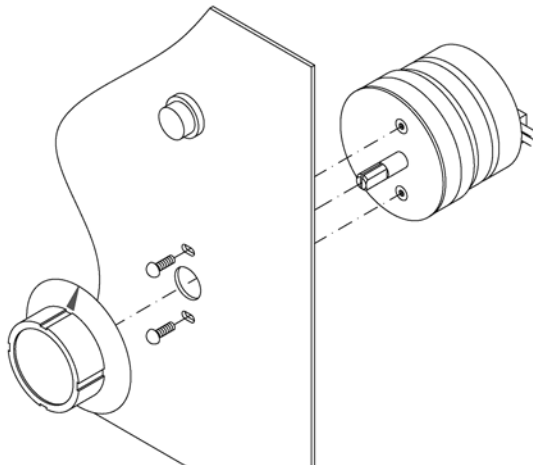
Many of the components in this section will have wires that will need to be connected to the terminal (TB) the diagram below shows how the terminals are numbered. Terminal 5 has a jumper between them to provide more terminals.



WHEN INSTALLING WIRES ON THE TERMINAL BLOCK USE THE LOWEST TERMINALS FIRST

TIMER

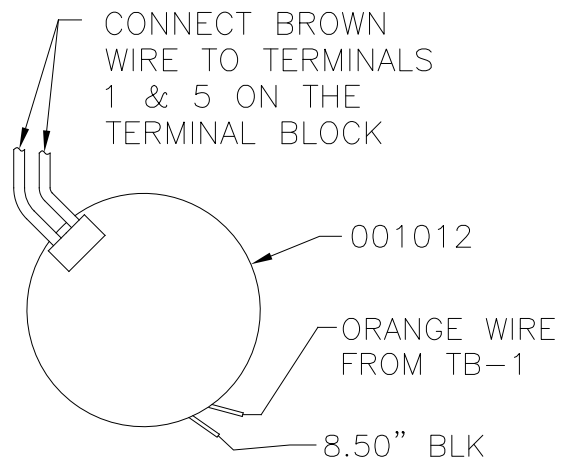
Removal:



1. Unplug power cord.
2. Remove rear panel of unit..
3. Remove timer knob from front of panel by pulling away from panel.

4. Remove timer mounting screws from front holding the timer in place.
5. Remove timer from panel and disconnect the black and orange wires from the terminal on the timer.
6. Disconnect the (2) brown wires from the terminal block.

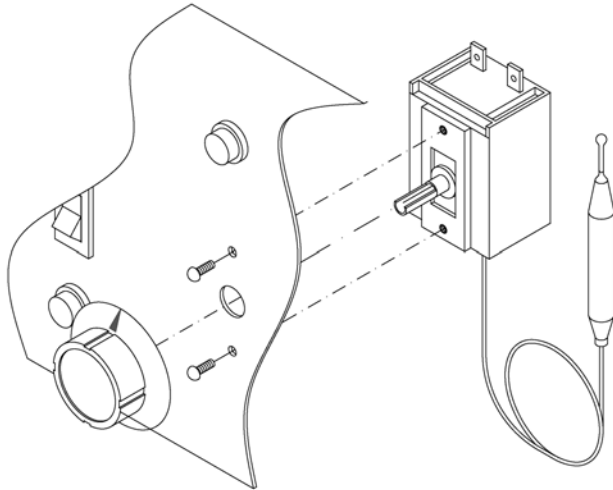
New Timer Installation:



7. Install new timer using mounting screws removed earlier and connect wires as shown above.
8. Push knob on to shaft on front of unit.
9. Reinstall rear panel.
10. Plug in power cord to put unit back in service.

THERMOSTAT:

Removal & Installation:



1. Unplug power cord.
2. Remove rear panel of unit.
3. Lay unit on its back and loosen the clamp holding the thermostat bulb in place.
4. Set unit upright on its casters.
5. Remove thermostat knob from front of panel by pulling away from panel.
6. Remove thermostat mounting screws from front holding the timer in place.
7. Disconnect wires from the thermostat.
8. Pull capillary tube and bulb up through hole in bottom of control box.
9. Thread capillary and bulb of new thermostat down through hole in bottom of control box.
10. Mount new thermostat to back of panel using the screws removed earlier.
11. Reconnect wires to thermostat.
12. Install thermostat knob.

13. Lay unit on its back.

14. Insert bulb under clamp on bottom of cooking well and tighten screw enough to hold bulb in place.

CAUTION

Tightening screw too much may damage the bulb.

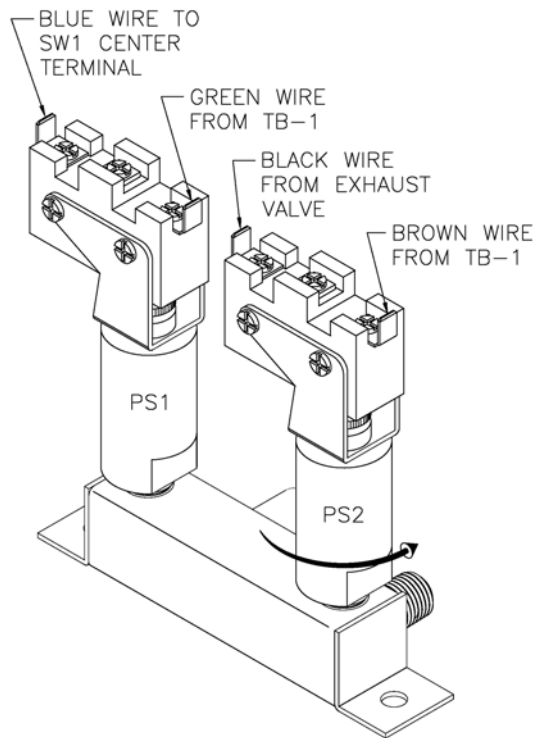
15. Set unit upright on its casters.

16. Reinstall rear panel.

17. Plug in power cord to put unit back in service.

PRESSURE SWITCHES:

REPLACEMENT:



PRESSURE SWITCH PS1:

When pressure is below its set point, PS1 is closed, providing power to the power relay/contacter, which powers the heating elements.

NOTICE

To remove PS1 it is necessary to remove PS2.

1. Unplug power cord.
2. Remove rear panel of unit.
2. Remove wires from both pressure switches.
3. Remove pressure switch PS2.
4. Remove pressure switch PS1.
5. Install the new pressure switch.
6. Reinstall pressure switch PS2.

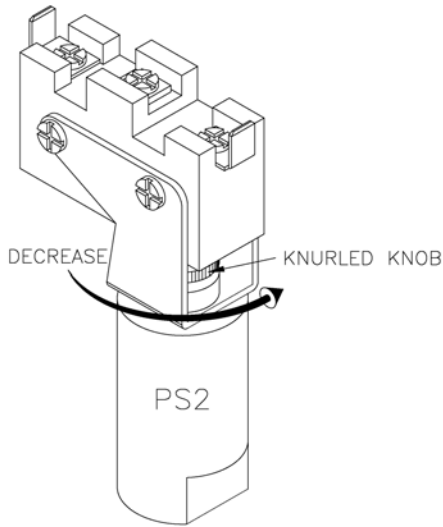
7. Reconnect wires as indicated in the diagram at left.
8. Adjust pressure switch PS1 as described in the PRESSURE SWITCH ADJUSTMENT section.
9. Reinstall rear panel.
10. Plug in power cord to put unit back in service.

PRESSURE SWITCH PS2

When pressure is below its set point, PS2 is closed providing power to the exhaust valve, keeping it closed to build pressure.

1. Unplug power cord.
2. Remove rear panel of unit.
3. Remove wires from pressure switch PS2.
4. Remove pressure switch PS2.
5. Install new pressure switch.
6. Reconnect wires as indicated in the diagram at left.
7. Adjust pressure switch PS1 as described in the PRESSURE SWITCH ADJUSTMENT section.
8. Reinstall rear panel.
9. Plug in power cord to put unit back in service.

PRESSURE SWITCH ADJUSTMENT

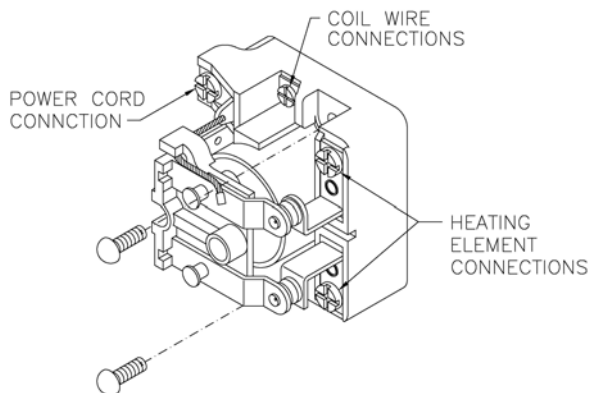


clockwise to re-energize the power relay/contacter. As the pressure passed 12 PSI adjust the knurled nut counterclockwise to de-energize the power relay/contacter. Test to ensure that the power relay/contacter continues to de-energize at 12 PSI.

1. Put one quart of water in cooker.
2. Place cover on cooking well and tighten.
3. Turn power on by setting timer to "1" hour.
4. If the exhaust valve releases pressure lower than 14.5 PSI, adjust knurled nut on the pressure switch clockwise to increase pressure. As the pressure passes 14.5 PSI turn the knurled nut counterclockwise to activate the exhaust valve. Test to insure that the exhaust valve continues to be activated at 14.5 PSI.
5. Continue to adjust until solenoid valve maintains a pressure between 14 to 15 PSI on the pressure gauge. Try to set it at 14.5 PSI.
6. Open ejector valve to reduce pressure in the cooking well to approximately 10 PSI.
7. If the power relay/contacter de-energizes before the pressure reaches 12 PSI, adjust the knurled nut on PS2

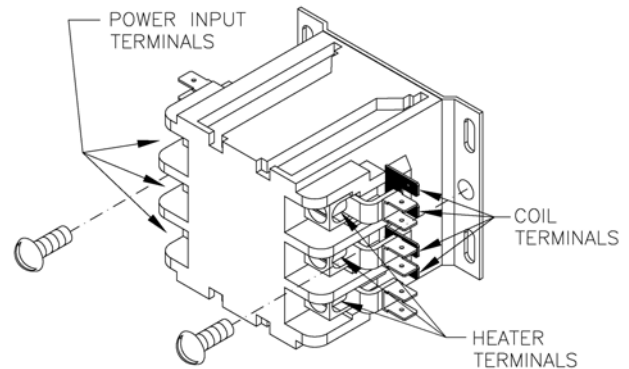
CONTACTORS & RELAYS:

SINGLE PHASE



1. Unplug power cord.
2. Remove rear panel of unit.
3. Disconnect all wires from the relay, making note of where each wire is connected.
4. Remove the (2) mounting screws from the relay.
5. Install new relay using screws removed in step 4.
6. Connect wires to the same terminals as they were when they were disconnected.
7. Reinstall rear panel.
8. Plug in power cord to put unit back in service.

THREE PHASE



1. Unplug power cord.
2. Remove rear panel of unit.
3. Disconnect all wires from the contactor.

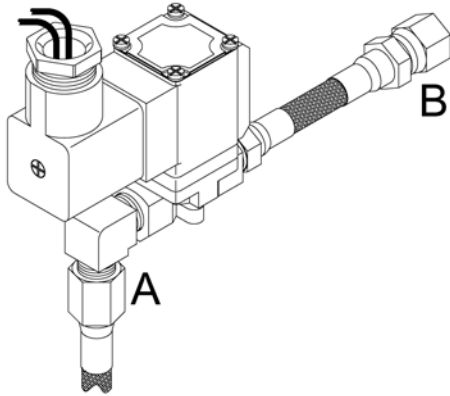
NOTICE

Make note of where each wire is connected.

4. Loosen the (2) mounting screws holding the defective relay.
5. Slide the contactor sideways to the left and lift off of the mounting screws.
5. Install new relay over the mounting screws sliding in the opposite direction and tighten screws.
6. Connect wires to the same terminals as noted in step 3.
7. Reinstall rear panel.
8. Plug in power cord to put unit back in service.

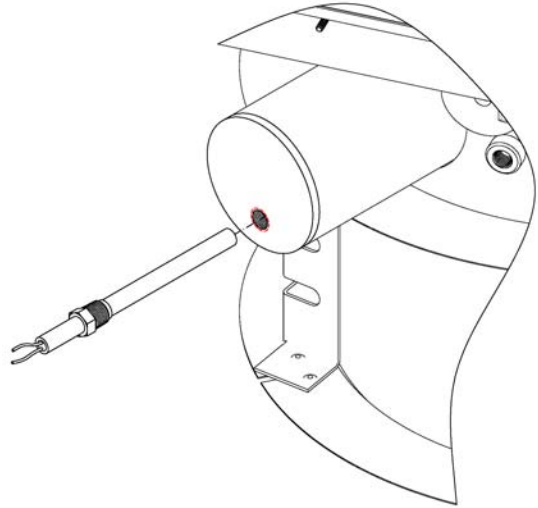
SOLENOID VALVE

1. Unplug power cord.
2. Remove rear panel of unit.
3. Disconnect the black solenoid valve wires from PS2 and TB-5.
4. Disconnect fittings **A** & **B** as shown in the diagram below.



5. Remove the brass elbow and install it on the new Solenoid Valve in the same place.
6. Remove the hose and install it on the new Solenoid Valve in the same place.
7. Reconnect fittings **A** & **B**.
8. Reconnect one black wire from the new Solenoid Valve to PS2 and the other to TB-5.
9. Reinstall rear panel.
10. Plug in power cord to put unit back in service.

CHARRING ELEMENT:



1. Unplug power cord.
2. Remove rear panel of unit.
3. Disconnect the Charring Element wires from TB-2 and TB-5.
4. Remove damaged Charring Element from charring chamber. (see above diagram)
5. Install new Charring Element.
6. Thread Charring Element wires up through the same hole as the Heating Element wires.
7. Connect one wire to Terminal Block at TB-2 and the other to TB-5.
8. Reinstall rear panel.
9. Plug in power cord to put unit back in service.

HEATING ELEMENTS:

⚠ WARNING Replacement of the heating elements should not be done on site because of time and space needed to do the replacement.

NOTICE Retain all screws for use during reassembly.

HEATING ELEMENT CHECK:

1. Unplug power cord.
2. Remove rear panel of unit.
3. Remove the heating element cover.
4. Disconnect the heating element wires from the heating elements and remove the jumpers.
5. Determine which element needs to be replaced by using an ohmmeter. The meter should read between 31.4 ohms and 38.4 ohms at the terminal end of each element.

If your ohmmeter indicates a value above or below these limits the element should be replaced. **Mark the damaged element.**

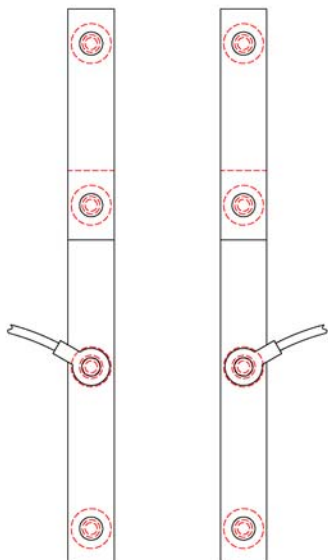
REPLACEMENT:

1. Pull out the drip tray from the bottom of the unit and set aside.
2. Turn unit upside down.
3. Disconnect the drain handle from the drain valve.
4. Loosen the clamp holding the thermostat bulb and move the bulb and capillary tube out of the way.
5. Remove the red base and pest control shield from the side panels.

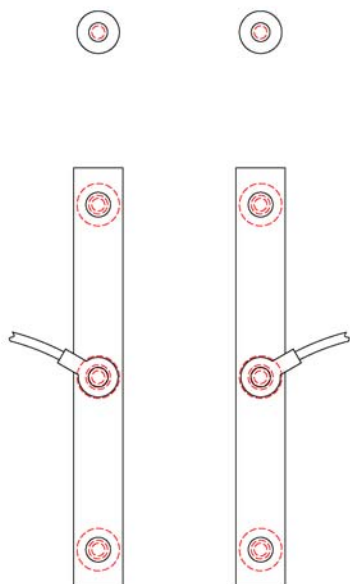
6. Remove the front and side panels
7. Remove the insulation band clamp.
8. Carefully remove the insulation and set it aside.
9. Remove the heating element band clamp.
10. Carefully spread the element terminal ends apart until the element clears the positioning brackets.
11. Carefully, while holding the element in this position, move it toward the drain valve end of the cooking well.
12. Before installing the new element, check the resistance of the element to make sure it is good.
13. Carefully spread the terminal ends apart just far enough to clear the positioning brackets and install it in the position the damaged element was.
14. Make sure the terminal ends line up with the other elements.
15. Reinstall the heating element band clamp.
16. Reinstall the insulation around the heating element band clamp and the cooking well.
17. Reinstall the insulation band clamp.
18. Reinsert the thermostat bulb under the clamp on the bottom of the cooking well.
19. Reinstall the red base and pest control shield to the side panels.
20. Reconnect the drain handle to the drain valve.

21. Turn the unit over onto it's casters.
22. Reconnect the heating element jumpers as shown below or on next page per voltage specified on specification plate.

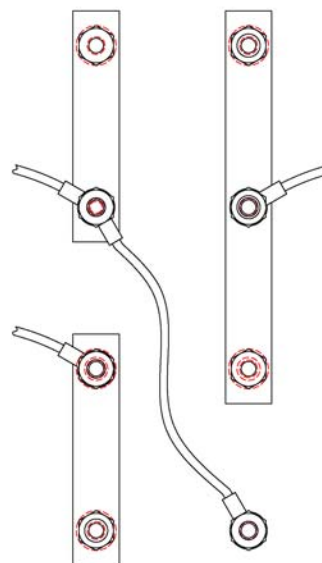
208V OR 220V
SINGLE PHASE



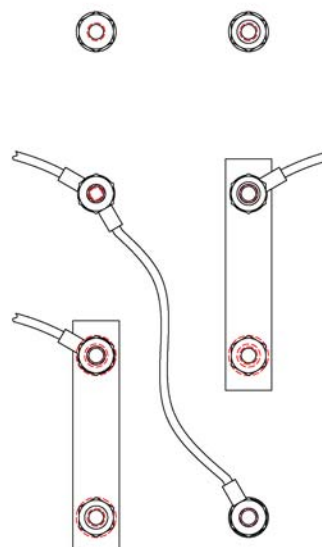
240V
SINGLE PHASE



208V OR 220V
THREE PHASE



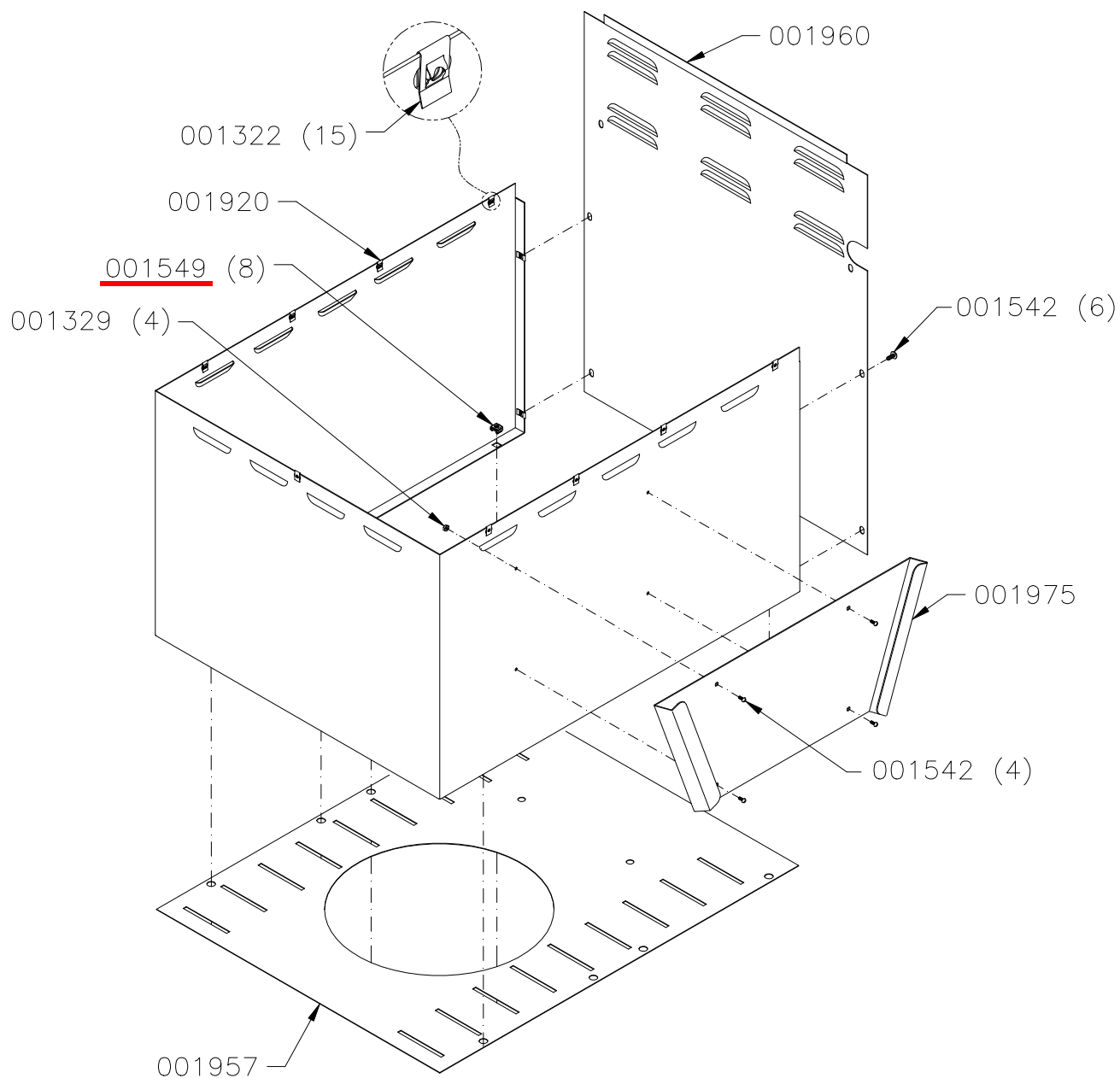
240V
THREE PHASE



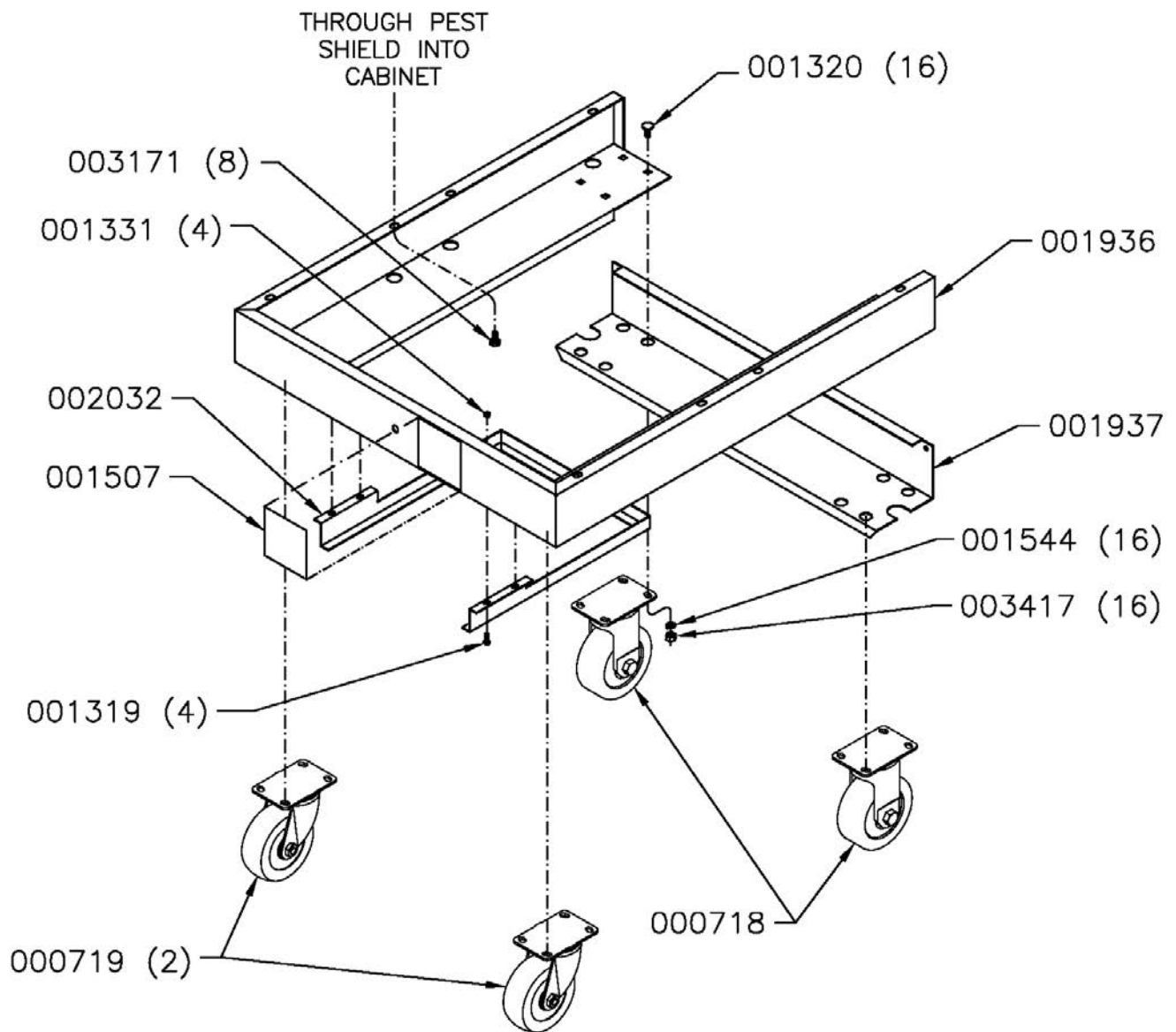
5 - PARTS

All adjustments and repairs shall be made by an authorized Broaster Company representative.

CABINET & PANELS

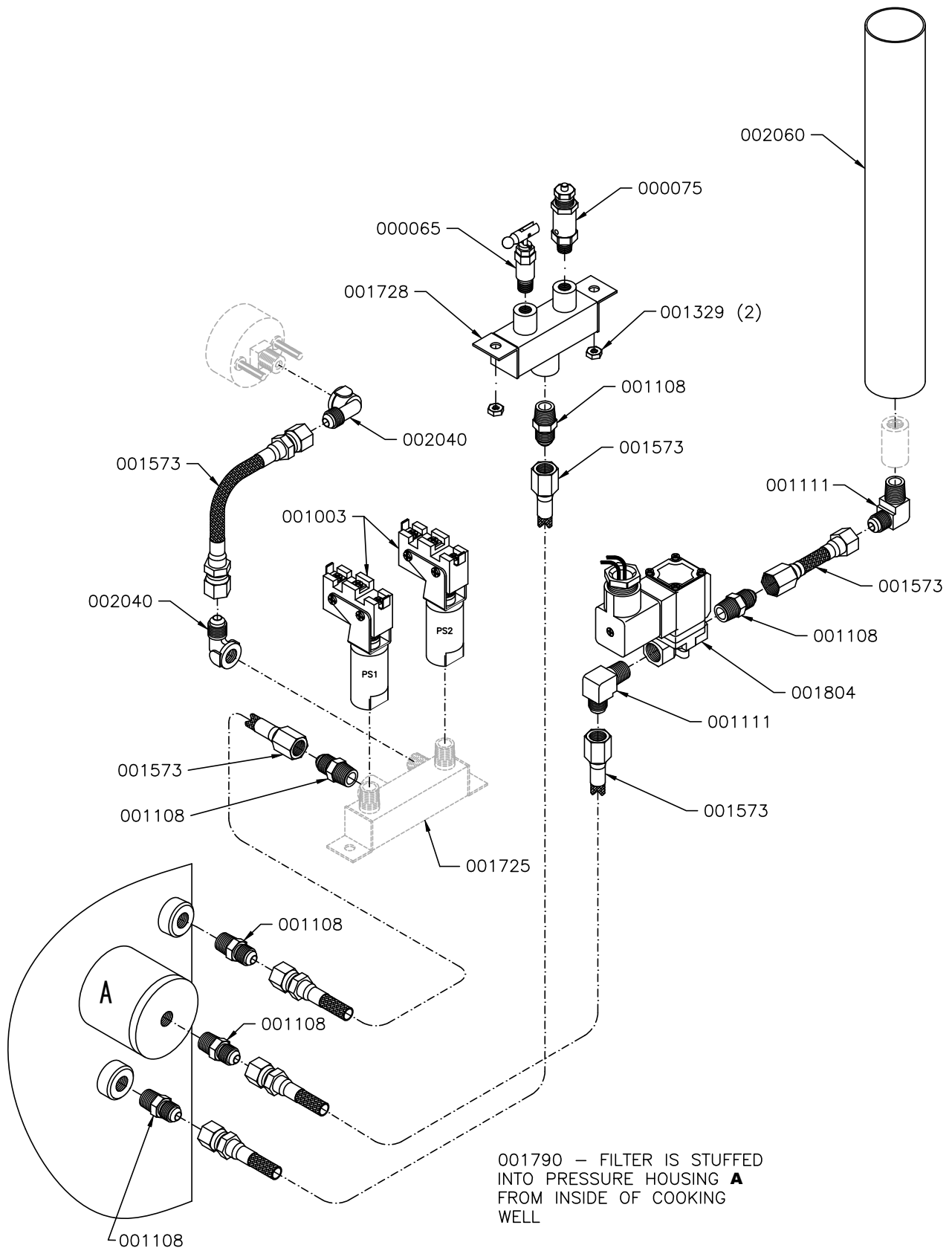


BASE PARTS

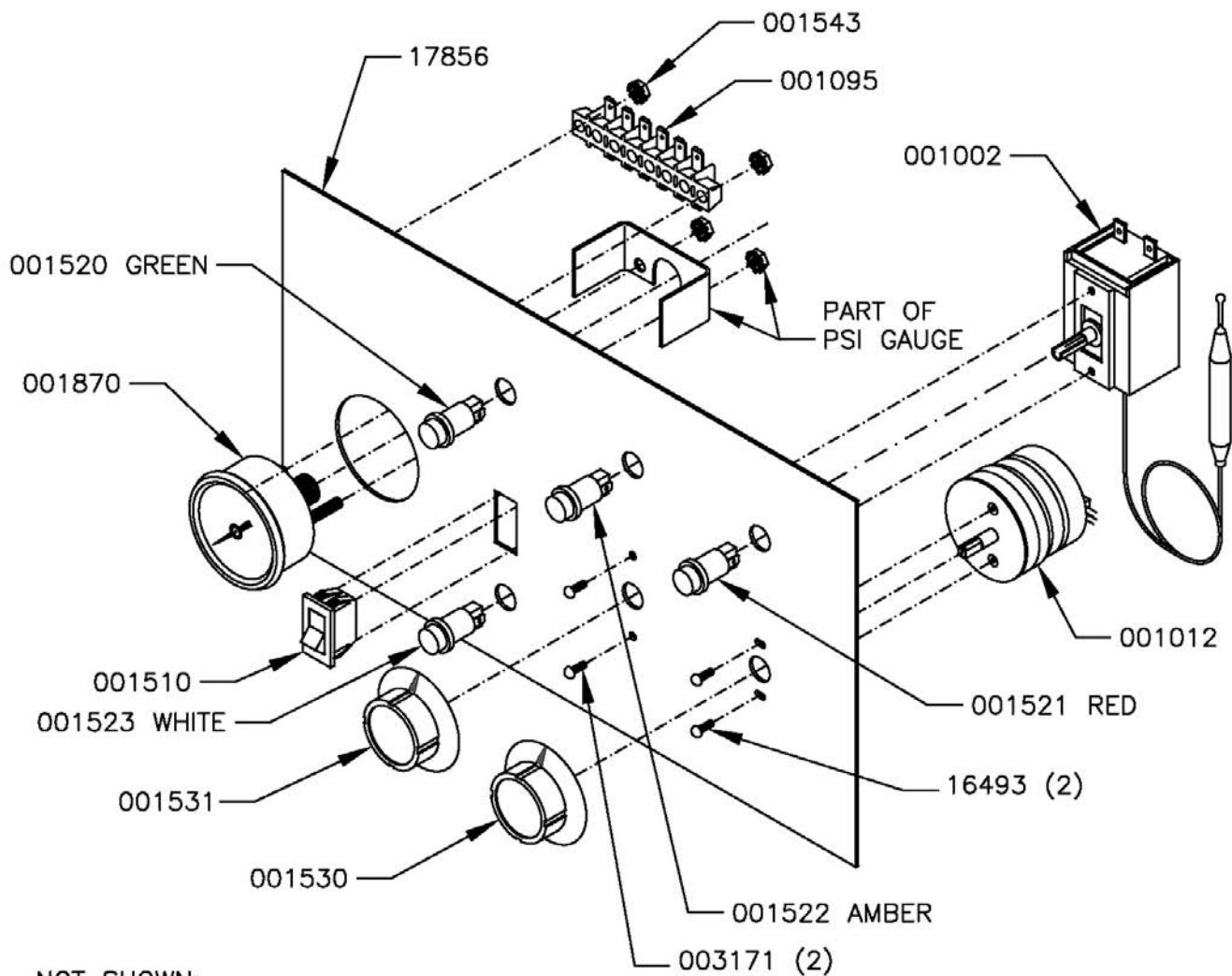


ITEMS NOT SHOWN
(1) #001528 DRIP PAN

PRESSURE AND EXHAUST SYSTEM PARTS



CONTROL PANEL PARTS



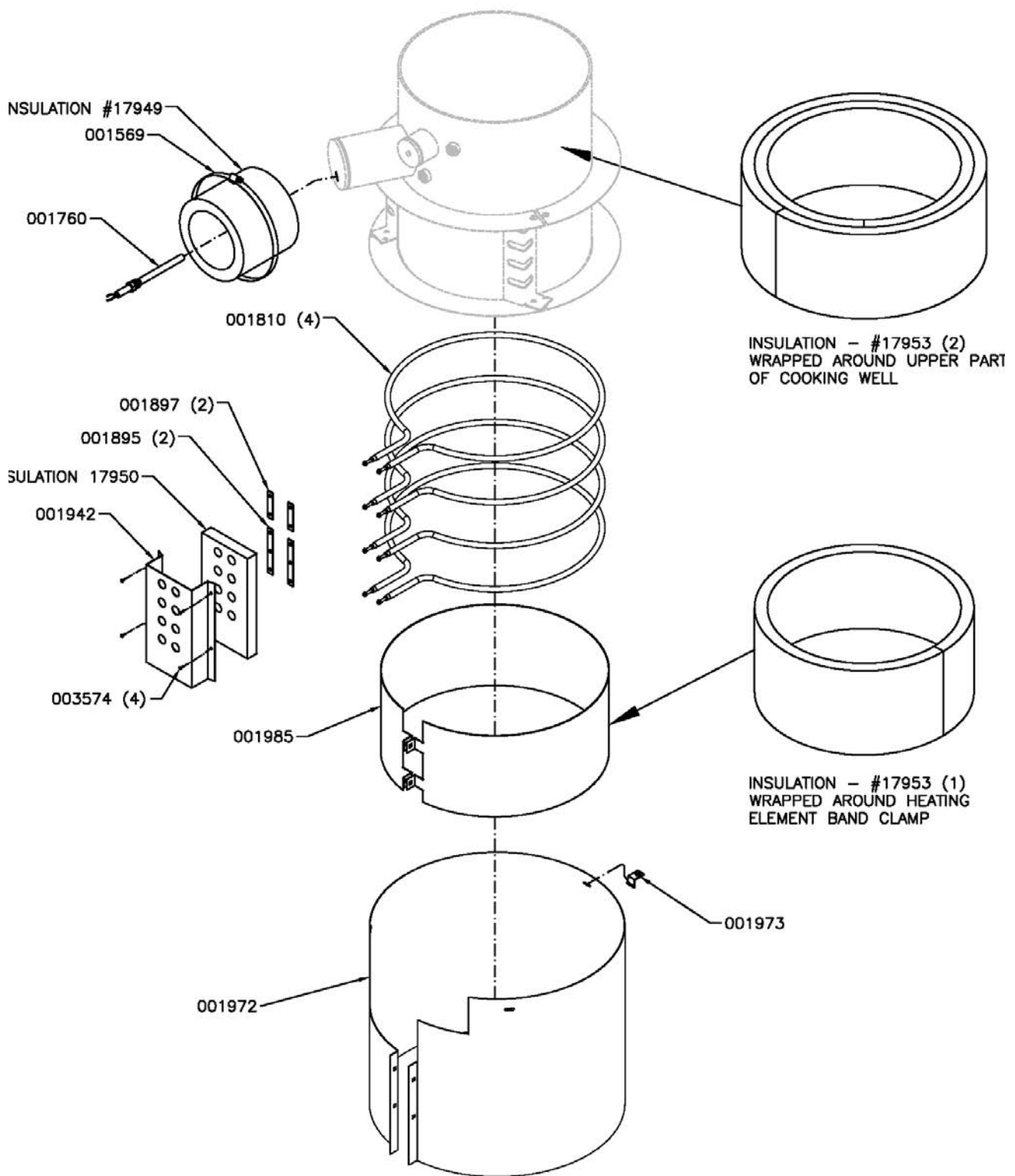
NOT SHOWN:

000990 - THERMOSTAT BULB CLAMP

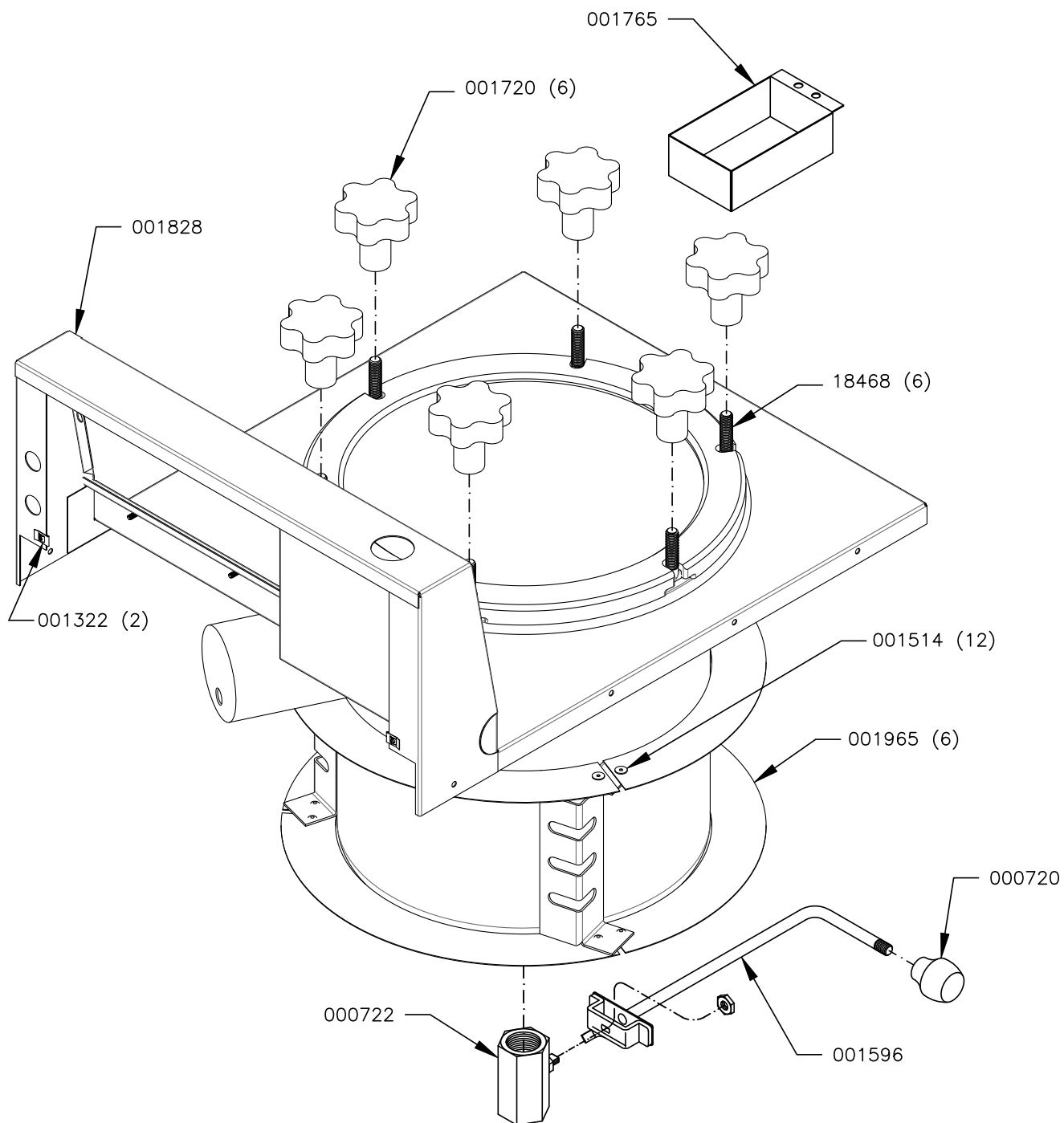
17880 - CONTROL PANEL WIRE ASSEMBLY

COMPLETE CONTROL PANEL ASSEMBLY - 001980

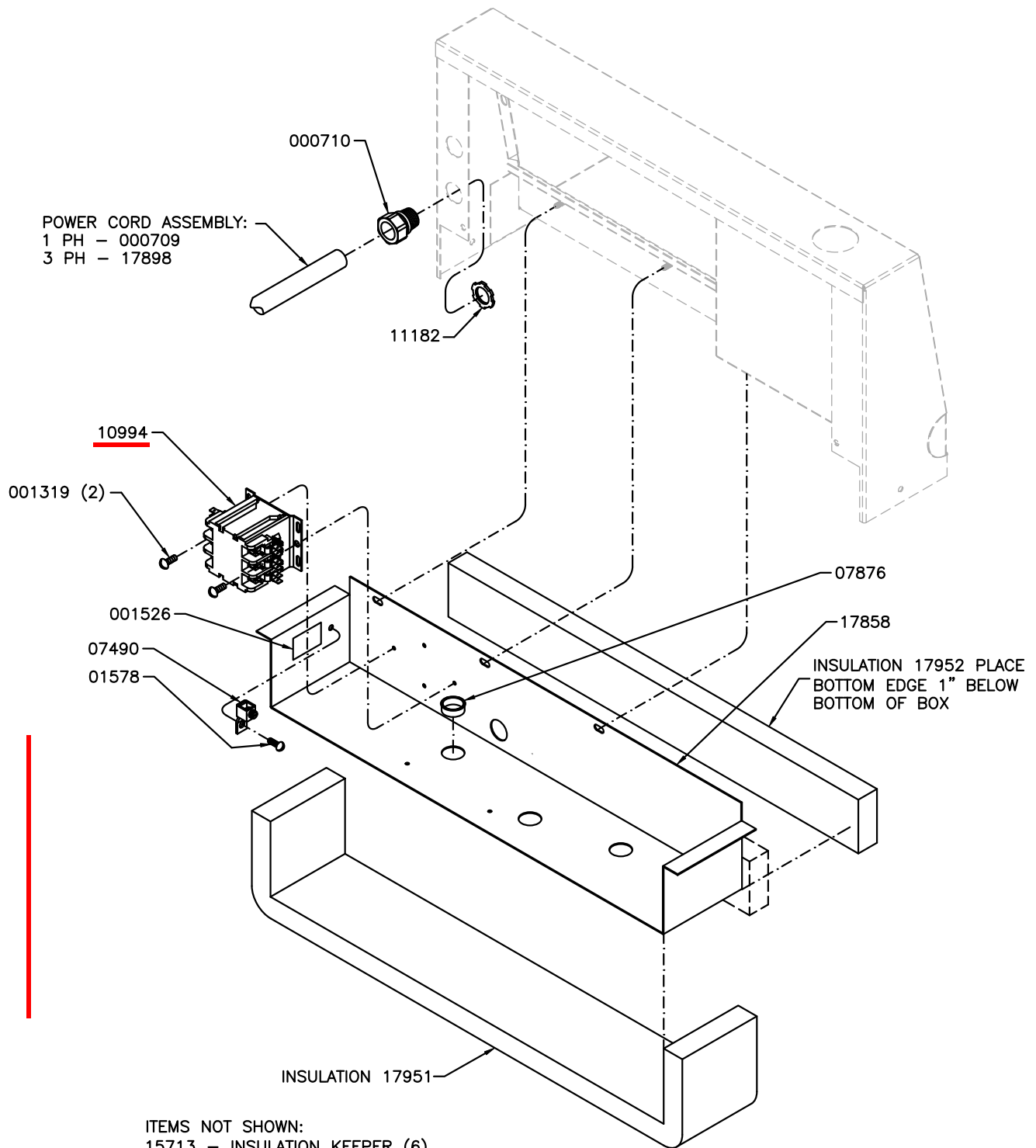
HEATING ELEMENTS AND INSULATION PARTS



COOKING WELL PARTS

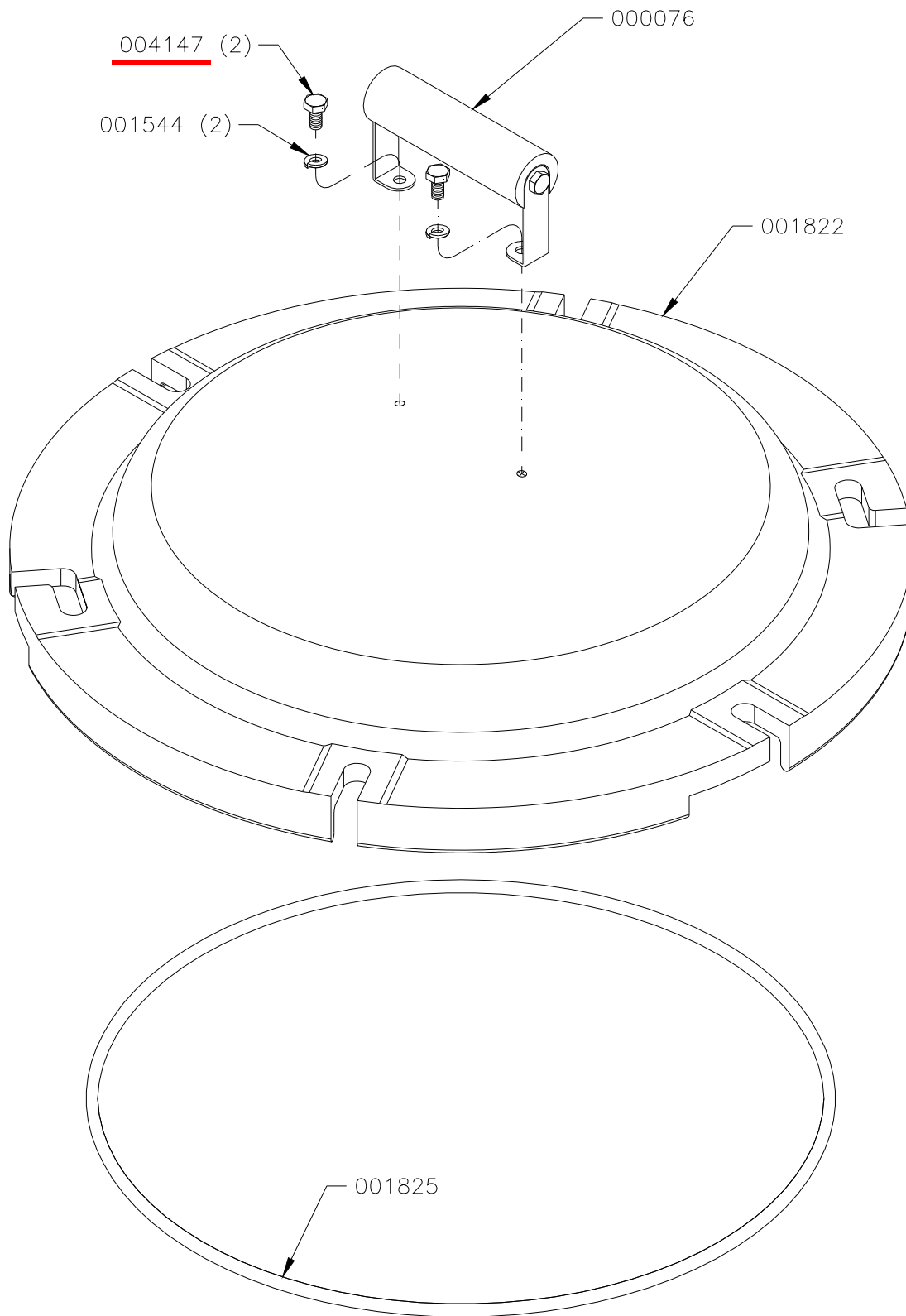


LOWER CONTROL BOX PARTS



WARNING THERE ARE METAL SPIKES ON THE BOTTOM AND BACK OF BOX 17858 THAT PROVIDE A PLACE FOR THE KEEPERS TO HOLD THE INSULATION IN PLACE.

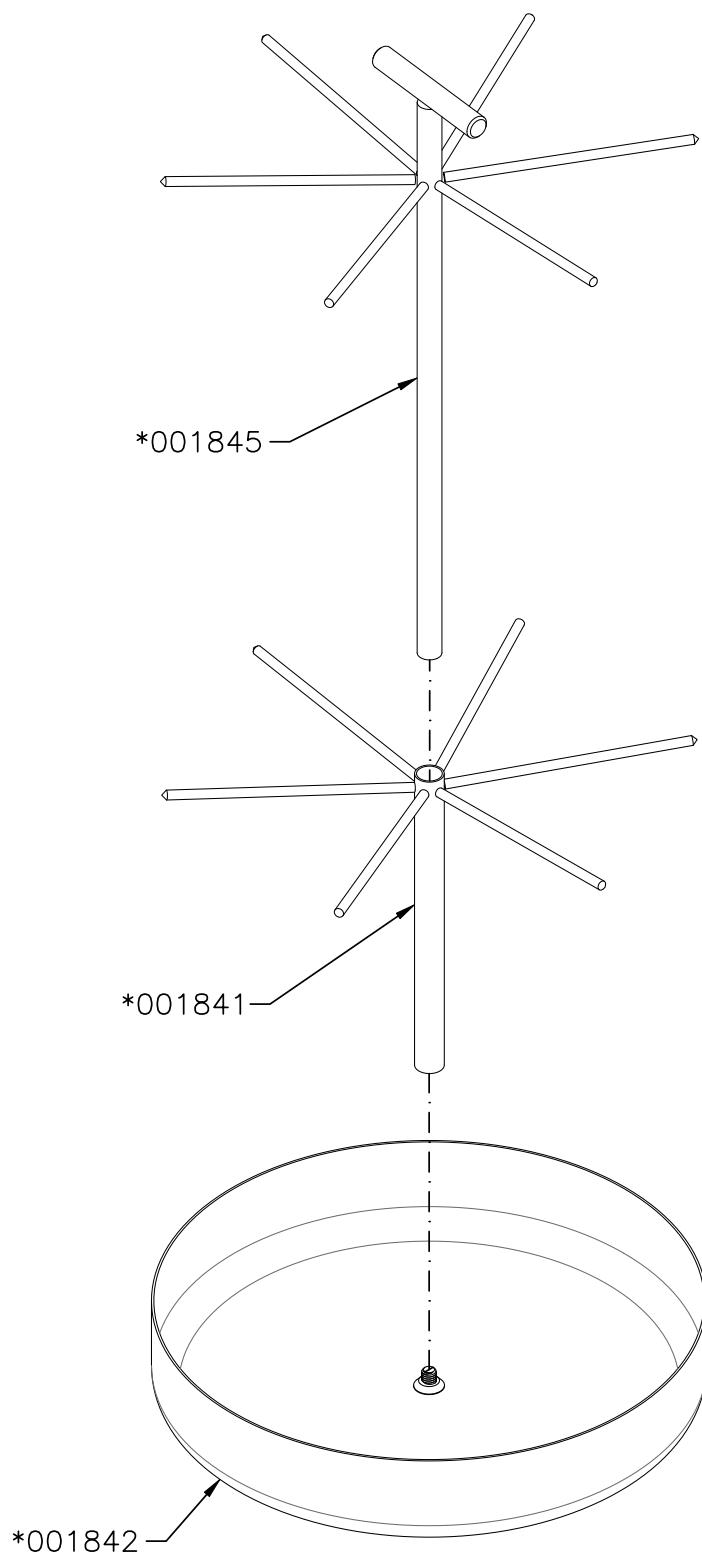
COVER PARTS



COMPLETE COVER ASSEMBLY 001815 INCLUDES
000076 HANDLE AND 001855 COVER

MEAT RACK

* INCLUDED IN #K001840 MEAT RACK KIT



TIERED FOOD BASKET

*** Included in #K17929 8-Tier Food Basket Assembly**



SERVICE NOTES

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