

Service Manual

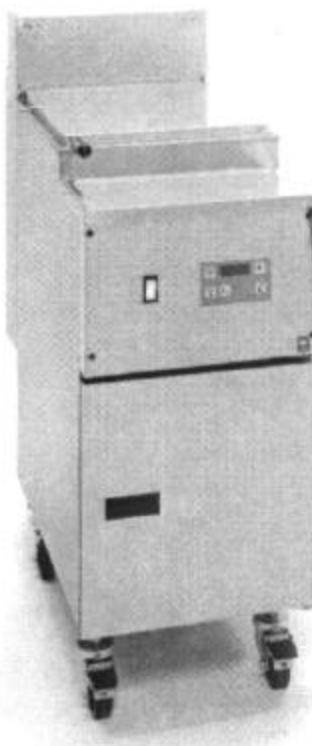
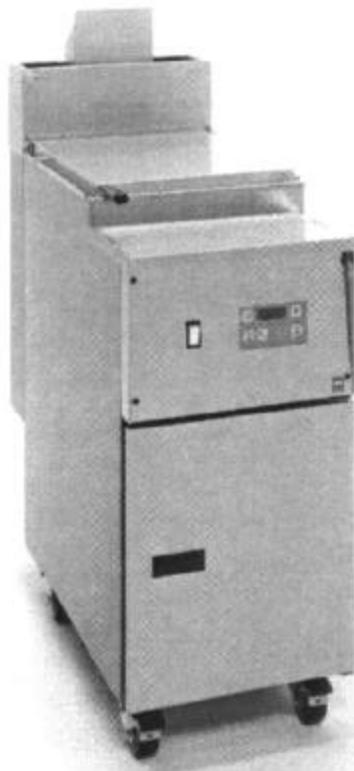
Pitco Frialator



for the Gas and Electric
Rethermalizer
Model Numbers



RTG14 & RTE14



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NOTICES

There are three different types of notices that you should be familiar with, a NOTICE, CAUTION, and WARNING. A NOTICE is a special note used to call attention to a particularly important point. CAUTION is used to point out a procedure or operation which may cause equipment damage. The WARNING notice is the most important of the three because it warns of an operation that may cause personal injury. Please familiarize yourself with your new Rethermalizer before operating it and heed the notices throughout this manual. The WARNINGS are listed below and on the following page for your review prior to operating the unit.

FOR YOUR SAFETY

DO NOT store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

WARNING: Improper installation, adjustment, 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.

TO THE PURCHASER

POST IN A PROMINENT LOCATION INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THAT AN OPERATOR SMELLS GAS. OBTAIN THIS INFORMATION FROM YOUR LOCAL GAS SUPPLIER.

SAFETY**SAFETY****SAFETY****SAFETY****SAFETY****WARNING**

This appliance is equipped with a three prong (grounding) plug. This is for your protection against shock hazard in the event of equipment malfunction. Always plug the unit directly into a properly grounded three-prong receptacle. DO NOT cut or remove the grounding (third) prong.

WARNING

DO NOT use an open flame to check for gas leaks! Keep all open flames away from the Rethermalizer until the installation is complete.

WARNING

A Rethermalizer equipped with casters and a flexible power cord, must be connected to the gas supply with a Quick-Disconnect device. This quick disconnect must comply with ANSI Z24.41. To limit the movement of the unit without depending on the connector or quick disconnect, a restraining cable must also be installed.

WARNING

There is an open gas flame inside the Rethermalizer. The unit may get hot enough to set nearby materials on fire. Keep the area around the unit free from combustibles.

WARNING

Ensure that the Rethermalizer can get enough air to keep the flame burning correctly. If the flame is starved for air it can give off a dangerous carbon monoxide gas. Carbon Monoxide is a clear odorless gas that can cause suffocation.

WARNING

Carbon monoxide can build up if you block the flue. Blocking the flue will also cause the unit to overheat. DO NOT obstruct the flow of combustion/ventilation or air opening around the Rethermalizer. Ensure that you meet the minimum clearances specified in the installation instructions. Adequate clearance around the unit is necessary for servicing and proper burner operation.

WARNING

Wait 5 minutes before attempting to relight the pilot. This will allow for any gas in the unit to dissipate.

WARNING

The power supply must be disconnected before servicing or cleaning the appliance.

WARNING

DO NOT supply the fryer with a gas that is not indicated on the data plate. If you need to convert the fryer to another type of fuel, contact your dealer.

WARNING

The Rethermalizer must be properly restrained to prevent movement or tipping. This restraint must prevent the unit from movements that would splash hot liquids on personnel. This restraint may be by any means (alcove installation, adequate ties, or battery installation).

WARNING

DO NOT obstruct the flow of combustion/ventilation or air openings around the rethermalizer. Adequate clearance around the rethermalizer is necessary for servicing and proper burner operation. Ensure that you meet the minimum clearances specified in the installation instructions.

WARNING

The Rethermalizer must be properly restrained to prevent movement or tipping. This restraint must prevent the fryer from movements that would splash hot liquids on personnel. This restraint may be any means (alcove installation, adequate ties, or battery installation).

WARNING

NEVER supply the Rethermalizer with a gas that is not indicated on the data plate. Using the incorrect gas type will cause improper operation. If you need to convert the unit to another type of fuel, contact your dealer.

**THIS MANUAL MUST BE
RETAINED FOR FUTURE
REFERENCE****SAFETY****SAFETY****SAFETY****SAFETY****SAFETY**

Table of Contents

| | |
|----------------------------------|---------|
| Table of Contents | ii |
| TROUBLESHOOTING | 1 |
| Component Diagnosis | 1 |
| Digital Control | 1 |
| Computer | 1 |
| Water Level Control | 1 |
| Water Fill Solenoid | 1 |
| Safety Relay (K1) | 2 |
| Ignition Control Module | 2 |
| Temperature Probe | 2 |
| PARTS | 3 |
| General Parts | 3 |
| Heating Components | 5 |
| Front Panel Assembly | 7 |
| Tank and Fluid Components | 9 |
| Accessories | 11 |
| SCHEMATICS | 14 - 17 |
| RTG14 with Digital Control | 14 |
| RTE14 with Digital Control | 15 |

TROUBLESHOOTING

This section is provided to aid the Authorized Service Technician in the repair of your Rethermalizer.

| SYMPTOM | POSSIBLE CAUSE |
|--|--|
| Display will not light | Bad Temperature Control, Fuse Holder, Fuse, Transformer or Switch |
| Maintains wrong temperature | Bad Probe or Display |
| Display lit, but does not heat | Bad K1 Relay, contactor, Probe, Display, Gas Valve or Elements or Water Level control. |
| Constantly fills, or will not fill | Bad K1 Relay, Level Sensor Seals, Level Control or Water fill solenoid. Manual bypass valve may be open. |
| Spark can be heard, Pilot does not light | Gas Valve Knob is NOT in the ON position? Plugge PIlot orifice. Bad Ignition Module or Gas Valve. |
| Pilot Lights but mains do not. | Bad Gas Valve or Ignition Module. |

Component Diagnosis:

Before diagnosing any individual components, all appropriate power supplies and wiring terminations must be checked. Follow the appropriate section below to diagnose the suspected components.

Digital Control:

When 24 VAC is supplied to the Temperature Control, and the control is turned on the display should be lit. When the water temperature is below the SET Temperature (195°F) 24VAC Heat Demand signal can be found between the Gray and Green/Yellow wires at the rear of the controller. The Red LED Heating indicator light will be ON. When problems with the Temperature Control occur it is important that the Probe be checked also.

Computer Control:

When 24VAC is supplied to the control the display should be lit. When the water temperature is below the SET Temperature (195°F) a 24VDC Heat Demand signal can be found at the coil of the Heat Demand Relay located behind the computer.

Water Level Control:

Check for 24 VAC between the COM and 24 V PWR (Power) terminals. Disconnect the HIGH, LOW and COM terminals, a 24 VAC signal can now be seen between the N.C. and COM terminals. The safety Relay (K1) and the Water Fill Solenoid will energize. Using a jumper wire, short the HIGH, LOW and COM terminals together, this will cause the Control to stop the 24 VAC signal between the N.C. and 24 V PWR terminals.

Water Fill Solenoid:

The Water Fill Solenoid should be open when a 24 VAC signal is applied to the two wires leading to the Actuator. With no voltage present the Solenoid should be closed.

Safety Relay (K1):

With a 24 VAC signal present at the coil section of the relay the switch section should have closed the circuit between the two Gray wires.

Ignition Control Module:

When the Ignition Control MModule receives 24VAC it will send a signal to the spark ignitor at the pilot assembly. The Module will also send 24VAC to the Pilot Solenoid at the Gas Valve. The pilot will light and the Pilot Flame Sensor will send a 0.15-0.35 micro amp signal to the Ignition Module at which time the ignition module will cease the pilot spark and send a 24VAC signal to the Main Solenoid at the Gas Valve. To test the system look and listen for the above ignition steps and check for the appropriate signals.

Temperature Probe:

Unplug the wiring harness from the rear of the Temperature Control. Measure the resistance between the two black wires on the harness in the cooker, NOT the harness at the control. Measure the water temperature (with an independent temperature meter or thermometer) and the resistance of the probe at the same time. Consult the chart below for probe specifications.

| Temperature °F | Resistance Ohms |
|-------------------|--------------------|
| 70°F | 108050 |
| 80°F | 84643 |
| 90°F | 66823 |
| 100°F | 53145 |
| 110°F | 42568 |
| 120°F | 34328 |

| Temperature °F | Resistance Ohms |
|-------------------|--------------------|
| 130°F | 27862 |
| 140°F | 22755 |
| 150°F | 18694 |
| 160°F | 15446 |
| 170°F | 12832 |
| 180°F | 10716 |

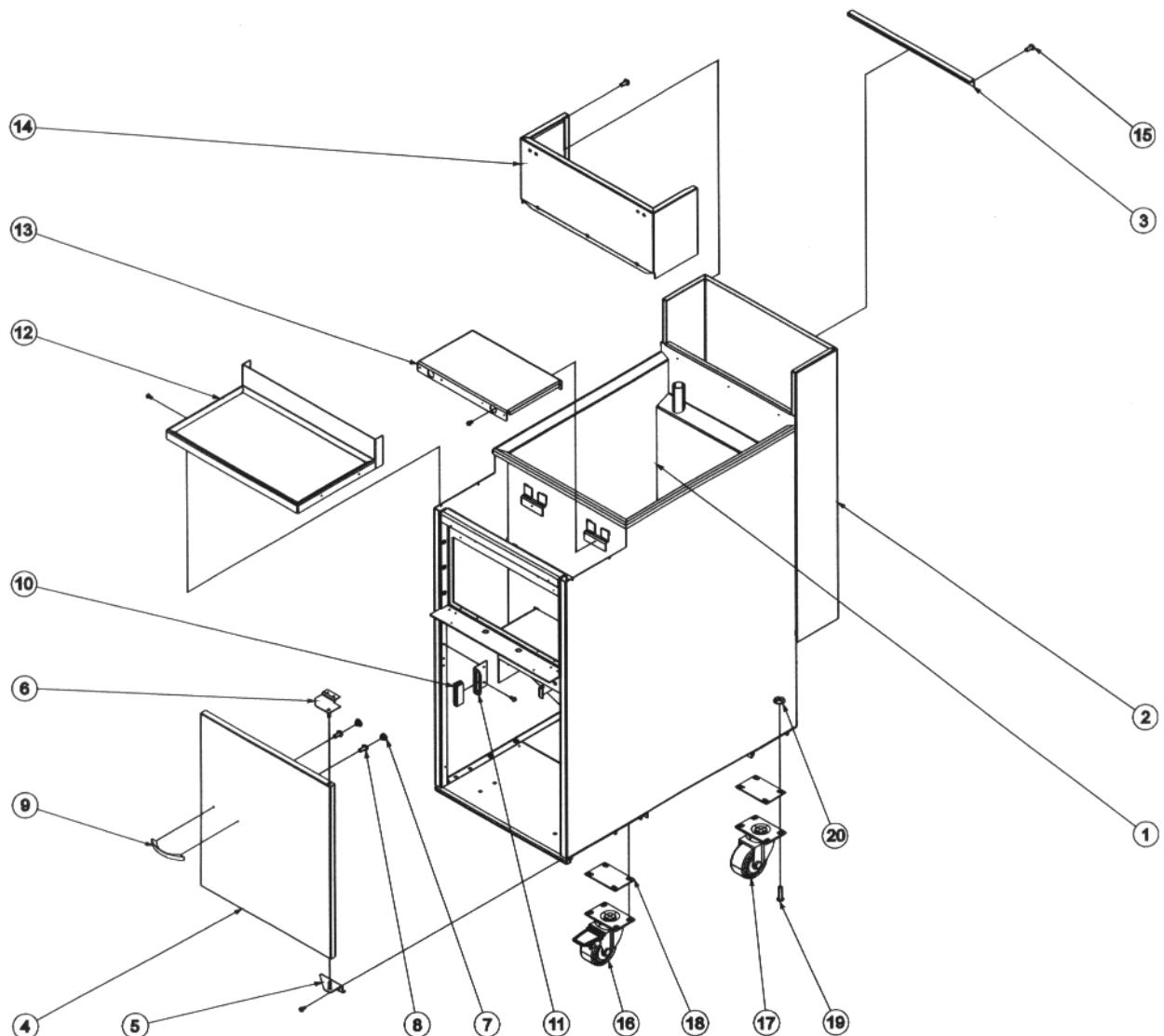
| Temperature °F | Resistance Ohms |
|-------------------|--------------------|
| 190°F | 8994 |
| 195°F | 8255 |
| 200°F | 7585 |
| 210°F | 6427 |
| 212°F | 6221 |
| | |

If the resistance varies more than 20% from that specified in the chart the probe should be changed. It is more important that the probe resistance be correct at 212°F than 70°F, therefore there can be more tolerance given at 70°F than at 212°F.

PARTS

General Parts:

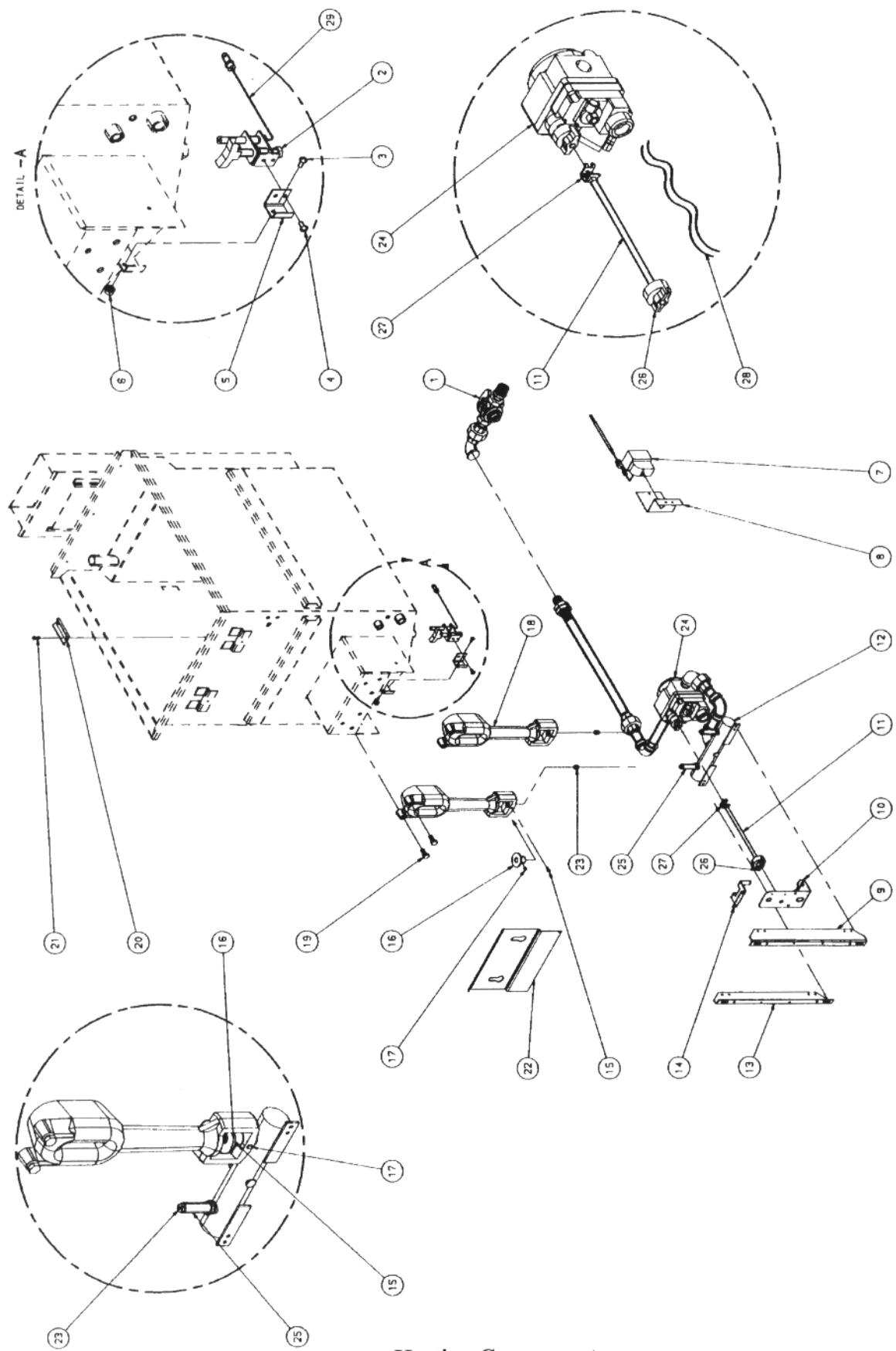
| Item # | QTY/ Unit | Part Number | Description | Gas/Electric |
|--------|-----------|-------------|--------------------------------------|--------------|
| 1 | 1 | B3310502-C | Tank | Gas |
| | 1 | B3402201 | Tank | Electric |
| 2 | 1 | B1811501 | Cabinet, Painted..... | Gas |
| | 1 | B1811503 | Cabinet, Painted..... | Electric |
| 3 | 1 | A1619202 | Back Strip | Gas |
| 4 | 1 | B2301109 | Door | Gas/Electric |
| 5 | 1 | B7230302 | Hinge, Bottom Right Hand Door | Gas/Electric |
| 6 | 1 | B7230202 | Hinge, Top Right Hand Door | Gas/Electric |
| 7 | 2 | P6071483 | Plug, Hole | Gas/Electric |
| 8 | 2 | PP10025 | Screw | Gas/Electric |
| 9 | 1 | PP11006 | Handle | Gas/Electric |
| 10 | 1 | P6071300 | Magnet | Gas/Electric |
| 11 | 1 | A1819602 | Bracket, Door Magnet | Gas/Electric |
| 12 | 1 | B3609901 | Edge, Marine | Gas/Electric |
| 13 | 1 | A1822101 | Cabinet Spacer, Tank Holder | Gas/Electric |
| 14 | 1 | A4103602 | Splash Back | Gas |
| | 1 | A4103902 | Splash Back | Electric |
| 15 | 4 | P0075300 | Screw, 3 #10 x 5/8" Self Drill | Gas/Electric |
| 16 | 2 | PP10728 | Caster With Brake | Gas/Electric |
| 17 | 2 | PP10652 | Caster Without Brake | Gas/Electric |
| 18 | 4 | A3901101 | Caster Mounting Plate | Gas/Electric |
| 19 | 16 | P0020600 | Bolt 1/4-20 | Gas/Electric |
| 20 | 16 | P0093300 | Nut 1/4-20 | Gas/Electric |



General Parts

Heating Components:

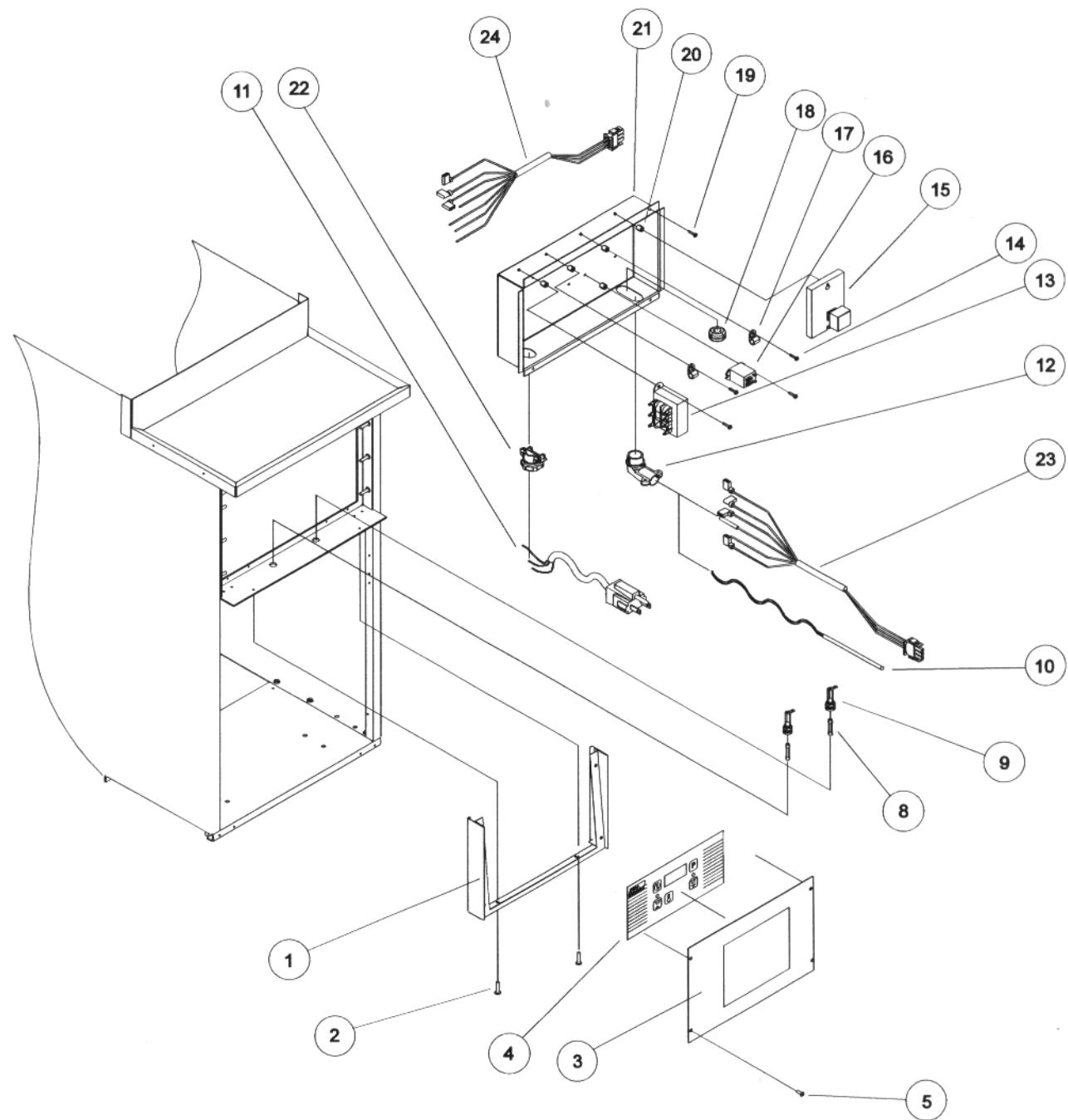
| Item # | QTY/ Unit | Part Number | Description | Gas/Electric |
|-----------|--------------|----------------|---|--------------|
| 1 | 1 | P6071767 | Gas Shut-Off Valve | Gas |
| 2 | 1 | P6071450 | Pilot Assembly, Nat | Gas |
| 3 | 2 | PP10665 | Screw 10-24 x 3/8" SS | Gas |
| 4 | 2 | PP10665 | Screw 10-24 x 3/8" SS | Gas |
| 5 | 1 | A3306402 | Pilot Bracket | Gas |
| 6 | 2 | P0092300 | Nut, Keep 10-24 | Gas |
| 7 | 1 | PP10271 | High-Limit | Gas |
| 8 | 1 | A1815501 | Bracket, High-Limit | Gas |
| 9 | 1 | A8000801 | Bracket, Manifold Mounting RH | Gas |
| 10 | 1 | A8013101 | Bracket, Thermostat & Unitrol Extension | Gas |
| 11 | 1 | B7510102 | Extension, Gas Valve Knob | Gas |
| 12 | 1 | B8009501 | Manifold, Burner | Gas |
| 13 | 1 | A8000801 | Bracket, Manifold Mounting LH | Gas |
| 14 | 1 | A4012801 | Clamp, Unitrol Bracket | Gas |
| 15 | 1 | P0063500 | Screw, Square Head 6-32 | Gas |
| 16 | 2 | A8001001 | Air Collar | Gas |
| 17 | 2 | PP10025 | Screw, Air Collar Set | Gas |
| 18 | 2 | P6071050 | Burner | Gas |
| 19 | 4 | PP10195 | Bolt, Burner Mounting, 1/4-20 | Gas |
| 20 | 1 | A1401002 | Clamp, Bulb and Probe | Gas |
| 21 | 2 | PP10698 | Screw, 10-24 Round Head SS | Gas |
| 22 | 1 | A3701002 | Heat Shield, Burner | Gas |
| 23 | 2 | P6071341 | Orifice, NAT | Gas |
| | 2 | P6071353 | Orifice, LP | Gas |
| 24 | 1 | P5045638 | Gas Valve 24V NAT | Gas |
| | 1 | P5045639 | Gas Valve 24V LP | Gas |
| 25 | 2 | A8001101 | Fittings, Burner | Gas |
| 26 | 2 | P6071267 | Knob, Gas Valve | Gas |
| 27 | 1 | P5045660 | Bracket | Gas |
| 28 | 1 | B6779850 | Unitrol Limit Wires | Gas |
| 29 | 1 | P5047541 | Thermopile | Gas |
| Not Shown | | | | |
| | 3 | PP10953 | Elements 208/220/240V | Electric |



Heating Components

Front Panel Assembly:

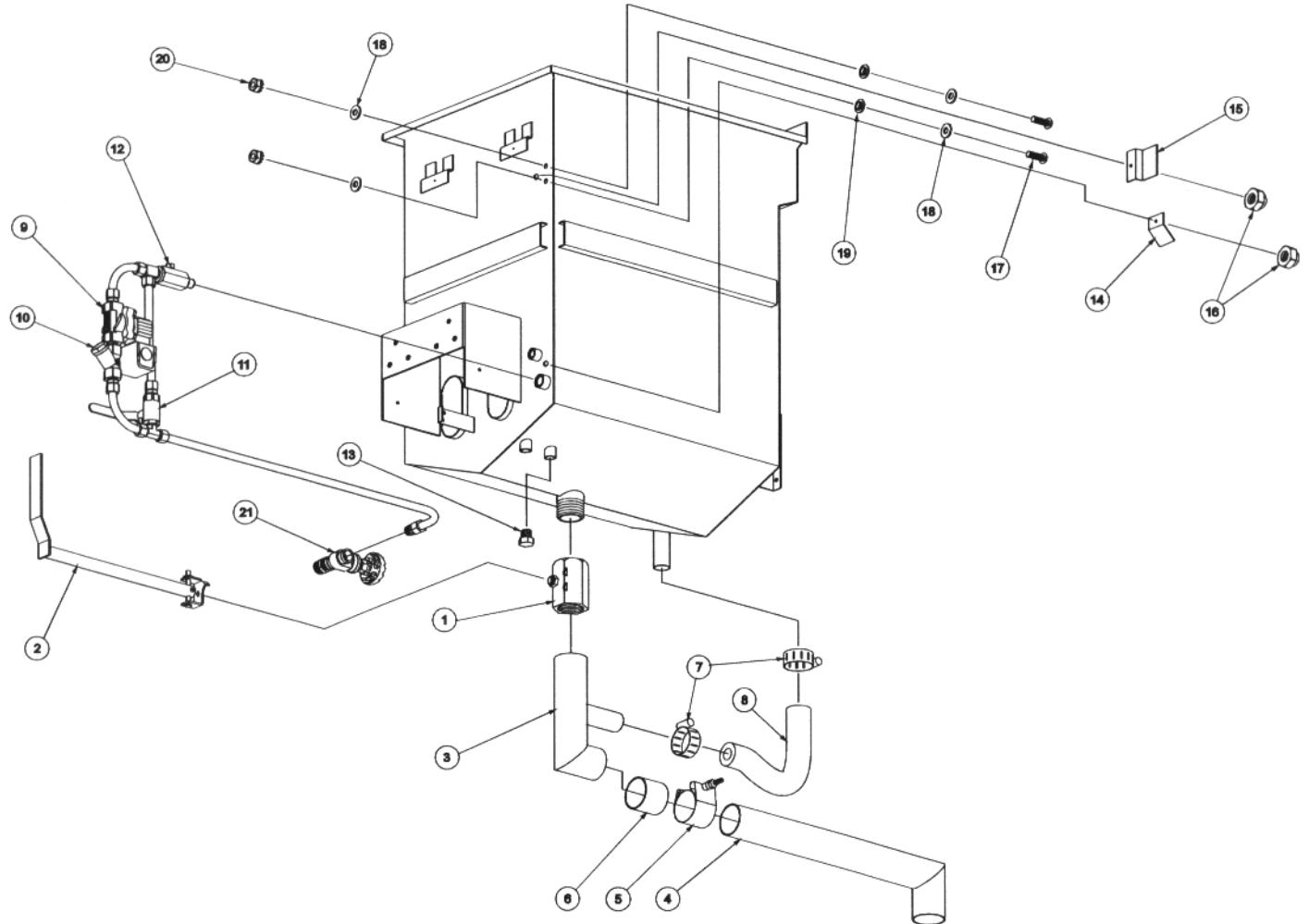
| Item # | Qty/ Unit | Part Number | Description | Gas/Electric |
|-----------|-----------|-------------|------------------------------------|--------------|
| 1 | 1 | B3609601 | Front Panel Weldment | Gas/Electric |
| 2 | 2 | P0075300 | Screw 3 10 x 5/8" Self Drill..... | Gas/Electric |
| 3 | 1 | A3635002 | Bezel Front Panel..... | Gas/Electric |
| 4 | 1 | PP10939 | Thermostat With 24V Display | Gas/Electric |
| 5 | 4 | PP10195 | Screw, Button Head Hex | Gas/Electric |
| 6 | 1 | PP10654 | Switch, Rocker SPST | Gas/Electric |
| 7 | 1 | A6054501 | Label, Switch | Gas/Electric |
| 8 | 1 | PP10122 | Fuse, 1 Amp Slow Blow, Glass | Gas |
| | 1 | P5045717 | Fuse, 2 Amp Slow Blow, Glass | Gas/Electric |
| 9 | 2 | P5045794 | Fuse Holder | Gas |
| | 1 | P5045794 | Fuse Holder | Electric |
| 10 | 1 | B6718701 | Probe, Temperature Sensing | Gas/Electric |
| 11 | 1 | PP10439 | Cable, Power With Plug | Gas/Electric |
| 12 | 1 | PP10146 | Strain Relief 90° | Gas/Electric |
| 13 | 1 | PP10210 | Transformer Multi to 24 VAC | Gas/Electric |
| 14 | 8 | PP10749 | Screw 6-32 x 5/8 | Gas/Electric |
| 15 | 1 | PP10702 | Control, Liquid Level | Gas |
| | 1 | PP10981 | Control, Liquid Level | Electric |
| 16 | 1 | P5046691 | Relay 120 VAC SPST | Gas |
| | 1 | P5046688 | Relay 24 VAC SPST | Electric |
| 17 | 2 | P6071071 | Wire Clamp | Gas/Electric |
| 18 | 1 | P6071223 | Grommet | Gas/Electric |
| 19 | 4 | PP10749 | Screw 6-32 x 5/8" SS | Gas/Electric |
| 20 | 9 | P0091400 | Nutsert 6-32 | Gas/Electric |
| 21 | 1 | A2948301 | Entrance Box | Gas/Electric |
| 22 | 1 | P5045240 | Clamp, Romex | Gas/Electric |
| 23 | 1 | B6714301 | Harness, Control Cable | Gas |
| | 1 | B6731302 | Harness, Entrance Box | Electric |
| 24 | 1 | B6714101 | Harness, Front Panel | Gas/Electric |
| | 1 | B6731402 | Harness, Front Panel | Electric |
| Not Shown | | | | |
| | 1 | PP10560 | Contactor, 24 VAC, 3 Pole | Electric |
| | 2 | P5047302 | Terminal Block | Electric |



Front Panel Assembly

Tank and Fluid Components:

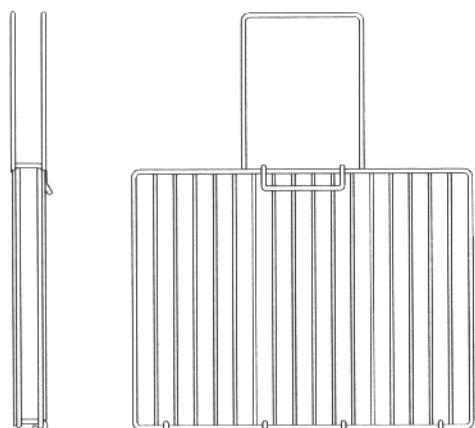
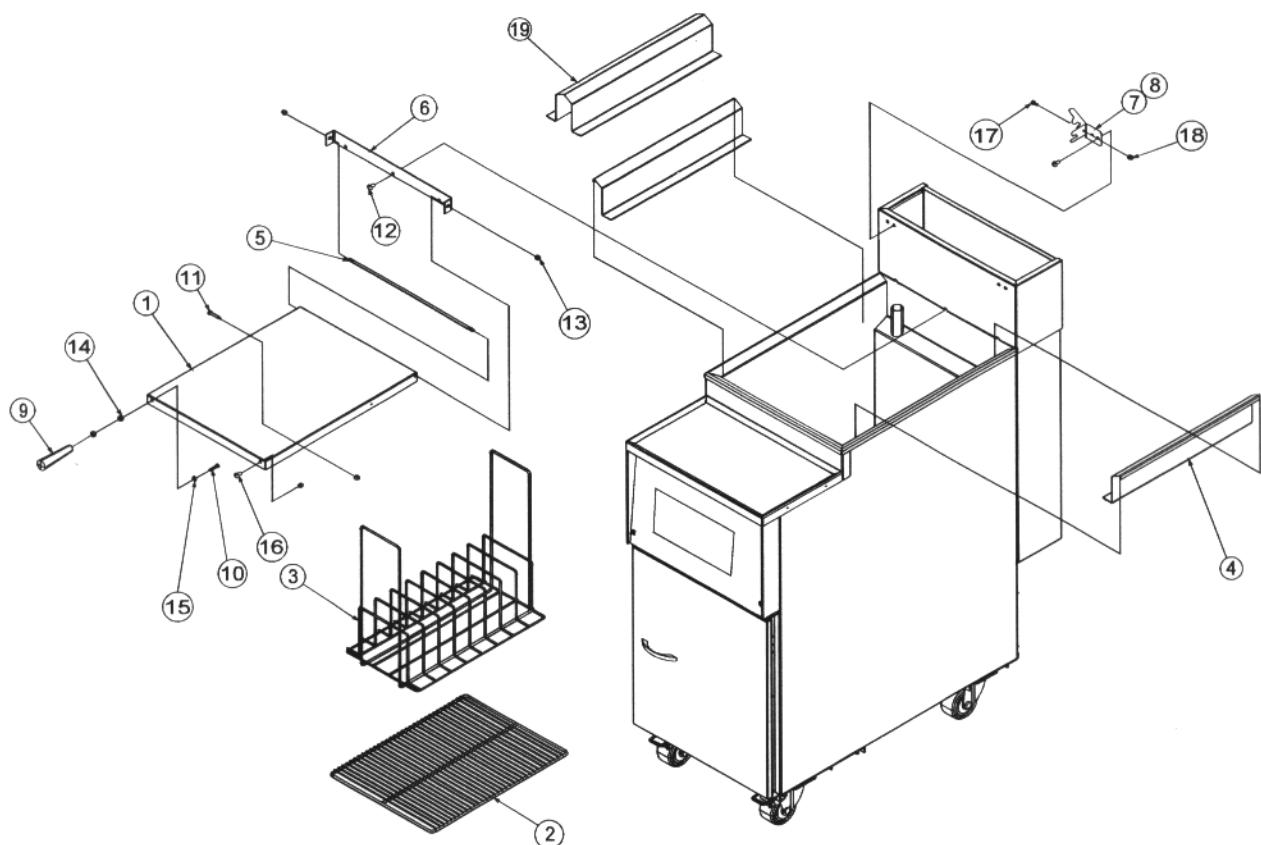
| Item | Qty/ Unit | Part Number | Description | Gas/Electric |
|------|--------------|----------------|---------------------------------|--------------|
| 1 | 1 | PPI0565 | Drain Valve, SS | Gas/Electric |
| 2 | 1 | B4000802 | Handle Assembly | Gas/Electric |
| 3 | 2 | B8015102 | Connector, Drain Outlet | Gas/Electric |
| 4 | 2 | B8015202 | Tube Drain Outlet | Gas/Electric |
| 5 | 2 | PP10034 | Clamp | Gas/Electric |
| 6 | 1 | PP10032 | Gasket | Gas/Electric |
| 7 | 2 | PP10620 | Clamp, Worm type | Gas/Electric |
| 8 | 1 | A3318602 | Hose, Overflow | Gas/Electric |
| 9 | 1 | PPI0747 | Solenoid, Water Fill | Gas |
| | 1 | PP10982 | Solenoid, Water Fill | Electric |
| 10 | 1 | PPI0742 | Filter | Gas/Electric |
| 11 | 1 | PP10753 | Valve, Ball 3/8" Bronze | Gas/Electric |
| 12 | 1 | PP10726 | Valve, Check (Non Return) | Gas/Electric |
| 13 | 4 | PP10663 | Plug, SS 1/4 NPT | Gas |
| 14 | 1 | A3318002 | Deflector, Water Inlet | Gas/Electric |
| 15 | 1 | A3318102 | Shield, Probe | Gas/Electric |
| 16 | 2 | P0142000 | Nut, Acorn 10-24 SS | Gas/Electric |
| 17 | 2 | PPI0698 | Screw, 10-24 x 5/8 SS | Gas/Electric |
| 18 | 4 | PPI0666 | Washer, Nylon | Gas/Electric |
| 19 | 2 | PP10667 | Washer, Shoulder Nylon | Gas/Electric |
| 20 | 2 | P0092300 | Nut, Keep 10-24 | Gas/Electric |



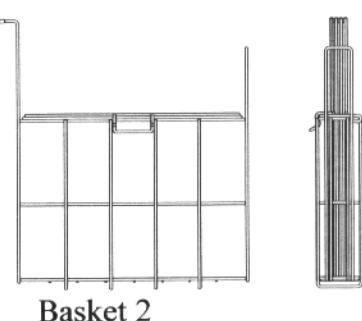
Tank and Fluid Components

Accessories:

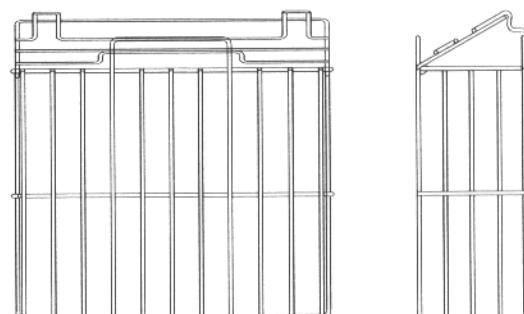
| Item # | Qty/ Unit | Part Number | Description | Gas/Electric |
|----------|--------------|----------------|---|--------------|
| 1 | 1 | A3317902 | Cover | Gas/Electric |
| 2 | 1 | A4509301 | Tube Rack | Gas |
| 3 | 1 | B4509402 | Taco Rack | Gas/Electric |
| 4 | 2 | A5053602 | Pan Holder End | Gas/Electric |
| 5 | 1 | A3318704 | Hinge rod | Gas/Electric |
| 6 | 1 | A3317802 | Support Hinge Rod | Gas/Electric |
| 7 | 1 | B3311001 | Catch, Cover - LH..... | Gas/Electric |
| 8 | 1 | B3311002 | Catch, Cover - RH | Gas/Electric |
| 9 | 1 | P6071251 | Handle | Gas/Electric |
| 10 | 2 | PP10670 | Bolt 1/4-20 x 1" SS | Gas/Electric |
| 11 | 1 | P0048980 | Screw, 10-32 with 1" shoulder | Gas/Electric |
| 12 | 3 | PP10698 | Screw, 10-24 x 5/8" SS | Gas/Electric |
| 13 | 2 | PP10668 | Nut, Acorn 1/4-20 | Gas/Electric |
| 14 | 2 | PP10669 | Nut 1/4-20 SS | Gas/Electric |
| 15 | 1 | PP10673 | Washer, Split Lock 1/4" SS | Gas/Electric |
| 16 | 1 | PP10729 | Screw 1/4-20 x 3/8" SS..... | Gas/Electric |
| 17 | 1 | P0112000 | Screw, 10-24 x 1/2" SS | Gas/Electric |
| 18 | 1 | P0142000 | Nut, Acorn 10-24 SS | Gas/Electric |
| 19 | 1 | A5053702 | Pan Holder Center - Dual Units Only | Gas/Electric |
| Basket 1 | | B4511101 | Basket, Suitcase | Gas/Electric |
| Basket 2 | | B4511501 | Basket, Narrow | Gas/Electric |
| Basket 3 | | B4511601 | Basket, Wide | Gas/Electric |



Basket 1

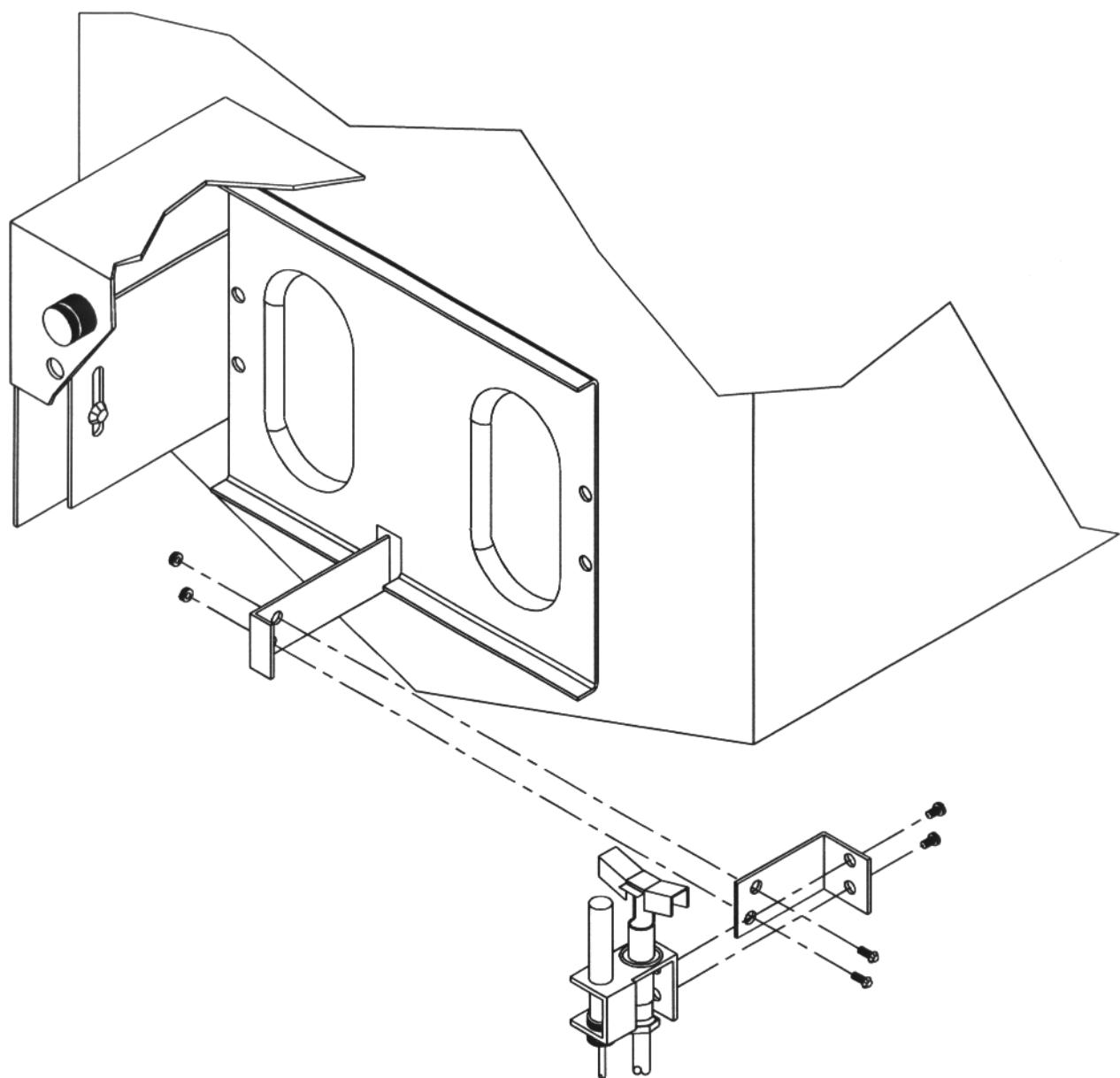


Basket 2

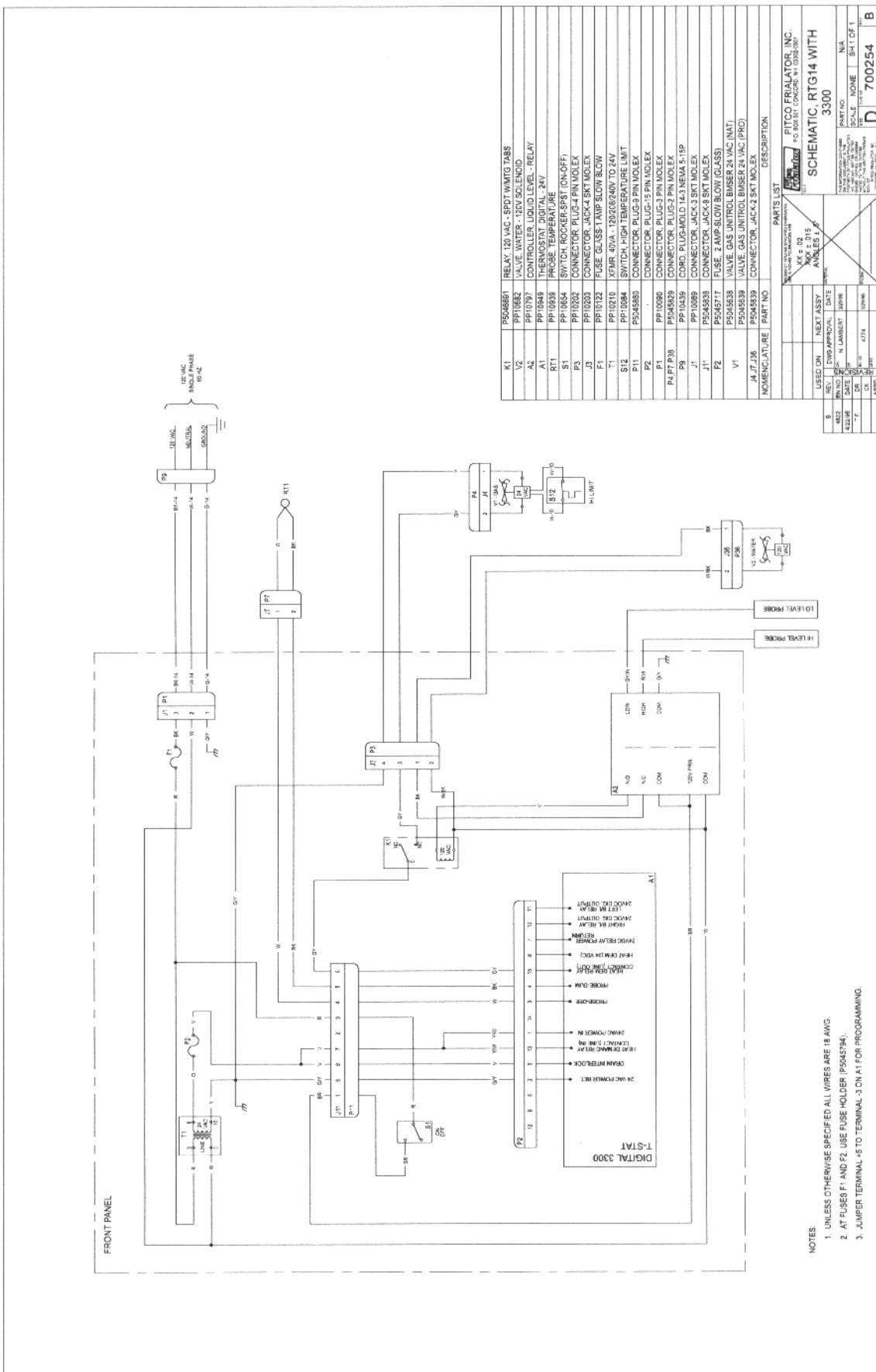


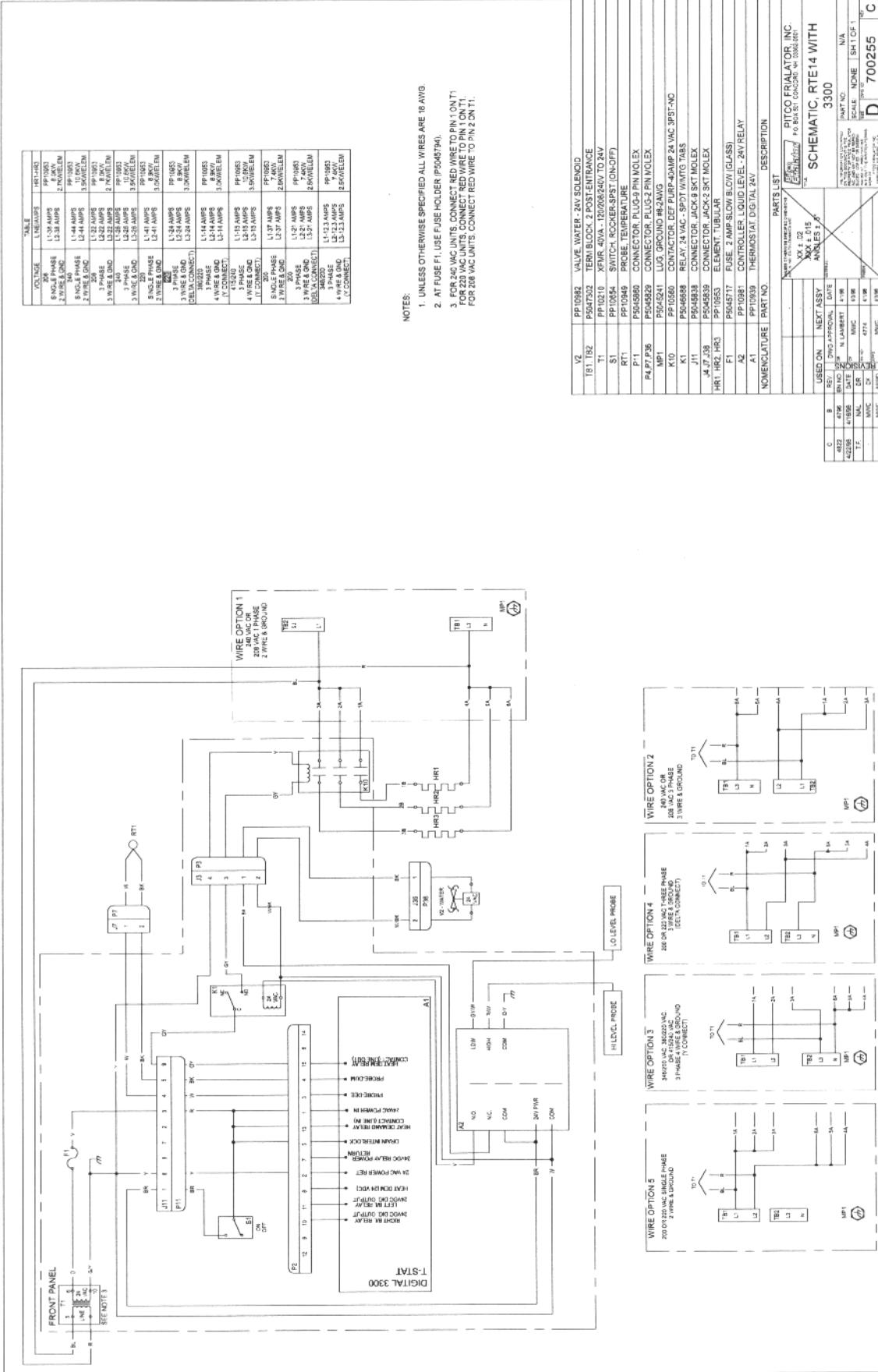
Basket 3

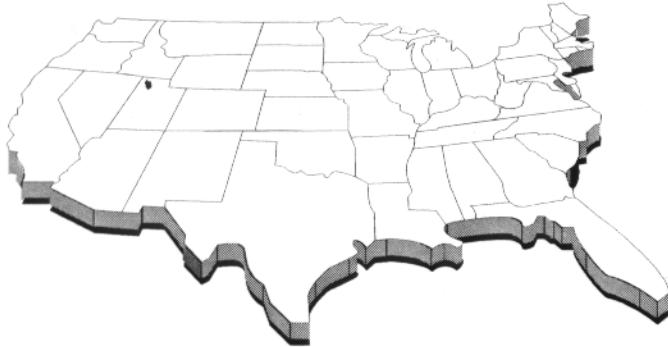
Accessories



Drawing showing the location of the Pilot Assembly with
the Burner Shield in place.







In the event of problems with or questions about your equipment, please contact your local ASAP (Authorized Service and Parts) representative. You can find their number by calling the:

NATIONAL SERVICE COOPERATIVE

1(800)298-1862

To obtain copies of this Installation, Operators and Maintenance Manual at NO CHARGE please contact Pitco Frialator at the following address:

**Pitco Frialator Inc.,
P.O.BOX 501
CONCORD, NH 03302-0501**

In the event of problems with or questions about your order, please contact the Pitco Frialator factory, from 8:00 a.m. - 5:00 p.m., Eastern Standard Time, Monday through Friday, toll-free at:

(800)258-3708 US and Canada only
(603)225-6684 World Wide