

## Models FEC300/500/750

Please read this entire manual for installation and use of these smokers. Failure to follow these instructions could result in property damage, bodily injury or even death.

Contact local building or fire officials about restrictions and installation inspection requirements in your area.

**SAVE THESE INSTRUCTIONS.**



**FEC750**  
(With optional  
smoke evacuator)



**FEC500**



**FEC300**

Version 14  
08/2014



Serial Number: \_\_\_\_\_

Dear Cookshack Customer,

Your Fast Eddy's™ by Cookshack rotisserie smoker oven will produce great barbecue and smoked foods. It is easy to operate, clean and maintain. Use this operator's manual to familiarize yourself with the smoker and its operation. If you have a question or problem not covered in the manual, call us as **1.800.423.0698** Monday through Friday, 9:00 a.m. to 4:00 p.m CST or email us at [info@cookshack.com](mailto:info@cookshack.com). You can also join the **Cookshack Barbecue Forum** on our website at [www.cookshack.com](http://www.cookshack.com) which has participation by both Cookshack customers and employees.

These units are NSF and USDA approved, Warnock Hershey and ETL Listed Commercial Cooking Equipment in both the USA and Canada.

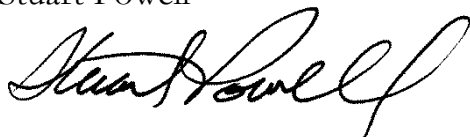
You must observe safe operating practices when using the smoker. Cookshack, Inc. assumes no responsibility for results of careless and dangerous operation of Cookshack smokers or other products. All warranties are null and void if the practices described in the Operator's Manual are not observed.

Read the following instructions thoroughly and completely before using your smoker! Observe the instructions carefully. Be certain that you understand completely how it functions before attempting to operate it.

This smoker oven is intended for use as a food smoker. It is not intended for any use not specifically described in this manual. Misuse of this smoker can result in serious injury and a fire hazard.

With these precautions in mind, enjoy your smoker and the delicious foods it will produce.

Stuart Powell



President and CEO  
Cookshack Inc.  
2304 N Ash Street  
Ponca City, OK 74601

**Find Cookshack on all your favorite Social Media!**



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## General Safety Instructions

**This equipment is designed and sold for commercial use only. Only licensed professionals should work on or service this equipment.**

Keep the oven free from combustible materials.

Never store or use gasoline in the vicinity of this oven.

Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or “freshen up” a fire in this oven. Keep all such liquids well away from the oven while in use.

Whenever working on, or servicing this unit **ALWAYS** disconnect the power.

This oven is equipped with a 3-prong plug for your protection from shock hazard. Always plug this unit directly into a properly grounded 3-prong receptacle.

**WARNING!** Exterior surfaces may be **HOT!**

Make sure all operator personnel are instructed on the proper use of the oven.

**A MAJOR CAUSE OF OVEN-RELATED FIRES IS FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS. IT IS OF UTMOST IMPORTANCE THAT THIS OVEN BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.**

Never leave firebox door open while the oven is running.

Never use a high-pressure washer around electrical components.

Always drain grease DAILY.

All switches should be in the “OFF” position when plugging into the receptacle

## Included Equipment

Once you have unpackaged your smoker, you should find the following standard equipment:

- Rotisserie racks (15)
- Foot pedal
- Cookbook
- Operator's Manual
- Pellets
  - FEC300 and FEC500 come with 80 lbs. of pellets
  - FEC750 comes with 160 lbs. of pellets
- Casters (not included if mounted on a trailer)
- Spice Kit
  - 1 gal. Spicy Barbecue Sauce
  - 1 gal. Mild Barbecue Sauce
  - 5 lbs. Brisket Rub
  - 5 lbs. Rib Rub
  - 5 lbs. Spicy Chicken Rub
  - 10 oz. Chili Mix
  - 10 oz. Spicy Barbecue Sauce Mix

## Electrical Specifications

The unit requires a separate 120 volt, 20 amp circuit. The unit must be grounded in accordance to your local codes or with the National Electric Code ANSI/NFPA 70-1990.

- 110 volts
- 60 HZ
- Single phase
- 15 amp

## General Installation Instructions

Local Code Officials and a Commercial Kitchen Ventilation Contractor should be consulted prior to installation to determine the need to obtain a permit. Unit must be installed per state and local fire codes and NFPA 96.

**WARNING!** Unit is very HEAVY, and extra care must be taken when unloading and moving.

Provisions must be made for adequate air supply for the oven. If the oven is to be installed in a sealed room or building utilizing exhaust fans, the room must be supplied with a return air system. Return air must be equal or slightly higher than that of the exhausted air.

**WARNING!** Do not pack required air spaces with insulation or other materials.

Unit may be installed under a hood in accordance with your local codes. If a hood is not used, then the flue is required to be a minimum five (5) inches in diameter, type “L” pipe and is to extend three (3) feet above the highest point where it passes through the roof. It also needs to be at least two (2) feet higher than any portion of a building within ten (10) feet or in accordance with state and local fire codes (NFPA96). A rain cap must be utilized on a flue exhaust.

**DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.**

**DO NOT CONNECT THIS UNIT TO A FLUE SERVING ANOTHER APPLIANCE.**

Attachment and securement of the exhaust venting system to the product and to each adjoining section of connector pipe are required to be fastened with at least three screws.

## Location

Stationary installation should be on a level surface that can support a minimum weight of 2500 lbs.

The unit requires adequate air. Ventilation is required for the proper operation of burner and cooking motors.

Keep the oven free from combustible materials. A good rule of thumb is to allow an 18 inch clearance space around gear motor access panel and the fire pit door opening.

Minimum spacing from combustible material is 6”; these clearances must be maintained unless materials used are non-combustible. Following is the recommended service spacing:

- Top – 18.”
- Left Side – 24” to load pellets and maintenance of rotisserie.
- Right Side – 24” for ash removal.
- Front – 48” for loading and unloading of product.
- Back – 24” maintenance of convection fan.

- Floor – May be combustible material except for area under the firebox. This must be a non-combustible material and must extend 6” beyond each side of the firebox.

## Venting

- Unit may be installed under a hood in accordance with your local codes. If a hood is not used, then the flue is required to be a minimum five (5) inches in diameter, type “L” pipe and is to extend three (3) feet above the highest point where it passes through the roof. It also needs to be at least two (2) feet higher than any portion of a building within ten (10) feet or in accordance with state and local fire codes (NFPA96). A rain cap must be utilized on a flue exhaust.
- When planning your flue, it is important to remember several items:
  - It must draw air naturally through the flue.
  - The flue should be cleaned every six (6) months.
  - One (1) inch clearance from combustible materials.
- The installation of a flue will vary depending on the location and local codes; however, the flue should not have more than two (2) ninety-degree elbows in it and should not be longer than thirty (30) feet.
- The optional smoke evacuator requires a ten (10) inch pipe, minimum 24 gauge with mushroom type fan (minimum 280 cfm) mounted on roof (not provided by Cookshack). Pipe needs three (3) inches clearance from combustibles. The fan must be run on a separate electrical circuit from the smoker.

## Exhaust Systems

- All Fast Eddy’s™ by Cookshack Rotisserie Units come with a standard system which vents smoke out of the oven through a 5 inch pipe. It is the customer’s responsibility to provide a method to move smoke from this exhaust to the outside following applicable local codes (NFPA 96). This system must remain in place any time the unit is operated inside a building.
- Cookshack, Inc. offers an accessory called the “Smoke Evacuator System” – Figure 1. This system is activated automatically when the doors are opened and operates by drawing smoke from inside the oven and venting it out the top of the unit. This prevents smoke from escaping into the work area each time the operator open the doors. The customer is responsible for supplying the

ducting and fan needed to carry the smoke from the Smoke Evacuator System to the outside.



**Figure 1 - Accessory, Smoke Evacuator System**

**\*\*\*IMPORTANT\*\*\* READ CAREFULLY**

**ADEQUATE MAKEUP AIR IS REQUIRED FOR SAFE OPERATION. Consult manual for more information. It is your responsibility to maintain essential combustion air at all times during operation of unit.**

- Positive Air Flow through the combustion chamber must be maintained for safe and proper operation of the unit.
- Burner air flow may be affected by one or a combination of the following.
  - Improper flue installation
  - Inadequate makeup air for hood system or exhaust fans
  - Competing hood systems or ventilation in the building
  - Extreme drafts or inadequate clearance
- Please contact Cookshack Customer Service with any questions at **1.800.423.0698** Monday through Friday, 9 AM to 4 PM CST or email us at [info@cookshack.com](mailto:info@cookshack.com).



## Operating Instructions

1. Before starting, check the following:
  - Pellets are loaded in pellet hopper
    - **Only 100% hardwood food-grade pellets** should be used in your smoker. Pellets should be no larger than 1/4" in diameter and 3/4" long. Use of heating fuel pellets can be harmful to both the food you are cooking and your smoker.
  - Ensure that the fire pot is clean and clear of ash.
  - Check to ensure there is not a buildup of grease in the bottom of the cooking chamber.
2. Make sure the pellet slide is clean.
3. Set your time and temperature (for instructions see "Control Panel Operations")
4. Push the "START" button on the control panel. Unit has an automatic ignition system.
5. In the event of igniter system failure, use the following manual lighting instructions **WITH OVEN OFF**:
  - Pour 1/2 cup of pellets into the fire pot.
  - Squirt approximately 2 tablespoons of alcohol gel into the fire pot.
  - Ignite with a match. **NOTE: Never attempt to squirt alcohol gel into burning embers. This has the potential for serious injury.**
  - Let the pellets burn for 4 to 5 minutes.
  - Set the thermostat to 180°F.
  - Press Start.
6. Always preheat the oven to at least 180°F prior to cooking. This should take approximately 10 to 15 minutes.
7. Ensure the foot pedal is plugged in (Figures 2 & 3).



**Figure 2-FEC300 Foot Pedal  
Plug-In  
Side of Controller**



**Figure 3-FEC500 & FEC750  
Foot Pedal Plug-In  
Front Bottom of Controller**

- With the rotisserie on/off switch in the Off position – rotisserie will not rotate with the foot pedal
- With the rotisserie on/off switch in the On position - rotisserie will rotate when door is closed. When the door is open you can control the rotisserie by depressing the foot pedal.

## Control Panel Operation



Figure 4-Control Panel

**ALWAYS CLEAN THE FIRE POT BEFORE RESTARTING THE OVEN.**

**Note:** The “MODE” and “PROBE TEMP” buttons are NOT operational on the FEC300, FEC500 or FEC750. Since the smoked product rotates, it is not possible to connect a probe.

- Recommended cooking times and temperatures are based on full loads with no holding cycle. Larger or smaller loads or the addition of holding time may require adjustment of cooking time and temperature.
- When you think the product is finished, turn the Master Switch to the OFF position. Wait ten minutes before opening the oven door to check the product for doneness.
- When the product is done to your satisfaction, remove from the smoker.
- An audible signal indicates that the cook cycle is complete and that the oven is going to the Hold Temperature Mode.
- In order to see the set cooking temperature, probe temperature or holding temperature, briefly press the corresponding button.

## Cook Mode

COOK MODE is for standard operation and is the default mode. In COOK MODE the oven will cook at the set cooking temperature for the set cooking time. At that point, the controller will change to the set holding temperature and remain there until the unit is manually shut down.

1. Turn Master Switch on the oven control panel to the ON position.
2. Set cooking temperature by pressing and holding the COOK TEMP button while using the ADJUST TIME OR TEMP buttons to change settings.
3. Set holding temperature by pressing and holding the HOLD TEMP button while using the ADJUST TIME OR TEMP buttons to change settings.
4. Set cooking time by pressing and holding the COOK TIME button while using the ADJUST TIME OR TEMP buttons to change settings.
5. Press START.

**PLEASE NOTE** that the oven temperature displayed while the oven is running is the actual air temperature inside the oven.

## Preset Buttons

- The IQ4 controller is equipped with two “**PRESET BUTTONS**” for easy selection of common settings for popular foods.
- Pressing the button marked **RIBS OR CHICKENS** will make the following settings:
  - Cook Temp 224°F
  - Hold Temp 140°F
  - Cook Time 3 hours
- Pressing the button marked **BRISKET** will make the following settings:
  - Cook Temp 224°F
  - Hold Temp 140°F
  - Cook Time 12 hours
- Once one of these preset buttons has been pushed you may start a cook cycle using these settings by simply pressing “START.”

The “**RESET BUTTON**” is used to clear the current instructions and cause the IQ4 to start over from the beginning.

**NOTE:** Oven temperature must be below 130°F before the oven will re-light.

## Loading Instructions

**IMPORTANT:** Do not overload your smoker. Use the Smoker Oven Maximum Load Capacity chart below to determine the largest amount load of your smoker. Capacities are based on 3 lb. ribs, 8-10 lbs. per heavy cut and 3 lbs. chickens. Capacities are specifically limited by the amount of heat available. Fill smoker 50-100% capacity for best results.

	Pork Butt	Brisket	Ribs	Chicken
FEC300	350 lbs.	300 lbs.	100 lbs.	45 whole
FEC500	500 lbs.	450 lbs.	150 lbs.	70 whole
FEC750	750 lbs.	700 lbs.	300 lbs.	110 whole

- When loading meat load the bottom racks first. In order to make a product fit, it may be necessary to remove the middle rack on a section when cooking thick cuts of meat like whole briskets or pork butts.
- The product needs to be loaded so that the racks are balanced – i.e. hang evenly on the arm when finished. When loading briskets place them so that heavy ends and flat ends are on alternate sides of the rack.
- When loading turkeys allow ample room between them and adjoining racks. This is necessary so that when the rotisserie turns the wings and legs do not catch on the rack above or below and dump off the rack.
- After loading racks, be sure to advance the rotisserie at least two revolutions, using the foot pedal, to check for adequate clearance of the produce on the walls of the cooking chamber and other racks. Reposition product if necessary.

## Shut Down and Maintenance Procedure

Press the reset button and wait 10 minutes to allow for cooling before opening the smoker then turn the master on/off switch to the “**OFF**” position.

To properly maintain your smoker, consider the following:

- Soot and Fly ash:
  - The products of combustion will contain small particles of fly ash. The fly ash will collect in the exhaust venting system and restrict the flow of the flue gases. Incomplete combustion such as occurs during

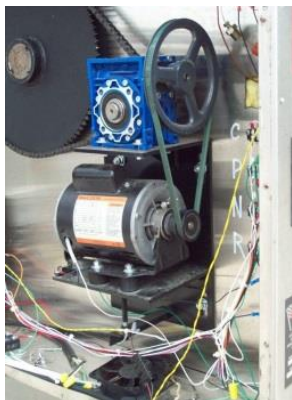
startup, shutdown or incorrect operation of the smoker oven will lead to some soot formation which will collect in the exhaust venting system.

- The exhaust venting system should be inspected every six months to determine if cleaning is necessary.
- Clean ash from the fire pot and combustion chamber weekly or if it appears as if there is a buildup of ash.
- Disposal of ash – Ash should be placed in a metal container with a tight-fitting lid. The closed container of ash should be placed on a noncombustible floor or the ground, well away from all combustible materials, pending final disposal. If the ash is disposed of by burial in soil or otherwise locally dispersed, it should be retained in the closed container until all cinders have thoroughly cooled.
- Grease rotisserie bearings using 2 to 3 squirts of high-temperature food grade bearing grease every 1 to 2 weeks – Figure 5.

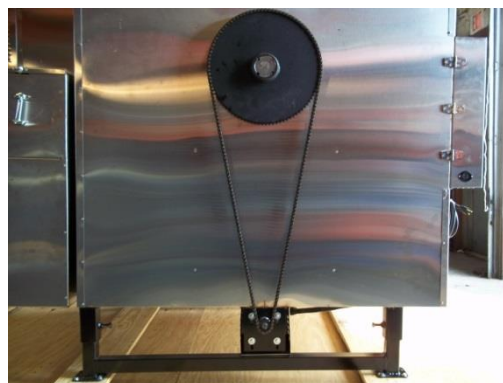


**Figure 5 - Greasing rotisserie bearings**

- Lubricate rotisserie drive chain every six months, also check chain tension and adjust by loosening bolts and using motor weight to create tension
  - Figure 6a- FEC500 and FEC750 drive chain and tension adjustment
    - Must remove Control Panel Cover to access
  - Figure 6b- FEC300 drive chain and tension adjustment



**Figure 6a**



**Figure 6b**

- Clean the racks and inside of cooking chamber with a degreaser. You can power wash grills weekly (Recommended cleaner is Zep FS10184 Degreaser).
  - **NOTE: PROTECT ALL ELECTRICAL COMPONENTS FROM MOISTURE DURING THIS PROCESS.**
- If the oven is stored outdoors care should be taken to ensure that water does not get into the pellet hopper. Wood pellets expand greatly when wet and will jam the auger system. A vinyl cover for the hopper is highly recommended.
- Brush the Convection fan blades off once per month – Figure 7.
- Clean the pellet slide once per month to prevent pellet dust buildup – Figure 8.



**Figure 7 – Convection Fan Cleaning**



**Figure 8 – Pellet Slide Cleaning**

## Troubleshooting Guide

This is an initial guide for troubleshooting. If any of the following steps do not correct your issue, contact Cookshack Customer Service at 1.800.423.0698.

Trouble	Probable Cause	Solution
Control panel does not power up	Unit is not plugged into a working outlet (110 VAC)  Main fuse on control panel  450° limit switch tripped	Check the outlet to ensure it is working or plug into alternate source  Replace fuse with 15 amp fuse only  Unplug unit and reset the limit switch by pushing in on the button (FEC300 Reset is on the left side of the smoker by the control panel while the FEC500 and FEC750 Reset is on the front panel below the fuse)
Rotisserie is not rotating with foot pedal but does rotate during the cook mode	Foot pedal is not plugged in correctly	Plug in foot pedal
Rotisserie does not function in cook mode but does function with foot pedal	Door switch	Ensure that the door is closed, and the switch is contacted
Rotisserie is not working at any time	Rotisserie drive problem	Unplug unit  Remove electrical/mechanical service panel  Confirm that the chain drive is in place and tight

		<p>Confirm that the drive belt from the motor to the gearbox is in place and tight</p> <p>Check fuse and replace with 7 amp fuse</p>
Fire goes out during operation	<p>Pellet hopper is empty</p> <p>Auger motor is turning but the auger is not turning</p> <p>Not enough intake air</p>	<p>Inspect hopper and clean pellet dust out and fill with pellets</p> <p>Check shear pin between auger and motor-replace if broken</p> <p>Check auger for binding-clear cause of binding (such as jammed pellets)</p> <p>Check air intake air fan-if not turning, contact Customer Service</p> <p>If fan is turning, refer to installation instructions and verify that the vent pipe is properly installed</p>
Fire does not light	<p>Excessive pellet feed</p> <p>Pellet Hopper is empty</p> <p>Switch on pellet hopper is not in contact with the lid</p>	<p>Pellet auger is not cycling, contact Customer Service</p> <p>Inspect hopper and clean pellet dust out, then fill with pellets</p> <p>Clear pellets so the lid will fully close or adjust the switch to make contact</p>



		with closed hopper lid
	Dirty fire pot	Open firebox and clean fire pot and try to restart unit
	Trouble with igniter	<p>Open pellet hopper lid and push the start button</p> <p>Open the firebox and feel over the pot. If the pot is hot, the igniter is fine. If pot is cold, contact Customer Service.</p> <p>You can manually light the unit also-see procedure in startup section</p> <p>Check air intake fan-if not turning, contact Customer Service</p>
	Not enough intake air	If fan is turning, refer to the installation instructions and verify that the vent pipe is properly installed
	Oven temperature is over 130°F	Light manually or wait for oven to cool

## Limited Warranty Policy

Cookshack Smoker Ovens are guaranteed to be free from defects in material and workmanship under normal use and when installed in accordance with factory recommendations. **Warranty is voided unless 100% hardwood food-grade pellets are used.**

This limited warranty includes parts and labor for the first 90 days. Following the 90 day period, the two (2) year limited warranty is for parts only.

Cookshack, Inc.'s obligation under this warranty shall be to repair or replace at its option any part deemed defective upon examination by Cookshack, Inc., or its authorized agent, for a period of two (2) years from the date of sale.

Customer must obtain approval from Cookshack, Inc. before performing any service. Cookshack, Inc. is not responsible for any unauthorized service work.

1. The Limited Warranty extends to the original purchaser only.
2. To make claim or request for the Limited Warranty, the original purchaser must notify Cookshack, Inc. Customer Service for instructions as to the repair or replacement of the defective merchandise prior to attempting or contracting for repair of the oven. (See following page for Return Merchandise Policies).
3. The model number and serial number of the Cookshack Smoker Oven must accompany any request for service to the oven.
4. The Limited Warranty shall not apply if the merchandise has been improperly installed; damaged due to abuse, misuse, misapplication, accident; or as a result of service or modification by any other than an authorized Cookshack, Inc. service agent.

There are no express warranties other than the limited warranty stated herein above. No warranties whether express or implied, including, but not limited to, any implied warranties of merchantability of fitness for a particular purpose, shall extend beyond the respective warranty periods described above. Cookshack, Inc. shall not be liable for any direct, indirect, special, consequential, incidental, or punitive damages; lost profits or loss of use or interruption of business regardless of the form of action or theory of liability resulting from any defect in or use of the Cookshack smoker oven, accessories and/or heating elements.

Additional information on obtaining service under this Limited Warranty is available on the following page or by contacting a Cookshack, Inc. Customer Service Representative directly at (800) 423-0698.

## Return Merchandise Policy

If you have merchandise that you believe is defective and requires repair or replacement:

1. Call Cookshack, Inc. at (800)423-0698. Ask to speak to a Customer Service Representative. Have your Smoker Oven model number and serial number ready.

If you are advised to return the merchandise to the factory for repair or replacement, please observe the following procedures.

2. You will be issued a return number. A Customer Service Representative will issue you a return number and/or mail you an instruction form (called a Return Merchandise Authorization) for returning the merchandise with the return number on it.

All return merchandise must have a return number. Do not return merchandise without a return number.

3. Attach the return number to the merchandise.

If you were sent a Return Merchandise Authorization, attach it to the merchandise you are returning.

If you were issued an RETURN NUMBER by phone and not sent a Return Merchandise Authorization, attach a note to the merchandise with your name, address and RETURN NUMBER.

Print the RETURN NUMBER on the outside of the return packaging.

4. Ship the merchandise back to Cookshack.

Return the merchandise to Cookshack, Inc., shipping prepaid, F.O.B. destination, in the original container or equivalent.

All return merchandise must be shipped to: Cookshack, Inc., 2304 N. Ash St., Ponca City, OK, 74601.

You assume the risk of any loss or damage that occurs during transit due to improper packaging of the returned merchandise. Use the original container that the merchandise was shipped in or equivalent.

5. Repair or replacement of merchandise under warranty.

Replacement or repairing defective merchandise is at Cookshack, Inc.'s option.

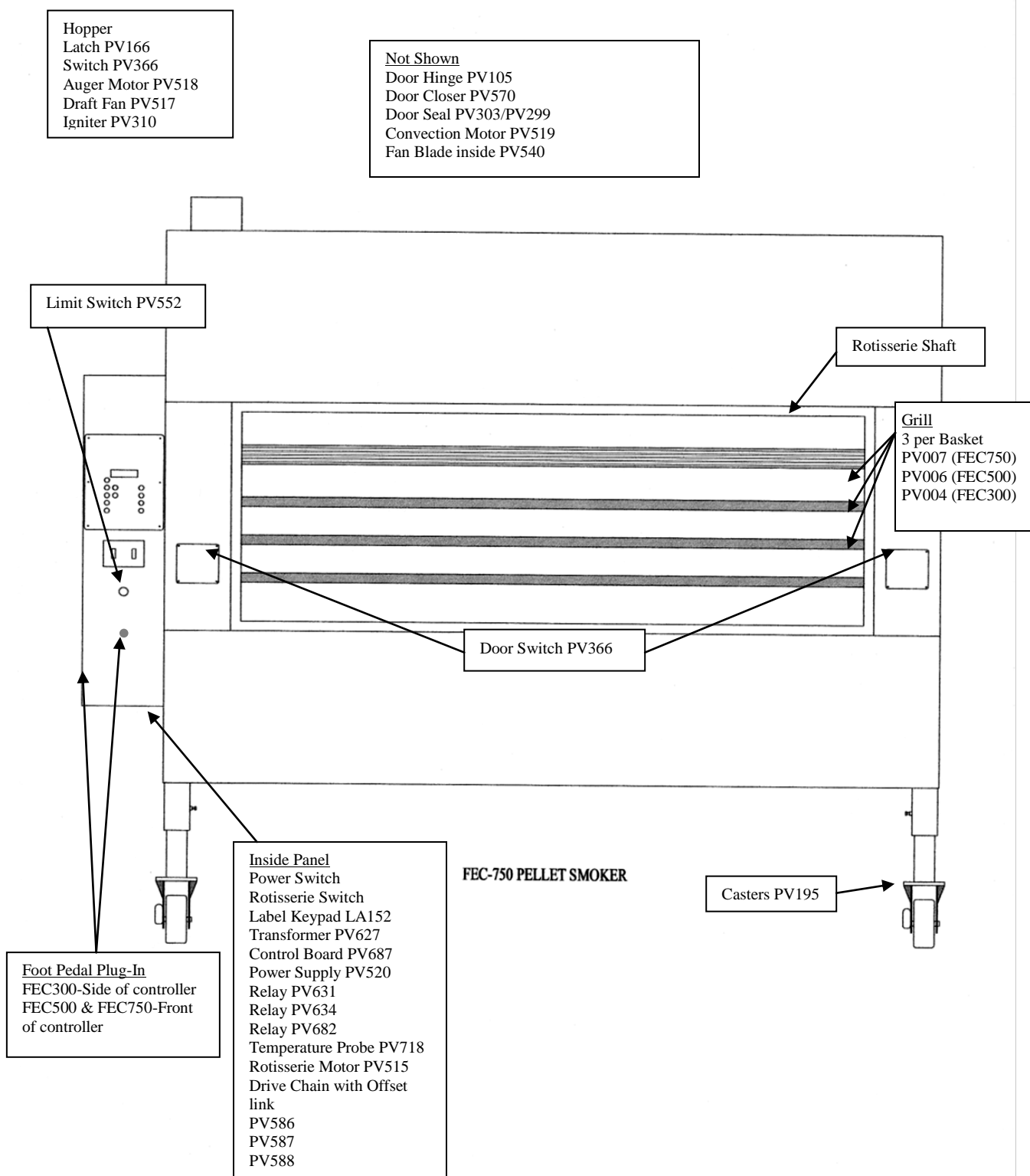
If repair of merchandise is deemed necessary by Cookshack, Inc. you will be instructed as to the necessary arrangements in order to affect the repair of the merchandise.

If replacement merchandise is deemed necessary by Cookshack, Inc. you will be invoiced for the replacement merchandise upon shipment. Credit for merchandise under warranty deemed to be defective by Cookshack, Inc. will be issued upon return of the defective merchandise.

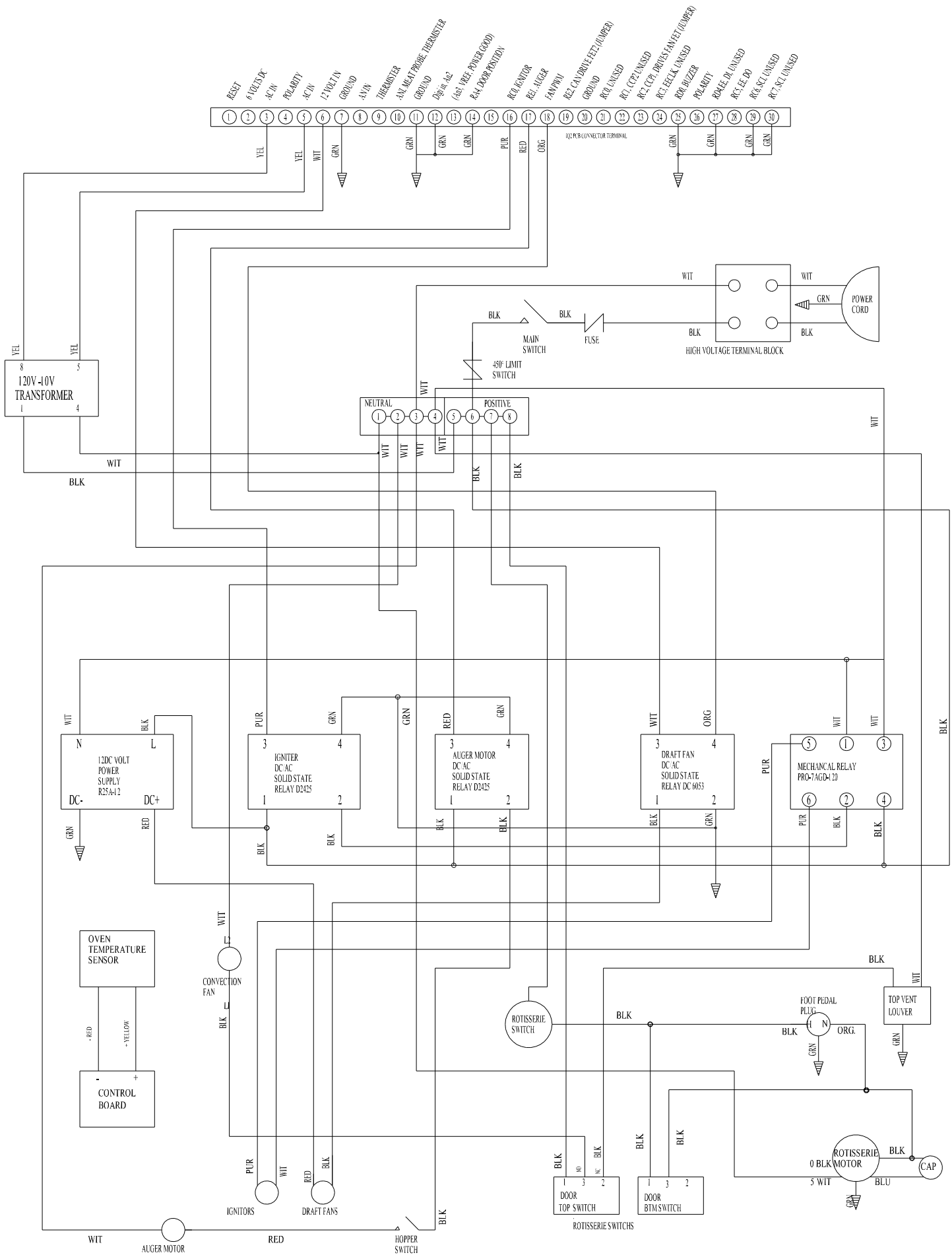
Credit may be denied if the returned merchandise is not found to be defective by Cookshack, Inc.; if it is not under warranty; if it is not received at Cookshack, Inc. 30 days after your RETURN NUMBER is issued; if it is damaged due to abuse, misuse, misapplication or accident; if it has been serviced or modified by any other than an authorized Cookshack, Inc. service agent; is not returned with an RETURN NUMBER; is not in clean condition; is not complete; is damaged or lost in transit.

Replacement merchandise is sent to you via UPS Ground or common carrier. If you request replacement merchandise to be sent by faster service than UPS Ground or common carrier you shall incur the cost of shipping.

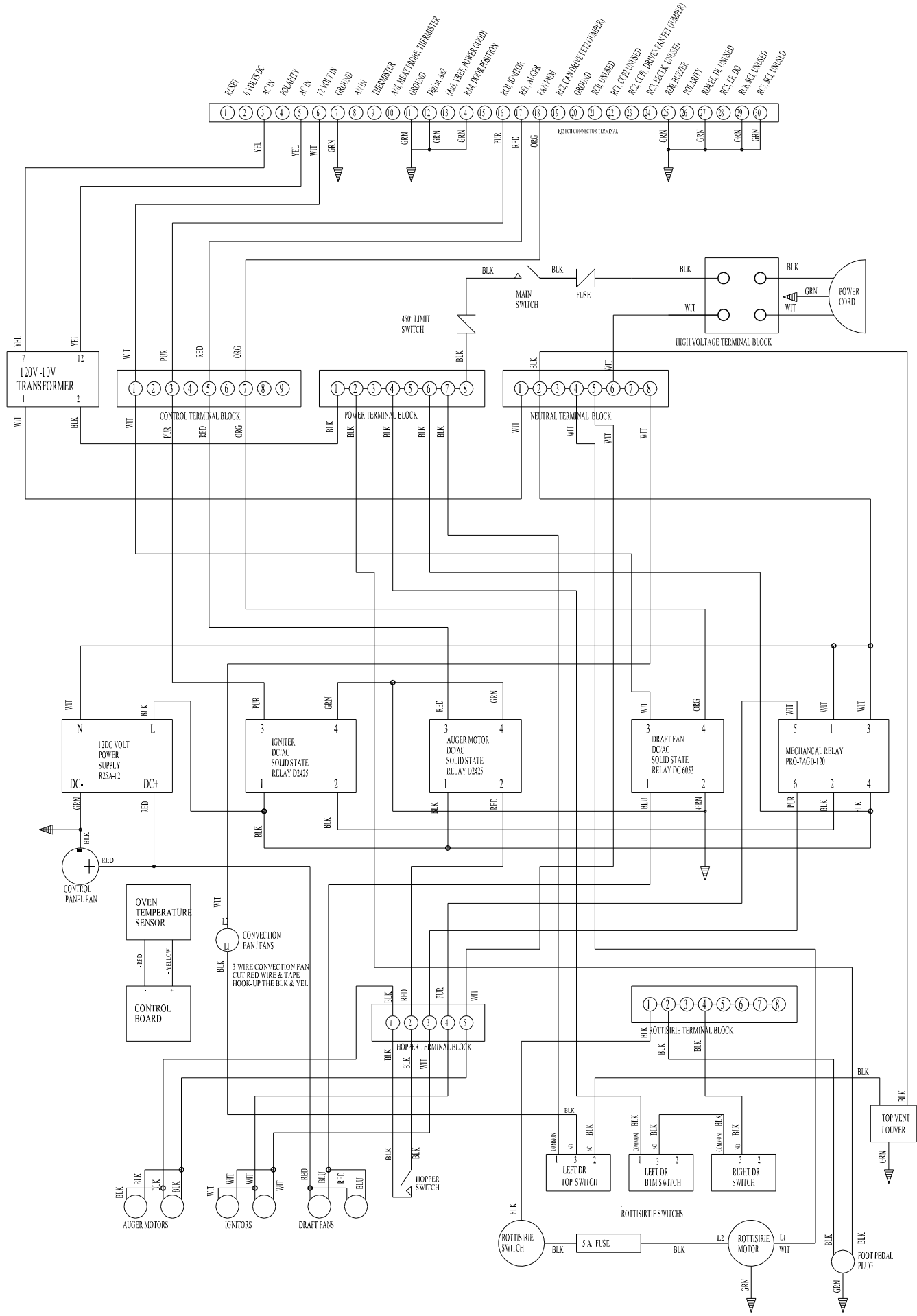
# Rotisserie Illustration



# FEC 300 120 VOLT WIRING DIAGRAM



## DATE 7/21/14



FEC 750 120 VOLT WIRING DIAGRAM

DATE 7/24/14

