

## WARRANTY INFORMATION

Your Yoder YS640 is fully backed by our exceptional customer support and warranties. The igniter is warranted for 1 year; the 10-gauge cooking body for 10 years, and the control system for 3 years. Tires and casters are warranted for 1 year against manufacturing defects. Register the warranty information online at: [www.yodersmokers.com](http://www.yodersmokers.com)

Firmware updates are offered to users through our dealer network and by inquiry to our customer service email address. We will send a hand held programmer on loan and instructions for completing a firmware upgrade.

For product support contact: [customerservice@yodersmokers.com](mailto:customerservice@yodersmokers.com).

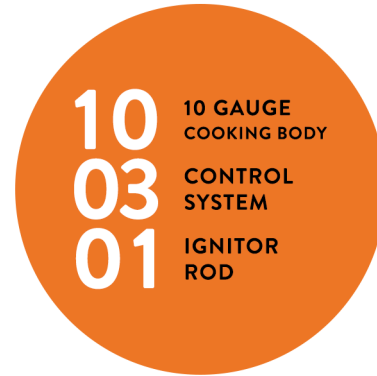
Please also visit our forum for the product information and advice on our product.

**Yoder Community Forum:** <http://community.yodersmokers.com>



[WWW.YODERSMOKERS.COM](http://WWW.YODERSMOKERS.COM)

### WARRANTY BREAKDOWN



YODER SMOKERS

# YS640 PELLET COOKER - 32"

OPERATIONS MANUAL

VERSION 8.4 - JULY 2016

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## Dangers, Warnings and Cautions



- Failure to follow the “Dangers, Warnings and Cautions” may result in serious bodily injury, death, or fire.
- Read this manual completely before using your Yoder for the first time.
- Keep the grill a minimum of 12 inches away from combustible surfaces.
- The cooking chamber door must remain closed during the cool-down cycle. Failure to do so can cause burn back in the hopper.
- Do not modify the holes in the burn grate.
- Do not add pellets by hand to the burn grate when the grill is in use.
- Do not use your grill in the rain or around any source of water.
- Do not leave your grill unattended during operation.
- Close supervision is necessary when any appliance is used by or near children.
- Do not transport your grill while operating or when the grill is hot. Make sure the fire is out and the grill is cool before moving.
- Extreme caution must be used when moving an appliance containing hot oil or other hot liquids.
- Exterior surfaces on the grill will be hot when in use and during cool down.
- Unplug from outlet when not in use and before cleaning.
- Allow to cool before putting on or taking off parts, or before performing any routine service or maintenance.
- Should a grease fire occur, turn the controller to the “off” position and unplug the unit to stop the fans. Keep the lid closed until the fire is out.
- If the Yoder fails to initially light after pressing the START button, or goes out during operation (due to a power surge or power failure) ,do not restart the Yoder without removing the cooking grates and heat diffuser/drip plate to check for a pellet overflow that may have occurred.
- Do not store the grill cover or other flammable items under or near the grill.
- After a period of non-use, the hopper, auger and firepot must be inspected for obstruction.
- Do not touch hot surfaces. Use handles or knobs, and wear heat resistant gloves when operating the grill.
- If your grill is stored outside, care should be taken to assure that water does not enter the pellet hopper. (The use of a grill cover is highly recommended).

## Bourbon Peach & Blueberry Cobbler

Serves 8-10

### Ingredients

#### Filling:

6 large peaches, sliced  
 1 C blueberries  
 1/2 C bourbon  
 1/4 C sugar  
 2 T cornstarch  
 2 t cinnamon  
 1/2 t vanilla extract  
 juice of half a small lemon

#### Topping:

1 C flour  
 1/2 C rolled oats  
 1/2 C sugar  
 1/2 t salt  
 3/4 C unsalted butter, small cubes  
 2 T heavy cream

### Directions

Step 1: Preheat your Yoder Smokers YS640 to 400°F. Combine the filling ingredients in a bowl and toss to distribute evenly. Set aside.

Step 2: Make the topping: In a large bowl, mix topping ingredients until all ingredients are incorporated. Dump filling into a Lodge Logic 12” Cast Iron Skillet. Crumble the topping over the filling.

Step 3: Bake until topping is golden brown and filling is thick and bubbling, about 1 hour. Serve warm with vanilla yogurt or ice cream.

## Stacked Beef Enchiladas

Serves 6-8

### Ingredients

2 lb ground beef  
1 Cup 505 Southwestern Chipotle Honey Roasted Chiles  
3/4 Cup yellow onion, diced  
2 Tablespoons green onions, sliced  
2 (16 oz) jars 505 Southwestern Enchilada Sauce  
1 Tablespoon flour  
1 Tablespoon butter  
1 Cup beef stock  
2 canned chipotles in adobo sauce, diced (2 peppers, not 2 cans)  
1/2 t cumin  
1 t Cattleman's Grill 8 Second Ride Carne Asada Seasoning  
1 lb cheddar cheese, grated  
12 corn tortillas

### Directions

Combine the beef, onions and 505 Southwestern Chipotle Honey Roasted Chiles in a skillet. Cook the beef all the way. Mix in the green onions. Season with salt. Set mixture aside. In a separate skillet, melt the butter, over medium heat. Add the flour, cumin, chipotles in adobo and Cattleman's Grill Carne Asada and whisk constantly for about one minute. Slowly whisk in the beef stock. Once all of the stock is incorporated, add in the 505 Southwestern Enchilada Sauce. Season with salt. Keep sauce warm. Cover the bottom of a skillet with oil (grape seed is best). Fry each corn tortilla on both sides, until lightly browned, and just slightly crispy. Immediately, transfer the tortilla to the warm sauce. Dip the tortilla entirely with tongs, then set aside on a sheet pan. Repeat this process until all tortillas are fried and soaked in sauce. Cover the bottom of a half sized aluminum foil steam table pan (12.75" X 10.3") with the enchilada sauce. Lay out a layer of 4 tortillas. Cover tortillas with one third of your beef mixture, then one third of your cheese. Repeat this process until you've used all the ingredients. Bake in your Yoder Smokers YS640 Pellet Smoker at 400°F, until the top is lightly browned, about 40 minutes.

- **When you are finished cooking, turn the power switch to the “off” position. The fan will continue to run for 18 minutes or until the temperature inside the cooking chamber falls below 125° F, whichever occurs first. During this period the cooking chamber door must remain closed. Failure to do so can cause burn back in the hopper.**
- **Longer detachable power-supply cord or extension cords are available and may be used if care is exercised in their use. If a longer detachable power-supply cord or extension cord is used:**
  - a) **The marked electrical rating of the cord set or extension cord should be at least as great as the electrical rating of the appliance (2 amps).**
  - b) **The cord should be arranged so that it will not drape over the countertop or table where it can be pulled on by children, tripped over unintentionally, or contact hot surfaces.**

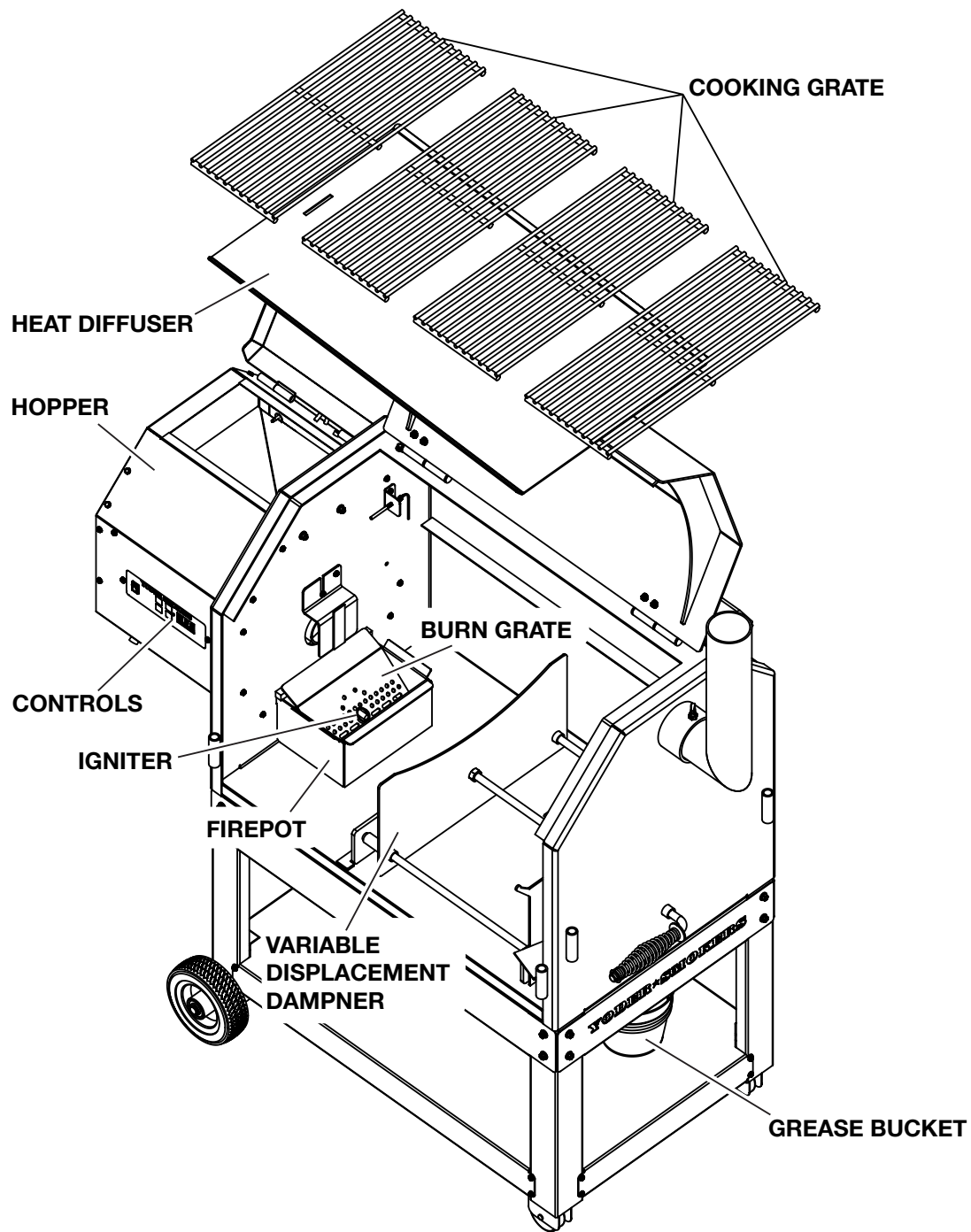


**Caution: Risk of Electric Shock. Keep extension cord connection dry and off the ground. Do not immerse cord or plugs in water or other liquid.**



**Caution: To ensure continued protection against risk of electric shock, connect to properly grounded outlets only.**

- **Outdoor extension cords should be used with outdoor use products and are surface marked with the suffix letter “W” and with a tag stating “Suitable for use with outdoor appliances.”**
- **Do not operate any appliance with a damaged cord or plug, or after the appliance malfunctions or has been damaged in any manner. Return appliance to the nearest authorized service facility for examination, repair, or adjustment.**
- **Always attach plug to appliance first, then plug cord into the wall outlet. To disconnect, turn any control to “off”, then remove plug from wall outlet.**
- **The use of accessory attachments not recommended by the appliance manufacturer may cause injuries.**
- **Store product indoors when not in use if possible – out of the reach of children.**
- **Do not clean this product with a water spray or the like.**
- **Do not place on or near a hot gas or electric burner, or in a heated oven.**
- **For household use only.**
- **Do not use appliance for other than intended use.**
- **Check the Yoder website ([www.YoderSmokers.com](http://www.YoderSmokers.com)) occasionally for updates and new product information.**
- **Save these instructions.**



## Turkey Roulade

Serves 4-6

2 turkey breasts  
 6 slices prosciutto  
 Smoke on Wheels BBQ Marinade  
 2 (6-8") strips of Frogmat

For the stuffing:

4 C cornbread, crumbled  
 1/2 C shallots, sliced  
 1/2 C pecans, toasted, chopped  
 1 T fresh thyme, leaves only  
 1/2 C maple syrup  
 2 T heavy cream

Directions

Remove the turkey breast from the breast bone if necessary. Pull the skin off and discard. Butterfly the breast, to make a flat, even piece of meat. Marinate in Smoke on Wheels BBQ Marinade for one hour. Meanwhile, over low heat, cook the shallots in a tablespoon of oil, with a pinch of salt until lightly browned. Combine the remaining stuffing ingredients in a bowl and mix to incorporate. Preheat your cooker to 325°F. Remove the turkey from the marinade. Wipe off excess marinade. Lay the breast flat on top of the Frogmat. Place three slices of prosciutto over the breast. Then, evenly spread the stuffing over the prosciutto. Roll the breast up. Wrap it with Frogmat. Tie the Frogmat with butcher's twine. Cook until internal temperature reaches 165°F, about one and a half to two hours. Rest 10 minutes. Slice to serve.

## Stuffed Pork Chops

4 Servings

Ingredients

4 pork chops  
1 1/2 C cornbread, crumbled  
2 T golden raisins  
1/4 C walnuts, toasted, roughly chopped  
1/4 C dried cherries, halved  
1/4 C buttermilk  
1/2 t black pepper  
2 t fresh sage, thinly sliced  
1/2 t kosher salt  
1/2 C bourbon  
Smoke on Wheels Pork Marinade & Injection  
John Henry Pecan Rub

Directions

Step 1: Place the dried cherries and raisins in a small bowl. Pour the bourbon over the top. Place chops into container or bag and cover with Smoke on Wheels Pork Marinade & Injection. Refrigerate for 2 hours.

Step 2: Remove chops from container, cut horizontal pockets in each pork chop for stuffing. Preheat your Yoder Smokers YS640 to 450°F, set up with GrillGrates.

Step 3: Remove the fruits from the bourbon. Combine them with the rest of the ingredients, and put into piping bag that is not fitted with a tip. Pipe each chop full with cornbread mixture. Alternatively, you can stuff the filling by hand, or use a zip top bag as a makeshift piping bag. Just put the filling in the bag, and cut off one corner. Once the chop is stuffed, dust with John Henry Pecan Rub.

Step 3: Grill the chops on medium high heat for about 6 minutes on each side. Turn each chop 45 degrees after 3 minutes to mark. Remove from the grill when the internal temperature reaches 145°F.

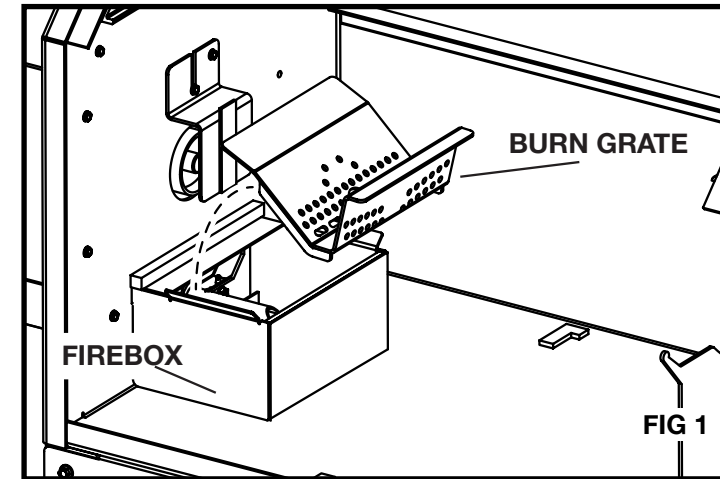
## Smoker Assembly

### Smoker Arrival

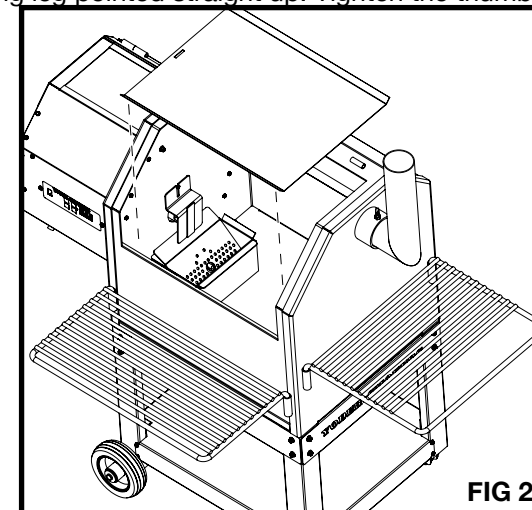
Your Yoder Smoker will arrive on a pallet wrapped and held on with bands. Cut the bands and remove the plastic wrap and foam from the smoker. Remove the smoker from the pallet. It is recommended that two people remove the Yoder from the pallet due to its size and weight. Open the hopper lid and remove the grease bucket that contains the power cord and a spare fuse and set aside. Open the cooking chamber and remove all of the wrapped components. There will be a front shelf, a side shelf, two cooking grates, a heat diffuser plate, burn grate, and smoke stack.

**NOTE:** If a second shelf and a bag of pellets were ordered, they will be in the cooking chamber as well.

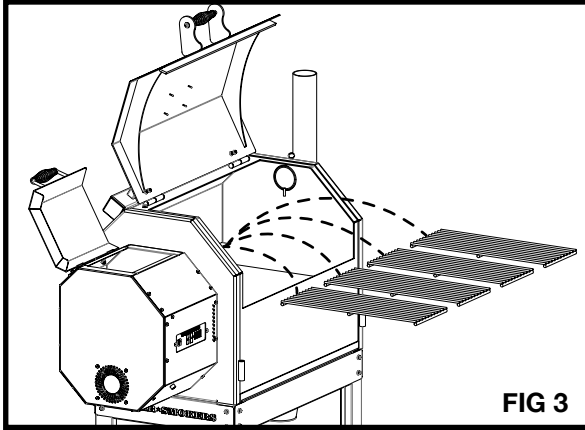
Assembly of your new Yoder starts by installing the burn grate inside the firebox. See **FIG 1**.



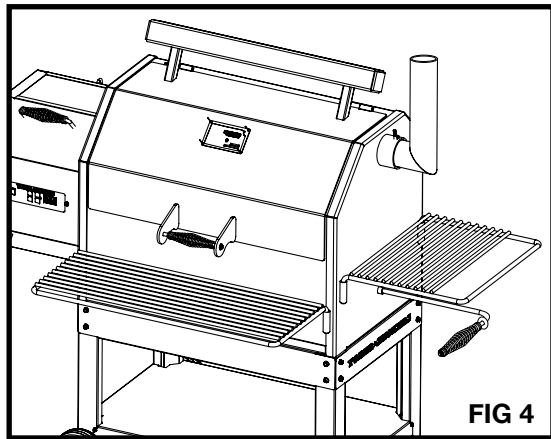
Install the heat diffuser plate and smoke stack next. The smoke stack installs flush to the inside of the cooking chamber with the long leg pointed straight up. Tighten the thumb screw securely. See **FIG 2**.



Place the cooking grates inside the cooking chamber. See **FIG 3**.



Attach the front and side shelves to the Yoder. See **FIG 4**.



Use the side shelf to assist in moving the Yoder into position. It is recommended that two people move the Yoder due to its size and weight. Once in position, follow the setup instructions (Page 16) to prepare your new cooker for use.

## Frenched Rack of Pork

Smoke on Wheels BBQ Marinade  
Cattleman's Grill Steakhouse  
Cattleman's Grill California Tri-tip

Place the frenched rack of pork loin in a large (2.5 gal) zip top bag. Cover meat with Smoke on Wheels Marinade. Squeeze the air out of the bag, seal it, and allow the pork to marinate for six hours. Remove the pork from the marinade. Preheat your cooker to 325°F. Wipe the excess marinade off the pork, but do not rinse. Use the residual marinade to bind the rubs to the pork. Cover the meat with equal parts Cattleman's Grill Steakhouse and Cattleman's Grill Tri-tip. Rest meat for 10 minutes. Cook at 325°F until internal temperature reaches 140°F-145°F. Remove. Cover loosely. Let rest 15 minutes. Slice in-between the bones for single chop servings.

## Grilled Tri-tip

1 beef tri-tip  
Sweetwater Spice Tres Chiles  
Cattleman's Grill California Tri-tip Seasoning  
Oakridge BBQ Santa Maria Grill Seasoning

### Directions

Step 1: Marinate the tri-tip in the Sweetwater Spice Tres Chiles according to the provided instructions.

Step 2: Preheat your Yoder Smokers YS640 to 500°F, and set up GrillGrates for direct grilling. Apply a 50/50 mixture of Cattleman's Grill California Tri-tip and Oakridge BBQ Santa Maria seasonings to the surface of the tri-tip. Let rest until rub looks wet, about 10 minutes.

Step 3: Grill on both sides over direct heat until good grill marks are achieved. Move to indirect heat. Cook to an internal temperature of 125°F-130°F. Rest 10 minutes before slicing, across the grain of the meat.



## Coffee Crusted Filet Mignon with Chipotle Aioli

### Ingredients

- Filet mignon steaks
- Sweetwater Spice Ancho Chipotle Bath
- Cattleman's Grill Smoky Chipotle Steak Seasoning
- Chipotle Aioli (recipe below)

### Directions

Step 1: Place your steaks in a zip top bag with the Sweetwater Spice Ancho Chipotle Bath. Marinate for 45 minutes.

Step 2: Preheat your Yoder Smokers YS640 Pellet Smoker to 475°F, set up with GrillGrates. Remove the steaks from the marinade, and wipe off the excess with a paper towel. Season with Cattleman's Grill Smoky Chipotle. Let sit five minutes.

Step 3: Grill the steak on each side for about five minutes, getting nice grill marks. Grill until the internal temperature reaches 120°F. Pull and rest five minutes before slicing. Serve with Chipotle Aioli.

## Chipotle Aioli

### Ingredients

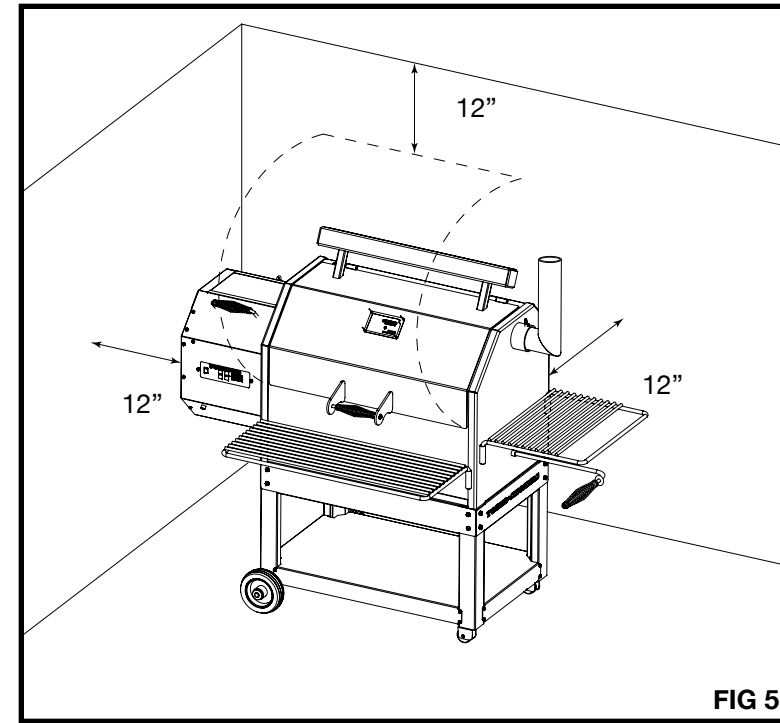
- 1 egg yolk
- 1 chipotle in adobo sauce
- 1/2 tsp adobo sauce
- 1 clove garlic, chopped
- 1 Tbsp lime juice
- 1/2 cup grape seed or vegetable oil (don't use olive oil)

### Directions

Combine all ingredients except oil in a food processor. Process to puree ingredients, then with the processor running add the oil very slowly until it's all incorporated.

## Smoker Placement

Yoder smokers/grills should always be a minimum of 12 inches away from any combustible surface (wall, deck, rail, etc.). A heat-protective pad is recommended if the smoker is on a wooden deck. See **FIG 5**.



## Leveling the Smoker

The smoker must be level, front to back and side to side. Place a level centered on the main cooking chamber door or cooking grates to help with this. If the smoker is not level there could be problems with the grease running towards the burn pot which could result in a grease fire.

## Operating the Smoker

### Initial Burn Off

Before cooking on your smoker/grill for the first time, burn off the grill to rid it of any foreign matter. Follow the instructions on Page 19 for initial start-up. Operate the grill at 350° F with the heat diffuser/drip pan and grates in place with the lid closed for one hour.

### Lighting Your Smoker

Always go through the Pre-Grill Checklist (Page 16). Should the igniter fail to ignite the pellets, it is easy to light your grill manually with a match and lighting agent (Page 22).

### Pre-Heating

There are two ways to cook on your Yoder grill. When the grill is set up for direct cooking, start the grill 10 to 15 minutes prior to cooking. When the grill is set up with the heat diffuser/drip pan in place, start the grill 20 to 30 minutes prior to cooking. This allows the body of the grill to heat up improving heat retention and shortening the recovery time after opening the cover.

### Lid Position

Preheat and cook with the lid closed. This allows for faster heat-up and keeps the cooking temperature even; the food will cook faster while using less fuel.

### Pellet Usage

Pellet usage will vary depending on the type of pellets, cooking temperatures, ambient air temperature, wind and whether or not the Yoder is equipped with a thermal jacket. Generally, usage is about 2 pounds per hour at grilling temperatures (350 to 450° F). At smoking temperatures (225 to 250° F) usage is about 1 1/2 pounds per hour. Consumption can vary from 1 1/2 pounds to 4 pounds per hour.

**NOTE:** If the Yoder runs out of pellets, the controller will continue to drive the auger and attempt to regain the set temperature, so it's important to monitor the cooker and assure an adequate pellet supply.

Using a very sharp or serrated knife, slice off the top 1/3 of the artichoke. Peel off the outer layers of leaves, starting at the base. Trim any remaining leaf tips with scissors. Rub all trimmed surfaces with lemon, as you go. Peel the stem with a peeler or paring knife. Cut the entire Artichoke in half, through the stem. Place the halves in a pot of simmering water. Cook 15-20 minutes, until stem is tender. Remove from water. When cool, scoop out the choke (the fuzzy material where the stem meets the base). Rub the halves with olive oil. Season with Cattleman's Grill Italiano Seasoning. Grill on a hot grill (450°F+), until you have nice grill marks. Peel off the outer leaves off. The "meat" at the base of the leaf is edible, good for snacking. When all leaves are removed, you're left with the heart and stem. Dice these to add to your pizza.

## Chicken Artichoke Skillet Pizza

### Ingredients

Pizza dough (recipe below)  
 Pizza sauce (recipe below)  
 Grilled artichoke  
 Grilled chicken breast  
 Cattleman's Grill Italiano Seasoning  
 Baby spinach  
 Mozzarella, diced or grated  
 Olive oil

Step 1: Season your breasts with Cattleman's Grill Italiano Seasoning and grill at 400°F until internal temperature reaches 160°F. Rest five minutes. Dice.

Step 2: Assemble pizza: Preheat your cooker to 500°F. Stretch the dough to 14 inches. Place in an oiled 12" Lodge Cast Iron Skillet. Brush the crust with olive oil. Spread a layer of pizza sauce over the dough. Top sauce with spinach, then mozzarella, then diced grilled artichoke and chicken breast.

Step 3: Bake at 450°F until dough is cooked through, about 20 minutes.

### Pizza Dough

Makes dough for 3-4 pizzas

### Ingredients

500g Napoli Antimo Caputo 00 Flour  
 325g water  
 10g salt  
 5g dry active yeast

Combine all ingredients in a stand mixer. Mix until all flour is incorporated, then a minute longer. Place in an oiled bowl. Let rise until doubled in size. Divide in 3 or 4 pieces. Roll into balls. Let rest at least thirty minutes before stretching/rolling.

### Pizza Sauce

### Ingredients

1 (28 oz) can Strianese San Marzano Tomatoes  
 2 cloves garlic, minced  
 2 T fresh basil, minced  
 1 1/2 T sugar  
 1 1/2 T salt

Combine ingredients. Bring to a simmer. Taste and adjust seasoning.

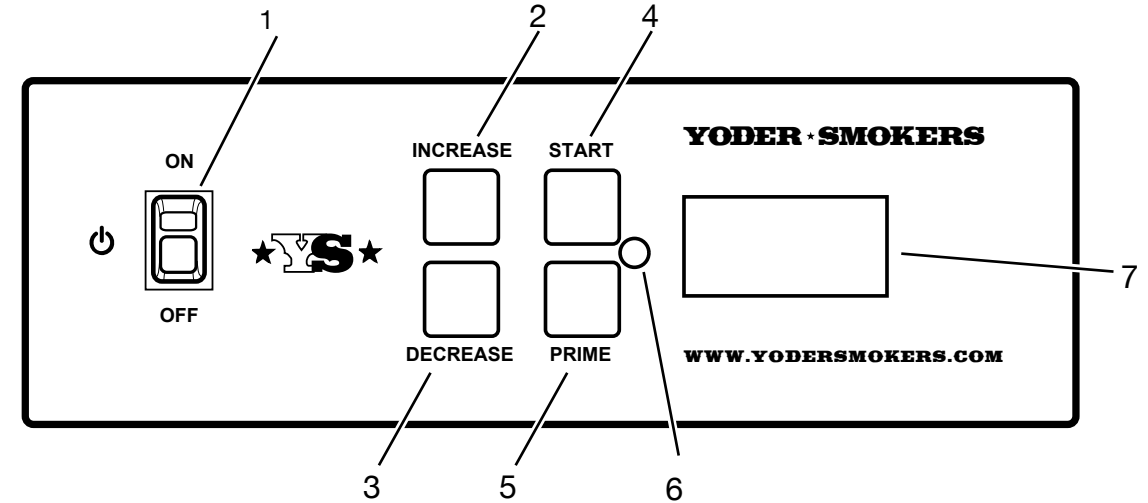
### Grilled Artichoke

### Ingredients

2 artichokes  
 1 lemon, wedges  
 olive oil  
 Cattleman's Grill Italiano Seasoning

## Yoder YS Series Control Panel

1. Power Switch - turns the power to your Yoder on and off



2. Increase - increase the temperature setting (in 5-degree increments).

3. Decrease - decrease the temperature setting (in 5-degree increments).

4. Start - activates the startup cycle. This also accesses the "heat up" modes (see below).

5. Prime - overrides the control system to manually feed pellets.

6. Power LED - lights up when the power switch is in the on position.

7. Display - provides information about how the grill is performing including: heat up mode, cool down mode, maintenance mode, set temperature and actual temperature. Once the cooker exceeds 110° F at start up the display alternates between the cooker temperature and the operating mode.

The controller is adjustable from 150 to 600° F in five degree increments. The controller displays the actual pit temperature when the set point is from 150 to 495° F. When the controller is set to 495° F or higher, the controller will display the set point.

To access the "heat up" modes once the Yoder is running press and hold the start button until the current heat up mode is displayed. Use the increase/decrease buttons to toggle between H1, H2 or H3.

Operating mode indicators: Heat up mode (**FIG 6**) is displayed by three dashed lines from lower left to upper right. Maintenance mode (**FIG 7**) is displayed by three horizontal lines. Cool down mode (**FIG 8**) is displayed by three dashed lines from the upper left to the lower right.

**NOTE:** For start-up in temperatures below 50° F, see Page 14.

### **Manually Selecting the Heat Up Mode:**

- Initiate the startup procedure by pressing the start button.
- Select desired cooking temperature.
- Press the start button, the display will flash H1.
- Use the increase/decrease buttons to select H2 or H3.
- Once the new mode is selected, the controller will automatically run the selected mode. See page 13 for explanation of automatic heat up modes.

### **Selecting Fahrenheit or Celsius:**

#### **Note: Only available on models outside the United States.**

- Initiate the startup procedure by pressing the start button.
- Press the start button; the display will flash H1.
- Press and hold the start button. The display will show F. or C.
- Use the increase/decrease buttons to select Fahrenheit or Celsius.
- Once the new mode is selected the controller will automatically run the selected mode. The default temperature display is Fahrenheit.

Pour the yeast water into the bowl of a stand mixer. Combine the salt, bread flour, all-purpose flour, and 2 tablespoons of melted butter then add to the bowl. Mix on low for about 5-6 minutes. Dough should be pulled away from the sides of the bowl. Place dough in an oiled bowl, cover, and allow to rise for 1 hour (or until doubled in size).

Fill a large pot with 8 cups water and 8 tablespoons (1/2 cup) baking soda. Stir to dissolve. Bring water to a low boil. If you need more water, just be sure to add a tablespoon of baking soda for every cup of water. While the water heats up, divide the dough into about 30 small, roughly equal sized balls.

Preheat your cooker to 375°F. Working in batches, place the balls in the boiling water for one minute each, flipping halfway through cooking. Use a slotted spoon to remove them from the water, draining away as much water as you can. Place on a baking sheet lined with parchment paper. Rest for 15 minutes

Brush the tops of the pretzels with melted butter, score the tops and sprinkle on the sea salt. Bake at 375°F for 20-25 minutes, until tops are golden brown.

## Bratwurst Sliders with Beer Cheese Sauce

Makes about 16 sliders

- 2 lb ground pork
- 1/4 lb ground bacon
- Backwoods Bratwurst Seasoning
- 2 T Grannie's Hickory Mustard
- Smokehouse Onions (recipe below)
- IPA Jalapeño Cheese Sauce (recipe below)
- Soft Pretzel Buns

Combine the ground meats, mustard and brat seasoning (dissolved in water) in the bowl of a stand mixer fitted with the paddle attachment. Mix on low until the meat mixture becomes tacky and holds together. Preheat your cooker to 450°F. Form meat into 2 ounce patties. Grill until internal temperature reaches 165°F.

\*Alternatively: You can purchase uncooked brats, uncase them and form them into patties.

## Smokehouse Onions

- 2 large yellow onions, sliced thin
- 1/4 cup melted butter
- 1 1/2 Tbsp Cattleman's Tri-tip Seasoning

Toss the sliced onions in the melted butter. Season with Cattleman's Grill Tri-tip Seasoning. Smoke in a foil pan at 275°F for 1 hour, increase to 400°F and cook until soft and browning, about 45 minutes.

## IPA Jalapeño Cheese Sauce

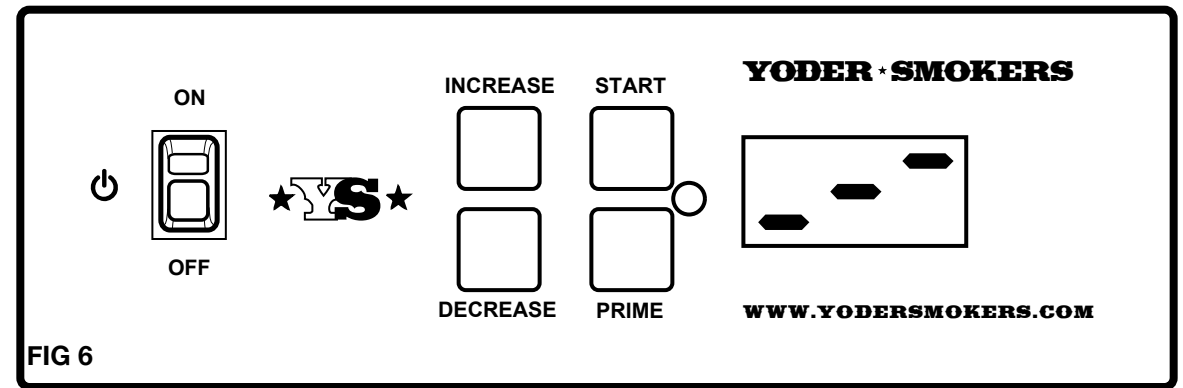
- 1 cup heavy whipping cream
- 6 oz white american cheese, grated
- 6 oz pepper jack, grated
- 6 fl oz your favorite IPA beer
- 1 Tbsp Grannie's Hickory Mustard

Bring the cream, beer and mustard to a simmer. Slowly whisk in cheeses. Season with salt and pepper as necessary.

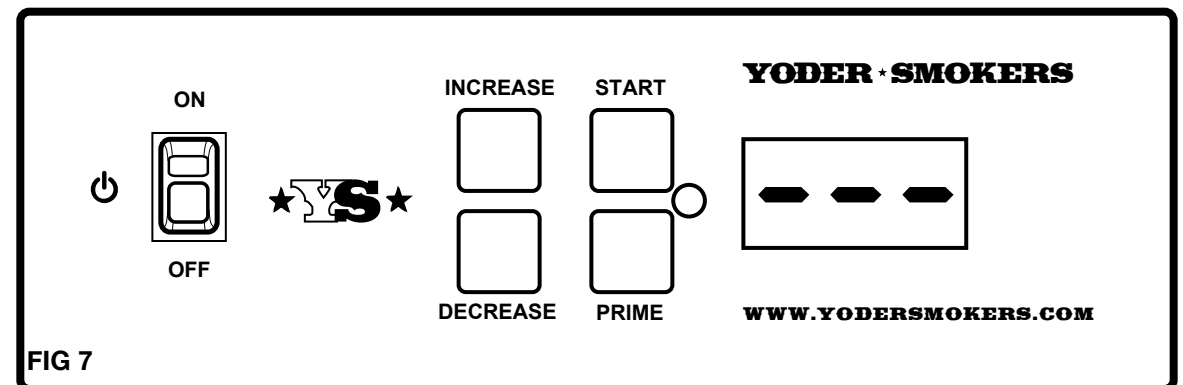
## Soft Pretzel Buns

- 3 cups warm water (110°F)
- 2 1/4 teaspoons (one package) active dry yeast
- 1 tablespoon sugar
- 2 teaspoons salt
- 2 cups bread flour
- 6 cups all-purpose flour
- 1/2-1 Cup baking soda
- 6 tablespoons melted butter, divided
- Cattleman's Grill Grey Salt

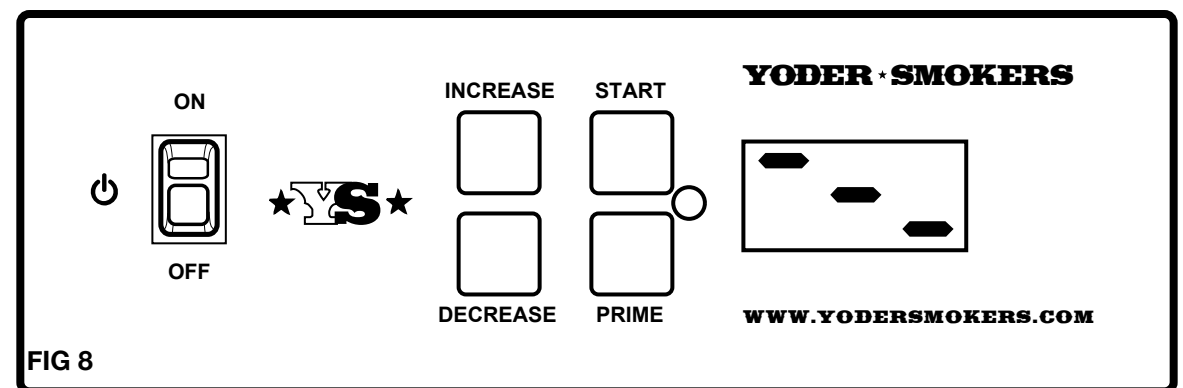
Dissolve the sugar in the warm water. Sprinkle the yeast over the water and let sit and foam up for 5-6 minutes.



Heat Up



Maintenance



Cool Down

## The Controller... In-Depth

This is an in-depth overview of the controller's feature set.

The controller has been designed to make it as hands-off and user-friendly as possible. At its most basic level, the cooker has three modes of operation: Heat-up, Maintenance and Cool Down.

Beyond these basic modes are the concepts of aggressiveness, anticipation and micromanagement that have been learned as the result of many thousands of hours of testing. When the cooker is displaying maintenance mode, it is not idle. It is constantly checking and re-evaluating the grill's temperature and making incremental adjustments to maintain the cooking temperature as close to the desired set point as possible – think of it as micromanagement.

Just like in the maintenance mode, the controller is constantly evaluating the grill status while in “heat up” and “cool down” modes. This is where “aggressiveness” and “anticipation” have been written into the program. If the controller senses the grill is not heating up very quickly, it will increase the pellet feed rate above what the normal heat up rate would be for a given set point, and it will continue to do so until the heat up rate is where it should be. The inverse is true of the cool down mode – if the grill is not cooling fast enough, the controller will get more aggressive with cool down until the grill temperature is where it should be.

### How the Heat Up Modes Work

In addition to the intelligence previously described, the program also contains three internal heat up modes. Left on its own, the controller makes a series of small incremental adjustments as described above. The various heat up modes are designed to speed the heat up process.

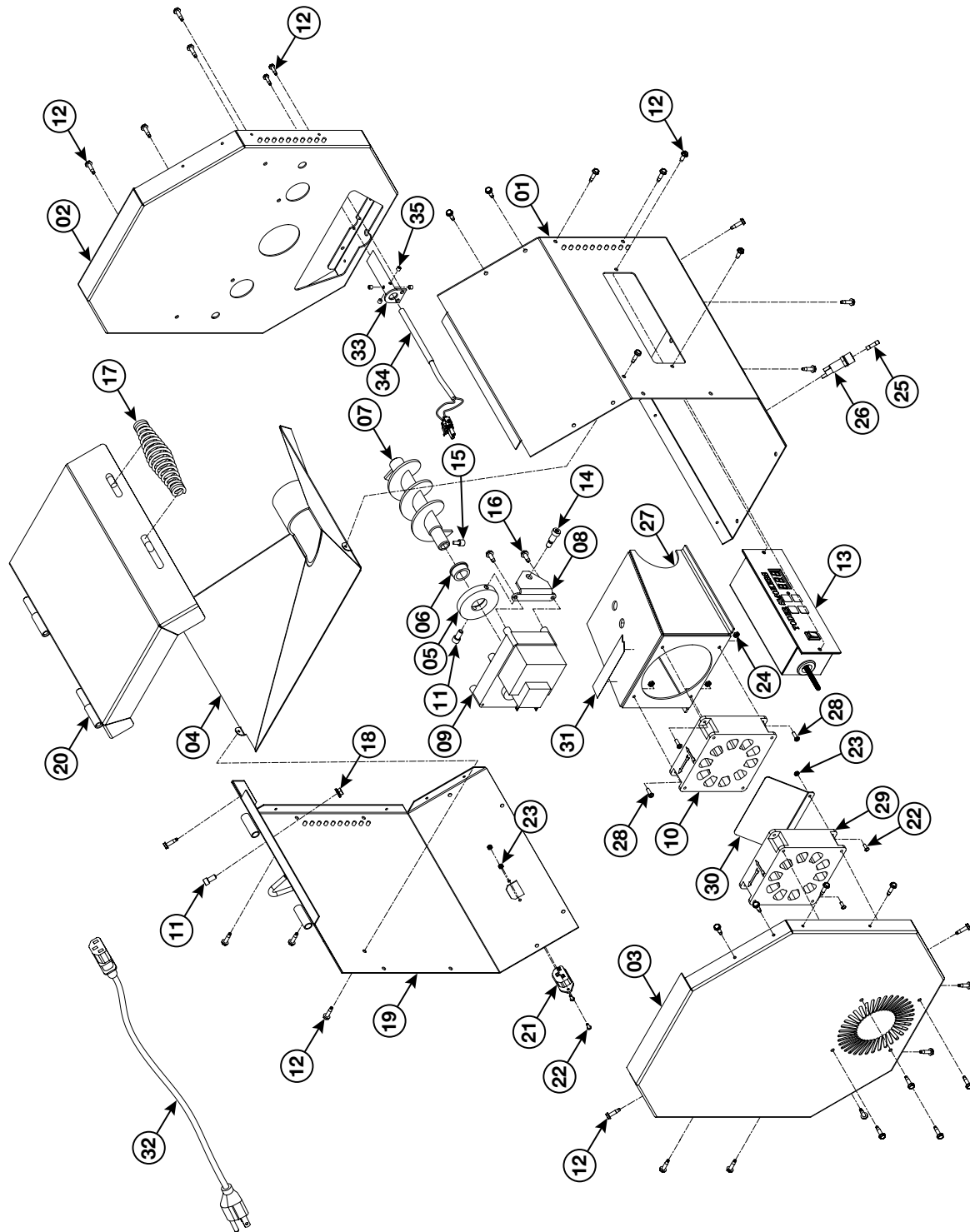
The selection of the heat up modes is automatically selected by the program. At startup the program automatically begins in H1. 8 minutes into the start-up cycle, the program calculates the difference between the set point and the actual cooker temperature and changes the “H” mode if necessary. The program will make the same calculation again at the 12-minute mark, and if an “H” mode other than the mode currently running is required, the program makes the required change. If a mode other than H1 has been selected, it will remain in that mode until it breaks that target set point at which time the program will enter maintenance mode.

Once the controller enters maintenance mode, the pit temperature must rise or fall 35 degrees above or below set point before the program enters the heat up or cool down mode.

## HOPPER ASSEMBLY

ITEM #	PART #	DESCRIPTION	QTY.
1	90101	BODY, FRONT, FEED COMPARTMENT	1
2	90102	BULKHEAD, MOUNT, HOPPER	1
3	90106	COVER, END, FEED COMPARTMENT	1
4	W90791	HOPPER, PELLET SMOKER	1
5	90022	BUSHING, AUGER	1
6	90023	BUSHING, AUGER	1
7	W90019	AUGER	1
8	90027	PLATE, ANTI-TORQUE	1
9	90001	MOTOR, PELLET AUGER	1
10	90060	INNER FAN, 115 CFM	1
11	1420X12SHCS	SOCKET HEAD CAP SCREW, 1/4-20 X 0.05 LONG	2
12	10X34HHSDS	SCREW, HEX HEAD, SELF DRILLING 10 X 3/4	37
13	A90152	CONTROLLER	1
14	516X12SHSB	SCREW, SHOULDER, .313 X .50, SOCKET HEAD 1/4-20	1
15	51618X12SHSS	SCREW, SET, SOCKET HEAD, 5/16-18 X 1/2	1
16	1024X12HHSTS	SCREW, SLOTTED, HEX HEAD, SELF TAPPING, 10-24 X 1/2	4
17	22866	HANDLE, SPRING	1
18	1420WHN	NUT, WHIZ, 1/4-20	1
19	W90790	HOPPER BACK	1
20	W90788	HOPPER DOOR	1
21	90312	SOCKET, 15 AMP	1
22	632X38MS	SCREW, MACHINE, ROUND HEAD, 6-32 X 3/8 LONG	4
23	632HN	NUT, HEX, 6-32	4
24	832HN	NUT, HEX, 8-32	4
25	91435	FUSE, 1.6A	1
26	90412	FUSE HOLDER	1
27	W90553	FAN HOUSING	1
28	832X12MS	SCREW, MACHINE, PHILLIPS HEAD, 8-32 X 1/2 LONG	4
29	90686	OUTER FAN, 68 CFM	1
30	90893	PLATE, FAN AIR DIVERTER	1
31	23985	VELCRO	1
32	90313	POWER CORD	1
33	W90026	IGNITER TUBE	1
34	A90494	IGNITER ASSEMBLY	1
35	1420X14SHSS	SCREW, SET, SOCKET HEAD, 1/4-20 X 1/4	4

## HOPPER ASSEMBLY



## Faster Startup in Cold Weather or For High Temperature Cooking

Even though the heat up mode is automatically selected, the cook can benefit from starting the pit in “H2” when the outside temperature is below 50° F; this will provide a more aggressive start over the first 8 minutes. Secondly, if the target temperature is greater than 350° F, starting the pit in “H3” will get the pit to temperature much quicker.

### Examples

Ambient temperature of 70° F and a set point of 350° F:

All of the pre-grill steps have been taken; turn the power switch to the “on” position and press start. The display will alternate between the heat up (mode lines) and the set temperature (set point). The display will continue in this manner until the cooking chamber temperature exceeds 110° F at which point the display will alternate between the mode lines and the actual cooker temperature. In about 3 minutes there will be evidence of ignition.

In the scenario listed above it is likely that the program will stay in “H1” through the startup cycle. In this case the “mode lines” will come out of heat up and into maintenance before the set point is reached. This does not indicate that the program is no longer working to achieve set point. It is simply doing it in a less aggressive way.

When “H2” or “H3” is selected, it is common for the pit to overshoot the set temperature. How much overshoot depends on the startup (initial pellet drops and ignition, and ambient conditions including wind and temperature). The program will make the adjustments and begin bringing the temperature down. It is also common for the grill to undershoot the set point and then work its way into the target temperature range. We call this process normalizing, which is the time it takes to raise the cooker’s body temperature to match the internal temperature.

**NOTE:** When the grill overshoots or undershoots some cooks want to jump in and begin making temperature adjustments. Do not make adjustments. When you do, the program will begin making adjustments to the new set point rather than finish settling into the intended temperature range. With experience comes the confidence of knowing how the cooker operates.

Also remember, no matter how small a pellet is, it is still wood, so understand that the controller is managing a wood fire which does not have the precision of gas or electric.

One last point on the subject of temperature management, if you have a grate (pit) probe in place, especially during heat up process, the grate probe will read higher than the display until the temperature of the cooker body and the internal temperatures stabilize. The reason for this is that the temperature displayed is a 90 second rolling average and will lag behind actual until the set point is reached.

**Door Open Function**

When the cooker has been in maintenance for more than 10 minutes and the cooker loses more than 15 degrees, the program interpretes that the cooking chamber door has been opened. When this happens, there is a specific piece of programming that is executed to speed recovery back to the set point.

**Prime Button**

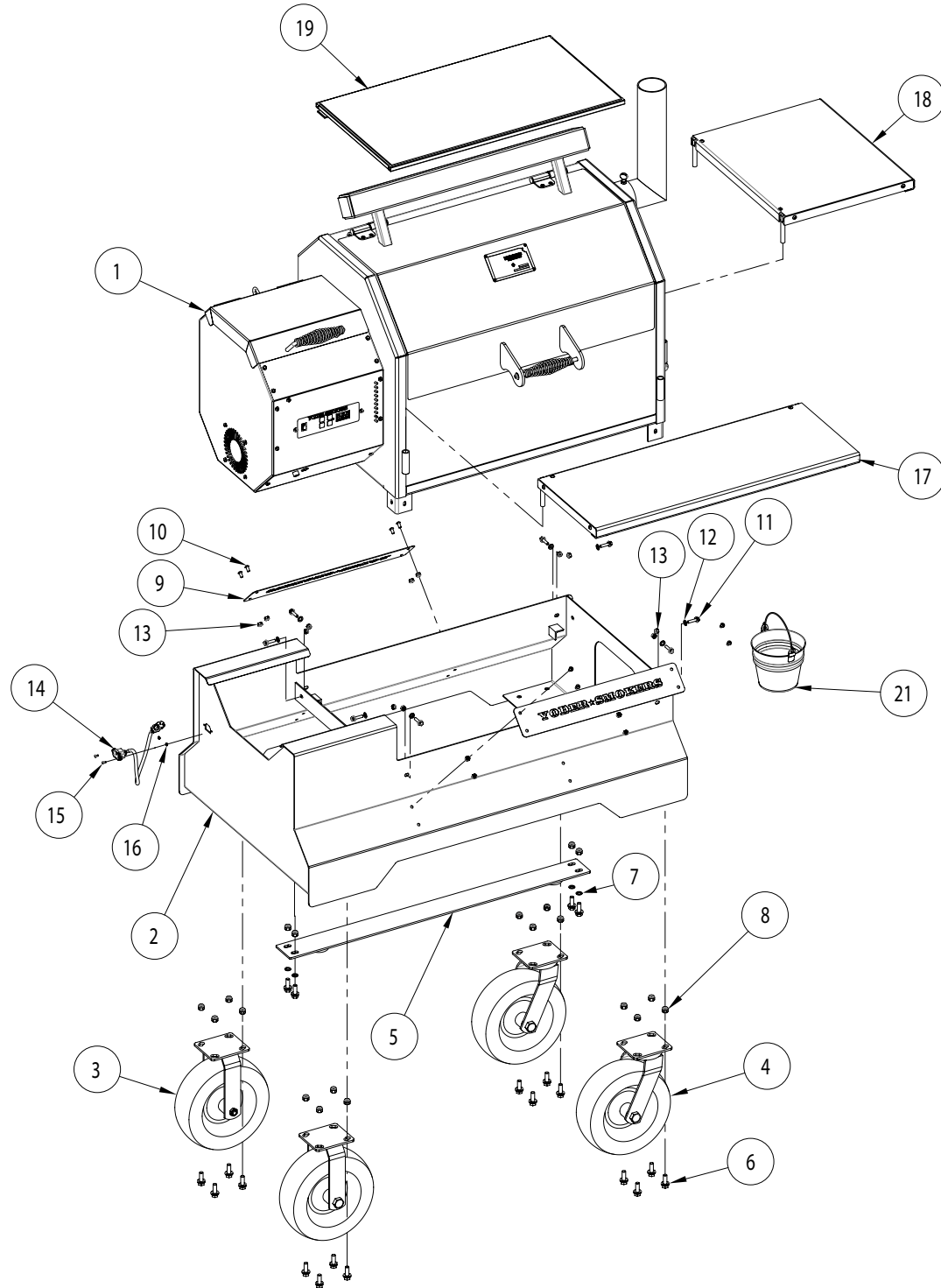
The prime button overrides the program altogether and turns the auger continuously, feeding pellets as long as the button is depressed. This is valuable anytime you have had the door open for a long time and have lost significant temperature or if you want to raise the cooker temperature from say 250 to 350° F. To use this function, press and hold the prime button on for 60 seconds, then let off for 60 seconds. You may repeat this twice allowing at least 2 minutes before repeating.

**640 COMP CART**

ITEM #	PART #	DESCRIPTION	QTY.
1	A90491	YS, PELLET, CHAMBER ASSEMBLY, 640	1
2	W90551	YS, WELDMENT, 640 COMP CART, BASE	1
3	90725	YS, CASTER, FLATFREE TIRE, 8" DIA., RIGID, MARATHON	2
4	90724	YS, CASTER, FLATFREE TIRE, 8" DIA., SWIVEL/LOCK, MARATHON	2
5	W90531	YS, WELDMENT, TIE-DOWN, UNDERCARRAIGE, 640	1
6	3816X1WHB	BOLT, WHIZ, 3/8-16 X 1" LONG	20
7	23867	WASHER, PHENOLIC, 3/8"	4
8	3816LNN	NUT, NYLOCK, 3/8-16	20
9	90527	YS, SIGN, COMP CART BASE, YODER SMOKERS LOGO	2
10	1420X12BHCSSS	1/4-20 X 1/2" BUTTON HEAD CAP SCREW, STAINLESS STEEL	8
11	1420X1WHB	BOLT, WHIZ, 1/4-20 X 1" LONG	8
12	23866	WASHER, PHENOLIC, 5/16"	8
13	1420LNN	NUT, NYLOCK, 1/4-20	16
14	91434	YS, HARNESS, WIRING EXTENSION W/RCPT, COMP CART	1
15	632X38MS	SCREW, MACHINE, ROUND HEAD, 6-32 X 3/8" LONG	2
16	632HN	NUT, HEX, 6-32	2
17	A90535	YS, ASSEMBLY, FRONT SHELF, 640, STAINLESS	1
18	A90511	YS, ASSEMBLY, SIDE SHELF, 640, STAINLESS	1
19	W90348	YS, WELDMENT, 2ND SHELF, 640 PELLET	1
20	90460	BUCKET, GALVANIZED, 1-1/4 QT	1
21	24117	EDGE TRIM, ADHESIVE, 1/4" OUTSIDE WIDTH, NC02-05	6 LF
22	91435	FUSE, 250V, 1.6A, 5X20MM, LITTLEFUSE #021701.6HXP	1



## 640 COMP CART



## Pre-Grill Checklist/Routine Maintenance

**Perform the following services prior to each cooking session when the grill is cool**

1. Open the cooking chamber door and remove the cooking grates.

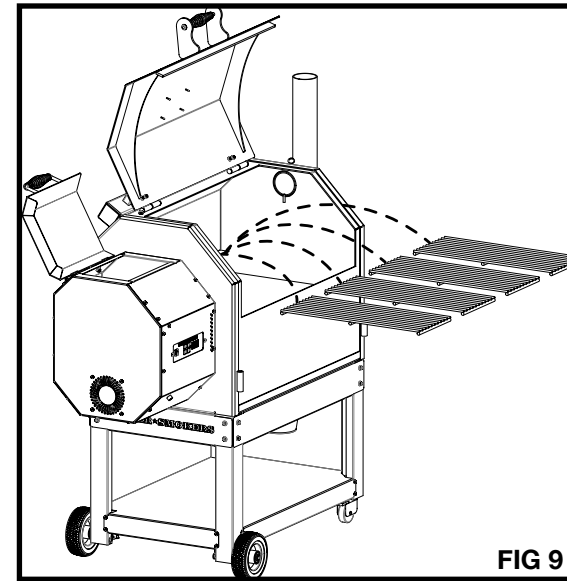


FIG 9

2. Remove the heat diffuser/drip plate, remove and discard previously used protective foil cover (if foil has been applied). Install a new layer of protective foil. Select heavy duty foil that is wide enough to wrap around the edges of the diffuser plate and cut long enough to cover the entire plate. Install the foil from left to right and fold over all four sides. Be sure the foil folded over the right hand edge is not hanging over the front edge (no more than 1").

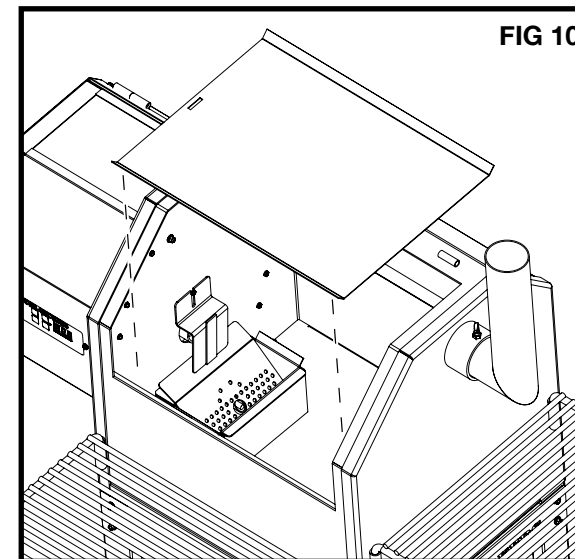
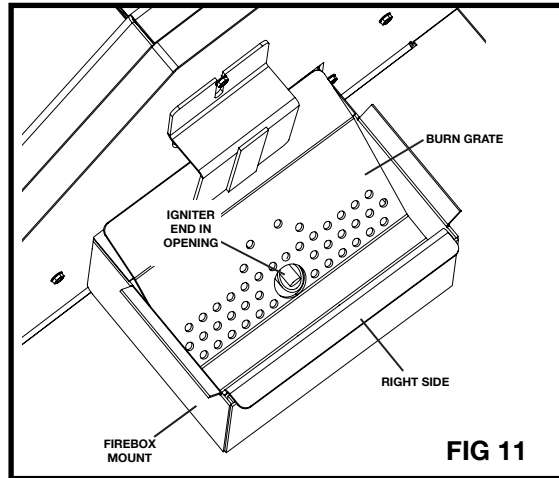
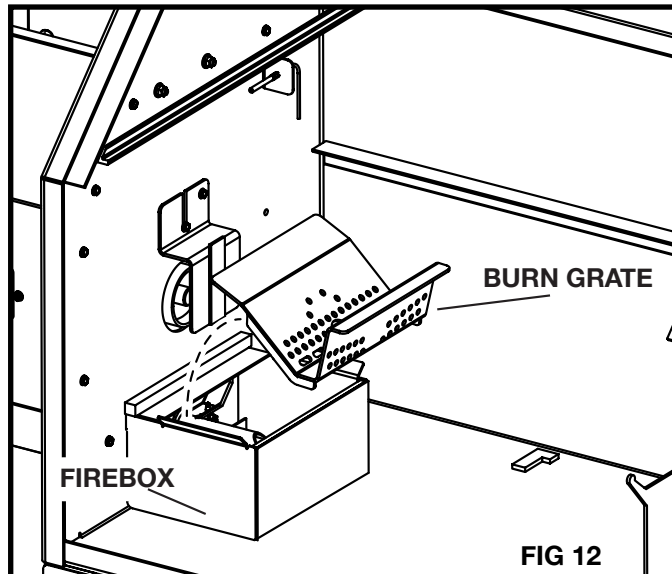


FIG 10

3. Remove the burn grate from the firebox. Inspect and clean thoroughly. Make certain that the combustion holes in the burn grate and the igniter tube in the firebox are free of debris or ash build up. Visually inspect the air way between the combustion fan and the firebox to be certain that it is free and clear of ash and debris. (A shop vacuum works well for ash and debris removal.)



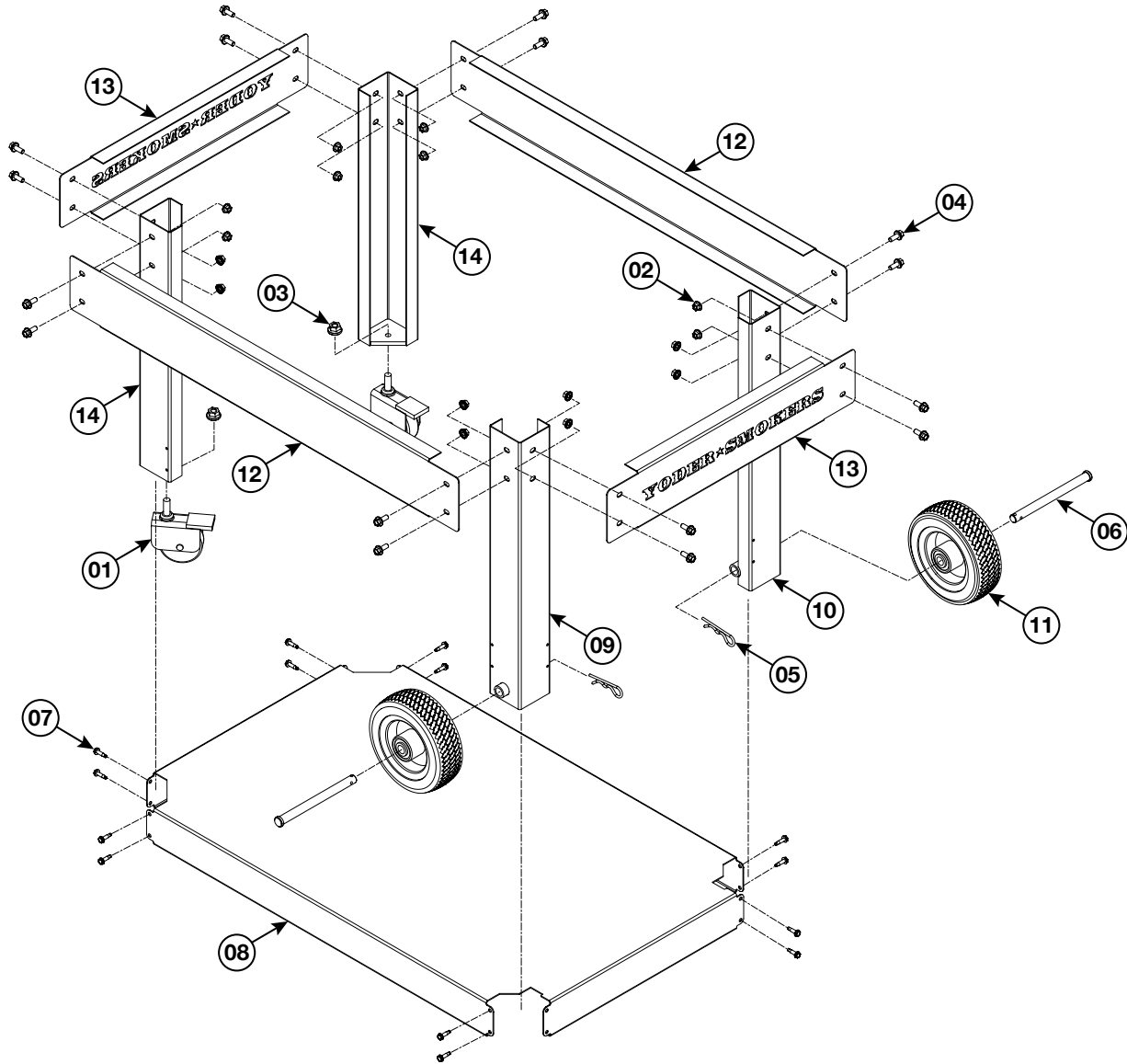
4. Inspect for and remove any grease build up on the bottom of the cooking chamber.
5. Inspect the silicone seal around the firebox, paying particular attention to the seal above the firebox at the hopper wall. It will be necessary from time to time to reapply high heat silicone such as **Permatex 81878** in this area which ensures proper combustion and grill performance.
6. Reinstall the burn grate. Begin by resting the right hand side of the burn grate on the firebox and then pressing down on the left hand side of the burn grate until fully seated. When the burn grate is properly seated it rests firmly on the right hand side of the firebox and fits close to the hopper wall. Finally, check that the igniter assembly is centered in the respective hole in the burn grate.
7. Reinstall the heat diffuser/drip plate. The heat diffuser plate attaches to the hook on the auger shield



## 640 CART

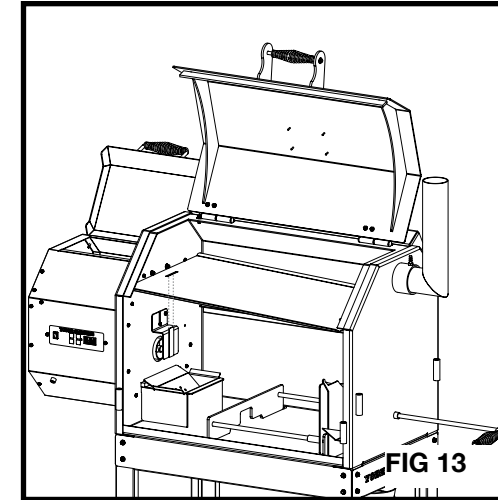
ITEM #	PART #	DESCRIPTION	QTY.
1	A91425	3 INCH CASTER WHEEL, 3/8-16	2
2	1420LNN	NUT, NYLOCK, 1/4-20	16
3	3816WHN	NUT, WHIZ, 3/8-16	2
4	1420X58WHB	BOLT, WHIZ, 1/4-20 X 5/8" LONG	16
5	701-102-02	PIN	2
6	90398	AXLE	2
7	10X34HHSDS	SCREW, HEX HEAD, SELF DRILLING, 10 X 3/4	16
8	90172LFP	BOTTOM SHELF	1
9	W90786	RIGHT FRONT LEG	1
10	W90784	LEFT FRONT LEG	1
11	24252	WHEEL	2
12	90166LFP	SKIRT, LONG, UNDERCARRIAGE	2
13	90165LFP	SKIRT, SHORT, UNDERCARRIAGE WITH LOGO	2
14	W90782	REAR LEG	2

## 640 CART



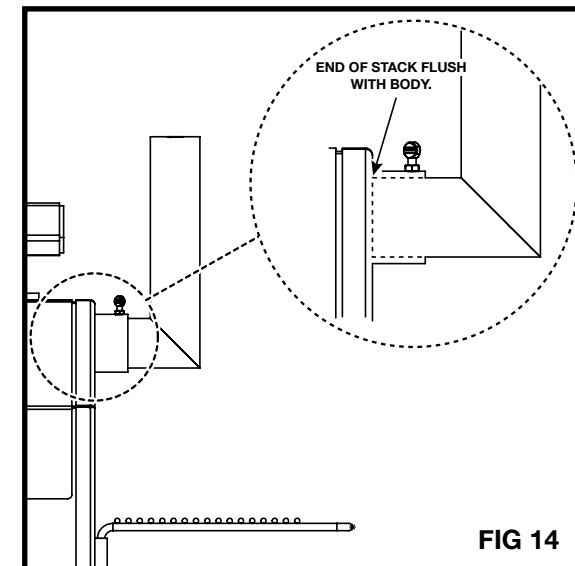
and rests on the grease divider on the right hand side of the grill. Once installed, check to be certain that the edges are approximately one-quarter inch below the grate rails at the hopper end and that the plate is adjusted evenly from front to back. (The diffuser is angled toward the right side of the grill to channel grease into the grease container.)

8. Reinstall the cooking grates and optional second shelf (See FIG 9).



9. Inspect chimney stack to be certain that the internal end of the stack is installed even with the grill body.

10. Remove, inspect and clean the grease bucket as needed. Reinstall the grease bucket under the right side of the grill.



11. Open the hopper lid and inspect for any foreign materials.

12. After complete inspection, continue to the Startup Section. (Page 19)

## Startup Procedure

(When using the Yoder with the heat diffuser/drip plate in position, it is best to start your grill 20 to 30 minutes prior to cooking. This allows the grill and cooking grates to heat completely improving heat retention and recovery when opening the cover during cooking.)

1. Confirm the power cord is unplugged from wall outlet and that the power switch is in the “off ” position
2. Plug the female end of the cord in the receptacle on the back of the pellet hopper. Plug the male end into a 120 volt, 15 amp GFCI-protected receptacle. If an extension cord is required, see caution notes (Page 3).
3. Load the hopper with “food grade” pellets. **DO NOT** use heating grade pellets. The hopper will hold 20 pounds of pellets allowing 5 to 13 hours of cooking depending on cooking temperatures, ambient temperatures, wind condition and whether or not the optional thermal jacket is installed.
4. Open the cooking chamber door.
5. Remove the cooking grates and heat diffuser/drip plate.
6. Adjust the variable displacement damper to wide open (fully on the right side) prior to starting the grill.

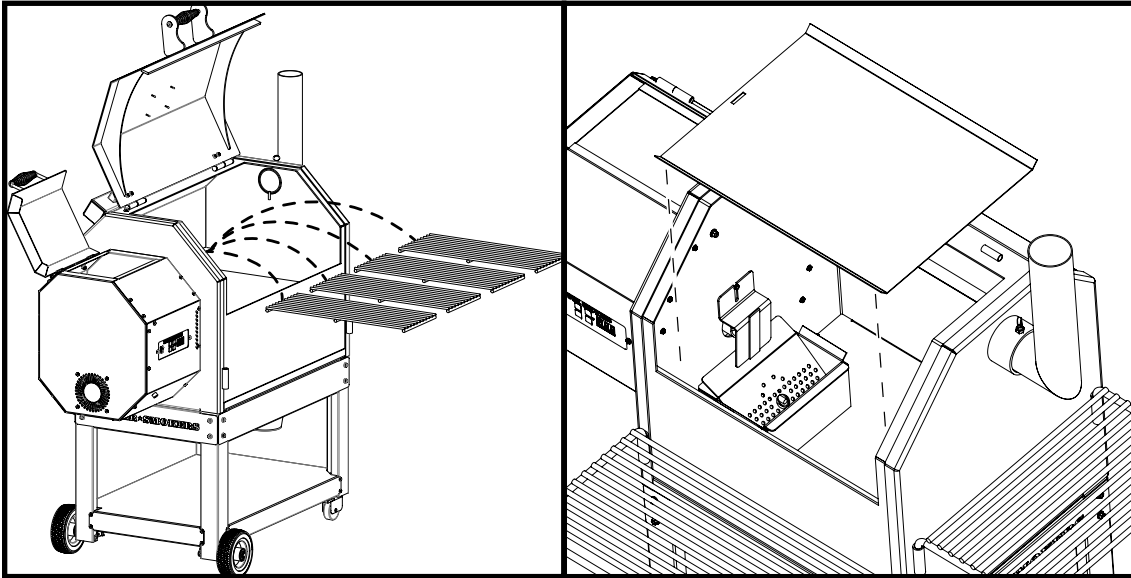
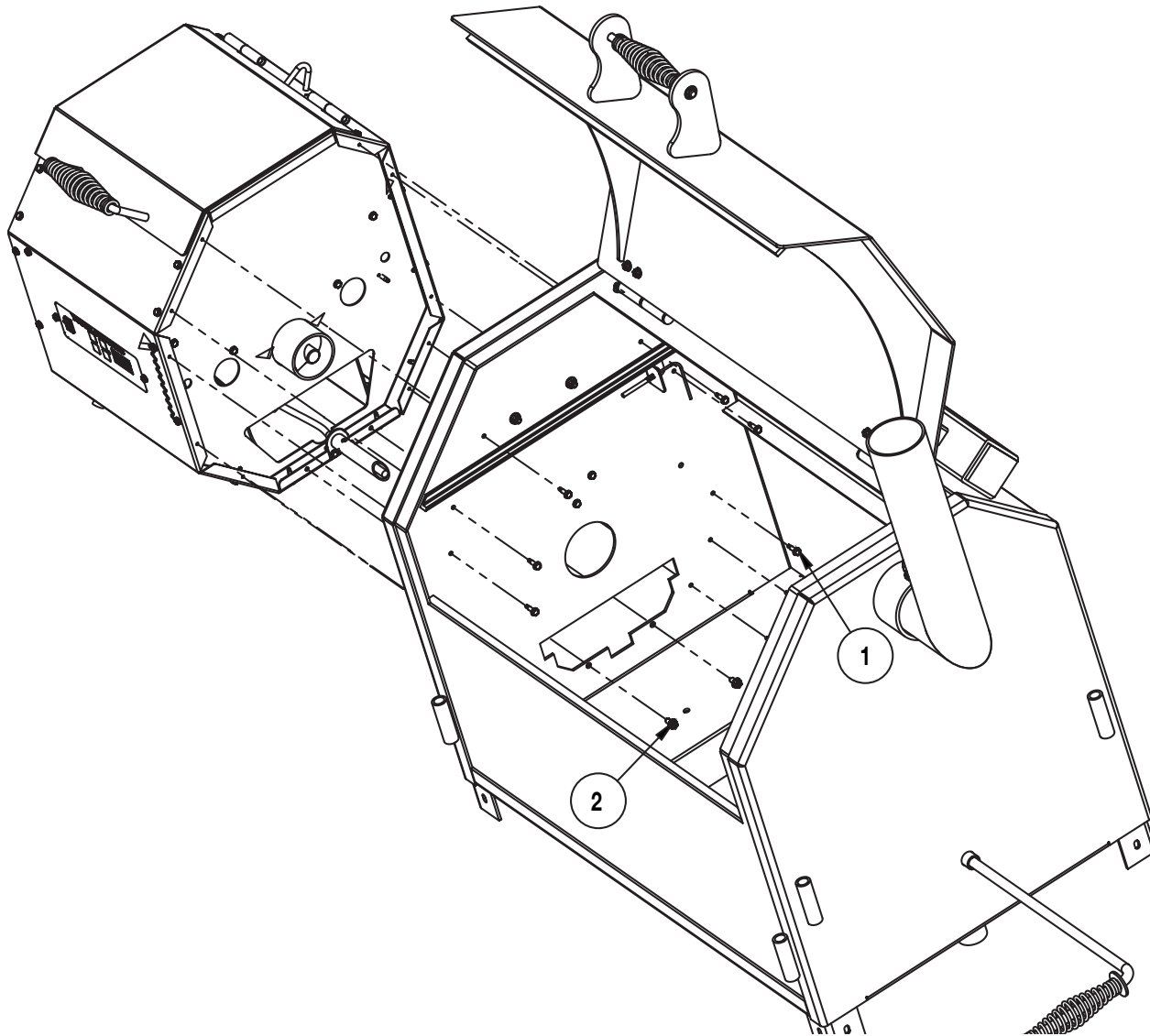


FIG 15

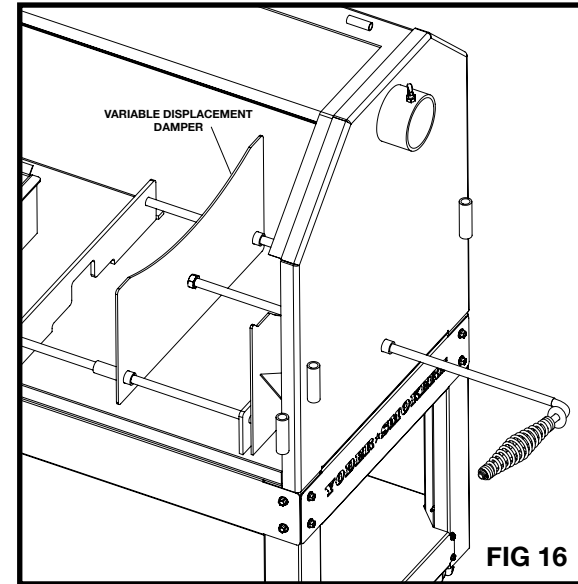
## 640 HOPPER AND COOKING CHAMBER

ITEM #	PART #	DESCRIPTION	QTY.
1	10X34HHSDS	SCREW, HEX HEAD, SELF DRILLING 10 X 3/4	10
2	1420X12HHSTS	SCREW, SLOTTED, HEX HEAD, SELF TAPPING, 1/4-20 X 1/2	2

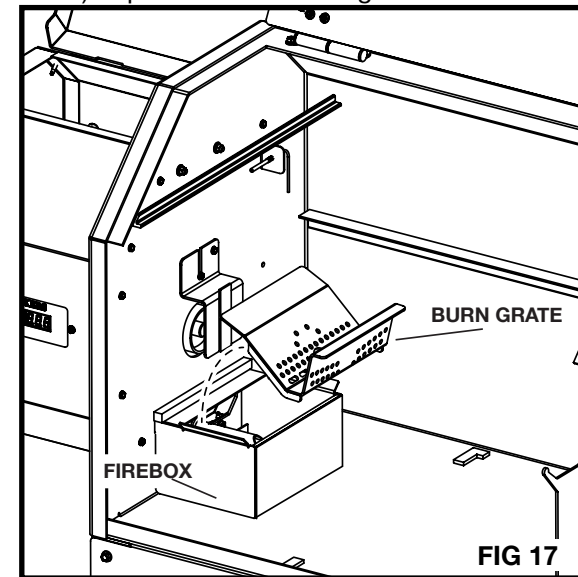
## 640 HOPPER AND COOKING CHAMBER



7. Check to see that the burn grate is properly seated in the firebox.



8. Place 1/8 cup (about a palm full) of pellets on the burn grate.



**NOTE:** This step is only necessary when the unit is first put into service or if it runs out of pellets.

9. Reinstall the heat diffuser/drip pan and cooking grates (See FIG 15).

10. Turn the power switch “on.” This starts the combustion air fan and illuminates the power light. Press the “start” button on the control panel to activate the auger feed system. (The default temperature set point is 350° F). If a higher or lower temperature setting is desired, use the increase/decrease buttons to set the temperature. This can be adjusted at any time after the start cycle is activated. (For cool/cold season or high temperature cooking see the Selectable Heat Up Modes [Page 11]).

Once the start cycle is activated, three lines will appear on the display panel from lower left to upper right indicating “heat up” mode. Once the grate temperature reaches 110° F, the actual grate temperature is displayed, alternating with the mode lines.

If the grate temperature range is exceeded during the “heat up” mode, dashing lines will appear from upper left to lower right indicating “cool down” mode. Once the target temperature range is attained, the lines will flash horizontal indicating “maintenance mode”. The controller will display grate temperatures when the set point is between 150 and 495° F. When the set point is between 500 and 600° F, the display will show the set point and not the actual grate temperature.

11. Flames should be visible on the burn grate within 3 to 4 minutes. (The igniter is active for 2 minutes. When you hit “start”, the auger turns continuously for 45 seconds to prime the burn grate. At 46 seconds, the igniter is powered on; within 2 minutes, the heat from the igniter and the combustion air from the fans will have a small smoldering fire started.

**NOTE:** The only way to reactivate the igniter is to turn the cooker off and let it go through the cool down cycle, or simply pull the plug for a hard reset at which point you can restart the cooker. Before restarting the Yoder, remove the grates and heat diffuser and inspect the burn grate for any pellet overflow. Remove all pellets from the burn grate area and from the pit floor if present.

12. Once the temperature reaches the set point, open the cooking chamber and carefully oil the grates with vegetable oil. You are ready to cook!

### Shutting Down The Smoker

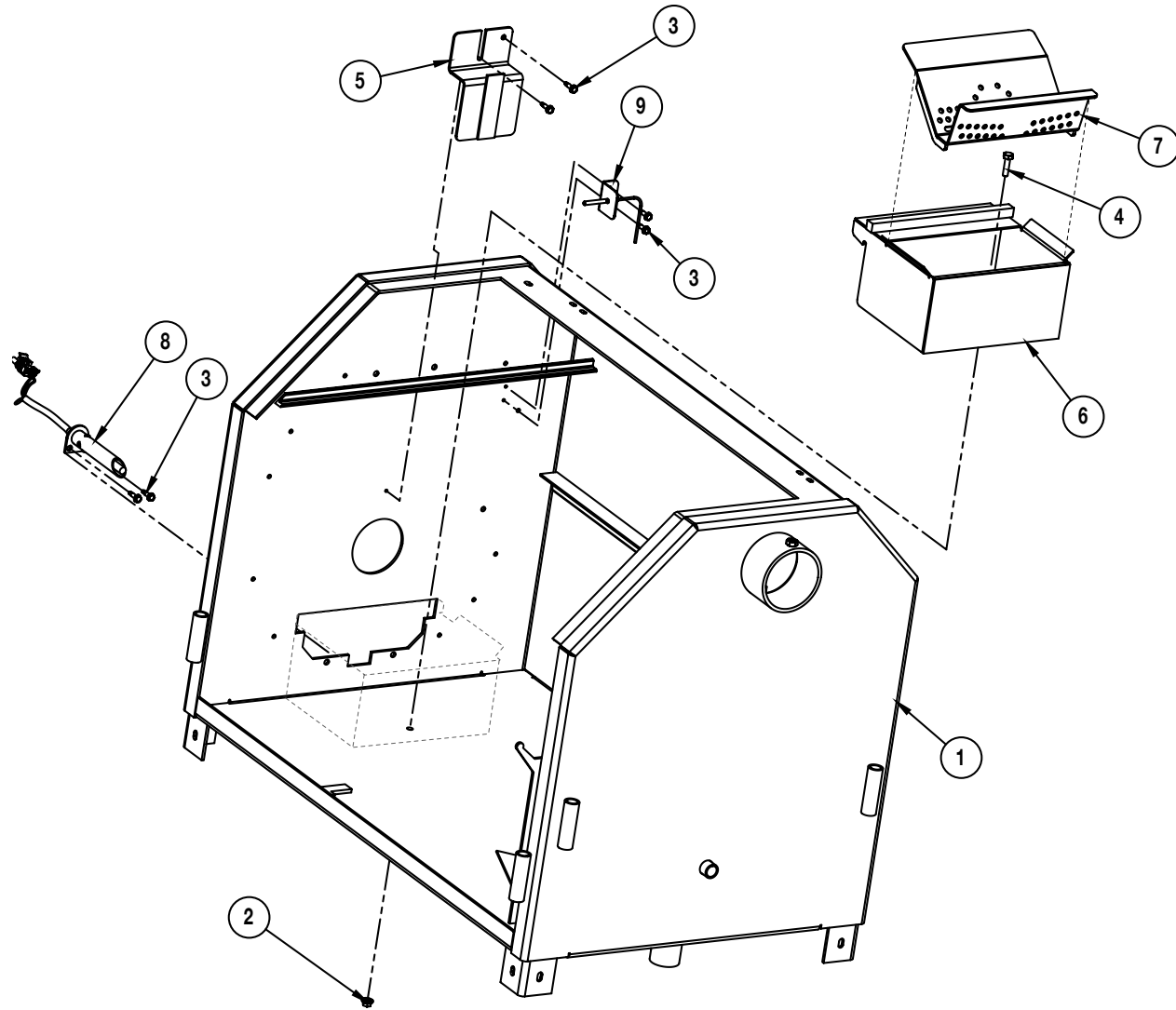
When finished cooking, push the power switch to the “off” position. The controller will begin its automatic shutdown procedure.

- The auger feed system will stop feeding fuel.
- The combustion cooling fan will continue to run until the fire is burned clean.
- The fan will continue to run until the grill temperature reaches 125° F or 18 minutes, whichever occurs first.
- When the procedure is complete, the fan and power LED will turn off.
- Disconnect the Yoder from its power source. When the grill is completely cool, cover the grill to protect your investment and keep the pellets dry.

## 640 IGNITER AND THERMOCOUPLE COMPONENTS

ITEM #	PART #	DESCRIPTION	QTY.
1	W90777	YS, PELLET, 640 SMOKE CHAMBER, WELDMENT	1
2	1420WHN	NUT, WHIZ, 1/4-20	1
3	10X34HHSDS	SCREW, HEX HEAD, SELF DRILLING, 10 X 3/4	6
4	1420X1HB	BOLT, HEX, 1/4-20 X 1” LONG	1
5	91713	YS, WELDMENT, AUGER COVER BRKT, PELLET	1
6	W90812	YS, WELDMENT, FIREPOT MOUNT, PELLET	1
7	W91078	YS, WELDMENT, BURN POT, PELLET SMOKER	1
8	A90423	YS, IGNITER ASSEMBLY, PELLET SMOKER	1
9	A91413	YS, ASSEMBLY, THERMOCOUPLE, PELLET SMOKER	1

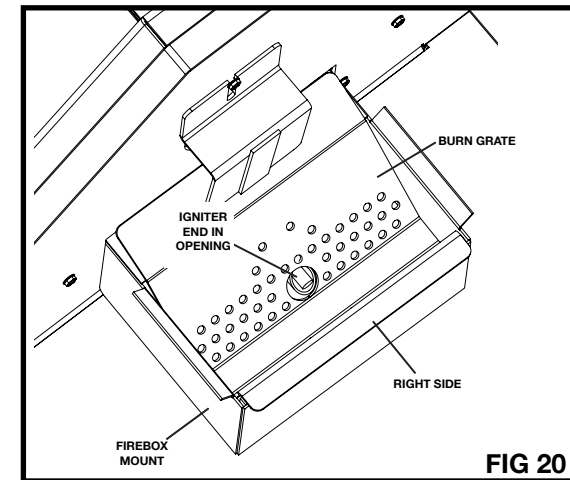
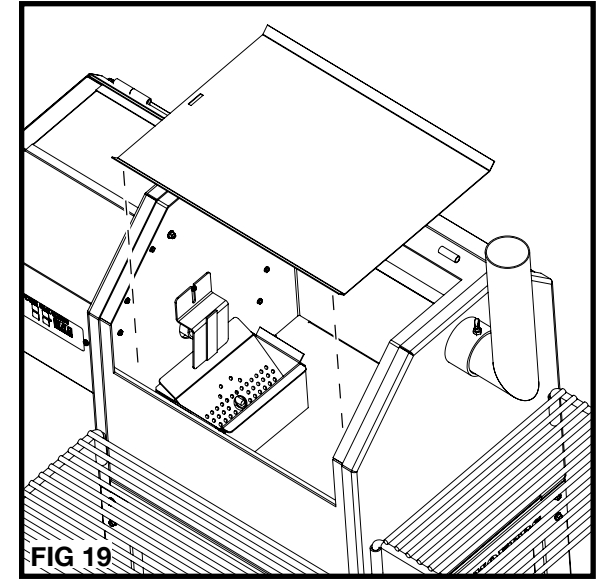
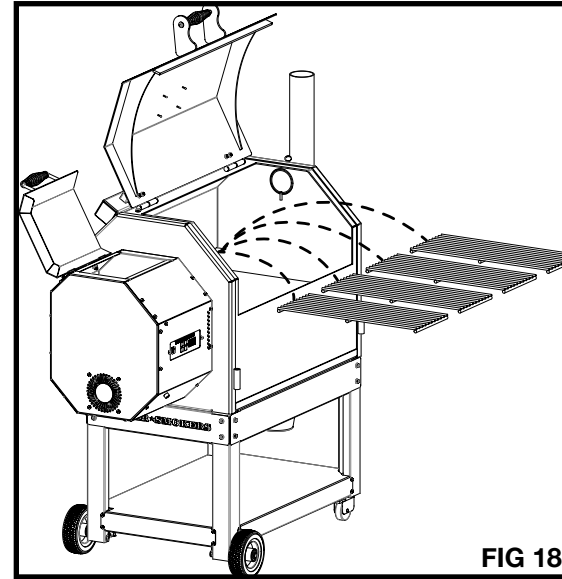
## 640 IGNITER AND THERMOCOUPLE COMPONENTS



## Manual Start Up

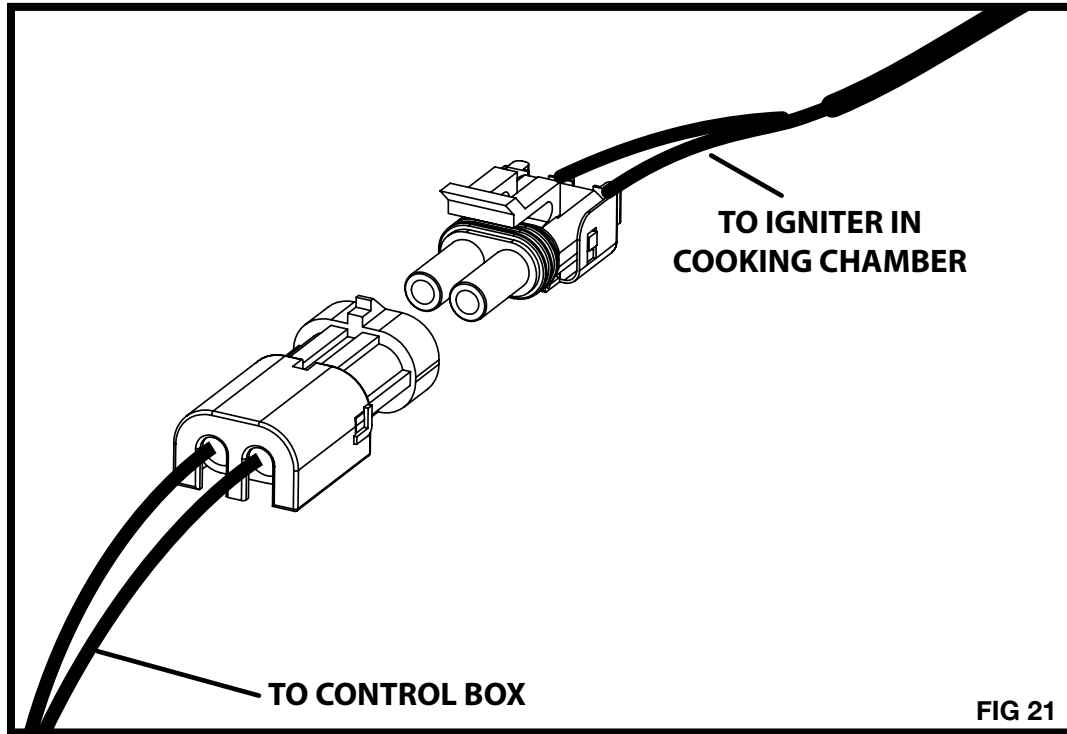
Here are the steps to manually light the grill in the event that the igniter fails. (Steps 2 & 3 only apply if the igniter has developed a dead short and is tripping the GFCI or blowing the fuse.)

1. Be sure the unit power cord is unplugged. Remove the cooking grates, diffuser plate and burn grate.



2. Reach into the hopper cavity on the left side of the igniter tube and pull the igniter wires into the firebox.

3. Unplug the igniter's weather tight connection and then push the wires back into the hopper cavity.



4. Reinstall the burn grate and place a small handful of pellets onto the grate.

5. Light the pellets with a torch, starter gel or starter stick.

6. Once lit, plug the power cord into an outlet and turn the power switch to the “on” position and press the start on the control panel:

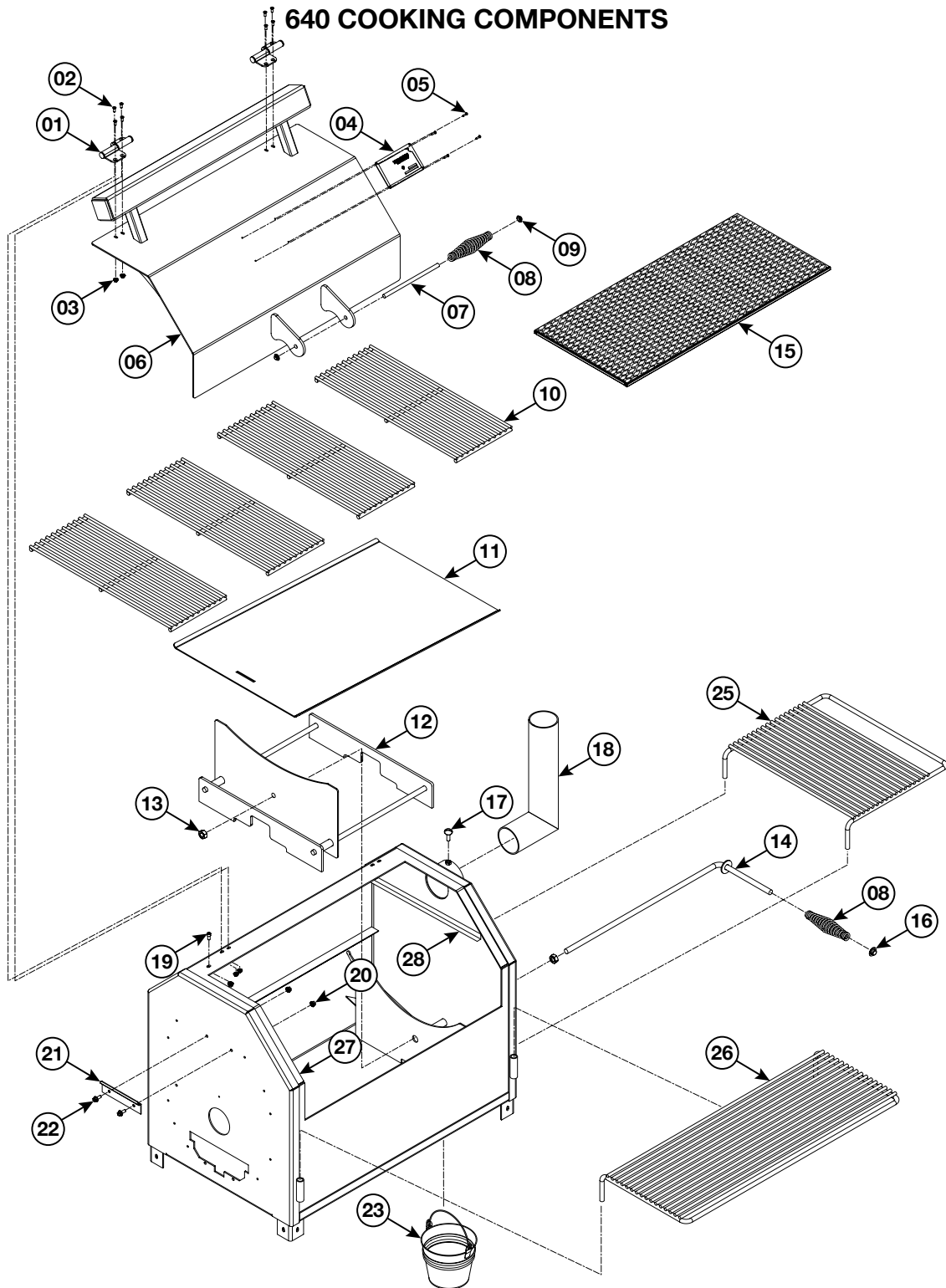
- The feed system begins the prime cycle before defaulting to the set temperature feed rate.
- Set the desired cooking temperature (default set point is 350° F).
- Your smoker will begin to produce a smoke during “startup” within approximately 3 to 5 minutes. To check if the pellets ignited, open the smoker and a flame should be visible in the burn pot area. You will be able to view this without having to touch any hot surfaces.

### 640 COOKING COMPONENTS

ITEM #	PART #	DESCRIPTION	QTY.
1	90737	HINGE, STAINLESS	2
2	1024X12FHMSSS	FLATHEAD MACHINE SCREW, STAINLESS	8
3	1024WHN	12-24 WHIZ NUT	8
4	22860	SERIAL NUMBER TAG	1
5	236-2489-02	POP RIVET	4
6	W90780	640 DOOR	1
7	41435	HANDLE, ROD	1
8	22866	HANDLE, SPRING	2
9	22924	PUSH CAP, 3/8"	2
10	90901	UNIVERSAL CHROME COOKING GRATE, 8"	4
11	W91641	HEAT DIFFUSER	1
12	W90813	ADJUSTABLE BAFFLE	1
13	1213HN	NUT, HEX, 1/2-13	2
14	90429-02	BAFFLE HANDLE	1
15	W90348	640 SECOND SHELF	1
16	23108	PUSH CAP, 1/2"	1
17	90377	THUMBSCREW, 5/16-18 X 3/4	1
18	W90067	CHIMNEY	1
19	1420X58WHB	SOCKET HEAD SCREW, 1/4-20 X 5/8	1
20	1420WHN	NUT, WHIZ, 1/4-20	3
21	90117-01	HOPPER MOUNTING BRACKET	1
22	1420X58WHB	BOLT, WHIZ, 1/4-20 X 5/8" LONG	2
23	90460	BUCKET	1
24	W90779	32" SMOKE CHAMBER	1
25	90896	SIDE SHELF	1
26	90895	FRONT SHELF, 32"	1
27	90352	LEFT ANGLE 2ND SHELF	1
28	90353	RIGHT ANGLE 2ND SHELF	1



## 640 COOKING COMPONENTS



## Getting the Most From Your Yoder: Direct & Indirect Grilling, Smoking & Baking

### Heat Up Times and Grate Temperatures

The question is regularly asked: “How long does it take from the time I press “start” until I am ready to cook?”

When the cooker is setup traditionally (diffuser plate installed), the heat up time is 20 to 30 minutes. When the cooker is setup for direct grilling (diffuser plate out), the heat up time is about 15 minutes. It is also important to note that when the cooker is setup “direct”, the temperature at the center of the grate is hotter than the reported temperature. How much hotter depends on the set point. At 350° F on the display, the grate center is approximately 425° F. At 475° F on the display, grate center is approximately 625° F. The difference is caused by the reduction of airflow to the thermocouple when the direct grates are installed. This is true with the diffuser in or out.

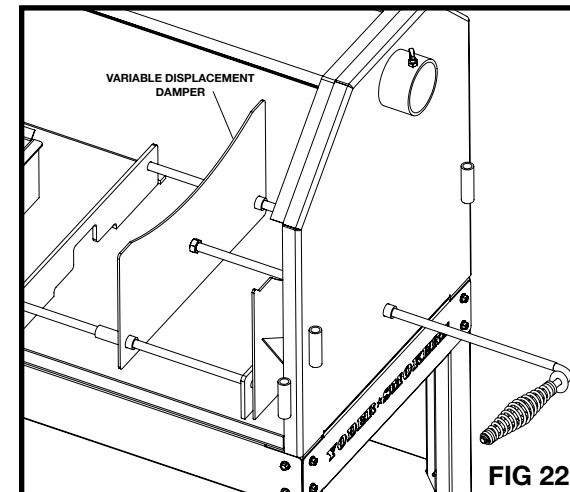
Finally, precise temperature management is not important when you are doing short cooks where you are opening and closing the pit frequently. Find a set temperature that works well for the type of food you are grilling... for instance burgers and brats do well at a 350° F set point when indirect grilling.

The versatility of your Yoder is realized by choosing one of its three unique setups:

- 1) Smoking from 150 to 275° F & baking from 350 to 400° F (with diffuser plate in place)
- 2) Indirect grilling from 275 to 350° F (with diffuser plate and optional Direct Grill Grates installed)
- 3) Direct grilling where searing temperatures are desired, simply by removing the heat diffuser plate and installing the optional Direct Grill Grates.

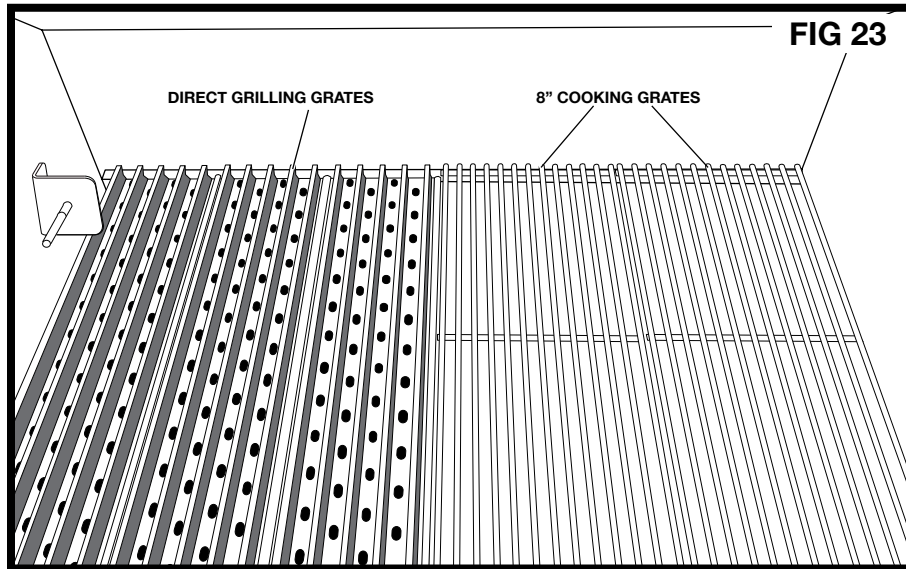
The traditional setup for the Yoder has the heat diffuser plate between the firebox and the cooking grates. With this setup, the cooking style is best described as a wood-fired oven. This setup is ideal for all of your smoked and baked foods.

Setup #1: Smoking and Baking. Heat diffuser plate in and standard cooking grates installed. In this setup, the variable displacement damper (VDD) is generally pushed in about 6 inches from the right hand side to create an even temperature across the grates. (See FIG 22).



Setup #2: Moderate temperature grilling such as wings and boneless chicken breasts (grate temperatures up to 350° F): Heat with the diffuser plate in place and a set of Grill Grates installed on the left side of the cooker. The “Direct Grilling Kit” consists of three custom-made aluminum panels which replace one standard cooking grate (See **FIG 23**).

**NOTES:**



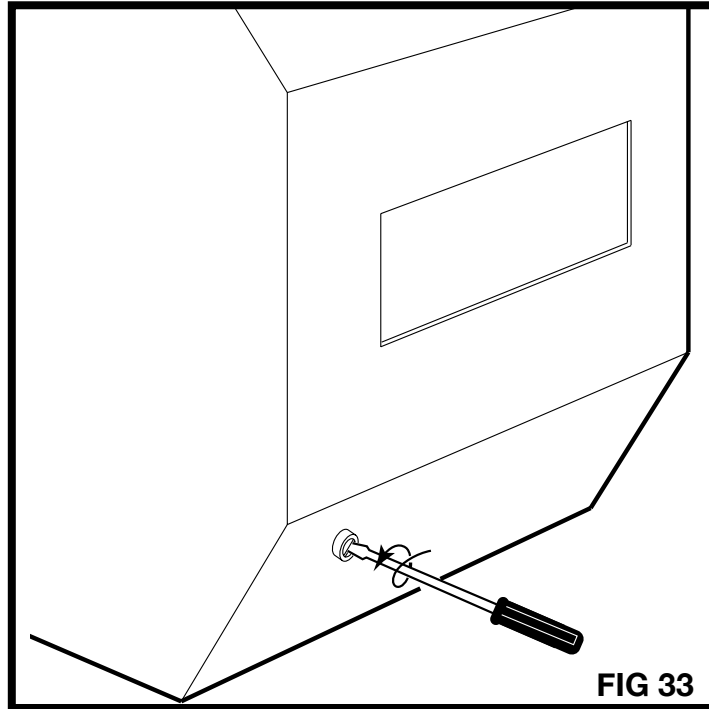
Option: Two sets of grill grates for extended direct grilling surface.

Setup #3: Direct grilling with searing capability (set temperatures above 400 degrees). Remove the heat diffuser plate, set the variable displacement damper in the full open position (See **FIG 27**) and install the Grill Grates on the left side of the cooker. (With the heat diffuser/drip plate removed, some users prefer to line the bottom of the cooker with foil to facilitate cleanup). When setup direct (heat diffuser out, one set of Grill Grates and standard cooking grates installed), the Yoder creates a true direct/indirect cooking environment.

With a second set of Grill Grates installed on the right side of the Yoder, temperatures are fairly even across the entire cooking surface; this is true with the diffuser in or out.

## Fuse Replacement

If there is no display on the power switch with the switch in the “on” position, check the power source to verify the GFCI hasn’t tripped. If the power source is working, check the Yoder fuse. The fuse holder is located on the left front side of the pellet hopper below the control panel (on the standard backyard carts). (see **FIG 33**). \* On the competition cart models the fuse holder is located on hopper end panel. Verify that the power switch is in the “off” position and disconnect the Yoder from its power source. Insert a small flat blade screwdriver into the slot on the top of the fuse container and twist it counterclockwise to open. If the fuse is blown, replace it with the supplied replacement fuse. (The fuse is a 1.6-ampere quick-blow fuse.) Reconnect the power and turn the Yoder on. If the fuse blows again, contact us for technical support.

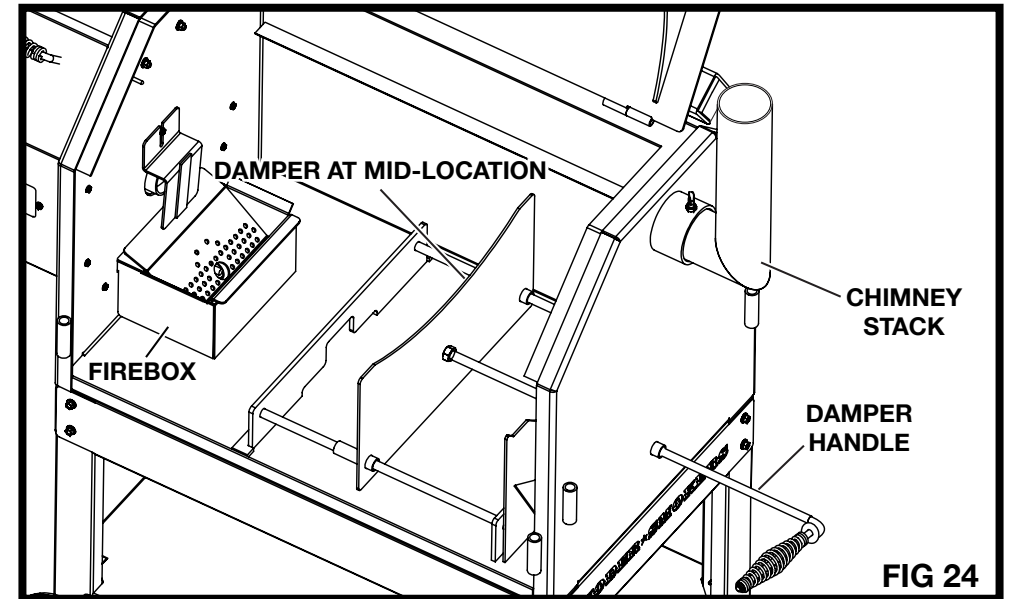


## Storing Your Grill

Cover your Yoder Smoker to protect it from the weather and to keep the pellets dry. If storing your cooker inside, be sure the smoker is cool to the touch before moving it inside. Inspect the hopper and cooking chamber for any remaining embers before storing the unit.

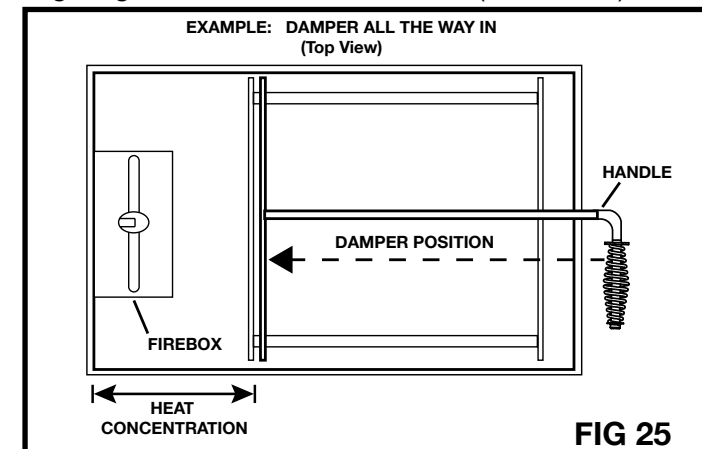
## Variable Displacement Damper

The YS640 is fitted with a variable displacement damper for managing heat distribution in the pit from the firebox to the chimney end. (See **FIG 24**)

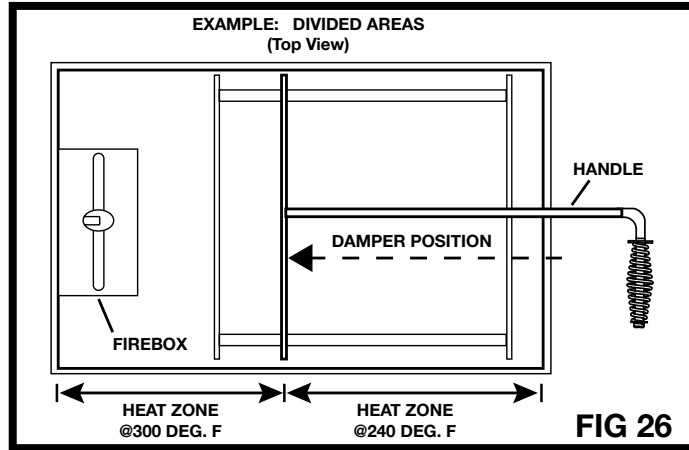


When the YS640 is set up with the heat diffuser in place the Variable Displacement Damper allows the pit master additional temperature control at the grate level. With the damper pushed all the way in, the left half of the grill will run hotter (**FIG 25**). When positioned all the way open, the right side of the grill will run hotter. With the damper pushed in about 5 inches, the grate surface will cook evenly, creating an ideal environment for slow cooking. With the direct grill kit in place, it is recommended that the damper is completely open to develop heat across the entire cooking surface.

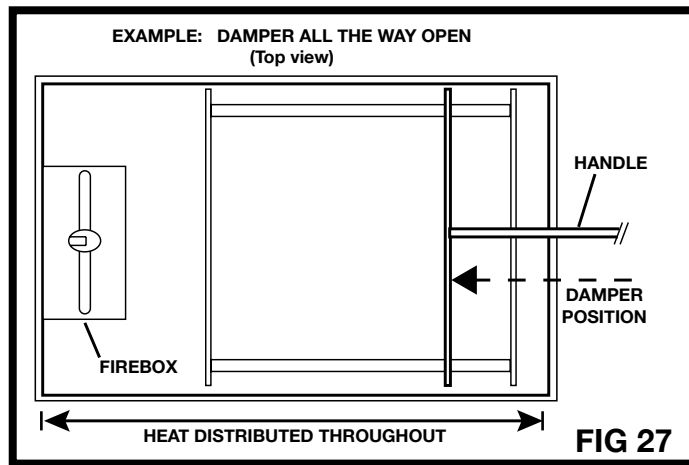
- By pushing the damper all the way in (toward the firebox) heat is concentrated for grilling on the left side of the Yoder. (See **FIG 25**)



- You can create dissimilar side-to-side temperature which is useful, for example, for cooking poultry on the left at 300° F and a butt or brisket on the right at 240° F. This puts different surface temperatures to work for you. (See **FIG 26**)



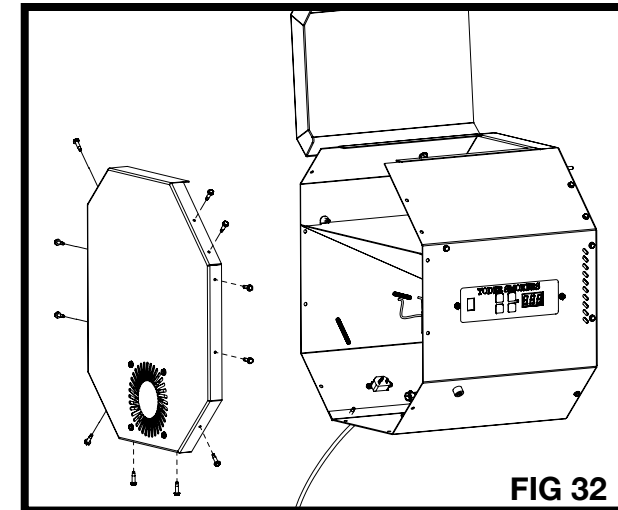
- When the damper is positioned about 5 inches from the stack end of the pit (full open position), the temperature is even from end to end, creating the ideal environment for slow cooking similar cuts of meat. (See **FIG 27**)



## Fan Cooled Hopper Assembly

**Always disconnect the power to the grill before performing any service**

- Remove any debris from the combustion air fan intake. Use compressed air to remove dust and debris from both fans.
- Inspect and clean the pellet hopper area. The interior hopper surface can be wiped down using warm water and detergent. To protect the surface and promote smooth pellet feeding, coat the surface with car wax.
- Inspect the metal auger area and remove any debris or sawdust that may have built up.
- Using a 5/16" socket you can remove the 11 screws securing the end panel to the hopper assembly (See **FIG 32**). This will allow you to perform the following:
  - Check and clean any debris within the hopper housing.
  - Check and clean any debris in the fan blades or housing.
  - Check and clean any debris from the auger motor.
  - Visually inspect the wiring harnesses and terminal connections.
- Upon inspection (and any required maintenance) replace all screws. Hand start each screw to ensure proper threading.



## Grease Management Area and Bucket

Always be sure the grease catch area is clean and free of debris; empty the grease bucket regularly.

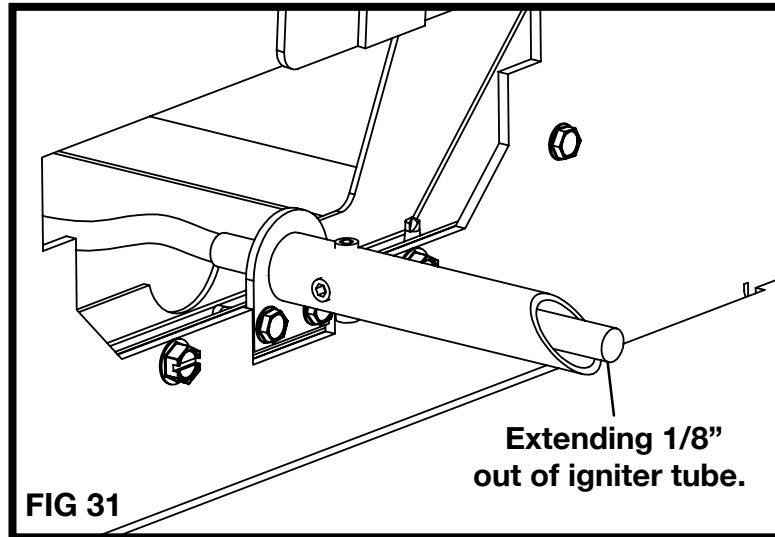
### Additional Maintenance:

In addition to regular cleaning, perform the following procedures every 30 days:

- Use a stiff brush to remove any build-up on the inside walls of your grill. Inspect and clean the inside of the lid, the heat diffuser/drip tray and the inside walls of the cooking chamber.
- When your grill is cool to the touch, use a shop vacuum to thoroughly clean the cooking chamber, firebox and hopper assembly.
- Use a citrus based cleaning solution to thoroughly clean the inside of the grill.
- Finally, visually inspect the painted surfaces and touch up any scratches with high heat flat black paint.

## Igniter

When inspecting the firebox assembly, confirm that the igniter assembly, tube and igniter rod are free of ash or other debris. Periodically check the four set screws that secure the igniter rod into the tube. (See FIG 31). Verify that the igniter rod is centered in the tube and that the tip of the igniter rod is extended approximately 1/8" out from the igniter tube.



## Grill Maintenance

Notice: Damage caused by improper maintenance can lead to costly repairs and may not be covered by warranty. Perform maintenance work only if the required information and proper tools are available. If they are not, or repairs beyond the scope of this manual are required, see your local dealer or contact Yoder Smokers to have trained technicians do the work.

### Preparing the Grill for the Season

Begin with a thorough inspection of the entire grill correcting any issues you find. Follow the steps found in the Pre-Grill checklist (Page 16).

### Painted Surfaces

Yoder smokers are painted with high heat silicone paint. When cleaning the smoker, surfaces should be washed down with warm soapy water using a neutral detergent, then rinsed with clean water. The paint should be periodically inspected and touched up when scuffs or bare spots are exposed. For more information about high heat paint that can be used for touch-up, contact [customerservice@yodersmokers.com](mailto:customerservice@yodersmokers.com).

### Cooking Grates

When new, wash thoroughly with warm soapy water, place back in the smoker and lightly coat with vegetable oil. Condition the grates during the burn off process. When you begin the next cooking session, bring the grill up to the desired cooking temperature and use a long-handled grill brush to clean the grates before evenly coating the grates with vegetable oil.

### Heat Diffuser/Drip Plate

This requires very little maintenance if the plate is lined with foil (non-stick foil). If foil is used, it can not be more than 2" longer than the heat diffuser plate. The foil must be folded up tight to the bottom of the plate. Any foil hanging off the front will effect the performance of the grill. It is recommended that you change the foil every one to three uses. If the heat diffuser/drip plate is used without foil, it will need to be cleaned after each use. Failure to do so creates the potential for a grease fire.

### Cooking Chamber

It is recommended that each time you run through the steps in the Pre-Grill Checklist (Page 16) that you inspect and thoroughly clean the interior of the cooking chamber. Any excess grease can be cleaned up using a plastic scraper and paper towels. Pay particular attention to the grease channels on the right hand side of the cooking body. At the beginning of the season, and as necessary throughout the rest of the year, de-grease the interior with a citrus based cleaning solution.

- Ensure that the grill is **completely cold** before using a shop vacuum or before scooping out and disposing of the ashes. Dispose of the ashes in a metal container.
- Use a citrus based cleaning solution to clean the entire inside of the body. This will control grease build-up and the possibility of flare-ups.

## Firebox and Burn Grate Assembly Maintenance

It is recommended that the firebox assembly is regularly inspected to be certain that it remains free of ash and debris which will ensure proper performance.

The firebox is a fully welded structure that carries the burn grate and channels the combustion air. The firebox is bolted to the cooking chamber floor. The seams on the hopper wall and the floor of the cooking chamber are sealed with a high temperature silicone. Perform regular inspection of the silicone seal, particularly on the top side of the firebox along the hopper wall. If this seal is broken, remove the old silicone, clean the surface, reapply new high temperature silicone and let it cure. We recommend using **Permatex 81160** high temperature silicone or **Sure Bond SB-188**.

The seating of the burn grate into the firebox is critical for proper grill performance. Begin by resting the right hand side of the burn grate on the fire pot and then pressing down on the left hand side of the burn grate until fully seated. Once the burn grate is seated there is little to no movement in this assembly. Also, check to be certain that the igniter assembly is centered in the respective hole in the burn grate.

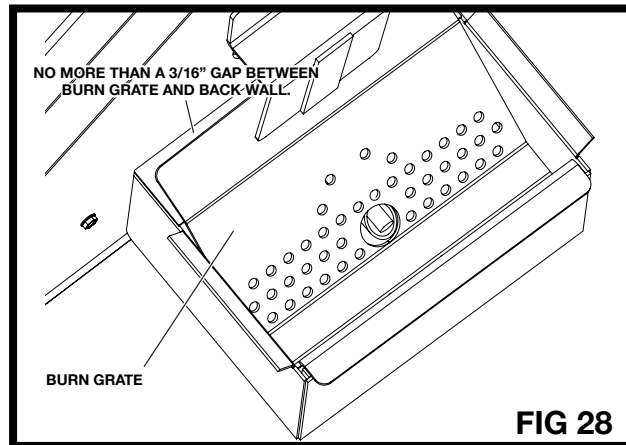
## Stainless Steel Burn Grate

It is important to regularly check the combustion air holes located on the floor and sides of the burn grate for any blockage or build-ups. Using a wire brush or flat-head screwdriver, scrape off any build-up or debris.

## Burn Grate Inspection

**NOTE:** Only do this when the smoker is completely cool.

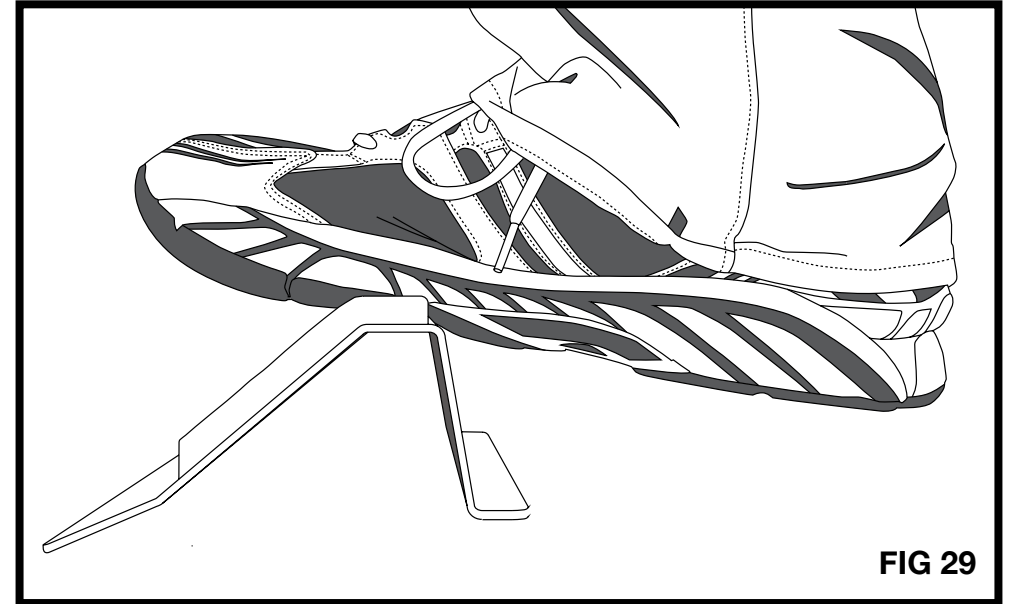
To ensure that the pit is burning efficiently, a visual inspection of the burn grate is required periodically. The burn grate should sit flat against the back wall. Due to the intense heat that is created, the burn grate can change shapes. There should be no more than a 3/16" gap from the back wall to the burn grate. If a gap does exist, then it must be corrected to ensure proper



pellet burning. To get to the burn grate see Page 16.

If the gap is greater than 1/8", the steps below should be followed.

1. Start by removing the burn grate from the firebox and placing it on its top.
2. Next, step on the burn grate and apply enough pressure to bend it back to its original shape. **DO NOT** apply too much pressure or you will overcorrect the burn grate and it will not fit back into the firebox.



3. Place the burn grate back into the firebox and check the gap between the back wall and the burn grate to ensure a proper fit. If a gap still exists, then repeat steps 1 and 2.

