



## **WARMLAND TROUBLESHOOTING GUIDE**



**WARMLAND PELLET STOVE**

**MODEL: PS45 SERIES: A**

## PROBLEM

## CAUSE

## SOLUTION

**Stove won't turn ON** (No lights or fan noise after 30sec.)

No Power to stove

Check power cord is plugged in. Check household Circuit Breaker

High Limit switch faulty or tripped

Switch button should be pressed in (check with unit unplugged) see section "stove overheats" Check to see why switch tripped. - See Fig. #3

Damaged or disconnected wiring/harness

Check Wiring and all connectors

Damaged switches on keypad

Replace keypad

**Pellets won't drop**

Hopper Empty

Check Hopper fuel level

Hopper lid open

Close lid

Sawdust/pellets plugging auger

Remove sawdust/pellets from Auger system.

Hopper lid switch damaged

Check switch. See Fig #7

Vacuum switch/lines plugged or damaged

Check switch and vacuum hose for damage or kinks.

Combustion Blower blocked or damaged

Check blower for ash build-up. Clean venting system. (See page 16 of Owner's Manual) Plug blower in direct to check operation.

Auger Motor fuse blown

Check motor for visible signs of a short and replace if needed, replace fuse (See wiring diagram, page 8)

Auger motor damaged

Plug motor into 120V directly. Check motor for movement of the motor armature and output shaft. If the armature rotates but not the output shaft, then the motor has internal damage- replace motor

Faulty motor drive on main board

Replace main board

## PROBLEM

## CAUSE

## SOLUTION

### **Pellets won't light after 8-10 min.**

Burn Pot/Burn Pot Liner not installed correctly	Ensure Burn Pot and Liner is installed properly. See page 14 of owner's manual, "Burn Pot and Liner Cleaning" section
Mixer Tyne blocking Igniter hole in the Liner	Remove Mixer Bar and rotate 180 degrees then re-engage.
Igniter hole in Burn Pot Liner restricted/plugged	Clean Liner holes and igniter tube.
Damaged or disconnected wiring/harness	Check Wiring and connectors
Igniter fuse blown	Check Igniter Fuse –if blown, check igniter for damage (See wiring diagram, page 8)
Igniter faulty	Check resistance with a meter. 35 – 45 ohms wire to wire.

### **Stove shuts down after 15min. (the end of Start-up cycle.)**

Fire did not get hot enough in 15 min start time	See "Pellets won't light."
Damaged or disconnected wiring/harness	Check Wiring and connectors
Exhaust temp. switch covered in ash	Clean switch(Fig #4), stove and exhaust venting
Exhaust Temp. Switch damaged	Test switch –should close when heated.

### **Stove turns off while operating**

Fire went out or fire too cold	See" Pellets won't drop" Clean Exhaust temp. switch, stove and exhaust venting. Low grade fuel - Trim auger feed to get more heat. See page 12 of owner's manual, "Control Board" section. Check firebox vacuum levels. Adjust if needed.
Hopper Lid open	Close Hopper lid
Stove is in AUTO thermostat mode and thermostat has opened	Normal operation. Switch to Hi/Low if continual operation is desired.
Stove overheated	See "Stove overheats"
Vacuum switch/lines plugged or damaged	Check switch and lines for damage or kinked hose.
Combustion Blower blocked or damaged	Check blower for ash build-up. Clean venting system. Plug blower in direct to check operation.
Hopper lid switch damaged	Replace switch (See Fig #7)

## PROBLEM

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### Stove trips High Limit switch/ Overheats

No convection airflow.	Clean out blades of Convection Blower. Plug blower in direct and check operation.
Damaged or disconnected wiring/harness	Check Wiring and connectors
Excessive fuel feed	Trim the Auger Feed down.
High Limit switch faulty	Check switch.
Convection Blower fuse blown	Check fuse –if blown, check blower for damage. (See wiring diagram, page 8)
Faulty Fan driver on Main Board	Replace board.

### Stove won't turn off after Shutdown period (unit may take up to 20 min to cool, depending on operating temp. at time of shutdown.)

Exhaust Temp. Switch damaged	Test switch –should close when heated and open again, when cooled to room temp.
Damaged or disconnected wiring	Check Wiring for a short

### Mixer doesn't turn

Mixer jammed	Clean burn pot liner and check alignment.
Mixer not connected to drive shaft.	Align pins on mixer in slots on drive shaft, insert and twist to lock.
Damaged or disconnected wiring/harness	Check Wiring and connectors
Mixer motor fuse blown	Check motor for damage and replace fuse.
Mixer motor chain drive failure	Check gear alignment. And ensure all gears are tight to their shafts.
Mixer bushing failure	Replace required bushings.(See Fig #8)
Faulty motor drive on main board	Replace main board

## PROBLEM

## CAUSE

## SOLUTION

**Fault light code #3 heat output segment flashing.**

Fire went out / stove went cold while in operation or did not light.

See “Stove turns off while operating” or “Pellets won’t drop” or Pellets won’t light” section

**Fault light code #4 heat output segment flashing.**

Vacuum switch opened while in operation or failed to close during start-up

See “Pellets won’t drop, Stove turns off while operating”

## Component Information

The following is a list of other components and their functions.

### Igniter

The Warmland PS45 stove comes equipped with an automatic igniter for lighting the fuel when the stove is in the lighting mode. (Fig. #21) The igniter superheats air that is pulled through the Burn-Pot by the combustion blower to light the fuel. The igniter remains energized for the first 10 minutes of the lighting sequence.

The Igniter can be removed by first removing the back grill and then removing the two screws securing the igniter to the firebox.

### Vacuum Switch

The stove has a Vacuum Switch (Fig. #21), located on the right rear hopper leg. If the pressure drops in the firebox due to a leak, a blocked flue, open front door or unsealed ash drawer, the vacuum switch will sense this and open the circuit to the Auger Motor. The Stove will then go into a shutdown mode.

To remove the Vacuum switch you will need to remove the back grill and then remove the two bolts securing the switch to the frame.

### Auger and Auger Motor

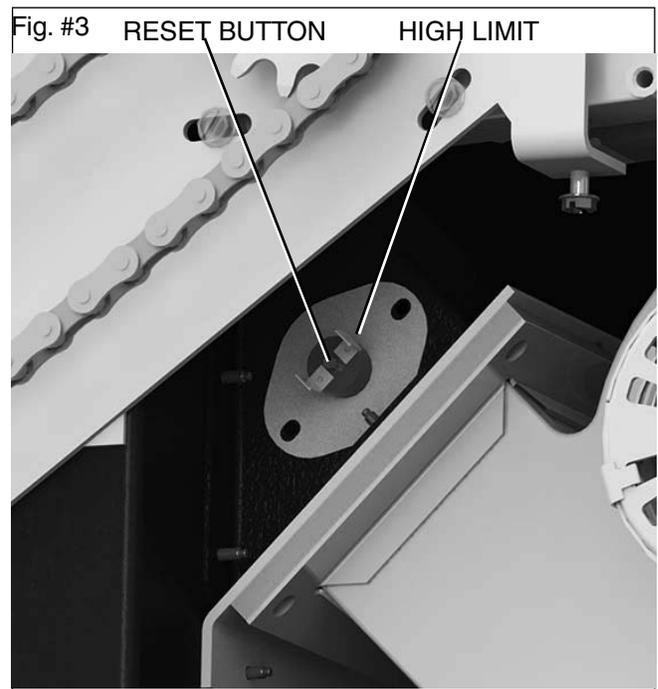
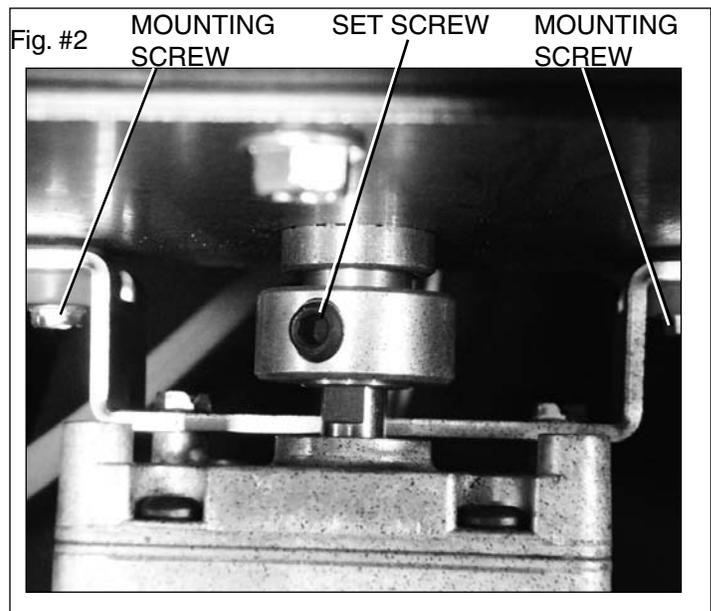
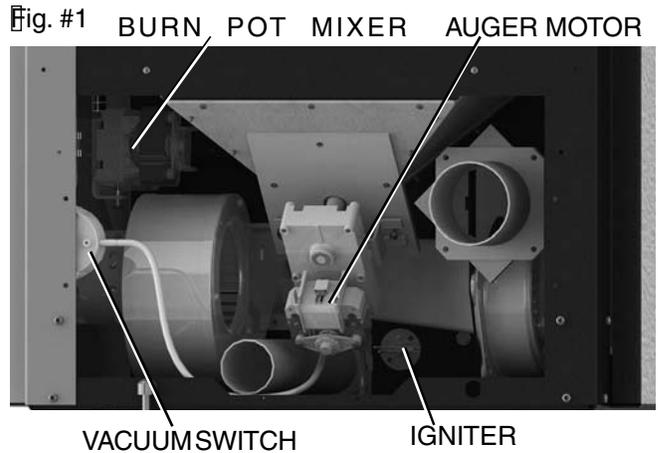
A 1 rpm gear motor turns the Auger, lifting pellets up the auger tube. The pellets are then dropped down a tube and into the burn-pot. The auger is controlled by the control board.

To remove auger motor, first remove the back grill then loosen the set screw on the auger collar. Next remove the two screws securing the motor mount to the bushing plate and pull down and back.

### HIGH LIMIT Snap Switch (Manual Reset)

This switch is installed on the convection blower duct and shuts the stove down if it senses excessive temperatures (Opens at 200° F). This snap switch has a reset button on it and will not allow the stove to start up until the reset button has been pushed.

To remove the High Limit Switch you need to remove the right side panel. Then remove the two screws securing the switch to the convection blower duct.



## Exhaust Temp Snap Switch

This switch is installed on the combustion blower and is used to sense when there is a fire in the stove during Start-Up. It will shut the stove off if it senses there is no fire in the Burn-Pot Liner.

To remove the Proof of Fire switch you will need to remove the left side panel. Then remove the two screws securing the switch to the exhaust blower casing.

## Draft Damper

The PS45 stove has a draft damper located at the left side of the stove directly in front of the combustion blower. After the stove is installed the Draft Damper will need to be set for the vent configuration. With the stove hot, use a magnehelic gauge to adjust the slider until a reading of .14" is achieved in the firebox. The sampling hole is located at the top of the ash box, above the ashpan. To reduce the draft, move the adjuster toward the center of the stove.

## Burn-Pot Mixer Motor

This 1 RPM gear motor turns the Burn-Pot Mixer rod via a coupling and chain drive system.

The Mixer Motor is controlled by the control board.

To remove the Mixer motor you will need to remove the rear grill and the right side panel. Next, loosen the set screw in the shaft collar. Then loosen the 3 Hex-Head screws and the locking screw in the mounting plate. Loosen the motor support screw to give more slack in the drive chain and disengage the chain from the sprocket. Slide the sprocket off the shaft. Now remove the locking screw and 3 Hex-Head screws completely.

## Hopper Switch

This switch monitors the hopper lid position. If the lid is open, the switch stops power to the auger motor.

To access the switch, remove the right side panel and then remove the nut holding the switch in place. When reinstalling a switch, be sure the switch closes when the hopper lid is closed. The switch is normally open, closing when pressed.

Fig. #4 PROOF OF FIRE SWITCH

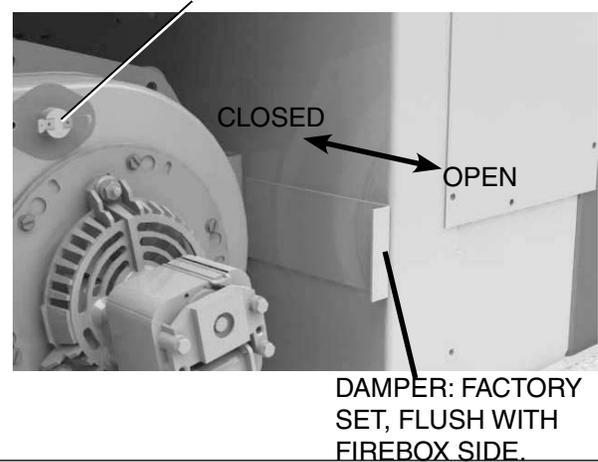


Fig. #5

SET SCREW

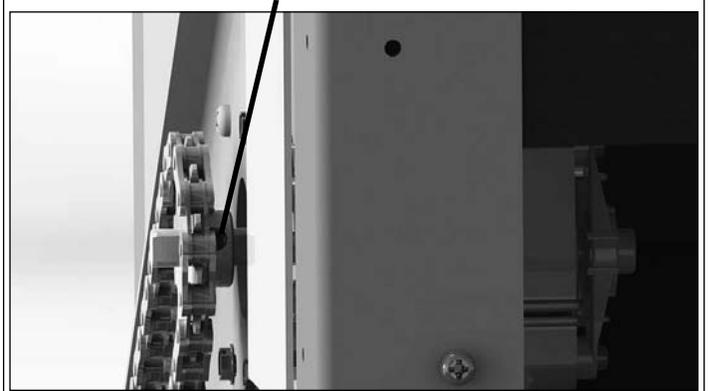
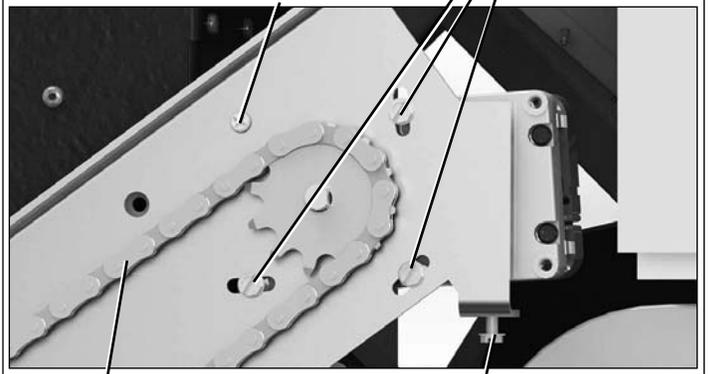


Fig. #6

LOCKING SCREW

HEX-HEAD SCREWS



DRIVE CHAIN

MOTOR SUPPORT SCREW

Fig. #7

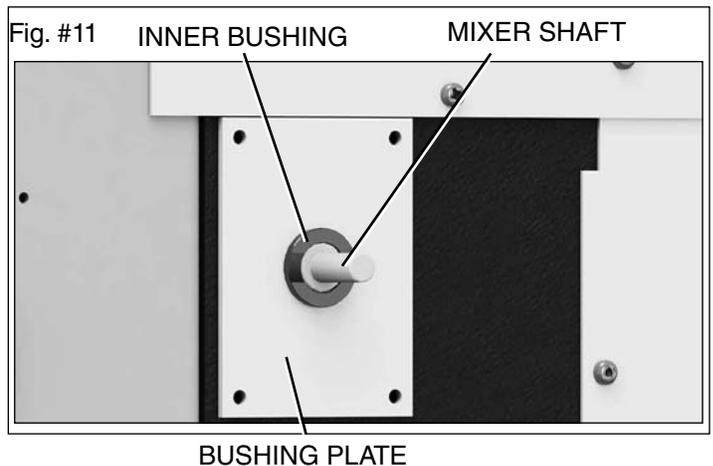
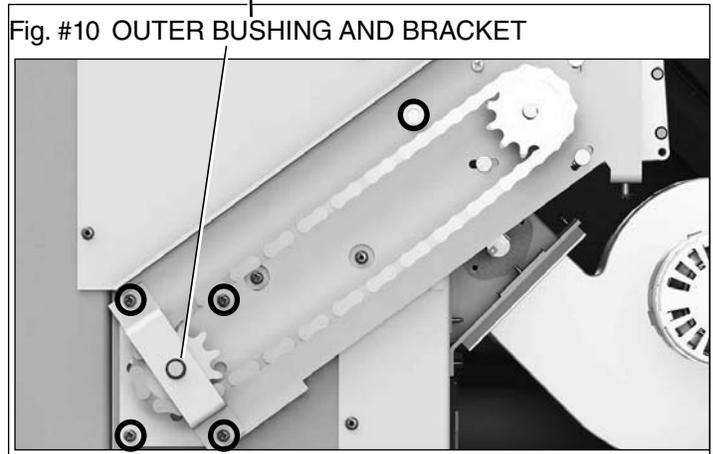
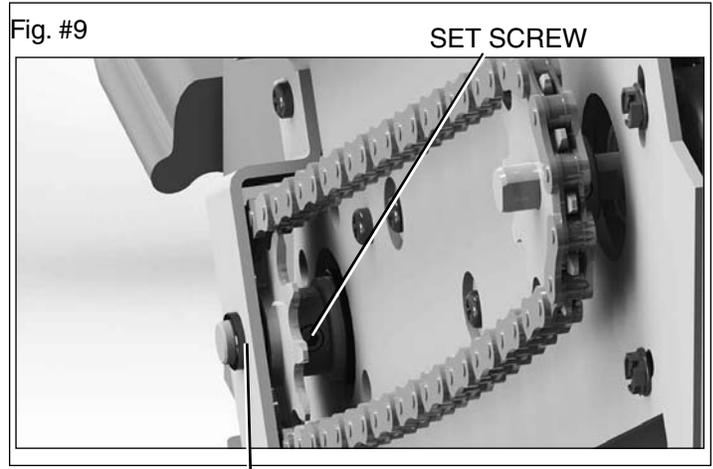
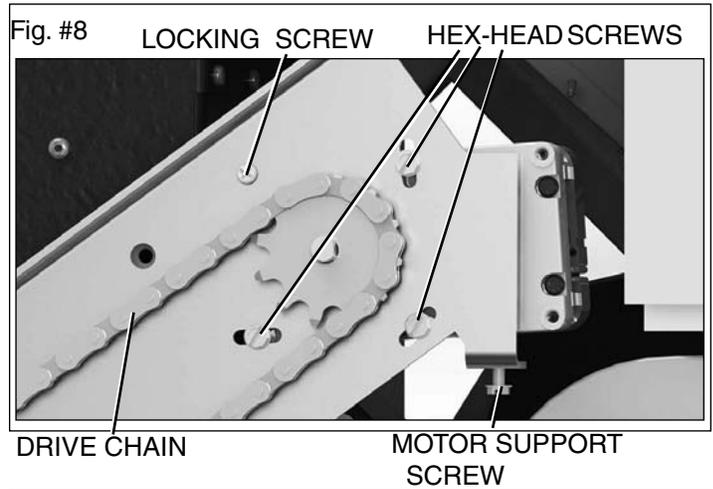
HOPPER SWITCH



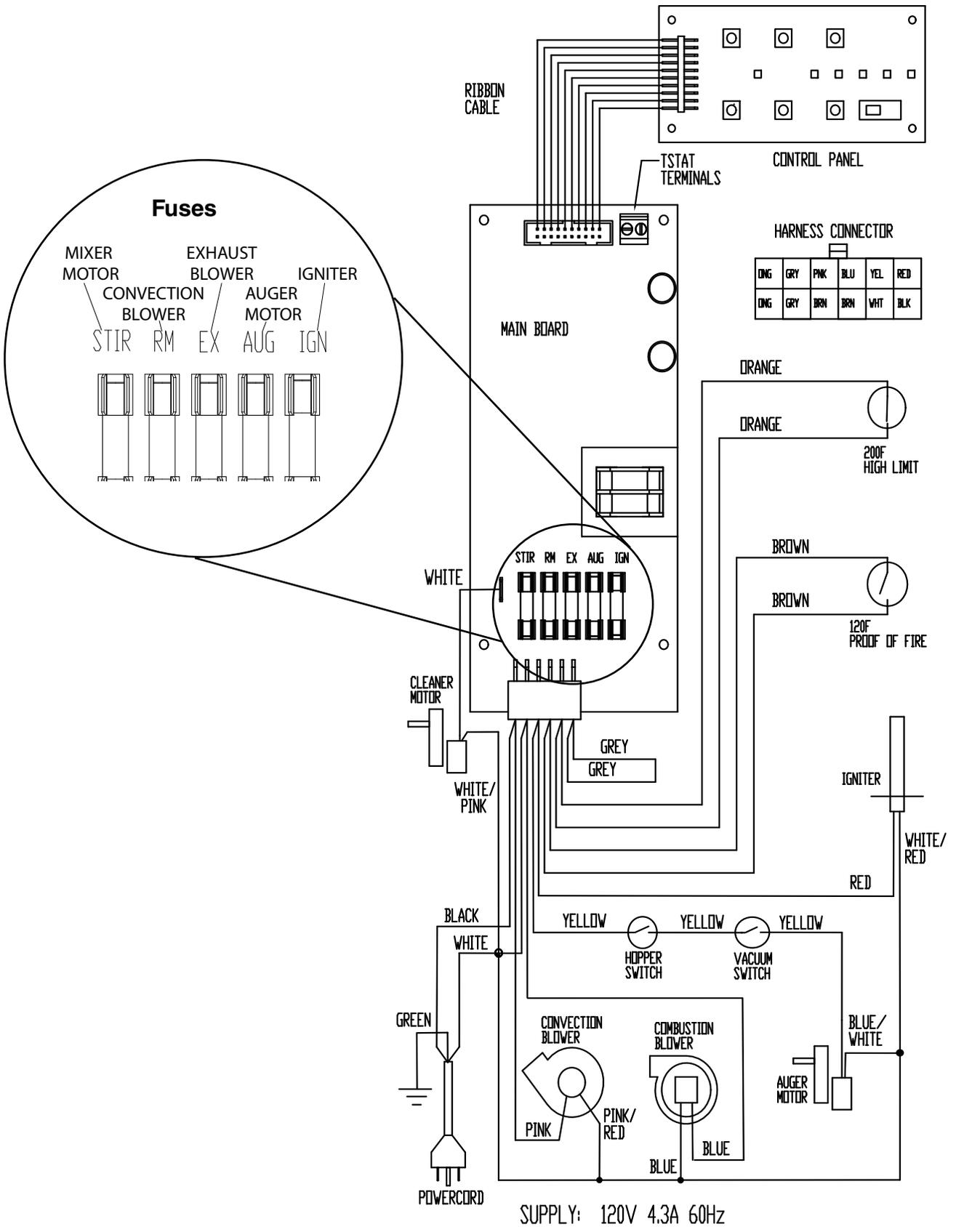
## Mixer Drive Shaft Assembly

This assembly of drive shaft & bushings is responsible for transmitting power from the mixer motor to the mixer.

To replace bushings, first remove the right side panel. Then loosen the 3 Hex-Head screws and the locking screw in the mounting plate. Loosen the motor support screw to give more slack in the drive chain. Next, loosen the set screw in the lower shaft collar, remove the 4 screws and 1 bolt shown in Fig #10 and remove the outer bushing and bracket along with the mixer drive shaft assembly. Then push or pull the mixer shaft into the firebox and remove the inner bushing and bushing plate.



# Wiring Diagram



SUPPLY: 120V 4.3A 60Hz

010210

5050.838 - A

PS 45 WIRING







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