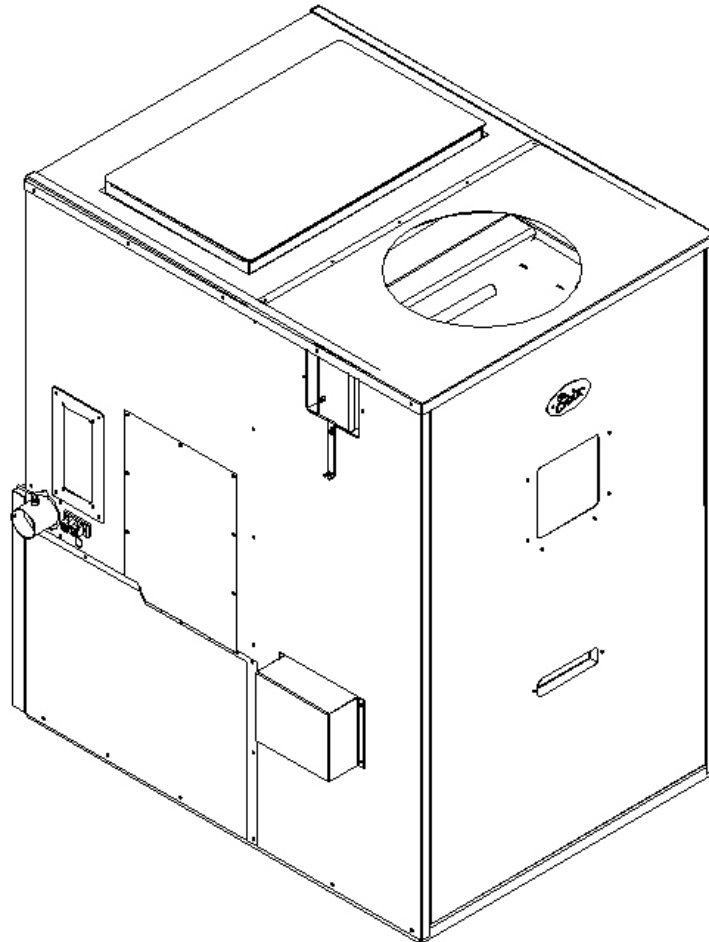


Installation & Operations Manual



SCF-REVOLUTION MULTI-FUEL FURNACE



1108

SCF - REVOLUTION MAINTENANCE

NOTE: WHEN YOU FIRST OPERATE YOUR FURNACE, CHECK TO DETERMINE THE NEEDED CLEANING FREQUENCY. THE FURNACE REQUIRES A MINIMUM AMOUNT OF DAILY MAINTENANCE. REQUIRED MAINTENANCE DEPENDS LARGELY UPON THE QUALITY OF CORN/PELLETS BURNED AND THE RATE OF BURN. THE AMOUNT OF DAILY MAINTENANCE WILL INCREASE IF FUEL QUALITY DECREASES AND/OR THE BURNING RATE OF CORN/PELLETS INCREASES.

NOTE: FAILURE TO KEEP YOUR FURNACE CLEAN, AS DESCRIBED IN THIS MANUAL, COULD RESULT IN POOR OPERATION, INEFFICIENT FUEL USAGE AND A POSSIBLE SAFETY HAZARD! IT IS THE RESPONSIBILITY OF THE OWNER/USER TO DETERMINE THE NEEDED MAINTENANCE FREQUENCY.

CAUTION: THE DOOR AND FRONT PART OF THE FURNACE WILL BE HOT. DO NOT TOUCH ANY PART OF THE FURNACE THAT IS HOT!

Daily Maintenance

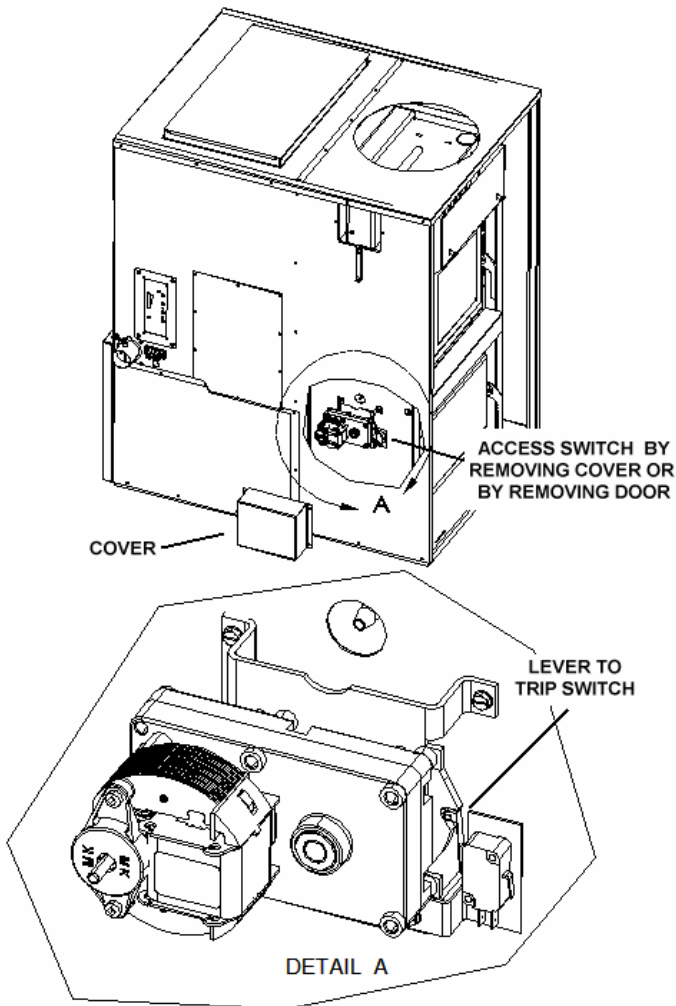
1. **The ash pan.** Make sure the Ashpan is not too full. If the Ashpan is too full, the Ash may not be dumped from the Revolution Pot when it runs a cleaning cycle.
2. **The Tube Scraper.** Pull the Tube Scraper back and forth a couple of times to keep the tubes clean. If the Tube Scraper feels sticky and difficult to move, check for the presence of creosote on the tubes. If creosote is present a damper adjustment may be needed or the Furnace has become plugged and needs a thorough cleaning. Call Dealer for assistance. *(See Figure 1 on Page 6 for the location of the Tube Scraper Rods).*
3. **Clean the Viewing Glass.** Use a dry paper towel to clean the glass. Quickly open the door and wipe the glass. The rate of burn will determine how often the window needs cleaning. Prolonged burning at a slow burn rate will result in the need for more frequent window cleaning. Cooling the Furnace and wiping the window daily with a cloth or paper towel will normally keep the window from accumulating difficult to clean residue. Use of a glass cleaner ONLY permitted when the Furnace is cold.

CAUTION: Do not slam the door. Do not operate the Furnace with a broken or cracked glass. Replace only with heat resistant ceramic glass supplied by the manufacturer.

Periodic Maintenance

CAUTION: Periodic maintenance should only be done while the Furnace is shut off and cold.

1. **Ashpan.** Empty the ash pan when it appears full (approximately twice a week). The frequency of cleaning the ash pan will depend on the quality and amount of Corn/Pellets being used. Carefully check to make sure the ash pan door is tightly closed after each opening.
2. **Revolution Burnpot.** Clean burn grate holes whenever needed. Clean the burnpot while it is in the furnace. Remove the pot Side Shields (*See Figure 12 on Page 23*) and use a stiff bristle brush to remove any ash build up in each section.



By tripping the switch lever, shown in detail in figure 19, the burn pot will cycle to another section. Repeat this until all 4 sections of the drum have been cleaned. Check each section with a small mirror to see they are clean.

If the holes in the pot remain plugged, remove the Burnpot, (*as shown in Figure 12 on Page 23*) and use a small metal object (Nail, Drill Bit, etc) to clean out plugged holes.

Figure 22

3. **Clean-Out Ports.** The Furnace has 3 Exhaust Cleanout Ports located in the LEFT AND RIGHT lower corners of the firebox and behind the Ashpan. Remove covers and clean regularly.

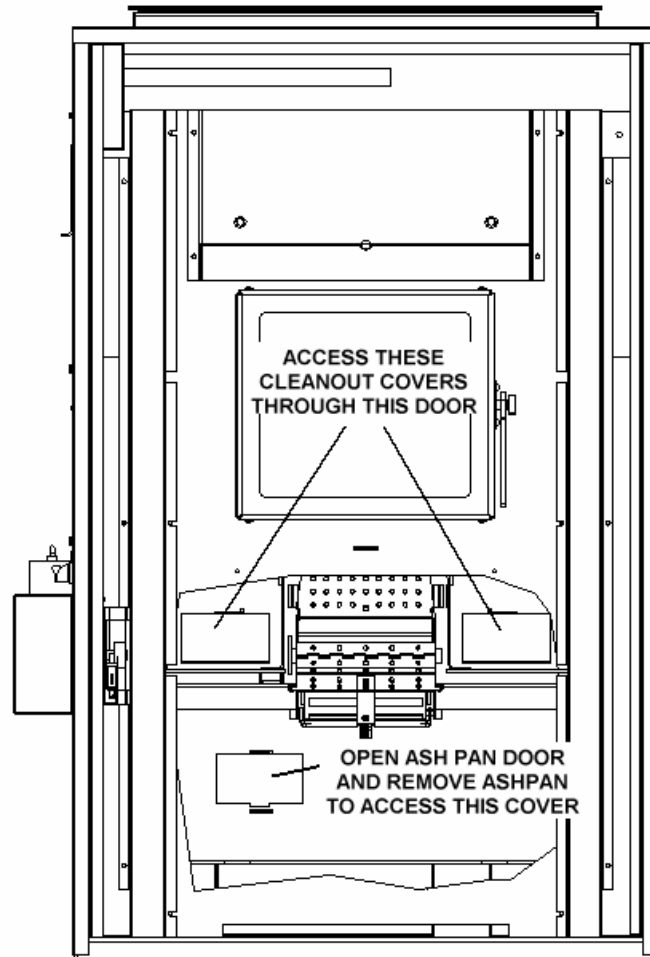
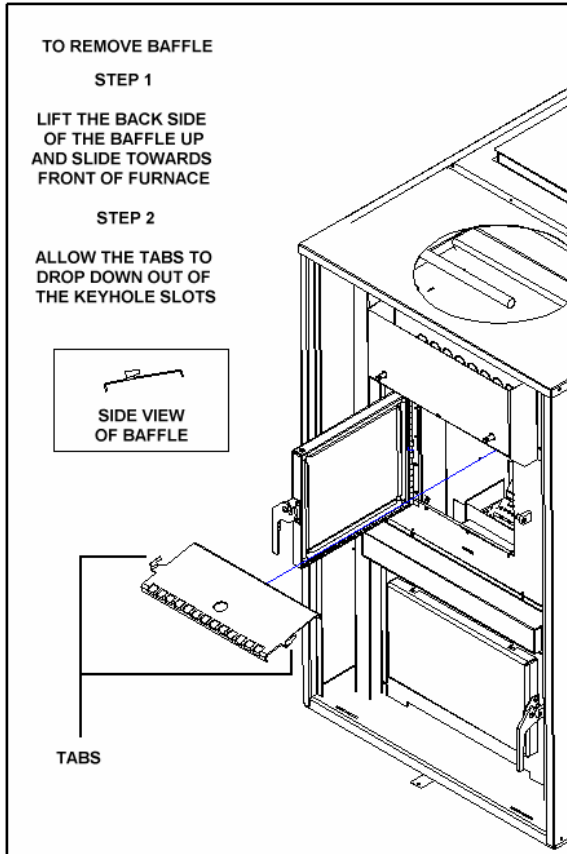


Figure 23

Frequency of cleaning depends on the amount of fuel being burnt and the quality of the Corn/Pellets. **Failure to clean the ash traps will cause the Furnace to become plugged with Fly Ash.**

4. **Heat Exchange Baffle.** Remove the baffle and clean the ashes that accumulate on a regular basis. Once a month or sooner, depending on the quality of fuel being used (*See Figure 24 on the next page*) Clean the baffle on a regular basis. Frequency of cleaning depends on amount of fuel being burnt and the quality of the pellets. Fuel with low ash content is recommended. **Failure to clean the baffle can cause the Furnace to become plugged with fly ash.**



Baffle Removal

To remove the baffle, lift the back of the baffle up to clear the inner back of the Furnace and slide towards the front of the Furnace. The baffle will slide out of the keyhole slots and drop down. *When putting the baffle back in the Furnace, make sure the Tabs are in the Keyhole slots and the back of the baffle is lifted up over the inner back to keep the Baffle locked in place.*

Figure 24

1. **Exhaust System.** Periodic cleaning of the exhaust system is required. Under certain conditions chimneys may plug up rapidly. Dirty/High moisture content Corn or Pellets with high ash content and installations with elbows and horizontal runs require more frequent chimney cleanings. See Page 22 “Preventing Chimney Fires”. The products of combustion will also contain small particles of fly ash. The fly ash will collect in the exhaust vent and restrict the flow of the flue gases. Judge the frequency of cleaning by checking the amount of ash that accumulates in the elbows or tee’s of the exhaust system. Ask the dealer for suggested frequency of cleaning, equipment needed and procedures for cleaning. Check the Exhaust system at least once every two months during the heating season.
2. **Gaskets.** Periodically inspect the condition of the rope gasket around the door, window and ash door. Replace as needed.
3. **Air Filter.** Check the Return Air Filters at least once a month and replace when needed. The size of the filter is 1” X 16” X 25”.

Many dealers offer a Service Contract that will cover Yearly Maintenance. Contact your St. Croix Dealer for assistance in maintaining your Furnace in top condition.

Yearly Maintenance

Yearly maintenance is designed to assure safe operation, prolong the life of the Furnace and help preserve its aesthetic appeal.

1. **Spring Shutdown.** After the last burn in the spring, cool the Furnace. Remove all fuel from the hopper and the auger system. Thoroughly clean the burn pot, burn pot box, ash pan and ash traps behind the ash pan. *(To locate the ash traps see figure 23 on page 42)*
2. The exhaust system should be thoroughly cleaned at least annually. Call your dealer for this service.
3. The motor/fan area behind the firebox and under the hopper should be vacuumed annually.

NOTE: UNPLUG THE FURNACE. Remove the access panels of the Furnace. Carefully clean or vacuum any dust, cobwebs and household dust. Carefully vacuum around the fan motors. If electrical wires become disconnected call your dealer for service.

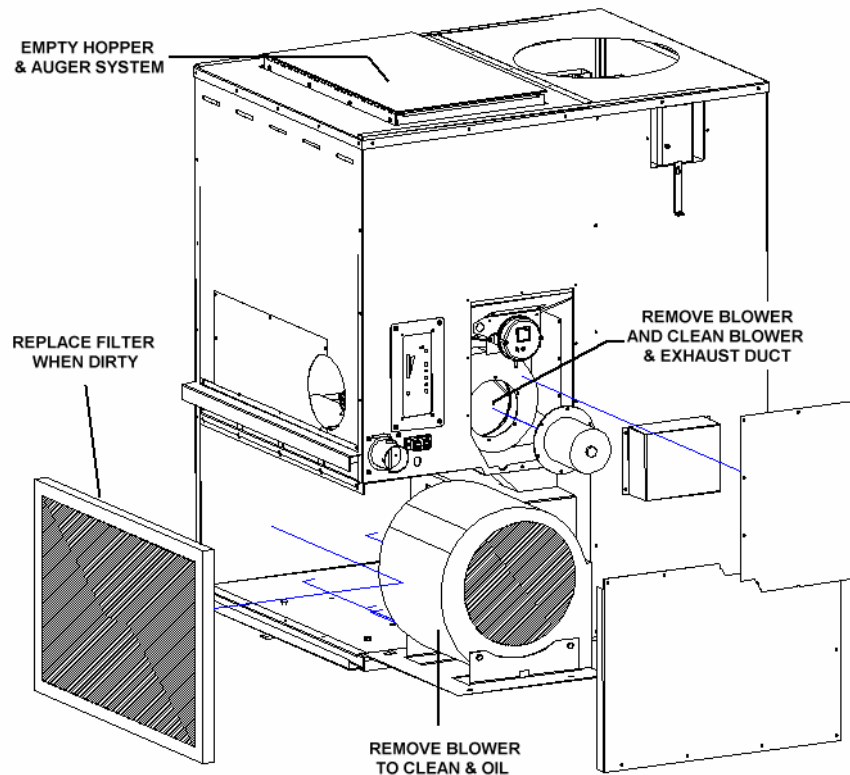


Figure 25

4. The Exhaust Fan (Combustion Fan) should be removed (may require a new gasket) and cleaned with compressed air annually. Call dealer for this service. Annual oiling of the motors is not needed.
5. The Convection Blower should be removed and cleaned with compressed air annually. There are 2 oil ports on the motor.

Fall Startup. Prior to lighting the first fire check the outside area around the exhaust and air intake systems for obstructions. Try all controls to see that they are working prior to lighting a fire.

SAFE OPERATION.

1. **Disposal of Ashes.** Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of burial in soil or otherwise locally dispersed, they should be retained in the container until all cinders have thoroughly cooled.
2. **Never use Gasoline,** gasoline type lantern fluid. Kerosene, charcoal lighter fluid or similar liquids to start or “freshen up” a fire in this heater. Keep all such liquids well away from the heater while it is in use.
3. **Creosote, Soot and Fly Ash:** Formation and Need for Removal. The products of combustion will contain small particles of Fly Ash. The fly ash will collect in the venting system and restrict the flow of flue gases. Incomplete combustion, such as occurs during start-up and shut-down, or incorrect operation of the room heater will lead to some soot or creosote formation which will collect in the venting system. The exhaust system should be inspected regularly during the heating season to determine if creosote buildup has occurred. Check more frequently at first to determine a schedule for cleaning the venting system based on individual use of this Corn/Pellet-burning heater. If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.
4. **Do not Overfire this unit.** Follow all instructions regarding the proper use of this heater.