Operation of SE210

Set boiler in place. Place insulation board under the boiler: from the rear of the boiler, slide the two pieces of 1 inch board on either side of the motor and then slide together towards the center. Next, slide smaller 1.5 inch board on the left side of the motor on top of the 1 inch board. In the front of the boiler, remove the inner access panel which is on the left side of the boiler. Use 3/8 nut driver and impact gun to pull remove screws to remove access panel then slide the wider 1.5 inch insulation board in the bottom of the cavity and then push it to the right, so that it sits on top of the 1 inch insulation board that you slid in from the back, verify that is seals off air from easily coming from under the boiler. The air must come from the front across the bottom door.

The cold water return may go in either of the 1.5 inch fittings on the back bottom of the boiler. The hot water supply is given from the 1.5 inch pipe fitting in the front top of the boiler. The relief valve goes in the three-quarter inch fitting at the top rear of the boiler and run 3/4 inch pipe from the relief valve over to the right side of the boiler and down 6 inches off the floor.

The low-water cut off goes in the supply line and no more than 12 inches from the 1.5 inch fitting on the boiler. The wiring for the low water cut off can be found in the high limit aquastat. It is located in the rear top of the boiler remove the access panel by removing the four Phillips head screws. Drill a 7/8 inch hole in the top sheet metal to run conduit down from the low water cut-off to the high limit.

Once boiler is plum the flow rate through the boiler must be 12 to 15 gallons per minute.

Use 6 inch stove pipe. To make a 90 off the boiler use a “T” with the opening facing the rear. No natural draft is needed.

The electrical power supply must be 115 to 120V AC 20 amp circuit.

Operation

Max BTU output is 170,000btu/hr

- To achieve max btu output keep water below 166F (at boiler).

To burn wood:

1. Turn the switch on. Located behind the front door.
2. Press the “Wood” button on the home screen
3. Start the fire.
    a. It burns the fire upside down so place some kindling and 3 of 4 small pieces of wood in fire box first then place paper on top. Light the paper and wait 10 or so minute before adding more wood. Add 4 or 5 more pieces wait for 10 or so minutes then you may load fire box as needed.
    b. Use wood that is 24” long and lay wood in firebox lengthwise.
    c. Stack wood in firebox neatly and tightly.

Note: Before each test run the boiler exhaust temp must reach 455F and maintain for 20 min. If unable to reach 455F, make sure wood is not bridged, make sure you don't have more than 3" of charcoal, and finally increase btu/hr output to at least 150,000btu/hr.

Note: Coal bed of charcoal must be no more than 3" deep once spread evenly across firebox. If it is then simply allowing the boiler to consume it before adding more wood.

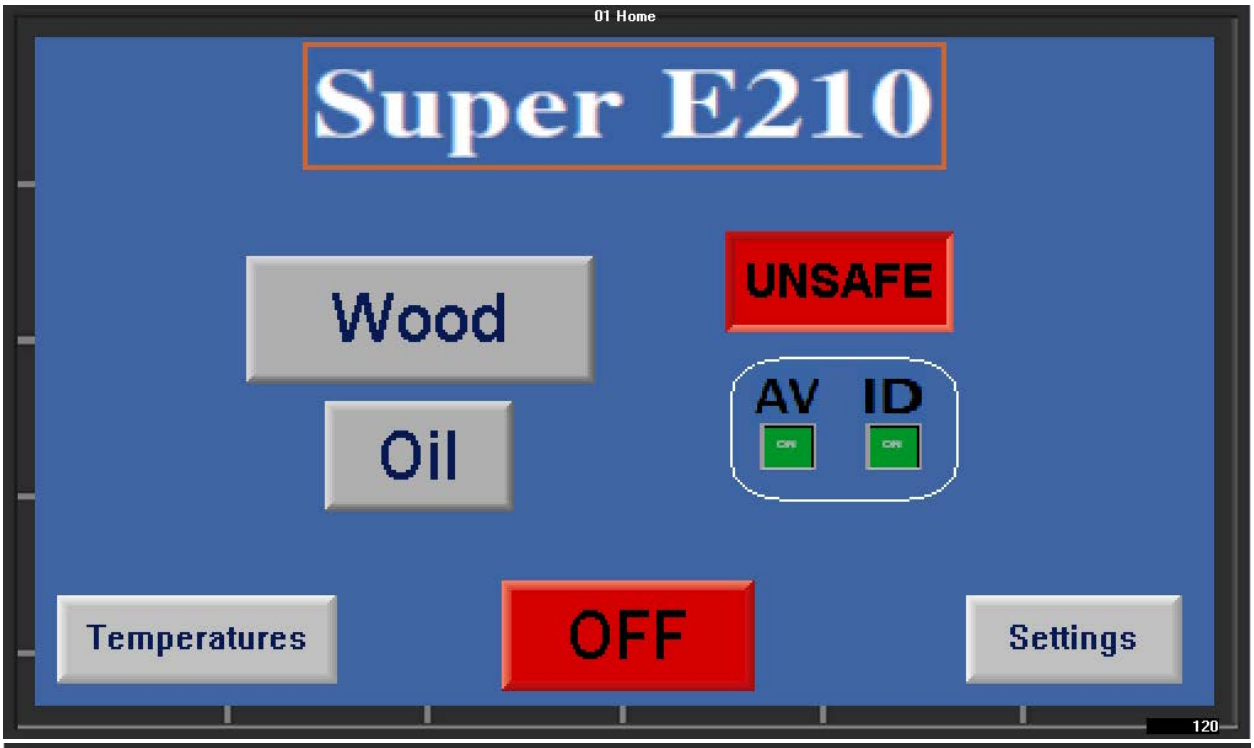
Note: Do not open door unless green light is on

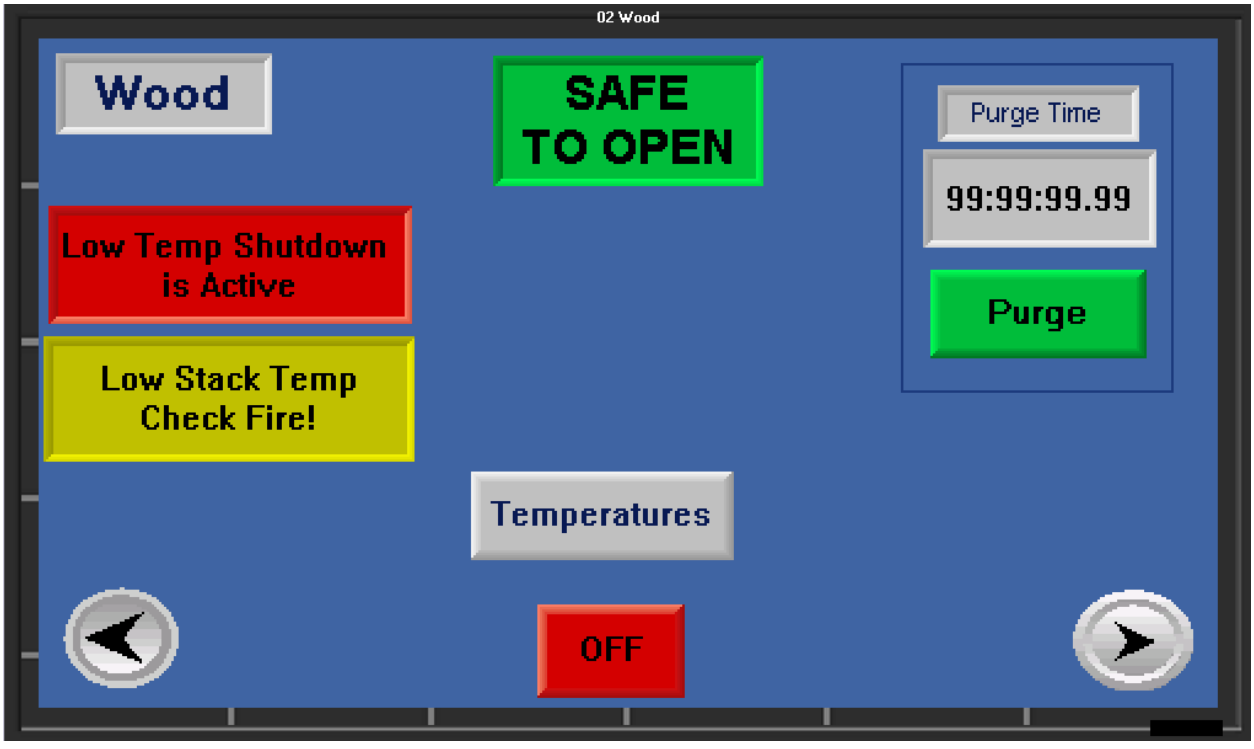
Note: verify the Low Temperature Shutdown is on. Go to Home screen -> press wood -> Press the arrow to go to next screen -> the button under load temp shutdown… should be green and say "on". If you see a red reset button press it to reset this function in order for the boiler to run.

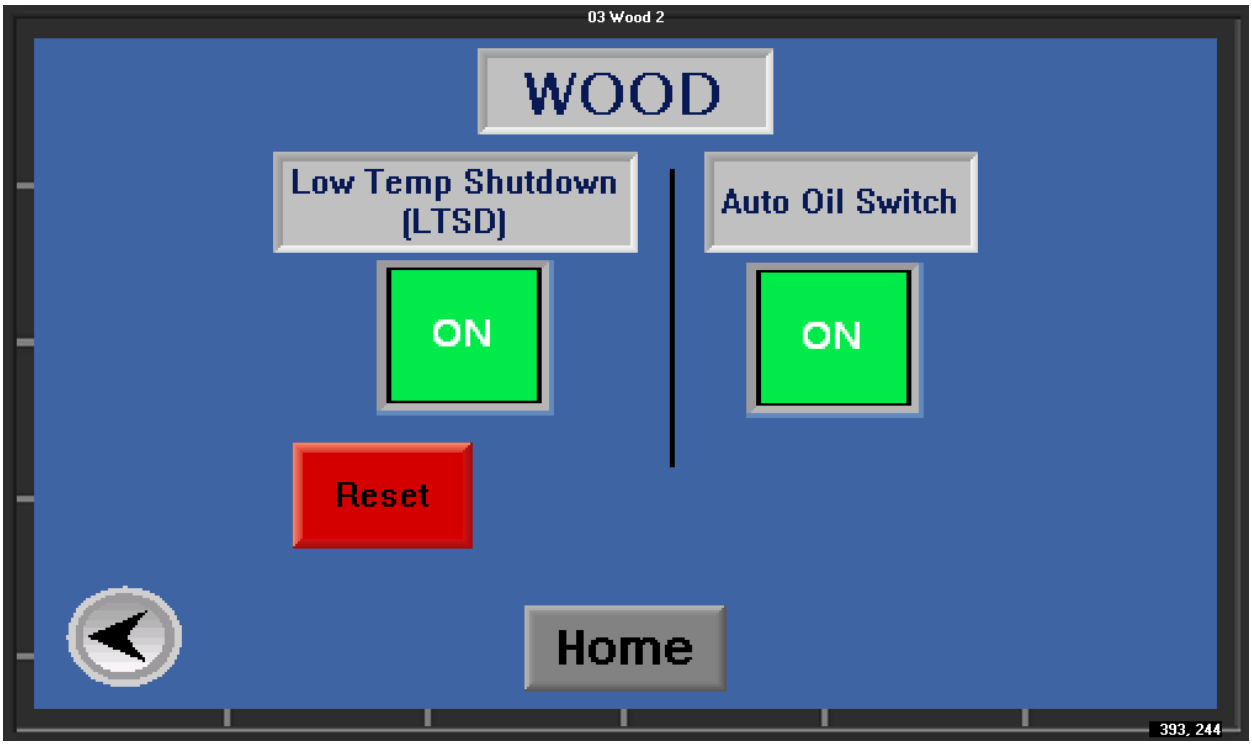
Note: verify the cycle timer is on. Go to home screen and press the "settings" button. In that page find the cycle timer button needs to be a "green on" button. If it is a "red off" simply press it

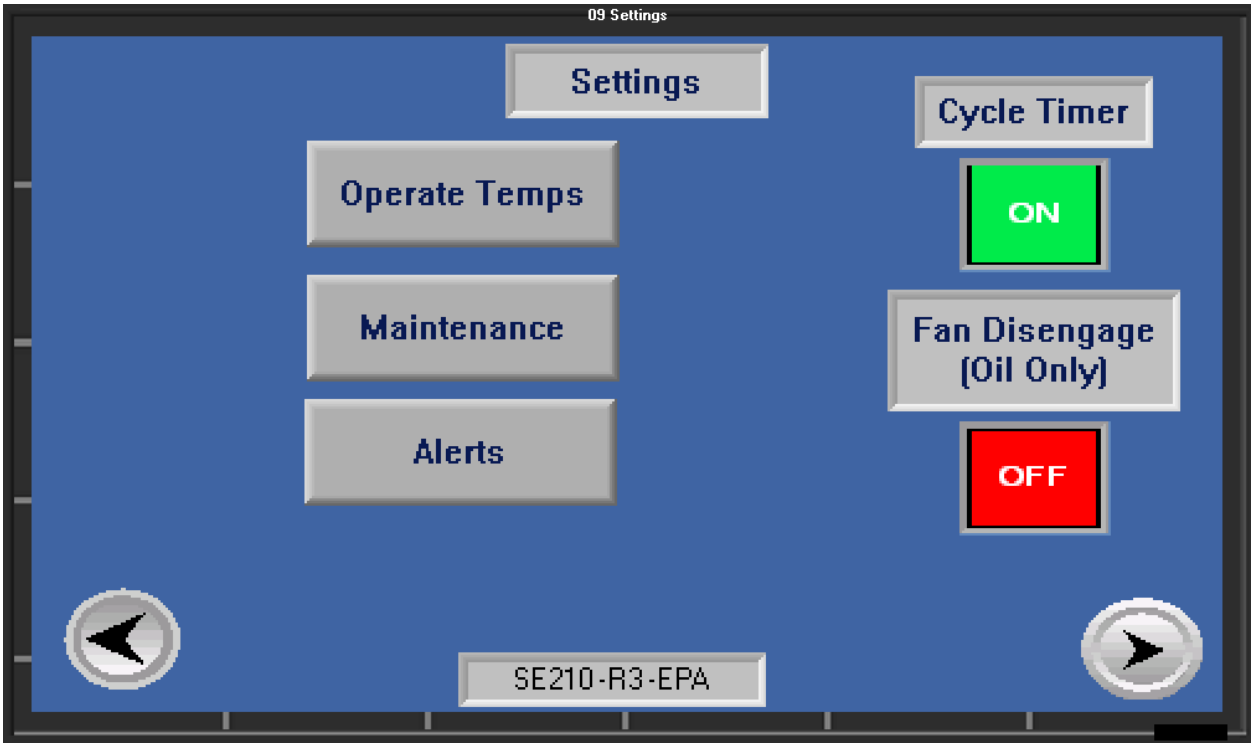
Note: verify the fan is in PID mode. Go to the home screen -> "settings" button-> press next "arrow" button -> press the "inputs" button. You should see a large grey button that says "PID Fan" if it is yellow and says "manual fan" simply press it.

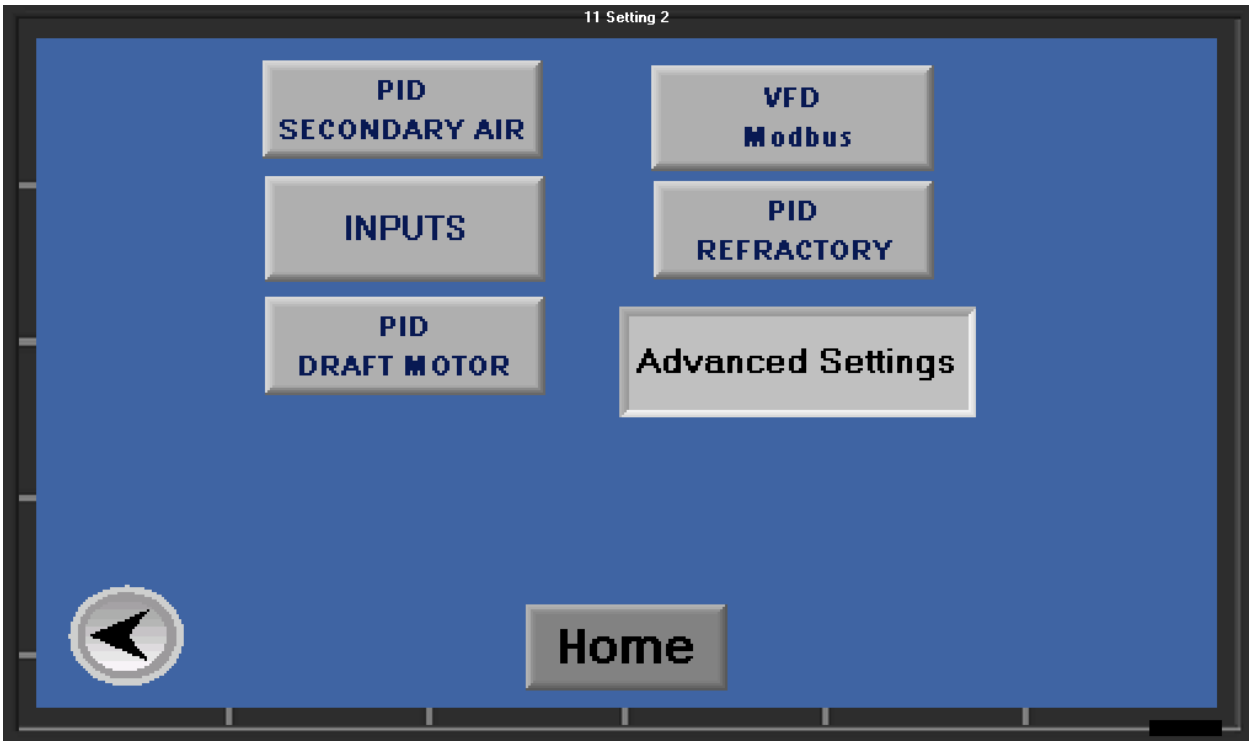
While on this page the low limit should read 25, the upper low limit should read 50 and the upper limit should read 55.

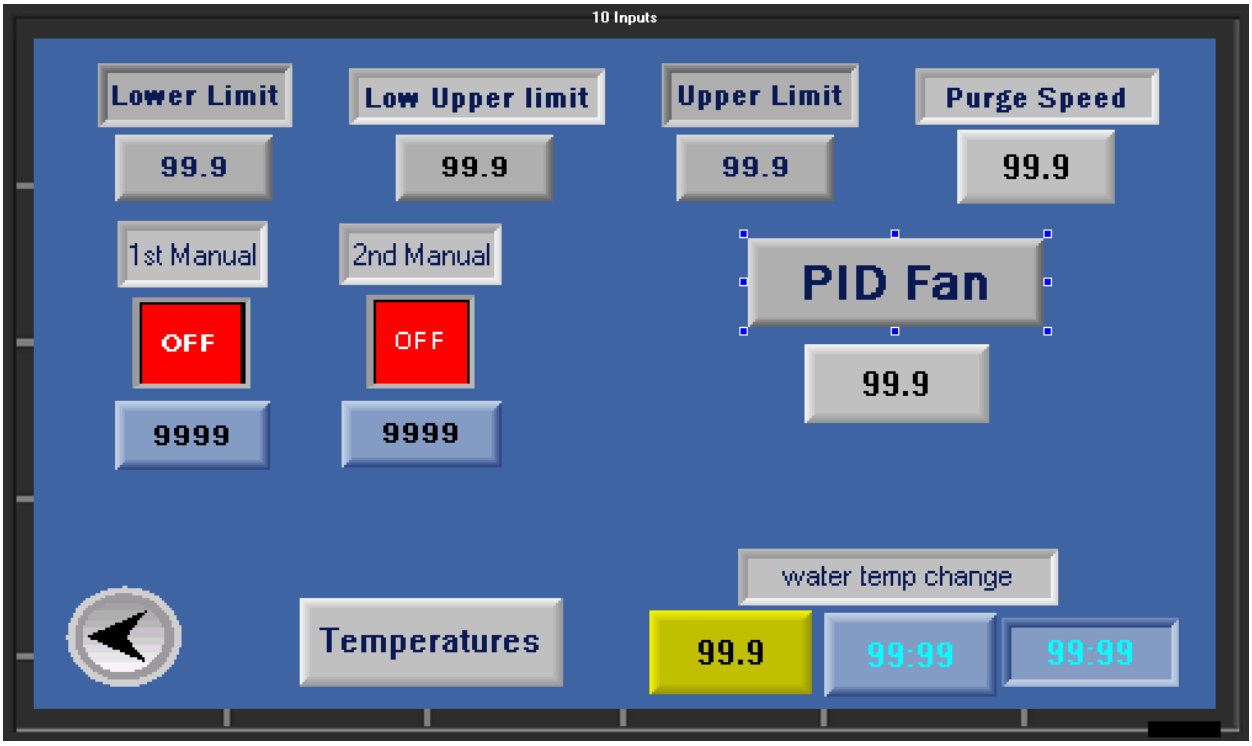

01 Home
Super E210
Wood
Oil
UNSAFE
AV
ID
ON
ON
Temperatures
OFF
Settings
120


02 Wood
Wood
SAFE
TO OPEN
Purge Time
99:99:99.99
Purge
Low Temp Shutdown
is Active
Low Stack Temp
Check Fire!
Temperatures
OFF


03 Wood 2
WOOD
Low Temp Shutdown (LTSD)
ON
Auto Oil Switch
ON
Reset
Home
393, 244


09 Settings
Settings
Operate Temps
Maintenance
Alerts
Cycle Timer
ON
Fan Disengage (Oil Only)
OFF
SE210-R3-EPA


11 Setting 2
PID SECONDARY AIR
VFD Modbus
INPUTS
PID REFRACTORY
PID DRAFT MOTOR
Advanced Settings
Home


10 Inputs
Lower Limit
99.9
Low Upper limit
99.9
Upper Limit
99.9
Purge Speed
99.9
1st Manual
OFF
9999
2nd Manual
OFF
9999
PID Fan
99.9
water temp change
99.9
99:99
99:99
Temperatures