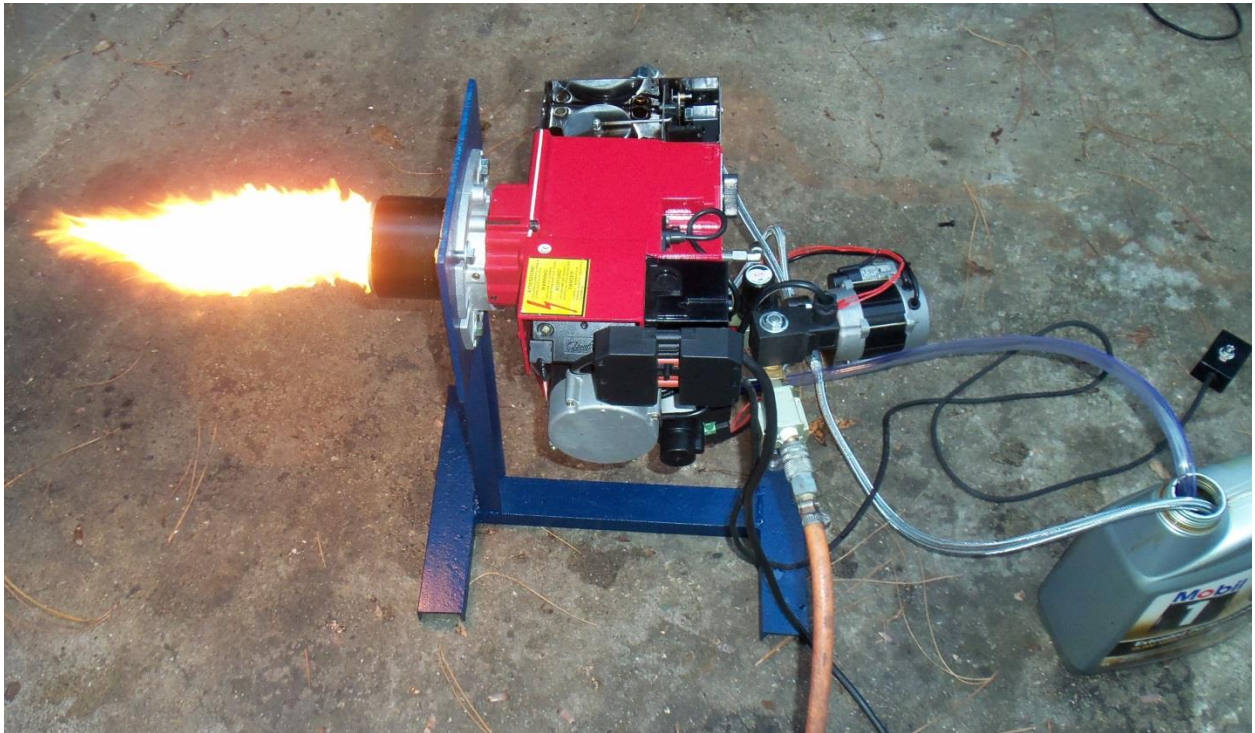


US Filtermaxx

200,000 BTU Waste Oil Burner



Assemble the Burner:

Remove all the parts from the box. Locate the burner flange coupling and attach it to the front of the burner as seen in the photo below using the socket head screws from the parts bag. Note that the stand in the photo is for illustrative purposes only and is not included in the burner kit.



Burner Flange



Parts Bag



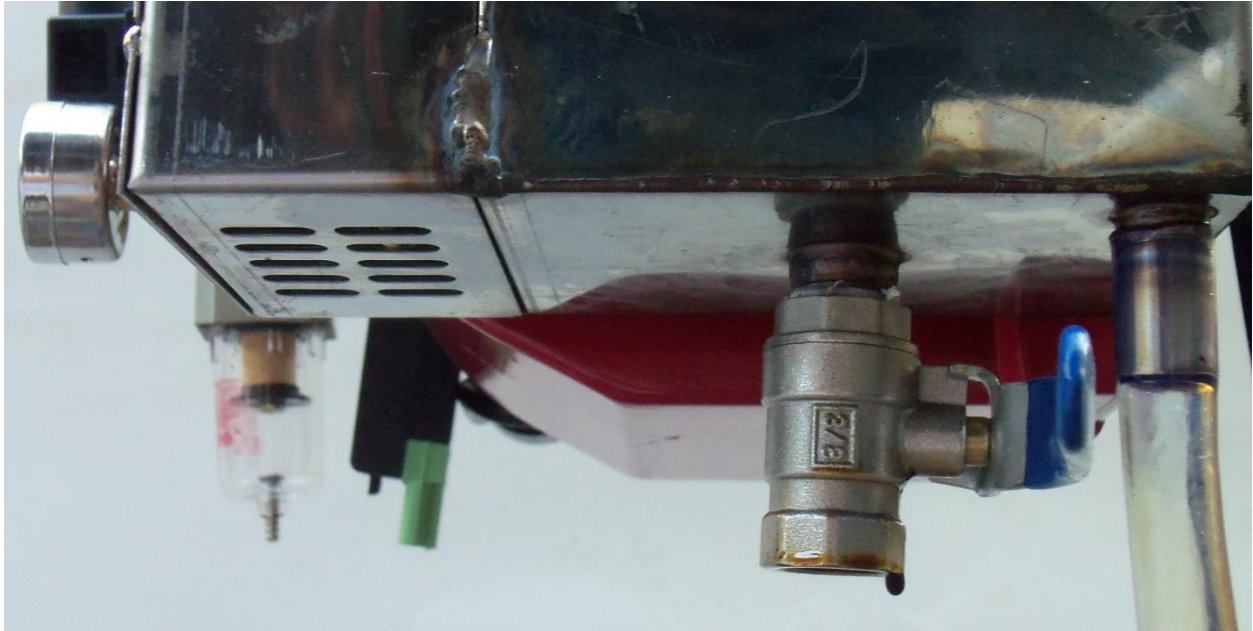
Burner Flange Installed on Burner

The heated oil tank has two drains. One is an overflow tube that drains oil when it is too high in the tank. The other drain is located at the bottom of the tank and has a ball valve to manually drain oil and water from the tank.



The threaded port in the center of the tank is for the ball valve. The tube is the overflow and a hose is attached at this point. The hose should drain back into the oil supply tank. As oil heats up, it expands and may rise up and dribble back down the tube to the supply tank.

Locate the ball valve and wrap the threaded end with pipe sealant and screw it into the threaded port. As seen in the photo below.



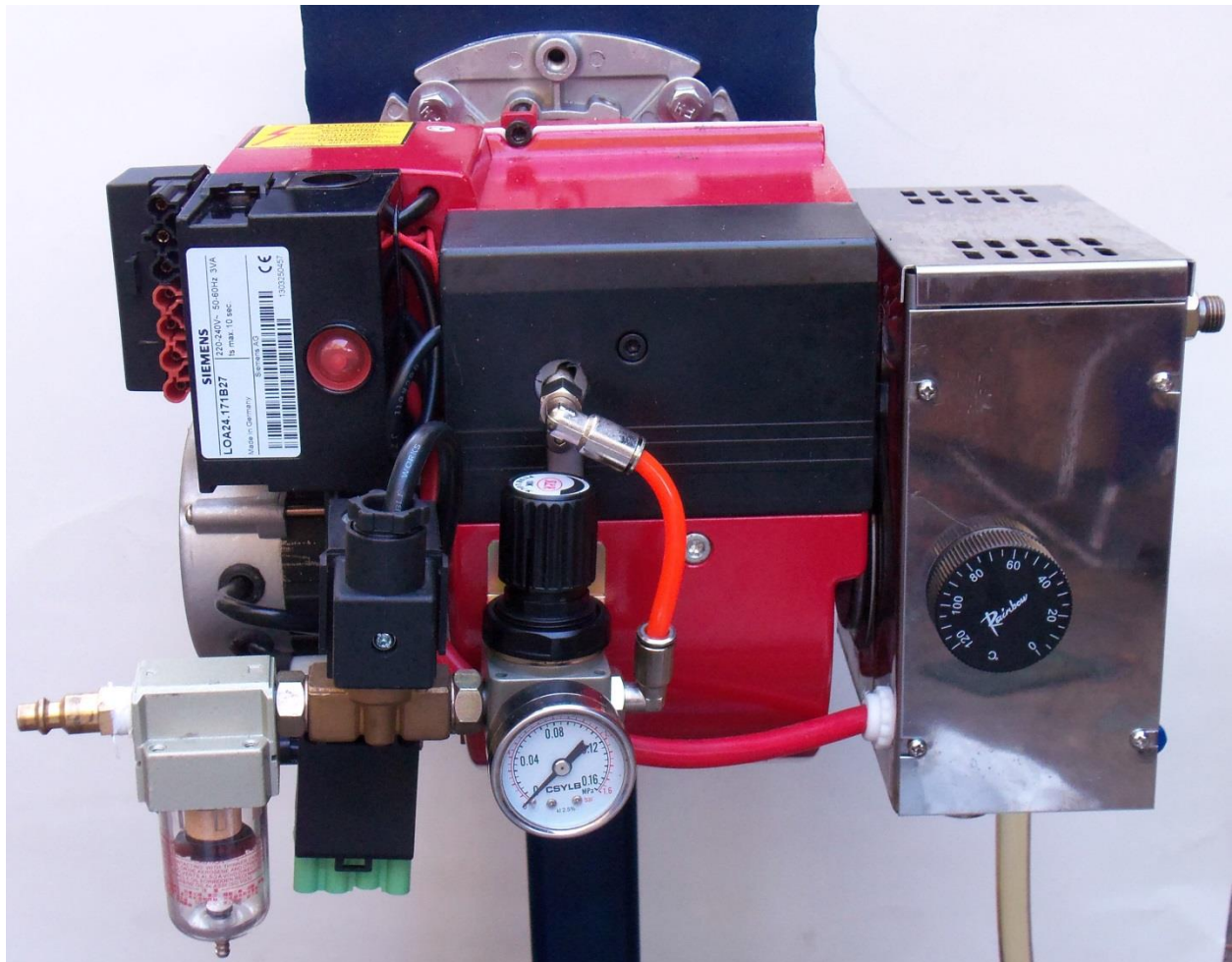
Ball valve and drain tube located on the bottom of the burner.

Locate the air regulator mount and attach it to the rear of the burner using the two screws located in the back of the burner.



The air regulator is attached to the mount using the plastic nut on the regulator. This is not a heavy duty plastic nut and will not sustain much weight or twisting motion. The input thread is $\frac{1}{4}$ NPT. The empty compression fitting should be removed and a hose barb attached (not included). The air input hose and hose barb should be attached before attaching the assembly to the burner.

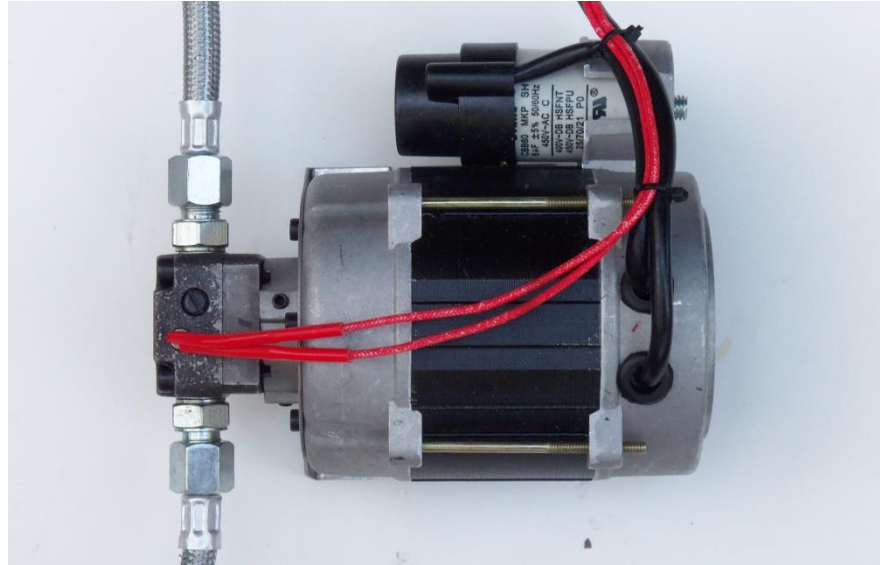
When the assembly is attached to the regulator mount, attach the output hose to the burner. When you are sure that everything is lined up properly the threads on the plastic nut may be coated with epoxy and retightened for a permanent connection.



Note that an air chuck connector is used in this photo is for demonstration only and a proper hose barb and hose should be used. Because the required air volume and pressure is low, about 20 PSI, ¼ inch fuel hose is suited for this application.

The oil pump has an internal heater and becomes hot to the touch in operation.

Assemble the oil pump hoses using the soft aluminum crush washers between the couplings for a leak proof connection. Use a copper or aluminum washer on the heated tank for the hose adapter as seen in the photo below.

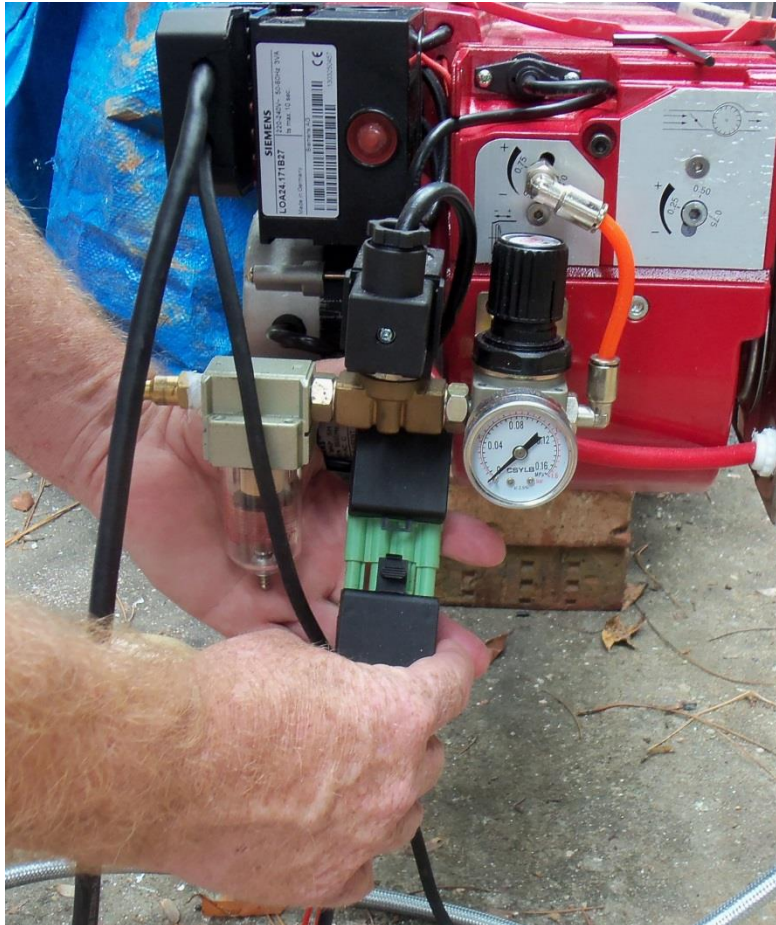


Oil Input hose adapter and copper washer



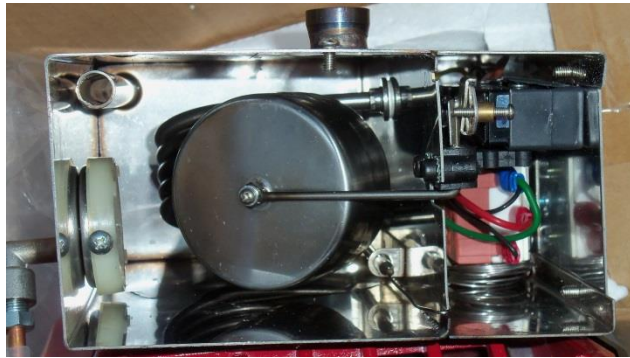
The oil strainer may be inserted after the supply tank and before the oil pump.

Plug the oil pump in using the attached connector.



Oil Reservoir Tank:

The oil reservoir tank is located on the side of the burner and contains both a heater and float valve. The float valve regulates the height of oil in the tank. There is an over flow pipe to drain excess oil back to the storage tank.

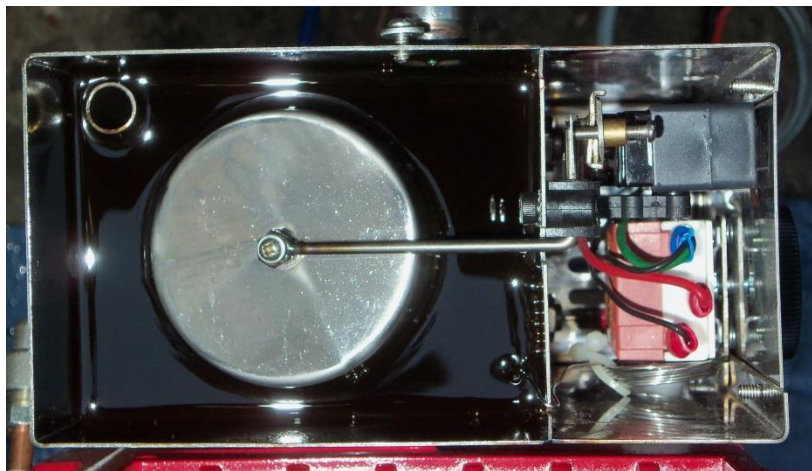


Float valve and heater coil in oil tank.



Oil Reservoir Tank with Input line

With the burner installed level, the oil should rise to nearly the top of the overflow pipe but should NOT drip from the burner nozzle.



The float is already set for best operation however, if the oil level is too high, Turn the adjusting screw in so that the float stops the oil flow at a slightly lower level in the reservoir tank. Oil should NOT drip from the burner nozzle. Oil

expands when hot so be sure to check it when the oil it up to temperature.

THE SUPPLY TANK MUST BE LOWER THAN THE BUNER OR SIPHONING MAY OCCURE, FLOODING THE FURNACE WITH OIL.

The burner exhaust must be vented to the outside. Do not operate burner with exhaust venting into a closed building.

Starting the Burner:

The oil burner DOES NOT start immediately upon closing the run switch.

Upon start up, the burner has a preprogrammed order of operations.

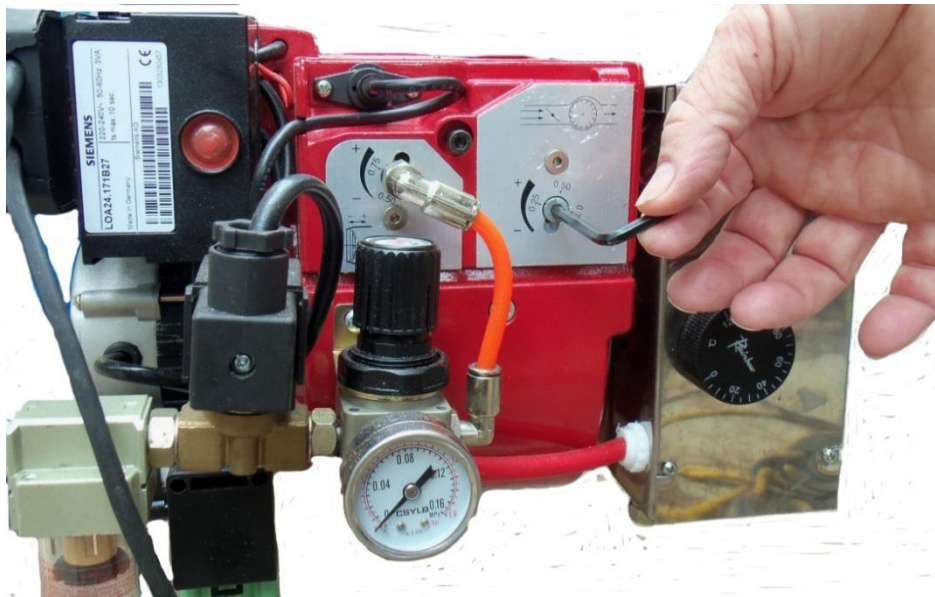
1. Feed pump starts and fills oil reservoir tank.
2. When the oil tank is full, the oil heater starts.
3. When the oil reaches the proper temperature, the fan starts.
4. The heater fan purges the nozzle and furnace for approximately 10 seconds
5. The electric ignitor starts.
6. The electric eye searches for light from a flame.
7. If there is light, the burner shuts down and the fault light comes on.
8. If no light is detected, the air valve opens and the burner starts.
9. If air pressure is between .35 and .45 bar, burner operates.
10. If air pressure is too high. Burner shuts down and fault light comes on.

The burner will not operate in daylight due to the electric eye.

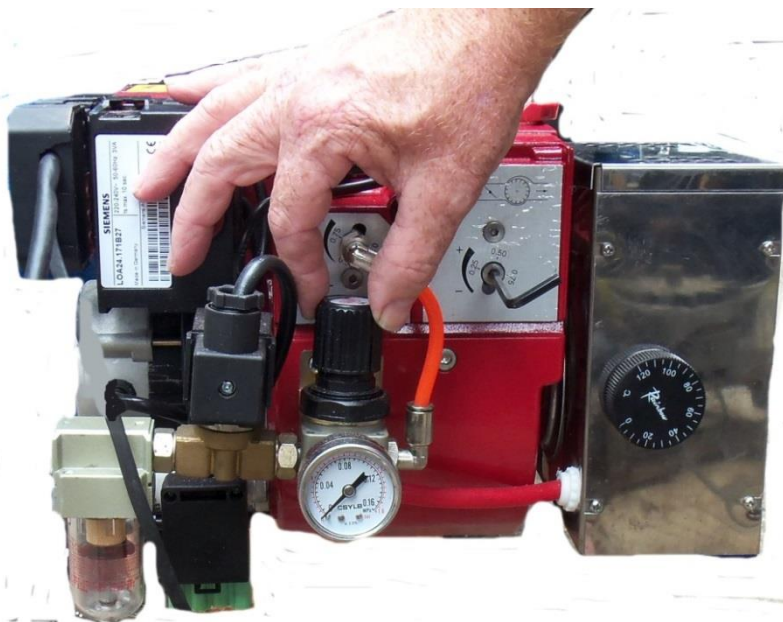
Some oils may be difficult to light. Drain about 1/3 of the oil from the float tank and refill with diesel or heating oil. Once the burner is lit, the regulator may be adjusted for best oil flow and burn.

Burner Adjustments

The burner operates between 80,000 and 200,000 BTU. It is adjusted for approximately 120,000 BTU upon arrival. To change the adjustment, remove the rear cover of the burner. The blower damper is adjusted using the allen key as seen below.



For each complete revolution of the screw, the damper adjusts 1 number up or down. Oil is fed by siphon and the siphon is controlled by the compressed air input.



After the damper is adjusted, the oil feed should be adjusted for minimum smoke and maximum flame noise. Generally, the maximum air pressure should not exceed .45 on the pressure meter with typical operation being between .35 - .4.

The burner will not start if the input air pressure is too high.

Air pressure TO the regulator should be about 20 psi. or less.

Oil Supply:

Oil should be clean and free of debris, water and antifreeze. The burner will not operate properly if oil contains these contaminants. Oil should be settled and all contaminants removed. Difficult oil may be cut with diesel fuel, heating oil or kerosene. Contaminated oil is difficult to light, draining about 1/3 of the float tank and replacing with diesel allows you to light the burner. Adjusting the damper for high air flow and by adjusting the oil flow, oil with light antifreeze contamination may be burned. Once lit, burner should be left in the ON position cycling and relighting is difficult.

Maintenance:

Periodically, the air input tube should be disconnected from the rear of the burner tube cleaned with a shot or two of carburetor cleaner to remove deposits and coked oil.

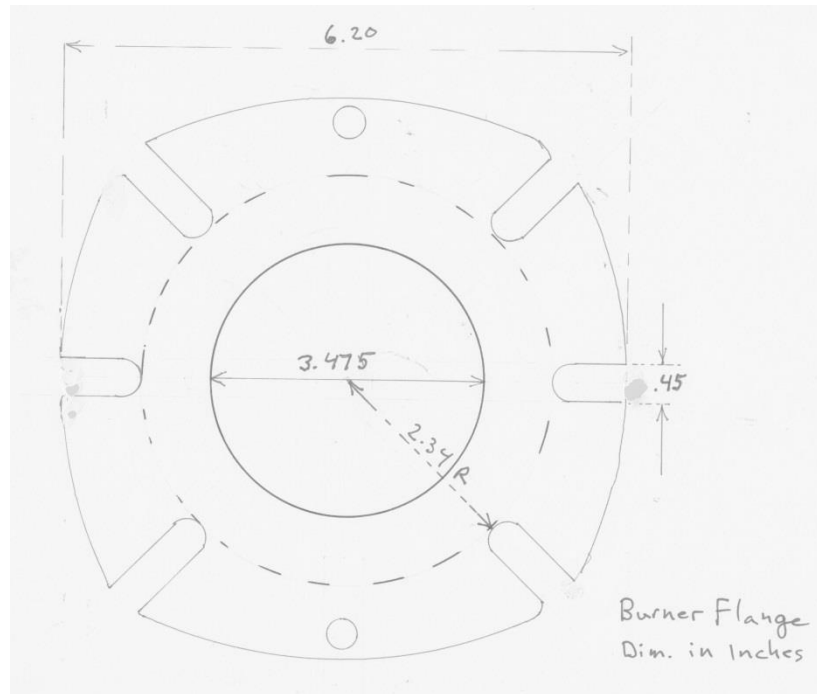
Using the ball valve, water should be drained from the float tank periodically.

Boiling water in feed tank is an indication of contamination.

The oil strainer should be cleaned to remove debris.

The burner is warranted for 1 year from date of purchase for defects in materials or workmanship. Malfunction due to improper installation, operation, fuel or maintenance is not covered under warranty. Burner should be installed and operated by qualified personnel only. US Filtermaxx liability extends to replacement of defective parts only. US Filtermaxx assumes no liability for

damages, injury or loss from use of this product. The buyer must follow all codes for installation and operation of the burner. The buyer agrees to these terms or must immediately return the burner for a refund.

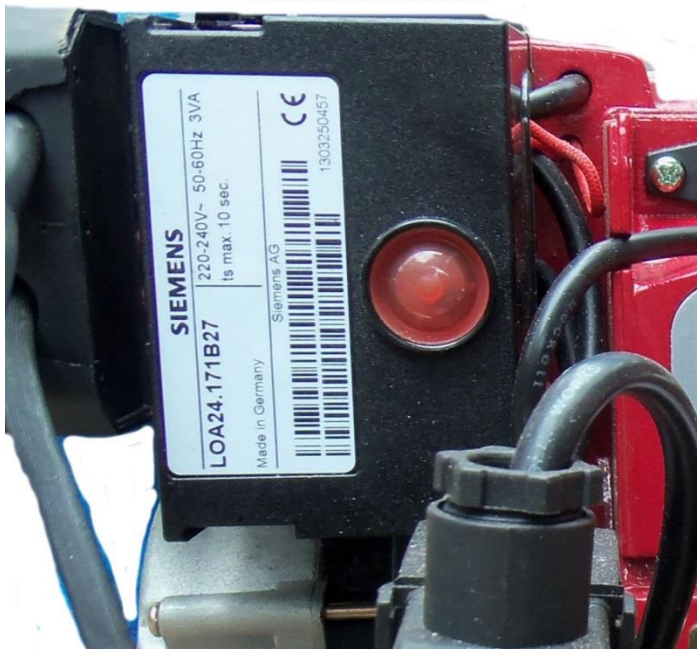


When the burner is in the off condition, radiated heat from the furnace may coke the nozzle. When possible, the burner should be set back a few inches. Coke should be cleaned periodically by removing the air input from the back of the COLD burner nozzle and giving a shot of, carb cleaner.



Burner installed on a furnace fabricated from a scrap propane tank.

Fault Light:



The fault light indicates bad ignition, too much air pressure or loss of flame. The fault light may be reset by turning off the power for 5 minutes, then pushing the reset button. Fault should be corrected before turning power back on.

Disposing of contaminated oil:

Oil with light water - antifreeze contamination may be disposed of using the burner. The float tank drain should be opened until the pickup screen on the front of the tank is visible. The tank should then be topped off with diesel or uncontaminated oil. The oil preheater should be turned up to maximum. The burner will light and the clean oil will heat the furnace. Once lit, the contaminated oil will refill the float tank and continue to burn. The burner will NOT cycle with contaminated oil and the burner should be left on until the contaminated oil is disposed of.