



## PL-8750 Poultry House Flame Sanitizer

### Assembly and Operating Instructions for Units with QUALITY tanks



**Important Note:**  
• Please read and follow all instructions and save these instructions for future reference.

#### **Warning:**

- After flaming, the machine is extremely hot and will remain so for an extended time. Do not make contact by hand or foot until sufficient cooling has occurred
- Use Extreme Caution - Do Not Operate this unit when leaks are present. Use only in well ventilated areas.
- Flames produced by this unit can reach 2,000°F and may cause serious burns and possibly death.
- Retain this manual – Propane can be dangerous. All service and repair work should be done by qualified L-P Gas service personnel. Use only parts supplied by Flame Engineering.



# General Information

---

<b>Table Of Contents</b>	
<b>General Information</b>	<b>1</b>
<b>Poultry House Flaming Tips</b>	<b>2</b>
<b>Parts List/Diagram</b>	<b>3</b>
<b>Wiring Diagram</b>	<b>4, 4A, 4B</b>
<b>Assembly Instructions</b>	<b>5-7</b>
<b>Start-up, Lighting and Operating Instructions</b>	<b>8</b>
<b>Check List for Daily Start Up and Warnings</b>	<b>9</b>
<b>Shut Down Procedures</b>	<b>10</b>
<b>Proper Purging Of LP-Gas Container</b>	<b>10</b>
<b>Vacuum Pre-Purged Domestic Tanks</b>	<b>11</b>
<b>Questions and Trouble Shooting</b>	<b>11-12</b>

Use a NEW Tank with top mounted liquid and vapor valves.

Heat for the sanitizing process is produced by six LPG torches.

Normal operating pressure is 50 psi. Low ceilings (10 feet or below) on sides may require 25 psi and two passes.

Approximate flame temperature is 2000° F.

Fuel Consumption is approximately 1 gallon per 800 square feet.

Ground Speed: 1/2 mph.

**Adequate ventilation must be provided.** ALL fans in tunnel house must be operating. On side curtain houses, make sure the curtains are in the down position. There should be a steady breeze. If it is very windy and gusty, you may want to raise the wind ward curtain some or most of the way to prevent flame interference from the wind.

Hand held torch provided is used to flame hard to reach areas, such as stem walls, stem wall tops and corners, as well as used to light the sanitizer torches in pilot stage.

The projected MAXIMUM BTU/hr output of the sanitizing unit is 6.9 million BTU. Normal operating range is 2.5 million BTU/hr at 50 psi.

## Poultry House Flaming Tips

---

Read and follow this instruction and operating manual before operating the sanitizer.

**Make sure to read pages 9 through 11.** These pages address correct tank preparation. Equalizing tank vacuum and neutralizing moisture. These steps must be followed.

Anytime the tank is allowed to run completely empty, methanol must be added by a qualified L-P Gas Technician. Use one pint per one hundred gallons of propane. Inexpensive insurance.

**For the machine to operate effectively, the litter must be level.**

The objective is to dry the litter. The first time you use the machine, one treatment may not be enough. Built-up litter has built-up problems. If you have moisture deeper than 3-4", you should stir or turn the litter after the first application and then repeat the application. It may have to be repeated a third time. Future applications should work with one pass. If you are flaming bare floors, one pass should be adequate.

Adequate ventilation must be provided. On tunnel houses, turn all the fans on. Open the big end door. The torches use a lot of oxygen. Also there is some smoke produced and having the fans on increases operator comfort and reduces heat build up at the ceiling. Always flame away from the fans. Back the flamer to within 10' of the fans, lower the unit, start moving forward and then push the full flame rocker switch. Watch the skids on each side of the machine. Both skids should be in contact with the litter, but not so low as it starts to build up litter. When reaching the end of the house, turn off full flame, stop, back to the fans and repeat steps. There is a hand flamer provided to do the edges, ends and corners. It is also used to light the unit.

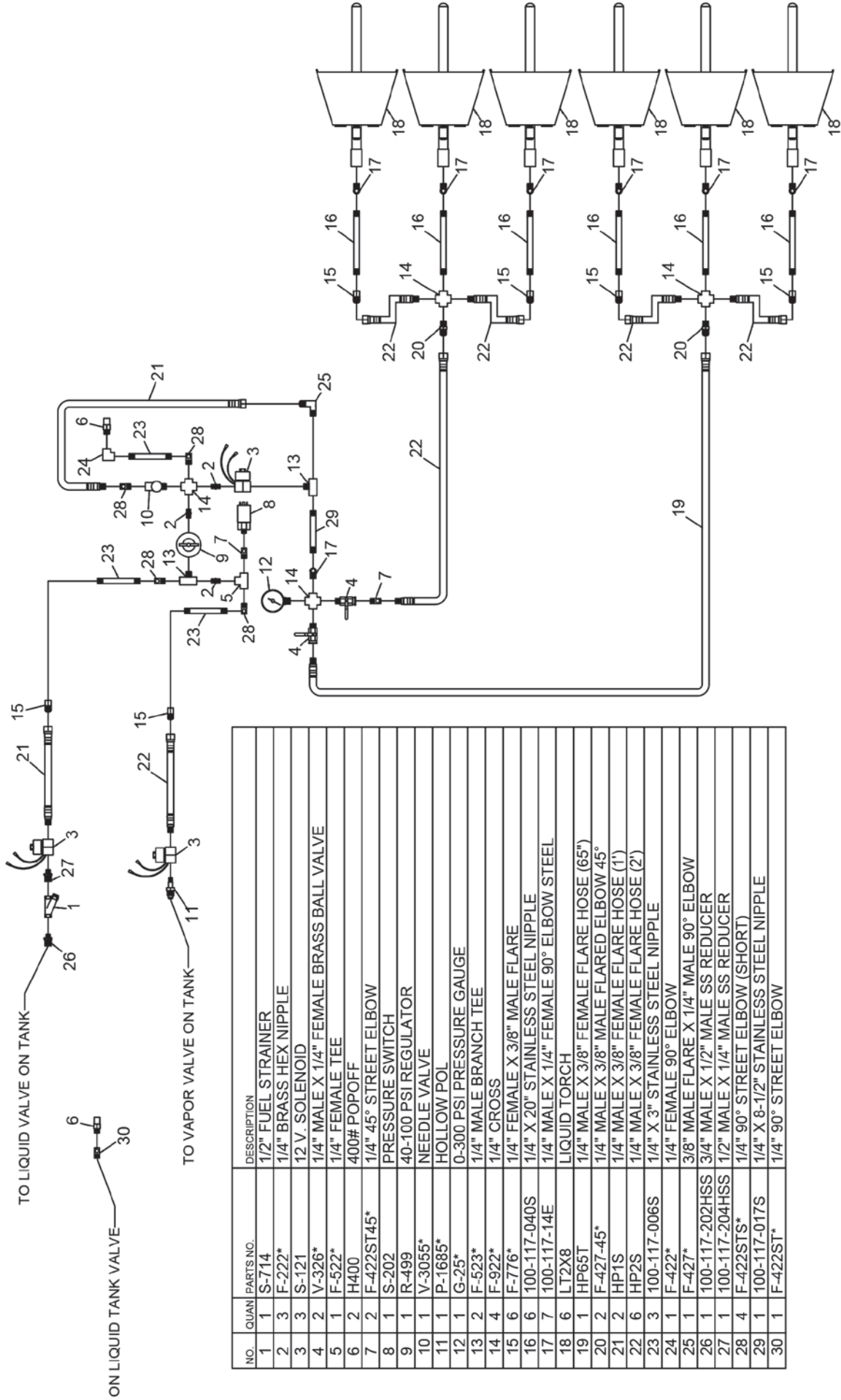
Adequate ventilation must be provided. Side curtain houses should be flamed into the wind. If there is a crosswind, direction of flaming is not important. If the side wind is at an angle, then flame into that angle. If the wind blows in (as in a gust) from the back of the machine, it can force the flame out of the front of the machine. It is important to have a breeze as the torches need the oxygen and it helps to keep the ceiling temperature down. The curtains should be in the down position. If it is too windy or gusty, raise the wind side most of the way up. You can leave the other side down. Keep the end doors open. This will make a difference in the way the machine operates.

On houses with low side walls, lower the operating pressure to 25# when flaming next to the wall. Two passes may be required. The same applies if the entire ceiling is low.

Maintain approximately 1/2 mph.

**If you have a problem**, push the (red) master switch on the switch box first. If you get off the tractor, shut down the machine. Never leave the machine unattended. Never leave it in one place while it is running on full flame. Anytime the machine is in full flame, the tractor must be moving.

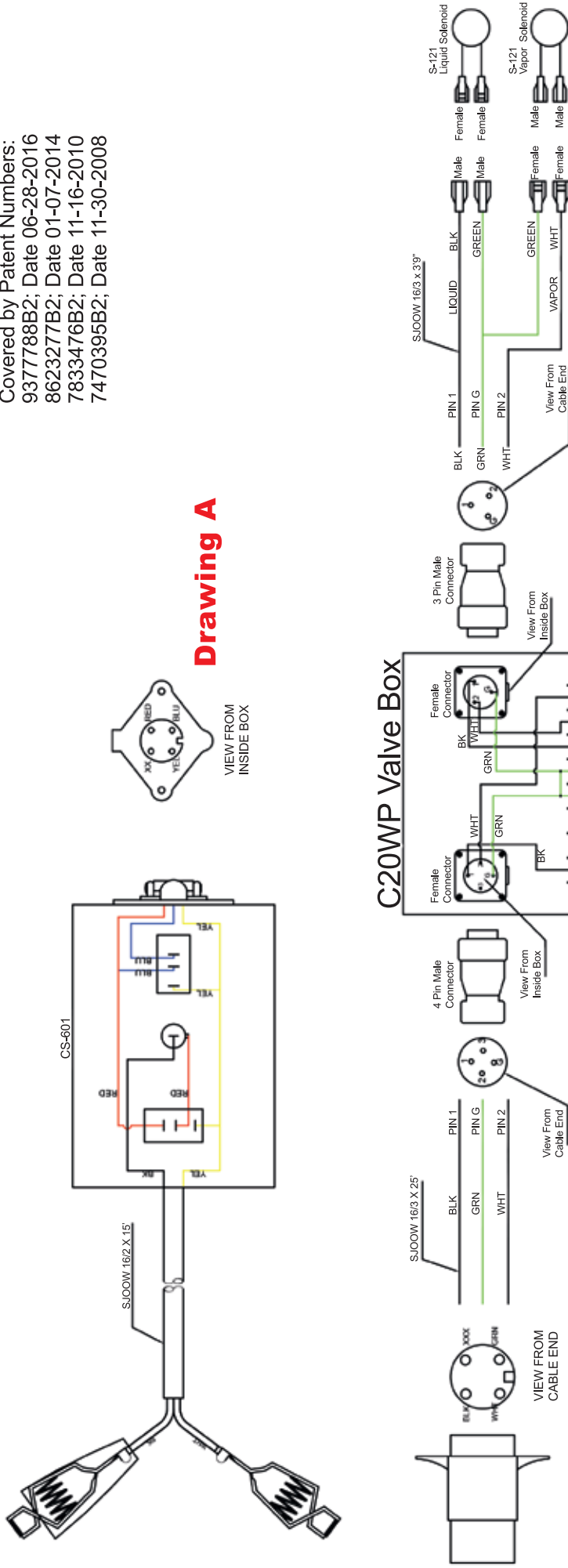
# Parts List/Diagram



NO.	QUAN	PARTS NO.	DESCRIPTION
1	1	S-714	1/2" FUEL STRAINER
2	3	F-222*	1/4" BRASS HEX NIPPLE
3	3	S-121	12 V. SOLENOID
4	2	V-326*	1/4" MALE X 1/4" FEMALE BRASS BALL VALVE
5	1	F-522*	1/4" FEMALE TEE
6	2	H400	400# POPOFF
7	2	F-422ST45*	1/4" 45° STREET ELBOW
8	1	S-202	PRESSURE SWITCH
9	1	R-499	40-100 PSI REGULATOR
10	1	V-3055*	NEEDLE VALVE
11	1	P-1685*	HOLLOW POL
12	1	G-25*	0-300 PSI PRESSURE GAUGE
13	2	F-523*	1/4" MALE BRANCH TEE
14	4	F-922*	1/4" CROSS
15	6	F-776*	1/4" FEMALE X 3/8" MALE FLARE
16	6	100-117-040S	1/4" X 20" STAINLESS STEEL NIPPLE
17	7	100-117-14E	1/4" MALE X 1/4" FEMALE 90° ELBOW STEEL
18	6	LT2X8	LIQUID TORCH
19	1	HP65T	1/4" MALE X 3/8" FEMALE FLARE HOSE (65")
20	2	F-427-45*	1/4" MALE X 3/8" MALE FLARED ELBOW 45°
21	2	HP1S	1/4" MALE X 3/8" FEMALE FLARE HOSE (1')
22	6	HP2S	1/4" MALE X 3/8" FEMALE FLARE HOSE (2')
23	3	100-117-006S	1/4" X 3" STAINLESS STEEL NIPPLE
24	1	F-422*	1/4" FEMALE 90° ELBOW
25	1	F-427*	3/8" MALE FLARE X 1/4" MALE 90° ELBOW
26	1	100-117-202HSS	3/4" MALE X 1/2" MALE SS REDUCER
27	1	100-117-204HSS	1/2" MALE X 1/4" MALE SS REDUCER
28	4	F-422STS*	1/4" 90° STREET ELBOW (SHORT)
29	1	100-117-017S	1/4" X 8-1/2" STAINLESS STEEL NIPPLE
30	1	F-422ST*	1/4" 90° STREET ELBOW

# Wiring Diagram

Copyright Protected.  
 Covered by Patent Numbers:  
 9377788B2; Date 06-28-2016  
 8623277B2; Date 01-07-2014  
 7833476B2; Date 11-16-2010  
 7470395B2; Date 11-30-2008



**Drawing A**

**See Details on Page 4B**

**Control Box Detail  
 See Page 4A**

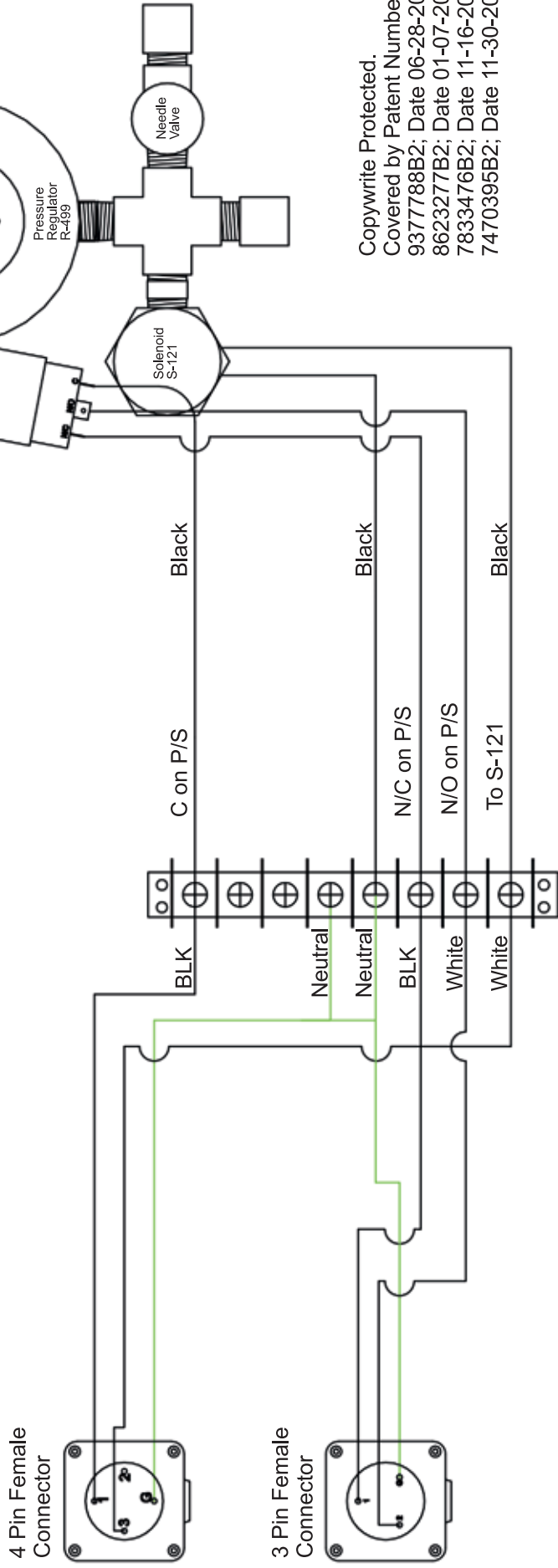
# Wiring Diagram Control Box Detail

**BOM**

- 1 Trailer Plug P # 71575
- 1 Pressure Switch, P # S-202
- 1 Regulator, P # R-499
- 1 Solenoid, P # S-121
- 1 SJOOW 16/3 x 25'
- 1 SJOOW 16/3 x 3'9"
- 1 Terminal Strip 70014
- 5 Push on Female Terminal P # 834005
- 1 Hose P # HP1S

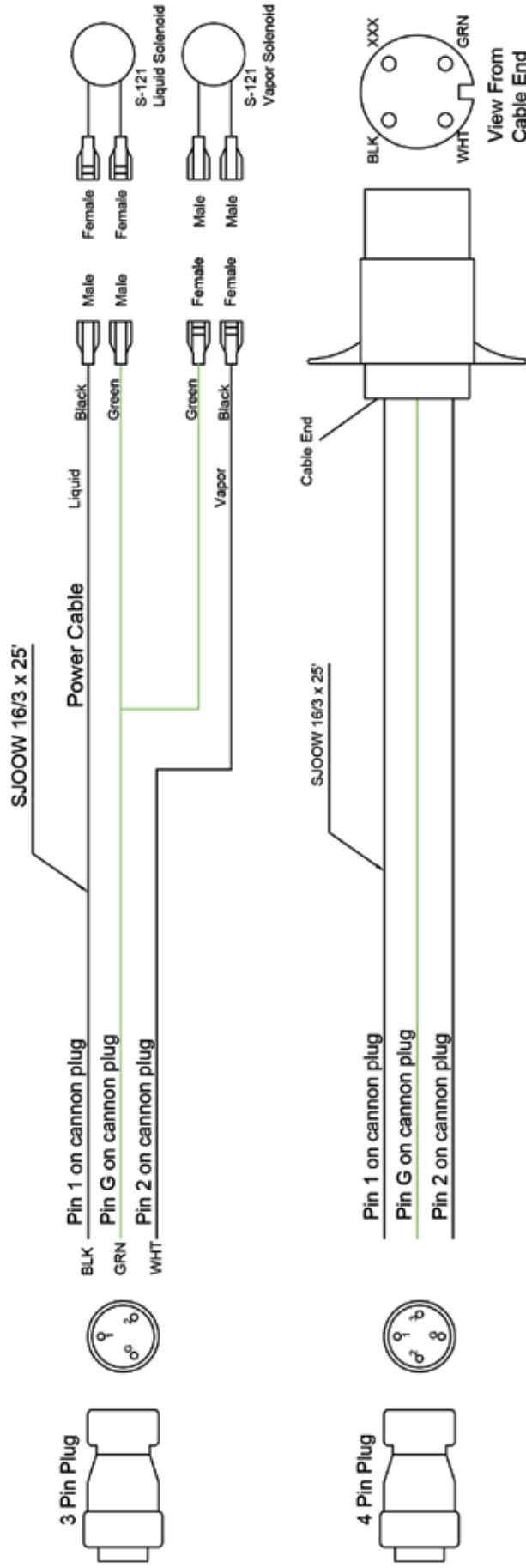
**BOM**

- 2 Push on Male Terminal P # 894005
- 1 Needle Valve, P # V-3055
- 1 1/4" Cross
- 1 1/4" 45 Deg St Ell
- 2 1/4" M x 1/4" F Tee
- 4 1/4" St Ell
- 1 1/4" Tee
- 2 1/4" Hex Nipple
- 1 3/8" FLX x 1/4" Male 90 Ell



Copyright Protected.  
 Covered by Patent Numbers:  
 9377788B2; Date 06-28-2016  
 8623277B2; Date 01-07-2014  
 7833476B2; Date 11-16-2010  
 7470395B2; Date 11-30-2008

# Wiring Diagram



## BOM

- 1 Trailer Plug, P # 71575.
- 1 3 Pin Connector P # 310.
- 1 4 Pin Connector P # 311.
- 2 Push On Male Connector, P # 894005.
- 2 Push On Female Connector, P # 834005.
- SJOOW 16/3 X 3' 9".
- SJOOW 16/3 x 25'.
- 2 S-121 Solenoid

Copyright Protected.  
 Covered by Patent Numbers;  
 937788B2; Date 06-28-2016  
 8623277B2; Date 01-07-2014  
 7833476B2; Date 11-16-2010  
 7470395B2; Date 11-30-2008

# PL-8750 Assembly Instructions

## Section 1: 12 volt controls: refer to drawing A Page 4

The PL8750 Flame Sanitizer is equipped with a 12 volt, tractor mounted control. There is a control box with two rocker switches. The red switch is the master switch and the green switch is the full flame switch. There is a cable that goes forward of this control box to the battery to provide power or it may be hard wired to a 12 volt source. There is a cable that goes from the control box to the solenoids in the manifold. The Black and Green wire from the control box connect to the liquid solenoid. The White and Green wire from the control box connect to the vapor solenoid. See photo on page 6.

## Section 2: Tank Installation:

**Note: Use only a New Tank equipped with a top mounted Liquid Withdrawal Valve and a top mounted Vapor Withdrawal Valve. Make sure the tank has a Check-Lok or Excess Flow Valves.**

**Step 1:** Remove back heat shield (shield with large Decal). Center tank on the Tank Cradle with the valves facing the front (side with the torches) of the unit. See photos 1 - 3.

**Step 2:** Place the red Valve Guard on the top of the tank with the Solenoid Control Box on the left hand side (looking from the rear of the unit). Make sure the Cable Brackets are in line with the Cable Holes on the Tank Cradle. See photo 4.

**Step 3:** Center cables on each Cable Bracket on the Valve Guard. Place Eye Bolts through the holes in the tank cradle and secure with the nut. Tighten nuts until tank is secure. See photo 4.

**Step 4:** You may reattach the back heat shield now or wait until you have completed the rest of the assembly.



Photo 1



Photo 2



Photo 3

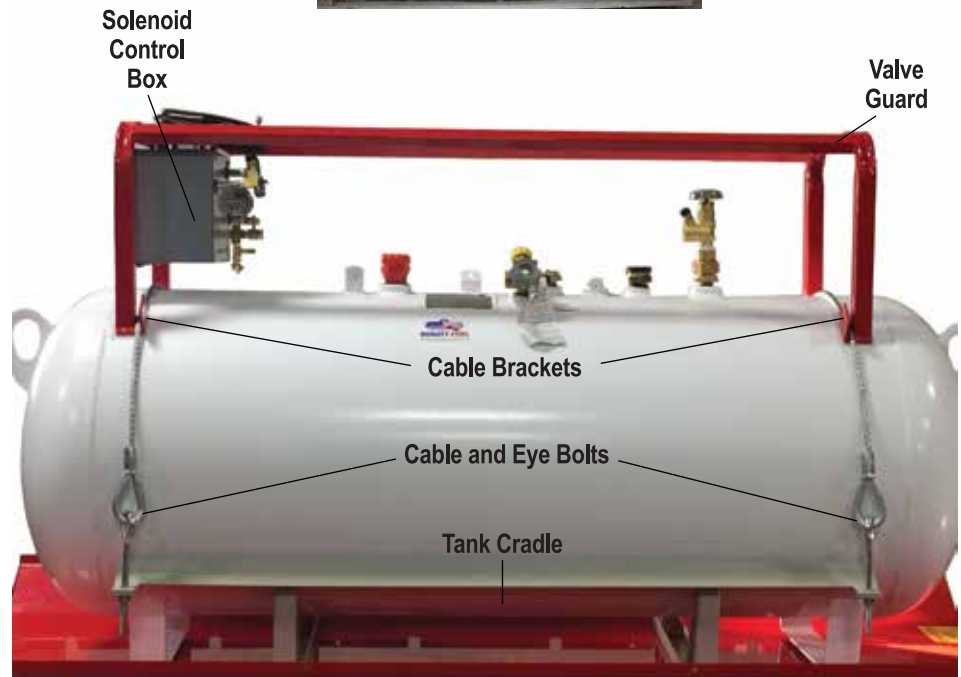


Photo 4



# PL-8750 Assembly Instructions

**All plumbing and wiring must be done by a certified L-P Gas Technician.**

**Section 3: Plumbing Installation:** Refer to photos below. Also the photos were taken without the heat shield on the torch side attached. You should be able to make all the connections without removing the shield.

## Plumbing the tank to the Solenoid Control Box:

### Step 1

#### Connecting the Vapor Hose Assembly:

Attach the P.O.L. Fitting on the Vapor Hose Assembly to the Vapor Withdrawal Valve on the tank.

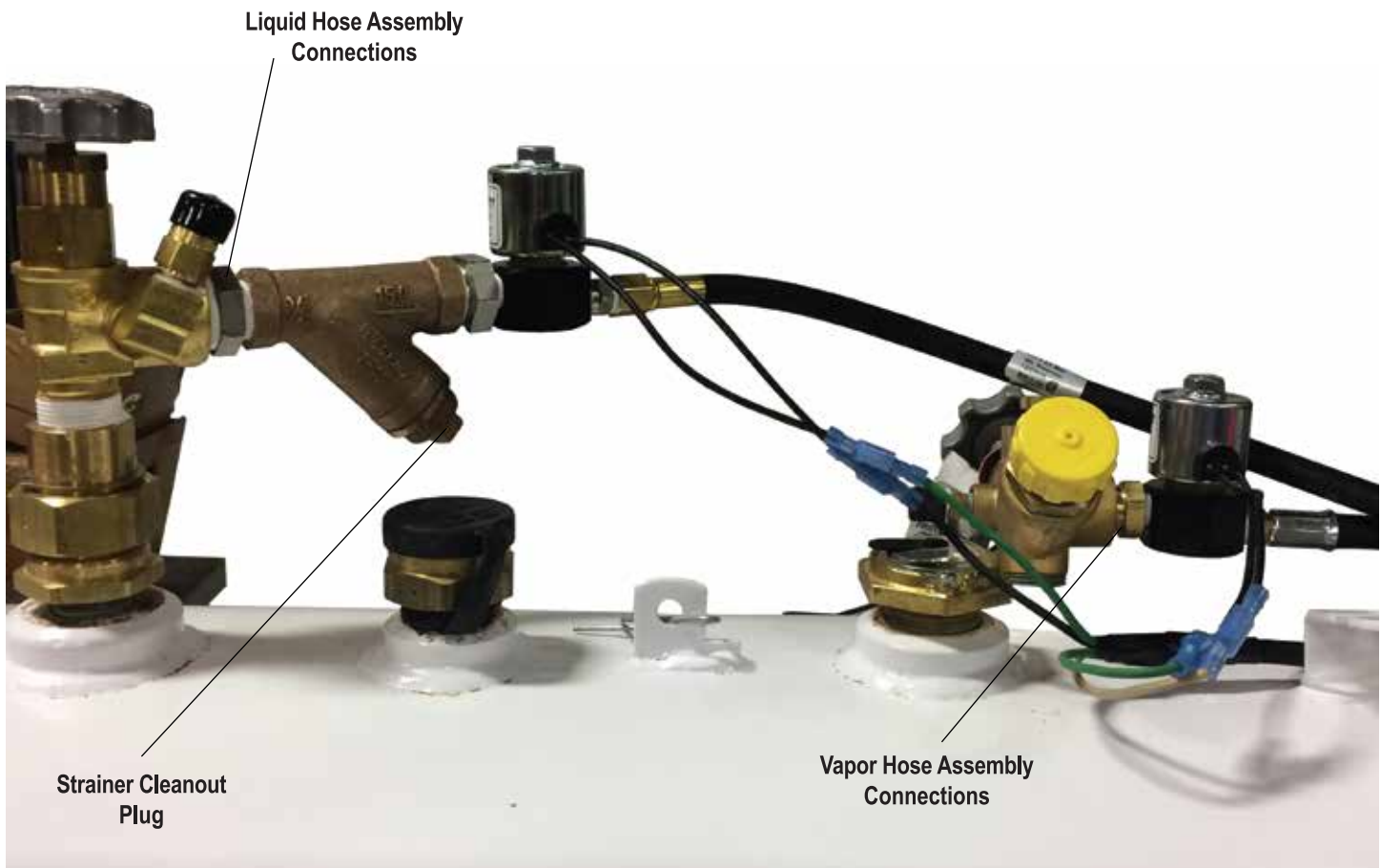
Attach female swivel fitting of the Vapor Hose Assembly to the male flare fitting of the lower pressure relief valve coming out of the Solenoid Control Box.

### Step 2

#### Connecting the Liquid Hose Assembly:

Attach the Strainer end of the Liquid Hose Assembly to the Liquid Withdrawal Valve on the tank making sure the clean out plug on the strainer is on the bottom.

Attach the female swivel fitting of the Liquid Hose Assembly to the male flare fitting on the upper pressure relief valve coming out of the Solenoid Control Box.



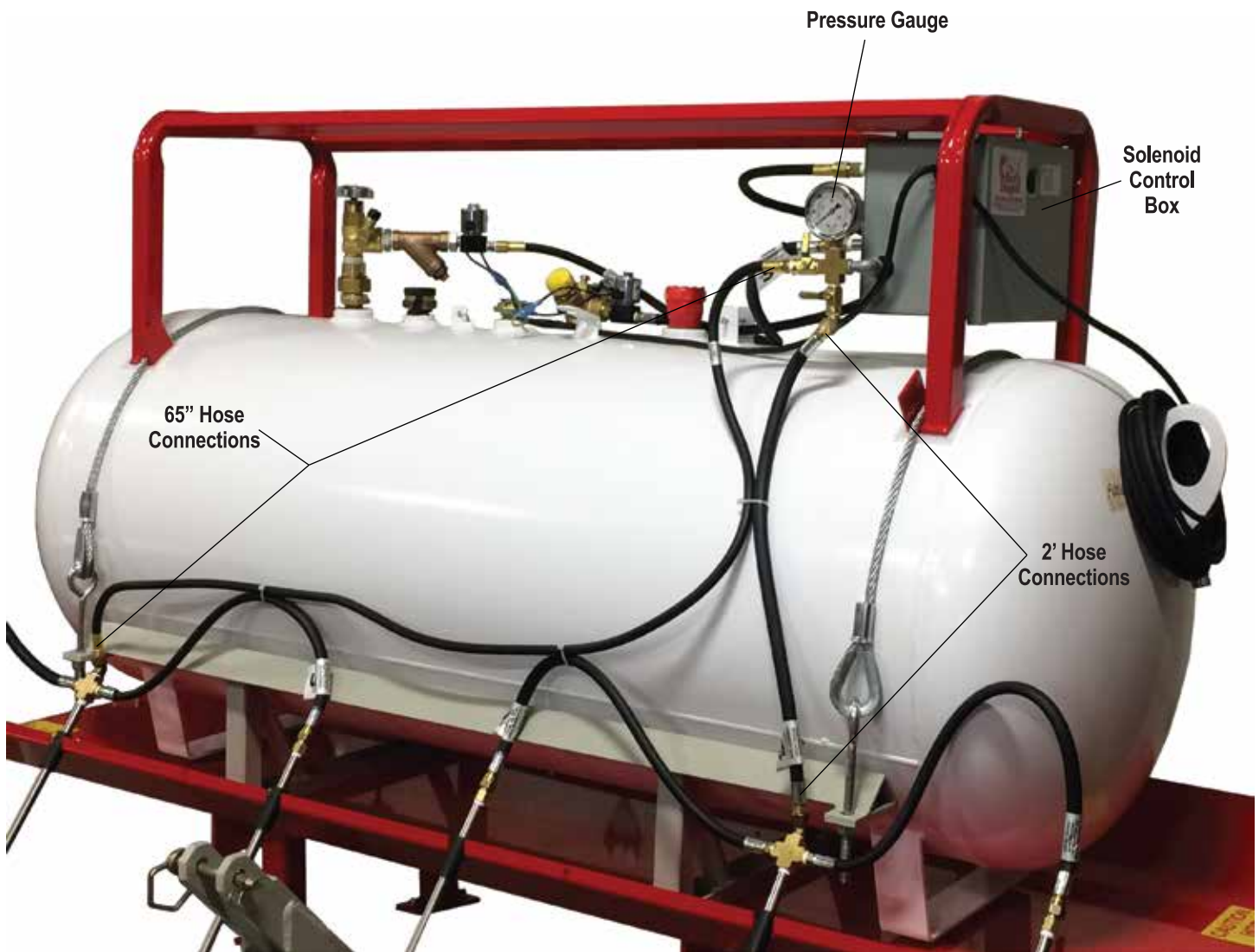
## PL-8750 Assembly Instructions

---

### Plumbing the Torches to the Solenoid Control Box:

**Step 1:** Connect the male end of the 2 ft Hose to the lower Ball Valve of the Pressure Gauge Assembly at the front of the Solenoid Control Box. Connect the female end of the 2 ft hose to the Brass Cross at the top of the stainless steel nipple connected to the fifth torch.

**Step 2:** Connect the male end of the 65 inch Hose to the upper Ball Valve of the Pressure Gauge Assembly at the front of the Solenoid Control Box. Connect the female end of the 65 inch hose to the Brass Cross at the top of the stainless steel nipple connected to the second torch. Tighten all connections securely.



## **PL-8750 Start-up, Lighting and Operating Instructions (Prior to Entering House)**

---

***IMPORTANT NOTE: Before flaming, make sure your litter is level.  
The start-up procedure is to be done outside of the building.***

### **Start-up Procedure:**

- Step 1:** Turn off all valves and regulators prior to lighting torches.
- Step 2:** Turn on tank valves slowly, press red master switch on & leak test all connections from the tank to the pilot needle valve in the control box using soapy water or leak detector on every connection. If leaks are found, turn off tank valve and open the needle valve allowing the lines to bleed. Fix all leaks and start over from step 1 until no leaks are found.
- Step 3:** Following steps 1 through 4 of the Lighting Procedures below, light the torches and leak check all connections from the pilot needle valve to the torches using soapy water or leak detector on every connection. If leaks are found, turn off tank valve and allow lines to burn out. Repeat process until no leaks are found.

***It is important that the leak test be made each day before entering the building.  
SEE WARNINGS AND CHECK LIST FOR DAILY START UP ON THE FOLLOWING PAGE.***

### **Lighting and Operating Procedure:**

- Step 1:** After making sure rocker switches are in the “off position”, open the tank liquid valve and tank vapor valve.
- Step 2:** Prepare to light torches. Light the provided hand torch.
- Step 3:** Move the red rocker switch to the on position.
- Step 4:** Open the pilot needle valve in the control box and open one of the ball valves for the three torches and light torches. Repeat for the other side. Adjust the pilot valve setting to a low strong blue flame.
- Step 5:** The operating pressure should be set at 50 psi. Adjust regulator with system operating at full flame. \*On side curtain houses or any house with low ceilings (less than 10 feet), drop pressure to 25 lbs.
- Step 6:** When ready to start flaming, position tractor at the fan end of the building facing away from fans. Always flame into the wind. Some fans are at floor level. They may have plastic dampers. Stay a safe distance away and hand flame this area. It is recommended to flame this area with the fans in the **OFF POSITION**.
- Step 7:** Turn the full flame switch (green rocker switch) to the on position and begin moving at 1/2 mph.
- Step 8:** When you reach the opposite end of the building, move your green rocker switch to the off position. This will return the machine to pilot stage. Return to the fan end of the building and repeat process.

***\* If the tractor is not moving, the (green) full flame switch and /or (red) master switch must be in the OFF position.***

***\* If the flaming unit is unattended for any time, it must be completely shut down.***

## Check List for Daily Start Up and Warnings

---

### **WARNING!**

- *After flaming, the machine is extremely hot and will remain so for an extended time. DO NOT touch until sufficient cooling has occurred!*
- *Use Extreme Caution - DO NOT Operate this unit when leaks are present. Use only in well ventilated areas.*
- *Flames produced by this unit can reach 2,000°F and could cause serious burns and possibly death.*

1. Fuel Tank Valve .....OFF
2. Pilot Valve(s) .....OFF
3. Regulator(s).....OFF
4. Control Switch .....OFF
5. Fuel Tank Valve .....ON  
Check for leaks from fuel tank to solenoid
6. Press Red Master Switch .....ON
7. Adjust Regulator to 50 PSI
8. Pilot Valve ..... OPEN
9. Light All Torches
10. Adjust pilot to a strong blue flame
11. Adjust Main Line Regulator to Working Pressure Desired
12. Move control toggle switches to .....ON
13. Fuel Tank Valve .....OFF
14. Move Control Switch to .....OFF
15. Allow ALL Fuel to Burn Out of Lines and Controls  
when shutting down.

### **WARNING!**

- *After flaming, the machine is extremely hot and will remain so for an extended time. DO NOT touch until sufficient cooling has occurred!*
- *Use Extreme Caution - DO NOT Operate this unit when leaks are present. Use only in well ventilated areas.*
- *Flames produced by this unit can reach 2,000°F and could cause serious burns and possibly death.*

## Shut Down Procedures

---

### Shut Down Procedure:

With the machine in pilot stage, shut down by first turning off the tank valves, LIQUID and VAPOR. Then allow the gas in the system to empty. Then place the rocker switches in the OFF position and close the two ball valves and the pilot valve in the control box.

### **WARNING**

- *After flaming, the machine is extremely hot and will remain so for an extended time. **DO NOT touch until sufficient cooling has occurred!***

After flaming with machine, use the hand held torch to get hard to reach places like corners, stem walls, sides and tops of the chicken house.

**Congratulations! You have just completed the first step in bio-safety.**

**It is recommended that for best results, start with a bare floor flaming and then flame after each de-caking.**

## Proper Purging Of LP-Gas Container

---

### The Importance of Purging

A very important step which must not be overlooked by LP-Gas distributors is the importance of properly purging new LP-Gas containers. Attention to this important procedure will promote customer satisfaction and greatly reduce service calls on new installations. Consider the following:

- Do not use this equipment if the tank has not been properly purged.
- *Purging should be done by a properly trained and certified L-P Gas Technician.*

### Both Moisture and Air are Contaminants

They seriously interfere with proper operation of the system. If not removed, they will result in costly service calls and needless expense.

### Neutralizing Moisture

**IMPORTANT** - If a tank is allowed to run completely out, methanol must be added when refilled.

Container Type	Minimum Volume Methanol Required
120 gal. tank	1 pint per 100 gallons.

**IMPORTANT** - Avoid substitutes. The secret of the effectiveness of methanol over all other alcohols is its high affinity for water plus a boiling point lower than all other alcohols, and most important: a boiling point lower than water.

## Vacuum Pre-Purged Domestic Tanks

---

Failure to properly purge a container can result in increased pressure, improper burning fuel mixture and odorant fade. Any of these conditions can result in personal injury, property damage or death.

### LP-Gas Injection Process:

This process must be done by a qualified LP-Gas Technician.

### Filling Process:

Filling of the tank must be done by a qualified LP-Gas Technician.

## Questions & Trouble Shooting:

---

Prior to calling with questions locate the Serial number stamped on the 3-point hitch of the unit (see Figure 1). This will enable customer service personnel to reference the necessary information.



**Figure 1**



## Questions & Trouble Shooting:

---

### Installation Problems:

If you have problems, questions, or feel you are missing a part during installation, please call Flame Engineering toll free at 1-800-255-2469 and our trained staff will gladly help you.

### Operation Problems:

If you have problems during operation, please check the following trouble shooting guide lines first. If you use this guide and still have problems call Flame Engineering and our staff will try to help remedy the situation.

### Trouble Shooting Tips

*(Read This First Before Calling the Factory)*

#### **START WITH A CLEAN TANK** *(We recommend only new tanks)*

Always begin with a NEW, clean, purged, liquid tank. This equipment requires the tank to be equipped with top mounted liquid, vapor withdrawal valves and a Check-Lok. Always perform use clean fuel.

#### **IF YOU EXPERIENCE FLAME OUT**

Check electrical connections at the battery. Then check to see if rocker switch light is on. If not, again check the battery connections until the switch light is on. Check the fuel strainer if you are experiencing flame out. Close tank valve and safely bleed pressure out of the lines. Clean accordingly. If tank debris is found in strainer or torches shortly after use, begin again with a NEW, clean, purged tank. (See Your LP-Gas Dealer). Did you perform the Methanol Injection Process before filling the tank with LP-Gas?

#### **IF YOU ARE GETTING A LOW FLAME**

Check torch orifices for blockage. Clean thoroughly if necessary. Did a certified L-P Gas Technician perform the Methanol Injection Process before filling the tank with LP-Gas?

#### **IF NO FUEL IS GETTING THROUGH TO THE TORCHES**

Turn off both tank valves, move switches to OFF position and safely bleed pressure from lines. Check electrical connections to the solenoids and make certain both valves are on and free and clear of tank debris. Solenoids will sometimes stick or not open and close completely. Remove the coil, remove the brass stem (be careful not to lose parts inside the brass stem), remove the plunger and spring. Clean the inside of the stem and outside of the plunger. Any worn or defective parts must be replaced by a qualified L-P Gas Technician.