



The Leader in Gas Lighting

Electronic Self-Igniting Gas Lanterns

Trouble Shooting Guide for All Installation Options



**ANSI/CSA Standard
designation
ANSI Z21.42-1993**

Pub-060

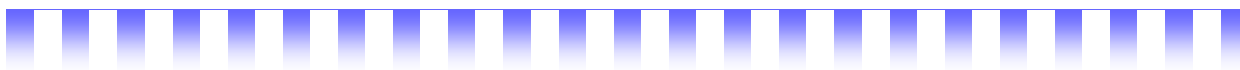


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For you safety:

Do not store or use gasoline, or other flammable vapors and liquids in the vicinity of this or any other appliance.

For your Safety

If You smell gas:

Outdoors:

- Shut off Gas to the appliance.
- Extinguish any open flame.
- If odor continues, immediately call your gas supplier.

In Addition Indoors:

- Open Windows
- Don't touch electrical Switches.
- Contact a professional plumber if the issue continues.

Caution:

During normal operation, gas lanterns operate **HOT**, do not cover or hang clothing or any flammable or combustible material from the gas operated lanterns.

Chapter 1. Official announcements from Solara Lighting LLC.

This troubleshooting guide is intended to assist the homeowner or installer with analyzing any issues that may affect the performance and/or installation of our Electronic Self-igniting gas lanterns. This particular guide can be used with any of the mounting styles that our lanterns come in:

Wall mounted



Pier mounted,



Post mounted.



Pendant hung.



Important:

- Please pay close attention to the warnings and safety instructions:
- Read all installation, operating and maintenance instructions before installing, operating or servicing lantern equipment.
- Improper installation, adjustment, alteration, service or maintenance of these lanterns can cause fire or explosion resulting in property damage personal injury and/or death.
- A qualified installer, service agency or gas supplier must perform installation, service or maintenance.
- The installation of this fixture must conform with all local codes and if there are not such codes, with the latest edition of the National Fuel Gas Code ANSI Z223.1. A copy of which can be obtained by requesting one in writing to client services and this companies address.
- A professional plumber and or electrician must provide all conduits for gas and electricity to the point of installation.
- The plumber must have the gas flowing properly and evenly to the individual gas lines and shut off valves must be working properly as per specifications and as described in this manual.
- Failure to ensure proper gas pressure will cause the gas appliance to not work properly.
- The gas lines should be bled of excess air before attachment of the gas lanterns. **See Page 7.**
- **The correct gas pressure needed for proper operation of these gas lanterns is 7 to 9" w.c. for Natural Gas and 11 to 14" w.c. for propane.**

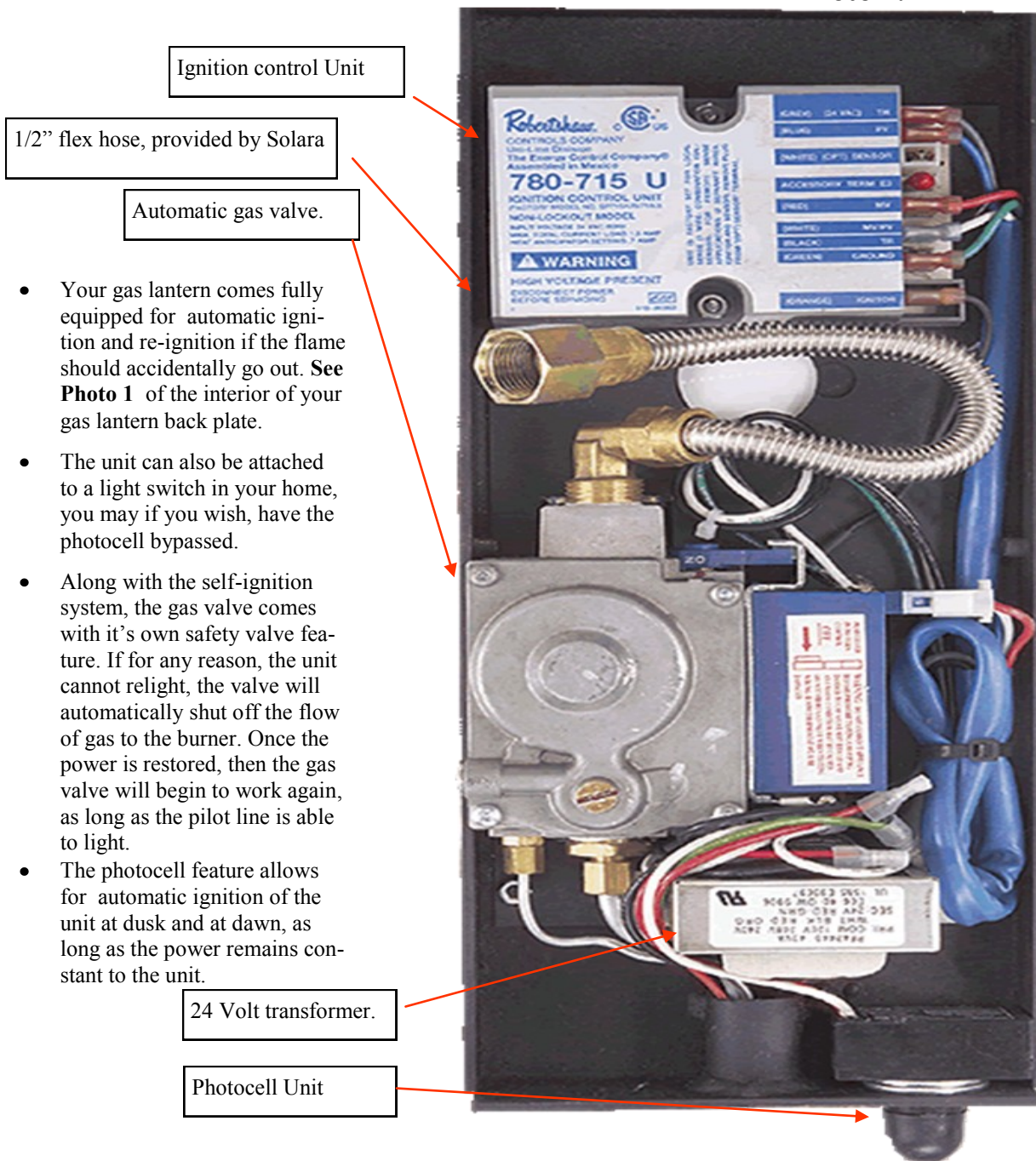
Chapter 2. Basic Questions and Answers.

1. Basic Issues : Quick questions and answers.

	Issue	Diagnosis:	Solutions:
A.	My Flame has reduced in size over time?	1. Carbon Build up in the burner tip. 2. Debris in gas line has clogged the small orifices in the burner tube.	See the separate Maintenance guide for cleaning instructions . Carbon build up is a natural by product of the yellow flame, it does not burn as hot as a blue flame. The blue flame is hotter and burns cleaner, but it is not visible enough for this use.
B.	My glass panel or glass drum has shattered/broken.	1. Carbon Build up in the burner tip has caused the flame to go sideways and it overheated the glass. 2. Possibly wind, or other causes.	Contact your distributor or Solara lighting to order a new piece. Please remember that glass is not covered by warranty once it has been installed in the fixture. See Maintenance guide for maintenance directions.
C.	What are the clearances for lantern distance from combustible material?	The body of the gas lantern, excluding ornamentation, must be installed not closer than 12 inches from the ceiling or overhang and not closer than 6 inches from the side of any wall.	See the guide marked “Installation Requirements” or the Installation Manual.
D.	Is the flame height adjustable? It is too low or too high.	The flame height has been preset at the factory with the proper flame size. The incoming pressure for Natural gas lanterns should be between 7-9 inches w.c. (inches on the water column). Propane gas lanterns should be 11-14 inches w.c. Check with your plumber or builder for these levels. Less or more pressure can greatly affect the performance of your lanterns.	The outbound pressure range of our gas valve is 3-6” w.c. To adjust the pressure, see the detailed instruction on page 15 of this guide.

Chapter 2. Electronic Self-igniting safety valve with photocell. General Parts Recognition

Photo 1.



Chapter 2. Standard Parts recognition.

This is the standard burner assembly for all four (4) different mounting types.

- Main Burner tip
- Burner tube with gas orifice.
- Main gas line.

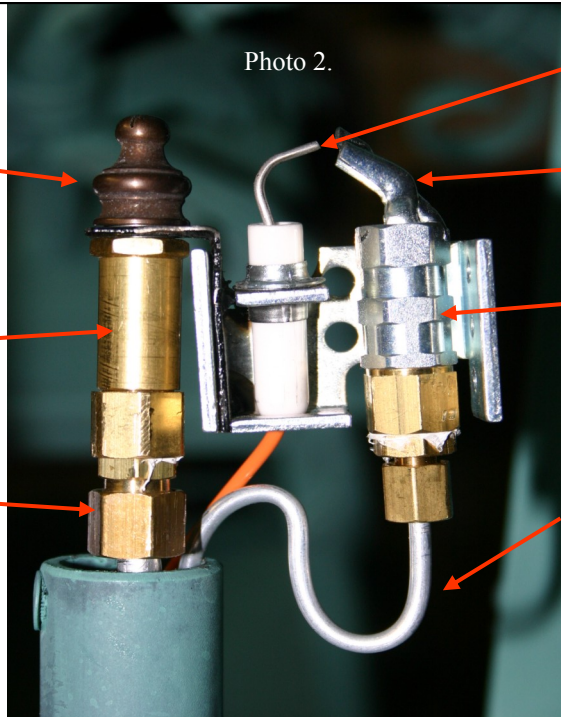


Photo 2.

- Igniter sensor wire. Striker, Sparker.
- Pilot Hood
- Pilot gas Assembly.
- Pilot gas line.

- If it is still daylight, you will need to cover the photocell with dark tape, before the unit will try to fire. **See Photo 3.**
- Verify that there is a constant 120 volts being delivered to the Photocell.
- Verify that the breaker is turned on.
- Verify that if the unit is attached to a timer or switch, that these are in the on position.

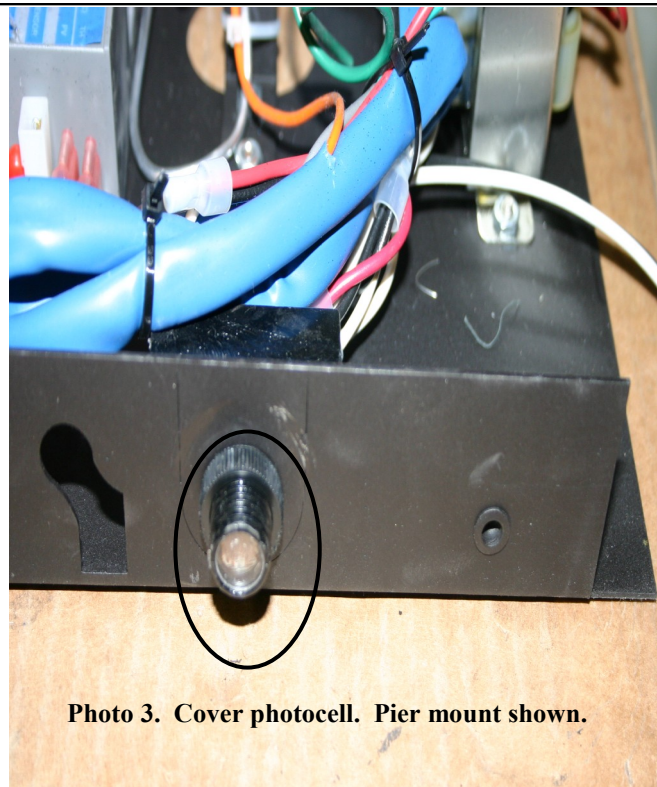


Photo 3. Cover photocell. Pier mount shown.

Chapter 3. Recommended Gas installation set up.

Illustration 1. Wall mount layout shown. Refer to individual installation manuals for different layouts, i.e. pendant, post, et al.
All mounting versions should have sediment traps and an on 'off valve as required by code.

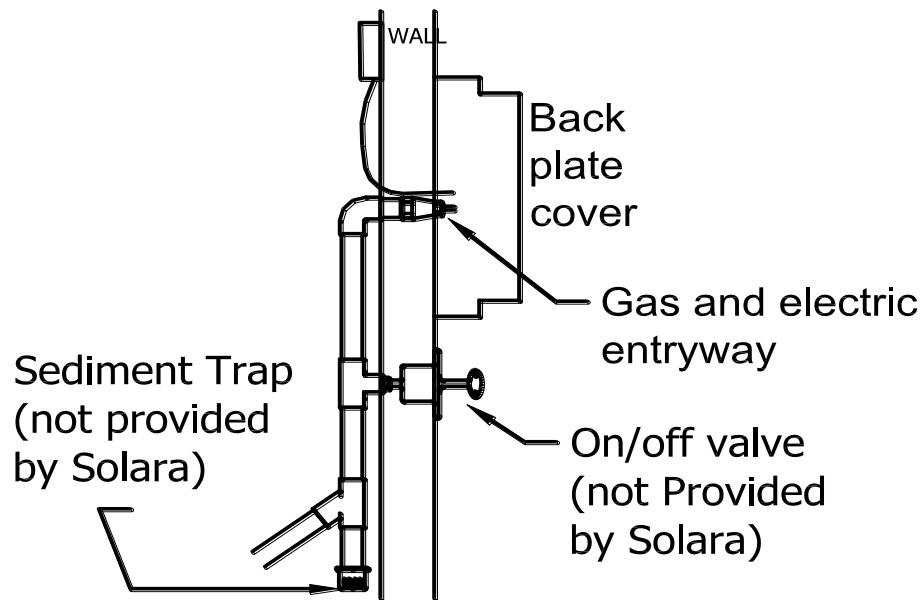
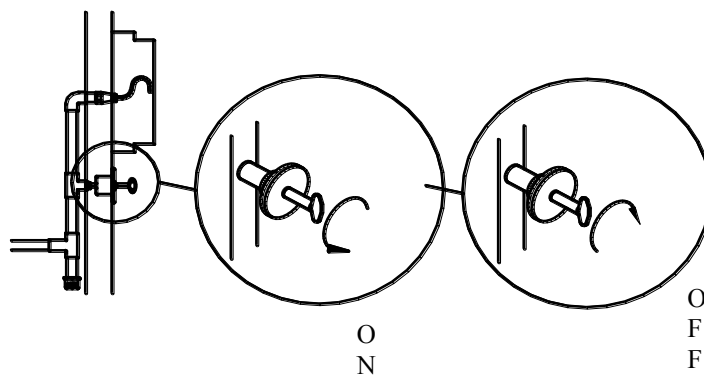


Illustration 2. On/Off valve. Not provided by Solara



Chapter 4. Checking the Gas Lines.

Bleeding The Gas Lines.

- **These lanterns must be disconnected from the gas supply during any pressure testing of the system at test pressures in excess of 1/2 psig. Failure to do so will could damage the gas valves and void the warranty.**
- Before attaching the gas line to the gas lantern, make sure all gas lines have been **fully bled** since blocked lines or lines with air in them will greatly impact the performance and ignition of your lanterns.
- **To bleed the gas lines**, make sure the area is well ventilated, and extinguish any possible source of flame ignition . Follow all local and national codes when venting the gas lines.
- Open the source gas line at the point of connection from the lantern gas valve, allow it to vent into the atmosphere for a few seconds. Then reconnect the source gas line to the
- Solara Lighting recommends only certified plumbers perform these actions.

Attention:

- When the unit is first turned on, the gas can take a while to make it all the way to the burner. Let it spark for a minute or two.
- The igniter wire will continue spark until the power is shut off, even if the gas flow is shut off.
- If the pilot flame takes longer than a few minutes to light, then reset the fixture by switching off the electrical power at the source.
- This will allow the time out feature of the gas valve to reset.
- The safety valve is designed to shut off the flow of gas after a minute or so if the igniter sensor/wire does not sense heat from the pilot flame.
- If the unit is sparking but not igniting,: Verify that the main gas shut off is turned to the on position, SEE ILL. 2 on Page 6.
- A main shut off valve, which complies with the construction provisions of ANSI Z21.15 and is suitable for use with the gas being used, must be installed between the gas line and the lanterns according to your local codes. See Illustration 1 on Page 6.
- This Shut off valve is not supplied by Solara and should have been installed by the builder, if it is called for in the codes.

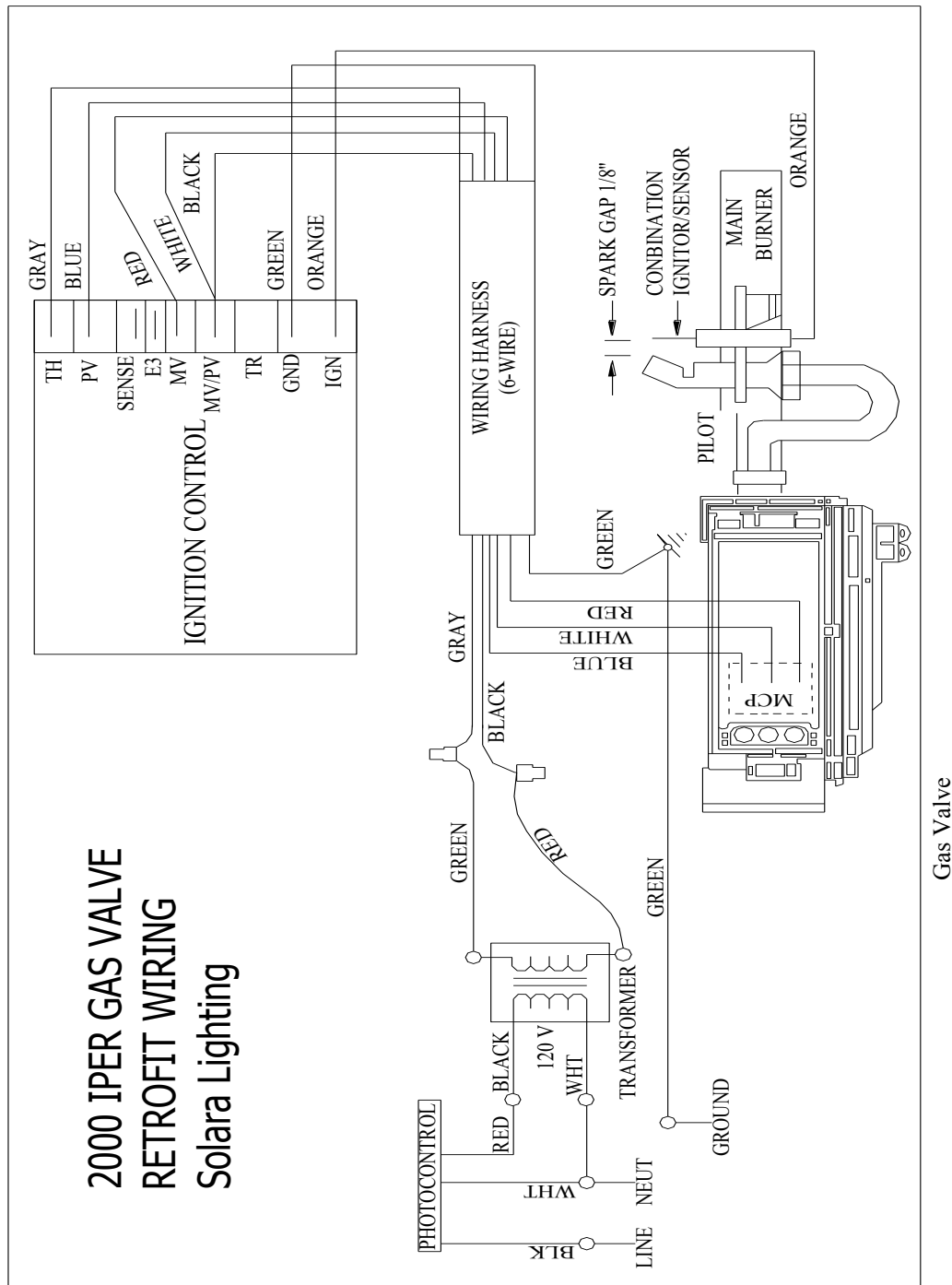
This is the reset switch on the top of the gas valve. All models come with this feature. You can use it as an emergency shutoff to stop the flow of gas through the valve. Push in to flip switch, then return it to the open position shown to reset.



Photo 4.

Chapter 4. Wiring diagram for All Self-Igniting Solara Gas Valves.

The diagram below shows the installation of Johnstone # 712-005 and illustrates the wiring method when using a 2000 series gas valve with Solara Lighting products.

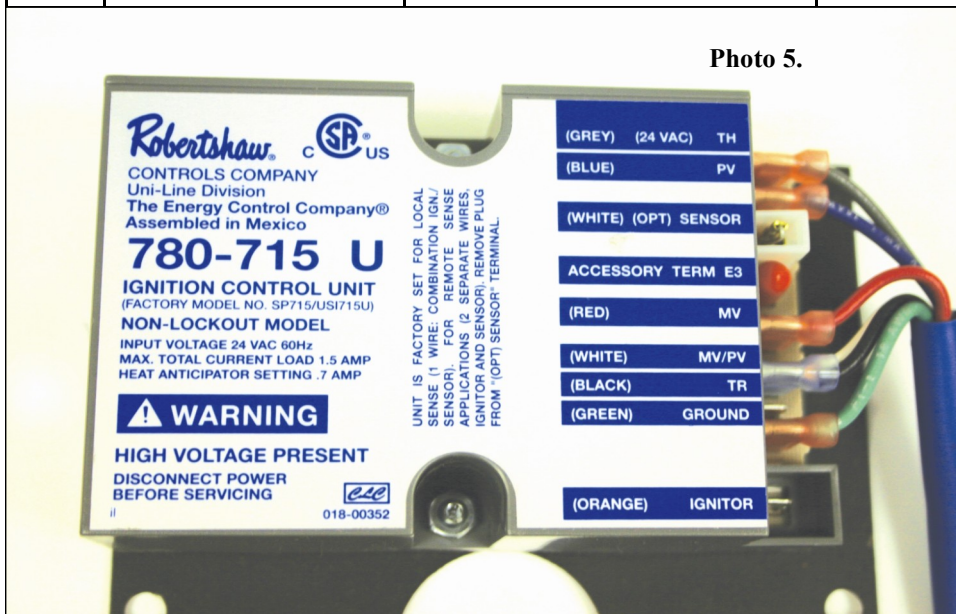


Chapter 5. Basic Troubleshooting Procedures.

1. Problem # 1: Power on, no spark.

	Possible Causes.	Diagnosis:	Solutions:
A.	No main power	Check that breaker is in on position.	Reset power.
B.	Photocell is not operating	Photocell will shut off power during daylight hours.	Cover the Photo cell unit with black tape to simulate darkness.
C.	Faulty Photocell.	Use a voltmeter to verify 120 v to photocell, and with sensor covered, that there is 120 v out of photocell. .	No power out, replace photocell. Contact Solara for replacement part.
D.	Faulty Transformer	Use a voltmeter to determine if 120v out of the photocell to Transformer.	There should be 24-26volts coming out of the transformer. If more or less than that, the control unit will not work properly, and if too much voltage, it can ruin the ignition control unit.
E.	Faulty Ignition control unit.	With Power on. Set your voltmeter to the 24 volt scale. Probe terminals TH and TR, (see wiring diagram Illustration 3, and Photo 5).	If you do not read 24 volts at TH and TR , the problem is not the ignition system. Perform normal system checks of main power, transformer and photocell. If you do read 24v at TH & TR , the problem is the ignition system. Check for loose or defective wiring. If wiring is good contact Solara lighting for replacement parts.

Photo 5.



Ignition Control Unit.

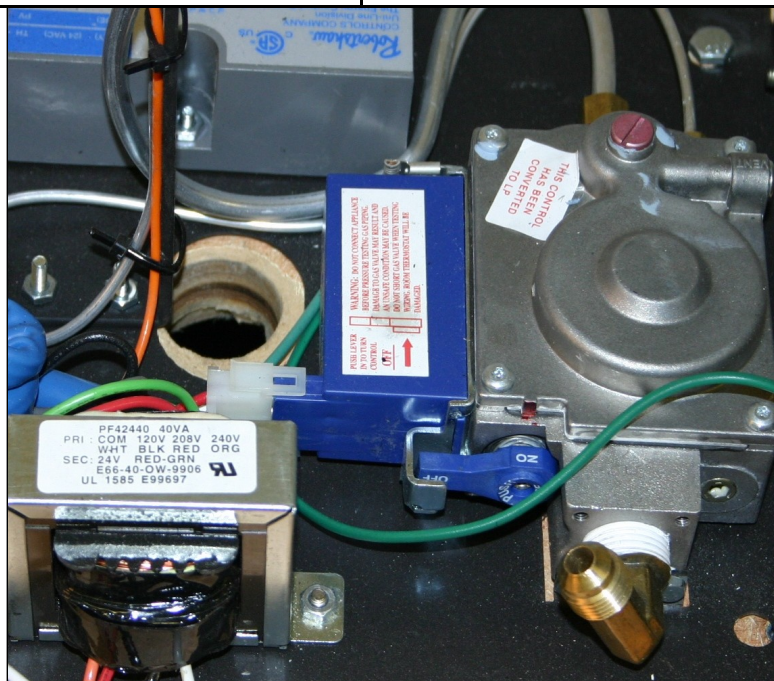
Chapter 5. Basic Troubleshooting Procedures.

1. Problem # 2: Have spark., no gas flow.

	Possible Causes.	Diagnosis:	Solutions:
A.	Main Gas supply turned off.	See Illustration 1 and 2. Check that main gas valve or petcock is turned to the ON position.	Turn the gas on, and make sure the gas is present at the stub out left by the builder.
B.	ON/OFF switch on our gas valve is tripped.	Verify that the Blue on/off switch , is set to the on position.	Push the on/off switch to the on position as shown in Photo 6 .
C.	Verify Power Level.	Use a voltmeter to verify 120 v to photocell, and with sensor covered, that there is 120 v out of photocell. .	The gas valve unit will not operate correctly with less than 120 volts. It will not operate correctly with a diming circuit. Verify power levels.
D.	Faulty Primary Valve in the gas valve.	With Gas on and the system sparking probe terminals PV and TR. With 24v at these terminals and pilot gas does not flow, then replace the gas valve. See wiring diagram Illustration 3, and Photo 5).	Contact Solara Lighting for replacement Gas Valve kit. .
E.	Faulty Ignition control unit.	If you do not read 24volts at terminals PV and MV/PV replace the ignition control unit. See wiring diagram Illustration 3, and Photo 5).	Contact Solara Lighting for replacement Gas Valve kit. See Below.

Attention:

The gas valve replacement kit contains the transformer, gas valve, wiring harness and ignition control unit, and these parts are not provided or sold separately. The kit does not include the Photocell, or the igniter/sensor wire. These parts need to be ordered separately. Contact your Sales person, or Solara Lighting directly at the numbers given. We can advise you of the warranty status and assist in diagnosing the problem.

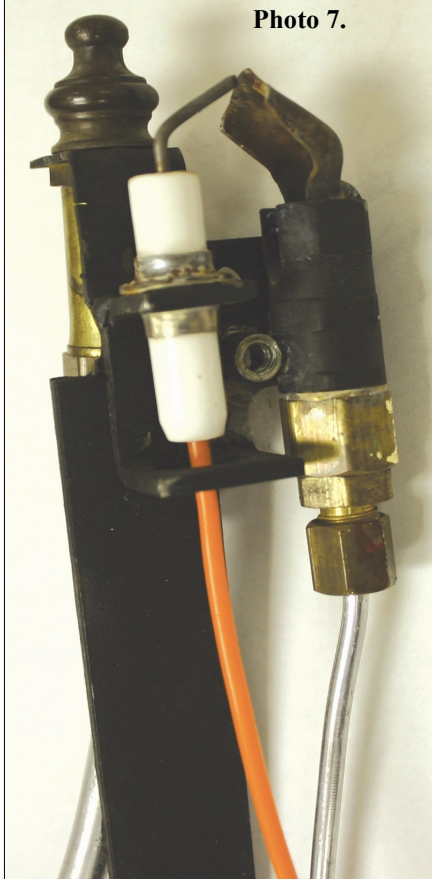


Chapter 5. Basic Troubleshooting Procedures.

1. Problem # 3: Have pilot gas, no spark.

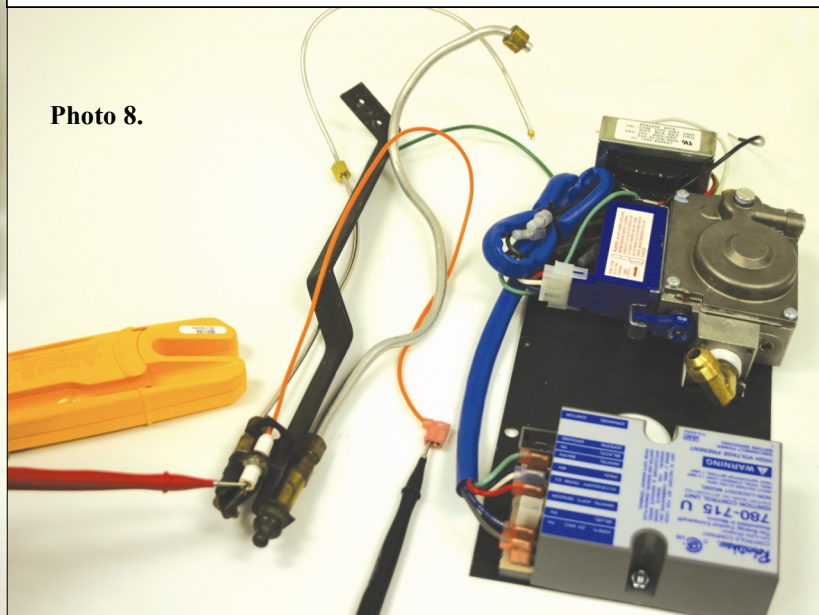
	Possible Causes.	Diagnosis:	Solutions:
A.	Defective Igniter/sensor wire and/or it's wiring.	1. Set the voltmeter to the ohm scale. 2. Disconnect the wire from the IGN terminal on the ignition control unit. 3. Touch one meter probe to the tip of the igniter/sensor rod in the pilot, see Photo 7. 4. Touch the other probe to the quick connect at the other end of the igniter/sensor wire. 5. The Ohm meter should got to 0, which means there is continuity. 6. If it does not then, the igniter/sensor wire has either broken or is grounding out to the fixture.	If you have continuity through the wire, then double check all connections to make sure no wires are loose. If the wire has good, then the ignition control unit is faulty and needs to be replaced. If you do not have continuity through the wiring, then check to see if the wiring is arcing out to the metal, replace it if needed. Contact your distributor or Solara Lighting for parts.

Photo 7.



Check the Igniter/sensor ceramic for cracks . Also see to it that the ceramic assembly is fully seated in the bracket. For the best results the igniter rod should be centered on the pilot hood and separated approximately 1/8”.

Photo 8.



Chapter 5. Basic Troubleshooting Procedures.

1. Problem # 4: Have pilot flame, Main burner will not turn on.

	Possible Causes.	Diagnosis:	Solutions:
A.	Defective Igniter/sensor wire and/or it's wiring.	1. Set Test meter to 24v scale. 2. With Pilot flame on igniter/sensor– Probe terminals MV and MV/PV on the ignition control unit. If you read 24 volts here, but not at the gas valve, there is a loose wiring connection.	Repair or replace the wiring.
B.	Faulty Ignition control unit	1. Set Test meter to 24v scale. 2. With Pilot flame on igniter/sensor– Probe terminals MV and MV/PV on the ignition control unit. If you read 24 volts here and the pilot flame is hitting the Igniter sensor rod, the problem could be: • Faulty igniter/sensor wire and / or it's wiring. • Faulty Ignition control unit. • No flame rectification signal to ignition control unit.	Contact your distributor or Solara lighting to order a new gas valve kit and the igniter/sensor wire.

Photo 9. Standard burner assembly.



Chapter 5. Basic Troubleshooting Procedures.

1. Problem # 5: Have pilot flame, Main burner turns on, but turns off quickly.

	Possible Causes.	Diagnosis:	Solutions:
A.	Photocell	1. Photocell uncovered during the daylight hours. 2. Photocell is not working correctly.	1. This could be normal operation for the daytime. Cover the photocell with dark tape. 2. Replace photocell.
B.	Faulty Ignition control unit or Gas valve.	1. Photocell is working as it should. 2. Cover Photocell with dark tape, if the unit still shuts off , then the gas valve kit should be replaced.	Contact your distributor or Solara lighting to order a new gas valve kit and the igniter/sensor wire.

Photo 10.
Basic Maple
leaf Flame
shape.



Chapter 6. Adjusting the Flame Height.

To adjust the flame height of your EG lantern, please follow the instructions shown below.

Please make sure that the electric power and gas supply are shut off at the source before beginning. Follow all National and local safety codes in adjusting the flame height. **DO NOT REMOVE THE ADJUSTMENT SCREW ENTIRELY, ESPECIALLY IF YOU ARE ADJUSTING THE SCREW WHILE THE FLAME IS ON!**

Turn the adjustment screw in the clockwise direction to increase the flame height. Turn the adjustment screw in the counterclockwise direction to decrease the flame.

Photo 11. Remove valve cover screw.



Photo 12. Remove cover screw.



Photo 13. Inside view, adjustment screw.



Photo 14. Adjusting valve adjusting screw



Statement of Warranty.

Materials and Technology Warranty.

Solara Lighting LLC products are made of the finest materials available and are manufactured under the most rigid specifications in the industry. **Solara Lighting warrants its products against defects in manufacturing for a period of one (1) year from our date of invoice, and will promptly replace or repair any items found to be defective.** Please contact your dealer or representative first, to report any problems of this type as we will need that information to honor any warranties.

Broken or Missing Glass will only be considered a warranty item if it is **broken and/or missing in shipment** and reported **immediately** upon arrival of the product. Please see the "Ten Day Claim Limit" flyer sent with your lantern.

To access your warranty coverage please follow the steps below.

Gather your information with regard to the lantern: The company that sold you the lantern(s), the date of installation, the types of lantern(s) i.e. Model name, model #, serial number. The serial number can be found inside the back plate of your lantern, where the gas valve is located. Your representative (sales person) can help you with the model #'s, purchase date, original order #, etc. When possible, it may be best to let your sales rep. handle the warranty transaction.

Contact Solara Lighting Technical Support or Customer Service at the numbers listed below with your information.

The Quality Assurance or Technical Support team will determine your warranty status and discuss the options to resolve the issue.

No product will be accepted as reworks without this prior authorization from Solara Lighting. Only Solara Lighting has the authority to okay a return of goods, all returned items that do not have an authorized Returned Goods Authorization (RGA) from Solara Lighting, will be refused by Solara Lighting and returned to the customer at their expense.

Warranty coverage does **not** cover routine maintenance of lanterns, if your problem is determined to be related to lack of maintenance or poor installation practices, your warranty could be voided. Please refer to our Maintenance Guide sent with your lantern with your Homeowner Kit.

Special Limited Warranty on Finishes.

Your lanterns require regular **maintenance of the outside finish** as well as the burner parts of the lantern. Please refer to your maintenance guide for details of cleaning and maintenance procedures. Your lanterns exterior should be rubbed down with a protective coating such as Murphy Oil, to aid in corrosion protection. We recommend cleaning and applying the Protective coating at least every 90 days. Failure to maintain the finish of the lantern can result in the voidance of your warranty.

Solara lighting offers a one (1) year warranty on our **standard** finishes in **non-coastal** regions.

Solara Lighting also offers many models in Bronze and these lanterns carry a two year warranty for finishes. Bronze lanterns will age naturally with time, revealing the beautiful aged patina of bronze. Please note that all of our Cast Bronze pieces are created using the "lost wax" method. This essentially means that each lantern is a **individually sculpted piece** and some variations will occur. Solara Lighting reserves the right to examine any variance and decide if the item should be replaced or reworked.

All of our beautiful finishes are hand painted and as such are unique and sometimes variations will occur. Therefore Solara Lighting reserves the right to examine first **any** returns requested on that basis, before repairing or deciding to charge for the rework.

Solara Lighting cannot issue **any Warranty** for our **standard** finishes on our **Steel** lanterns in **Coastal regions**. For the purposes of this document, coastal regions are defined as being within 100 miles of the shoreline. As such, no warranty repairs or returns on steel lanterns **without** special coastal finish will be accepted under this policy.

Solara Lighting can provide a special **coastal finish** for steel lanterns for an **additional fee**. The Coastal Finish will be guaranteed for a period of **one year** from date of shipment. The ship date can be found on the label on the front cover.

Standard Policy for service charges for removal, installation, shipping charges for warranty items.

All service charges must be approved by upper management. Broken glass is not considered a warranty item and will not be covered in service charges.

The standard repair, removal or installation charge for any single lantern or fixture that Solara will cover is \$90.00 for the first lantern and 30.00 for each additional lantern on that site, that needs to be repaired.

For cases where the damaged lantern is removed and a new lantern is installed at the same time, the maximum charge Solara will cover is \$135.00.

For multiple quantities of lanterns the standard removal or installation charge that Solara will cover is 90.00 for the first lantern and 30.00 for each additional lantern.

Example: $90.00 + (7 \text{ additional lanterns} \times 30) = \300.00 total .

We will cover shipping charges only under special circumstances and this must be approved by Solara management.

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