



Shenandoah

Instruction Manual



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Made in the U.S.A.



FOR YOUR SAFETY

If you smell gas:

1. Open Windows
2. Don't touch electrical switches
3. Extinguish any open flame
4. Immediately call your gas supplier

POUR VOTRE SURETE

Si vous sentez une odeur de gaz:

1. Ouvrez les fenêtres
2. Ne touchez pas aux de commutateurs électriques
3. Eteindre n'importe quelle ouverture flambe
4. Immédiatement appeler votre fournisseur de gaz

FOR YOUR SAFETY

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

POUR VOTRE SURETE

Pas l'essence de magasin ou usage ou les autres vapeurs et les liquides inflammables à proximité de cet ou l'autre appareil.

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DANGER !

SICKNESS AND/OR DEATH MAY RESULT FROM USE OF THIS HEATER IN AN UNVENTILATED BUILDING OR IN HUMAN LIVING AREAS.

LE RESULTAT DE MAI DE MORT DE ET/OU DE MALADIE DE L'USAGE DE CET APPAREIL DE CHAUFFAGE DANS UN CONSTRUISANT UNVENTILATED OU DANS L'HUMAIN SECTEURS VIVANTES.

EL USO DE ESTA CALENTADORA EN UN UNVENTILATED CONSTRUYENDO O EN HUMANO AREAS PUEDE RESULTAR EN ENFERMEDAD Y/O MUERTE

- | | |
|--|---|
| <p>⚠ Do not use the heater to heat human living areas. The intended use of the heater is to provide warmth for poultry and hog buildings. Adequate ventilation must be provided.</p> | <p>⚠ Ne pas utiliser l'appareil de chauffage pour chauffer humain habiter les secteurs. L'usage voulu de l'appareil de chauffage sera obligé à fournir la chaleur pour les bâtiments de volaille et cochon. La ventilation suffisante doit être fournie.</p> |
| <p>⚠ Use only the type of gas being supplied to the unit as marked on it (Propane or Natural Gas). Do not operate with improper fuel. Ventilation air and combustion air must not be obstructed.</p> | <p>⚠ Utiliser seulement le type de gaz étant fourni à l'unité comme marqué dessus (le Propane ou le Gaz Naturel). Ne pas fonctionner avec le carburant déplacé. L'air de ventilation et l'air de combustion ne doivent pas être encombrés.</p> |
| <p>⚠ Test all pipe and pipe joints for leaks by a suitable means (Example: soap and water solution or a pressure check). Do not operate the heater until this test has been preformed.</p> | <p>⚠ Essayer tous joints de tuyau et tuyau pour les fuites par un moyens convenables (l'Exemple : la solution de savon et eau ou un contrôle de pression). Ne pas fonctionner l'appareil de chauffage jusqu'à ce que ce test a été préformé.</p> |
| <p>⚠ Do not move, handle, repair, or adjust height of the heater while in operation or when still hot. Do not bypass any safety devices.</p> | <p>⚠ Pas le mouvement, la poignée, la réparation, ou ajuster la hauteur de l'appareil de chauffage pendant que dans l'opération ou quand calme chaud. Ne pas sauter d'appareils de sûreté.</p> |
| <p>⚠ Before each use, a visual inspection of the heater is essential to insure safe and satisfactory heating. Replace or repair defective components before operating heater. Failure to do so will void warranty and could result in injury or property damage.</p> | <p>⚠ Avant que chaque usage, une inspection visuelle de l'appareil de chauffage est essentielle pour assurer le chauffage sûr et satisfaisant. Remplacer ou réparer des composants le défectueux avant de fonctionner appareil de chauffage. L'échec pour ainsi faire annulera la garantie et pourrait avoir pour résultat les dommages de blessure ou propriété.</p> |
| <p>⚠ The installation of these appliances is to be in accordance with CAN/CGA-B149.1 and National Fuel Gas Code, ANSI 2223.1/NFPA 54 installation codes for gas burning appliances and equipment and/or local codes.</p> | <p>⚠ L'installation de ces appareils sera obligé à être conformément à CAN/CGA-B149.1 et Code de Gaz de Carburant National, ANSI 2223.1/NFPA 54 codes d'installation pour le gaz appareils ardents et et/ou d'équipement codes locaux.</p> |
| <p>⚠ WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.</p> | <p>⚠ L'AVERTISSEMENT : l'installation Déplacée, l'ajustement, le changement, le service ou l'entretien peuvent causer les dommages de propriété, la blessure ou la mort. Lire l'installation, fonctionnant et les instructions d'entretien à fond avant d'installer ou entretenir cet équipement.</p> |

DSI UNITS MUST BE PROPERLY GROUNDED. DO NOT ALTER ELECTRICAL CORD.

LES UNITES DE DSI DOIVENT ETRE CONVENABLEMENT FONDE. Ne PAS CHANGER LA CORDE ELECTRIQUE.

Las UNIDADES de DSI se DEBEN MOLER APROPIADAMENTE. No ALTERE CUERDA ELECTRICA.

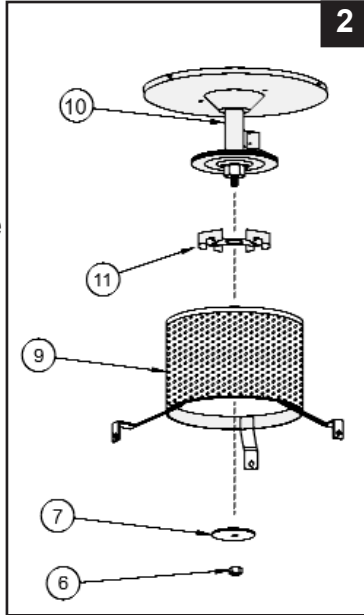
Plug in the three-prong power cord to a correctly grounded three-prong electrical outlet.

HIGH PRESSURE ASSEMBLY INSTRUCTIONS

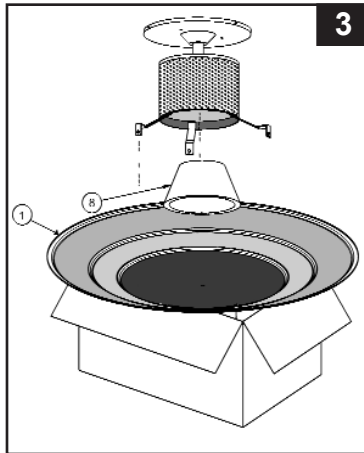
NOTE: The installation of these appliances is to be in accordance with CAN/CGA - B49.1 and B149.2 Installation Codes for gas burning appliances and equipment and/or local code.

1. Remove all parts from the box - save empty box for use in assembly.

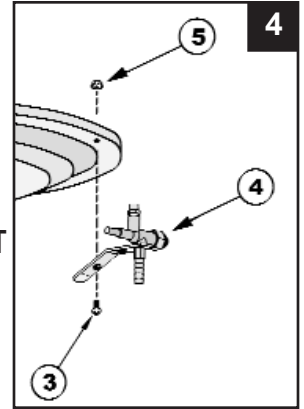
2. Turn the **BURNER ASSEMBLY (10)** and the **EMITTER ASSEMBLY (9)** UPSIDE DOWN. Insert the stud on top of the **BURNER (10)** through the **BURNER SPACER (11)** and the small end of the emitter cone. Place the large **WASHER (7)** onto the stud inside the emitter cone and finger tighten **SS NUT (6)**. Align one of the emitter legs with the two holes in the burner pan. Firmly tighten SS nut inside Emitter.



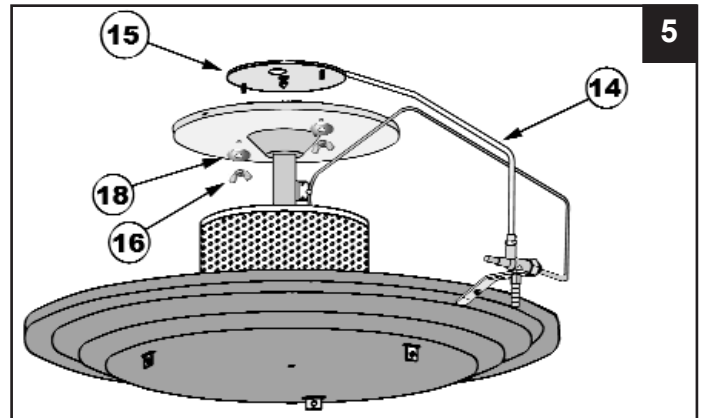
3. Set the **CANOPY (1)** UPSIDE DOWN on the box. Place the **CONE INSULATION (8)** with the large end down in the center of the canopy. Set the **EMITTER** over the **CONE INSULATION**, inserting the leg that is aligned with the holes in the burner pan through the slot aligned with the hole in the outer edge of the canopy.



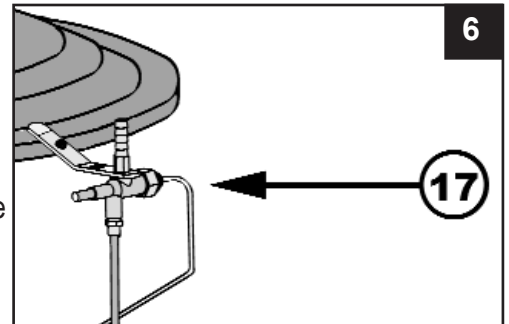
4. Attach the **CONTROL VALVE ASSEMBLY (4)** on the edge of the **CANOPY (canopy top)**, the gas outlet on the valve should be in the "up" position (gas valve down), and secure with one **SCREW (3)** and **STAR NUT (5)**.



5. Attach the **1/4" TUBING (14)** to the **GAS CONTROL VALVE**. Tighten firmly, making sure that the studs on the air intake/ orifice bracket align with the holes in the burner pan- USE TWO WRENCHES TO PREVENT TWISTING OR DAMAGING THE TUBING. Insert the two studs on the **AIR INTAKE/ORIFICE BRACKET** through the holes in the **BURNER PAN**. Use two **WASHERS (18)** and **WING NUTS (16)** to secure bracket to pan.



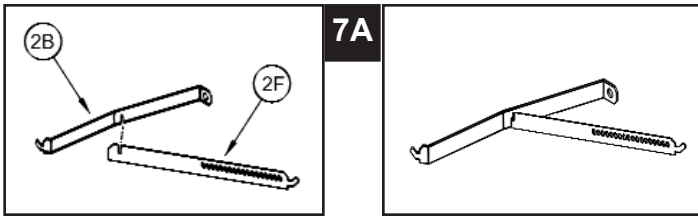
6. Attach the **THERMOCOUPLE (17)** to the **GAS CONTROL VALVE** (Caution: Finger tighten plus quarter turn!) Form the thermocouple along the tubing.



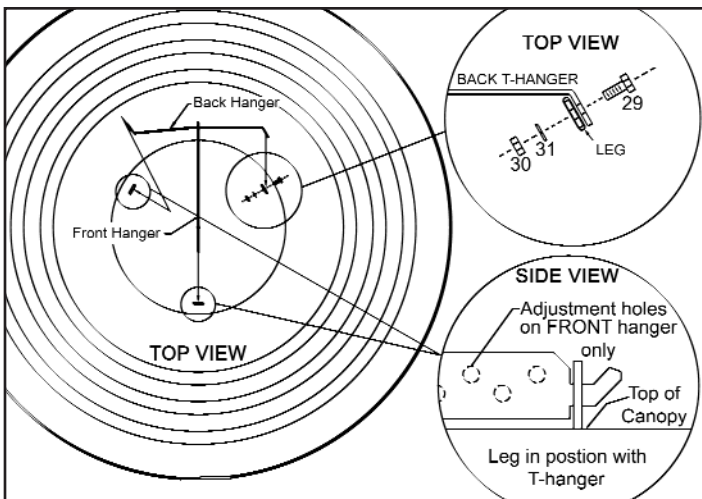
NOTE: Check all Screws & Fittings to make sure they are tight per instructions.

7. "T-Hanger" assembly instructions:

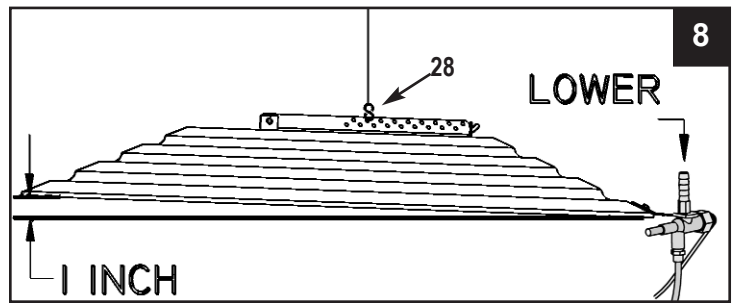
- A. Insert slot in the middle of **BACK T-HANGER (2B)** into the slot in the end of the **FRONT T-HANGER (2F)** (Note: adjustment holes at top)



- B. Insert hook on front T-hanger through top leg of **EMITTER** which is aligned with the control valve. Insert the hook on the right end of the back T-HANGER through right top leg of the **EMITTER**.



- C. Assemble and tighten **BOLT (31)**, **NUT (32)**, and **WASHER (33)** as shown with back T-hanger on outside of Emitter legs.
8. Suspend the brooder: To level the heater, simply support the heater underneath and then move the **S-HOOK (28)** forward or backward. After it is level clamp both ends of the s-hook shut. The brooder should hang with the control assembly tilted slightly downward. Normally the brooder is attached to a winch cable used for raising and lowering. In addition, we strongly recommend that a safety cable or chain be attached to the brooder to prevent the brooder from falling to the litter if the winching cable should happen to break.

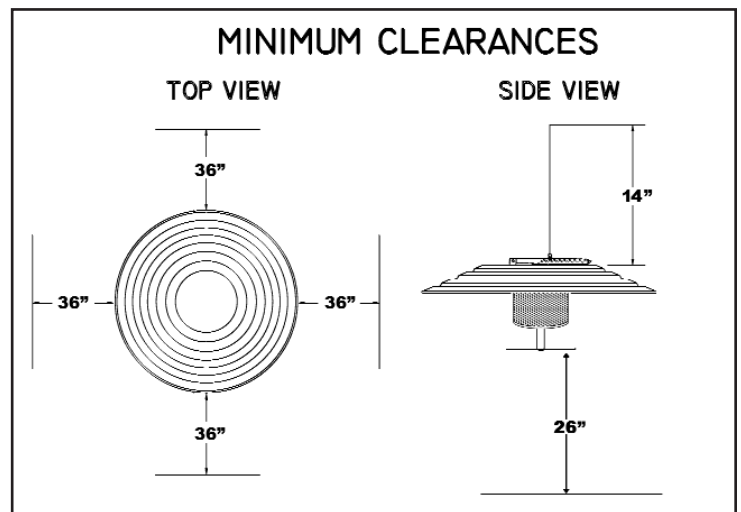


GENERAL INFORMATION

The heater must be located so there is a minimum clearance of 14" above the heater and 36" from the side. Any combustable material must not be adjacent to the heater.

The heater should be hung with a min. of 26" from bottom of the heater to the floor.

Be sure to comply with all local, state, and federal gas codes for your area.



MANIFOLD OPERATION

- A. Install the manifold by connecting the gas supply from the LP tank to the ½" pipe tee located next to the Red regulator.
- B. Connect the piping to the heaters to the ½" pipe tee closest to the gauge. Check all connections for leaks.

TO ADJUST THE MANIFOLD

The supply pressure to the manifold should be 5 psi.

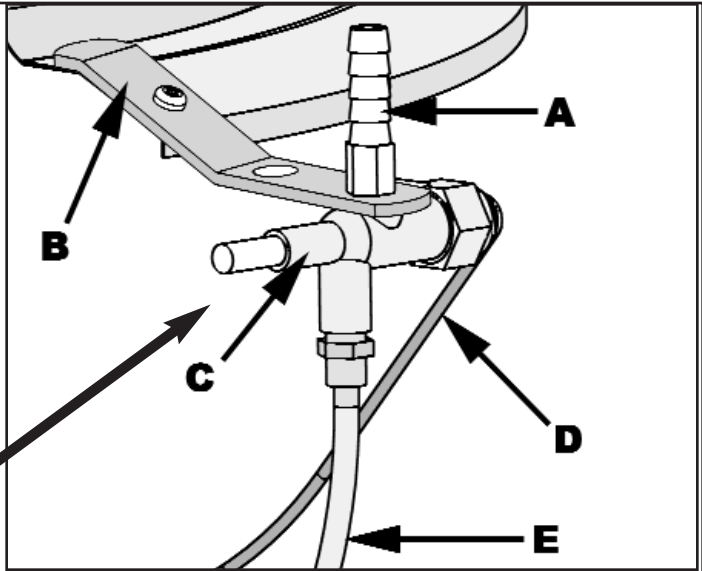
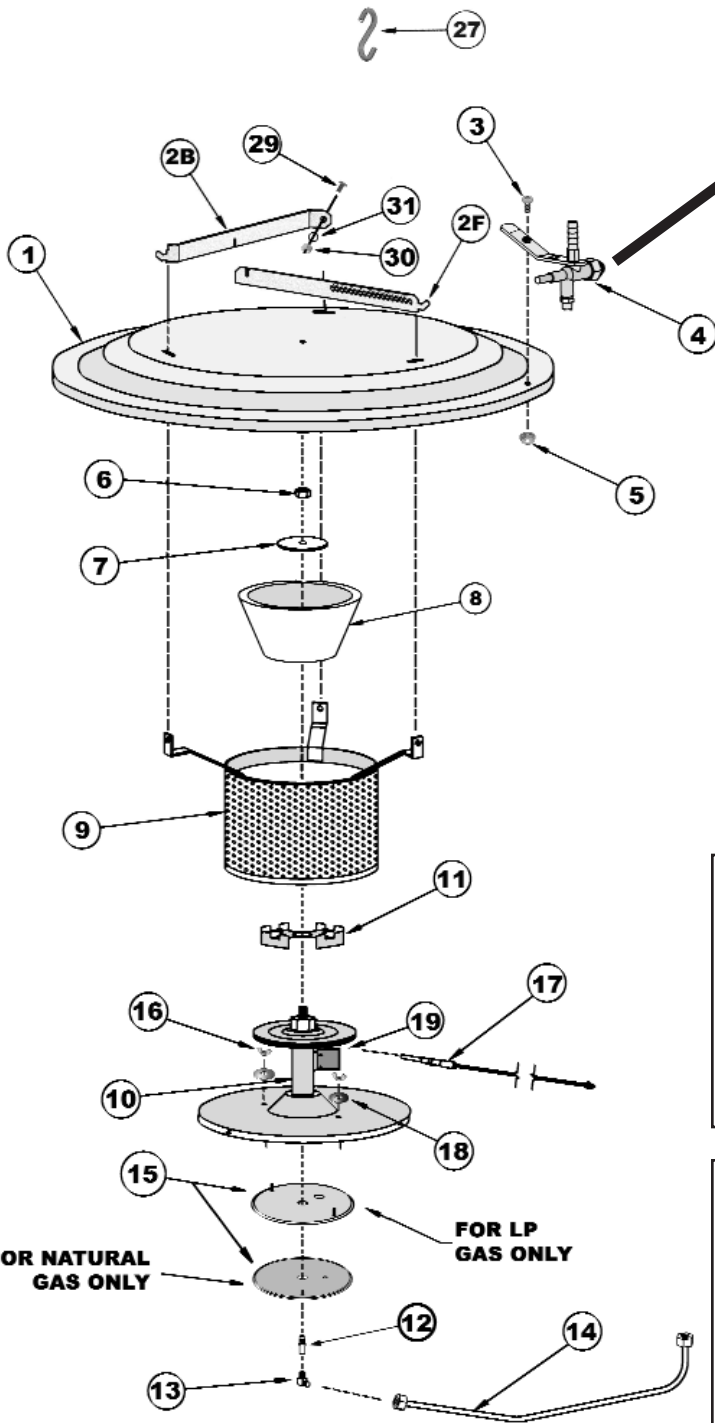
- a. Light all the heaters. Turn on the bottom solenoid, this is the Maximum rate solenoid. Set the pressure on the manifold gauge so that the pressure is 5 psi. Turn off the bottom solenoid.
- b. Turn off the Maximum rate solenoid and turn on the 2nd solenoid up from the bottom of the manifold, this is the Med-Hi solenoid. The pressure should be set so that it is 3.5 psi.
- c. Turn off the Med-HI rate solenoid and turn on the 3rd solenoid up from the bottom of the manifold, this is the Med-Lo solenoid. The pressure should be set so that it is 2 psi.
- d. Turn off the Med-Lo solenoid. Gas will be going through the top section of the manifold. This is the minimum rate burn. Adjust the manifolds gauge pressure so that it is .5 psi (13" water column)

TO SET UP THERMOSTAT/CONTROLLER

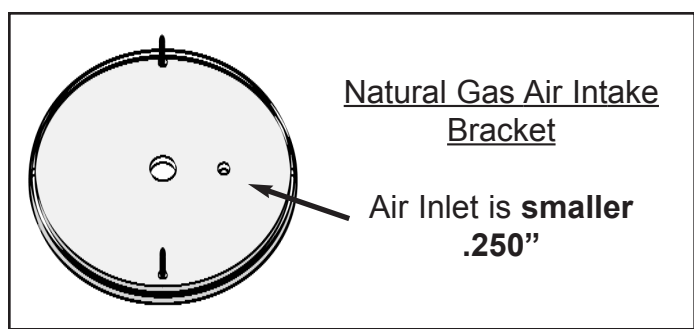
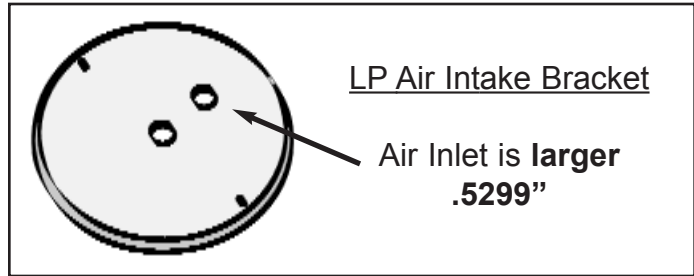
Set the set point on each thermostat progressively lower from Med-Lo to Hi. There should be about .5 to 1 degree difference in the set point of each solenoid.

Example:

Med-Lo Set Point	85
Med-Hi Set Point	84
Hi set point	83



- | | |
|--------------|-------------------------|
| A - 11005195 | Hose Barb 3/8 x 1/8 FP |
| B - 21190493 | Valve Bracket |
| C - 11005245 | Valve S.I.T. SSO Assem. |
| D - 11005193 | Thermocouple |
| E - 21300326 | 1/4" x 20" Tubing |



HIGH PRESSURE BROODER PARTS LIST

1	21002008	Canopy 24 Hp17 Galv Compl	1
2B	21004002	HANGER-T BACK LEG	1
2F	21014002	HANGER-T FRONT LEG	1
3	18003945	Screw 10-24 X 3/8	1
4	31005245	VALVE ASM HP17 SSO	1
5	18000021	Nut 10-24 Star Kep	1
6	11000064	Nut 3/8-16 Stainless	1
7	11000151	Washer Flat 2"	2
8	11000075	Sierra Infrd 21,22 Cone Insul	1
9	31001028	Sierra Infrd 21,22 Emitter Asm	1
10	31001123	Infra Red Welded Burner H21	1
11	21077088	Burner Spacer H-21	1
12	11000203	Orifice No 73 (Clean)	1
13	21000624	Elbow Brass 1/4Mct X 1/8Mpt	1
14	21300326	Tubing Hp17 1/4 x 20"	1
15	31004904	Air/Intk Brkt LP Hp17	1
	31004905	Air Intake Brkt NAT	1
16	13005190	Nut 10-24 Wing	2
17	11005193	Thermocouple 600MM (24")	1
18	13005189	Washer (Fender) 3/16"X1"	2
19	21004507	Bracket HP17 TCOUPLE & SHLD	1
27	11004900	Hook S Large	1
29	11000028	1/4-20 BOLT	1
30	11000187	1/4-20 NUT	1
31	11000338	1/4-20 WASHER	1

LIGHTING INSTRUCTIONS

1. Turn on main gas supply to supply pipe.
2. Turn on High Solenoid Valve.
3. Depress and hold blue button and light the Burner. Allow to burn "45" seconds before releasing.
4. Adjust thermostat to proper setting.

SHUT DOWN INSTRUCTIONS

1. Turn off gas supply.
2. Turn off power to manifold.

MAINTENANCE

Proper care and maintenance of your HIGH PRESSURE Radiant Heater cannot be over emphasized!!

A POORLY MAINTAINED HEATER WILL:

- ⊗ Raise Operating Costs - due to poor combustion
- ⊗ Lower Air Quality
- ⊗ Cause Inconsistent Temperatures
- ⊗ Decrease the Life of the Heater

MAINTENANCE PROGRAM:

- ✓ Daily: Check flames, they should be burning clear and blue; if not, clean as required or and/or check gas pressure.
- ✓ Clean heater after each flock:
- ✓ Inspect for any orifice blockage caused by spider webs in the burner assemblies.
- ⚠ DANGER! Never spray penetrating oil (WD-40) on the control valve. This will cause the loss of high temperature valve grease and cause the valve to leak.
- ⊗ Clean dust and dirt from burner ports with compressed air by removing the wing nuts and washer from the top of the burner pan and lowering the air intake assembly. If an air compressor is not available, turn the heater to a vertical position and tap on the side of the burner brackets with a screwdriver handle, pliers, or any other suitable object, to knock the dust from the unit.
- ⊗ If houses are washed down, care should be taken to prevent moisture from accumulating on control valve and burner assemblies. After wash downs we recommend that you light the heaters to dry up any excess moisture. Avoid getting radiant wet.
- ⊗ For proper combustion it is important that the small holes in the Emitter be clean and unobstructed. The Emitter can be cleaned by inserting a long brass bristle brush between the emitter screen and inner cone.
- ⊗ Clean air intakes with a small brush
- ⊗ Extreme care must be taken not to enlarge or distort the burner orifice. Special burner orifice cleaning kits, which includes the correct size orifice cleaning gauges and brushes, are available for purchase at your dealer.
- ⊗ If heater is disconnected from the gas line, use tape to seal the open connections. This will keep moisture, dust, and insects out and prevent future problems.

WARRANTY

Agile Mfg., Inc., ("Agile"), warrants each new SHENANDOAH® product manufactured by it to be free from defects in material or workmanship for one (1) year from and after the date of initial installation by or for the original purchaser. If such a defect is found by the Manufacturer to exist within the one-year period, the Manufacturer will, at its option, (a) repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement. Labor costs associated with the replacement or repair of the product are not covered by the Manufacturer. The Manufacturer shall not be responsible for the costs of removal or reinstallation of products and shall not be responsible for transportation costs. The purchaser must first contact the seller to resolve product issues covered under this Warranty. If the purchaser is unable to resolve warranty claims directly with the seller, the purchaser should contact the manufacturer as the address listed below.

Conditions and Limitations

1. The product must be installed and operated in accordance with the instruction published by the Manufacturer **or Warranty will be void.**
2. The product must be installed according to all applicable federal, State and local codes or regulations **or Warranty will be void.**
3. Warranty is **void if all components** of the product or system are not original equipment supplied by the Manufacturer.
4. This product must be purchased from and installed by an authorized distributor or certified representative thereof **or the Warranty will be void.**
5. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, of lack of proper maintenance, or from lightning strikes, electrical power surges or interruption of electricity, shall not be considered defects under the Warranty.
6. This Warranty applies only to systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this Warranty.

The Manufacturer shall not be liable for any **Consequential or Special Damage** which any purchaser may suffer or claim to suffer as a result of any defect in the product. **"Consequential"** or **"Special Damages"** as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies. THIS WARRANTY CONSTITUTES THE MANUFACTURER'S ENTIRE AND SOLE WARRANTY AND THE MANUFACTURER EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSES SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Agile Distributors are not authorized to modify or extend the terms and conditions of this Warranty in any manner or to offer or grant any other warranties for Agile products in addition to those terms expressly stated above. An officer of Agile must authorize any exceptions to this Warranty in writing. The Manufacturer reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

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