

The Septic Heater Company

www.septicheater.com

1 (888) 41-SEPTIC

Office: POB 891

Production: 2134 Bardwell DR NW

PH 507-649-0831

Tioga, ND 58852

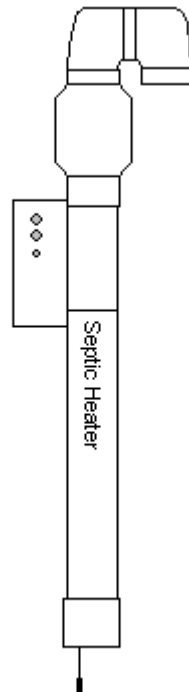
Bemidji, MN 56601

info@septicheater.com

A-200 Septic Heater Owners Manual

SAVE THIS MANUAL

Read rules for safe installation and operation carefully.



Thank you for choosing the Septic Heater. With proper care and maintenance, this heater will provide you years of dependable trouble-free service. Save these instructions for future reference.

Table of Contents

A. IMPORTANT SAFETY INSTRUCTIONS	3
B. WARNING - RISK OF EXPLOSIVE GASES	4
C. HOW THE SEPTIC HEATER WORKS.....	4
<i>Automatic Mode:</i>	4
<i>On Mode:</i>	4
<i>If there is a problem:</i>	4
D. INSTALLATION	5
<i>What you will need:</i>	6
<i>Installation Steps:</i>	6
E. CARE & MAINTENANCE OF YOUR SEPTIC HEATER.....	11
F. SEPTIC SYSTEM BASICS	12
WARRANTY	13



Be sure to send in Registration Card for warranty to be in effect.

A. Important Safety Instructions



- 1) The septic heater is designed for any septic system, provided it can vent properly.
- 2) All traps must have water in them – floor drains, sinks, etc; to prevent gases from entering the home.
- 3) Methane gas is present in your septic system and is flammable. If you ever smell sewer odors, unplug the septic heater and call your onsite professional; you have a ventilation problem.
- 4) Follow all instructions and directions.
- 5) Use of an attachment not recommended by the manufacturer may result in an explosion, fire, or electrical shock to persons.
- 6) To reduce risk of damage to the electrical plug, pull by the plug rather than the cord when disconnecting the Septic Heater.
- 7) Do not disassemble the Septic Heater. DO NOT operate in a horizontal position.
- 8) To reduce the risk of electrical shock, unplug the Septic Heater before attempting cleaning.
- 9) Never place a Septic Heater on a septic system where the air cannot vent out.
- 10) Never place the Septic Heater on a pressurized pipe.
- 11) Never reduce the airflow by placing the Septic Heater such that it blows into pipes less than 2” in diameter.
- 12) Make sure the extension cord will not be driven on, stepped or tripped on, or traversed by anything that may damage it.
- 13) Use only the **recommended** gauge wire within the extension cord.
(See installation step 3).
- 14) Use of improper extension cord may result in risk of fire, electrical shock, or explosion. The pins on your plug should be the same size and shape to match the pins on the Septic Heater plug-in.
- 15) The extension cord must be in good electrical condition.
- 16) Use on a GFI receptacle only to power the Septic Heater.
- 17) Do not operate the Septic Heater with a damaged extension cord.
- 18) The Septic Heater is **NOT** intended to thaw frozen systems. If the pipes are completely blocked, they must be thawed before using the Septic Heater.
- 19) **DO NOT USE A NON-GROUNDED EXTENSION CORD OR POWER SOURCE!**

B. WARNING - RISK OF EXPLOSIVE GASES



Working in the vicinity of a septic system is dangerous. Septic systems generate explosive and corrosive gases during normal operations. For this reason, it is of the utmost importance that each time before using your Septic Heater, you read this manual and follow the instructions.

C. How the Septic Heater works

The Septic Heater is activated by the sensor that hangs out the bottom of the heater. This sensor works in air or water. Do not place the sensor in the liquid of a septic tank. Be careful not to damage this wire or sensor.

Automatic Mode:

With the switch placed to the right, when the tank sensor temperature falls to 38°F, the heater will turn on and heat for 2-4 hours on average. It then shuts itself off until the sensor temperature falls to 38°F again.

- The red light on the exterior of the heater indicates the heat element is active.
- A blinking red light indicates the heater has gone into fault. Place the switch to the center position and note the blinks of the light. Unplug the heater and plug it in again. If it goes into fault again within one hour, contact The Septic Heater Company.

Every 20 minutes, whether heating or not, the fan runs for 4 seconds as a self-check and to purge septic gases out of the heater and keeps the fan from getting iced up.

While the heater is in a heating cycle, the red light may turn off for 1-2 minutes, then back on for 2-3 minutes. This is normal and it means that the heater has reached its optimum heat output temperature, and turns power off to the heat element until the low output air temperature is reached, then the heat element turns on again.

Manual Mode:

When the selector switch is placed to the left of center position, the heater will run, putting out hot air regardless of tank temperature.



If there is a problem:

If the red indicator light is blinking, unplug the Septic Heater, press circuit breaker in (if popped), wait 20 seconds and plug it back in. If the problem persists, contact The Septic Heater Company.

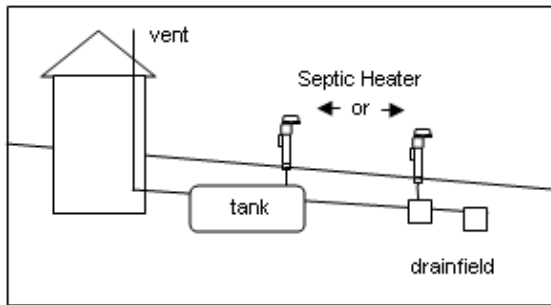
If the heater goes into fault after 1 hour of operation, call the Septic Heater Co.

D. Installation

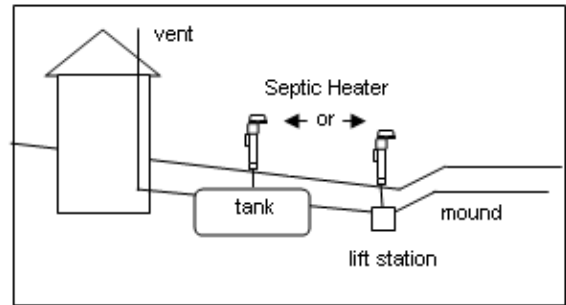
In both gravity and mound septic systems, the Septic Heater is installed above the tank if pipes are freezing between the house and tank or in the tank itself. If it is freezing in the drainfield, the Septic Heater is installed above a drop box in gravity systems and above the lift station in mound systems.

Airflow is critical. The Septic Heater must be placed such that the air can exit the system. In gravity systems with no lift or pump, there is positive airflow and the Septic Heater can be placed above the tank or drop box in the drainfield. In a mound system, though, you would not install the Septic Heater in the drainfield because there is nowhere for the air to vent. Instead you would place it over the lift station so air can vent out of the main vent of the house.

Gravity septic system



Mound septic system



Pipes and Sizes:

The Septic Heater fits onto a 4" SDR35 sewer pipe, which is a thin wall PVC pipe that is most commonly used in sewer applications. The Septic Heater slides onto the male end of the SDR35 pipe.

You may have Schedule 40 PVC riser pipes, which is a thicker wall pipe than SDR 35. If you have this type, you will need an adapter to make the proper fitting.

You could also have 6" riser pipes rather than 4", you will need an adapter to make the proper fitting.

These adapters are standard sizes, all of which can be purchased at your local hardware store.

What you will need:

- Tape measure
- 5/16" wrench, socket, or nut driver
- Small metal container for smoke bomb
- Recommended extension cord

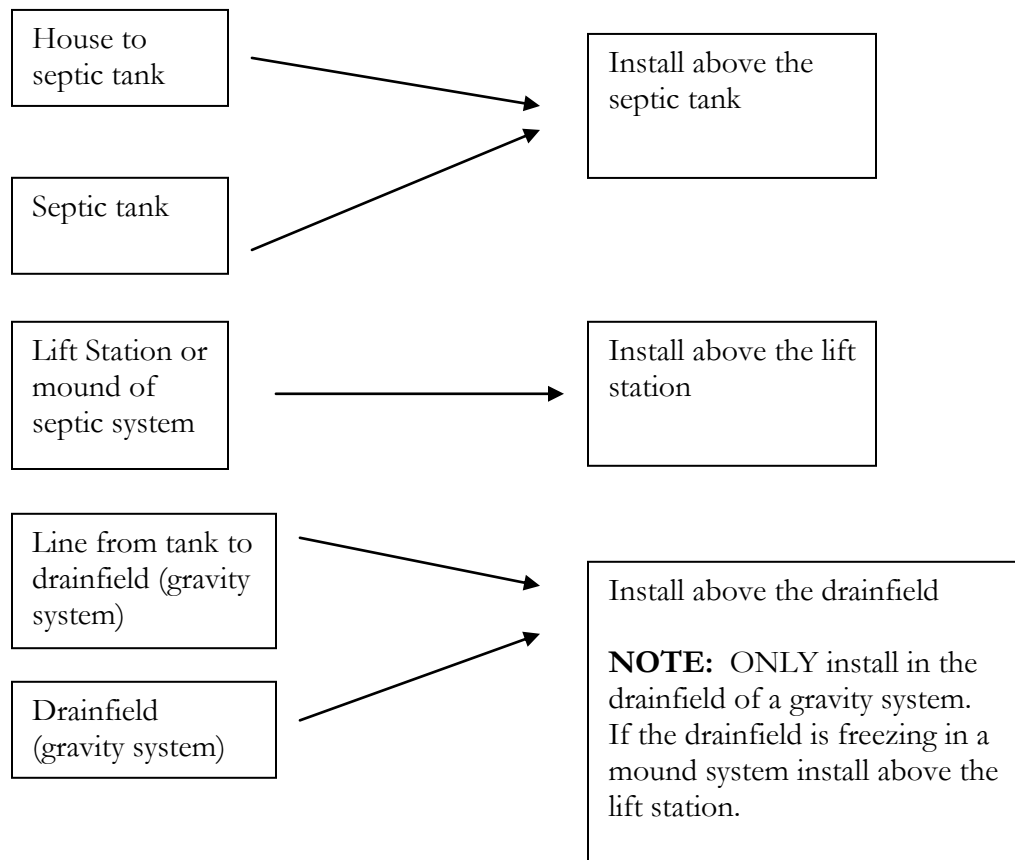
Installation Steps:

- 1) Determine where to install the Septic Heater.

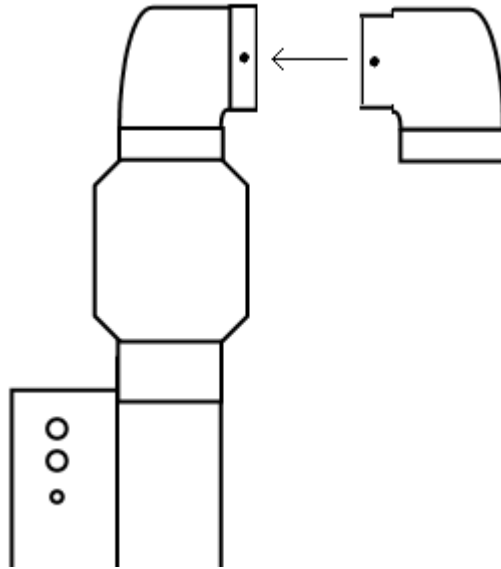
Identify where you will likely have freezing problems or where you have had problems in the past. Place the Septic Heater downstream of that point (see diagram below). You can also refer to section (F) Septic System Basic Layout.

TIP: If you have not had problems in the past, we recommend that the Septic Heater be placed over the septic tank.

Where is your septic system likely to freeze?



- 2) Attach the air intake.



Slide together and insert screw (provided) into pre-drilled holes.

- 3) Run the heavy-duty outdoor extension cord to the desired location. Do not plug the Septic Heater into the extension cord yet.



Use only GROUNDED outdoor extension cords:

- If the distance from the outlet to the Septic Heater is less than 100 feet, use a 14-gauge wire power cord.
- If the distance from the outlet to the Septic Heater is over 100 feet, use a 12-gauge wire power cord.

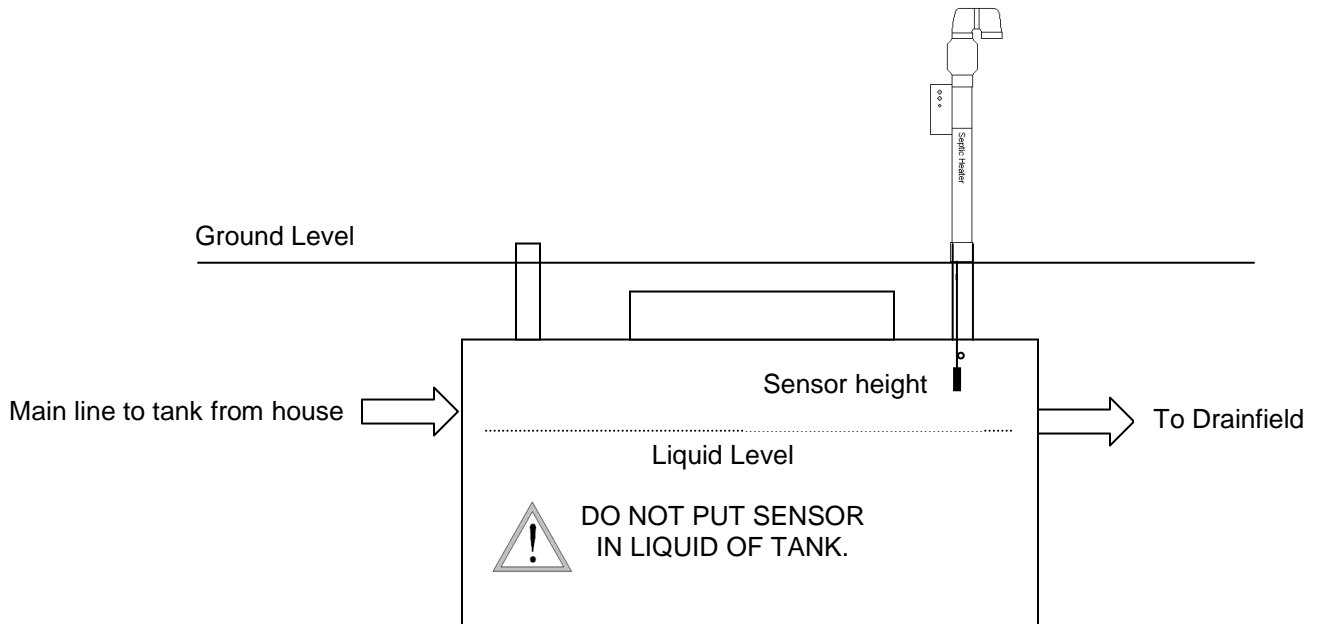
- 4) Adjust the sensor for proper length.

For Tank Installations:

The sensor must hang in the air and not the liquid of the septic tank!

- a) Remove the cap on the riser pipe.
- b) Measure down to the top of the liquid from the top of the riser pipe, then subtract 12 inches. This will be the length of the sensor cord from the end of the Septic Heater to the end of the sensor.
- c) Coil and secure any excess wire with the zip-tie (provided) on the sensor wire to hold the correct sensor height. The sensor will then be 8" above the liquid level when the Septic Heater is installed. *The sensor should not hang into the liquid of the septic tank. DO NOT kink or cut the sensor wire.*
- d) If the sensor wire is not long enough, let the sensor wire hang at full length.

Tank Installation Diagram

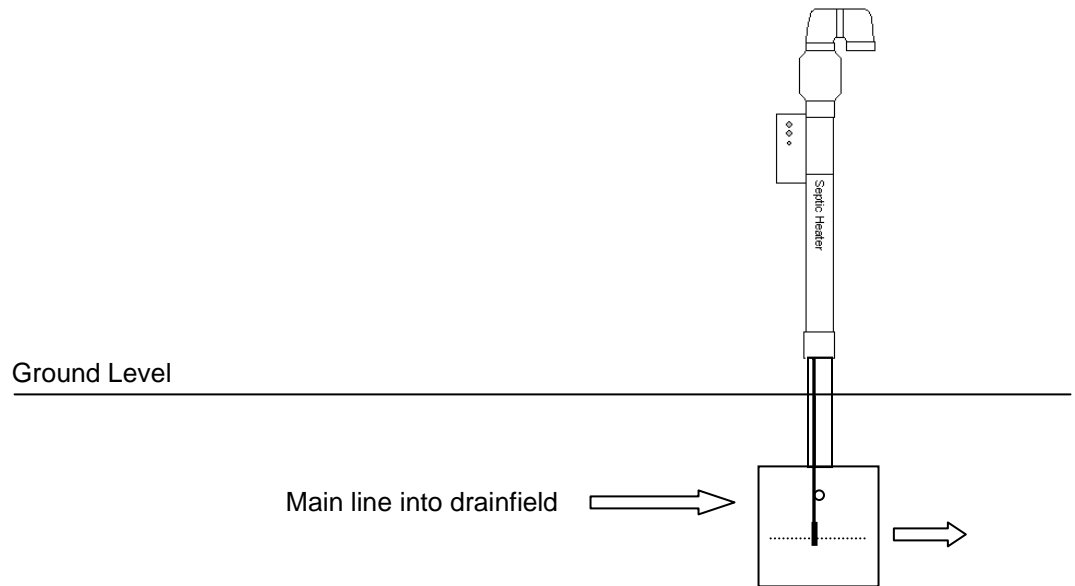


4) (continued)

For Drainfield Installations:

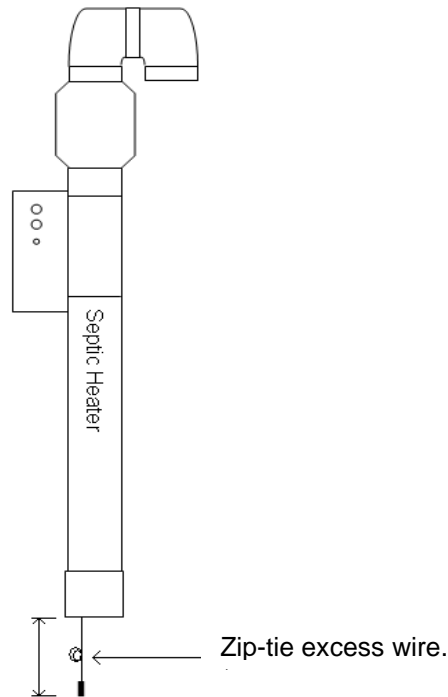
- a) Remove the cap on the riser pipe.
- b) Measure down to the top of the liquid in the drop box or distribution box from the top of the riser pipe, then subtract 4 inches. This will be the length of the sensor cord from the end of the Septic Heater to the end of the sensor. (The sensor should hang in the air or slightly in the liquid in the drop box or distribution box.)
- c) Coil and secure any excess wire with the zip-tie (provided) on the sensor wire to hold the correct sensor height. *DO NOT kink or cut the sensor wire.*

Drainfield Installation Diagram



The sensor should be in the air right above the water surface, or slightly in the liquid of the drop box or distribution box.

4) (continued)



- 5) Put the sensor down the riser pipe, making sure it does not catch on the sides of the pipe and/or gets damaged.
- 6) Slide the Septic Heater onto the riser pipe. There should be 4" of the riser pipe exposed before you put the Septic Heater on the pipe so that it fits securely. (Most riser pipes are 4" in diameter. If yours is wider, you can use an adapter to reduce your pipe to 4". Then the Septic Heater will fit properly.)
- 7) Plug the extension cord in at the GFI Receptacle, then plug the Septic Heater into the extension cord.
- 8) Place heater in manual mode.
- 9) Lighting the Smoke Bomb
 - a. Put cartridge in a bowl, or something that won't burn. Light with or lighter or blow torch. Hold under air intake of heater (make sure fan is running).
 - b. Watch to see where smoke comes out of septic system / roof vent(s).
 - c. Do not breath smoke



NOTE: If you do not detect airflow, call your plumber to make sure none of your pipes are blocked.

- 10) **Complete and return** the Warranty Registration Card to the manufacturer for warranty to be in effect. It is located at the back of this manual.

E. Care & Maintenance of your Septic Heater

REMOVE the Septic Heater from the septic system when the chance of freezing has subsided. During the summer months, bugs accumulate in the septic system, which may nest within the Septic Heater if it is not removed.

Store in a clean, cool, dry place during non-use periods.

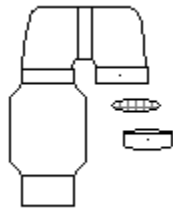
Follow the installation procedure when you place the Septic Heater in service for the following seasons.

While the unit is in storage, seal the bottom of the pipe to prevent bugs and or debris from entering the Septic Heater.

Always use caution when handling the Septic Heater so that the sensor wire does not get damaged or stressed.

It is very important that the air intake screen remains free of any and all obstructions. Inspect the screen periodically to verify that there are no obstructions.

Air Intake



Disassembly instructions for inspection and Cleaning

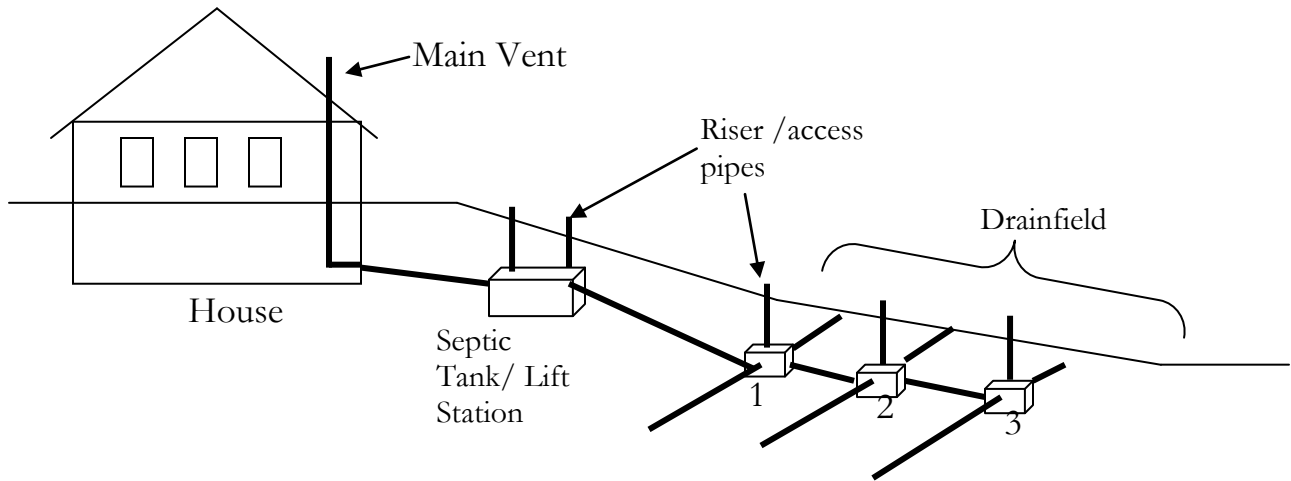
- 1) Remove Set Screw
- 2) Remove Support Ring
- 3) Remove Air Screen

Re-assembly

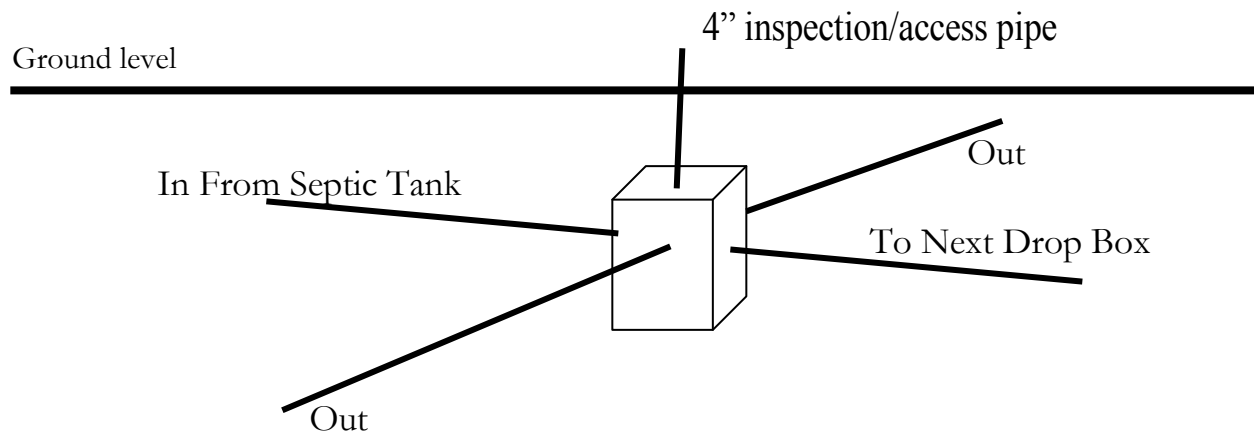
- 1) Insert Air Screen with plastic ring down
- 2) Insert Support Ring, align the hole
- 3) Re-install Set Screw

F. Septic System Basics

Typical septic system layout:



Drop box / distribution box detail:



WARRANTY

Norgaard Enterprises, Inc., dba The Septic Heater Company (TSHC) products are warranted against defects in workmanship, material, design, labeling, and packaging. No other warranty, expressed or implied, written or oral, applies.

Warranty Period:

This warranty is effective for thirty-six months from the date the product is first placed in service. Product Registration Cards must be completed upon installation, and returned to TSHC.

Conditions:

TSHC products must be installed, operated and maintained in accordance with TSHC's instructions. TSHC is not liable for damage or unsatisfactory performance of the product resulting from accident, negligence, alteration, unauthorized repair, improper application or installation of the product or corrosion. TSHC is NOT liable for any incidental or consequential damages. Claims against carriers for damage in transit must be filed by the purchaser with the carrier. Removal and re-installation of the product, and shipment of the unit for repair or inspection shall be at the purchaser's risk and expense.

Remedy:

The Septic Heater in question should be returned, freight prepaid, to:

The Septic Heater Company
East Door
2134 Bardwell Dr NW
Bemidji, MN 56601

The Septic Heater will be repaired or replaced at TSHC's discretion.

FAULT CODES

If the heater goes into a fault mode indicated by a steady blinking red light, place the switch in the center (off) position. After a short amount of time, the heater will start blinking a pattern. It starts with a 2 second steady on, then count the blinks. For example, the heater might start with the 2 second blink, then do 3 blinks, followed by 2 blinks, then starts over with a steady 2 second blink and repeats. This fault would be a 32, or a hard cutout fault.

- 11 DTC1 INVALID T/C
- 12 DTC1 TANK T/C OPEN
- 13 DTC1 WRONG T/C
- 14 DTC1 NO VALID READING
- 15 DTC1 MEMORY FAILURE
- 21 DTC2 INVALID T/C
- 22 DTC2 TANK T/C OPEN
- 23 DTC2 WRONG T/C
- 24 DTC2 NO VALID READING
- 25 DTC2 MEMORY FAILURE
- 31 DISCHARGE HIGH ALARM
- 32 HARD CUTOUT FAULT
- 33 NO HEAT COLD START (DISABLED)
- 34 TANK TEMP LOW ALARM
- 35 DISCHARGE LOW ALARM
- 41 DTC1 COMMUNICATION FAULT
- 42 DTC2 COMMUNICATION FAULT
- 51 DTC 1 EXTERNALLY DETECTED TANK LOW
- 52 DTC2 EXTERNALLY DETECTED DISCHARGE LOW
- 53 DTC2 EXTERNALLY DETECTED DISCHARGE HIGH