



SludgeHammer®

nature called. we answered.



commercial
& industrial



communities



marine



residential



agriculture

Model S-400/600/800/1000

Certified to NSF/ANSI Standard #40, Class 1

Installer's Maintenance Procedures

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SLUDGEHAMMER® INSTALLER'S MAINTENANCE PROCEDURES

After installation of a Sludgehammer® unit in a single family residence the certified installer shall require that the homeowner enter into a maintenance contract.

The maintenance provider shall provide the following services to the homeowner:

1. Twice a year, the maintenance provider will schedule an inspection. During this inspection, the maintenance provider will:
 - A. Open air pump basin and check that air pump is operating.
 - B. Shut off air pump and wait for alarm to sound.
 - C. Turn air back on and open the lid on the treatment tank.
 - D. Observe the vigor and pattern of the bubble plume above the Sludgehammer® unit. Bubble flow should be obvious and the liquid should be passing up through the central openings in the Matrix "Stack" that is attached above the unit.
 - E. Observe the quality of water in the tank. The liquid should be clear without any objectionable odors. No blackness in the liquid should be evident.
 - F. Use probe or a Sludge Judge to determine if there is sludge layer on the bottom of the tank. If a sludge layer of greater than 12" thick is evident, then the tank should be pumped.
 - G. Evidence of a floating scum layer should be noted and if a scum layer of greater thickness than 12" is seen, the tank should be pumped.
 - H. Remove the bacterial applicator from the Sludgehammer® unit. Check for a bacterial coating on the bag and the stick above the bag. It should be greater than 1/16th of an inch in thickness and the color should be a medium to dark grey-brown. If the bag or stick has a black color, the Sludgehammer® unit should be removed and cleaned with a hose.

- I. To clean the Sludgehammer®, a union should be installed in the horizontal air line entering the treatment tank riser so the line can be detached. The unit should be drawn up and out of the chamber using the attached rope. Allow the unit to drain and tip over to remove the bottom. The bottom is simply twisted until it can be slid off. Remove the bottom and keep the unit over the open riser of the treatment tank. Use a hose to vigorously wash out any sludge in the unit, particularly between the layers of the cusped fixed bacterial film matrix material wrapped around the central 4" pipe in the Sludgehammer®.
- J. Reattach the bottom by sliding it over the bottom bolts and twisting to secure. Lower the Sludgehammer® back into the tank until it is returned to its original location. Reattach the air line and tighten the union.
- K. After either cleaning or simply inspecting the bacterial applicator, clip the zip ties holding the bacterial packet to the applicator. Attach a new packet using the enclosed zip ties. The old bacterial packet can be inserted into the bag the new packet came in for disposal.
- L. Reinsert the bacterial applicator into the Sludgehammer® unit as before.
- M. The system is expected to produce effluent with TSS of less than 30 mg/l and cBOD of less than 25 mg/l. For confirmation, laboratory samples should be taken as a "grab" sample from the outlet chamber. Attach a 1 liter sample bottle to a dowel with tape. Remove the cap and lower the bottle into the liquid so it quickly passes through the surface. Let bottle fill from a depth of approximately 6-12" below the surface so any surface scum does not enter. Retrieve bottle when full, replace cap and rinse outside of bottle. Take to laboratory for BOD/TSS analysis.

Should the alarm be activated at any time the homeowner should contact the maintenance provider to schedule a repair inspection. Where the Sludgehammer® is used as pre-treatment for any active disposal technology, such as a sub-surface drip system, the homeowner should contact the maintenance provider as quickly as possible in order to re-establish treatment quality and protect the disposal system from degradation.

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The likeliest cause for the alarm to sound is breakage of the diaphragm in the air pump. The maintenance provider should always have a spare pump with him when responding to any such call. The replacement pump can be substituted during the call and replacement of the diaphragm can be carried out back at the shop for easier installation.

Medical Notification

In the event the homeowner receives drug therapy, either with antibiotics or with chemotherapeutic agents, particularly anti-cancer drugs, the homeowner should contact the maintenance provider. If the treatment course is limited in duration, the maintenance provider should schedule an inspection approximately 1-2 weeks after the end of the treatment period to check the health of the bacteria in the system.

Where a homeowner is entering a prolonged or perpetual treatment regime, the maintenance provider should recommend a quarterly inspection. If it is impossible to maintain the health of the bacteria in the system due to chemotherapy, it may be necessary to install a bacterial inoculator to continuously inoculate with viable bacteria. SludgeHammer® Group can provide such a unit.