

KNOW THE FACTS!

HOME AERATION UNIT - CAVITETTE

Illustration of your Unit

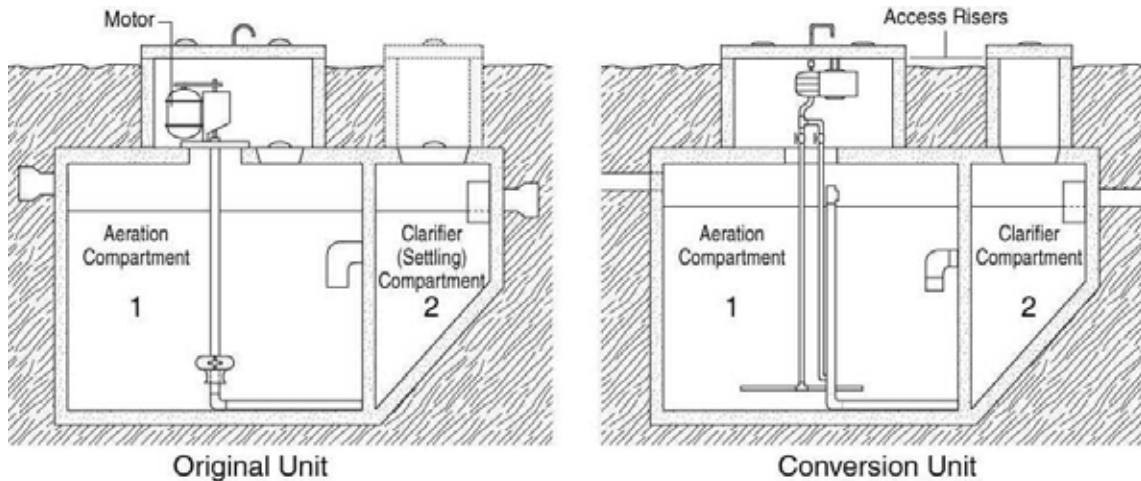
You currently live in an unsewered area of Hamilton County. The waste from your house is treated by a home aeration unit. These units come in many shapes and sizes. They are sometimes referred to as “cavitettes.” Cavitette is the brand name of one aeration unit used in our county. The other brands used are: Coate Aer, Jet, Multi-Flo, Norweco, and Oldham. Although aeration units have different brand names, the principle of operation is basically the same; air injected into sewage provides agitation and oxygen which allows bacteria to reduce organic waste to carbon dioxide and water.

Treatment Process

Cavitette units are manufactured to produce an effluent that will not meet current water quality standards. However, a properly operating unit will provide a clear effluent. The following process is used.

- Primary - (Pre-Treatment/Settling) Cavitette units do not provide for settling in the treatment process.
- Secondary (Aeration) - Raw sewage from your home first flows to this chamber. (See #1) Injected air provides agitation and oxygen to aerobic bacteria which reduce organic matter in wastewater.
- Clarification - The second chamber (#2) has no agitation so suspended solids remaining in the aerated sewage can settle. This chamber is angled so solids return to the aeration chamber for further treatment.

Tertiary (Filtration/Disinfection) - Cavitette units do not provide for filtration in the treatment process. A separate chlorinator for disinfection may be added to some units.



HAMILTON COUNTY
PUBLIC HEALTH

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CAVITETTE (cont.)

Care of your Unit

Your Cavitette may be a 750 or 1500 gallon per day treatment plant.

Note: Some aeration units are installed very deep below the surface of the ground. Maintenance to the units poses special safety problems and should be performed by an experienced contractor. If you meet the preceding criteria or are uncomfortable with the following procedures, contact a maintenance company registered and bonded with the Health District.

Lids - Lids must be accessible and extend four to six inches above grade. Check lids for cracks that allow surface water to enter the system or prevent Health District personnel from performing inspections. Lids that cannot be moved without cracking or falling apart must be replaced.

Aeration Tank - Remove lid from the aeration riser and check the following:

- Electrical service wire-Replace if wire is frayed or black residue is present.
- Air supply line-Line should be securely connected to the motor/blower and the diffuser bar.
- Belt/Coupler-Belt should not be cracked or broken.
- Motor/Blower-If the motor/blower is not running, touch carefully checking for warmth. The motor should be replaced/repared if cold.
- Remove porthole lid inside the aeration riser to view the aeration process.
- Air bubbles-Turbulence and air bubbles in the wastewater indicate aeration is taking place.
- Replace all lids.

Clarifier - Remove lid from clarifier riser. If no riser is present, one needs to be installed. Liquid below should be clear, not cloudy or grey. If there is an accumulation of floating material, it should be skimmed and discarded. If a scum layer is more than 6 inches thick the compartment should be pumped. Make sure baffle is in place and not deteriorated.

Discharge Point - Check the discharge point. If discharge effluent is not clear, or black/grey matter is deposited at the discharge point, call a service contractor. Aeration unit discharge points are not appropriate play areas for children even when systems are operating properly.

Managing your Unit

Sewage tank pumpers must be registered with the Health District. The principle purpose of tank pumping is to remove sludge. You may want to be present at the time of pumping to insure all sludge and wastewater is removed. Contracted repairs must be performed by registered professionals. To receive a list of registered pumpers and contractors call the Health District at (513) 946-7862.

For more information, call the Water Quality Division at 513.946.7862 or visit www.hamiltoncountyhealth.org.



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