



"Guardians of Water Quality®"
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White Knight MIG™ Maintenance Guide & Recommendations

Every onsite wastewater treatment system, be it a simple septic system or the more advanced treatment technologies available, need routine periodic maintenance to operate properly for the protection of public health and the environment.

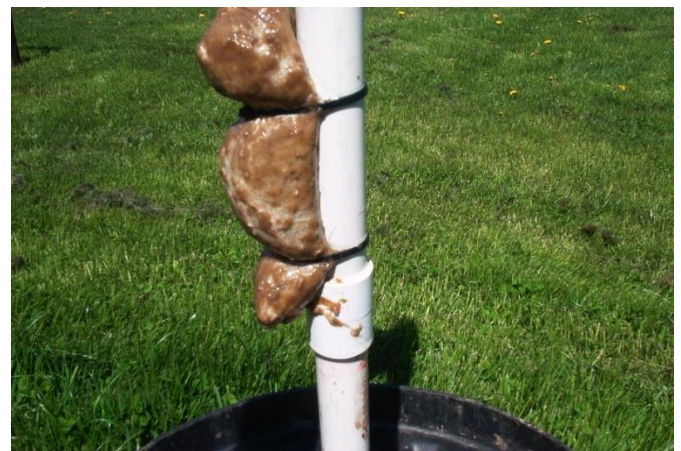
The following White Knight Microbial Inoculator Generator™ Maintenance Guide & Recommendations, in addition to the accompanying Simple Sample Service Contract and White Knight MIG™ Service Visit Report Form are being provided to assist service providers with the successful accomplishment of this task.

1) Routine Residential Service is conducted approximately every 6 months through a maintenance contract with a qualified provider. Commercial / Institutional system requirements will vary and must be tailored for each specific application however basic service procedures remain the same. Approximately two weeks following the White Knight MIG™ installation a follow up visit must be conducted by the installer and re-inoculation performed. The second IOS-500™ inoculant packet that was shipped with the White Knight MIG™ is used for this purpose.



Following installation, routine service must be conducted at the scheduled intervals with re-inoculation occurring annually.

2) Upon removal of the wand the packet should exhibit brownish colored biofilm. This biofilm may also form on other system components. The bubble pattern should be robust and rolling, as it was when the unit was first activated.



3) Wearing proper personal protection equipment, remove the old inoculant packet from the wand, open the packet and empty its contents back into the tank. Do not throw the used inoculant sack back into the tank, place the sack and the removed zip ties into empty the plastic bag that the replacement packet came in a dispose of properly. Affix new inoculant packet to the wand and reinsert the wand into the White Knight MIG™ tower.

4) Effluent removed from the flow stream of the White Knight MIG™ and placed into a clear container should be translucent and light in color with an appearance similar to that of "Lemon Aid" with no offensive odor.



5) As part of each service visit a 1/2" diameter pole or ridged plastic tube with sharp edges removed should be inserted down through the media column of the tower and the diffuser membrane gently bumped several times while in operation. Biofilm sometimes form on the membrane, which could reduce fine bubble production if allowed to build up. "Bumping" the diffuser breaks free any biofilm.



6) As an efficient enhanced biological treatment process the White Knight MIG™ rapidly digests organic solids within the tank however any visible inorganic materials such as feminine hygiene products, wipes, etc. must be removed and disposed of properly in order to assure proper performance.

7) The effluent filter must also be checked. It should appear relatively free of undigested organic materials and will typically have light brownish biofilm on it. Inorganic materials should be removed and disposed of properly. Do not remove the beneficial biofilm.



8) The tank must also be checked for the accumulation of settled solids as part of the routine service procedure. Due to the aggressive nature of the White Knight MIG™ biology the frequency of pump out of accumulated solids is significantly less than that of a common septic tank. Complete pump out of the tank should be performed when settled solids approach 18" in depth.

9) The air pump's air filter must be removed and cleaned annually unless unusual dust conditions exist. The foam filter is easily cleaned by washing in a mild soap and water solution, rinsed and allowed to dry. Cleaning and rinse water should be disposed of at the inlet side of the tank.



10) The Absorption System should be inspected for sign of any breakout and its condition duly noted.



11) If present, Distribution Box Riser(s) or Observation Ports should be opened and the depth of any liquid within them Box recorded. Observe personal protection procedures and clean the measuring instruments with a disinfectant immediately following use.

12) Complete the Service Visit Report. Leave a copy with the client and file appropriately. Alert client to any unusual or operator caused issues discovered such as non-biodegradables being flushed, the need to coordinate a pump out of accumulated settled solids at next service interval, etc.

