



# SINGULAIR GREEN® BIO-KINETIC® WASTEWATER TREATMENT SYSTEM SINGULAIR® AERATOR INSTALLATION

Installation of the aerator and Bio-Kinetic system should take place when the Singulair Green system is ready for start-up. Refer to the Bio-Kinetic System Installation instructions for additional details regarding the installation of the Bio-Kinetic system. Your delivery truck driver should make arrangements for equipment installation to occur after the home is occupied and the sanitary sewer is in use. Review your Singulair Green tank setting records weekly to insure that you do not have equipment installations that are overdue. If you suspect that adequate time has passed for system start-up and you have not yet heard from the owners, contact them to schedule equipment installation.

## PRE-INSTALLATION CHECKLIST

The installer should have accurate directions to the facility and a list of service inspections due at other installations in the vicinity.

The service vehicle should carry the Singulair Tool Kaddy fully stocked with tools, spare parts and test equipment for use during installation.

The installer should have the Singulair Green Installation Manual.

Someone should be present at the location to allow installer access to the control center and electrical service panel.

The main electrical service panel wiring must be complete so the aerator may be started-up and tested.

All chambers of the Singulair Green tankage should be free of debris.

The installer must have the proper model aerator for the installation.

The serial number on the aerator must match the service and warranty record card.

## AERATOR START-UP PROCEDURE

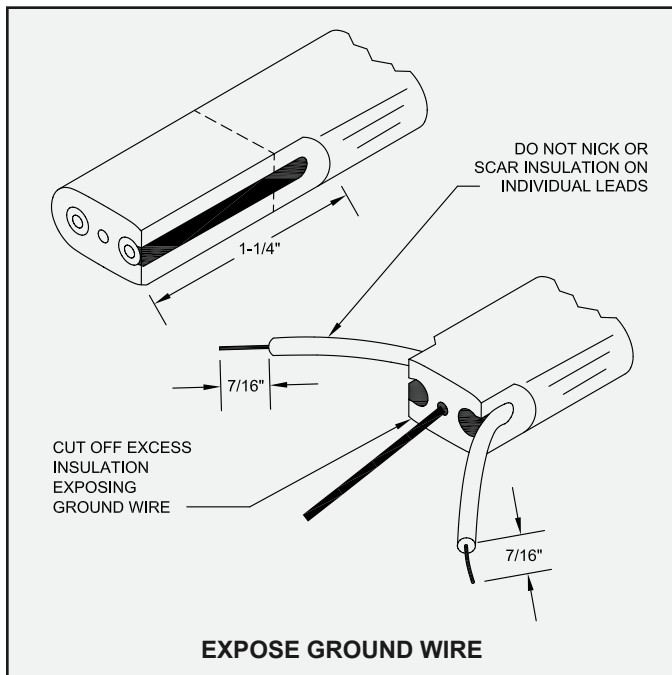
When you arrive on site, introduce yourself to the owner and ask to see the main electrical service panel and Service Pro control center. Be certain the circuit for the Singulair Green system in the main electrical service panel is de-energized and that the selector switch in the Service Pro control center is in the OFF position. Explain to the owner that you will be installing the aerator into the aeration chamber of the tank and you will need access to the main electrical service panel for system start-up after the aerator has been installed. Carry the aerator in its shipping carton to the tank site. Place the Singulair Tool Kaddy nearby for easy access to tools and test equipment. Remove the vented cover from the aerator mounting riser. Carefully remove the aspirator shaft from the shipping carton. Do not bump or bend the aspirator shaft. Lay the shaft on the vented cover. Grip the outside bottom of the shipping carton with your feet and lift the aerator to remove it. Lay the aerator on its side with the brackets resting on the vented cover near the aerator mounting riser. Uncoil the underground electrical service cable from inside the aerator mounting riser and extend it out of the riser. Test the exposed leads with the electrical multi-meter from the Tool Kaddy before proceeding. The circuit should not be energized and voltage should not be evident when the leads are tested with the multi-meter.

## WIRING THE ELECTRICAL CONNECTOR

The moisture resistant electrical connector must be properly wired to insure system operation and protect components. Carefully follow these steps for wiring:

1. Uncouple the two halves of the electrical connector on the Singulair aerator. Unscrew the three captive stainless steel screws from the face of the female half of the assembly. They will stay in the body of the receptacle. Lift out the rigid internal receptacle body.
2. Unscrew the compression nut on the strain relief connector assembly at the small end of the female half of the connector. Do not misplace the compression ring. Insert the electrical service cable through the compression nut, compression ring and neoprene grommet, which is contained in the molded plastic sleeve of the female connector.
3. Strip the outer insulation back 1 1/4" on the underground electrical service cable and expose the three individual leads. Use extreme care to be sure the insulation jackets on the individual black and white leads are not scarred or damaged while stripping the outer jacket. Check carefully. If even slight damage is evident, cut the end of the cable just below your work and begin again.
4. Strip 1/16" from the ends of the black and white leads.

## AERATOR INSTALLATION (Cont.)



must not be bumped or allowed to contact anything except the aeration tank liquid.

1. With the Singulair aerator lying on its side and the brackets propped up on the vented cover, rotate the foam restrictor until the stainless steel set screws in the intermediate shaft are facing up.
2. Loosen the two set screws that are located closest to the foam restrictor.
3. Examine the upper end of the aspirator shaft and locate the alignment mark on the aspirator shaft so that the alignment mark on the intermediate shaft meets the corresponding mark on the intermediate shaft. Be sure both set screws have been loosened before inserting the aspirator shaft. The aspirator shaft must be fully inserted to the depth of the stop shoulder machined into the aspirator shaft. Use a tee-handle allen wrench to tighten only. Overtightening may dish the side of the aspirator shaft and compromise the straightness tolerance.

### INSTALLATION IN THE MOUNTING RISER

5. Insert the black lead end into the hole adjacent to the brass-colored screw and tighten the screw securely.
6. Insert the white lead end into the hole adjacent to the silver-colored screw and tighten the screw securely.
7. Insert the bare copper ground lead into the hole adjacent to the green screw and tighten screw securely.
8. Inspect your work to see that no two uninsulated leads are in contact with each other and that all screws are tight. Also be sure the wire insulation is not captured in the terminal. All power cable leads must be connected to the correct terminals in the female receptacle for proper aerator operation. The back of the insert body is clear, making it easy to verify that each wire is in place before tightening the terminal screws. Improper wiring or electrical hook-up will void the warranty.
9. Locate the insert key above the grounding pole on the side of the rigid receptacle body and align it with the keyway molded on the inside of the rubber receptacle sleeve. Grasp the connector and insert the receptacle body fully into the sleeve.
10. Engage the three captive stainless steel screws on the face of the receptacle body and tighten them.
11. Press the neoprene grommet onto the small end of the female half of the electrical connector. Tighten the compression nut and clear plastic compression ring against the grommet. The compression nut achieves maximum torque by hand-tightening. Do not over-tighten the compression nut. **NOTE:** Any time the female connector is not in use, secure the closure cap in the end of the receptacle.

1. Lower the aerator into the aerator mounting riser carefully to avoid any contact between the aspirator shaft, aspirator tip and tank side walls.
2. Make sure that the weight of the aerator is evenly distributed on all four mounting brackets and that the brackets are seated in the four grooves on the top of the aerator mounting riser.
3. Arrange the underground power cable in the mounting riser so that it does not touch or come into contact with the side of the Singulair aerator.
4. Make sure the blades on the male half of the electrical connector are clean and dry. Plug the two halves of the watertight electrical connector together making sure the multiple lip seal is securely engaged. Arrange the aerator power cord, electrical connector and underground electrical cable around the aerator, and secure them into the mounting clips attached to the aerator upper brackets. Before replacing the aerator mounting riser lid, make sure these electrical connections are not resting against the top of the aerator. **DANGER: Make sure the system access cover is in good condition and securely installed on the mounting riser. Never allow access risers to be left uncovered or partially covered. Failure to secure access covers and safety nets could result in bodily injury, illness or death. Riser safety nets are available from Norweco for concrete or plastic risers.**

### ASPIRATOR SHAFT INSTALLATION

Each Singulair aerator is manufactured and tested to a critical straightness tolerance from the aerator motor to the aspirator. Remember that the operating life of the aerator often depends on the straightness of the aspirator shaft. It

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