

## **AEOLIAN LANDSCAPE II** **by Ned Kahn**

### MAINTENANCE INSTRUCTIONS

#### GENERAL INFORMATION:

Aeolian Landscape consists of a glass covered tank containing a fine powder (glass blasting beads) and a fan to blow the powder around, creating a desert type landscape.

The circuit breaker switch is located underneath the casing, and about 12" to the right of the direction control knob. It can be toggled with the fingertips, without lifting the casing.

#### General Cleaning:

The glass may be cleaned with glass cleaner. The anodized surface of the exhibit may be cleaned with a general purpose cleaner. The casing may be touched up with alcohol base, black shoe dye. Be sure to wipe off any residual dye with a soft cloth after the dye has fully dried. The Plexiglas graphic panel should be cleaned with a plexi cleaner and a soft wipe that will not leave scratches, (we suggest Wype-All™).

#### Removing the glass:

The interior of the exhibit is accessed by lifting the glass up with a vacuum grip specifically for handling glass, and rated for at least 70 Lbs. A weather strip seals the glass to the tank. Lift the glass straight up so as not to tear the seal. Wear a dust mask to avoid breathing the fine glass dust particles.

#### Changing the Bulb:

The light bulb is accessed by lifting the glass, using a vacuum grip. Lift as straight up as possible to avoid damaging the gasket. The PAR30 bulb screws into a socket mounted on the side of the tank. Before loosening the bulb, brush off the sand from the old bulb with a clean paint brush that wont shed into the white sand. Replace the bulb with a new unit, checking that the bulb screws into the socket without a gritty feel. If sand seems to be in the socket, remove the bulb, brush out the socket and bulb base, then try inserting it again. The glass fits close into the recess without much play, so be careful when re-installing it. Never push down on the glass to make it drop in, lift it back up gently, check for debris in the recess and try setting it down again.

### Adjusting the belt tension:

Raise the exhibit up off the floor enough to remove the bottom panel. The smaller pulley is an adjustable pitch pulley, used to tighten the belt. The belt tension should allow the handle to slip if too much force is used.

### Removing the fan:

To remove the fan, the cabinet will need to be lifted high enough to access the underside, and the glass will need to be removed. The sand in the tank will need to be swept away from the base of the fan assembly. Check the two pillow blocks that support the fan assembly for set screws locking the fan support in place. Back these screws out and disconnect the wires from the power supply. Remove the large pulley. Remove the fan blade by loosening the set screw in the hub, and sliding the hub off the motor shaft. Then slide the fan support up far enough to access the three flat-head allen screws that retain the bearing assembly. The fan assembly can now be lifted and tilted to clear the tank.

When replacing the fan assembly, be sure to clean the felt seal at the bottom, of any grit. Be sure the felt seal is not worn down and maintains pressure on the steel collar when the set screws have been tightened in the lower pillow block.

### Replacing fan wires:

Remove the bottom to access the fan wires. Repair chafed wires with heat shrink tubing. If the fan wires become fatigued, the fan may need to be removed in order to replace them. Using high quality monel test lead (test probe wire) for the conductors postpones this task for as long as possible. The grommet through the side of the fan support tube is quite secure in its hole and will have to be wrestled out of and back into place. An additional vinyl tube has been inserted into the end of the fan housing to minimize chafing and provide another layer of insulation over these wires. Check that this hose is intact and slightly protruding from the end of the shaft.

### Fan motor:

In order to withstand the abrasive environment the fan motor has been modified. The original shaft-end ball bearing has been replaced with a sealed unit and an additional felt wiper was placed between the fan hub and motor counter bore. The seal on the motor lead may have a strip of closed cell neoprene foam wrapped around the lead. (The newer motors have an improved strain relief.) In addition, the motor seams are sealed with soft wax lubricant to keep fine dust out.

The brushes in the motor will be worn after approximately one year of normal operation. It is recommended to change the brushes at a scheduled

interval, approximately every 9 months, rather than waiting until the motor stops working. This will save the armature from being damaged and the expense of dismantling the fan assembly.

Replacing the felt seal will require checking the motor current. A dust seal is provided by pushing the fan hub up against the felt washer while tightening the set-screw, however too much friction can easily cause the motor to overload. Adjust the pressure on the new seal to match the maximum motor nameplate current. (0.3A) If the motor draws too much current with almost no pressure on the felt seal, and the shaft and bearings seem free, then feather the fan blades very slightly by bending them. Check that the blades are even, and clear of the support.