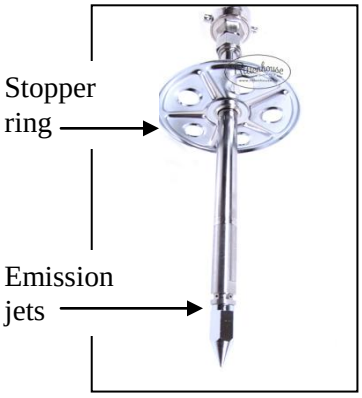
Maintaining a Kioritz Soil Injector



Before each use:

1. Be sure the bottom line of the gridded fastening nut (calibration ring) of the knob seat so that it bisects the red number 5 and the fastening nut is tight and secure. This will ensure that each pump of the handle dispenses 5 cc of fluid. Six pumps will dispense 30 cc or 1 fluid ounce.

2. Remove any dirt or debris from the probe area.

3. The stopper ring (metal baffle) just above the probe should be securely fastened in the lowest groove so the dispensing depth will be about 5".

4. Pour a cup of plain water into the reservoir and pump the handle several times to be sure fluid is ejected in all four directions. If one or more of the emission jets is clogged, clean it gently with a sharp metal tool such as a gimlet, ice pick, or even a paper clip; don't use a toothpick as it might break off in the jet.

5. Once you've confirmed that all four jets are working properly, you can test the calibration by placing the tip into a measuring cup, pumping the handle 6 times, and seeing if you get exactly one ounce. If not, adjust the calibration as necessary. Then pour or pump any remaining water out of the reservoir.

6. Mix the treatment product in a clean container according to instructions. Most treatment products dissolve better in warm water than in cold. Be sure the treatment material is completely dissolved.

7. To fill the reservoir, push the injector probe into the ground under a hemlock tree so the injector is at an angle with the input opening facing straight up. Unscrew the black input cap, clean the filter if necessary, and replace it loosely so the air seal is broken and liquid can flow freely into the tank (do not remove the filter). Pour the liquid slowly into the reservoir.

8. When finished filling, tap the filter down and screw the input cap on.

9. Begin the application process immediately.

During use:

1. To dispense the treatment solution, place the palm of your hand on the pommel handle and pump firmly and quickly.

2. Don't use the stopper ring (baffle) as a "foot push." It will break. Instead, use your upper body strength to push the probe into the ground. Avoid roots and rocks; if you feel resistance in the soil, move the probe an inch or two and try again.

3. If fluid begins to run freely from the tip when you are not pumping the handle, it may be because dirt or debris has adhered to the ball valve or the spring has become misshapen or adhered to the pipe. First, pump the handle vigorously several times to try to dislodge any dirt or debris in the pipe. If that doesn't work, disassemble the part of the probe that is immediately above the tip – do this carefully over a light colored towel so as not to lose any of the tiny parts. Clean the area and reshape the spring if necessary/possible; or you may need to replace these spring from your spare parts kit. Then reassemble.

4. Keep using the injector continuously until the reservoir is empty. If the injector remains motionless for more than about 10 minutes while there is treatment material in the reservoir, particulate matter may fall out of solution and clog the emission jets.

After each use:

1. If there is treatment solution left in the reservoir when you are finished, pour it or inject it under a hemlock. Don't pour it into a stream or down a drain. (Mixed solution doesn't keep well.)

2. Put a few cups of plain water into the reservoir, shake the injector, and pump the water through until the emission runs clear. Clean the emission jets if necessary to be sure fluid is being ejected in all four directions.

3. Remove any dirt or debris from the injector, dry it, and store it in a clean dry place.