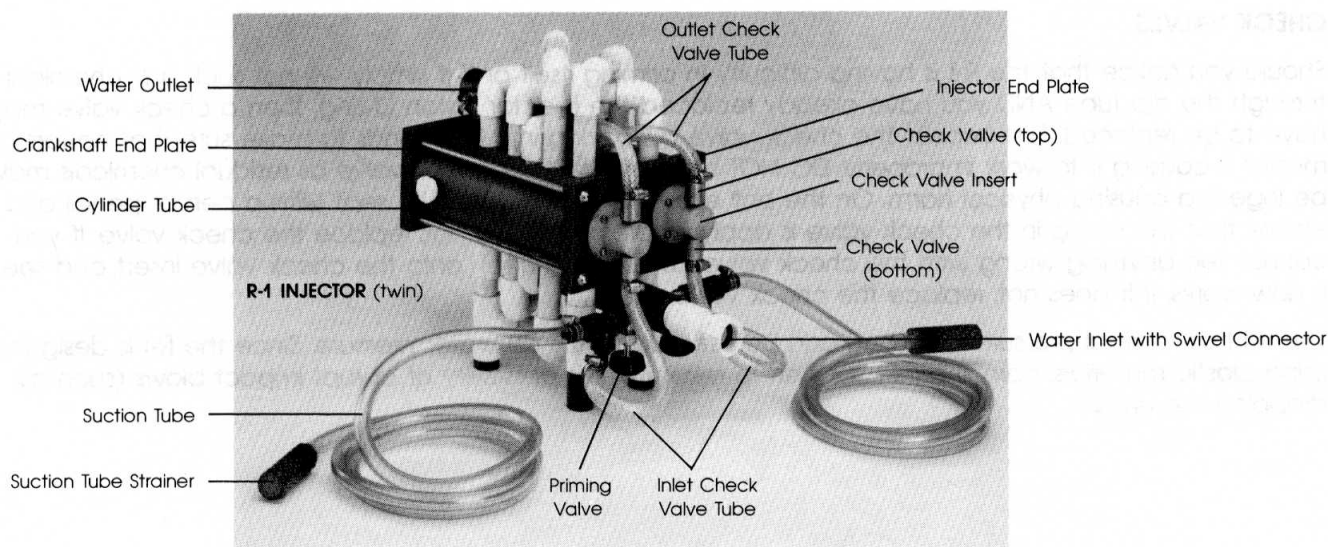


OPERATION OF R-1 INJECTOR

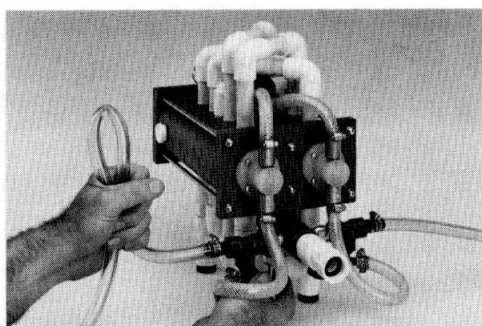
Your R-1 liquid fertilizer injector is shipped with no assembly required and is ready for use.

The R-1 will maintain its' accuracy and will give trouble-free service so long as it is operating at water flow rates between 2-12 GPM. It is important that no more than 12 GPM of water is being used through the R-1, as overspeeding the unit will cause premature wear in the water motor section.

To install the R-1, simply connect your water source to the swivel connector as shown below ($\frac{3}{4}$ -inch hose is ideal). The outlet connection on the R-1 is also designed for $\frac{3}{4}$ -inch hose.



Open the hose-bib feeding the inlet water hose to the injector. By placing the palm of your hand against the side of one of the R-1 cylinder tubes, you can tell if the water motor is turning inside: a slight vibration will be felt. Remember that at least 1 GPM is required to turn the water motor. Now open the priming valve and let water stream down the suction tube. Once the suction tube appears to be full of water, crimp any portion of the suction tube until you notice all bubbles removed from all of the tubing. Release the crimp on the suction tube and close the priming valve. You will notice that the R-1 is now injecting (after the crimp is released and the priming valve is closed, hold the suction tube straight-up in the air and you will notice a constant draw as the injector begins to work). Open the priming valve again to allow water to purge air in the suction tube, place the suction tube in a container with liquid chemical, shut-off the priming valve, and you're in business.



After you finish applying liquid chemical, it is always good practice to flush-out the injector check valves with clean water. To do this, simply remove the suction tube from the chemical container, open the priming valve and let the injector run for about 20 seconds. This flushing procedure will extend the life of the check valves and will enable you to change the injector piston O-ring less frequently.

INJECTOR PISTON O-RING REPLACEMENT

The only maintenance required for the R-1 is periodic replacement of the injector piston O-ring.

To change the O-ring, simply remove the hose clamps that attach the reinforced tubing to the check valves and pull the tubing away. Then loosen and remove the four fillister head machine screws that hold the check valve insert onto the injector end plate. Once removed, you will notice an O-ring on the inside of the check valve insert. Remove the old O-ring and install a new one. Reassemble in the opposite manner.

This O-ring change procedure should be done about once a year or if you notice the injector is having a difficult time priming itself.

CHECK VALVES

Should you notice that the R-1 is having difficulty in priming itself or if it simply will not suck any chemical through the dip tube AND you have already replaced the injector piston O-ring, then a check valve may have to be replaced. First inspect the check valve by looking into both ends to make sure that no foreign matter is causing it to work improperly. DO NOT blow through the check valve as residual chemicals may be ingested causing physical harm. On the ball end, lift the ball out of its' seat with a pen or pencil and ensure that the spring in the check valve is applying pressure. If it is not, replace the check valve. If you cannot see anything wrong with the check valve, assemble it back onto the check valve insert and see if it now works. If it does not, replace the check valve.

The R-1 has minimal pressure drop and can be used up to 125 psi water pressure. Since the R-1 is designed using plastic materials, care should be taken to minimize the possibility of abrupt impact blows (such as dropping the unit).