

IRRIGATION TROUBLESHOOTING TIPS

BROKEN SPRINKLER HEADS

Broken sprinkler heads are often caused by lawnmower blades and snow shovels.

Remedy: dig a deeper hole to prevent the problem from happening again

Sometimes sprinkler heads break down after a long life.

Remedy: unscrew the stem from the canister and install a new stem in its place.

When digging up a sprinkler head, avoid prying on it with your shovel, because doing so might break the threaded connection underneath. You should also avoid jumping on your shovel blade or otherwise using excessive force, because you could accidentally slice through the pipe feeding the sprinkler. The best approach is to first cut a shallow, one-foot square into the sod around the head with your shovel. Then remove the sod by hand and stack it neatly to one side of the sprinkler. Using your hands or a small trowel, next remove the soil surrounding the head and place it on the other side. You'll want to dig your hole so that the top of head will sit approximately one-half inch above the soil. If the head is any deeper than this, it might pick up lawn debris that can damage its seal; if it's any higher, it might be struck again. Once you have the sprinkler at the proper depth, replace the soil an inch or two at a time, tamping it in with a small stick or the end of your shovel as you go. Solid tamping ensures that the head won't surface over time.

BROKEN IRRIGATION PIPE

Broken Pipe can be caused either by freezing or downward pressure onto a sharp rock, or by the misplacement of a shovel blade or lawn aerator.

Troubleshoot: locate the leak which would be in between sprinkler or possibly close to the valves; either place the ground may be saturated. Carefully dig down 6" – 8". You do not want to shovel aggressively and cut through the pipe. Create some digging space for comfortable access. Expose a foot of pipe on either end of the break, and with either a hacksaw or pipe cutters remove 3 to 4 inches of poly pipe and take this sample to the irrigation supply store. A simple Turnseal is all you need; it's a hand tightened compression fitting to be inserted in between the broken pipe. Or you could repair with clamps and inserts.

WIRING PROBLEMS

If you cannot get a sprinkler zone to come on from the controller, and you're confident the controller works well, check the wiring.

Troubleshoot: Check each connection including the ground wire for corrosion; cut corroded section back and expose clean section to rewire. Make sure wire nuts are tight. Try again to operate zone from controller. If things still aren't working, check for unused strand of wire and replace the one being used. Otherwise you'll need new length of wire all together. You'll need to trench in new wire to valves.

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STUCK VALVES

If a zone of sprinklers runs nonstop while your controller is off, you most likely have a stuck valve, meaning a small rock or other debris is preventing the valve from fully closing.

Water flows only when an electrical current sent from the controller passes through the valve's solenoid and activates a mechanism that lifts the diaphragm. When the electrical current is broken and the diaphragm is dropped back down, the water stops. During this process, the diaphragm doesn't travel very far, so often a small rock will get pinched between the diaphragm and the valve's plastic framing, preventing a good seal. When this happens, water will flow through the valve continuously.

Troubleshoot: Unscrew the solenoid to take some pressure off the valve. After some water has passed through the valve, screw the solenoid back on. If the valve seals properly in the off position, the problem is solved. However, if the valve remains stuck open, unscrew the whole jar-top off. Before dismantling the valve, turn the water supply off. After removing jar top, remove any debris in and around the delicate diaphragm with tweezers or small screwdriver. Replace the top and flush water through for 5 seconds. Problem should be solved. If not, the diaphragm or solenoid needs to be replaced. If you're not sure which needs replacing, then buy the whole valve (most likely cheaper anyway) and then you can just replace the old jar-top with the new one without having to remove the old valve completely.

UNEVEN PRECIPITATION

Brown spots on your lawn could suggest one of 3 things:

- 1) The operation time for some zones is too low
- 2) Some sprinklers have the wrong nozzle size for the area they cover.
- 3) Some sprinkler heads may be spread too far apart.

Troubleshoot: Manually operate each zone to verify water supply reaches head to head. If not, adjust the radius (spray distance). Next, observe whether the half-circle heads along the perimeter spray separately from full-circle heads in open areas. If so, double the zone run time of the full-circle heads to eliminate the brown spot problem. Otherwise, you'll need to replace the nozzles in perimeter heads to ones that are half as large (i.e., from 2gpm to 1gpm), then double the run time to even out the precipitation rate for each zone. If you cannot get your sprinkler heads to reach any closer than half way to each other, that's a strong indication the heads are too far apart. More will have to be added to fix the problem.

Research the types of sprinklers you have on the specified zone. Investigate how many heads are allowed per zone according to psi, line size, gph. If possible, you can gently dig up one head, remove it, cap the line, and then install 2 heads systematically in between the existing heads. You'll also need to change nozzle size to accommodate precipitation rate. **NOTE:** Do not mix rotor type sprinkler heads with pop-ups.