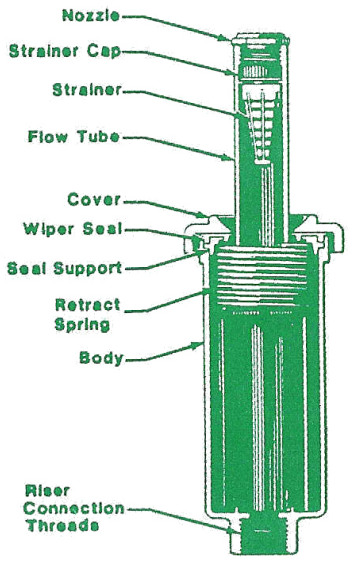
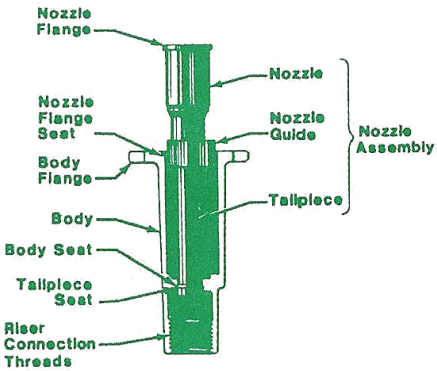
JPA journal

Pop-Up Sprinklers



Spring Loaded



Gravity Retraction

There are several types and manufacturers of pop-up sprinklers. The most common are micro, spring actuated, gear driven, and impact. This article will focus on the standard spring-actuated type that is most common in small lawns.

The spring-actuated sprinklers in their early production were constructed of metal and used fixed nozzles (no vertical movement). The fixed nozzles were then replace by vertical moving nozzles (pistons) allowing the sprinkler to rise above the surrounding grass blades and spray without deflection. These sprinklers were still constructed of metal, however, and didn't seal well when operating resulting in pressure loss and limiting the number of sprinklers efficiently used per valve.

The plastic pop-up sprinklers seen today became a commonly used alternative to their metal predecessors in the early 1980's using a spring to compensate for the weight loss problem of the plastic piston portion of the sprinkler. There was no longer water loss where the piston meets the sprinkler cap and because the sprinklers were lightweight they didn't require as much pressure to operate. Systems were now capable of handling an increased number of sprinklers per valve and an increased number or size of controllers. In short, these plastic sprinklers have improved the level of service while reducing the cost of maintaining the irrigation system through the reduction of expensive equipment (valves & controllers), and the sprinkler itself (plastic) being cheaper to produce.

Now we must discuss the responsibility of the owner of this equipment. As mentioned above, cost savings have been achieved through innovation, but it doesn't stop there. Along with wear there are (3) specific items that cause sprinklers to fail; scored pistons from fines (small particles), worn cap gaskets, and loss of spring tension. Often, when one of these conditions has occurred the others are not far behind. It is at this point that sprinklers become susceptible to damage (mechanical, traffic, automobile, vandalism, etc). The early stages of this wear begin to show up through stressed landscaping, increased watering times, and loss of water savings. Most plastic pop-up sprinklers will last between 4-7 years before requiring attention, however, there are some sprinkler brands or environments that will require attention sooner.

Today's pop-ups have water saving features available. There are flow restrictors that restrict water flow to 30 p.s.i. when a nozzle or piston is missing or broken allowing the other sprinklers to operate without significant pressure loss. There are built in check valves that prevent lateral lines from emptying through the lowest sprinkler when the valves complete the programmed watering cycle.

Contact our office if you want your property included in on one of our sprinkler restoration maintenance programs.

J-P-A INC. Landscape & Construction