

Common Sprinkler System Issues

There are several common issues to look for. Some issues may be easy to fix on your own; others may require the help of a sprinkler system professional.

Pressure

- Low Pressure:
 - When the pressure is too low, the sprinkler head will emit larger, heavier drops; the water won't travel very far, and you may see dry patches. Low pressure may be caused by a leak, too many heads on a zone or a long sprinkler line.
 - If pressure is less than 20 psi, a booster pump is needed to raise pressure.
- High Pressure:
 - If pressure is too high, the head will produce a finer mist, which causes significant water loss due to evaporation from even a slight wind. High pressure can cause overspray – you may be watering your driveway or fence instead of the lawn.
 - To lower pressure, install pressure reducing stems on heads, pressure-regulating heads or a pressure regulator on the system.

Sprinkler Head Type	Low Pressure	Normal Pressure	High Pressure
Spray	<25 psi	30 psi	>35 psi
Rotor	<35 psi	50 psi	>70 psi

Zone with Mixed Head Types

All sprinkler heads on a zone should be the same type (e.g. rotors, sprays, etc.) and have the same precipitation rate (in inches per hour). Different head types and heads with different precipitation rates require widely varying run times. A zone with a mix of heads means you will likely need to overwater one area in order to sufficiently water another.

Broken/Missing Heads

Broken heads waste a lot of water. A broken head geyser will also damage the surrounding landscape by eroding away the plant material and soil. Breaks also cause low pressure, resulting in the issues described above.

Clogged Nozzle

Nozzles can get grit or dirt in them, causing limited or no spray. This may be caused by blockage in the screen or in the nozzle itself, and the head will need to be cleaned. If this does not fix the problem, replace the screen. The nozzle may be worn, however, and in need of being replaced.

Tilted Head

Heads may be tilted after being hit, often by a lawn mower. Heads may also lean when the soil has been loosened or disturbed for repairs. Tilted heads will not apply water where it's intended to go. These heads need properly straightened and supported by the surrounding soil.

Low/Sunken Heads

Low or sunken heads often don't reach over the grass to apply water where it's intended to go. These heads need to be dug up and raised. This can be a quick fix using a riser.

Improper Arc or Radius

The arc of a head is the fraction of the circle around the head that receives water (e.g. a 90° arc would be used in a corner). The radius of head is the farthest distance the water should reach. Heads with improper arc or radius may be overspraying or underspraying. Optimal system design has “head-to-head” coverage, where the spray from one head reaches the base of the closest head, resulting in overlap that creates a uniform distribution of water. Places where the spray pattern doesn't overlap may develop dry spots. Some heads are adjustable, but many are not. For Rainbird and Hunter heads, try a Rainbird U-series nozzle to increase uniformity. “U” stands for undercut nozzle.

Overspray

There should be no overspray onto sidewalks, patios, driveways or streets. To avoid overspray, heads should be placed several inches away from the edge of the landscape and use the correct arc. To adjust the radius of a sprinkler head up to 20%, use a radius adjustment screw. If the radius needs to be reduced more than 20%, a nozzle with a shorter throw radius should be installed. If overspray is due to an incorrect spray pattern, replace the nozzle with one that's appropriate (e.g. 180° arc instead of 360°).

Obstructions

Make sure that the spray from the head is not obstructed by vegetation or other objects. Trim back vegetation or raise the sprinkler heads as needed. This will increase the system's uniformity of coverage.

Low Head Drainage

If the zone has some sprinkler heads that are lower than the rest, the water remaining in the pipes after a watering cycle will tend to drain from those heads each time the zone shuts off. In-line check valves or sprinkler heads with in-head check valves should be installed to prevent water waste. Check valves often say “SAM” for Seal-A-Matic.

Underground Leak

Underground leaks can occur when water is left in the sprinkler system over the winter. The frozen water can cause a pipe to begin leaking. This can be detected by a large pool of water accumulating near the base of the head when the system is turned on and lower pressure at that head. Be sure to get your system properly blown-out at the end of the season.

Broken Drip Emitter

A broken drip emitter can be replaced with a new emitter or a ‘goof-plug’ can be put in the hole to eliminate watering in that location. Larger tears in the line can be fixed with a compression fitting.