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1. Rotor Maintenance

An irrigation system's overall efficiency is directly related to how well it's adjusted, and if repairs are done correctly and in a timely manner. If the systems under your care are not properly maintained, water waste and inferior appearance of turf and landscaped areas are a sure bet.

Proper system maintenance is easy if you are diligent in your inspection, carefully follow the correct repair steps and use the most efficient equipment. No where is this more evident than with rotors, especially closed-case rotors. Though they are designed to be nearly maintenance-free, today's rotors are an essential part of many irrigation systems and, therefore, should receive a dose of seasonal "TLC" to ensure proper operation.

In northern climates, the irrigation system should be physically inspected annually, usually at the beginning of the season. In southern climates, an inspection should be performed at least twice a year.

During the inspection, you should check each rotor for proper arc adjustment, thatch build up, proper rotation, worn nozzles, and worn seals. Occasionally, you may also find cracked cases and clogged screens. Most of these are simple to detect and fix. However, it requires you to spend the time to watch each rotor operating.

Details and Diligence: A Guide to Seasonal Rotor Maintenance

Following is a checklist for seasonal rotor maintenance:

Arc Adjustment – It's important to spend the time to make sure that each part-circle rotor moves completely through its properly adjusted arc pattern. Children playing and vandals sometimes change the rotor's arc setting. If the arc requires modification, readjust it according to the manufacturer's instructions.

Thatch Build Up – As grass grows, it develops thatch. Thatch is partially decomposed organic material between the grass blade and the soil. If the grass and thatch interferes with the water stream from the nozzle, it may need to be removed and thinned. In older systems, it may be necessary to dig up the rotor, attach a riser and physically raise the height of the rotor.

Rotation – As with arc adjustment, it's very important to observe each rotor in operation to ensure that it rotates. If the rotor does not rotate, replace it with a comparable rotor and nozzle.

Worn Nozzles – If a nozzle is worn, the rotor will have a reduced radius of throw the water stream will appear "rough." Worn nozzles usually occur in older systems or systems that have a dirty, or gritty water source. Replace worn nozzles with the manufacturer's recommended nozzles.

Worn Seals – A rotor with worn seals may display a flow of water between the rotor's turret and the cap. However, worn seals may only exhibit a slight weeping between the rotor turret and the cap. In either case, the seal or the cap needs to be replaced. Some manufacturer's rotors allow the seal to be replaced. When the seal is an integral part of the cap, the entire cap needs to be replaced.

Cracked Case – This problem can be difficult to detect. It will appear as an unusually wet area at the rotor. This problem is usually found along a driveway and is the result of the rotor being run over by a vehicle. Sometimes it is also the result of an improperly winterized system.

To correct the problem, the rotor must be removed and the case replaced. However, there may be hidden damage to the rotor turret or the drive mechanism. It may be more sensible to replace the entire rotor.

Clogged Screens – Manufacturer's provide screens at the base of the rotor or turret to trap dirt and debris that would otherwise clog the nozzle. When enough debris is trapped, the blockage will cause low pressure, restrict flow and reduce the radius of throw.

Clogged screens are commonly caused by:

- A buildup of dirt and debris that has been introduced to the irrigation system as the result of a repair
- Broken pipes downstream of the rotor that can pull dirt into the line
- Algae buildup

To correct a clogged screen, remove the rotor internals and completely flush the line. Remove any debris from the screen. It is important to take care while flushing the line so that no additional debris is washed back into the system.

Rotor maintenance is fairly simple if you follow a few simple steps. In fact, the time spent inspecting the system, and making minor adjustments and repairs, will help an irrigation system perform well for many years. Moreover, your efforts will not only ensure that the landscape remains healthy and beautiful, it will virtually guarantee a satisfied customer