

LIGHTNING AND YOUR AUTOMATIC IRRIGATION SYSTEM

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We at Greenhaven, Anoka had our new Toro VT3 irrigation system installed in the summer of 1982. We started installation the 24th of June and finished in late August.

The installation of the system went very well with little disruption of play and turf. They proceeded with the installation in phases working on one nine at a time. The first phase included tees and fairways on the front nine. This took approximately nine days. The next phase included the front nine greens which took about three days. Once the front nine was completed, the system was charged and the old system was abandoned. The same procedure was followed for the back nine. Up to this point we were running the system manually. The last phase included hooking up the electricity, adjusting

controllers and testing the automatic controls.

We ran the system automatically for two months in the fall of 1982 with absolutely no problems.

The next summer went fine until about July when a severe thunderstorm with numerous ground lightning strikes rolled through Anoka. Despite the fact that we had both our 24V and 120V electrical component protected with state of the art lightning protection we incurred a good deal of damage because of the closeness of the lightning strikes.

Lightning hit a tree off the seventh tee, followed the ground to a sprinkler head on the tee, went through the wiring system knocking out virtually all satellites on the front nine and half of the back nine as well as the master controller! The lightning actually blew the sod off an area of the fairway approximately one foot wide and 40 feet long. We had sod hanging from the trees!

Although most of the damage was corrected immediately some components within the



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system continued to fail for the next three to four weeks. The reason for continued failure is some components are weakened by a severe strike but do not fail until they are used for a period of time.

All went well until August 1984 when once again a severe storm hit our area. This time one of our satellite controllers took a direct hit thoroughly destroying it and virtually knocking out our entire system.

Fortunately, the bulk of the damage was repaired in a few days and we were fully working again. A few lightning damaged components still need repair which we will do this winter.

The repair costs to the system ran approximately \$2,000 to \$2,500 on each occasion. However, prior to the second lightning strike we purchased an insurance policy in the amount of \$130,000.00 for a total annual cost of \$250.00 that protected us against damages such as the lightning. The policy has proven to be a good investment.

We continue to look for other ways to

protect our system from lightning. Toro has proposed a method for improving on our lightning protection system. However, at this point in time it does not appear to be cost justified.

Other than being subject to lightning damage we have found the Toro VT3 system to be most reliable. We have had no other major problems. There is the usual maintenance that has to be done that is true with any of our tools. We are very happy with our system and the coverage we have. The programming system does everything it is designed to do.

We must all understand that lightning is a part of Mother Nature and there is nothing we can do to prevent it. We need to deal with it and particularly those of us with the newer sophisticated electric and "electronic" type irrigation systems.



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