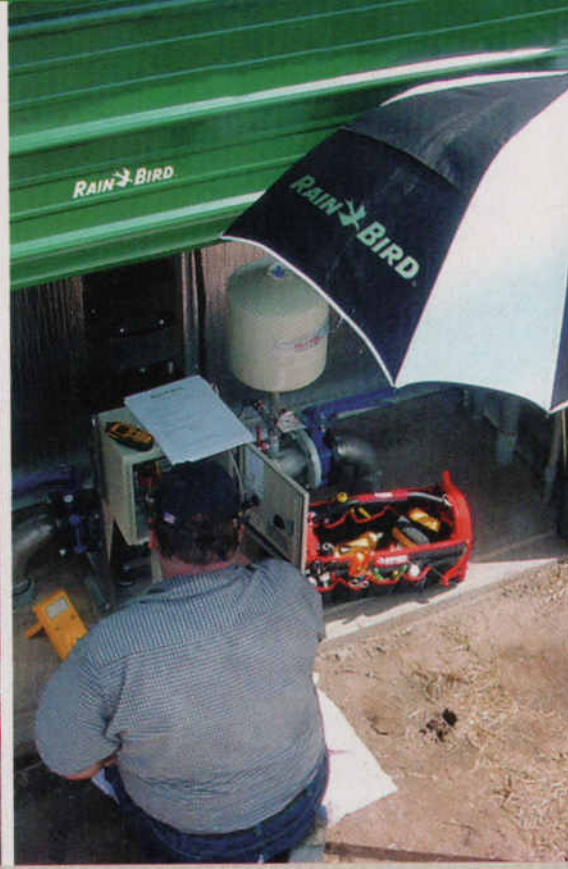


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Sacramento, CA

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important role proper maintenance plays in achieving the overall performance of the synthetic turf system.

Maintenance is vital if the surface is to maintain its appearance and to provide consistency of play, permeability, and longevity. The basic objectives of effective maintenance are that:

- the playing surface is kept clean; airborne contaminants are removed;
- the playing surface remains level and of consistent texture so that it gives a true and predictable performance;
- the infill materials are evenly distributed;
- the effective drainage of surface water is maintained throughout the life of the field's surface;
- the system does not become over compacted and hard;
- the facility is consistently attractive and well-kept.

**Identify your system.** The specifics of the synthetic surface, fiber, infill, construction, play lines, and any other basic elements or unusual features must be accurately identified so that the appropriate maintenance regimen can be applied. Your system provider should be the source for this info.

Fibers vary in length, thickness, and density depending upon the performance requirements of your synthetic turf system. Long pile systems may be filled with a combination of sand and rubber granules, rubber granules only, or a combination of other specialty materials in order to meet the predetermined performance criteria. The sand material used as infill should be rounded to sub-angular and silt free.

The rubber granules used as infill material are typically styrene butadiene rubber (SBR) or ethylene propylene dien polymerisat (EPDM.) The granules must be clean and metal free. Combinations of sand, rubber or other suitable materials in various combinations must be capable of meeting all the guidelines and environmental requirements at the installation location.

Tufted is the most commonly used process by which the fiber yarns that form the pile are inserted into a previously prepared blanket-like primary backing. Woven is the process where the surface is composed of interlacing sets of continuous yarn while knitted means the yarn fibers of the pile are tied to the backing which was simul-

taneously constructed in the same over and under, criss-cross process.

The permanent play lines defining the field of play can be tufted into the surface backing or are an integral part with the surface, having been inlaid or cut into the surface with designated colors. Temporary play lines are painted onto the surface but require frequent attention, repainting, or repair to maintain their appearance. Frequent inspection is recommended.

**Maintenance procedures.** These processes will help assure continued performance of the system as specified in relation to the declared purpose and use of the synthetic turf surface.

Airborne pollutants such as leaves and other debris should not be allowed to remain on the surface for any length of time. If not removed, they will migrate into the system, forming a drainage inhibition within the surface that can reduce drainage.

A wide soft broom can be used for removing the surface debris. A mechanical leaf sweeper or special vacuum cleaner that does not remove the fill can speed up the operation. Such equipment must be well maintained and carefully operated to avoid contamination or physical damage to the surface.

Proper grooming "freshens" the synthetic turf surface appearance and is crucial to help prevent the premature deterioration of the performance characteristics, appearance, and drainage properties. Mechanical grooming can accelerate the process when the proper equipment is chosen and operated by skilled personnel.

Drainage is essential to effective maintenance. It is possible that the bed of infill material serves as a filter. Infill can unavoidably retain inert particulate matter conveyed or blown onto the field or carried by rainfall or other air contaminants. By moving and re-leveling the upper layers of infill, mechanical grooming can delay the timeline when problems may begin to occur in the normal course of use, which could reduce the drainage process.

Accumulation of unwanted or foreign materials is inevitable. Too much grooming, or the negligence of grooming, can affect the long term turf performance, even if such does not appear in the short run. Should a contaminant have growth potential, the species and its eradication agents should be carefully identified and removal should be immediate before serious infestation occurs. Equipment designed for that specific purpose

must be operated by killed personnel who have precise knowledge of its effects. Routine maintenance can reduce the long term effects of any external contaminants, making such occurrences almost a non-issue.

It is important that the synthetic turf pile is maintained vertically. Regular brushing is an important function that must not be overlooked or neglected. The surface should be brushed in a number of directions, alternating the direction in consecutive activities, but generally in the direction of the individual panels to avoid crossing over the main seams.

**Equipment selection.** Turf and maintenance equipment manufacturer's advice should be sought when considering any type of maintenance operation and the use of any equipment or procedures not recommended by the manufacturer of the system. The objectives of the maintenance process must be understood. No two machines will operate to the same degree of efficiency and effectiveness. The condition of the surface will also affect the operation of the equipment. Both conditions should be evaluated.

Most maintenance equipment utilizes a brush or brushing action. It is critical that the type of brush used does not abuse the condition of the surface. Drag brushes behind the power unit are normally not recommended because they tend to flatten the pile and generate the need to implement the cleaning operation twice or more unnecessarily. If drag brushes are to be considered, a test strip should be used to determine whether or not the effect and process of those brushes are desired. Brushes that have a rotary action in a horizontal position in front of the pile unit are preferred since they agitate the blades of the synthetic turf. The simultaneous vacuuming action should remove the undesired pollutants and debris.

Power brushing equipment may agitate the infill to various degrees. The type of brushing, vacuuming, de-compacting, and final grooming should be relevant to the end result. The objective of each grooming routine should be determined prior to initiating the selection of the maintenance equipment, i.e., stand up of the pile and clean or level the infill within the pile; provide uniform performance characteristics; etc. ■

*This information provided by the Synthetic Turf Council, [www.syntheticurf.org](http://www.syntheticurf.org).*

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# Field painting advice from suppliers

### **Pioneer Athletics, [pioneerathletics.com](http://pioneerathletics.com)**

During the 2007-2008 football season, the synthetic turf field at the Louisiana

Superdome played host to 19 games. In a 20-week span, there were 10 New Orleans Saints games, five Tulane Wave games, the Bayou Classic, the New Orleans Bowl, the Sugar Bowl, and the BCS National Championship game. Each game required a complete field paint changeover, including all field logos, hash marks, and endzones.

In previous years, the Superdome maintenance crew painted all field markings with house-

hold paint from the local hardware store. After each event when the field paint had to be removed, they hired 15 temporary laborers who spent up to 3 days scrubbing the field with an industrial cleaning solution—and still had problems with ghosting of the paint.

Last season though, they found a way to remove every last mark on the field in 2-3 hours by doing the work themselves with Pioneer Athletic's Removable Field Paint System. GameLine Temporary Marking Paint is a high-gloss paint specifically formulated to be easily removed from synthetic turf once sprayed with Blitz-GameLine

remover solution. This paint is chemically engineered to react to the remover solution so its resin system releases from the turf blades.

The process is simple:

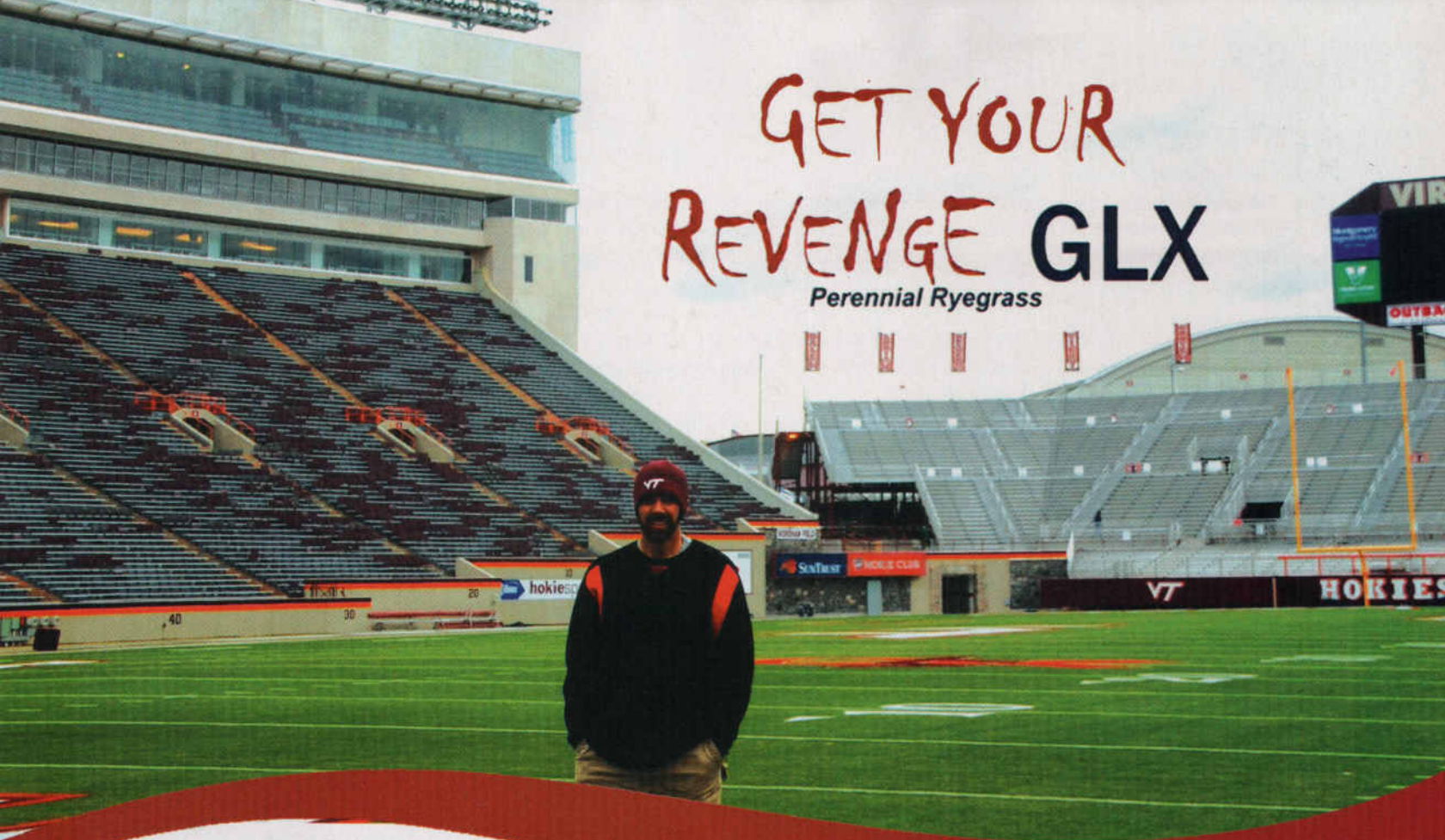
Step 1. Apply GameLine Temporary Marking Paint.

Step 2. When the field temperature is below 80 degrees, use Blitz GameLine Remover Solution in a backpack sprayer to saturate the painted area.

Step 3. Agitate the area with Pioneer's Blitz Remover machine, a lightweight, walk-behind, scrubbing machine with a 5.5-hp Honda engine

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Perennial Ryegrass



"I am very happy with Revenge GLX perennial ryegrass and Nu Destiny Kentucky bluegrass.

"Here at Virginia Tech we have a very aggressive bermudagrass and others have had trouble establishing a ryegrass into it. The past two years I have overseeded with Revenge GLX perennial ryegrass throughout the summer. Revenge GLX gives us a great stand of ryegrass every time we need it.

"I also put Nu Destiny Kentucky bluegrass as a mono-stand for the soccer goal mouths and on the football practice fields. I am more than pleased with Nu Destiny's performance. In fact, I did not have to sod our goal mouths. Both varieties are great!"

-Jason Bowers, CSFM  
Virginia Tech, Blacksburg, VA

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# TOOLS & EQUIPMENT

and seven adjustable brush heights.

Step 4. All traces of the paint rinse away with water from a standard garden hose. If drainage is an issue, use Pioneer's WaterClaw to remove the excess water and paint residue while leaving the infill in place.

Pioneer worked closely with the Superdome crew to develop a comprehensive system of field paints, field striping machines, and equipment that addressed their particular situation and synthetic turf surface.

## Graco, Inc., [www.graco.com](http://www.graco.com)

The majority of turf striping equipment in use today is "pressure pot" based, with either an on-board compressor or CO2 tank. These older style systems make it difficult for turf strippers to find substantial product differentiation from one manufacturer to another. This type of equipment requires that paint be "cut" with water, and then added to a tank on the striper which is very time consuming and is considered "old school" tech-

nology.

Airless striping technology is the newest manner in which sports fields are now being striped. This technology allows you to now save time and money by:

Spraying athletic paint, uncut, which keeps the field looking great for 2-3 times as long as other systems including spray cans and pressure pots.

Drawing directly from the paint container. No more mixing and dumping is needed with this technology.

Providing exact pressure control. Pressure control must be below 900 psi in order to avoid damaging the turf. You want to spray the turf, not the dirt! Make sure equipment is capable to being "dialed down" to avoid damage.

Stencil spraying, which is a must for sports turf applications; a quick change out to a 20-inch extension with proper tip allows for fast, reliable stencil jobs.

Use of adjustable spray shields to help keep

the line quality the best it can be by blocking wind from blowing the paint all over the field.

Use of tall turf tires allows unit to easily roll.

Connecting a drive system to the turf striper, which allows user less fatigue and provides consistent, straight paint lines

Minimum of half gallon per minute is needed to provide the coverage field managers demand.

Paint filters on the sprayer: Include the "rock catcher," paint manifold filter and paint gun filter. Prevents downtime due to clogs.

Piston pump technology produces the most consistent lines.

Non-clogging, reversible SwitchTips allow great lines to be sprayed every day.

One of the best ways to see what these new style airless turf-striping units can do is to arrange for a demo to see how it performs and how easy or difficult it is to use.

Transporting the unit is as important as using it so make sure it is light-weight, portable, and able to be moved from field to field with little or

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Fax \_\_\_\_\_ Email \_\_\_\_\_

Signature \_\_\_\_\_

Direct Supervisor Name \_\_\_\_\_

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- Sports Turf Manager \$110  
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Please select the primary facility type where you are employed:

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 Commercial \$295  
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 Chapter Dues (contact headquarters for amount)  
Chapter name) \_\_\_\_\_ \$ \_\_\_\_\_  
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\*There must already be a national sports turf manager from your facility or commercial member from your company before you may sign up in the Associate category.

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— Bob Campbell, CSFM  
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Courtesy of Graco, Inc.

no hassle. Lastly, go with a proven brand from an equipment supplier who has a solid reputation in your market.

**Whitlam Paint, [www.whitlampaint.com](http://www.whitlampaint.com)**

Temp-Stripe Athletic Field marking paints are necessary now, more than ever, to put temporary markings for either a different sport or for hosting an event that normally gets played elsewhere, whether it's synthetic turf or natural.

This product makes some sports turf managers' lives much easier for a variety of reasons: Some people use Temp-Stripe because it has a easy removal feature (just water pressure and "elbow grease"); some like it because it breaks down into the soil better than most other, more permanent, long-lasting type field paints

Most like it because it actually works and doesn't require the purchase and use of a chemical solution for removal, nor does it require the purchase of additional equipment for that removal process. ■



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## StarLiner

In response to concerns from customers regarding the environmental impact of aerosol field paints, Pioneer Athletics developed a striping machine that produces sharp, liquid paint lines with the ease of an aerosol striper. The StarLiner runs on a rechargeable battery and resembles a typical aerosol striper, but delivers a bright liquid line that will not burn natural grass. The brilliant white Star Stripe paint made for the StarLiner contains Halogen 2000 optical brighteners and comes in a "bag-in-a-box" container that is self-sealing and reusable. Star Stripe paint is also available in orange, red, yellow and blue.

### Pioneer Athletics

For information, fill in 059 on reader service form or see <http://www.oners.hotims.com/14681-059>

## ProLine

Layout fields once and never measure again with Newstripe's ProLine field layout system. Just drive the rugged nylon locators into the ground at key field positions, attach the supplied string line to the locators and you're ready to stripe your field. The locators are then left in place so you can precisely remark your field year after year, yet you will never have to re-measure. There are no open holes to catch cleats or fill with debris. Available in packaged of 12, 25 and 50 locators. Each kit comes complete with starting tool and 600 feet of high-grade cord.

### Newstripe

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# Paint and Equipment for Synthetic Fields

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# Benefits of verticutting

By Darian Daily

Verticutting has many important benefits to produce healthy sports turf.

**W**e all know the cultural practices such as aerification and topdressing are important for healthy sports turf. But verticutting or vertical mowing is the least-used practice. Verticutting has many important benefits to produce healthy sports turf, including thatch removal, lateral growth promotion, seed bed preparation, and early spring green up.

### Thatch removal

Whether you maintain warm season or cool season turf, thatch control is important. Some thatch is good for the field system. The proper

amount of thatch will assist in the breaking down of chemical (fertilizers) because of the higher likelihood of having good microbial activity. Proper thatch will allow for better seed bed for new seedlings and gives good footing. Excessive thatch can lead to a poor draining field, a higher susceptibility to diseases, and unstable footing.

Proper verticutting loosens the old thatch and brings it to the top. Once the old thatch is removed, the turf can take in more water and take in more air promoting healthier turf. Another positive of removing excessive thatch is that your turf will dry quicker because the air and sun get down to the soil.

On the playability side, having too much thatch, the field will feel soft and "slow." A field with proper thatch will feel firm and "fast."

### Promotes lateral growth

For sports turf managers maintaining warm season grasses, verticutting is as important as aerification. With proper fertilization, verticutting warm season grasses will stimulate the cut stolons to generate new growth from the cut area and this forms a much thicker and denser turf. After a light topdressing, the field will become nice and "tight" and ready for play.

The same is true, but to a lesser degree, for