



Selecting the proper synthetic turf maintenance equipment

» REGULAR SYNTHETIC TURF MAINTENANCE insures long life and safe playing conditions.

Pick a drag brush that is designed **specifically** for synthetic playing surfaces.

Editor's note: This article was written by Paul Hollis of Redexim Charterhouse, Inc.

The sports turf industry has seen a great increase in the number of synthetic turf fields over the past decade. Unlike the first and second generations of synthetic turf, the third generation playing fields have longer fibers and are filled with rubber, sand, or a mixture of both to reduce the hardness of the playing surface.

While many buyers of these surfaces cite their being "maintenance free" as a major purchasing consideration, after seeing many fields that are 6-8 years old that have not been maintained, the manufacturers themselves will admit that there needs to be a degree of maintenance done to the fields to prolong the life of the field

and keep them aesthetically pleasing. The most disappointing thing to sports turf managers is that most of manufacturers will claim that only they or one of their installers can properly maintain the carpet.

To better understand the maintenance required of today's synthetic fields, one must understand the basic construction of the synthetic playing surface. It consists of fibers or carpet, the infill (sand or rubber), backing material, a choker stone layer, open grade and soil. It



» **IF USED PROPERLY** a vacuum can remove hair, dust and other small pollutants that a blower will move from one place to another.

may sound complicated, but in essence the fields are not all that different from your household carpet. In order to select the proper maintenance machine for your field you must remember three

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» Above: A **SIMPLE DRAG BRUSH** is a great way to groom the field and return carpet fibers to their upright position

» Below: **PULLING SPRING TINES THROUGH THE UPPER INFILL MIX** is the only way to relieve compaction and lower GMAX concerns.

Always put a rope through the spring tines in case one comes loose or breaks.



basic components of field preservation:

- Keep the surface free of debris
- Keep the fibers in an upright position
- Keep the infill free of compaction

To keep the surface free of debris, it is obvious that the debris must be removed. Organic material such as leaves should not be allowed to remain on the surface for any length of time. They can start to decompose and wander into the infill system, which can impede drainage on the field.

Some companies may instruct the owner to use a brush or backpack blower to remove the material from the surface. This may work for larger items, but when small debris such as sunflower seeds are a problem, a blower just moves the pollutant from one spot to another. To properly remove debris it is recommended to use a mechanical sweeper or vacuum to collect and remove the material. The amount of maintenance needed varies from location to location, but clearly a maintenance machine must be well maintained and the instructions must be carefully followed as to not cause any damage to the playing surface.



➤ Above: **CONSIDER WHAT EQUIPMENT YOU'LL NEED** for a maintenance program when purchasing a new field.

➤ Right: **SIDELINE AREAS** require special attention due to litter such as tape, sunflowers seeds, water cups, etc.

Regular grooming is a must to keep the carpet fibers in an upright position. If an artificial playing surface is not regularly groomed with a proper drag brush the surface will become slick and the fibers will wear prematurely. If the fibers are allowed to lay-over and remain bent too long they may be difficult to stand upright again, so they need regular attention. A drag brush can easily be found that can be used behind any power unit, including small tractors, utility vehicles, golf carts or even small mowers. Dragging will improve footing, redistribute infill, reduce static electricity, and improve the look of the playing surface.

Just like natural turf, all types of infill become compacted in time. Through research we know that GMAX ratings over 200, measured with a Clegg Drop hammer, pose greater risks for athletes. To reduce the compaction levels it is imperative to use a drag brush with spring tines to loosen the infill mix. The infill mixes that use sand, or a sand/rubber mix tend to see higher GMAX levels due to their design. They use sand not only as a weighted base, but to make the infill stiffer for a faster and harder playing surface.

When planning a synthetic system purchase, make sure to include the price of these three machines for proper maintenance. The maintenance program will not only provide a better looking and safer playing surface, but it is also an investment to insure a longer life for your surface.

When making a purchasing decision remember to ask these key questions:

- Can I do my own maintenance?
- Is there a recommended maintenance program?
- Is there a recommended or approved list of maintenance equipment?

Some manufacturers may try to make you think that only they or their installers can maintain a synthetic field. Many have an approved list of machines that can be used on their fields that you can buy only from them, which limits your choices and increases your costs. Be advised to look closely at manufacturer warranties before making a buying decision. Some companies have clauses that restrict users by hours of use, maintenance schedules and other items such as improper footwear. When gym class, band practice, and actual game time is added up it not only voids warranty, but it shortens the life of a playing field. ■

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College's unique vehicle cuts costs, offers comfort

By Hency Yuen-Eng

A new vehicle at Monroe Community College in Rochester, NY, is turning heads around campus, but you won't find this model in any showroom.

Dubbed the "Trash Master," the modified, two-door Chevy Cavalier is the Facilities team's unique solution for a vehicle equipped not only to collect all sorts of trash and provide the driver with heat and comfort during inclement weather but also promises to deliver significant cost savings in upkeep.



"The car was a farfetched idea, but it's worked very fine," said Ron Fess, supervisor of campus grounds. "So far, so good."

For nearly 15 years, the Facilities team used a 6 x 4 utility vehicle that was retrofitted to collect trash, leaves and other debris around the 300-acre Brighton Campus. The gas-powered vacuum unit, a leaf vac that was refashioned to discard paper, plastic and other objects, was efficient, but the vehicle became too costly to maintain. The unconventional use of the vehicle constantly on asphalt, rather than on grass, frequently wore out the tires and damaged the axles.

With no doors on the vehicle, the driver also was regularly exposed to inclement weather. So earlier this year the Facilities team went to work to solve the problem. Workers spent a month retrofitting the used sedan donated by a local dealership, Hoselton Chevrolet in East Rochester. They



carved a hole in the driver's door large enough for an arm to get through for easy access to the suction hose. They also cut the car's roofline in half; gutted the back of the car—including the trunk, back seats and rear windows—to the car's subfloor, leaving the fenders and rear bumpers intact; and mounted the existing, retrofitted vacuum unit to a custom-made framework on the subfloor.

In addition, an insulated panel between the front seat and the vacuum motor reduces outside noise for the driver.

"There were no blueprints or drawings. It was, 'Oh we'll start here and see where it takes us,'" Paul Pfenninger, auto mechanic at MCC, said about retrofitting the campus-owned vehicle with the help of staff horticulturist Greg Nickason. They helped solidify the design concept after Fess shared his vision with them.

"We didn't compromise the strength of the car. From a mechanical standpoint, it's a lot better than the old equipment. It doesn't require as much service. Parts aren't breaking down as often," Pfenninger said. "The tires on the old equipment are not designed for roadway use. We were changing tires every 6-8 weeks and changing axles three times a year."

An electric start on the 13-horsepower vacuum motor turns on the unit. Connected to the motor, the 7-foot suction hose protrudes over the driver side of the vehicle and features a handle grip within the driver's reach. The handle is kept in place with a sophisticated network of elastic cords, chains, metal bars and steel clasps.

Because the hose is flexible, the driver can easily maneuver it to pick up trash along curbs. The hose is wide and powerful enough to pull in wet leaves, glass bottles, unopened soda cans, plastic milk jugs and empty oil cans. Shredded or crushed debris is forced out through a discharge chute into a 50-cubic-foot covered metal receptacle, manufactured by Facilities workers. The container design makes

it a breeze to empty the collected trash: The driver presses a toggle switch in the vehicle to activate a lift system and walks back to open the receptacle door. A front loader sits behind it to catch the debris and deposit it into a larger garbage bin.

The capacity of the metal receptacle is large enough to hold 4 days worth of trash.

"You can't buy it like that. They don't sell them in boxes. We made all this stuff on our own," Fess said about the container.

Michael Wichtowski, the main operator of the car, hopes the vehicle will last another 100,000 miles. Ten other people, who also spend 2-3 hours a day picking up trash on campus, use campus-owned golf carts to do their job. Garbage pickup accounts for one-third of the crew's daily workload.

"The new vehicle is user-friendly; it makes the route a lot quicker to do. And it has heat for the winter," Wichtowski said with a smile, a stark contrast to how he felt last winter, when he'd come in from his shift with frozen feet and his body covered with grime. "With this vehicle, the dust stays outside." ■

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