

GREENSMASTER® 1000

Today's golfers are relentlessly attentive to the playability of your greens. They anticipate highly manicured greens that offer the smoothest playing surface to facilitate a faster, truer ball roll.

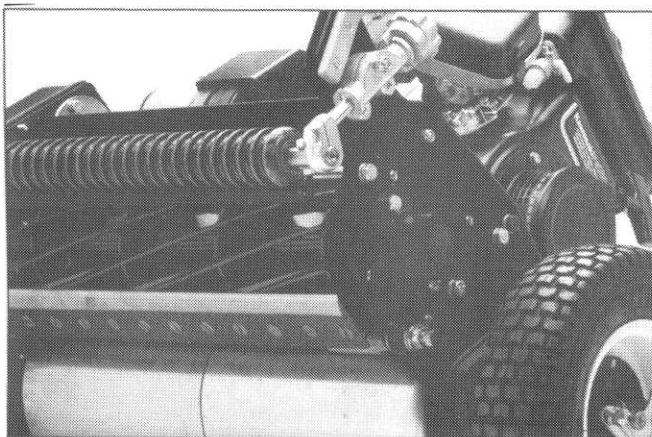
The Greensmaster® 1000 delivers these results and more.

Superior Cutting Performance Features...

The Greensmaster 1000 exclusively equips an 11 blade reel with a fractional .166" clip rate for the smoothest, most uniform cut. A tournament quality bedknife is standard, too, and is optimally positioned to ensure maximized cutting efficiency. To amplify these superb cut qualities, an optional micro-cut bedknife serves a low 5/64" effective height of cut. All together, to achieve praiseworthy, truer greens.

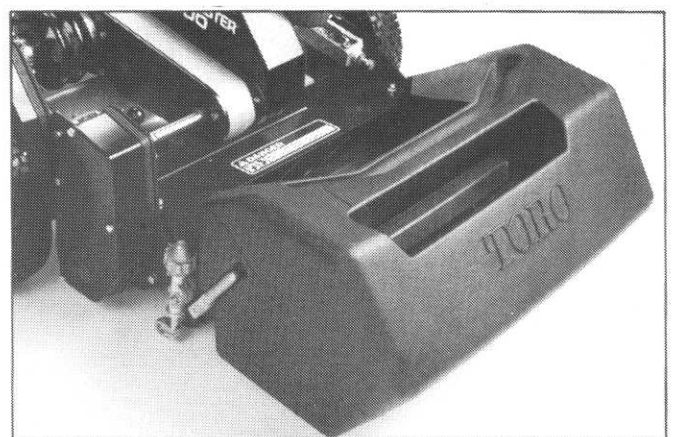
Smooth, Straight Line Traction.

Reinforcing the Greensmaster's smooth performance, is a dimple-free, rust-free aluminum direct drive drum. Our traction drum doesn't require a tread-type surface because there's sufficient clearance between the ground and bedknife to avoid dragging and the need for added traction. Our smooth surface, split with a differential, makes it easy to turn, diminishes scuffing and empowers straight line tracking like no other mower.



Grass Collection You Can Count On.

Toro's aerodynamic grass basket incorporates a patent pending design which precisely controls the flow of air and grass to ensure the clippings stay in the basket, evenly distributed. It's mounted on horn brackets for quick and easy emptying. With the Greensmaster 1000 your turf stays cleaner, healthier, free of debris.



New Program Insures Fuel Tanks On Golf Courses

Why should golf courses have to worry about insuring underground fuel storage tanks?

"Because they are an uninsured liability...and because it's the law," says Richard L. Shanks, president of Financial Guardian of Kansas City.

Financial Guardian worked in cooperation with the Golf Course Superintendents Association of America (GCSAA) to develop the only insurance program that specifically covers pollution resulting from underground and above ground fuel tanks on golf courses.

Coverage under the new program actually exceeds the U.S. Environmental Protection Agency's financial responsibility standards that require owners of tanks to prove that they can pay for the costs of a leak.

According to Tom Akins, GCSAA government relations manager, the U.S. golf community had "few, if any, options that would help courses meet the October 1990 deadline for financial responsibility."

The GCSAA-sponsored program "puts golf courses into compliance with the law and also fills a real liability void," Akins says.

As required by federal law, the policy covers clean-up costs and third-party liability for each pollution incident up to \$500,000 and all incidents up to \$1 million annually.

Furthermore, the policy also provides \$250,000 annually for legal defense costs arising from a pollution incident.

"Because of the lower risks associated with these golf course tanks, we were able to build a lot of nice 'extras' into the program and still make it very affordable for golf courses," Shanks says.

The GCSAA tank insurance is provided by Employers Reinsurance Corporation (rated A+ XII by A.M. Best), one of the nation's largest reinsurers. The program will mesh with any golf course's existing general liability coverage. To obtain details or an application, contact the Pollution Liability Department at Financial Guardian at 800/727-0250.



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Athletic Pro and Athletic Pro II	For athletic turf.	Well suited for new seeding or overseeding. Fast establishing, traffic tolerant, rapid recovery. Both provide good footing.
Boulevard Mix	Any area with high pH (roadsides, sidewalks, boulevards, alkaline soils, etc.).	Contains 'Fults' and Dawson red fescue for beautiful salt-tolerant turf. Performs at low to high fertility levels.
Landscape Pro Mix	School grounds, cemeteries, golf course roughs, home lawns.	Establishes fast. Adapts to broad range of conditions and management levels. Low to moderate fertility needs.
Overseeder II Mix	Fairways, tees, athletic fields.	Rapid germination and establishment. Withstands heavy traffic and resists diseases. Penetrates compacted soils.
Medalist North Mix	Fairways, tees, cart paths, wear areas.	Quality turf for high traffic areas. Clean mowing and disease resistant.
Premium Sod Blend	Commercial sod production.	Exceptional dark green color. Tolerates light shade. Superior disease resistance. Rapid sod producer.
Renovator Pro Mix	Problem solver for heavy traffic areas (athletic fields, golf tees, and fairways).	Penetrates compacted soils and combats <i>Poa annua</i> . Adaptable to most geographic regions.
Medalist Brand Overseeding Products	Winter overseeding of dormant bermudagrass.	Establishes rapidly and evenly. Tolerates traffic while providing a superior putting surface. Smooth spring transition.



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- ★ Micronutrients and Iron ★
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- ★ Long lasting ★
- ★ Conditions the soil ★
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MGCSA EDUCATION COMMITTEE MEMBERS from left, are Jim Nicol, Bunker Hills; Kevin Clunis, Stillwater, chairman, and Joe Moris, Tartan Park.



CHECKING LAFAYETTE'S COURSE are John Harris, Lafayette, at the wheel, and Chris Hague, Hazeltine.



AMONG THE SPEAKERS were, from left, Dr. Don White, University of Minnesota; Warren Rebholz, executive director of the Minnesota Golf Association, and Dr. Martin Petrovic, Cornell University.



CHATTING with Don Sellinger, left, Bailey Nurseries, is Leroy Young, MTI.



REVIEWING IDEAS are Bill Johnson, Edina CC, left, and Steve Schumacher, Hastings CC.



VISITING with DR. J. Stephen Hazel, right, who spoke at the GCSAA Seminar on March 19-20, also at Lafayette, is Larry Mueller, Minnesota Valley. Forty persons attended.

Storage Facility Suggestions

- **Keep all pesticides out of the reach of children,** pets, livestock, and irresponsible people. Store pesticides in a locked secure place such as a separate building or storage room. Consider fencing around and in the storage building to provide protection from theft and increase safety.

- **Consider soil and land surface characteristics** when constructing a storage facility to prevent contamination of surface or groundwater by drainage, runoff or leaching. Locate your storage area where water damage (flooding) is unlikely to occur. Keep it downwind and downhill from sensitive areas such as houses, play areas, gardens and ponds. Locate the facility a safe distance away from wells.

- **It is preferable to have a separate building** for pesticide storage. If it is necessary for the pesticide storage to be a part of a building used for other purposes, the storage area should be on the ground floor. Offices should not be located in the building or area.

- **Within the storage area,** separate pesticides by group (herbicides, insecticides, etc.) to prevent accidental misuse or contamination. Store pesticides away from food, feed, potable water supplies, veterinary supplies, seeds and protective equipment. This prevents contamination from fumes, dust or spills.

- **Ventilate the storage area** and keep it relatively free from temperature extremes. Very high or low temperatures can cause pesticide deterioration. Generally, pesticides should be stored at temperatures above 40 degrees F and below 90 degrees F. Never place pesticide containers in front of windows. Humidity should be kept low to prevent lumping or degradation of powder formulations and to reduce corrosion of metal containers.

- **Exhaust fans directed in the outside reduce** the temperature and dust or fume concentrations. Fans should provide three to six air changes per hour. Large storage areas, when occupied, may require up to 20 air exchanges per hour.

- **Use fire-resistant building materials.** A sealed cement floor is the best. Seal the walls and floor with a substance such as epoxy paint to prevent absorption of spilled pesticides.

- **Explosion-proof electrical wiring, switches and outlets** may be required depending on the size, location, materials stored and the type of facility.

- **Sink or showers are needed for clean-up.** Drains that may contain pesticide solutions from clean-up, mixing or maintenance operations must not connect to sewer systems or be openly discharged. Water that contains pesticide solution should be stored temporarily in holding tanks until it can be used as a dilutant for the next spray of similar materials or disposed of properly.

- **Post highly-visible, weather-proof warning signs** on walls, doors or windows to indicate to anyone entering the facility that pesticides are stored there. "No Smoking" signs should be posted.

- **Store liquid formulations and small containers** of dry formulations on metal shelving because it does not absorb spilled pesticides and is easier to clean than other surfaces.

- **Store glass containers under cool conditions** on lower shelves. Too much heat can break the container or cause it to explode.

- **Containers should not extend beyond shelving** where they could be bumped or knocked off. Place larger metal drums and non-metallic containers on pallets.

- **Store pesticides only in their original labeled** containers to minimize the potential for accidents. Pesticide containers should be marked with the date of purchase to ensure that the oldest container is used up first. This practice will help ensure that pesticides are used within their shelf life.

- **Consult pesticide labels** for special storage instructions.

- **Have clean-up materials and equipment** (kitty litter, sawdust or other absorbent material, plastic-lined containers, small shovel, broom, dustpan, etc.) readily available. A fire extinguisher approved for chemical fires, first aid equipment and emergency telephone numbers should all be easily accessible. Install smoke detectors, alarms or sprinklers as needed.

- **Give local fire department a floor plan** showing the location, names and amounts of pesticides stored.

The following information should be kept at the storage area and your home (for use after hours):

1) A list of emergency phone numbers:

- Police
- Fire
- Poison control center
- Pollution Emergency Alerting System
- DNR Waste Management Division
- A spill clean-up company

2) An inventory of pesticides

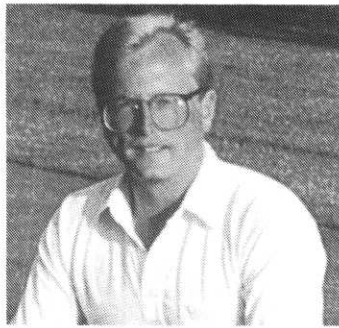
3) Material Safety Data Sheets (MSDS) for each pesticide on site

4) A map of the building floor plan showing the location of pesticides

5) A site plan indicating building sewers, wells, direction of runoff and other environmental hazards.

For more information write or call
Art Selder, Ag Engineer
West Virginia University - Extension Service
Morgantown, WV 26505
(304) 293-5539

It Is The Law!



John K. MacKenzie, Jr.
North Oaks

It is the law! We, as responsible golf course superintendents, must educate our green staff and all new employees about the Minnesota Right-to-Know law. However, sometimes it is just not convenient to spend time training new personnel about the hazards associated with chemical use on the golf course.

At North Oaks Golf Course, we have composed a program which instructs new and existing employees about the Right-to-Know law, Material Safety Data Sheets (MSDS), golf course etiquette and maintenance practices and policies. The employee is then given a very comprehensive test, detailing important ideas. Although time consuming at first, all of this information is self taught, eliminating the need and expense of one to one training.

The program starts during the off season with the compilation of club policies and practices and MSDS forms for chemicals in the inventory and those which will be used in the future. An explanation of the Right-to-Know law is also added. Other useful information such as a map of the course, the maintenance building floor plan and the location of fire extinguishers is obtained. Using a copy machine, we mass produce enough booklets so each of the crew members has his or her own issue, as well as several extra. We do not alphabetize the MSDS forms at this time.

The next process is actually fun, the drafting of an exam which thoroughly tests the employees' knowledge of the material presented. Questions like, What is the flashpoint of banner? or What is the LD50 of Aliete or What is the emergency response phone number for Phenyl Murcurac Acetate? Because this is an open book format, the employee is forced to learn how to use the MSDS sheets and the policy booklet.

When we distribute the package of information, the new or existing crew member is required to read the material, alphabetize the MSDS forms, write and index for the MSDS forms and finally take the written exam and pass with a score of no less than 100%. He or she then signs the test and turns it in to be kept on file for the next five years as proof that they have completed a comprehensive Right-to-Know training program. We also distribute booklets to community groups and emergency response teams, thus meeting the requirements of the Community Right-to-Know law.

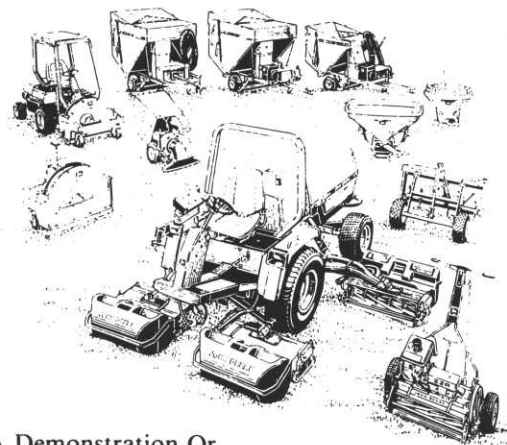
The upcoming season will be the second year we have provided the self-taught Right-to-Know program. We change the test annually and any additional MSDS forms are provided when we expand our chemical arsenal. The self education format reduces the expense of one on one education. Also, by training our staff we have decreased our exposure to accidents and worker compensation suits. And finally, by forcing our crew members to read, use and acknowledge their understanding of the information provided, our club has complied with the law.

—John K. MacKenzie Jr., CGCS

Remaining 1990 MGCSA Meeting Sites

Date	Site	Event
May 15	Oak Glen Country Club	
June 11	Stone Brooke Golf Club	
July 9	Northfield Golf Club	
August 13	Hazeltine National Golf Club	MGCSA Championship
Sept. 24	Dellwood Hills Golf Club	Stodola Scramble
October 8	Baker Park Golf Club	

WE LOOK FORWARD TO WORKING WITH YOU THIS COMING YEAR



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- New Richmond
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Wis. 715-246-6565

Underground Storage Tanks

WHAT DO YOU HAVE TO DO?

Minimum Requirements

You must have Leak Detection, Corrosion Protection, and Spill/Overfill Prevention. 
 For **WHEN** you have to add to your tank system, see the chart on the right.

LEAK DETECTION							
NEW TANKS 2 Choices	<ul style="list-style-type: none"> • Monthly Monitoring* • Monthly Inventory Control and Tank Tightness Testing Every 5 Years (You can only use this choice for 10 years after installation.) 						
EXISTING TANKS 3 Choices <i>The chart at the bottom of the next page displays these choices.</i>	<ul style="list-style-type: none"> • Monthly Monitoring* • Monthly Inventory Control and Annual Tank Tightness Testing (This choice can only be used until December 1998.) • Monthly Inventory Control and Tank Tightness Testing Every 5 Years. (This choice can only be used for 10 years after adding corrosion protection and spill/overfill prevention or until December 1998, whichever date is later.) 						
NEW & EXISTING PRESSURIZED PIPING Choice of one from each set	<ul style="list-style-type: none"> • Automatic Flow Restrictor • Automatic Shutoff Device — and — • Continuous Alarm System • Annual Line Testing • Monthly Monitoring* (except automatic tank gauging) 						
NEW & EXISTING SUCTION PIPING 3 Choices	<ul style="list-style-type: none"> • Monthly Monitoring* (except automatic tank gauging) • Line Testing Every 3 Years • No Requirements (if the system has specific characteristics) 						
CORROSION PROTECTION							
NEW TANKS 3 Choices	<ul style="list-style-type: none"> • Coated and Cathodically Protected Steel • Fiberglass • Steel Tank clad with Fiberglass 						
EXISTING TANKS 4 Choices	<ul style="list-style-type: none"> • Same Options as for New Tanks • Add Cathodic Protection System • Interior Lining • Interior Lining and Cathodic Protection 						
NEW PIPING 2 Choices	<ul style="list-style-type: none"> • Coated and Cathodically Protected Steel • Fiberglass 						
EXISTING PIPING 2 Choices	<ul style="list-style-type: none"> • Same Options as for New Piping • Cathodically Protected Steel 						
SPILL/OVERFILL PREVENTION							
ALL TANKS	<ul style="list-style-type: none"> • Catchment Basins — and — • Automatic Shutoff Devices -or- • Overfill Alarms -or- • Ball Float Valves 						
* Monthly Monitoring includes: <table style="display: inline-table; vertical-align: top; margin-left: 20px;"> <tr> <td style="padding-right: 20px;">Automatic Tank Gauging</td> <td>Ground-Water Monitoring</td> </tr> <tr> <td style="padding-right: 20px;">Vapor Monitoring</td> <td>Other Approved Methods</td> </tr> <tr> <td style="padding-right: 20px;">Interstitial Monitoring</td> <td></td> </tr> </table>		Automatic Tank Gauging	Ground-Water Monitoring	Vapor Monitoring	Other Approved Methods	Interstitial Monitoring	
Automatic Tank Gauging	Ground-Water Monitoring						
Vapor Monitoring	Other Approved Methods						
Interstitial Monitoring							

WHEN DO YOU HAVE TO ACT?

Important Deadline

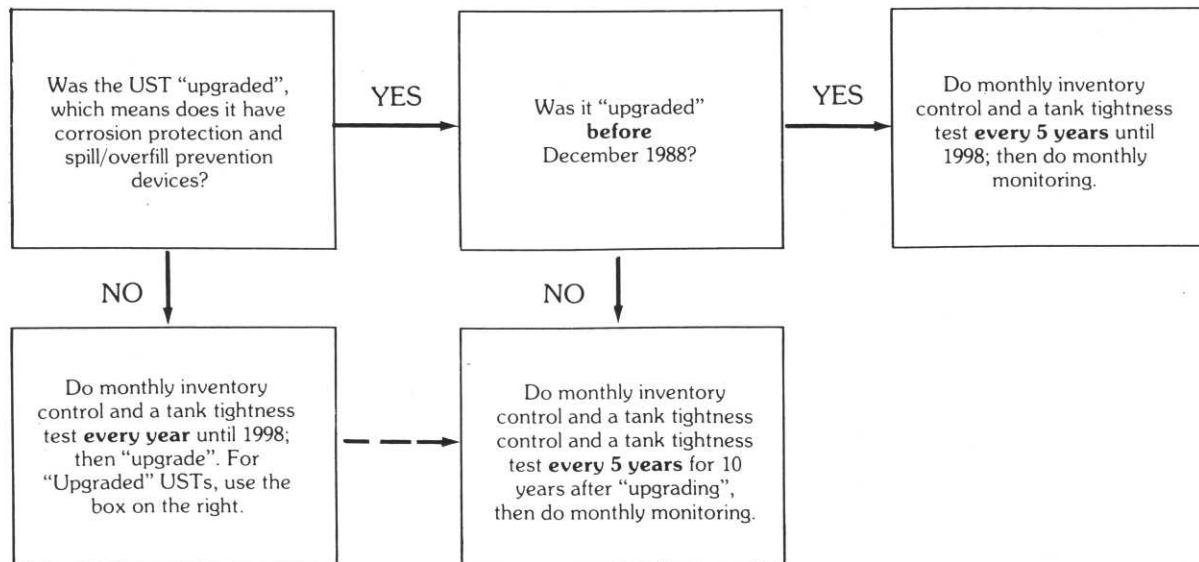
← For **WHAT** you have to do, see the chart on the left.

TYPE OF TANK & PIPING	LEAK DETECTION	CORROSION PROTECTION	SPILL/OVERFILL PREVENTION
New Tanks and Piping*	At installation	At installation	At installation
Existing Tanks** Installed: Before 1965 or unknown 1965 - 1969 1970 - 1974 1975 - 1979 1980 - December 1988	By No Later Than: December 1989 December 1990 December 1991 December 1992 December 1993	} December 1998	} December 1998
Existing Piping** Pressurized Suction	December 1990 Same as existing tanks	December 1998 December 1998	Does not apply Does not apply

* New tanks and piping are those installed after December 1988
 ** Existing tanks and piping are those installed before December 1988

IF YOU CHOOSE TANK TIGHTNESS TESTING AT EXISTING USTs...

If you don't use monthly monitoring at existing USTs, you must use a combination of periodic tank tightness tests and monthly inventory control. This combined method can only be used for a few years, as the chart below displays.



GREEN CLIPPINGS

The MGCSA Research Committee has completed a survey entitled "**Winter Preparation.**" Its purpose is to identify maintenance practices that are beneficial to turfgrass survival over winter. Those of you who complete this survey will be eligible for one of four \$50 cash prizes. You should receive the survey in a separate mailing in May. Watch for it... Congratulations to the following for joining the Golf Course Superintendents Association of America (GCSAA): **Gerald Dale**, Class A, Coffee Mill Golf & Country Club, Wabasha; **David Stromberg**, student, Anoka, and **Michael Nelson**, student, St. Paul....**Be on the lookout for Lyme Disease.** Spring and early summer is the peak period for disease incidents. Everyone is urged to check themselves, children and pets daily

when they have been active outdoors. Studies have shown that as many as 65% of the cases had picked up the disease on their own lawn....**Scholarship applications** are available from any board member. Chairman Rick Frederickson says there will be \$3,000 in scholarships awarded this year....**John Staver**, Virginia, recently was transferred from the Sectional Affairs Committee of the United States Golf Association to the USGA's Green Section Committee. He cited his interest in turfgrass management and research as his reasons for requesting the change....**William H. Bengeyfield**, national director of the USGA Green Section since 1982, retired on March 31. His successor will be named in the near future....**The Minnesota Golf Association** has moved into handsome, new, expanded quarters across the hall from its previous location. Room number now is 405..**Paul Douglas**, KARE-TV (Ch. 11) weatherman, will be the principal speaker at the May 15 meeting of the MGCSA at Oak Glen. Host superintendent is **Pete Morgan**. Host company is **North Star Turf**.

New Positions

Pat Walton, Superintendent, Deer Run, Victoria, to Superintendent, Rolling Green CC, Hamel.

John Katterheinrich, Lost Tree, North Palm Beach, Fla., to Superintendent, Interlachen Country Club, Edina.

Bill Larson, Superintendent, Hudson, Wis., to Superintendent, Town & Country, St. Paul.

Tim George, Superintendent, Headwaters GC, Park Rapids, to Superintendent, Deer Run, Victoria.

Greg Spencer, Assistant Superintendent to Superintendent, Brookview GC, Golden Valley.

Mark Fossum, Assistant Superintendent, Braemar GC, to Superintendent, Headwaters GC, Park Rapids.

* * * *

NOTE

If you've moved and we haven't heard about it, please send this information to Hole Notes, P.O. Box 617, Wayzata, Minn. 55391. Thank you.

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A few words of appreciation for the first person on the course every morning. . . **THE GOLF COURSE SUPERINTENDENT**

A local superintendent says the air around his golf course reminds him of a police dog's breath. Also says he has more empathy with Iran now that city officials turned off his irrigation water.

One Minnesota superintendent deserves a special pat on the back. . .

GEORGE OSTLER

. . . has labored through 43 years of this type of problem.

George has finished his 34th year as superintendent at Hillcrest Golf Club and also had 9 years with Midland Hills Golf Club before that.

CONGRATULATIONS, GEORGE!!

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St. Paul, MN 55120



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