



Form No. 3429-967 Rev B

Count on it.

Operator's Manual

Tiller

TXL 2000 Tool Carrier

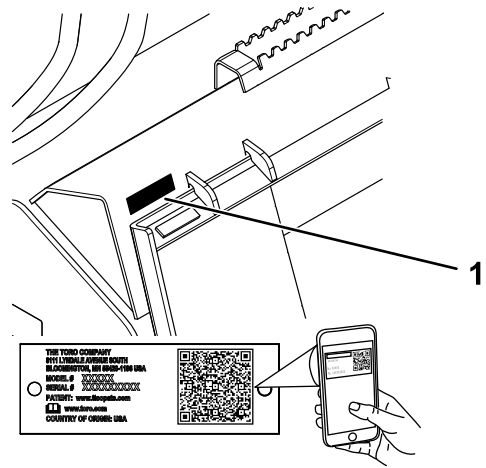
Model No. 22542—Serial No. 318000001 and Up



⚠ WARNING

CALIFORNIA Proposition 65 Warning

Use of this product may cause exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.



g271842

Figure 1

1. Model and serial number location

Model No. _____

Serial No. _____

This manual identifies potential hazards and has safety messages identified by the safety-alert symbol (Figure 2), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



g000502

Figure 2

1. Safety-alert symbol

This manual also uses 2 words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

Introduction

This tiller is intended to be used on a Toro tool carrier for breaking through hard soil conditions on residential or commercial properties. Using this product for purposes other than its intended use could prove dangerous to you and bystanders.

Read this information carefully to learn how to operate and maintain your product properly and to avoid injury and product damage. You are responsible for operating the product properly and safely.

Visit www.Toro.com for product safety and operation training materials, accessory information, help finding a dealer, or to register your product

Whenever you need service, genuine Toro parts, or additional information, contact an Authorized Service Dealer or Toro Customer Service and have the model and serial numbers of your product ready. Figure 1 identifies the location of the model and serial numbers on the product. Write the numbers in the space provided.

Important: With your mobile device, you can scan the QR code on the serial number decal (if equipped) to access warranty, parts, and other product information.

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Safety

⚠ DANGER

There may be buried utility lines in the work area. Digging into them may cause a shock or an explosion.

Have the property or work area marked for buried lines and do not dig in marked areas. Contact your local marking service or utility company to have the property marked (for example, in the US, call 811 or in Australia, call 1100 for the nationwide marking service).

General Safety

Always follow all safety instructions to avoid serious injury or death.

- **Do not transport an attachment with the arms raised or extended;** always transport the attachment close to the ground, with the loader arms retracted; refer to [Transport Position \(page 7\)](#).
- Have the property or work area marked for buried lines and other objects, and do not dig in marked areas.
- Read and understand the content of this *Operator's Manual* before starting the engine.
- Use your full attention while operating the machine. Do not engage in any activity that causes distractions; otherwise, injury or property damage may occur.
- Never allow children or untrained people to operate the machine.
- Keep your hands and feet away from the moving components and attachments.
- Do not operate the machine without the guards and other safety protective devices in place and working on the machine.
- Keep bystanders and pets a safe distance away from the machine.
- Stop the machine, shut off the engine, and remove the key before servicing, fueling, or unclogging the machine.

Improperly using or maintaining this machine can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety-alert symbol ⚠, which means Caution, Warning, or Danger—personal safety instruction. Failure to comply with these instructions may result in personal injury or death.

You can find additional safety information where needed throughout this *Operator's Manual*.

Slope Safety

- **Operate the machine up and down slopes with the heavy end of the machine uphill.** Weight distribution changes with attachments. This attachment makes the front of machine the heavy end.
- **Keep the attachment in the lowered position with the loader arms retracted when on slopes.** Raising the attachment or extending the loader arms on a slope affects the stability of the machine.
- Slopes are a major factor related to loss of control and tip-over accidents, which can result in severe injury or death. Operating the machine on any slope or uneven terrain requires extra caution.
- Establish your own procedures and rules for operating on slopes. These procedures must include surveying the site to determine which slopes are safe for machine operation. Always use common sense and good judgment when performing this survey.
- Slow down and use extra care on hillsides. Ground conditions can affect the stability of the machine.
- Avoid starting or stopping on a slope. If the machine loses traction, proceed slowly, straight down the slope.
- Avoid turning on slopes. If you must turn, turn slowly and keep the heavy end of the machine uphill.
- Keep all movements on slopes slow and gradual. Do not make sudden changes in speed or direction.
- If you feel uneasy operating the machine on a slope, do not do it.
- Watch for holes, ruts, or bumps, as uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Use caution when operating on wet surfaces. Reduced traction could cause sliding.
- Do not operate the machine near drop-offs, ditches, embankments, or bodies of water. The machine could suddenly roll over if a wheel or track goes over the edge or the edge caves in. Maintain a safe distance between the machine and any hazard.
- Do not remove or add attachments on a slope.
- Do not park the machine on a hillside or slope.

Tiller Safety

- Keep bystanders at least 15 m (50 feet) away from the machine.
- Run the tiller so that debris is thrown away from the traction unit.
- Keep away from the rotating tines while operating the tiller.
- After striking a foreign object, shut off the engine, remove the key, thoroughly inspect the attachment for any damage, and repair the damage before starting and operating the attachment.
- Always lower the attachment each time you shut off the machine or leave the operating position.

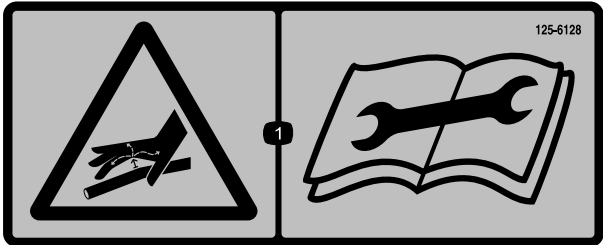
Maintenance and Storage Safety

- Check fasteners at frequent intervals for proper tightness to ensure that the equipment is in safe operating condition.
- Refer to the *Operator's Manual* for important details if you store the attachment for an extended period of time
- Maintain or replace safety and instruction labels, as necessary.

Safety and Instructional Decals



Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



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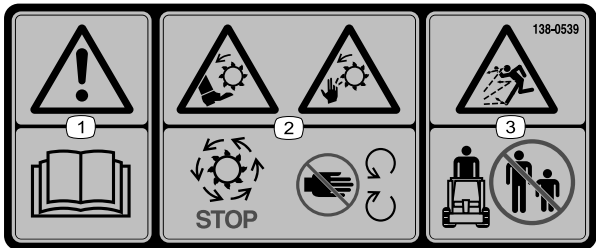
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- 1. High pressure fluid hazard, injection into the body—read the *Operator’s Manual* before performing maintenance.



133-8061

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138-0539

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- 1. Warning—read the *Operator’s Manual*.
- 2. Cutting hazard of the foot, tiller; cutting/dismemberment hazard of the hand, tiller—wait for all moving parts to stop; stay away from moving parts.
- 3. Thrown object hazard—keep bystanders away.

Product Overview

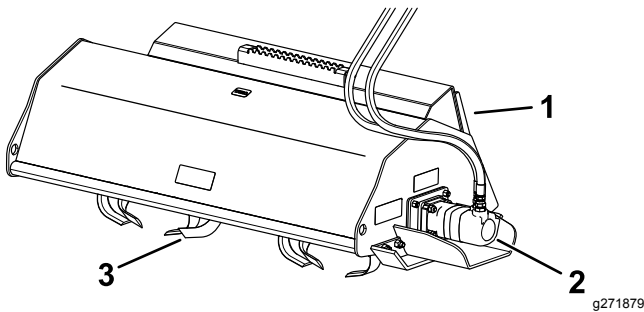


Figure 3

- 1. Attachment-mount plate
- 2. Motor
- 3. Tine

Specifications

Note: Specifications and design are subject to change without notice.

Overall width	180 cm (71 inches)
Tilling width	137 cm (54 inches)
Overall depth	81 cm (32 inches)
Tilling depth	15 cm (6 inches)
Height	71 cm (28 inches)
Rotor diameter	56 cm (22 inches)
Weight	387 kg (854 lb)
Number of tines	28

To ensure optimum performance and continued safety certification of the machine, use only genuine Toro replacement parts and accessories. Replacement parts and accessories made by other manufacturers could be dangerous, and such use could void the product warranty.

Operation

Determine the left and right sides of the machine from the normal operating position.

Installing and Removing the Attachment

Refer to the *Operator's Manual* for the traction unit for the installation and removal procedure.

Important: Before installing the attachment, position the machine on a level surface, ensure that the mount plates are free of any dirt or debris, and ensure that the pins rotate freely. If the pins do not rotate freely, grease them.

Note: Always use the traction unit to lift and move the attachment.

⚠ WARNING

If you do not fully seat the quick-attach pins through the attachment mount plate, the attachment could fall off the machine, crushing you or bystanders.

Ensure that the quick-attach pins are fully seated in the attachment mount plate.

⚠ WARNING

Hydraulic fluid escaping under pressure can penetrate skin and cause injury. Fluid injected into the skin must be surgically removed within a few hours by a doctor familiar with this form of injury; otherwise, gangrene may result.

- Ensure that all hydraulic-fluid hoses and lines are in good condition and all hydraulic connections and fittings are tight before applying pressure to the hydraulic system.
- Keep your body and hands away from pinhole leaks or nozzles that eject high-pressure hydraulic fluid.
- Use cardboard or paper to find hydraulic leaks; never use your hands.

⚠ CAUTION

Hydraulic couplers, hydraulic lines/valves, and hydraulic fluid may be hot. If you contact hot components, you may be burned.





- Wear gloves when operating the hydraulic couplers.
- Allow the machine to cool before touching hydraulic components.
- Do not touch hydraulic fluid spills.

Starting the Tiller

1. Start the traction unit engine and set the throttle to HIGH IDLE.
2. Engage the auxiliary hydraulics.
3. Slowly lower the tiller to the ground.
4. Move the traction unit forward or backward as desired.

Note: For the rotor to operate effectively, rotate it in the same direction that the traction unit is moving. The direction of the rotor rotation is controlled by the traction unit hydraulic controls; refer to the following table.

Important: Disengage the auxiliary hydraulics and wait for the rotor to stop completely before changing the rotor direction.

Rotor Direction	Travel Direction
	
	

Transport Position

When transporting the attachment, keep it as close to the ground as possible, no more than 15 cm (6 inches) above the lowest position. Tilt it rearward.

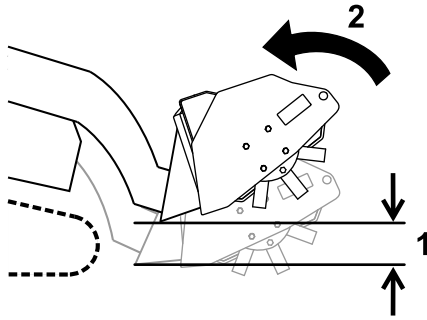


Figure 4

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1. No more than 15 cm (6 inches) above the lowest position
 2. Tilt the attachment rearward.
-

Operating Tips

- Clean the area of trash, branches, and rocks before tilling to prevent equipment damage.
- Mow and remove tall grass and weeds before tilling to minimize grass and weeds wrapping around the rotor.
- Always begin tilling with the slowest ground speed possible. Increase speed if conditions permit.
- Always use full throttle (maximum engine speed).
- If the rotor stalls, slow down the travel speed or decrease the rotor depth by raising the rotor
- Do not till under wet conditions; soil stuck to the rotor and teeth decreases performance.
- You may need to make multiple passes when working in sod or compacted soil.
- Till in long, straight passes. Do not make turns while the tiller is in the ground, as equipment damage may result.
- Avoid excessive tilling of the soil, as finely tilled soil does not absorb moisture easily and puddles of water may form.
- When tilling hard packed, very dry, or virgin soil, raise the tiller so only the very top of the soil is penetrated. On succeeding passes the depth may be lowered.
- Run the tiller so that the dirt is thrown away from you.
- Wait for the tiller to stop before changing the rotation direction.
- If a rock or other obstruction gets into the tiller tines, reverse the rotation direction to dislodge it.

Maintenance

Determine the left and right sides of the machine from the normal operating position.

⚠ CAUTION

If you leave the key in the switch, someone could accidentally start the engine and seriously injure you or other bystanders.

Remove the key from the switch before you perform any maintenance.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
Before each use or daily	<ul style="list-style-type: none">• Grease the bearings (immediately after every washing).• Check the tines and tine bolts (replace as required).• Check the hydraulic lines for leaks, loose fittings, kinked lines, loose mounting supports, wear, weather, and chemical deterioration.
Before storage	<ul style="list-style-type: none">• Grease the bearings

Greasing the Tiller

Service Interval: Before each use or daily
(immediately after every washing).

Before storage

Grease immediately after every washing.

Grease Type: General-purpose grease

1. Park the machine on a level surface and disengage the auxiliary hydraulics.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Grease the rotor bearing shown in [Figure 5](#).
4. Wipe up any excess grease.

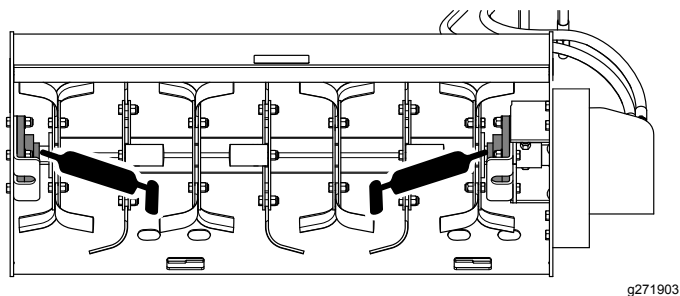


Figure 5

Replacing the Tiller Tines

Service Interval: Before each use or daily—Check the tines and tine bolts (replace as required).

Note: Worn or dull tines degrade the performance of the tiller.

1. Park the machine on a level surface and disengage the auxiliary hydraulics.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Note the direction that the tiller tine is oriented.
4. Remove the bolt (5/8 x 1-3/4 inch), nut (5/8 inch), and tine ([Figure 6](#)).

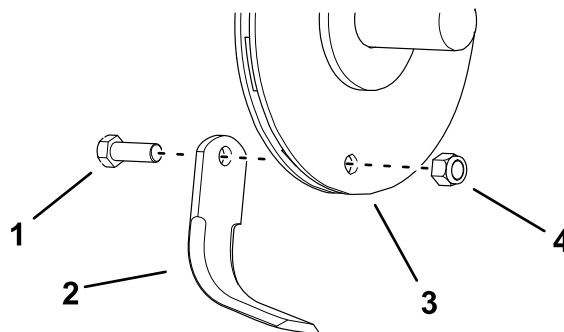


Figure 6

1. Bolt (5/8 x 1-3/4 inch)
2. Tine
3. Nut (5/8 inch)

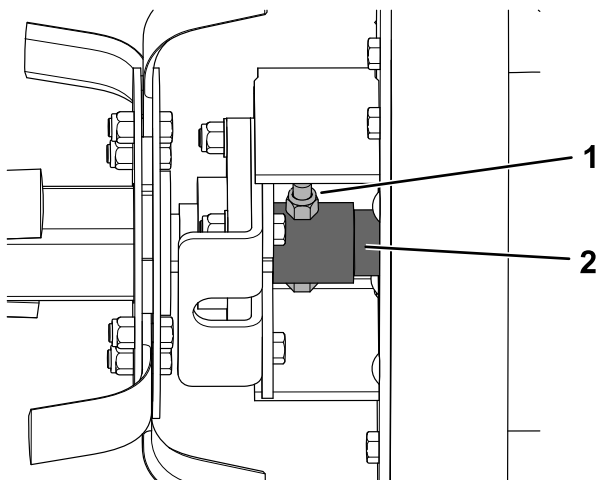
5. Clean dirt and debris from the tine pocket.

6. Install the new tine, orienting it the same direction as the old tine (Figure 6).
7. Torque the bolt to 183 to 223 N·m (135 to 165 ft-lb).

Replacing the Rotor Assembly

Removing the Rotor Assembly

1. Remove the tiller from the traction unit.
2. Use a hoist to lay the tiller back on the attachment plate.
3. Remove the nut (5/8 inch) and bolt (5/8 x 4 inches) securing the drive adapter to the rotor assembly (Figure 7).

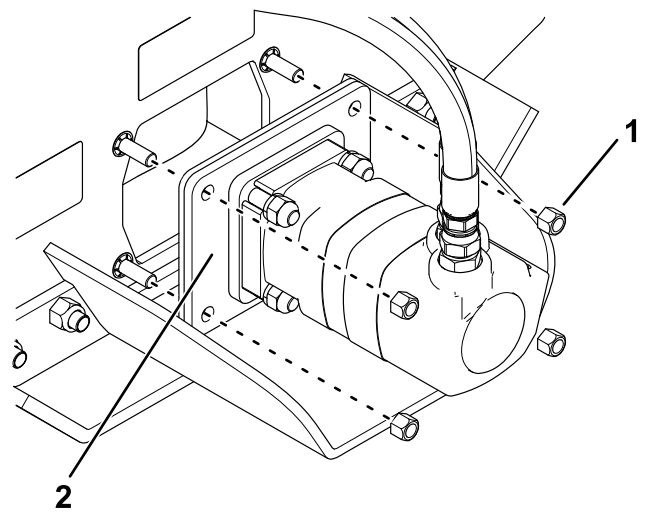


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Figure 7

1. Bolt and nut
2. Drive adapter

4. Remove the 4 nuts (9/16 inch) securing the motor mount (Figure 8). Remove the mount with the motor.

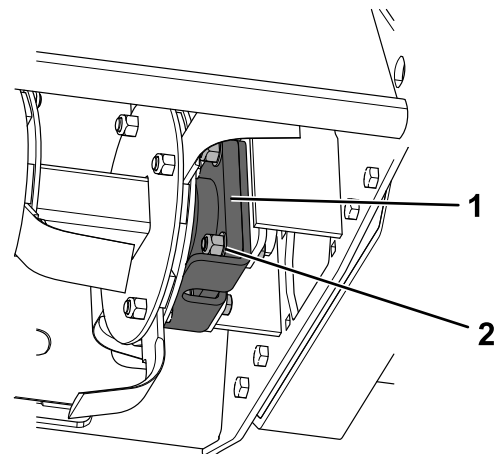


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Figure 8

1. Nut—9/16 inch (4)
2. Motor mount

5. Support the rotor assembly using a hoist and remove the 4 locknuts (5/8 inch), 4 washers, and 4 bolts (5/8 x 2-1/2 inches) securing the bearing guard and bearing on each end of the rotor assembly (Figure 9).



g271907

Figure 9

1. Locknut, washer, and bolt (4)
2. Bearing guard and bearing

6. Remove the rotor assembly.

Installing the Rotor Assembly

1. Install the rotor assembly with the 2 bearing guards and bearings using 4 locknuts (5/8 inch), 4 washers, and 4 bolts (5/8 x 2-1/2 inches) for both sets of guards and bearings (Figure 9). Torque the bolts to 183 to 224 N·m (135 to 165 ft-lb).
2. Using 4 nuts (9/16 inch), install the rotor mount and motor (Figure 8). Torque the nuts to 127 to 157 N·m (94 to 116 ft-lb).
3. Secure the drive adapter to the rotor assembly using a nut (5/8 inch) and bolt (5/8 x 4 inches) as shown in Figure 7. Torque the bolt to 183 to 224 N·m (135 to 165 ft-lb)

Checking the Hydraulic Lines

Service Interval: Before each use or daily

WARNING

Hydraulic fluid escaping under pressure can penetrate skin and cause injury. Fluid injected into the skin must be surgically removed within a few hours by a doctor familiar with this form of injury; otherwise, gangrene may result.

- Keep your body and hands away from pinhole leaks or nozzles that eject high-pressure hydraulic fluid.
- Use cardboard or paper to find hydraulic leaks; never use your hands.

Storage

1. Before long-term storage, wash the attachment with mild detergent and water to remove dirt and grime.
2. Paint all scratched or bare metal surfaces.
Note: Paint is available from your Authorized Service Dealer.
3. Store the attachment in a clean, dry garage or storage area. Cover it to protect it and keep it clean.

Important: Store the tiller on a pallet or concrete. Do not store it on the ground.

Troubleshooting

Problem	Possible Cause	Corrective Action
The tiller does not operate.	<ol style="list-style-type: none"> 1. A hydraulic coupler is not completely connected. 2. One or more hydraulic couplers are damaged. 3. There is an obstruction in a hydraulic hose. 4. The auxiliary valve on the traction unit is not opening. 5. There is an obstruction in the tiller (e.g., rock or root). 6. A drive chain is broken. 7. A drive chain is loose. 8. A hydraulic valve is not working properly. 9. A drive motor is not working properly. 	<ol style="list-style-type: none"> 1. Check and tighten all couplers. 2. Check the couplers and replace any that are damaged. 3. Find and remove the obstruction. 4. Repair the auxiliary valve. 5. Find and remove the obstruction. 6. Repair or replace the chain. 7. Adjust the chain tension. 8. Replace or repair the hydraulic valve. 9. Replace or repair the drive motor.

California Proposition 65 Warning Information

What is this warning?

You may see a product for sale that has a warning label like the following:



WARNING: Cancer and Reproductive Harm—www.p65Warnings.ca.gov.

What is Prop 65?

Prop 65 applies to any company operating in California, selling products in California, or manufacturing products that may be sold in or brought into California. It mandates that the Governor of California maintain and publish a list of chemicals known to cause cancer, birth defects, and/or other reproductive harm. The list, which is updated annually, includes hundreds of chemicals found in many everyday items. The purpose of Prop 65 is to inform the public about exposure to these chemicals.

Prop 65 does not ban the sale of products containing these chemicals but instead requires warnings on any product, product packaging, or literature with the product. Moreover, a Prop 65 warning does not mean that a product is in violation of any product safety standards or requirements. In fact, the California government has clarified that a Prop 65 warning "is not the same as a regulatory decision that a product is 'safe' or 'unsafe.'" Many of these chemicals have been used in everyday products for years without documented harm. For more information, go to <https://oag.ca.gov/prop65/faqs-view-all>.

A Prop 65 warning means that a company has either (1) evaluated the exposure and has concluded that it exceeds the "no significant risk level"; or (2) has chosen to provide a warning based on its understanding about the presence of a listed chemical without attempting to evaluate the exposure.

Does this law apply everywhere?

Prop 65 warnings are required under California law only. These warnings are seen throughout California in a wide range of settings, including but not limited to restaurants, grocery stores, hotels, schools, and hospitals, and on a wide variety of products. Additionally, some online and mail order retailers provide Prop 65 warnings on their websites or in catalogs.

How do the California warnings compare to federal limits?

Prop 65 standards are often more stringent than federal and international standards. There are various substances that require a Prop 65 warning at levels that are far lower than federal action limits. For example, the Prop 65 standard for warnings for lead is 0.5 µg/day, which is well below the federal and international standards.

Why don't all similar products carry the warning?

- Products sold in California require Prop 65 labelling while similar products sold elsewhere do not.
- A company involved in a Prop 65 lawsuit reaching a settlement may be required to use Prop 65 warnings for its products, but other companies making similar products may have no such requirement.
- The enforcement of Prop 65 is inconsistent.
- Companies may elect not to provide warnings because they conclude that they are not required to do so under Prop 65; a lack of warnings for a product does not mean that the product is free of listed chemicals at similar levels.

Why does Toro include this warning?

Toro has chosen to provide consumers with as much information as possible so that they can make informed decisions about the products they buy and use. Toro provides warnings in certain cases based on its knowledge of the presence of one or more listed chemicals without evaluating the level of exposure, as not all the listed chemicals provide exposure limit requirements. While the exposure from Toro products may be negligible or well within the "no significant risk" range, out of an abundance of caution, Toro has elected to provide the Prop 65 warnings. Moreover, if Toro does not provide these warnings, it could be sued by the State of California or by private parties seeking to enforce Prop 65 and subject to substantial penalties.