



Form No. 3460-566 Rev A

**Count on it.**

**Operator's Manual**

**40in Tiller  
Compact Tool Carrier**

Model No. 22445—Serial No. 318000001 and Up

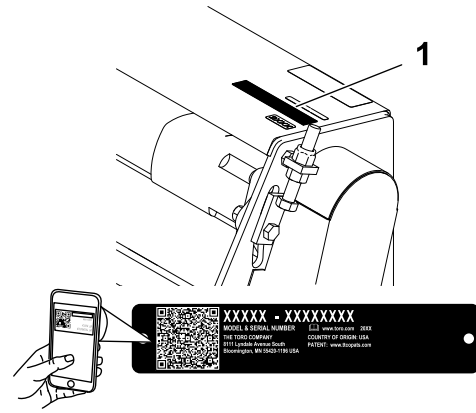


This product complies with all relevant European directives. For details, please see the Declaration of Incorporation (DOI) at the back of this publication.

**⚠ 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.**



**Figure 1**

g327141

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.



**Figure 2**

g000502

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.

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## Introduction

This tiller is intended to be used on a Toro compact 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](http://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 exceed the rated operating capacity, as the machine may become unstable, which may result in loss of control.
- **Do not transport an attachment with the arms raised or extended (if applicable).** Always transport the attachment close to the ground; 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 machine.
- 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 away from the machine.
- Stop the machine, shut off the machine, 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.

## 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.
- Raising or extending (if applicable) the loader arms on a slope affects the stability of the machine. Keep the loader arms in the lowered and retracted position when on slopes..
- 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.
- Evaluate the area to ensure that the ground is stable enough to support the machine.
- Use caution when operating the machine near the following:
  - Drop-offs
  - Ditches
  - Embankments
  - Bodies of water

The machine could suddenly roll over if a 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

- For wheeled machines, do not use the counterweight on the traction unit when using the tiller.
- Keep bystanders at least 15 m (50 ft) 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.

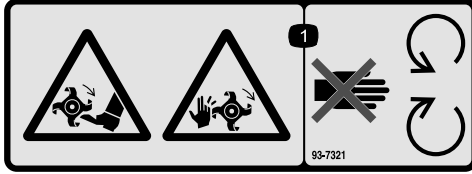
## Maintenance and Storage Safety

- Check fasteners at frequent intervals for proper tightness to ensure that the equipment is in safe operating condition.
- Refer to this *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



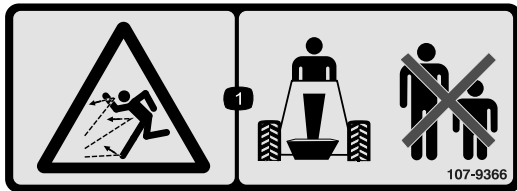
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



93-7321

decal93-7321

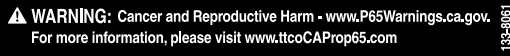
1. Cutting/dismemberment hazard of hands and feet, rotating knives/blades—stay away from moving parts.



107-9366

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1. Thrown object hazard—keep bystanders away from the machine.



133-8061

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# Product Overview

## Specifications

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

Width	120 cm (44 inches)
Tilling Width	102 cm (40 inches)
Length	51 cm (20 inches)
Height	66 cm (26 inches)
Weight	165 kg (363 lb)

## Attachments/Accessories

A selection of Toro approved attachments and accessories is available for use with the machine to enhance and expand its capabilities. Contact your Authorized Service Dealer or authorized Toro distributor or go to [www.Toro.com](http://www.Toro.com) for a list of all approved attachments and accessories.

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 throttle.
2. Engage the auxiliary hydraulics.
3. Slowly lower the tiller to the ground.
4. Move the traction unit forward or backward as desired.

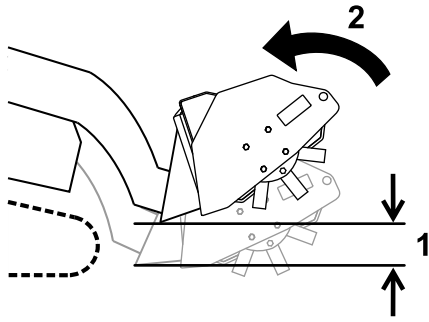
**Note:** For the rotor to operate effectively, rotate it in the same direction that the traction unit is moving. The direction of the rotor rotation is controlled by the traction unit hydraulic controls; refer to the following table.

**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 ground. Tilt it rearward.



g271854

**Figure 3**

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

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## 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.

## Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 5 hours	<ul style="list-style-type: none"> <li>Lubricate the drive chain.</li> <li>Adjust the drive chain tension.</li> </ul>
Before each use or daily	<ul style="list-style-type: none"> <li>Check the tines (replace as required).</li> <li>Check and tighten the tine bolts (replace as required).</li> <li>Check the hydraulic lines for leaks, loose fittings, kinked lines, loose mounting supports, wear, weather, and chemical deterioration.</li> </ul>
Every 25 hours	<ul style="list-style-type: none"> <li>Grease the shaft bearing (immediately after every washing).</li> <li>Lubricate the drive chain.</li> <li>Adjust the drive chain tension.</li> </ul>
Before storage	<ul style="list-style-type: none"> <li>Grease the shaft bearing</li> <li>Lubricate the drive chain.</li> <li>Adjust the drive chain tension.</li> <li>Lubricate the shaft bearing.</li> <li>Paint chipped surfaces.</li> </ul>

### ⚠ 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.

## Greasing the Tiller

**Service Interval:** Every 25 hours—Grease the shaft bearing (immediately after every washing).

Before storage—Grease the shaft bearing

**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. Clean the grease fittings with a rag.

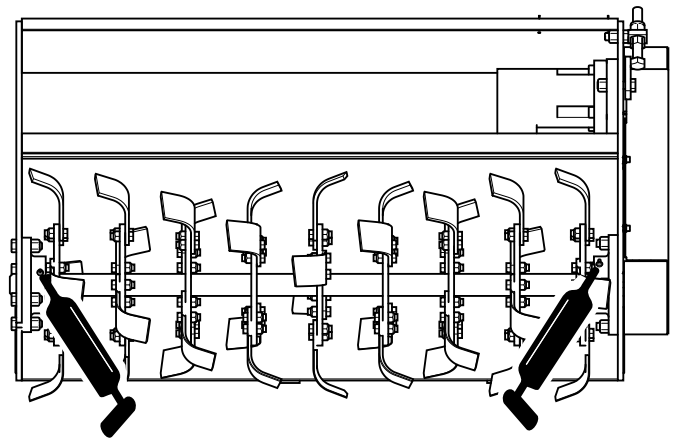


Figure 4

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4. Connect a grease gun to each fitting.
5. Pump grease into the fittings until grease begins to ooze out of the bearings.
6. Wipe up any excess grease.



# Lubricating the Drive Chain

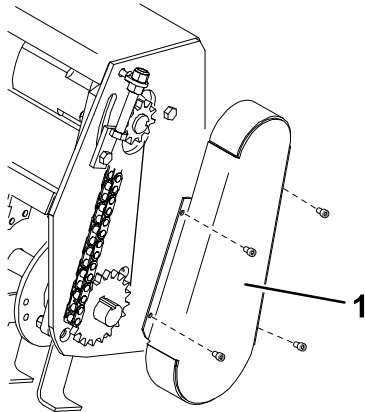
**Service Interval:** After the first 5 hours

Every 25 hours

Before storage

**Lubricant Type:** Commercial chain lube

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. Remove the drive chain cover.



**Figure 5**

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1. Drive chain cover

4. Apply a commercial chain lube onto the chain spans.
5. Install the drive chain cover.

# Adjusting the Drive Chain Tension

**Service Interval:** After the first 5 hours

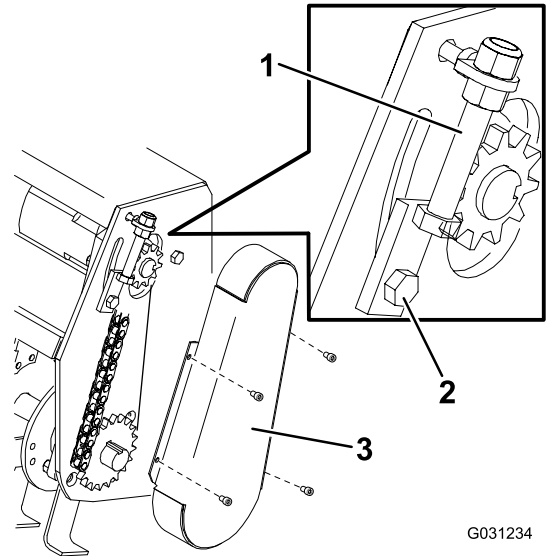
Every 25 hours

Before storage

**Note:** There should be 1 to 2 cm (1/2 to 3/4 inch) slack in the chain, measured midway between the sprockets.

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. Remove the drive chain cover (Figure 6).
4. Loosen the 2 hydraulic motor, mount-plate bolts (Figure 6).

5. Using the adjuster bolt, move the hydraulic motor upward to tighten the drive chain (Figure 6).



G031234

g031234

**Figure 6**

1. Adjuster bolt
2. Hydraulic motor, mount-plate bolt
3. Drive chain cover

6. After you have set the chain to the proper tension, tighten the adjuster bolt and hydraulic motor mount-plate bolts (Figure 6).

**Note:** When you can no longer set the chain to the proper tension using the adjuster bolt or if chain failures repeatedly occur, replace the chain.

7. Install the drive chain cover.

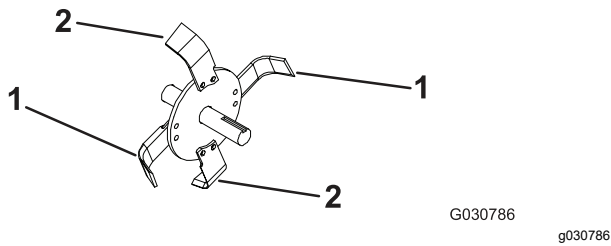
# Replacing the Tiller Tines

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

Before each use or daily—Check and tighten the 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. Install tines so that there are 2 left tines and 2 right tines on each hub (Figure 7).



**Figure 7**

1. Left tine                      2. Right tine

**Note:** The cutting edges of the tines should face toward the rear of the tiller.

4. Torque the tine-mounting bolts to 85 to 104 N-m (63 to 77 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. Check the condition of the drive chain. Adjust and lubricate the chain.
3. Grease all fittings.
4. Check and tighten all bolts, nuts, and screws. Repair or replace any damaged or worn parts.
5. Paint all scratched or bare metal surfaces. Paint is available from your Authorized Service Dealer.
6. Store the tiller in a clean, dry garage or storage area. Cover the tiller to protect it and keep it clean.

# Troubleshooting

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

**Notes:**

# Declaration of Incorporation

The Toro Company, 8111 Lyndale Avenue South, Bloomington, MN, USA declares that the following unit(s) conform(s) to the directives listed, when installed in accordance with the accompanying instructions onto certain Toro models as indicated on the relevant Declarations of Conformity.

Model No.	Serial No.	Product Description	Invoice Description	General Description	Directive
22445	318000001 and Up	40in Tiller, Compact Utility Loader	TILLER ATTACHMENT CE	Compact Utility Loader	2006/42/EC

Relevant technical documentation has been compiled as required per Part B of Annex VII of 2006/42/EC.

We will undertake to transmit, in response to requests by national authorities, relevant information on this partly completed machinery. The method of transmission shall be electronic transmittal.

This machinery shall not be put into service until incorporated into approved Toro models as indicated on the associated Declaration of Conformity and in accordance with all instructions, whereby it can be declared in conformity with all relevant Directives.

Certified:



Chad Moe  
Sr. Engineering Manager  
8111 Lyndale Ave. South  
Bloomington, MN 55420, USA  
November 15, 2022

Authorized Representative:

Marcel Dutrieux  
Manager European Product Integrity  
Toro Europe NV  
Nijverheidsstraat 5  
2260 Oevel  
Belgium

# UK Declaration of Incorporation

The Toro Company, 8111 Lyndale Avenue South, Bloomington, MN, USA declares that the following unit(s) conform(s) to the regulations listed, when installed in accordance with the accompanying instructions onto certain Toro models as indicated on the relevant Declarations of Conformity.

Model No.	Serial No.	Product Description	Invoice Description	General Description	Regulation
22445	318000001 and Up	40in Tiller, Compact Utility Loader	TILLER ATTACHMENT CE	Compact Utility Loader	S.I. 2008/1597

Relevant technical documentation has been compiled as required per Schedule 10 of S.I. 2008 No. 1597.

We will undertake to transmit, in response to requests by national authorities, relevant information on this partly completed machinery. The method of transmission shall be electronic transmittal.

This machinery shall not be put into service until incorporated into approved Toro models as indicated on the associated Declaration of Conformity and in accordance with all instructions, whereby it can be declared in conformity with all relevant regulations.

This declaration has been issued under the sole responsibility of the manufacturer.  
The object of the declaration is in conformity with relevant UK legislation.

Authorized Representative:

Marcel Dutrieux  
Manager European Product Integrity  
Toro U.K. Limited  
Spellbrook Lane West  
Bishop's Stortford  
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United Kingdom



Chad Moe  
Sr. Engineering Manager  
8111 Lyndale Ave. South  
Bloomington, MN 55420, USA  
November 15, 2022

## EEA/UK Privacy Notice

### **Toro's Use of Your Personal Information**

The Toro Company ("Toro") respects your privacy. When you purchase our products, we may collect certain personal information about you, either directly from you or through your local Toro company or dealer. Toro uses this information to fulfil contractual obligations - such as to register your warranty, process your warranty claim or to contact you in the event of a product recall - and for legitimate business purposes - such as to gauge customer satisfaction, improve our products or provide you with product information which may be of interest. Toro may share your information with our subsidiaries, affiliates, dealers or other business partners in connection these activities. We may also disclose personal information when required by law or in connection with the sale, purchase or merger of a business. We will never sell your personal information to any other company for marketing purposes.

### **Retention of your Personal Information**

Toro will keep your personal information as long as it is relevant for the above purposes and in accordance with legal requirements. For more information about applicable retention periods please contact [legal@toro.com](mailto:legal@toro.com).

### **Toro's Commitment to Security**

Your personal information may be processed in the US or another country which may have less strict data protection laws than your country of residence. Whenever we transfer your information outside of your country of residence, we will take legally required steps to ensure that appropriate safeguards are in place to protect your information and to make sure it is treated securely.

### **Access and Correction**

You may have the right to correct or review your personal data, or object to or restrict the processing of your data. To do so, please contact us by email at [legal@toro.com](mailto:legal@toro.com). If you have concerns about the way in which Toro has handled your information, we encourage you to raise this directly with us. Please note that European residents have the right to complain to your Data Protection Authority.

# 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](http://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.