



# TransPro™ 648 Tow-Behind Trailer

ProCore® 648 or 648s Aerator

Model No. 09964—Serial No. 323000000 and Up

## Installation Instructions

### Safety

- This trailer is intended for use with ProCore 648 and 648s machines only. Towing incompatible products can result in damage to the trailer and/or injury to the operator and bystanders. Refer to [Compatible Machines \(page 5\)](#) for a complete list of compatible machines.
- Use only a vehicle with the proper tow rating; the TransPro 648 trailer and a ProCore aerator with attachments has an approximate combined weight of 1089 kg (2,400 lb). Ensure that the tow vehicle has adequate braking and handling capacity by checking the recommendations of the vehicle manufacturer.
- Ensure that the trailer is properly connected to the tow vehicle before loading or unloading the aerator to prevent sudden unintended tongue movement or flip-up. The trailer tongue should be parallel to the ground when you align it with the tow vehicle hitch.
- The trailer adds extra towing weight to the vehicle. Drive the vehicle safely.
  - Do not drive the machine on highways or public roads.
  - Always slow the tow vehicle when approaching and while making a turn.
  - Always slow the tow vehicle when driving in unfamiliar areas or over rough terrain.
  - Always slow the tow vehicle when changing the direction of travel or preparing to stop.
  - Always slow the tow vehicle when turning or driving on slopes.
  - Do not make sudden or sharp turns. Do not suddenly change direction of travel on an incline, ramp, grade, slope, or similar surface.
  - The maximum towing speed is 15 mph (24 km/h). Always adjust the tow-vehicle speed to allow for existing ground conditions, such as wet slick surfaces, loose sand or gravel and/or low visibility conditions, such as dim or bright lighting, fog, mist, or rain.
  - Be especially careful when driving a heavily loaded vehicle down an incline or slope. Drive the vehicle up and down the face of the slopes, inclines, or grades whenever possible. Do not drive across the face of a slope if at all possible. There is a risk of upsetting the vehicle, which can result in serious injury or death.
- Do not operate the tow vehicle or use the trailer when tired, ill, or under the influence of alcohol or drugs.
- Use the trailer only in good visibility and appropriate weather conditions. Do not operate the tow vehicle or use the trailer when there is the risk of lightning.
- Before backing up, look behind you and ensure that it is clear of people and objects. Back up slowly and watch the trailer movement closely.
- Use extreme caution and slow speed when backing up the trailer and tow vehicle.
- Watch out for traffic when near or crossing roads. Always yield the right of way to pedestrians and other vehicles.
- If the trailer begins to vibrate abnormally, stop the tow vehicle immediately. Shut off the tow-vehicle engine. Repair all damage before towing.
- Before servicing or making any adjustments to the trailer, do the following:
  - Stop the tow vehicle and engage the parking brake.
  - Shut off the tow-vehicle engine and remove the key.
- While the trailer is disconnected from tow vehicle:
  - Store the trailer on level ground.
  - Chock the wheels to prevent the trailer from moving.
- Keep all fasteners tightened securely. Replace any parts removed when servicing or making adjustments.



# 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.



147-8352

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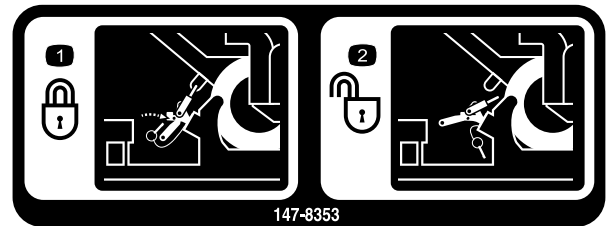
1. Warning—read the *Operator's Manual*; drive slowly when driving downhill with a trailer; do not lose control of the vehicle and trailer.
2. Warning—do not carry passengers.
3. Warning—drive slowly when driving with a trailer; do not exceed 24 km/h (15 mph).
4. Warning—the maximum trailer weight is 907 kg (2000 lb) and the maximum tongue weight is 181 kg (400 lb).



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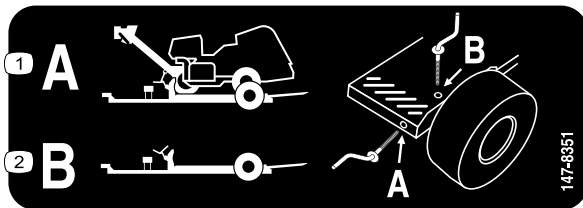
1. The trailer tires should be inflated to 0.96 bar (14 psi).
2. Read the *Operator's Manual*.
3. Torque the trailer wheel nuts to 108.5 N·m (80 ft-lb).



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1. Secure the aerator to the trailer; attach the J-hook to the front tie-down point, push down on the lock lever, and install the quick-release pin.
2. Release the aerator from the trailer; remove the quick-release pin, pull up on the lock lever, and remove the J-hook from the front tie-down point.



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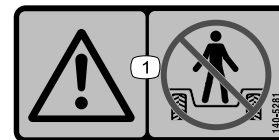
1. When towing an aerator, store the pins in the front of the wheel plate.
2. When not towing an aerator, hold the ramp in the raised position and install the pins through the top of the ramp and wheel plate.

**WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**  
For more information, please visit [www.ttcocAProp65.com](http://www.ttcocAProp65.com)

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1. Warning—do not carry passengers on the trailer.

# Installation

## Loose Parts

Use the chart below to verify that all parts have been shipped.

Procedure	Description	Qty.	Use
<b>1</b>	Trailer	1	Remove the crate.
	Wheel	2	
<b>2</b>	Hitch tube	1	Assemble the trailer.
	Clevis pins	3	
	Ramp	1	
	Flange bushing	4	
	Ramp pin	2	
	Cotter pin	2	
	Jack	1	
	Bolt (3/8 x 1-1/8 inches)	4	
	Washer (7/16 inch)	4	
Locknut (3/8 inch)	4		

# 1

## Removing the Crate

Parts needed for this procedure:

1	Trailer
2	Wheel

## Procedure

1. Position the crate under a hoist that can reach both ends of the trailer, or where a forklift can lift each end of the trailer.
2. Cut the bands and remove the top, sides, and ends of the crate.
3. Remove the storage pins from the top of the trailer that secure the trailer to the crate.

**Important:** Retain the storage pins for later installation.

4. Lift the ramp out of the crate and set aside for later installation.
5. Remove the screws securing the shipping bracket to the crate.

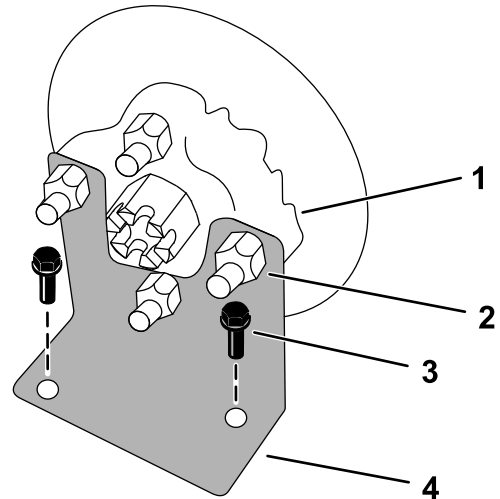


Figure 1

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- |            |                     |
|------------|---------------------|
| 1. Hub     | 3. Screw            |
| 2. Lug nut | 4. Shipping bracket |

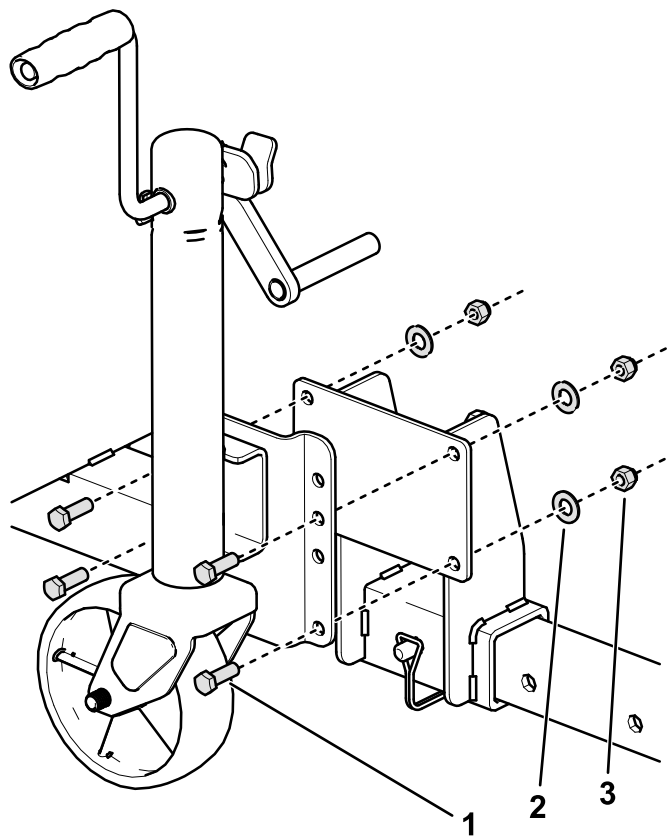
6. Remove the remaining hardware connecting the trailer to the pallet.
7. Using the hoist or forklift, lift the trailer.
8. Remove the pallet from beneath the machine.
9. Remove the 4 lug nuts from each of the wheel hubs (Figure 1).

**Important:** Retain the lug nuts for later installation. You may discard the shipping brackets.

10. Install the 2 wheels using the lug nuts removed in step 9; refer to [Checking the Torque of the Wheel Lug Nuts](#) (page 8).

11. Install the jack to the bracket on the trailer frame tube as shown in [Figure 2](#).

**Note:** Install the jack using the lowest set of holes to maximize ground clearance.



**Figure 2**

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1. Bolt (3/8 x 1-1/8 inches)
2. Washer (7/16 inch)
3. Locknut (3/8 inch)

12. Lower the trailer to the ground, remove the hoist or forklift, and secure the trailer from movement.

# 2

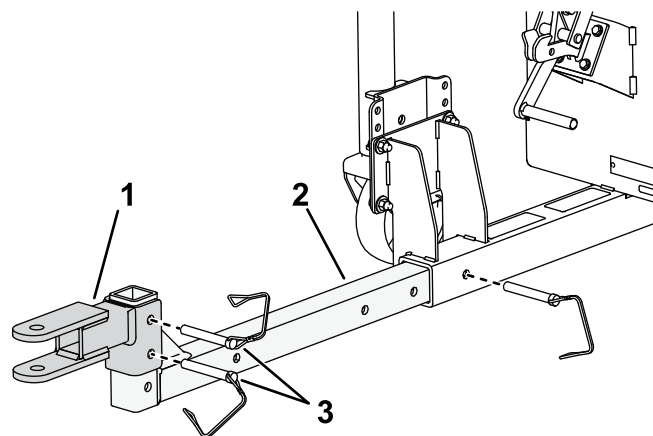
## Assembling the Trailer

### Parts needed for this procedure:

1	Hitch tube
3	Clevis pins
1	Ramp
4	Flange bushing
2	Ramp pin
2	Cotter pin
1	Jack
4	Bolt (3/8 x 1-1/8 inches)
4	Washer (7/16 inch)
4	Locknut (3/8 inch)

### Procedure

1. Insert the hitch tube to the frame as shown in [Figure 3](#).
2. Install the hitch adapter to the hitch tube with the clevis pins ([Figure 3](#)).

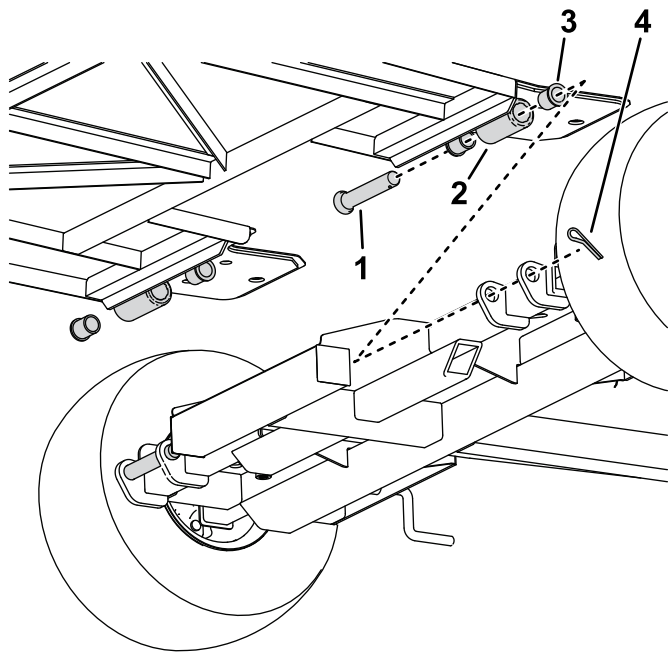


**Figure 3**

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1. Hitch adapter
2. Hitch tube
3. Clevis pins

3. Install the flange bushings to the pivot hub at the bottom of the ramp.
4. Install the ramp to the frame using the ramp pins and cotter pins as shown in [Figure 4](#).



**Figure 4**

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- |                   |                   |
|-------------------|-------------------|
| 1. Ramp pin       | 3. Flange bushing |
| 2. Ramp pivot hub | 4. Cotter pin     |

5. Install the storage pins removed in [1 Removing the Crate \(page 3\)](#) through the top of the ramp and wheel plate to hold the ramp in the raised position.

# Operation

## Compatible Machines

This trailer is designed to be configured for the following ProCore aerator machines without the need for additional kits:

Machine	Model
ProCore 648 aerator	09200
ProCore 648s aerator	09960

Contact your authorized Toro distributor for more information.

## Adjusting the Trailer Tongue

1. Align the trailer tongue with the tow-vehicle hitch.

**Important:** The trailer tongue must be parallel to the ground when it is aligned with the tow-vehicle hitch.

2. Remove the clevis pins from the hitch adapter and adjust the position up or down ([Figure 3](#)) as necessary.

**Note:** The hitch adapter can be rotated for further adjustment to the alignment.

3. Remove the clevis pins from the hitch tube and adjust the length as necessary.

**Important:** Ensure that there is enough clearance between the aerator handle and the rear of the tow vehicle when towing.

**Note:** When storing the trailer, you can push the hitch tube back into the trailer frame tube to shorten the overall length.

# Loading the Trailer

## ⚠ WARNING

Stepping on the ramp may lead to loss of footing.

Walk on the ground while guiding the machine up or down the ramp.

## Preparing to Load the Trailer

1. Connect the trailer to your traction unit; refer to your traction unit *Operator's Manual*.

**Important:** Ensure that the trailer tongue is parallel to the ground when it is aligned with the tow vehicle hitch; if it is not, refer to [Adjusting the Trailer Tongue \(page 5\)](#).

2. Remove the pins from the top of the ramp and wheel plate to lower the ramps.
3. Install the pins to the front of the wheel plates.

## Loading a Machine on the Trailer

1. Remove the storage pins from the top of the ramp and wheel plate to lower the ramps.
2. Install the pins to the front of the wheel plates.
3. Park the trailer on a level surface and move the line marker on the machine to the storage position; refer to your machine *Operator's Manual*.
4. Walk on the ground while slowly guiding the machine up the ramp and onto the trailer until the front wheel rolls over the integrated chock and rests against the front trailer guard ([Figure 5](#)).

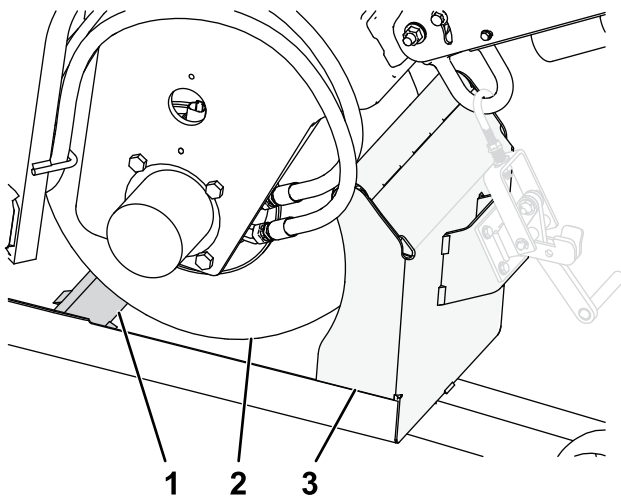
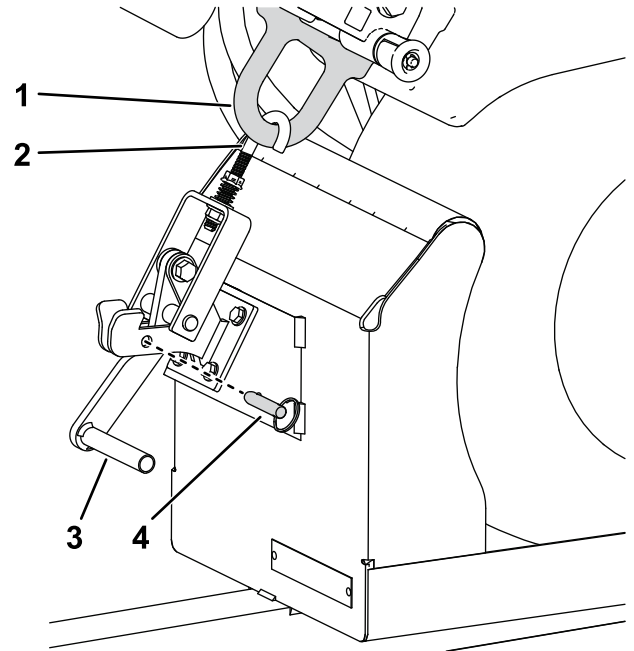


Figure 5

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1. Trailer chock
2. Front wheel
3. Front trailer guard

5. Shut off the machine and engage the parking brake.
6. Remove the quick-release pin, pull up on the lock lever, and attach the J-hook from the front tie-down point.
7. Push down on the lock lever and secure it using the quick-release pin ([Figure 6](#)).



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Figure 6

1. Front tie-down point
2. J-hook
3. Lock lever
4. Quick-release pin

**Important:** To ensure that the machine does not shift on the trailer, adjust the 2 nuts on the J-hook so the machine is tight to the trailer when the lever is latched.

## Unloading a Machine from the Trailer

1. Park the trailer on a level surface and move the line marker on the machine to the storage position if they are in the extended position; refer to your machine *Operator's Manual*.
2. Remove the quick-release pin, pull up on the lock lever, and remove the J-hook from the front tie-down point.
3. Turn on the machine and disengage the parking brake.
4. Walk on the ground while slowly guiding the machine down the ramp and off of the trailer until the front wheel is on the ground.

***Important:*** Ensure that the front wheel stays in the channel while backing the machine straight off of the trailer.

5. Shut off the machine and engage the parking brake.
6. Remove the storage pins from the front of the wheel plates.
7. Install the pins to the top of the ramp and wheel plate to secure the ramps in the raised position prior to moving the unloaded trailer.

# Maintenance

## Recommended Maintenance Schedule(s)

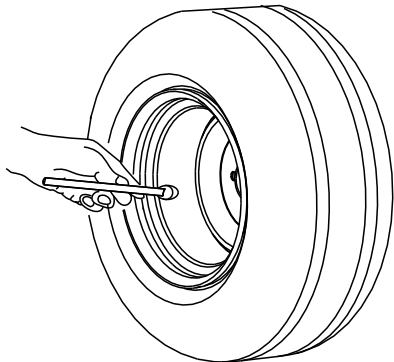
Maintenance Service Interval	Maintenance Procedure
After the first 10 hours	<ul style="list-style-type: none"> <li>• Check the torque of the wheel lug nuts.</li> </ul>
Before each use or daily	<ul style="list-style-type: none"> <li>• Check the tire air pressure.</li> </ul>
Yearly	<ul style="list-style-type: none"> <li>• Check the wheel bearings for endplay.</li> <li>• Check the torque of the wheel lug nuts.</li> </ul>

### Checking the Tire Air Pressure

**Service Interval:** Before each use or daily

**Tire air pressure specification:** 96.5 kPa (14 psi)

Check the air pressure in the tires (Figure 7). Add or remove air as needed to set the air pressure in the tires to the tire air-pressure specification.



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Figure 7

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### Checking the Wheel Bearings for Freeplay

**Service Interval:** Yearly

1. Remove any machines that may be stored on the trailer.
2. Use a jack to raise the trailer and place jack stands under the trailer.
3. Check each wheel for excessive freeplay (i.e., free movement of the tire and hub assembly).

If you detect excessive freeplay, contact to your authorized Toro distributor.

### Checking the Torque of the Wheel Lug Nuts

**Service Interval:** After the first 10 hours

Yearly

**Torque specification:** 108 N·m (80 ft-lb)

Check the torque of the wheel lug nuts each time you install the wheels and after the first 10 hours of operation.

Torque the wheel lug nuts in the pattern as shown in Figure 8 to the specified torque.

#### ⚠ WARNING

Failure to maintain proper torque could result in failure or loss of wheel and could result in personal injury.

Torque the wheel lug nuts to the specified torque.

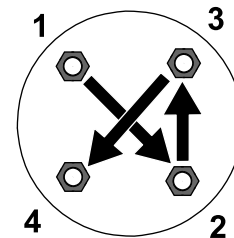


Figure 8

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**Notes:**



# The Toro Warranty

Two-Year or 1,500 Hours Limited Warranty

## Conditions and Products Covered

The Toro Company warrants your Toro Commercial product ("Product") to be free from defects in materials or workmanship for 2 years or 1,500 operational hours\*, whichever occurs first. This warranty is applicable to all products with the exception of Aerators (refer to separate warranty statements for these products). Where a warrantable condition exists, we will repair the Product at no cost to you including diagnostics, labor, parts, and transportation. This warranty begins on the date the Product is delivered to the original retail purchaser.

\* Product equipped with an hour meter.

## Instructions for Obtaining Warranty Service

You are responsible for notifying the Commercial Products Distributor or Authorized Commercial Products Dealer from whom you purchased the Product as soon as you believe a warrantable condition exists. If you need help locating a Commercial Products Distributor or Authorized Dealer, or if you have questions regarding your warranty rights or responsibilities, you may contact us at:

Toro Commercial Products Service Department  
8111 Lyndale Avenue South  
Bloomington, MN 55420-1196

952-888-8801 or 800-952-2740  
E-mail: [commercial.warranty@toro.com](mailto:commercial.warranty@toro.com)

## Owner Responsibilities

As the product owner, you are responsible for required maintenance and adjustments stated in your *Operator's Manual*. Repairs for product issues caused by failure to perform required maintenance and adjustments are not covered under this warranty.

## Items and Conditions Not Covered

Not all product failures or malfunctions that occur during the warranty period are defects in materials or workmanship. This warranty does not cover the following:

- Product failures which result from the use of non-Toro replacement parts, or from installation and use of add-on, or modified non-Toro branded accessories and products.
- Product failures which result from failure to perform recommended maintenance and/or adjustments.
- Product failures which result from operating the Product in an abusive, negligent, or reckless manner.
- Parts consumed through use that are not defective. Examples of parts which are consumed, or used up, during normal Product operation include, but are not limited to, brake pads and linings, clutch linings, blades, reels, rollers and bearings (sealed or greasable), bed knives, spark plugs, castor wheels and bearings, tires, filters, belts, and certain sprayer components such as diaphragms, nozzles, flow meters, and check valves.
- Failures caused by outside influence, including, but not limited to, weather, storage practices, contamination, use of unapproved fuels, coolants, lubricants, additives, fertilizers, water, or chemicals.
- Failure or performance issues due to the use of fuels (e.g. gasoline, diesel, or biodiesel) that do not conform to their respective industry standards.
- Normal noise, vibration, wear and tear, and deterioration. Normal "wear and tear" includes, but is not limited to, damage to seats due to wear or abrasion, worn painted surfaces, scratched decals or windows.

## Countries Other than the United States or Canada

Customers who have purchased Toro products exported from the United States or Canada should contact their Toro Distributor (Dealer) to obtain guarantee policies for your country, province, or state. If for any reason you are dissatisfied with your Distributor's service or have difficulty obtaining guarantee information, contact your Authorized Toro Service Center.

## Parts

Parts scheduled for replacement as required maintenance are warranted for the period of time up to the scheduled replacement time for that part. Parts replaced under this warranty are covered for the duration of the original product warranty and become the property of Toro. Toro will make the final decision whether to repair any existing part or assembly or replace it. Toro may use remanufactured parts for warranty repairs.

## Deep Cycle and Lithium-Ion Battery Warranty

Deep cycle and Lithium-Ion batteries have a specified total number of kilowatt-hours they can deliver during their lifetime. Operating, recharging, and maintenance techniques can extend or reduce total battery life. As the batteries in this product are consumed, the amount of useful work between charging intervals will slowly decrease until the battery is completely worn out. Replacement of worn out batteries, due to normal consumption, is the responsibility of the product owner. Note: (Lithium-Ion battery only): Refer to the battery warranty for additional information.

## Lifetime Crankshaft Warranty (ProStripe 02657 Model Only)

The ProStripe which is fitted with a genuine Toro Friction Disc and Crank-Safe Blade Brake Clutch (integrated Blade Brake Clutch (BBC) + Friction Disc assembly) as original equipment and used by the original purchaser in accordance with recommended operating and maintenance procedures, are covered by a Lifetime Warranty against engine crankshaft bending. Machines fitted with friction washers, Blade Brake Clutch (BBC) units and other such devices are not covered by the Lifetime Crankshaft Warranty.

## Maintenance is at Owner's Expense

Engine tune-up, lubrication, cleaning and polishing, replacement of filters, coolant, and completing recommended maintenance are some of the normal services Toro products require that are at the owner's expense.

## General Conditions

Repair by an Authorized Toro Distributor or Dealer is your sole remedy under this warranty.

**The Toro Company is not liable for indirect, incidental or consequential damages in connection with the use of the Toro Products covered by this warranty, including any cost or expense of providing substitute equipment or service during reasonable periods of malfunction or non-use pending completion of repairs under this warranty. Except for the Emissions warranty referenced below, if applicable, there is no other express warranty. All implied warranties of merchantability and fitness for use are limited to the duration of this express warranty.**

Some states do not allow exclusions of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## Note Regarding Emissions Warranty

The Emissions Control System on your Product may be covered by a separate warranty meeting requirements established by the U.S. Environmental Protection Agency (EPA) and/or the California Air Resources Board (CARB). The hour limitations set forth above do not apply to the Emissions Control System Warranty. Refer to the Engine Emission Control Warranty Statement supplied with your product or contained in the engine manufacturer's documentation.

# 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 do we include this warning?

Our company 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. We provide 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 our products may be negligible or well within the "no significant risk" range, out of an abundance of caution, we have elected to provide the Prop 65 warnings. Moreover, if we do 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.



**Count on it.**