



Count on it.

Form No. 3354-420 Rev B

Operator's Manual

Bucket

for TX 413 Compact Utility Loaders

Model No. 22422—Serial No. 240000001 and Up



There may be buried power, gas, and/or telephone lines in the work area. Shock or explosion may occur if you dig into them.

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 United States, call 811 for the nationwide marking service).

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Introduction

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.

You may contact Toro directly at www.Toro.com for product and 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. The model and serial numbers are located on a plate on the back of the bucket. Write the numbers in the space provided.

Model No. _____

Serial No. _____

This manual identifies potential hazards and has safety messages identified by the safety alert symbol (Figure 1), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



Figure 1

1. Safety alert symbol

This manual uses 2 other words to highlight information.

Important calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

Safety

Improper use or maintenance by the operator or owner can result in injury. To reduce the potential for injury, comply with these safety instructions and those in the traction unit *Operator's Manual*. Always pay attention to the safety alert symbol, which means *Caution*, *Warning*, or *Danger*—personal safety instruction. Failure to comply with the instruction may result in personal injury or death.



There may be buried power, gas, and/or telephone lines in the work area. Shock or explosion may occur if you dig into them.

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 United States, call 811 for the nationwide marking service).



When the engine is off, attachments in the raised position can gradually lower. Someone nearby may be pinned or injured by the attachment as it lowers.

Always lower the attachment lift each time you shut off the traction unit.



When going up or down hill, the machine could overturn if the heavy end is toward the downhill side. Someone may be pinned or seriously injured by the machine if it overturns.

Operate up and down slopes with the heavy end of the machine uphill. Carrying a load will make the front end heavy.



If the bucket is not kept level while lifting, the load could be inadvertently dumped on the operator, causing injury.

When lifting the bucket, tilt it forward to keep it level and prevent it from spilling backward.

Stability Ratings

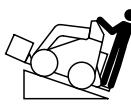

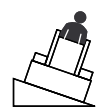
To determine the degree of slope you can traverse with the bucket installed on a traction unit, find the stability rating for the hill position you want to travel in the appropriate table on the following page, then find the degree of slope for the same rating and hill position in the Stability Data section of the traction unit operator's manual.



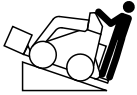


Exceeding the maximum recommended slope can cause the traction unit to tip, crushing you or bystanders.

Do not drive the traction unit on a slope steeper than the maximum recommended slope, as determined in the following tables and the traction unit operator's manual.

Stability with a Loaded Bucket

Orientation	Stability Rating
Front Uphill 	B
Rear Uphill 	D
Side Uphill 	B

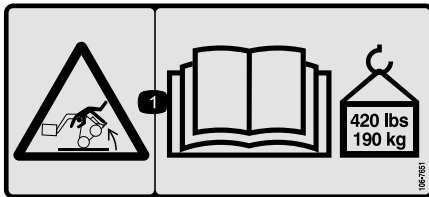
Stability with an Unloaded Bucket

Orientation	Stability Rating
Front Uphill 	D
Rear Uphill 	C
Side Uphill 	C

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 lost.



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1. Tipping hazard—read the *Operator's Manual*; the maximum load rating is 420 lb (190 kg).

Operation

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

Refer to your traction unit *Operator's Manual* for more information on installing and removing the bucket from your traction unit.

When loading material, always have the bucket level to the ground, moving forward into the material to be lifted. When the bucket is full, tilt it gently rearwards to decrease the lifting resistance when you lift the load.

When transporting a load, keep the bucket as close to the ground as possible.

Operational Specifications

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

Width	34.5 inches (88 cm)
Length	24 inches (61 cm)
Height	14 inches (36 cm)
Weight	120 lb (55 Kg)
Capacity (SAE struck capacity)	2.8 ft ³ (0.08 m ³)

Maximum Material Density at Capacity

The density of materials being moved by the bucket varies and therefore so will the amount of a given material that can be carried by the bucket before the maximum load rating is reached. The first table on the following page lists the density of material that can be carried, both heaped and struck (i.e., leveled off), in the bucket. Following that is a table listing common materials and their densities.

To move materials with densities greater than the maximum allowed for the bucket, reduce the volume of material placed in the bucket.

Maximum Density for Capacity Chart

Bucket Capacity	Maximum Density
Heaped bucket	97 lb/ft ³ (1553 kg/m ³)
Struck (leveled) bucket	119 lb/ft ³ (1918 kg/m ³)

Material Density Chart

Material	Density (Approximate)
Caliche	78 lb/ft ³ (1250 kg/m ³)
Clay:	
Natural bed	104 lb/ft ³ (1600 kg/m ³)
Dry	93 lb/ft ³ (1480 kg/m ³)
Wet	104 lb/ft ³ (1660 kg/m ³)
With gravel, dry	89 lb/ft ³ (1420 kg/m ³)
With gravel, wet	96 lb/ft ³ (1540 kg/m ³)
Coal:	
Anthracite, broken	69 lb/ft ³ (1100 kg/m ³)
Bituminous, broken	52 lb/ft ³ (830 kg/m ³)
Earth:	
Dry, packed	94 lb/ft ³ (1510 kg/m ³)
Wet, packed	100 lb/ft ³ (1600 kg/m ³)
Loam	78 lb/ft ³ (1250 kg/m ³)
Granite, broken or large crushed	104 lb/ft ³ (1660 kg/m ³)
Gravel:	
Dry	94 lb/ft ³ (1510 kg/m ³)
Pit run (graveled sand)	120 lb/ft ³ (1930 kg/m ³)
Dry 1/2 to 2 inch (13 to 51 mm)	106 lb/ft ³ (1690 kg/m ³)
Wet 1/2 to 2 inch (13 to 51 mm)	126 lb/ft ³ (2020 kg/m ³)
Limestone, broken or crushed	96 lb/ft ³ (1540 kg/m ³)
Sand:	
Dry	89 lb/ft ³ (1420 kg/m ³)
Wet	115 lb/ft ³ (1840 kg/m ³)
With gravel, dry	107 lb/ft ³ (1720 kg/m ³)
With gravel, wet	126 lb/ft ³ (2020 kg/m ³)
Sandstone, broken	94 lb/ft ³ (1510 kg/m ³)
Shale	78 lb/ft ³ (1250 kg/m ³)
Slag, broken	109 lb/ft ³ (1750 kg/m ³)
Stone, crushed	100 lb/ft ³ (1600 kg/m ³)
Topsoil	59 lb/ft ³ (950 kg/m ³)

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. 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.

Notes:

Notes:



Compact Utility Loader
(CUL) Products

The Toro Compact Utility Loader Warranty

A One-Year Limited Warranty

Conditions and Products Covered

The Toro® Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly warrant your Toro Compact Utility Loader (CUL) ("Product") to be free from defects in materials or workmanship. The following time periods apply from the date the Product is delivered to the original retail purchaser:

The following time periods apply from the date of purchase:

Products	Warranty Period
All CUL units and attachments	1 year or 1000 operational hours, whichever occurs first
Kohler Engines	3 years
All other Engines	2 years

Where a warrantable condition exists, we will repair the Product at no cost to you including diagnosis, labor, and parts.

Instructions for Obtaining Warranty Service

If you think that your Toro Product contains a defect in materials or workmanship, follow this procedure:

1. Contact any Authorized Toro CUL Service Dealer to arrange service at their dealership. To locate a dealer convenient to you, access our website at www.Toro.com. You may also call our Toro Customer Care Department toll free at 888-577-7466 (U.S. customers) or 877-484-9255 (Canadian customers).
2. Bring the product and your proof of purchase (sales receipt) to the Service Dealer.

If for any reason you are dissatisfied with the Service Dealer's analysis or with the assistance provided, contact us at:

LCB Customer Service Department
Toro Warranty Company
8111 Lyndale Avenue South
Bloomington, MN 55420-1196
Toll Free: 888-577-7466 (U.S. customers)
Toll Free: 877-484-9255 (Canada customers)

Owner Responsibilities

You must maintain your Toro Product by following the maintenance procedures described in the Operator's Manual. Such routine maintenance, whether performed by a dealer or by you, is at your expense. Parts scheduled for replacement as required maintenance ("Maintenance Parts"), are warranted for the period of time up to the scheduled replacement time for that part. Failure to perform required maintenance and adjustments can be grounds for disallowing a warranty claim.

Items and Conditions Not Covered

Not all product failures or malfunctions that occur during the warranty period are defects in materials or workmanship. This express 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, modified, or unapproved accessories
- Product failures which result from failure to perform required maintenance and/or adjustments
- Product failures which result from operating the Product in an abusive, negligent or reckless manner
- Parts subject to consumption through use unless found to be defective. Examples of parts which are consumed, or used up, during normal Product operation include, but are not limited to, digging teeth, tines, spark plugs, tires, tracks, filters, chains, etc.
- Failures caused by outside influence. Items considered to be outside influence include, but are not limited to, weather, storage practices, contamination, use of unapproved coolants, lubricants, additives, or chemicals, etc.
- Normal "wear and tear" items. Normal "wear and tear" includes, but is not limited to, worn painted surfaces, scratched decals or windows, etc
- Any component covered by a separate manufacturer's warranty
- Pickup and delivery charges

General Conditions

Repair by an Authorized Toro CUL Service Dealer is your sole remedy under this warranty. **Neither The Toro® Company nor Toro Warranty Company is 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. 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.

Except for the engine warranty coverage and the Emissions warranty referenced below, if applicable, there is no other express 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) 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 California Emission Control Warranty Statement printed in your operator's manual or contained in the engine manufacturer's documentation for details.

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 the Toro importer. If all other remedies fail, you may contact us at Toro Warranty Company.