Form No. 3323-274

Tree Forks

Sitework Systems Attachment

Model No. 22438—890001 & Up

PROTOTYPE

Operator's Manual

English (CE)

Contents

Introduction

We want you to be completely satisfied with your new product, so feel free to contact your local Authorized Service Dealer for help with service, genuine replacement parts, or other information you may require.

Whenever you contact your Authorized Service Dealer or the factory, always know the model and serial numbers of your product. These numbers will help the Service Dealer or Service Representative provide exact information about your specific product. You will find the model and serial number on a plate located on the back of the tree fork frame.

For your convenience, write the product model and serial numbers in the space below.

Model No: _____

Serial No. _____

The warning system in this manual identifies potential hazards and has special safety messages that help you and others avoid personal injury, even death. DANGER, WARNING and CAUTION are signal words used to identify the level of hazard. However, regardless of the hazard, be extremely careful.

DANGER signals an extreme hazard that will cause serious injury or death if the recommended precautions are not followed.

WARNING signals a hazard that may cause serious injury or death if the recommended precautions are not followed.

CAUTION signals a hazard that may cause minor or moderate injury if the recommended precautions are not followed.

Two other words are also used to highlight information. “Important” calls attention to special mechanical information and “Note” emphasizes general information worthy of special attention.

The left and right side of the machine is determined by standing in the normal operator’s position.

Safety

Improper use or maintenance by the operator or owner can result in injury. To reduce the potential for injury, comply with the safety instructions in the traction unit Operator’s Manual and 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.

⚠ DANGER ⚠

POTENTIAL HAZARD
- **There may be buried power, gas, and/or telephone lines in the work area.**

WHAT CAN HAPPEN
- **Shock or explosion may occur.**

HOW TO AVOID THE HAZARD
- **Have the property or work area marked for buried lines and don’t dig in marked areas.**

PROTOTYPE

©The Toro Company – 1999
8111 Lyndale Ave. South
Bloomington, MN 55420–1196

All Rights Reserved
Printed in the USA

DANGER

POTENTIAL HAZARD
- **There may be overhead power lines in the work area.**

WHAT CAN HAPPEN
- **Shock may occur if a power line is touched by a tree or other object that is being transported.**

HOW TO AVOID THE HAZARD
- **Survey and mark the area where there are overhead power lines, and do not transport trees or tall objects under the power lines.**

WARNING

POTENTIAL HAZARD
- **When the engine is off, attachments in the raised position can gradually lower.**

WHAT CAN HAPPEN
- **Someone nearby may be pinned or injured by the attachment as it lowers.**

HOW TO AVOID THE HAZARD
- **Always lower the attachment lift each time you shut off the traction unit.**

WARNING

POTENTIAL HAZARD
- **When going up or down hill, the machine could overturn if the heavy end is toward the downhill side.**

WHAT CAN HAPPEN
- **Someone may be pinned or seriously injured by the machine if it overturns.**

HOW TO AVOID THE HAZARD
- **Operate up and down slopes with the heavy end of the machine uphill. An empty fork will make the rear end heavy and a loaded fork will make the front end heavy.**

CAUTION

POTENTIAL HAZARD
- **If you step off of the platform with the load raised, the machine could tip forward.**

WHAT CAN HAPPEN
- **Someone nearby may be pinned or injured.**

HOW TO AVOID THE HAZARD
- **Lower the fork before stepping off or the platform.**

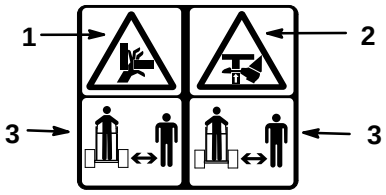
CAUTION

POTENTIAL HAZARD
- **If the attachment is not kept level while lifting, the load could be inadvertently dumped on the operator.**

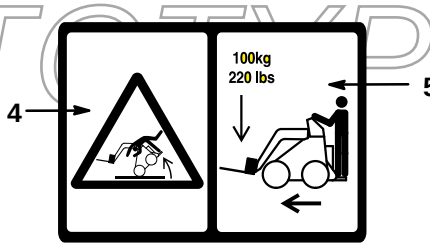
WHAT CAN HAPPEN
- **The operator could be injured when the fork is unloaded.**

HOW TO AVOID THE HAZARD
- **When lifting the attachment, tilt it forward to keep it level and prevent it from spilling backwards.**
- **Carry the load level and low to the ground.**

Safety Decals



 # 100–4650



 # 100–4650

Figure 1

1. Pinching/crushing hazard—hand
2. Pinching/crushing hazard—foot
3. Keep bystanders away
4. Machine rollover–exceeding rated load capacity can cause instability
5. Maximum load capacity

PROTOTYPE

Specifications

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

Overall width	24.5 inches (62 cm)
Overall length	45 inches (114 cm)
Overall height	12.5 inches (32 cm)
Weight	169 lbs (77 Kg)
Fork length	43 inches (109 cm)
Fork specifications Length Height Width Thickness Cross section Movement range Left fork Right fork	 43 inches (109 cm) 3 inches (7.6 cm) 3 inches (7.6 cm) 0.25 inches (0.6 cm) Triangular 47 degrees Stationary
Hydraulic cylinder Rod diameter Stroke Bore diameter Cylinder force	 1.125 inches (3 cm) 3 inches (7.6 cm) 2 inches (5 cm) 8,425 lbs (4,275 Kg) at 3,000 psi (20,685 kPa)
Pivot pin diameter	1 inches (2.5 cm)
Maximum load	220 lbs (100 Kg)

Stability Ratings

To determine the degree of slope you can traverse with the fork installed on a traction unit, find the stability rating for the hill position you want to travel in the appropriate table, 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.

IMPORTANT: If your traction unit has a rear operator's platform, the counterweight must be used on the platform while using the fork, or the traction unit will become unstable.

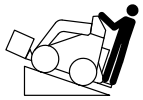
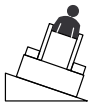
WARNING

POTENTIAL HAZARD
- **Exceeding the maximum recommended slope can cause the traction unit to tip.**

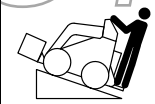
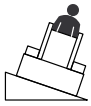
WHAT CAN HAPPEN
- **If the traction unit tips, you or bystanders could be crushed.**

HOW TO AVOID THE HAZARD
- **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 without a Load

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

Stability with a Load

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

PROTOTYPE

Operation

Note: Refer to your traction unit operator's manual for complete instructions on installing/removing attachments onto/from the traction unit and connecting/disconnecting hydraulic hoses.

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

Tree Fork Operation

The tree fork is an excellent tool for transporting balled and container grown trees and shrubs. You can also use the fork to move rocks under 220 lbs (100 Kg).

To pick up a tree, angle the forks to a width larger than the tree ball or container. Drive the traction unit forward to position the tree between the forks. Gently angle the forks inward until they contact the tree ball or container. Raise the loader arms to lift the tree.

Operating Tips

- Position the tree as close as possible to the fork frame to maximize lifting capability.
- Never attempt to lift more that the rated capacity of the traction unit.
- When transporting a load, keep the fork as close to the ground as possible.
- To ease the placement of a tree into a hole, pick up the tree near the top of the ball or container.
- The fork can also be used to lift, transport, and position small boulders and rocks.

Tree Fork Controls

1. If your traction unit has a speed selector and a flow divider, move the speed selector to the fast (rabbit) position and the flow divider to the 10 to 11 o'clock position.
2. Pull the auxiliary hydraulics valve to the operator grip to open the forks.
3. Push the auxiliary hydraulics valve away from the operator grip to close the forks.

Maintenance

Service Interval Chart

Service Operation	Each Use	5 Hours	25 Hours	200 Hours	Storage Service	Notes
Hydraulic hoses—inspect				X	X	Replace if damaged
Chipped surfaces—paint					X	

CAUTION

PROTOTYPE

POTENTIAL HAZARD
- **If you leave the key in the ignition switch, someone could start the engine.**

WHAT CAN HAPPEN
- **Accidental starting of the engine could seriously injure you or other bystanders.**

HOW TO AVOID THE HAZARD
- **Remove the key from the ignition switch before you do any maintenance.**

Storage

1. Before long term storage, wash the attachment with mild detergent and water to remove dirt and grime.
2. Check and tighten all bolts, nuts, and screws. Repair or replace any part that is damaged or worn.
3. Ensure that all hydraulic couplers are connected together to prevent contamination of the hydraulic system.
4. Paint all scratched or bare metal surfaces. Paint is available from your Authorized Service Dealer.
5. Store the attachment in a clean, dry garage or storage area. Cover it to protect it and keep it clean.

Troubleshooting

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
Fork does not open and close.	1. Hydraulic coupler not completely connected	1. Check and tighten all couplers.
	2. Defective hydraulic coupler	2. Check couplers and replace any that are defective.
	3. An obstruction in a hydraulic hose	3. Find and remove the obstruction.
	4. Auxiliary valve on the traction unit is not opening.	4. Repair the valve.
	5. Defective hydraulic cylinder(s)	5. Replace or repair any defective cylinders.

PROTOTYPE

PROTOTYPE

PROTOTYPE