Form No. 3354-432 Rev A

Backhoe

for Compact Utility Loaders

Model No. 23163—260000001 and Up

Operator's Manual

Register your product at www.Toro.com.

Original Instructions (EN)

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Introduction

Read this manual carefully to learn how to operate and maintain your product properly. The information in this manual can help you and others avoid injury and product damage. Although Toro designs and produces safe products, 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. You will find the model and serial number on a plate located on the product.

Write the product model and serial numbers in the space below:

Model No. _____

Serial No. _____

This manual identifies potential hazards and has special safety messages that help you and others avoid personal injury and 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 you do not follow the recommended precautions.

Warning signals a hazard that *may* cause serious injury or death if you do not follow the recommended precautions.

Caution signals a hazard that may cause minor or moderate injury if you do not follow the recommended precautions.

This manual uses two 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 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 ⚠

There may be buried power, gas, and/or telephone lines in the work area. Electric shock, death, or explosion may occur.

Have the property or work area marked for buried lines and do not dig in marked areas.

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Danger

There may be overhead power lines in the work area. Electric shock or death may occur if a power line is touched by the backhoe.

Survey and mark the area where there are overhead power lines, and dig with caution under power lines, to ensure that you do not touch them with the backhoe.

Warning

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 backhoe uphill.

Caution

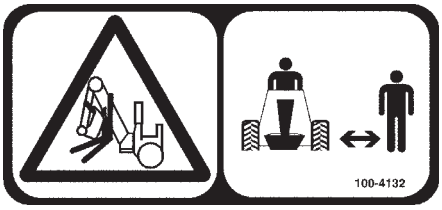
The tires of the traction unit can be slippery. If the tires are used as a step to climb on to or off of the backhoe, the operator could slip and fall, causing injury.

Use the step provided when climbing on to or off of the backhoe and not the traction unit tires.

Safety and Instruction 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.

1



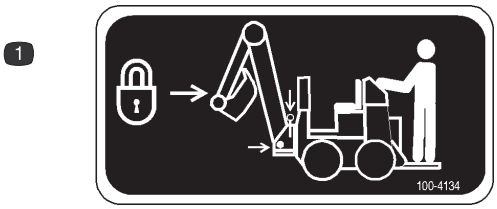
100-4132

1. Crushing hazard, backhoe—keep bystanders a safe distance from the backhoe.



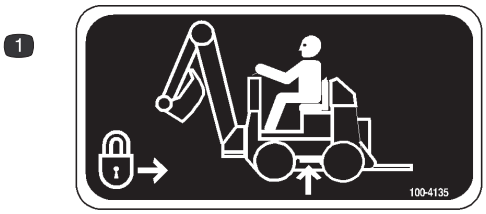
100-4133

1. Warning—read the *Operator's Manual.*
2. Explosion and electric shock hazards—do not dig in areas with buried gas or electrical lines, and do not operate under overhead electrical lines.
3. Crushing hazard, backhoe—lock the boom before leaving the machine.
4. Tipping hazard—do not move the traction unit while seated on the backhoe, install the counter–weight, and lower the stabilizers.



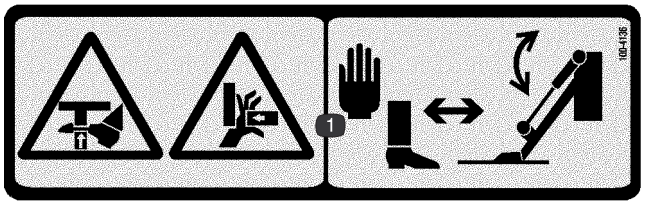
100-4134

1. Lock the boom before transporting the backhoe.



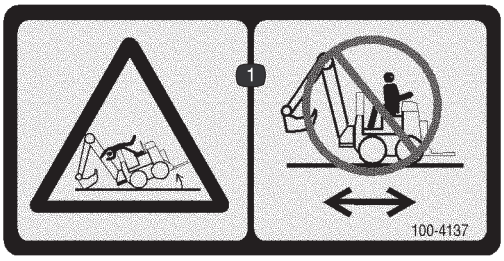
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1. Install and secure the side bars before operating the backhoe.



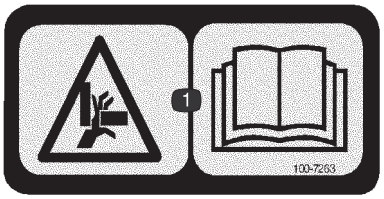
100-4136

1. Crushing hazard of hand and foot—keep hands and feet a safe distance from a moving stabilizer.



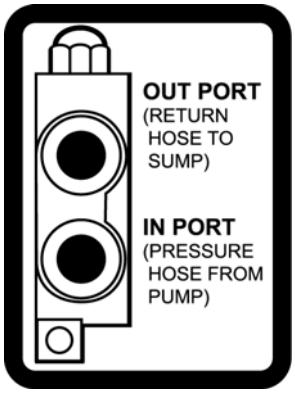
100-4137

1. Tipping hazard—do not move the traction unit while seated on the backhoe.

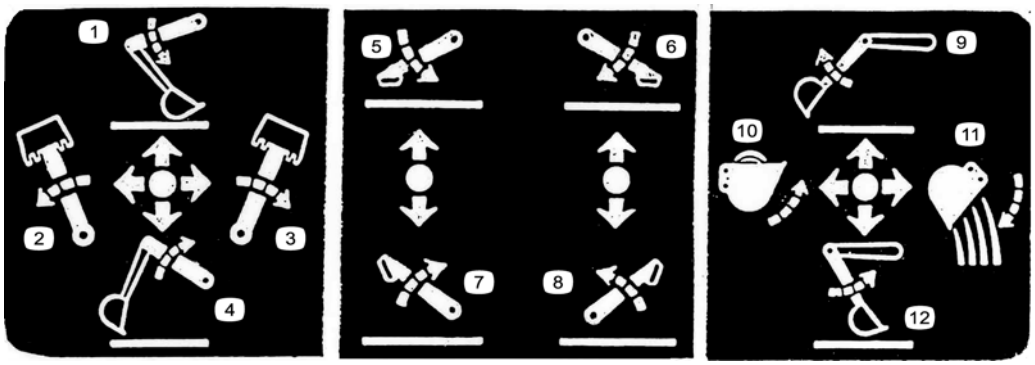


100-7263

1. Crushing hazard of hand—read the *Operator's Manual.*



108-5665



108-5693

1. Lower the boom.
2. Rotate the boom left.
3. Rotate the boom right.
4. Raise the boom.
5. Lower the left stabilizer.
6. Lower the right stabilizer.
7. Raise the left stabilizer.
8. Raise the right stabilizer.
9. Raise the dipperstick.
10. Curl the bucket.
11. Dump the bucket.
12. Lower the dipperstick.

Specifications

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

Width	34.5 inches (87.6 cm)
Length	41 inches (104 cm)
Transport height	71 inches (180 cm)
Weight	762 lbs (346 Kg)
Digging depth (maximum)	82 inches (208 cm)
Bucket rotation	180 degrees
Swing arc	180 degrees
Stabilizer spread (working)	78 inches (198 cm)

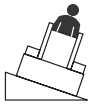
Stability Ratings

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

Warning

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 table and the traction unit operator's manual.

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

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

Setup

Loose Parts

Note: Use the chart below to identify parts for assembly.

Description	Qty.	Use
Frame	1	Install the heat shield
Vinyl Cover	1	
Bolts, 1/4 x 1-1/4 in.	2	
Backhoe Kit for a 200/300 Series traction unit (sold separately)	1	One kit required to connect the backhoe to your traction unit
Backhoe Kit for a TX Series traction unit (sold separately)	1	

The backhoe mounts slightly differently to the 200/300 series traction unit than it does to the TX. You must obtain and install the Backhoe kit appropriate for your traction unit. Use the instructions provided in this section to install these kits.

Installing the Heat Shield

1. Place the vinyl cover on the underside of the frame and secure it around the rods with the hook and loop fasteners (Fig. 1).

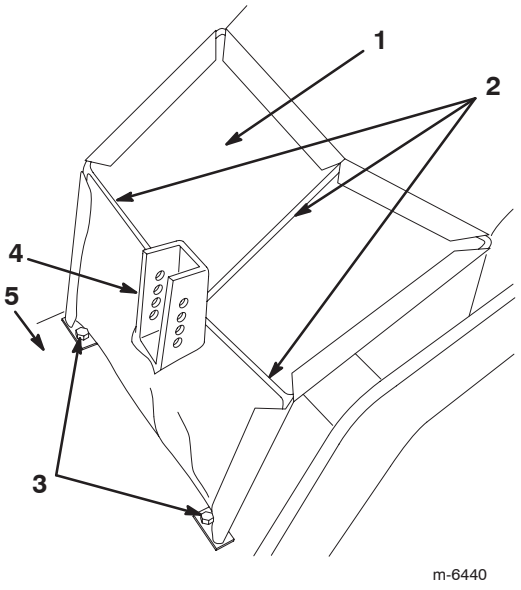


Figure 1

1. Vinyl cover
2. Frame rods (not covered by vinyl cover)
3. Bolts and nuts (not shown) at the rear of the platform
4. Seat stand
5. Operator platform

2. Remove the seat and the seat bracket from the seat stand.

3. Remove the 2 bolts and 2 nuts at the rear of the operator platform (Fig. 1). Discard the bolts but save the nuts for step 5.

4. Place the heat shield down over the seat stand (Fig. 1).

5. Use the 2 bolts from the kit (1/4 x 1-1/4 in.) and the 2 nuts (1/4 in.) that you removed in step 3 to secure the tabs at the base of the heat shield to the operator platform.

6. Install the seat.

Installing the 200/300 Series Traction Unit Backhoe Kit

If you will be using the backhoe with a 200 or 300 series traction unit, install the side bar brackets and tilt cylinder pin included in the kit.

Installing the Side Bar Brackets

1. Remove the traction unit manual holder and relocate it under the control panel (4-Paw gasoline units only).
2. Remove the battery from the traction unit. Refer to your traction unit operator's manual.

Note: If you have a 300 series, diesel traction unit, you do not need to remove the battery; however, you do need to remove the loader arm cylinder and exhaust cover plate on the right side of the machine. To remove the loader arm cylinder, you need to raise the loader arms and install the cylinder lock on the left side before removing the right cylinder. Replace the cylinder and plate when finished installing the side bar bracket.

3. Examine your traction unit. If it has three mounting holes pre-drilled in the frame, a few inches in front of each lift cylinder (Fig. 1), skip to step 6.

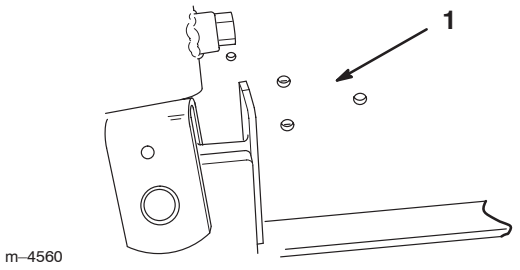


Figure 1

1. Holes

4. Line up the side bar bracket as illustrated in Figure 2 and mark the centers of the three holes (you may need to adjust the position of the bracket slightly so that the bracket and back-plate do not interfere with weldments on the traction unit).

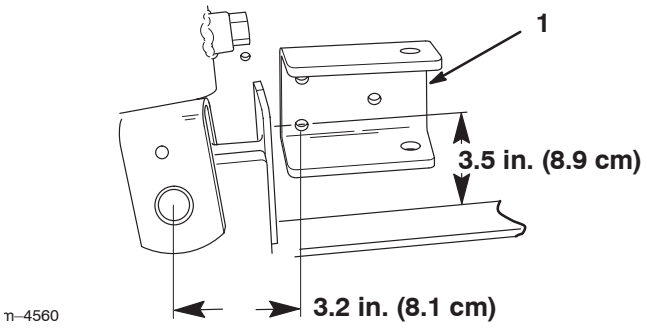


Figure 2

1. Side bar bracket

5. Drill three, 9/16 in. (1.43 cm) diameter holes through the side of the traction unit at the marked locations.
6. Secure the side bar bracket to the side of the traction unit using the back-plate, three carriage bolts, and three nuts (Fig. 3).

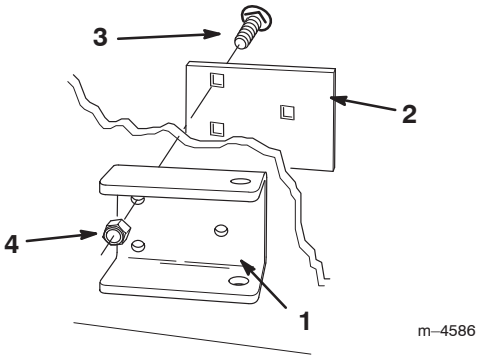


Figure 3

1. Side bar bracket
2. Back-plate
3. Carriage bolt
4. Nut

7. Torque the nuts to 75 ft-lbs (102 N·m).
8. Repeat steps 3–7 for the other side of the traction unit.
9. Install the battery from the traction unit. Refer to your traction unit operator's manual.

Note: On some 200 series traction units, the bolt heads will interfere with the battery case. If this happens, elongate the holes in the frame for mounting the battery clamp.

Changing the Tilt Cylinder Pin

1. Place a block in front of the mount plate so that it cannot swing forward when you remove the tilt cylinder pin.

Caution

When you remove the tilt cylinder pin, the mount plate may swing forward, crushing your feet or hands, or those of bystanders.

Block up the mount plate before removing the tilt cylinder pin.

2. Remove the bolt securing the upper tilt cylinder pin (Fig. 4).
3. Using a hammer and punch, remove the tilt cylinder pin.

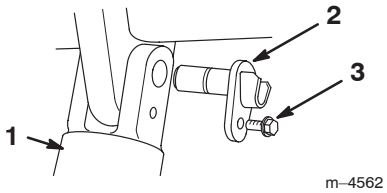


Figure 4

1. Tilt cylinder
2. Tilt cylinder pin
3. Bolt

4. Apply a generous coating of grease to the new pin.
5. Install the new pin into position and secure it with a bolt (Fig. 5).

Note: Leave the new pin installed, even when you remove the backhoe.

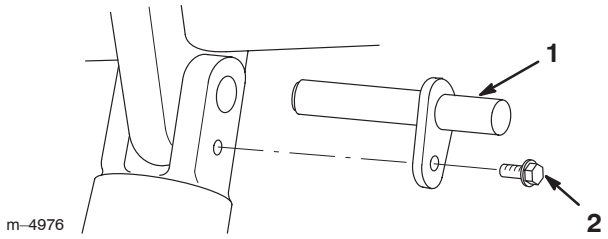


Figure 5

1. New tilt cylinder pin
2. Bolt

Installing the TX Series Traction Unit Backhoe Kit

If you will be using the backhoe with a 400 series (TX) traction unit, install the tilt cylinder pin included in the kit.

1. Block up the mount plate so that it cannot swing forward.

Caution

When you remove the tilt cylinder pin, the mount plate may swing forward, crushing your feet or hands, or those of bystanders.

Block up the mount plate before removing the tilt cylinder pin.

2. Remove the bolt and nut securing the upper tilt cylinder pin on the traction unit (Fig. 6).
3. Using a hammer and punch, remove the tilt cylinder pin.
4. Install the new pin into position and secure it with the bolt and nut removed previously, using the middle hole on the pin (Fig. 6).
5. Grease the pin using the fitting on the tilt cylinder.

Note: Leave the new pin installed, even when the backhoe is removed.

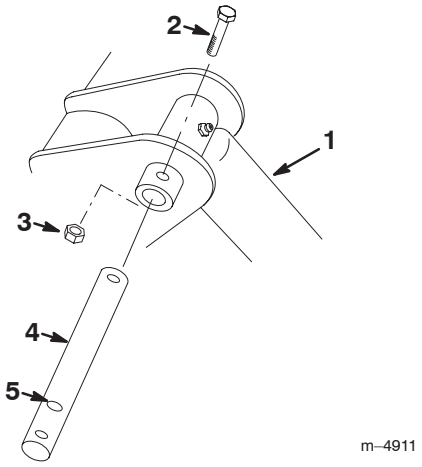


Figure 6

1. Tilt cylinder
2. Bolt
3. Nut
4. New tilt cylinder pin
5. Middle hole

Greasing the Backhoe

Before using the backhoe for the first time, ensure that all of the fittings are fully greased; refer to Greasing and Lubrication, page 17.

Adjusting the Seat

Caution

The seat mounting bracket has several pinch points. You could pinch and/or cut your fingers when adjusting the seat.

Take care to keep your fingers away from the seat mounting bracket when moving the seat up and down and when lowering the seat into position.

1. Stop the engine.
2. Tilt the seat forward.
3. Loosen the knobs on the bottom of the seat (Fig. 7) and slide the seat forward or back as needed.
4. To adjust the seat height, remove the hairpin cotter and pin from the seat stand (Fig. 7) and raise or lower the seat as required.

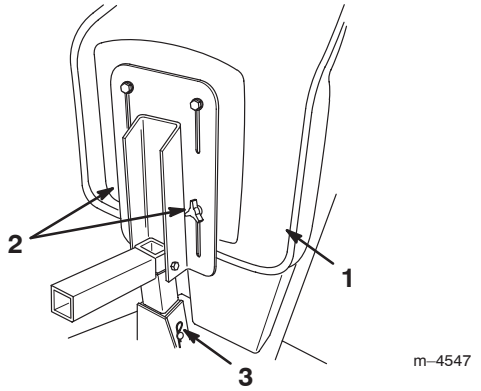


Figure 7

1. Seat
2. Knobs
3. Pin and hairpin cotter

5. When you have the proper height, install the pin and hairpin cotter to secure the seat.

Operation

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

Operation Checklist

To ensure safe, effective use of the backhoe, complete the following activities before, during, and after operating the backhoe:

Note: For detailed descriptions of these procedures, refer to Installing the Backhoe on the Traction Unit (page 11) and Operating the Backhoe (page 12).

Before Operation:

- Locate and mark underground utilities.
- Install the counterweight on the traction unit.
- Install the links between the backhoe and the tilt cylinder pin on the traction unit.
- Install the side bars between the backhoe and the traction unit frame (200/300 series traction units only).
- Install the hydraulics lever clamp over the traction unit controls.
- Lower the stabilizer arms before digging.

During Operation:

Only operate the backhoe from the backhoe seat.

Only move the traction unit from the traction unit operator's position and not from the seat of the backhoe.

After Operation:

Install the pins securing the boom from moving up and down and side to side (Figs. 16 and 17) before leaving the backhoe unattended, transporting it, or disconnecting it from the traction unit.

Backhoe Overview

Figure 8 illustrates the backhoe. Familiarize yourself with all of the components listed in Figure 8.

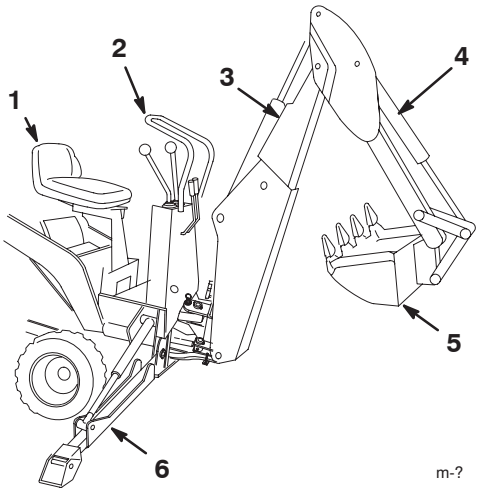


Figure 8

1. Seat
2. Controls
3. Boom
4. Dipperstick
5. Bucket
6. Stabilizer

Controls

Familiarize yourself with all of the controls listed in Figure 9 before you operate the backhoe.

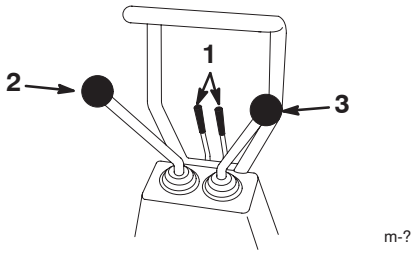


Figure 9

1. Stabilizer control levers
2. Boom control lever
3. Dipperstick/bucket control lever

Note: On CE units the control for raising and lowering the dipperstick and raising and lowering the boom are reversed (i.e., the boom control is on the right and the dipperstick control is on the left). The swing and bucket controls do not change.

Stabilizer Control Levers

Move the stabilizer control levers forward to lower the stabilizers and rearward to raise the stabilizers.

Boom Control Lever

Move the boom control lever forward to lower the boom and rearward to raise the boom. Move the boom control lever to the right to swing the boom to the right and move it left to swing the boom to the left.

You can also move the boom control lever into an intermediate position (i.e., forward and left, forward and right, rearward and left, or rearward and right) to swing the boom at the same time as you raise or lower it.

Dipperstick/Bucket Control Lever

Move the dipperstick/bucket control lever forward to extend the dipperstick and rearward to retract the dipperstick. Move the dipperstick/bucket control lever to the right to dump the bucket and move it left to load the bucket.

You can also move the dipperstick/bucket control lever into an intermediate position (i.e., forward and left, forward and right, rearward and left, or rearward and right) to extend or retract the dipperstick at the same time as you load or dump the bucket.

Connecting the Backhoe to the Traction Unit

Important Before connecting any attachments to the traction unit, ensure that the mount plates are free of any dirt or debris and that the pins rotate freely.

1. Start the engine.
2. Attach the backhoe to the traction unit mount plate as described in the traction unit *Operator's Manual.*
3. Tilt the backhoe part of the way back.
4. Stop the engine.
5. Attach the hydraulic hoses to the traction unit as described in the traction unit *Operator's Manual.*
6. Start the engine.
7. Tilt the backhoe all the way back.

Caution

Tilting the backhoe can pinch or crush your hands.

Keep away from the moving backhoe when tilting.

8. Slide the two links on each end of the tilt cylinder pin and the backhoe link pin and secure them with two lynch pins (Fig. 10 for 200/300 Series traction units or Fig. 11 for TX traction units).

Note: You may need to move the attachment tilt lever to line up the holes in the links with the pins.

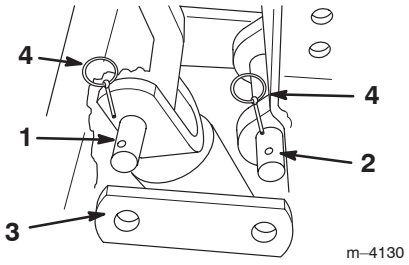


Figure 10

1. Tilt cylinder pin
2. Backhoe link pin
3. Link
4. Lynch pin

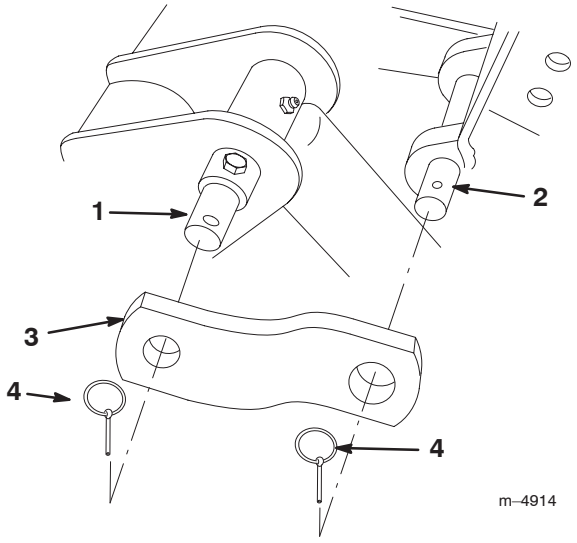


Figure 11

1. Tilt cylinder pin
2. Backhoe link pin
3. Link
4. Lynch pin

9. If you are installing the backhoe on a 200/300 series traction unit, install the side bars on each side as illustrated in Figure 12. The decal on each side bar must be visible when installed.

Important If the bars do not fit snuggly, remove them, loosen the jam nut, and thread the compound side bar together or apart as needed to ensure that they fit as tight as possible (Fig. 12). Tighten the jam nut when finished.

Note: If you have a 300 series, diesel traction unit, you may need to loosen the hood and slide it up in the mounting slots to ensure that the hood does not interfere with the side bars.

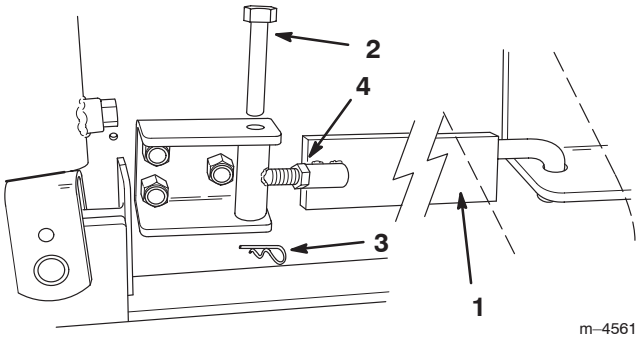


Figure 12

1. Side bar
2. Pin
3. Hairpin cotter
4. Jam nut

Operating the Backhoe

Preparing the Backhoe

1. Drive to the work location.
2. If you are using the backhoe with a 200/300 series traction unit, install the auxiliary hydraulics clamp as follows:

   A. Set the speed selector lever to the slow (turtle) position and the throttle to the 2/3 full position.

   B. Pull the auxiliary hydraulics lever to the operator grip and install the hydraulics lever clamp by pushing it over the hand grip and sliding it right so that the pin through the clamp slides under the right hand grip (Fig. 13).

   C. If your traction unit has a parking brake, engage it.

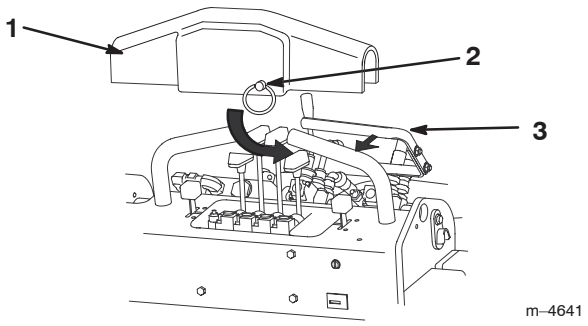


Figure 13

1. Hydraulics lever clamp
2. Pin
3. Auxiliary hydraulics lever

3. If you are using the backhoe with a TX traction unit, install the auxiliary hydraulics clamp as follows:

A. Set the throttle 2/3 of the way to the rabbit position on the traction unit.

B. Pull the lever and clamp down to the reference bar so that the clamp routes behind the loader arm/attachment tilt lever.

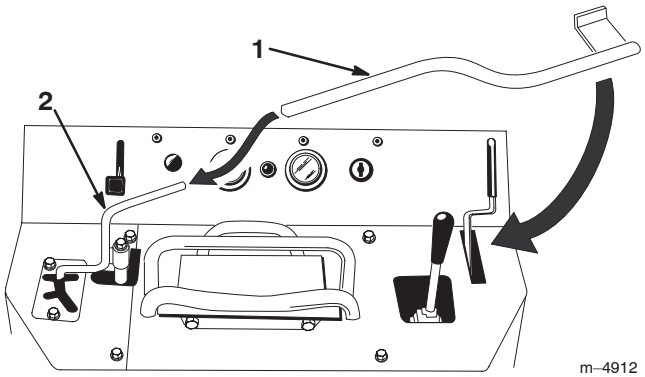


Figure 14

1. Hydraulics lever clamp
2. Auxiliary hydraulics lever

C. Set the parking brake and release the clamp so that it catches under the brake lever (Fig. 15).

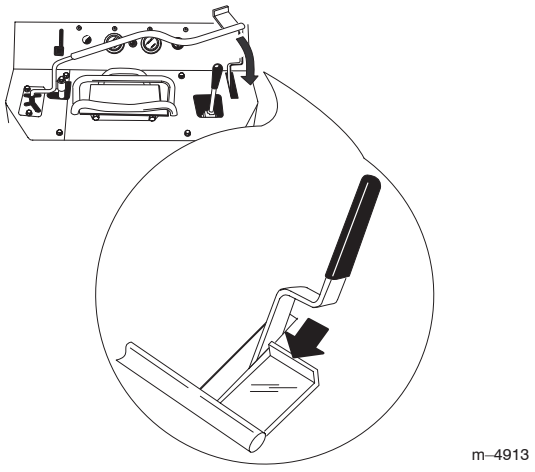


Figure 15

1. Hydraulics lever clamp
2. Pin
3. Auxiliary hydraulics lever

4. Push the stabilizer control levers forward to lower both stabilizers until they touch the ground and the front wheels of the traction unit come off of the ground slightly.

5. Remove the two pins locking the boom in place (Figs. 16 and 17) and place them in the storage positions (Fig. 18).

Note: One pin prevents the boom from swinging side to side (Fig. 16) and the other prevents the boom from moving up and down (Fig. 17).

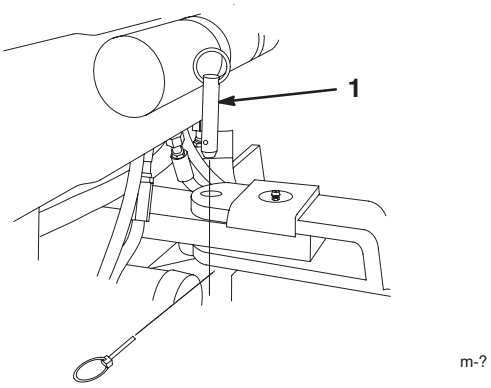


Figure 16

1. Pin

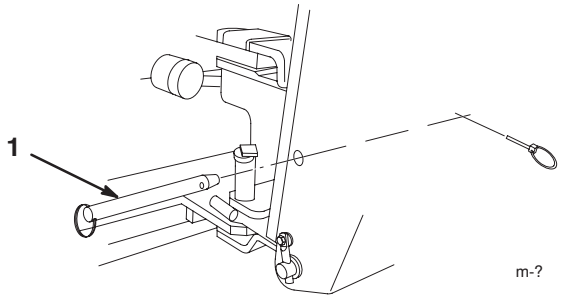


Figure 17

1. Pin

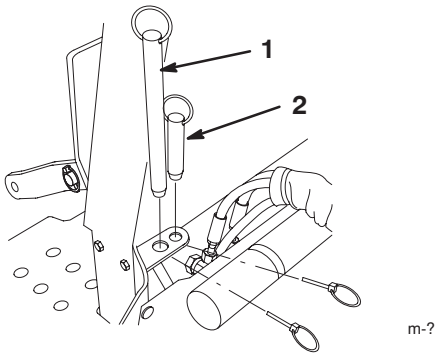


Figure 18

1. Pin
2. Lynch pin

Digging a Hole

Using a backhoe with precision and proficiency takes time and practice. In general, you dig a hole by extending the dipperstick and bucket, lowering them into the ground, and then pullback on the dipperstick while raising the boom and curling the bucket rearward (Fig. 19).

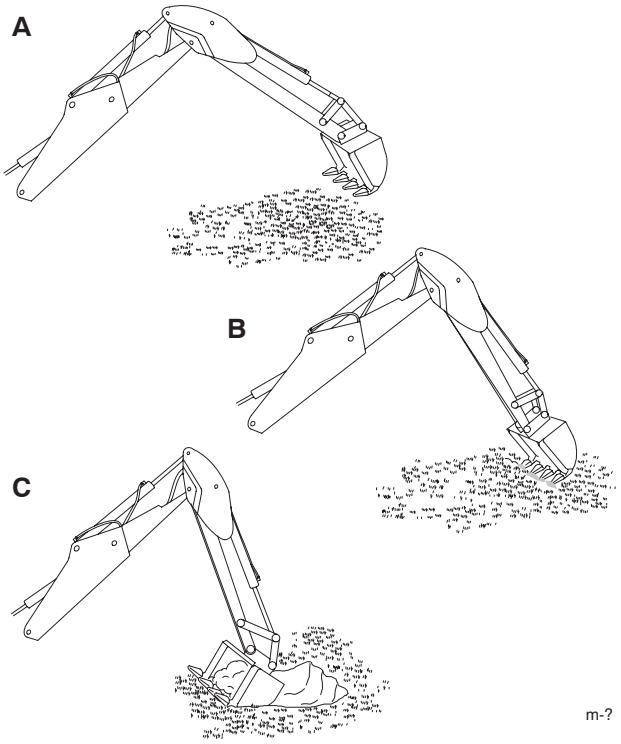


Figure 19

To empty the bucket you swing it to the left or right and extend the dipperstick and uncurl bucket, dumping the load (Fig. 20).

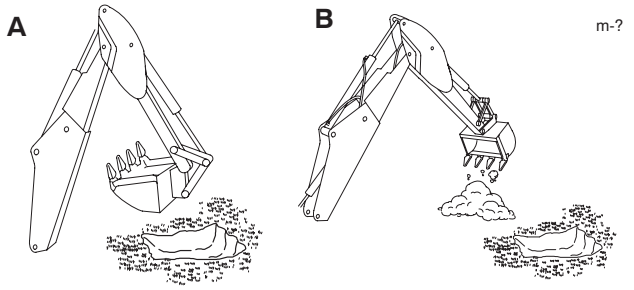


Figure 20

The distance you extend the dipperstick and bucket and the size of bite you take will vary greatly with the soil type, moisture content of the soil, and obstructions in the soil, such as tree roots and rocks.

Spend some time practicing with the backhoe to get the feel for how it operates and how to best use it in the conditions in which you work. Please read and use the following tips when operating the backhoe:

- Do not dig too close to the backhoe body or stabilizers. The backhoe could undercut the stabilizers or traction unit causing the machine to fall into the hole.

Warning

If you dig too close to the backhoe, the backhoe could fall into the hole, tipping on top of you causing severe injury.

Ensure that you do not dig within three feet of the backhoe or stabilizers.

- Do not take large bites of soil. Instead, sweep the bucket through the soil using the swinging motion of the dipperstick a few inches deep at a time.
- If the bucket catches in the soil, uncurl the bucket, raise the boom slightly, and continue digging.
- If your traction unit has a speed selector, set it to the fast position (rabbit) while you are learning how to operate the backhoe (this will slow the backhoe down). Set it to the slow position (turtle) once you feel you have mastered the use of the backhoe.
- If your traction unit has a flow divider, set it to the 11 o'clock position.

Securing the Backhoe for Transport

Warning

If you do not secure the boom, it could swing or lower during transport or when disconnecting the backhoe from the traction unit. The traction unit could become unstable causing loss of control and you or bystanders could be injured. If the boom swings when disconnecting, it could crush or amputate fingers or hands as you disconnect the attachment locking pins.

Always secure the boom before transport and before disconnecting the backhoe from the traction unit.

1. Fully raise the boom, retract the dipperstick, and curl the bucket rearward (Fig. 21). Ensure that you center the boom locking pin holes as much as possible.

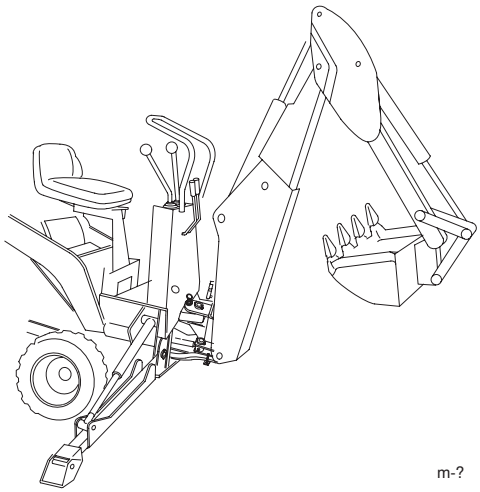


Figure 21

2. Pull the stabilizer levers rearward until the stabilizers are fully raised.
3. Secure the boom using the two pins removed prior to operation (Figs. 22 and 23).

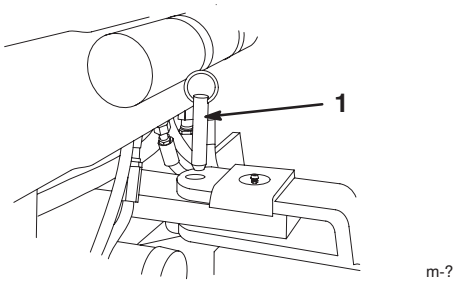


Figure 22

1. Pin

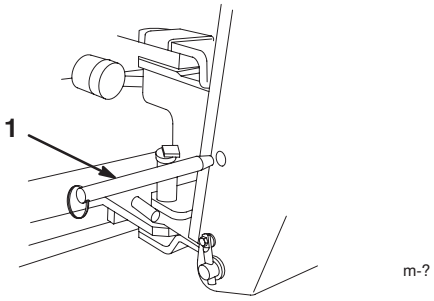


Figure 23

1. Pin
2. Lynch pin

4. Stop the engine and remove the key.
5. Remove the hydraulics lever clamp (Fig. 13 or 14).
6. Secure the clamp to the backhoe by inserting the end of the pin through the clamp into the hole in the side of the control tower (Fig. 24 for 200/300 series traction units. The TX traction unit has a shorter pin through its clamp).

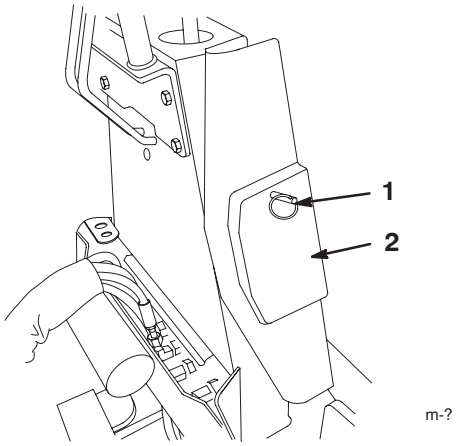


Figure 24

1. Pin
2. Clamp

7. Slowly transport the backhoe as needed.

Disconnecting the Backhoe from the Traction Unit

1. Secure the backhoe in the transport position (refer to Securing for Transport, page 15), move the backhoe to a level storage area, and stop the engine.

Warning

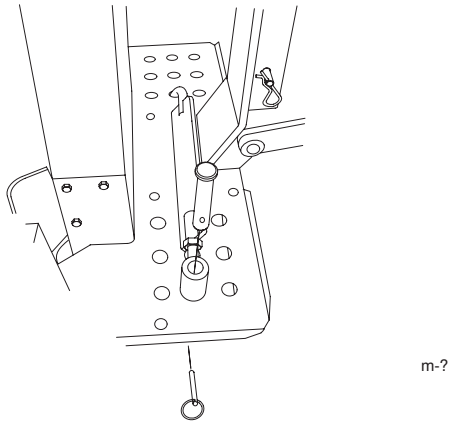
If you do not secure the boom, it could swing or lower during transport or when disconnecting the backhoe from the traction unit. The traction unit could become unstable causing loss of control and you or bystanders could be injured. If the boom swings when disconnecting, it could crush or amputate fingers or hands as you disconnect the attachment locking pins.

Always secure the boom before transport and before disconnecting the backhoe from the traction unit.

2. If you are removing the backhoe from a 200/300 Series traction unit, remove the side bars as follows:

   A. Remove the hairpin cotters and pins securing the side bars and remove the side bars (Fig. 12).

   B. Pin the side bars in the storage positions as illustrated in Figure 25.



m-?

Figure 25

3. Start the engine.

4. Remove the lynch pins securing the links and remove the links (Fig. 10 or 11).

Note: You may need to adjust the tilt lever slightly to loosen the links.

5. Secure the links and two lynch pins for storage on the pins on the backhoe and the other two lynch pins on the traction unit tilt cylinder pin.

6. Disengage the attachment lock pins by turning them to the outside.

7. Tilt the backhoe forward slowly until the storage supports on the backhoe receiver plate and the bucket contacts the ground.

Warning

If you remove the backhoe from the traction unit without a bucket installed on the dipperstick, the backhoe will be unstable. The backhoe could tip over injuring you or other bystanders.

Do not remove the backhoe from the traction unit without first installing a bucket onto the backhoe.

8. Stop the engine.

9. Move the auxiliary hydraulic lever forward, backward, and back to the neutral position to relieve hydraulic pressure at the hydraulic couplers.

10. Slide the collar back on hydraulic couplers and disconnect them.

11. Install protective covers onto the hydraulic couplers on the traction unit.

12. Start the engine.

13. Tilt the mount plate forward and back the traction unit away from the backhoe.

Maintenance

Caution

If you leave the key in the ignition switch, someone could start the engine. Accidental starting of the engine could seriously injure you or other bystanders.

Remove the key from the ignition switch before you do any maintenance.

Service Interval Chart

Service Operation	8 Hrs	25 Hrs	Storage Service
Grease fittings	X		X
Inspect for leaks		X	X
Chipped surfaces–paint			X

Greasing and Lubrication

Service Interval/Specification

Grease all fittings every 8 operating hours (Fig. 26). Note that in most cases the grease fittings are located in the center of every pivot pin. Also, grease the fitting in the swing cylinder pivot pin, located under the seat column, under the backhoe (this location is not shown in Figure 26).

Grease all fittings immediately after every washing.

Grease Type: General-purpose grease

How to Grease

1. Stop the engine and remove the key.
2. Clean the grease fittings with a rag.
3. Connect a grease gun to each fitting.
4. Pump grease into the fittings until grease begins to ooze out of the bearings.
5. Wipe up any excess grease.

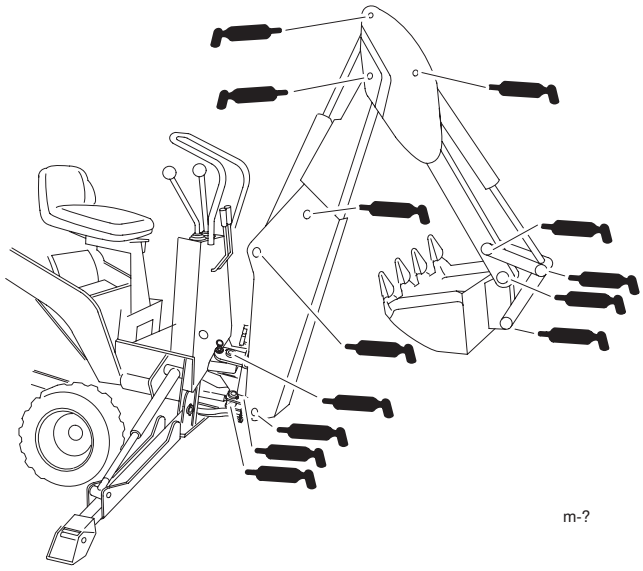


Figure 26

Storage

1. Before long term storage wash the attachment with mild detergent and water to remove dirt and grime.
2. Apply grease to all grease fittings.
3. Check and tighten all bolts, nuts, and screws. Repair or replace any part that are damaged or worn.
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
Backhoe does not operate	1. Hydraulic coupler not completely connected	1. Check and tighten all couplers.
	2. Auxiliary hydraulics valve on the traction unit is not fully engaged.	2. Engage the valve.
	3. Transport pins were not removed.	3. Remove the pins.
	4. Hydraulic fluid level is low.	4. Fill the traction unit hydraulic tank.
	5. Damaged hydraulic coupler	5. Check couplers and replace any that are defective.
	6. Obstructed hydraulic hose	6. Find and remove the obstruction.
	7. Pinched hydraulic hose	7. Replace the hose.
	8. Auxiliary hydraulic valve on the traction unit is not opening.	8. Repair the valve.
	9. Hydraulic coupler not completely connected	9. Check and tighten all couplers.
	10. Bent piston rod	10. Contact your Authorized Toro Dealer.
Backhoe is operating slowly	1. Hydraulic oil is cold.	1. Allow the engine to warm the oil before operating.
	2. Engine speed is too slow.	2. Increase the throttle speed of the traction unit.
	3. Pinched hydraulic hose	3. Replace the hose.
	4. Damaged cylinder	4. Contact your Authorized Toro Dealer.
	5. Damaged hydraulic pump	5. Contact your Authorized Toro Dealer.
Backhoe fails to hold up a load (all loads will normally settle down over a long period of time)	1. Damaged hydraulic hose	1. Replace the hose.
	2. Damaged cylinder	2. Contact your Authorized Toro Dealer.
	3. Damaged control valve	3. Contact your Authorized Toro Dealer.
Hydraulic oil leakage	1. Damaged hydraulic hose	1. Replace the hose.
	2. Damaged hydraulic system	2. Contact your Authorized Toro Dealer.
Swing cylinder malfunctioning	1. Damaged cylinders, or swing restrictors	1. Contact your Authorized Toro Dealer.

Problem	Possible Causes	Corrective Action
Control valve sticking or working hard	1. Dirty hydraulic oil	1. Change the hydraulic oil.
	2. Damaged or dirty valve	2. Contact your Authorized Toro Dealer.
	3. Damaged cylinder	3. Contact your Authorized Toro Dealer.
Backhoe operation is spongy or jerky	1. Hydraulic fluid level is low.	1. Fill the traction unit hydraulic tank.
	2. Air in the hydraulic system	2. Extend the cylinders as far as possible and hold them in an extended position for several seconds.
	3. Hydraulic oil is cold.	3. Allow the engine to warm the oil before operating.
	4. Pinched hydraulic hose	4. Replace the hose.


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