



Count on it.

Operator's Manual

Trencher Head

TXL 2000 Tool Carrier

Model No. 22533—Serial No. 318000001 and Up



⚠ 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.

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.

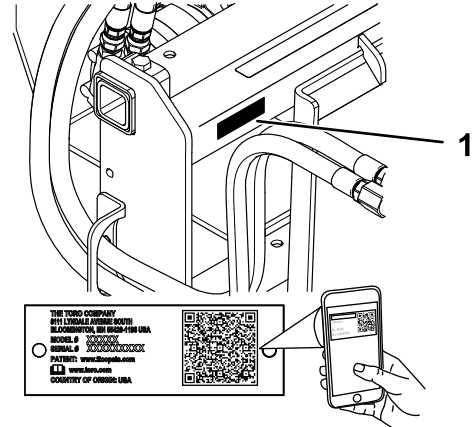


Figure 1

g270158

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 uses 2 words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

Introduction

The trencher head attachment is intended to be used on a Toro tool carrier with a variety of booms and chains. It is designed primarily to dig trenches in soil to facilitate the burying of cabling and piping. It not intended for use in cutting hard materials such as wood or concrete. 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 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.

Contents

Safety	3
General Safety	3
Slope Safety	4
Trencher Safety	4
Maintenance and Storage Safety	4
Safety and Instructional Decals	5
Setup	6
1 Installing the Boom	6
2 Installing the Digging Chain	7
3 Installing the Crumber	7
4 Installing the Spoils Auger	8
Product Overview	8
Specifications	8
Operation	9
Installing and Removing the Attachment	9
Digging a Trench	9
Operating Tips	10
Offsetting the Trencher	10
Transport Position	11
Transporting the Trencher on a Trailer	11
Maintenance	12
Recommended Maintenance Schedule(s)	12
Greasing the Trencher	12
Checking the Hydraulic Lines	12
Servicing the Planetary Oil	13
Flipping a Worn Boom	14
Replacing the Digging Teeth	14
Replacing the Digging Chain	15
Adjusting the Chain Tension	17
Replacing the Drive Sprocket	18
Storage	19

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 transport an attachment with the arms raised or extended;** always transport the attachment close to the ground, with the loader arms retracted; refer to [Transport Position \(page 11\)](#).
- 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 engine.
- 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 a safe distance away from the machine.
- Stop the machine, shut off the engine, 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.

You can find additional safety information where needed throughout this *Operator's Manual*.

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.
- **Keep the attachment in the lowered position with the loader arms retracted when on slopes.** Raising the attachment or extending the loader arms on a slope affects the stability of the machine.
- 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.
- Do not operate the machine near drop-offs, embankments, or bodies of water. The machine could suddenly roll over if a wheel or 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.

Trencher Safety

- Keep your hands, feet, and any other part of your body or clothing away from moving teeth, auger, or other parts.
- Look behind and down before backing up to ensure that the path is clear.
- Stop the digging chain when you are not digging.
- Always lower the attachment and shut off the machine each time you leave the operating position.
- Clean soil from the trencher before transporting it.

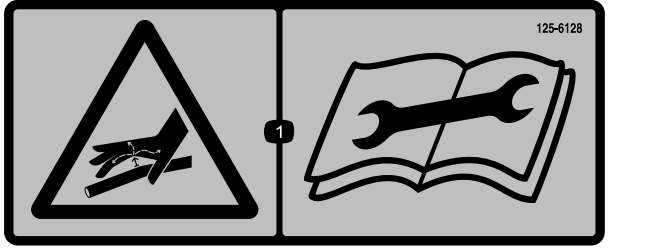
Maintenance and Storage Safety

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

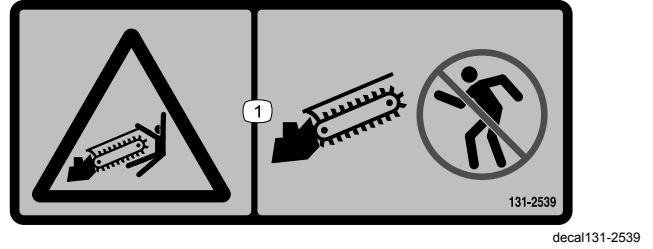


Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



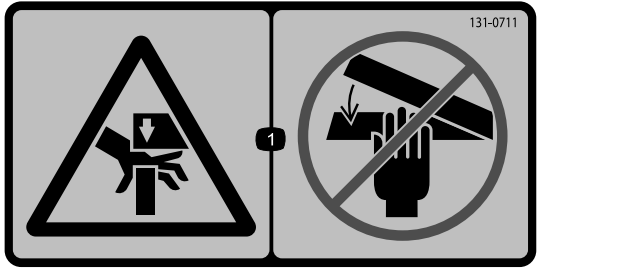
125-6128

1. High pressure fluid hazard, injection into the body—read the *Operator's Manual* before performing maintenance.



131-2539

1. Cutting/dismemberment hazard, trencher—do not walk in front of the trencher.



131-0711

1. Crushing hazard—keep away from pinch points and actuating parts.

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.
For more information, please visit www.ttcocalprop65.com

133-8061

decal133-8061



139-2804

decal139-2804

1. Warning—read the *Operator's Manual*.
2. Warning—keep bystanders away.
3. Explosion hazard; electric shock hazard—do not operate if power lines may be present; call your local utility company.

Setup

Loose Parts

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

Procedure	Description	Qty.	Use
1	Boom assembly (sold separately)	1	Install the boom.
2	Digging chain (sold separately)	1	Install the digging chain.
3	Crumber (provided with boom)	1	Install the crumber
4	No parts required	–	Install the spoils auger.

1

Installing the Boom

Parts needed for this procedure:

1	Boom assembly (sold separately)
---	---------------------------------

Procedure

1. Install the trencher to the traction unit; refer to the *Operator's Manual* for the traction unit.
2. Raise the trencher about 15 cm (6 inches) off the ground.
3. Shut off the engine and remove the key.
4. Remove the jam nuts and tensioning bolt on each side of the boom (Figure 3).
5. Thread 2 jam nuts onto each bolt to the head of the bolt.
6. Insert the bolts into the tubes, with the head of the bolt and nuts facing the end to be installed on the drive head (Figure 3).
7. Slide the boom over the arm on the drive head (Figure 3).

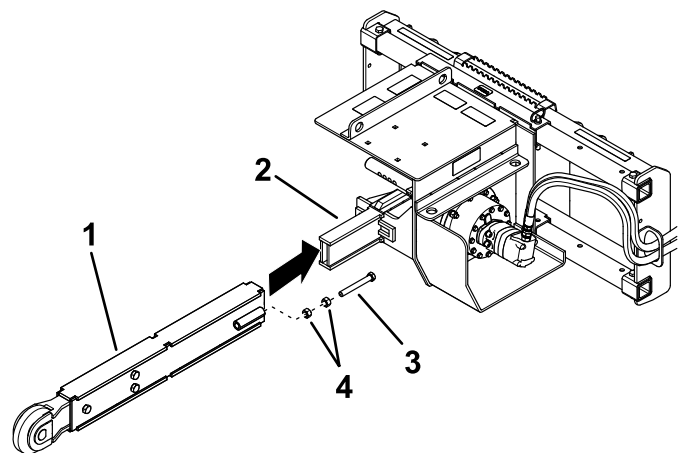


Figure 3

g280085

- | | |
|---------|------------------------|
| 1. Boom | 3. Tensioning bolt (2) |
| 2. Arm | 4. Jam nut (4) |

2

Installing the Digging Chain

Parts needed for this procedure:

1	Digging chain (sold separately)
---	---------------------------------

Procedure

1. Remove the bolt and locknut securing the spoils auger and remove the auger (Figure 4).

Note: Retain the hardware for installation later.

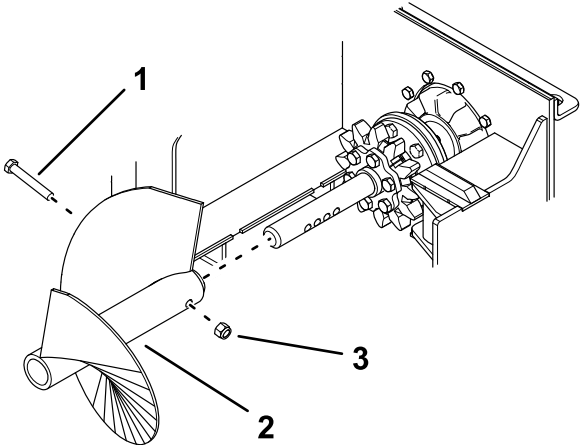


Figure 4

g270627

- | | |
|--------------------------|-----------------------|
| 1. Bolt (5/8 x 4 inches) | 3. Locknut (5/8 inch) |
| 2. Spoils auger | |

2. Refer to [Installing the Digging Chain \(page 16\)](#) to install the chain.

3

Installing the Crumber

Parts needed for this procedure:

1	Crumber (provided with boom)
---	------------------------------

Procedure

Install the crumber using the 4 bolts (1/2 x 1-3/4 inches), 4 flat washers, 4 spring washers, and 4 nuts (1/2 inch) as shown in Figure 5.

Note: Ensure that there is at least 5 cm (2 inches) between the chain and crumber plate.

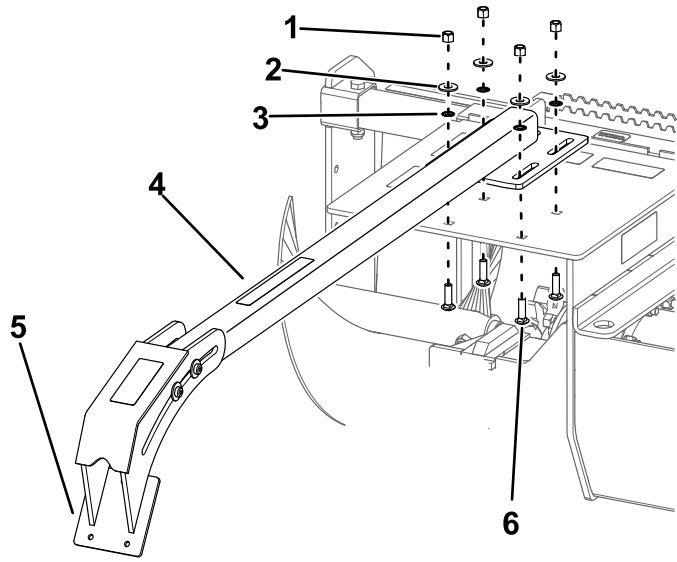


Figure 5

g270626

- | | |
|----------------------|--------------------------------|
| 1. Nut—1/2 inch (4) | 4. Crumber |
| 2. Flat washer (4) | 5. Crumber plate |
| 3. Spring washer (4) | 6. Bolt—1/2 x 1-3/4 inches (4) |

4

Installing the Spoils Auger

No Parts Required

Procedure

Before operating the trencher, install and position the spoils auger to work correctly with the digging chain configuration you are using. If you do not position the spoils auger correctly, you could damage the trencher.

1. Use the bolt and nut removed from the auger previously to secure it in the correct holes, as shown in [Figure 6](#).

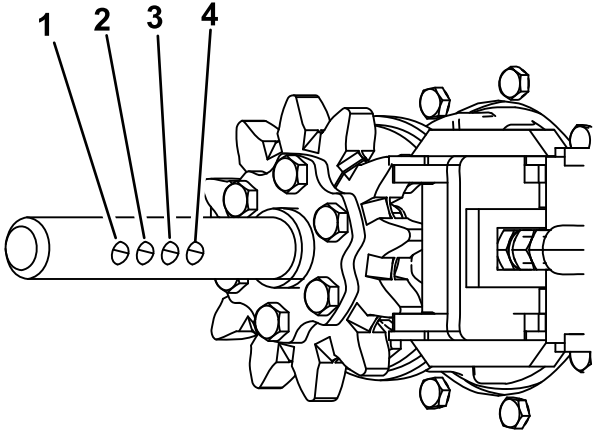


Figure 6

- | | |
|--|---|
| 1. Connect these holes for a 10 cm (4 inch) chain. | 3. Connect these holes for a 20 cm (8 inch) chain. |
| 2. Connect these holes for a 15 cm (6 inch) chain. | 4. Connect these holes for a 30 cm (12 inch) chain. |

2. Torque the bolt to 183 to 223 N·m (135 to 165 ft-lb).

Product Overview

Specifications

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

	With 91 cm (36 inch) boom	With 122 cm (48 inch) boom	With 152 cm (60 inch) boom
Dig depth at 60 degree boom angle	91 cm (36 inches)	122 cm (48 inches)	152 cm (60 inches)
Width	150 cm (59 inches)	150 cm (59 inches)	150 cm (59 inches)
Height	66 cm (26 inches)	66 cm (26 inches)	66 cm (26 inches)
Length	178 cm (70 inches)	216 cm (85 inches)	244 cm (96 inches)
Approximate weight with chain	515 kg (1,135 lb)	554 kg (1,220 lb)	583 kg (1,285 lb)

Note: Wider chains will increase the weight of the trencher.

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

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.

Digging a Trench

1. Start the engine, set the throttle to HIGH IDLE, and move the machine over the area to be trenched.
2. Raise the loader arms to the horizontal position, and tilt the trencher so that the boom is at a 15° angle.
3. Engage the auxiliary hydraulics and slowly lower the trencher until the chain touches the ground.
4. Begin inserting the nose of the boom and chain into the ground by slowly raising the trencher a few centimeters (inches) off the ground while tilting the nose down into the ground gradually.

Note: You may need to move the traction unit rearward as you rotate the trencher to help the crumber engage the ground.

5. Once the trencher boom is in the ground at a 65° angle, slowly lower the trencher until the spoils auger is just above the ground.
6. Ensure that all parts of the trencher are functioning correctly.
7. Slowly move the traction unit rearward to extend the trench.

Note: If you move too fast, the trencher will stall. If it stalls, raise it slightly, slowly drive forward, or reverse the chain direction momentarily.

8. When finished, raise the trencher and boom out of the trench by tilting the attachment rearward. Then, clear soil from the chain by changing the direction of the chain several times.

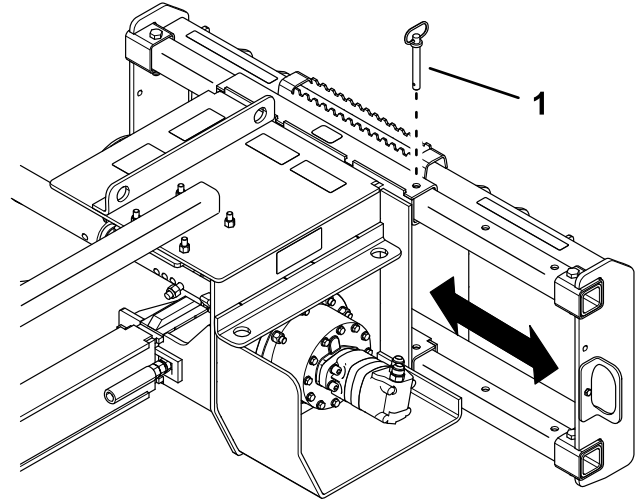
Operating Tips

- Clean the area of trash, branches, and rocks before trenching to prevent equipment damage.
- Always begin trenching with the slowest ground speed possible. Increase speed if conditions permit.
- Always use full throttle (maximum engine speed) when trenching.
- Always trench backward (i.e., in reverse).
- Never transport the trencher with the loader arms raised. Keep the arms lowered and the trencher tilted up.
- When trenching, the spoils auger should just clear the original ground surface to obtain maximum soil removal.
- Trench at a 65 degree angle for best results.
- To dig a trench faster, control the depth with periodic adjustments of the loader arms.
- If the trencher binds in the soil, reverse the chain direction. Once the chain is loose, continue trenching.
- If you need the finished trench to be cleaner than what is possible with the trencher, you can purchase a crumber from your dealer. The crumber mounts onto the trencher and scrapes the trench clean as you run the trencher.

Offsetting the Trencher

You can move the trencher to the left side of the trencher frame to allow you to trench close to buildings and other obstacles.

1. Remove the trencher from the traction unit; refer to the *Operator's Manual* for the traction unit.
2. Remove the pin from the top of the trencher (Figure 7).



g270671

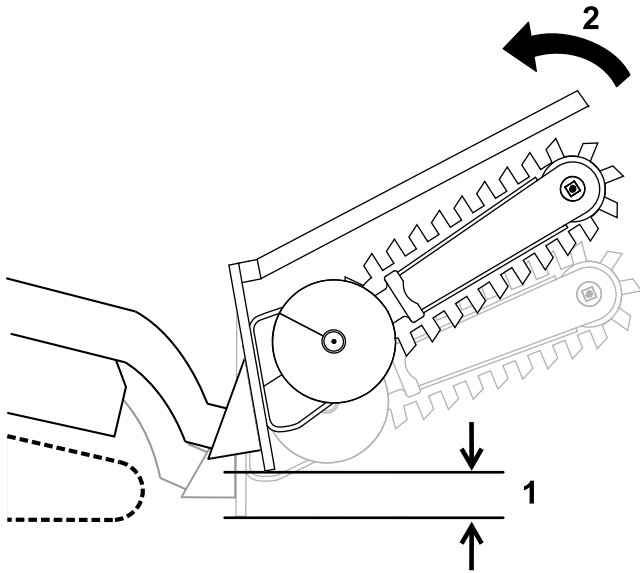
Figure 7

1. Pin

3. Move the attachment mount plate to the desired location and secure it with the pin.

Transport Position

When transporting the attachment, keep it as close to the ground as possible, no more than 15 cm (6 inches) above the lowest position. Tilt it rearward.



g270672

Figure 8

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

Transporting the Trencher on a Trailer

Place the trencher on a trailer or truck capable of carrying it. Securely tie the trencher to the trailer or truck using tie straps appropriate for the weight of the trencher and for highway use.

Maintenance

Determine the left and right sides of the machine from the normal operating position.

⚠ 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.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
Before each use or daily	<ul style="list-style-type: none">• Grease the trencher• Check the hydraulic lines for leaks, loose fittings, kinked lines, loose mounting supports, wear, weather, and chemical deterioration.• Check the planetary oil level.• Inspect the boom for wear.• Check the chain tension.
Every 25 hours	<ul style="list-style-type: none">• Inspect the boom for wear.
Every 50 hours	<ul style="list-style-type: none">• Replace the planetary oil.

Greasing the Trencher

Service Interval: Before each use or daily

Grease Type: General-purpose grease

1. Park the machine on a level surface, disengage the auxiliary hydraulics, engage the parking brake, and lower the loader arms.
2. Shut off the engine and remove the key.
3. Remove the plug from the idler shaft.
4. Clean the grease fitting with a rag (Figure 9).

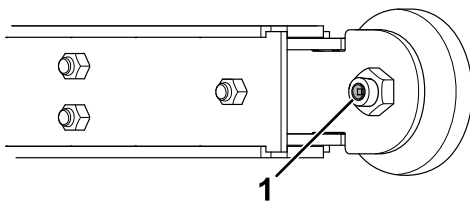


Figure 9

1. Plug

5. Connect a grease gun to the fitting.
6. Pump grease into the fittings until grease begins to ooze out of the bearings (approximately 3 pumps).
7. Wipe up any excess grease.
8. Install the plug.

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.

Servicing the Planetary Oil

Oil Specifications

Oil type: SAE 80W-90, API service GL-5

Capacity: 0.70 L (24 fl oz)

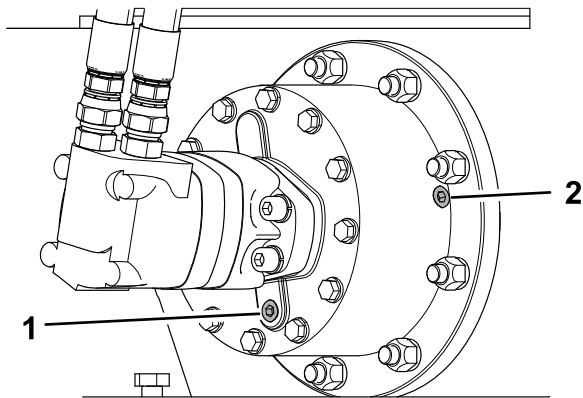
Checking the Planetary Oil Level

Service Interval: Before each use or daily

1. Park the machine on a level surface, disengage the auxiliary hydraulics, engage the parking brake, and lower the loader arms.
2. Shut off the engine and remove the key.
3. Remove the upper drain plug, at the 3 o'clock position on the planetary, near the quick-attach plate (Figure 10).
4. If oil comes out of the hole, the oil level is correct. If no oil comes out, add oil until it comes out of the hole.

Important: Do not overfill.

5. Install the plug.



g272152

Figure 10

1. Lower drain plug
2. Upper drain plug

Replacing the Planetary Oil

Service Interval: Every 50 hours

1. Park the machine on a level surface, disengage the auxiliary hydraulics, engage the parking brake, and lower the loader arms.
2. Shut off the engine and remove the key.
3. Remove the lower drain plug, at the 6 o'clock position on the planetary, and drain the oil (Figure 10).
4. Install the drain plug.
5. Remove the upper drain plug and add oil until it comes out of the hole.
6. Install the drain plug.
7. Dispose of the used oil at a recycling center.

Flipping a Worn Boom

Service Interval: Every 25 hours—Inspect the boom for wear.

Inspect the bottom of the boom for wear. If it is worn, complete the following:

Note: A boom is worn when grooves from the chain are deep enough that the link rollers contact the boom.

Note: If you have already flipped the boom once, replace the boom when both sides are worn.

1. Park the machine on a level surface, disengage the auxiliary hydraulics, engage the parking brake, and lower the loader arms.
2. Shut off the engine and remove the key.
3. Loosen the jam nuts and move them to as close to the head of the tensioning bolts as possible (Figure 11).
4. Remove the chain from the drive sprocket and boom.

Note: Use a hoist to lift the chain.

5. Remove the boom, flip it over so the bottom becomes the top (or if you have already flipped it once, replace it), and install the boom again (Figure 11).

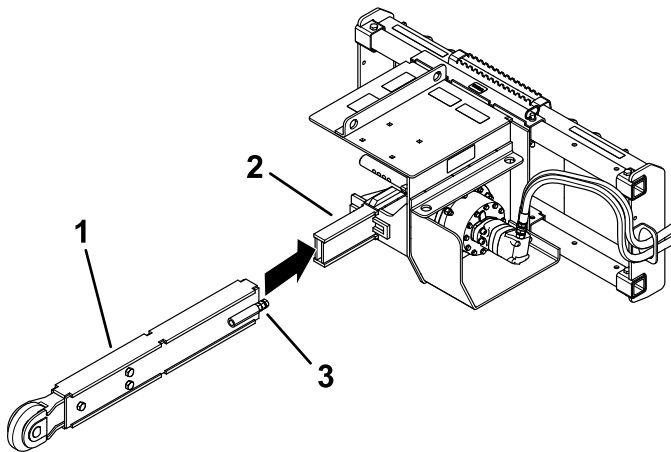


Figure 11

g270625

1. Boom
2. Arm
3. Jam nuts and tensioning bolt (2)

6. Install the chain over the drive sprocket and idler wheel.

Note: Use a hoist to lift the chain.

7. Adjust the tensioning bolts until there is approximately 2.5 cm (1 inch) of slack between the bottom of the boom and the chain. Tighten the jam nuts.

Note: Ensure to adjust the jam nuts on both bolts evenly.

Replacing the Digging Teeth

Service Interval: Before each use or daily—Inspect the boom for wear.

Due to the high amount of wear placed on the digging teeth, you need to replace them periodically.

To replace a single tooth, remove the bolts and nuts securing the tooth to remove it, then install a new tooth in the same position. Torque the bolts securing the teeth to 37 to 45 N·m (27 to 33 ft-lb).

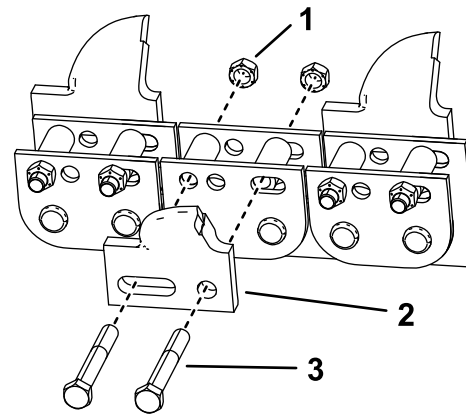


Figure 12

g245068

1. Nut
2. Tooth
3. Nut

Replacing the Digging Chain

Removing the Digging Chain

Preparing to Remove the Digging Chain

1. Park the machine on a level surface, lower the loader arms, and tilt the boom to the horizontal position.
2. Rotate the digging chain until the master pin is positioned at the top of the idler wheel (Figure 15).
3. Shut off the engine and remove the key.
4. Remove the bolt and locknut securing the spoils auger and remove the auger (Figure 13).

Note: Retain the hardware for installation later.

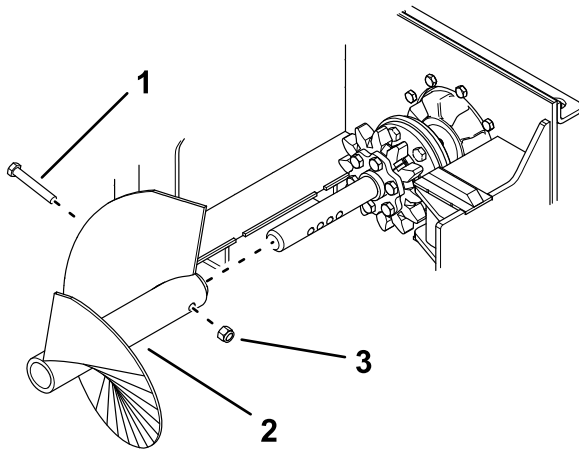


Figure 13

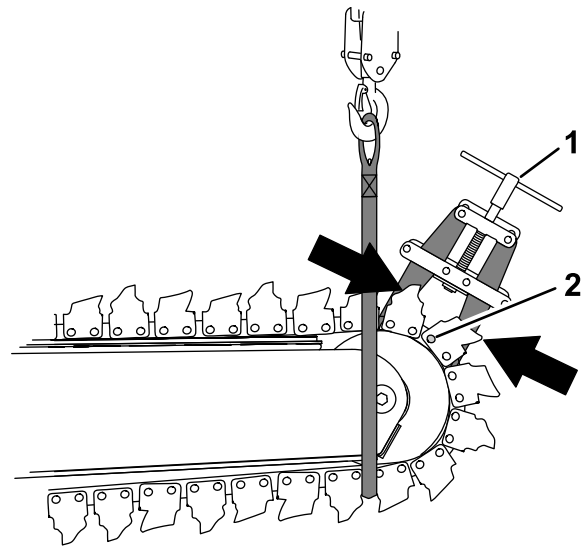
g270627

1. Bolt (5/8 x 4 inches)
2. Spoils auger
3. Locknut (5/8 inch)

5. Loosen the jam nuts and move them to as close to the head of the tensioning bolts as possible (see Figure 11).

Removing the Master Pin in the Digging Chain

1. Counting from the master pin, loop a 3.65 m (12 foot) lifting strap with a lifting capacity of 181.4 kg (400 lb) around the chain at the digging tooth of the fifth or sixth link below and forward of the boom (Figure 14).
2. With the strap attached to the lifting equipment, raise the lifting strap enough to support the digging chain.
3. Clamp the ends of the chain with a chain clamp at the link rollers at either side of the inner and outer plates at the master pin (Figure 14).

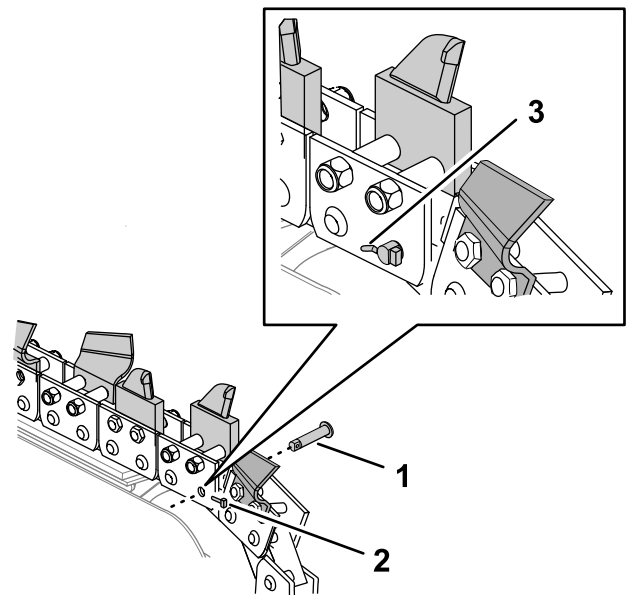


g272492

Figure 14

1. Chain clamp
2. Master pin hole

4. Straighten or cut off the tail of the safety pin and remove the pin (Figure 15).



g272491

Figure 15

1. Master pin
2. Safety pin
3. Safety pin (bent 30° to 45°)

Note: Discard the safety pin.

5. Remove the master pin and the roller for the master pin (Figure 15).

Note: Retain the master pin and the roller for installing the replacement chain.

Removing the Digging Chain from the Machine

1. Lower the lifting equipment until the end of the digging chain is laying on the ground (Figure 16).
2. Remove the lifting strap.
3. Start the machine and lower the boom until the idler wheel is positioned 31 to 36 cm (12 to 14 inches) above the ground (Figure 16).

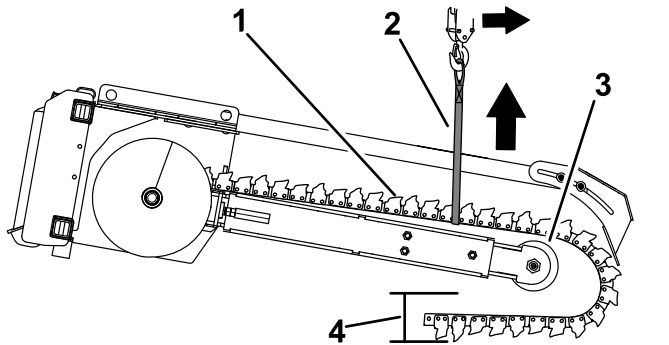


Figure 16

- | | |
|------------------|--|
| 1. Digging chain | 3. Idler wheel |
| 2. Lifting strap | 4. Clearance 31 to 36 cm (12 to 14 inches) |

4. Start the machine and slowly engage the forward-flow auxiliary hydraulics.
5. When the digging chain has cleared the drive sprocket, shut off the auxiliary hydraulics, shut off the machine, and remove the key.
6. Wrap the lifting strap around the digging chain at the idler wheel, and attach the strap to the lifting equipment (Figure 16).
7. Raise the lifting equipment and remove the digging chain from the boom (Figure 16).

Installing the Digging Chain

Preparing to Install the Digging Chain

1. Park the machine on a level surface, lower the loader arms, and tilt the boom to the horizontal position.
2. Shut off the engine and remove the key.
3. Lay the digging chain on the ground in a straight line, below the lifting equipment such as a hoist, and with the cutting face of the teeth pointing toward the path where you will move the machine (forward) to position it over the digging chain (Figure 17).

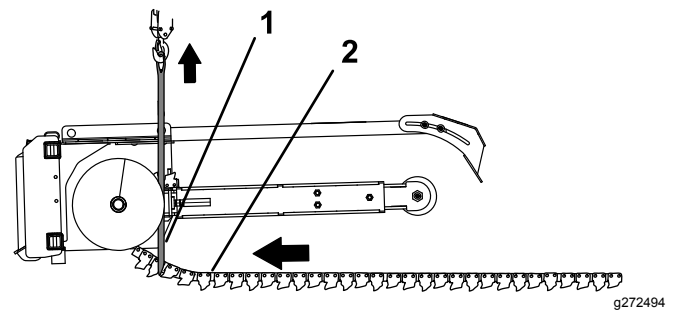


Figure 17

- | | |
|------------------|---|
| 1. Lifting strap | 2. Digging chain (teeth down and forward) |
|------------------|---|

4. At the forward end of the chain, loop a 3.65 m (12 foot) lifting strap with a lifting capacity of 181.4 kg (400 lb) around the chain at the digging tooth of the third or fourth link of the chain (Figure 17).
5. Start the machine and position the trencher boom over the digging chain and with the lifting strap forward of the drive sprocket of the trencher (Figure 17).

Note: When positioned correctly, the boom of the trencher is aligned with the digging chain.

6. Turn the machine off and remove the key.

Aligning the Digging Chain

This procedure requires 2 people to align the digging chain to the machine.

1. Route the ends of the lifting strap forward of the sprocket hub, on either side of the drive sprocket.

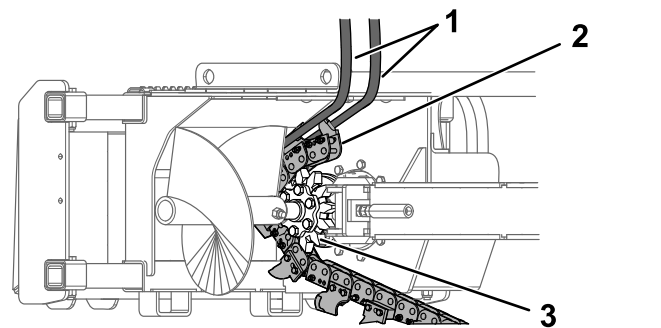


Figure 18

- | | |
|------------------|-------------------|
| 1. Lifting strap | 3. Drive sprocket |
| 2. Digging chain | |

2. Connect the ends of the lifting strap to the lifting equipment, and raise the end of the chain until the drive pins engage the drive sprocket (Figure 18).

3. Start the machine and slowly engage the forward-flow auxiliary hydraulics to drive the chain onto the upper wear strip of the boom.

Important: If the chain is not aligned or engaged with the drive sprocket, shut off the machine, remove the key, and align the chain to the drive sprocket.

Note: Maintain tension on the strap until the end of the chain is on the upper wear strip.

4. Lower the lifting strap as the chain moves around the sprocket and into position on the upper wear strip.
5. Shut off the auxiliary hydraulics when the end of the chain is positioned on top of the idler wheel (Figure 19).

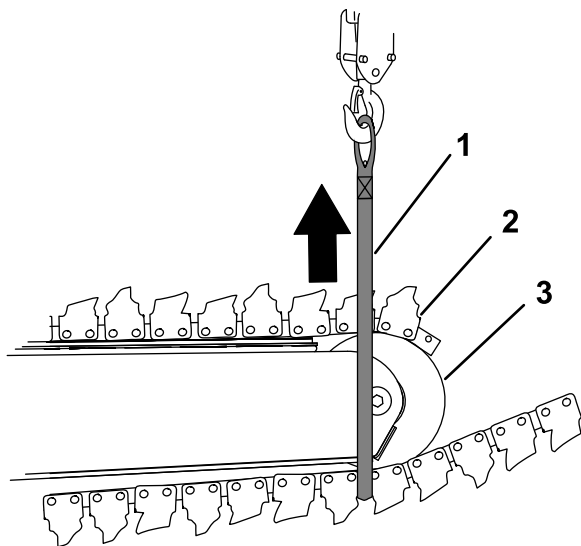


Figure 19

g272493

- | | |
|------------------|----------------|
| 1. Lifting strap | 3. Idler wheel |
| 2. Digging chain | |

6. Shut off the machine and remove the key.
7. Remove the lifting strap from the machine.

Linking the Digging Chain

1. At the end of the chain laying on the ground, loop the lifting strap around the chain at the digging tooth of the fifth or sixth link of the chain (Figure 19).

2. Raise the chain and position it around the idler wheel (Figure 19 and Figure 14).

Note: Rotate the auger as necessary to engage the teeth of auger drive sprocket with the digging chain.

3. Clamp the ends of the chain with a with a chain clamp at the link rollers at either side of the inner and outer plates at the master pin (Figure 14).

4. Align the hole of a link roller with the holes in the inner plates at the end of the chain (Figure 15).
5. Align the holes in the inner plates and the roller of the chain with the holes in the outer plates of the other end of the chain (Figure 15).
6. Align the master pin with the hole in the pin parallel with the chain plates forward of the idler wheel (Figure 15).
7. Insert the master pin through the digging chain plates.
8. Insert the safety pin through the master pin with the head of the pin toward the idler wheel (Figure 15).

Important: Do not install a used safety pin. Only use a new safety pin.

9. Remove the lifting strap and the chain clamp.
10. Bend the tail of the safety pin down 30° to 45° (Figure 15).
11. Install the spoils auger; refer to 4 Installing the Spoils Auger (page 8).
12. Adjust the tension of the digging chain; refer to Adjusting the Chain Tension (page 17).

Adjusting the Chain Tension

Service Interval: Before each use or daily—Check the chain tension.

With the trencher parallel to the ground, ensure that there is approximately 2.5 cm (1 inch) between the bottom of the boom and the top of the bottom chain span. If not, adjust the chain using the following procedure:

1. Park the machine on a level surface, disengage the auxiliary hydraulics, engage the parking brake, and lower the loader arms.
2. Shut off the engine and remove the key.
3. Rotate the jam nut closest to the tube to adjust the tensioning bolt until there is approximately 2.5 cm (1 inch) of slack between the bottom of the boom and the chain (Figure 3). Tighten the other jam nut against the first jam nut.

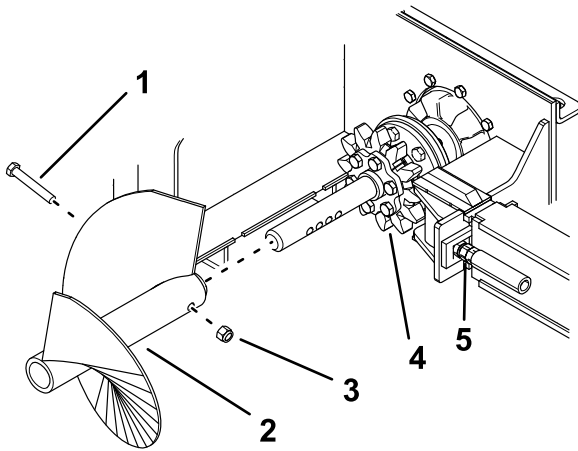
Note: Ensure to adjust the jam nuts on both bolts evenly.

4. Loosen the 4 nuts securing the crumber to the trencher and slide it outward so that there is at least 5 cm (2 inches) between the chain and the crumber plate (Figure 5).
5. Tighten the 4 nuts.

Replacing the Drive Sprocket

Over time, the drive sprocket will wear, especially when used in sandy or clay soils. When this happens, the digging chain will begin to slip. If the chain slips, replace the drive sprocket as follows:

1. Park the machine on a level surface, disengage the auxiliary hydraulics, engage the parking brake, and lower the loader arms.
2. Raise the trencher a few centimeters (inches) above the ground.
3. Shut off the engine and remove the key.
4. Remove the spoils auger ([Figure 20](#)).



g270871

Figure 20

- | | |
|--------------------------|-------------------------------------|
| 1. Bolt (5/8 x 4 inches) | 4. Drive sprocket |
| 2. Spoils auger | 5. Jam nuts and tensioning bolt (2) |
| 3. Locknut (5/8 inch) | |

5. Loosen the jam nuts and move them to as close to the head of the tensioning bolts as possible ([Figure 20](#)).
6. Remove the chain from the drive sprocket and boom.
7. Remove the 6 bolts (5/8 x 2-1/2 inches) and nuts (5/8 inch) securing the drive sprocket ([Figure 20](#)).
8. Remove and discard the drive sprocket ([Figure 20](#)).
9. Clean the sprocket mounting surface on the trencher.
10. Apply thread-locking compound to the 6 bolts (5/8 x 2-1/2 inches), and install the sprocket halves, bolts, and nuts (5/8 inch) finger tight ([Figure 20](#)).

11. Slowly begin tightening the bolts progressing around the sprocket until all bolts are torqued to 129 to 155 N·m (95 to 115 ft-lb).

Important: Tighten each bolt only half way first, working your way around the 6 bolts, then return to each bolt in turn and torque them.

12. Install the digging chain; refer to [Installing the Digging Chain \(page 16\)](#).
13. Install the spoils auger; refer to [4 Installing the Spoils Auger \(page 8\)](#).

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.

Note: 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.

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.

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.