



Count on it.

Operator's Manual

Auger Drive Head

for TX 413 Compact Utility Loaders

Model No. 22804—Serial No. 270000001 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).

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 printed on a plate on the auger drive head. On augers and extensions, the model and serial number plate is located on the upper portion of the shaft. Write the numbers in the space provided.

<p>Model No. _____</p> <p>Serial No. _____</p>
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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.

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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.



Contact with a moving auger can cause entanglement, severe wounds, and/or death.

Keep all others at least 10 feet away from the auger during operation. Also, do not replace the supplied bolt which secures the auger to the drive head with a longer bolt as this may increase the chance for entanglement.



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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. An attached auger bit will make the front end heavy.



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.

Stability Ratings

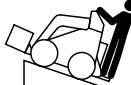


To determine the degree of slope you can traverse with the auger installed on a traction unit, find the stability rating for the hill position you want to travel in the appropriate table below, then find the degree of slope for the same rating and hill position in the Stability Data section of the traction unit *Operator's Manual*.



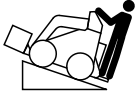


Exceeding the maximum recommended slope can cause the traction unit to tip, crushing you or bystanders.

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 12 to 24 inch (30 to 61 cm) Auger

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

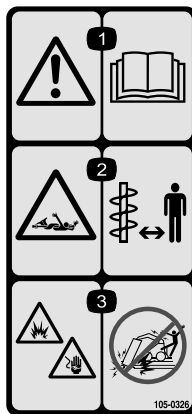
Stability Without an Auger or with an Auger Smaller than 12 inches (30 cm)

Orientation	Stability Rating
Front Uphill 	C
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. Warning—read the *Operator's Manual*.
2. Entanglement hazard, auger—keep bystanders a safe distance from the auger.
3. Explosion and/or electric shock hazard—do not dig in areas with buried gas or power lines.

Operation

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

Note: Always use the traction unit to lift and move the attachment. To move an auger without the drive head, sling a strap over each end of the auger and hoist it to the desired location.

Operational Specifications

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

Width	24 inches (61 cm)
Length	15 inches (38 cm)
Height	23 inches (58 cm)
Weight (without auger)	135 lb (61 Kg)
Maximum Auger Diameter	24 inches (61 cm)

Installing an Auger



The auger head swings freely in the cradle arms. Your hands or fingers could get pinched and severely injured or amputated if they are caught between the cradle arms and the swinging drive head.

Keep your hands and fingers away from the cradle arms.

1. Raise the loader arms so the drive head clears the ground.
2. Stop the engine.
3. Manually rotate the auger drive head up, until you can slide a bolt (1/2 x 2-3/4 inches) into the hole in the cradle arm, securing the drive head. Lightly secure the bolt with a flange nut (1/2 inch) (Figure 2).

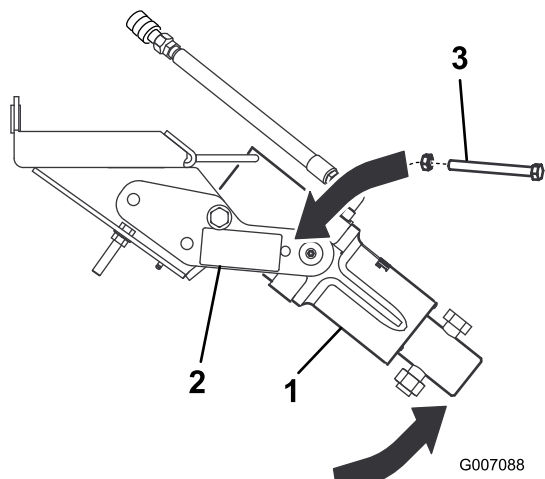


Figure 2

1. Drive head
2. Cradle arm
3. Bolt and flange nut

4. If using an extension with the auger, insert the end of the extension into the end of the auger and secure the auger to the extension with a bolt (7/8 x 4-1/2 inch) and nut (7/8 inch) (Figure 3).

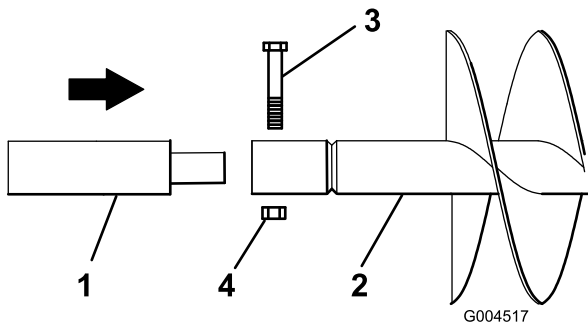


Figure 3

1. Extension
2. Auger shaft
3. Bolt, 7/8 x 4-1/2 inch
4. Nut, 7/8 inch

5. Start the engine.
6. Maneuver the drive shaft into the end of the auger shaft or extension (if applicable) (Figure 4).

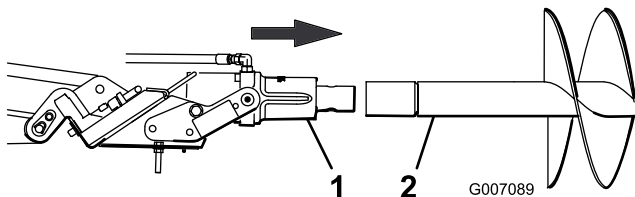


Figure 4

1. Drive head
2. Auger shaft

7. Stop the engine.
8. Secure the auger to the drive head with a bolt (7/8 x 4-1/2 inch) and nut (7/8 inch) (Figure 5).

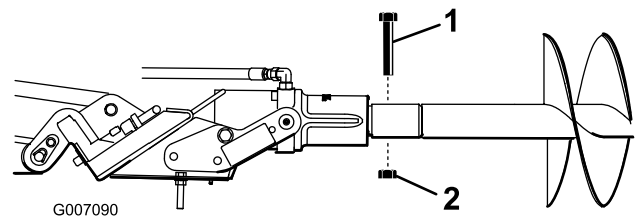


Figure 5

1. Bolt, 7/8 x 4-1/2 inches
2. Nut, 7/8 inch

9. Remove the bolt and nut from the cradle arms that were installed in step 3
10. Start the engine.
11. Raise the auger free of the ground (Figure 6).

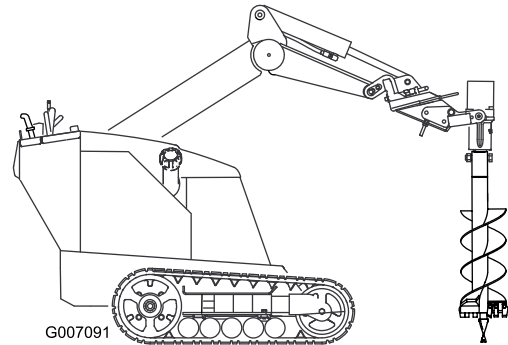


Figure 6

12. When the auger is vertical, tilt the attachment plate rearward, until the drive head contacts the attachment plate to stabilize the auger and keep it from swinging freely.

Digging a Hole



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).

Important: Before digging, ensure that the ground is free of any trash or debris.

Important: Do not use the auger unless the auger point and teeth are intact and in good condition.

1. Lower the auger to the soil at the site of the proposed hole.
2. Move the throttle lever to the Fast position.
3. Pull the auxiliary hydraulics lever to the operator grip or reference bar to begin digging.
4. Lower the auger slowly as the soil is loosened. As you dig deeper, move the traction unit backward or forward as required to keep the auger vertical (Figure 7).

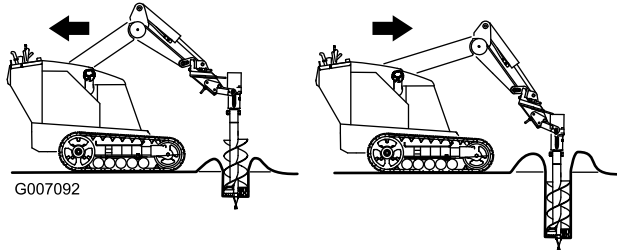


Figure 7

5. When the auger becomes full of soil, disengage the auger drive and lift the auger from the hole. Engage the auger drive to spin off the soil, then resume digging.

Note: Switching the auxiliary hydraulics lever rapidly from forward to reverse will help to shake off the soil.

Removing an Auger

1. Raise the loader arms so the auger comes out of the hole.

Note: If you have a 24 inch extension installed between the drive head and the auger, it may be necessary to raise the auger as high as possible and then move the traction unit backward to pull the auger the rest of the way out of the hole.
2. Set the auger down in its storage location.
3. While lowering the arms, drive slowly backwards until the auger is horizontal.
4. Stop the engine.
5. Remove the bolt and nut securing the drive head to the auger or extension.
6. Start the engine and back the traction unit away from the auger.
7. If you used an extension, remove the bolt and nut securing it and pull it off of the auger.

Maintenance

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
Before each use or daily	<ul style="list-style-type: none">• Grease the cradle arm pivot points. (Grease all fittings immediately after every washing.)• Check the auger teeth and replace them if they are damaged or worn.
Before storage	<ul style="list-style-type: none">• Check the auger teeth and replace them if they are damaged or worn.• Paint chipped surfaces.



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.

Greasing the Cradle Arm Pivot Points

Service Interval: Before each use or daily (Grease all fittings immediately after every washing.)

Grease Type: General-purpose 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.

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 damaged or worn part.
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 Cause	Corrective Action
The drive head does not operate.	<ol style="list-style-type: none">1. Hydraulic coupler not completely connected2. Defective hydraulic coupler3. An obstruction in a hydraulic hose4. Kinked hydraulic hose5. The bearings have failed	<ol style="list-style-type: none">1. Check and tighten all couplers.2. Check couplers and replace any that are defective.3. Find and remove the obstruction.4. Replace the kinked hose5. Refer to your authorized service dealer.