Form No. 3327-479

TORO®

Breaker

Dingo® Attachment

Model No. 22441—220000001 & Up

Operator's Manual

English (EN, GB)

Contents

Introduction

We want you to be completely satisfied with your new product, so feel free to contact your 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 breaker 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

Completely read this manual and the traction unit operator’s manual before using the equipment. Also, ensure that anyone who will use the equipment has read these manuals or has been fully trained in the safety and proper usage of the equipment by someone who has read them.

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 which may explode or shock you if you dig into them.

Have the property or area to be broken marked for buried lines and do not break in marked areas.

8111 Lyndale Avenue South
Bloomington, MN 55420-1196

Danger

The moving breaker can crush hands, feet or other body parts.

- **Keep your hands, feet, and any other part of your body or clothing away from moving parts.**
- **Before adjusting, cleaning, repairing, and inspecting the breaker, lower it to the ground, stop the engine, remove the key, and wait for all moving parts to stop.**

Warning

When the engine is off, attachments in the raised position can gradually lower and may pin or crush bystanders.

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

Warning

During operation, the breaker throws small pieces of broken material and dust. Flying debris may damage eyes. Inhaling the dust can damage lungs.

- **The operator and all bystanders must wear safety glasses, goggles, or a face shield during operation of the breaker.**
- **The operator and all bystanders must wear a face mask or other filter over mouths and noses during operation of the breaker.**
- **Keep bystanders at least 25 feet away from the beaker during operation.**

Warning

The breaker is very loud during operation. Over time, your hearing may be impaired if unprotected.

Wear hearing protection during operation.

Warning

The breaker can cause the ground to give way and crumble from under the traction unit, causing it to become unstable and tip over, crushing you or bystanders.

- **Keep the traction unit away from the edge being broken.**
- **Do not break directly under the front of the traction unit.**

Warning

Within the breaker is a chamber containing pressurized nitrogen which under the right circumstances could explode, injuring or killing you or bystanders.

- **Do not take apart the body of the breaker.**
- **Do not attempt to recharge the chamber yourself. Always take the breaker to and Authorized Toro dealer for recharging.**
- **Ensure that the breaker is charged only with nitrogen. Other gasses can explode.**
- **Do not ship the charged breaker via air freight.**

Sound Power

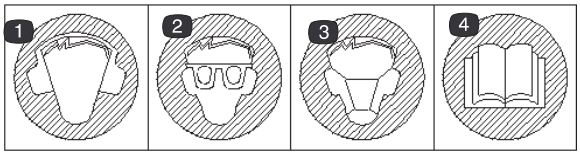
Sound Power of 115.4 dBA as directed by 2000/14/EC

Sound Pressure

Sound Pressure of 87.4 dBA as directed by 98/37/EC

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.



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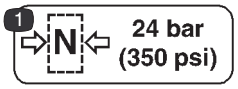
1. Wear hearing protection.
2. Wear eye protection.
3. Wear respiratory protection.
4. Read the *Operator's Manual.*



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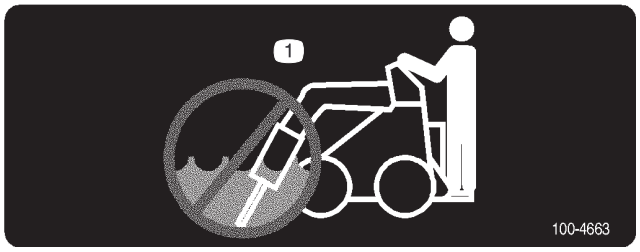
1. Nitrogen—pressure



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1. Do not use the breaker underwater.

104-6067

1. Add grease

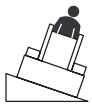
Specifications

Width	24.5 inches (62 cm)
Length	49 inches (125 cm)
Height	13 inches (33 cm)
Weight (without auger)	285 lbs (129 Kg)
Bit working length	11 inches (28 cm)
Bit diameter	1.75 inches (4.4 cm)
Impact energy class	175 ft·lbs (237 J)
Blows per minute	1,200
Flow range	4 to 10 gpm (15 to 38 lpm)

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

Stability Ratings

To determine the degree of slope you can traverse with the breaker 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.

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

Note: If you have a traction unit other than the Dingo TX, do not use the counterweight with the breaker or the traction unit will be less stable in the front and side uphill positions.

Warning

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

Do not drive the the traction unit on a slope steeper than the maximum slope.

Installation

Refer to your traction unit operator's manual for instructions on installing/removing attachments.

Installing the Bit

1. Raise the horizontal breaker so it is about 6 inches off of the ground.
2. Stop the engine and remove the key.
3. Using a hammer and punch, drive the bit retaining pin 3/4 of the way out of the breaker housing (Fig. 1). It will require a blow of considerable force to drive the pin from its seating in the breaker.

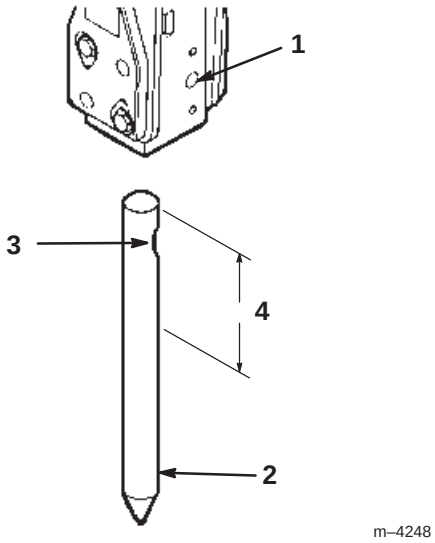


Figure 1

1. Retaining pin
2. Bit
3. Notch
4. Grease here

4. Remove the plastic spacer.
5. Smear grease completely over the top six inches of the bit (Fig. 1).
6. Slide the bit into the breaker with the notch in the bit facing the right side of the breaker (Fig. 1).
7. Insert the bit retaining pin into the breaker and drive it into place with a hammer (Fig. 1).
8. Grease the bit before use. For detailed instructions on when and how to grease the bit, refer to Greasing the Bit, page 8.

Note: To change bits, repeat the above procedure. When changing bits the current bit will be removed instead of the plastic spacer.

Operation

Important If you have a traction unit other than the Dingo TX, ensure that you install the relief valve kit on your traction unit before using the breaker. Failure to install this kit may damage your traction unit. Refer to your Authorized Toro Dealer for more information.

Important Always use the traction unit to lift and move the attachment.

Operating Tips

- Wear **eye, ear, and breathing protection** while using the breaker.

- If your traction unit is a Dingo TX, use 3/4 throttle when breaking. This will prevent damage to the breaker.
- If you have a traction unit other than Dingo TX, use full throttle (maximum engine speed), low range (turtle position) on the speed selector lever, and adjust the flow divider valve to approximately the 10 o'clock position.
- Place the bit within 6 to 18 inches of the edge of the material to be broken with the breaker angled slightly towards the edge (Fig. 2).

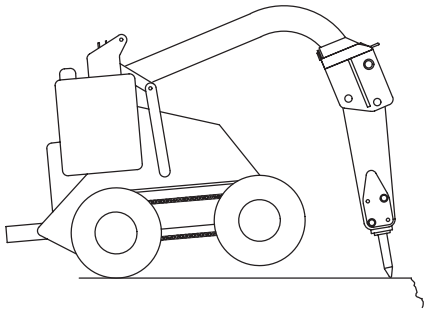


Figure 2

- If the bit is positioned too far from the edge of the material the energy may be absorbed by the material without breaking it. If the material has not cracked after 15 to 20 seconds, stop the breaker and move the bit to a different location.

Important Continuous penetration in the same location for long periods of time will create high temperatures at the tip of the bit. This could cause the bit to lose its temper and mushroom under impact, destroying the bit.

- When breaking, always apply downward pressure with the loader arms until the front of the traction unit raises off of the ground a few inches (Fig. 2). Maintain this pressure as the bit works its way into the material being broken.
- Do not move the auxiliary hydraulics lever to engage the breaker unless the bit is on the ground and downward pressure is applied.
- Do not bind the bit in the material being cut. Binding of the bit can cause the bit to bend or wear out prematurely. Ensure that all force applied to the breaker is inline with the bit, not side to side or front to back. This will require frequent adjustments in the positioning of the traction unit.
- Listen to the sound of the breaker when is is operating. The sound will be different when there is adequate downward pressure than when not enough pressure is being applied.
- Many materials do not respond well to continued hammering in one place. Move the the breaker each time that it penetrates the material without breaking it.

When you move the breaker to a new location, move it in a line parallel to the edge of the material, about 3 inches from the previous hole. This will score the material and if done repeatedly, break off a large piece of the material (Fig. 3).

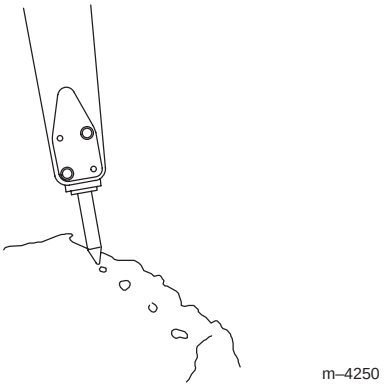


Figure 3

Important Never pry with the bit.

- If you are breaking rebar reinforced concrete, use a chisel bit in the breaker to cut through the rebars in the concrete. The rebar can also be cut with a torch.

Important Do not use the breaker in or under water.

Breaking a Vertical Surface

Converting the Breaker

1. Tilt the breaker as far forward as possible and lower it until the tip is resting on the ground.
2. Remove the click pin securing the front mounting pin (Fig. 4).
3. Drive the front mounting pin out of the breaker (Fig. 4).
4. Lower the loader arms until the holes in the breaker align with the upper holes in the mount (Fig. 4).

Warning

As you lower the loader arms while changing the breaker position, the breaker swings within the frame. Hands, fingers, and feet can be caught between the breaker and the frame and be crushed or amputated.

Keep yourself and others away from the breaker while changing the position.

5. Drive the front mounting pin through the upper holes and secure it with the click pin (Fig. 4).

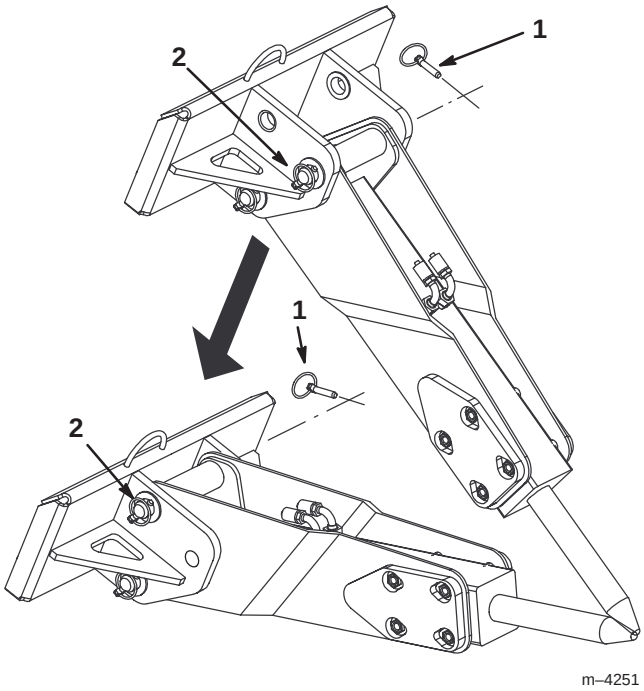


Figure 4

1. Click pin
2. Front mounting pin

Operating Tips for Vertical Surfaces

- Position the bit on the vertical surface in the same manner as you would position it on a horizontal surface.
- Maintain pressure on the bit by driving the traction unit forward into the vertical surface while operating the breaker.

Maintenance

Service Interval Chart

Service Operation	Each Use	Storage Service	Notes
Grease the bit	X	X	Grease before each use and then every 1 to 2 operating hours
Inspect and tighten all fasteners	X	X	
Inspect the mounting pins, holes, lower bushing (above the bit), bit retaining pin, and roll pins for looseness or wear.	X	X	Reseat or replace as necessary.
Check for hydraulic leaks at all fittings and hoses.	X	X	Repair leaky fittings and/or replace leaky hoses.
Chipped surfaces—paint		X	

Caution

If you leave the key in the ignition switch, someone could start the engine, severely injuring you or others.

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

Greasing the Bit

Service Interval/Specification

Grease the bit before each use and then after every 1 to 2 hours of operation. Grease it immediately after washing.

Grease Type: General-purpose grease, certified NGLI number 1 or 2.

How to Grease

1. Tilt the breaker so that it is vertical, then lower it to the ground so that the bit is pushed up into the breaker as far as possible.

Important Failure to push the bit up into the breaker before greasing will allow the grease to fill the space between the top of the bit and the breaker piston. When you next use the breaker, the piston will pressurize this grease and cause seal damage.

2. Stop the engine and remove the key.
3. Clean the grease fitting with a rag.

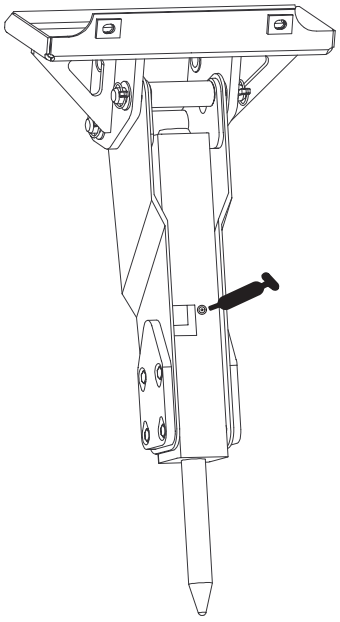


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Figure 5

4. Connect a grease gun to the fitting.
5. Pump grease into the fitting until either grease begins to ooze out of the lower bushing and retaining pin or it becomes difficult to pump the grease gun.
6. Wipe up any excess grease.

Charging the Nitrogen

Inside the breaker is a chamber of pressurized nitrogen. After many hours of use the pressure will decrease, reducing the performance of the breaker. If this should happen, bring the breaker to your Authorized Toro Dealer to be recharged.

Warning

Within the breaker is a chamber containing pressurized nitrogen which under the right circumstances could explode, injuring or killing you or bystanders.

- **Do not take apart the body of the breaker.**
- **Do not attempt to recharge the chamber yourself. Always take the breaker to and Authorized Toro dealer for recharging.**
- **Ensure that the breaker is charged only with nitrogen. Other gasses can explode.**
- **Do not ship the charged breaker via air freight.**

Storage

1. Before long term storage, wash the attachment with mild detergent and water to remove dirt and grime.
2. Grease the bit.
3. Check and tighten all bolts, nuts, and screws.
4. Inspect all mounting pins, holes, the lower bushing, roll pins, and the bit retaining pin. Repair or replace any part that is damaged or worn.
5. Inspect all hydraulic fittings and hoses for leaks. Repair or replace any fittings or hoses that leak.

Warning

Hydraulic fluid escaping under pressure can penetrate skin and cause injury. Fluid accidentally injected into the skin must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.

- **Keep body and hands away from pin hole leaks or nozzles that eject high pressure hydraulic fluid.**
- **Use cardboard or paper to find hydraulic leaks, never use your hands.**

6. Paint all scratched or bare metal surfaces. Paint is available from your Authorized Service Dealer.

7. Store the breaker in a **vertical position** in a clean, dry garage or storage area. Cover it to protect it and keep it clean.

Important If the breaker will be stored for more than a month, it must be stored vertically to avoid damaging o-rings and seals inside the breaker.

Troubleshooting

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
The breaker does not operate.	1. Hydraulic coupler not completely connected	1. Check and tighten all couplers.
	2. Damaged hydraulic coupler	2. Check couplers and replace any that are damaged.
	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. Low nitrogen level in the breaker	5. Refer to you authorized Toro dealer.


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