FORM NO. 3321–604

Breaker Attachment

Model No. 22441– 990001 & Up

Operator’s Manual

IMPORTANT: Read this manual carefully. It contains information about your safety and the safety of others. Also become familiar with the controls and their proper use before you operate the product.

Introduction

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

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

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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 the safety instructions in the traction unit operator's manual and always pay attention to the safety alert ⚠ symbol, which means CAUTION, WARNING, or DANGER—"personal safety instruction." Failure to comply with the instruction may result in personal injury or death.

⚠ DANGER

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

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

HOW TO AVOID THE HAZARD
- **Have the property or area to be broken marked for buried lines and do not break in marked areas.**

⚠ DANGER

POTENTIAL HAZARD
- **Contact with moving breaker may cause injury.**

WHAT CAN HAPPEN
- **Moving breaker can crush hands, feet or other body parts.**

HOW TO AVOID THE HAZARD
- **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

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

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

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

⚠ WARNING

POTENTIAL HAZARD
- **During operation, the breaker throws small pieces of broken material and dust.**

WHAT CAN HAPPEN
- **Flying debris may damage eyes.**
- **Inhaling the dust can damage lungs.**

HOW TO AVOID THE HAZARD
- **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

POTENTIAL HAZARD
- **The breaker is very loud during operation.**

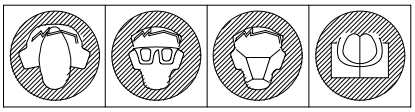
WHAT CAN HAPPEN
- **Over time, your hearing may be impaired if unprotected.**

HOW TO AVOID THE HAZARD
- **Wear hearing protection during operation.**

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.

(Part No. 27711)



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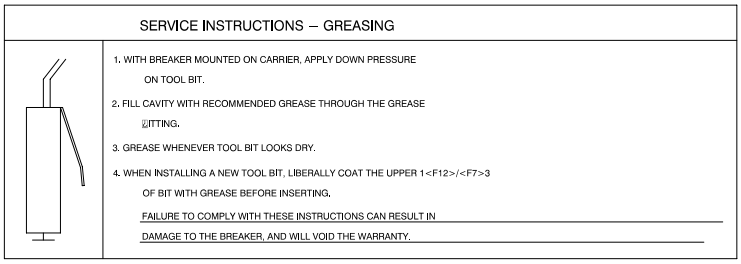

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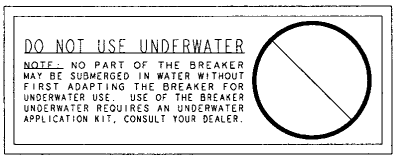

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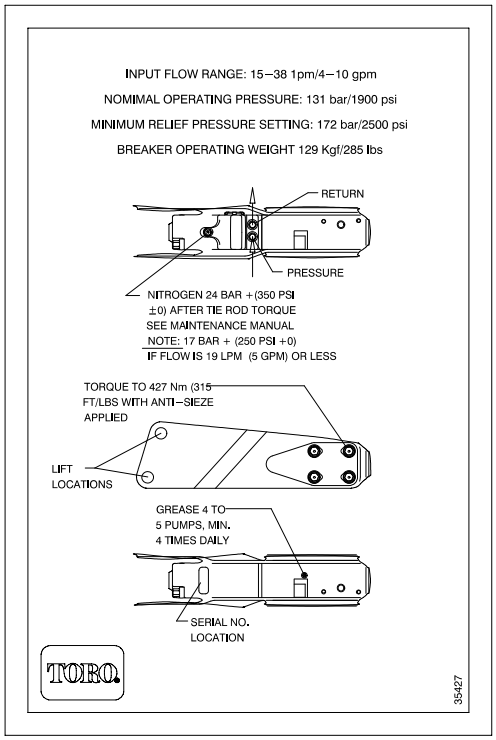

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Specifications

General Specifications:

Overall width	24.5 inches (62 cm)
Overall length	49.0 inches (125 cm)
Overall height	13.0 inches (33 cm)
Weight (with bit)	285 lbs (129 Kg)
Bit working length	11.0 inches (27.9 cm)
Bit diameter	1.75 inches (4.4 cm)
Impact energy class	175 ft·lbs (237 J)
Blows per minute	1200
Flow range	4 to 10 gpm (15 to 38 lpm)

Installation

Loose Parts

DESCRIPTION	QTY.	USE
Breaker	1	Assemble the breaker
Bit–concrete breaker (other bits are available; contact your Toro dealer for more information)	1	

IMPORTANT: The Hydraulic Relief kit must be installed on some traction units prior to using the breaker or serious damage may occur to the hydraulic system. Failure to install the relief kit will void the warranty of your traction unit. To determine if your traction unit needs a Hydraulic Relief Kit, contact your authorized Toro dealer.

Installing the Breaker on the Traction Unit

IMPORTANT: Before installing the breaker, ensure that the mount plates are free of any dirt or debris.

1. Position the breaker on a level surface with enough space behind it to accommodate the traction unit.
2. Move pump control lever to slow (turtle) position.
3. Start the engine.
4. Slowly push the attachment tilt lever forward to tilt the attachment mount plate forward.
5. Position mount plate into the upper lip of the attachments receiver plate (Fig. 1).

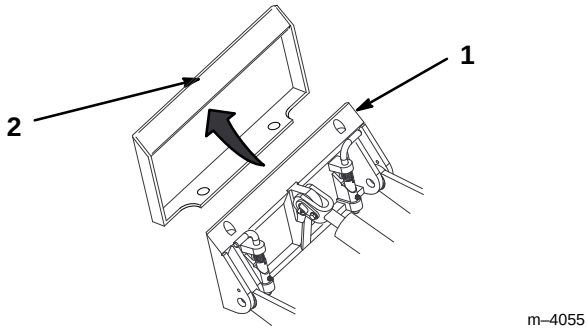

Figure 1

1. Mount plate
2. Receiver plate

6. Raise the loader arms while tilting back the mount plate at the same time.

IMPORTANT: The attachment should be raised enough to clear the ground and the mount plate tilted all the way back.

7. Stop the engine.

8. Engage the attachment lock pins (Fig. 2).

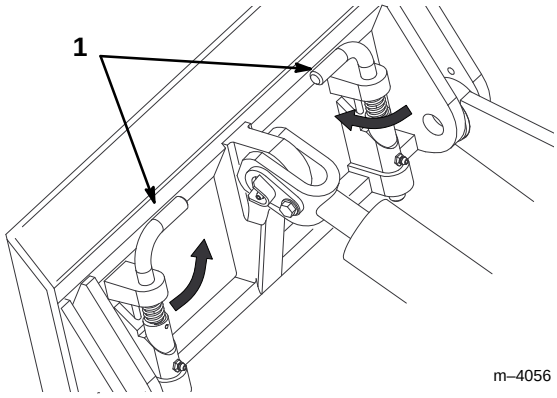

Figure 2

1. Attachment lock pins (shown in engaged position)

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. 3). It will require a blow of considerable force to drive the pin from its seating in the breaker.

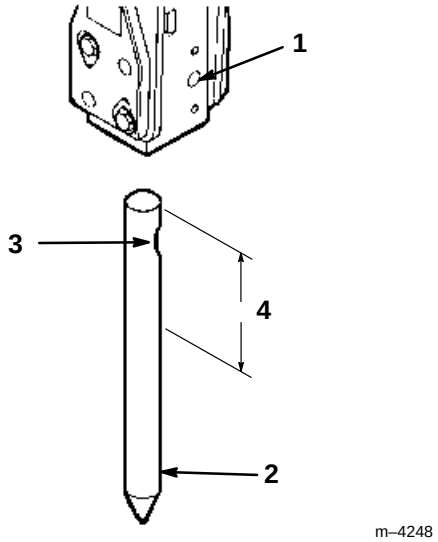

Figure 3

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. 3).

6. Slide the bit into the breaker with the notch in the bit facing the right side of the breaker (Fig. 3).

7. Insert the bit retaining pin into the breaker and drive it into place with a hammer (Fig. 3).

8. Grease the bit before use. For detailed instructions on when and how to grease the bit, refer to Greasing the Bit, page 10.

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

Connecting the Hydraulic Hoses

1. Stop the engine.
2. Move the auxiliary hydraulics lever forward, backward, and back to neutral to relieve pressure at the hydraulic couplers.

   IMPORTANT: Ensure that all foreign matter is cleaned from the hydraulic connections before making connections.
3. Remove the protective covers from the hydraulic couplers on the traction unit. Connect the covers together to prevent contamination during operation.
4. Ensure that the hydraulic hoses on the breaker are routed through the loop on the top of the mount plate.
5. Slide the collar back on the hydraulic coupler and connect the attachment couplers to the machine couplers.
6. Confirm that the connection is secure by pulling on the hoses.

Removing the Breaker from the Traction Unit

1. Start the engine and lower the breaker to the ground or onto a trailer.
2. Stop the engine.
3. Disengage the attachment lock pins by turning them to the outside.
4. Move the auxiliary hydraulics lever forward, backward, and back to neutral to relieve pressure at the hydraulic couplers.
5. Slide the collar back on the hydraulic couplers and disconnect them.

   IMPORTANT: Connect the attachment hoses together to prevent hydraulic system contamination during storage.

⚠ WARNING

POTENTIAL HAZARD
- **Hydraulic fluid escaping under pressure can penetrate skin and cause injury.**

WHAT CAN HAPPEN
- **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.**

HOW TO AVOID THE HAZARD
- **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. Install the protective covers onto the hydraulic couplers on the traction unit.
7. Start the engine, tilt the mount plate forward, and back the traction unit away from the breaker.

Operation

Operating Tips

- Always use full throttle (maximum engine speed) when breaking.
- Use low range (turtle position) on the speed selector for best performance and smoothest operation.
- 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. 4).

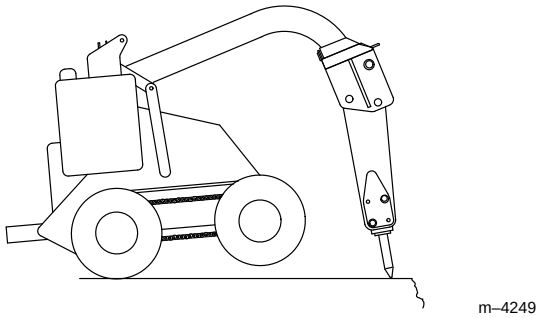

Figure 4

- 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 wheels raise off of the ground a few inches (Fig. 4). 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. 5).

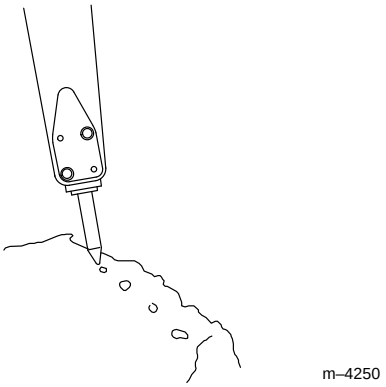

Figure 5

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. 6).

3. Drive the front mounting pin out of the breaker (Fig. 6).

4. Lower the loader arms until the holes in the breaker align with the upper holes in the mount (Fig. 6).

5. Drive the front mounting pin through the upper holes and secure it with the click pin (Fig. 6).

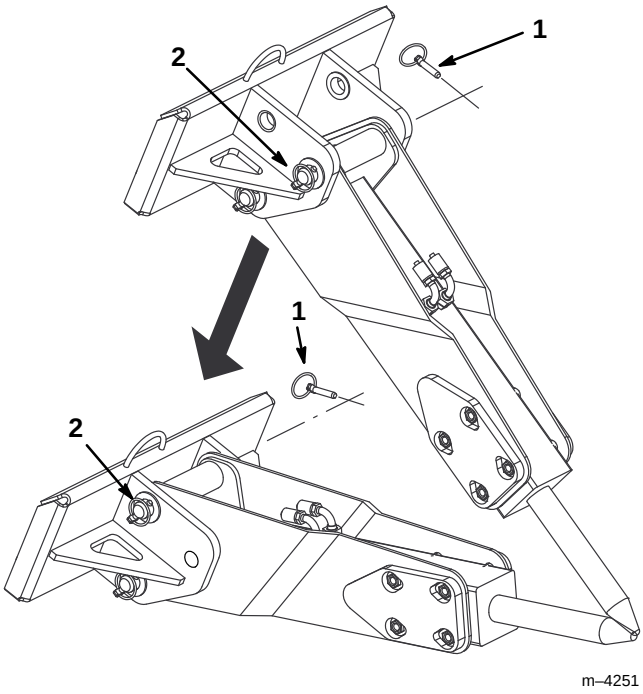

Figure 6

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

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

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

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

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.

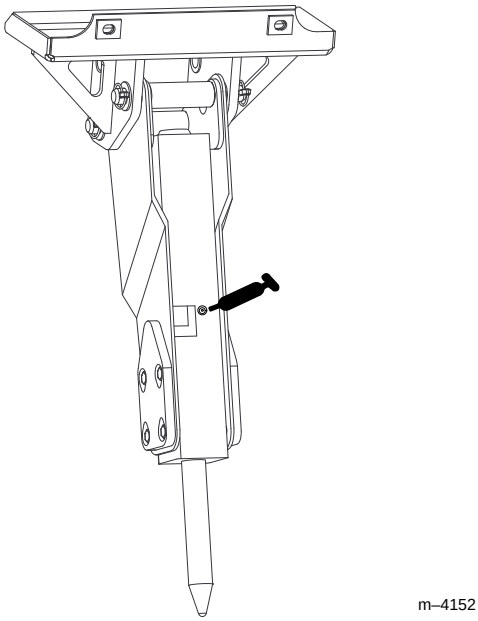

Figure 7

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.

Storage

1. Before long term storage, wash the machine with mild detergent and water to remove dirt and grime from the entire machine.

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

POTENTIAL HAZARD

- **Hydraulic fluid escaping under pressure can penetrate skin and cause injury.**

WHAT CAN HAPPEN

- **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.**

HOW TO AVOID THE HAZARD

- **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. Ensure that all hydraulic couplers are connected together to prevent contamination of the hydraulic system.

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

8. 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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