

## Starting the Engine

1. Ensure that the battery-disconnect switch is in the ON position.
2. Ensure that the auxiliary-hydraulics lever and traction-control are in the NEUTRAL position.
3. Move the throttle lever midway between the SLOW and FAST positions.
4. Insert the key into the key switch and turn it to the ON position.
5. Wait for the glow-plug indicator light to stop blinking.
6. Turn the key to the START position. When the engine starts, release the key.

**Important:** Do not engage the starter for more than 10 seconds at a time. If the engine fails to start, wait 30 seconds for the starter to cool down between attempts. Failure to follow these instructions could burn out the starter motor.

7. Move the throttle lever to the FAST position.

**Important:** Running the engine at high speeds when the hydraulic system is cold (i.e., when the air temperature is at or below freezing) could damage the hydraulic system. When starting the engine in cold conditions, allow it to run in the middle throttle position for 2 to 5 minutes before moving the throttle to the FAST position.

**Note:** If the outdoor temperature is below freezing, store the traction unit in a garage to keep it warmer and to aid in starting.

## Driving the Machine

**Note:** Enable the traction control by toggling the traction-enable switch before driving the machine.

Use the traction control to move the machine. The farther you move the traction control in any direction, the faster the machine moves in that direction. Release the traction control to stop the machine.

The throttle control regulates the engine speed as measured in rpm (revolutions per minute). Place the throttle lever in the FAST position for best performance. You can, however, use the throttle position to operate at slower speeds.

## Shutting Off the Engine

1. Park the machine on a level surface, engage the parking brake (if equipped), and lower the loader arms.
2. Ensure that the auxiliary hydraulics lever is in the NEUTRAL position.
3. Move the throttle lever to the SLOW position.
4. If the engine has been working hard or is hot, let it idle for a minute before turning the key switch to the OFF position.

**Note:** This helps to cool the engine before you shut it off. In an emergency, you can shut off the engine immediately.

5. Turn the key switch to the OFF position and remove the key.

### ⚠ CAUTION

A child or untrained bystander could attempt to operate the traction unit and be injured.

Remove the key from the key switch when leaving the traction unit, even if just for a few seconds.

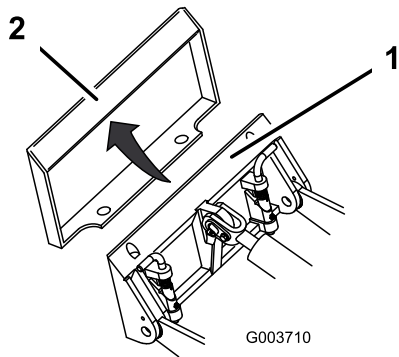
## Using Attachments

### Installing an Attachment

**Important:** Use only Toro-approved attachments. Attachments can change the stability and the operating characteristics of the machine. The warranty of the machine may be voided if you use the machine with unapproved attachments.

**Important:** Before installing the attachment, ensure that the mount plates are free of any dirt or debris and that the pins rotate freely. If the pins do not rotate freely, grease them.

1. Position the attachment on a level surface with enough space behind it to accommodate the machine.
2. Start the engine.
3. Tilt the attachment mount plate forward.
4. Position the mount plate into the upper lip of the attachment receiver plate (Figure 24).



**Figure 24**

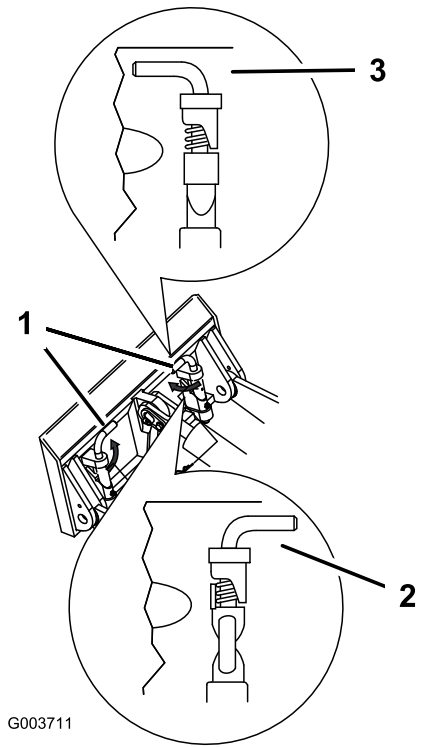
1. Mount plate
2. Receiver plate

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

**Important:** Raise the attachment enough to clear the ground and tilt the mount plate all the way back.

6. Shut off the engine and remove the key.
7. Engage the quick-attach pins, ensuring that they are fully seated in the mount plate (Figure 25).

**Important:** If the pins do not rotate to the engaged position, the mount plate is not fully aligned with the holes in the attachment receiver plate. Check the receiver plate and clean it if necessary.



**Figure 25**

1. Quick-attach pins (engaged position)
2. Disengaged position
3. Engaged position

### **⚠ 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.

## Connecting the Hydraulic Hoses

### ⚠ 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.

If the attachment requires hydraulics for operation, connect the hydraulic hoses as follows:

1. Shut off the engine and remove the key.
2. Move the auxiliary-hydraulics lever forward, backward, and back to the NEUTRAL position to relieve pressure at the hydraulic couplers.
3. Remove the protective covers from the hydraulic connectors on the machine.
4. Ensure that all foreign matter is cleaned from the hydraulic connectors.
5. Push the attachment male connector into the female connector on the machine.

**Note:** When you connect the attachment male connector first, you relieve any pressure built up in the attachment.

6. Push the attachment female connector onto the male connector on the machine.
7. Confirm that the connection is secure by pulling on the hoses.

## Removing an Attachment

1. Park the machine on a level surface.
  2. Lower the attachment to the ground.
  3. Shut off the engine and remove the key.
  4. Disengage the quick-attach pins by turning them to the outside.
  5. If the attachment uses hydraulics, move the auxiliary-hydraulics lever forward, backward, and back to the NEUTRAL position to relieve pressure at the hydraulic couplers.
  6. If the attachment uses hydraulics, slide the collars back on the hydraulic couplers and disconnect them.
- Important:** Connect the attachment hoses together to prevent hydraulic system contamination during storage.
7. Install the protective covers onto the hydraulic couplers on the machine.
  8. Start the engine, tilt the mount plate forward, and back the machine away from the attachment.

## After Operation

### After Operation Safety

#### General Safety

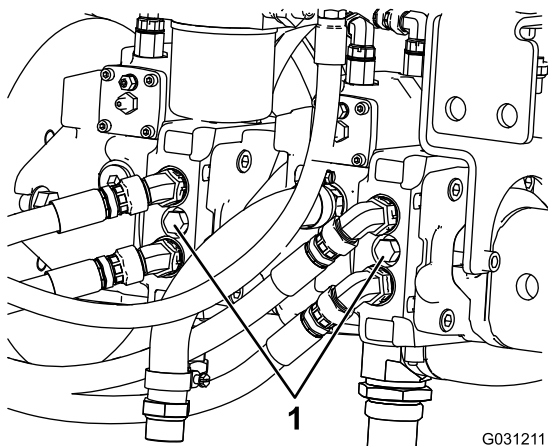
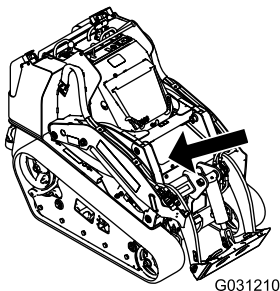
- Shut off the engine, remove the key, wait for all movement to stop, and allow the machine to cool before adjusting, cleaning, storing, or servicing it.
- Clean debris from the attachments, drives, mufflers, and engine to help prevent fires. Clean up oil or fuel spills.
- Keep all parts in good working condition and all hardware tightened.
- Do not touch parts that may be hot from operation. Allow them to cool before attempting to maintain, adjust, or service the machine.
- Use care when loading or unloading the machine into a trailer or truck.

## Moving a Non-Functioning Machine

**Important:** Do not tow or pull the machine without first opening the tow valves, or you will damage the hydraulic system.

1. Shut off the engine and remove the key.
2. Open the hood and secure the hood prop.

- Remove the side screens; refer to [Removing the Side Screens \(page 27\)](#).
- Using a wrench, turn the tow valves on the hydraulic pumps twice counterclockwise ([Figure 26](#)).



**Figure 26**

- Tow valve

- Tow the machine as required.
- After repairing the machine, close the tow valves before operating it.

## Hauling the Machine

Use a heavy-duty trailer or truck to haul the machine. Use a full-width ramp. Ensure that the trailer or truck has all the necessary brakes, lighting, and marking as required by law. Please carefully read all the safety instructions. Knowing this information could help you or bystanders avoid injury. Refer to your local ordinances for trailer and tie-down requirements.

### **⚠ WARNING**

**Driving on the street or roadway without turn signals, lights, reflective markings, or a slow-moving-vehicle emblem is dangerous and can lead to accidents causing personal injury.**

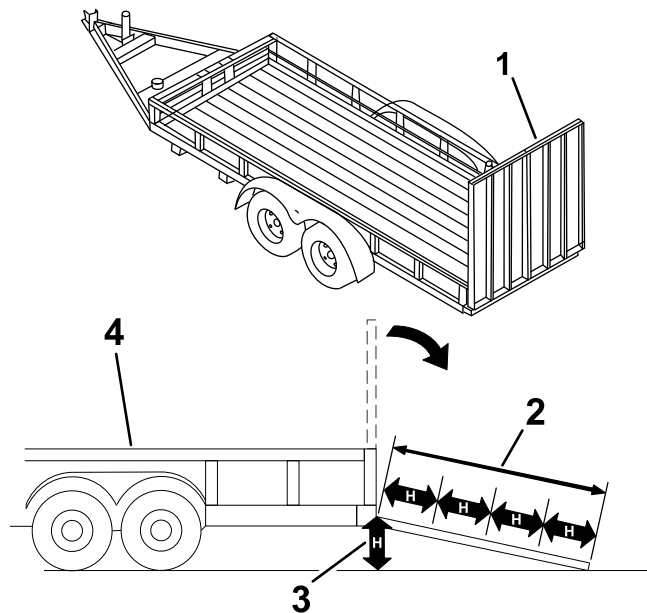
**Do not drive the machine on a public street or roadway.**

## Selecting a Trailer

### **⚠ WARNING**

**Loading a machine onto a trailer or truck increases the possibility of tip-over and could cause serious injury or death ([Figure 27](#)).**

- Use only full-width ramps.
- Ensure that the length of ramp is at least 4 times as long as the height of the trailer or truck bed to the ground. This ensures that ramp angle does not exceed 15 degrees on flat ground.



**Figure 27**

- Full-width ramp(s) in stowed position
- Ramp is at least 4 times as long as the height of the trailer or truck bed to the ground
- H=height of the trailer or truck bed to the ground
- Trailer

# Loading the Machine

## ⚠ WARNING

Loading a machine onto a trailer or truck increases the possibility of tip-over and could cause serious injury or death.

- Use extreme caution when operating a machine on a ramp.
- Load and unload the machine with the heavy end up the ramp.
- Avoid sudden acceleration or deceleration while driving the machine on a ramp as this could cause a loss of control or a tip-over situation.

1. If using a trailer, connect it to the towing vehicle and connect the safety chains.
2. If applicable, connect the trailer brakes.
3. Lower the ramp(s).
4. Lower the loader arms.
5. Load the machine onto the trailer with the heavy end up the ramp, carrying loads low (Figure 28).
  - If the machine has a **full** load-bearing attachment (e.g., bucket) or a non-load-bearing attachment (e.g., trencher), drive the machine forward up the ramp.
  - If the machine has an **empty** load-bearing attachment or no attachment, back the machine up the ramp.

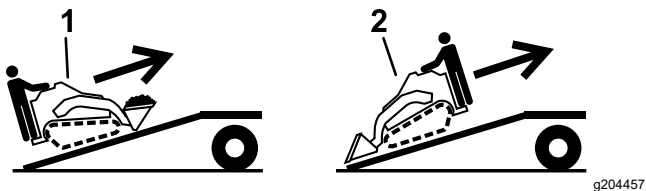


Figure 28

1. Machine with full attachment or non-load-bearing attachment—drive the machine forward up the ramp(s).
2. Machine with empty or no attachment—back the machine up the ramp(s).

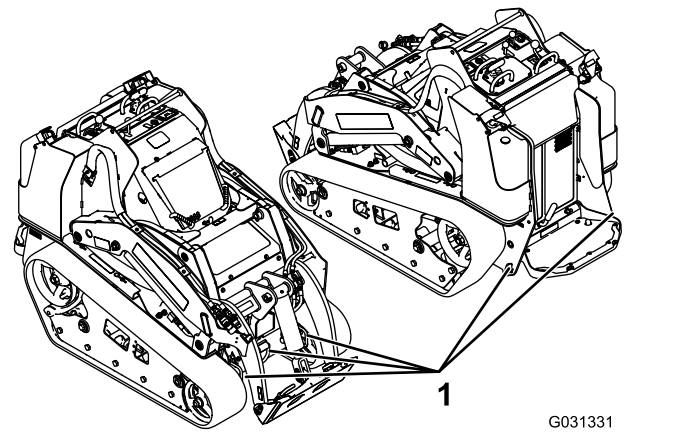


Figure 29

1. Tie-down loops

# Unloading the Machine

1. Lower the ramp(s).
2. Unload the machine from the trailer with the heavy end up the ramp, carrying loads low (Figure 30).
  - If the machine has a **full** load-bearing attachment (e.g., bucket) or a non-load-bearing attachment (e.g., trencher), back it down the ramp.
  - If the machine has an **empty** load-bearing attachment or no attachment, drive it forward down the ramp.

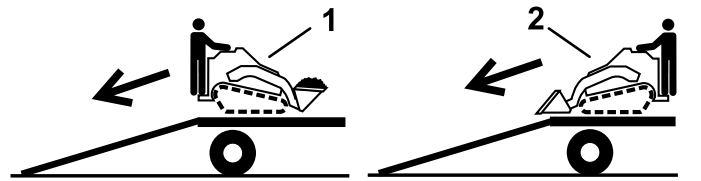


Figure 30

1. Machine with full attachment or non-load-bearing attachment—back the machine down the ramp(s).
2. Machine with empty or no attachment—drive the machine forward down the ramp(s).

6. Lower the loader arms all the way down.
7. Engage the parking brake (if equipped), shut off the engine, and remove the key.
8. Use the metal tie-down loops on the machine to securely fasten the machine to the trailer or truck with straps, chains, cable, or ropes (Figure 29). Refer to local regulations for tie-down requirements.

# Lifting the Machine

You can lift the machine using the tie-down/lift loops as lift points; refer to Figure 29.