

# Operation

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

## Before Operation

### Before Operation Safety

#### General Safety

- **For electric-start models only:** Use extension cords and receptacles as specified in the manual. Inspect the electrical cord before plugging it into a power source. If the cord is damaged, replace it. Unplug the power cord whenever you are not starting the machine.
- Wear appropriate clothing, including eye protection; long pants; substantial, slip-resistant footwear; and hearing protection. Tie back long hair, secure loose clothing, and do not wear loose jewelry.
- Thoroughly inspect the area where you will use the machine, and remove all doormats, sleds, boards, wires, and other foreign objects.
- If a shield, safety device, or decal is damaged, illegible, or missing, repair or replace it before beginning operation. Also, tighten any loose fasteners.
- Adjust the collector housing height to clear a gravel or crushed-rock surface.

### Fuel Safety

Fuel is extremely flammable and explosive. A fire or explosion from fuel can burn you and others.

- To prevent a static charge from igniting the fuel, place the container and/or machine on the ground before filling, not in a vehicle or on an object.
- Fill the fuel tank outdoors when the engine is cold. Replace the fuel cap securely and wipe up spills.
- Do not handle fuel when smoking or around an open flame or sparks.
- Store fuel in an approved fuel container, out of the reach of children.
- When fuel is in the tank, tip the machine only as directed in the instructions.
- If you spill fuel on your clothing, change your clothing immediately.

## Filling the Fuel Tank

Type	Unleaded gasoline
Minimum octane rating	87 (US) or 91 (research octane; outside the US)
Ethanol	No more than 10% by volume
Methanol	None
MTBE (methyl tertiary butyl ether)	Less than 15% by volume
Oil	Do not add to the fuel

Use only clean, fresh (no more than 30 days old), fuel from a reputable source.

Fill the fuel tank as shown in Figure 13; do not fill above the bottom of the fuel tank neck.

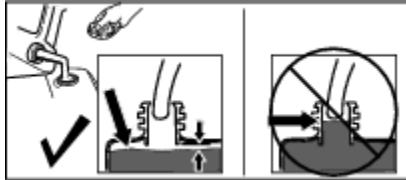


Figure 13

**Important:** For best results, purchase only the quantity of fuel that you expect to use in 30 days. Otherwise, add fuel stabilizer/conditioner to fresh fuel as directed by the fuel-stabilizer/conditioner manufacturer.

## During Operation

### During Operation Safety

#### General Safety

- **Shut off the engine before unclogging the machine and always use a stick or the snow-cleanout tool (if provided).**
- Stay behind the handles and away from the discharge opening while operating the machine. **Keep your face, hands, feet, and any other part of your body or clothing away from moving or rotating parts.**
- Never direct the discharge toward people or areas where property damage can occur.
- Use your full attention while operating the machine. Do not engage in any activity that causes distractions; otherwise, injury or property damage may occur.
- Exercise caution to avoid slipping or falling, especially when operating the machine in reverse.

- Always be sure of your footing, and keep a firm hold on the handles. Walk; never run.
- Exercise extreme caution when operating the machine on a slope.
- Do not operate the machine without good visibility or light.
- Look behind and use care when backing up the machine.
- When not actively clearing snow, disengage power to the auger.
- Exercise extreme caution when operating the machine on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
- Never attempt to make any adjustments while the engine is running, except as directed in the instructions.
- After striking a foreign object, shut off the engine, remove the key, and inspect the machine for damage. Repair any damage before starting the machine.
- If the machine starts to vibrate abnormally, shut off the engine and check immediately for the cause.
- Do not run the engine indoors; exhaust fumes are dangerous.
- Do not overload the machine capacity by attempting to clear snow at too fast a rate.
- Disengage all clutches and shift into neutral before starting the engine.
- Shut off the engine whenever you leave the operating position, before clearing or unclogging the collector, impeller, or discharge chute, and when making any repairs, adjustments, or inspections.
- Never operate the machine at high transport speeds on slippery surfaces.

## Starting the Engine

### Electric Start

**Note:** To use the electric starter (electric-start models only), connect a power cord to the plug-in first and then to a power outlet. Use only a UL-listed, 16-gauge extension cord recommended for outdoor use that is not longer than 15 m (50 ft).

### Warning

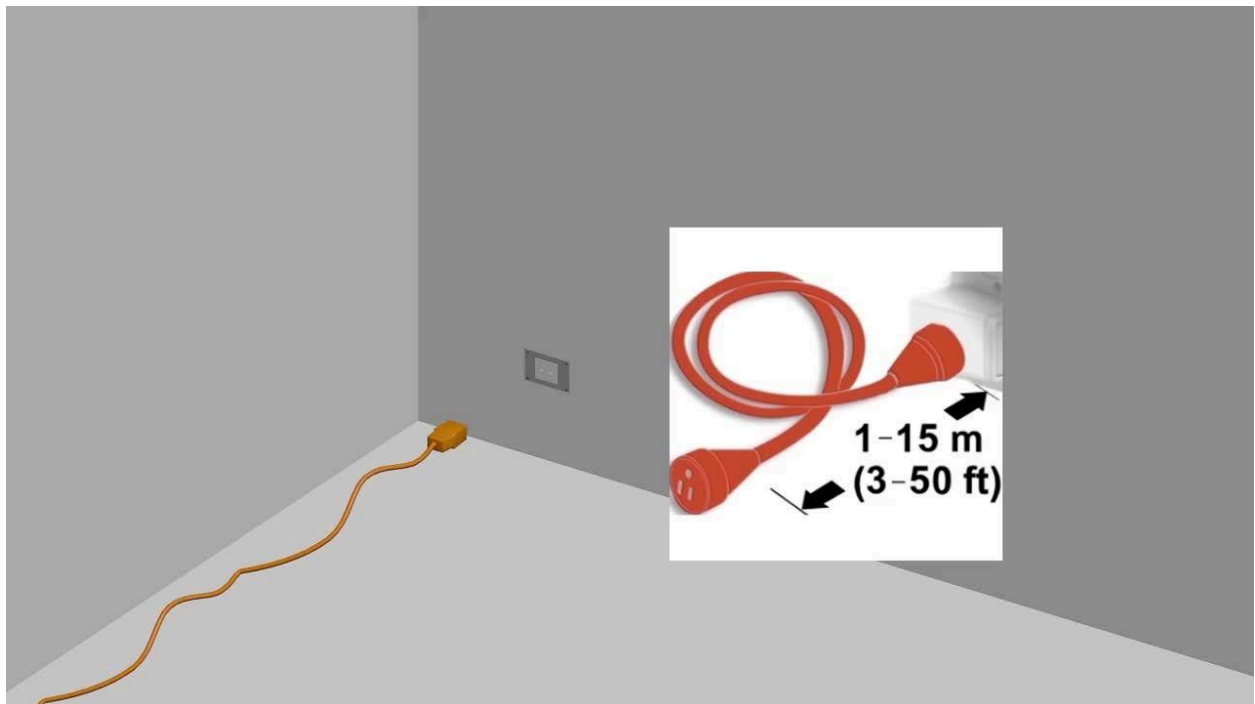
The electrical cord can become damaged, causing a shock or fire.

Thoroughly inspect the electrical cord before using the machine. If the cord is damaged, do not use it. Replace or repair the damaged cord immediately. Contact an Authorized Service Dealer for assistance.

## Caution

If you leave the machine plugged into a power outlet, someone can inadvertently start the machine and injure people or damage property.

Unplug the power cord whenever you are not starting the machine.



Video 2

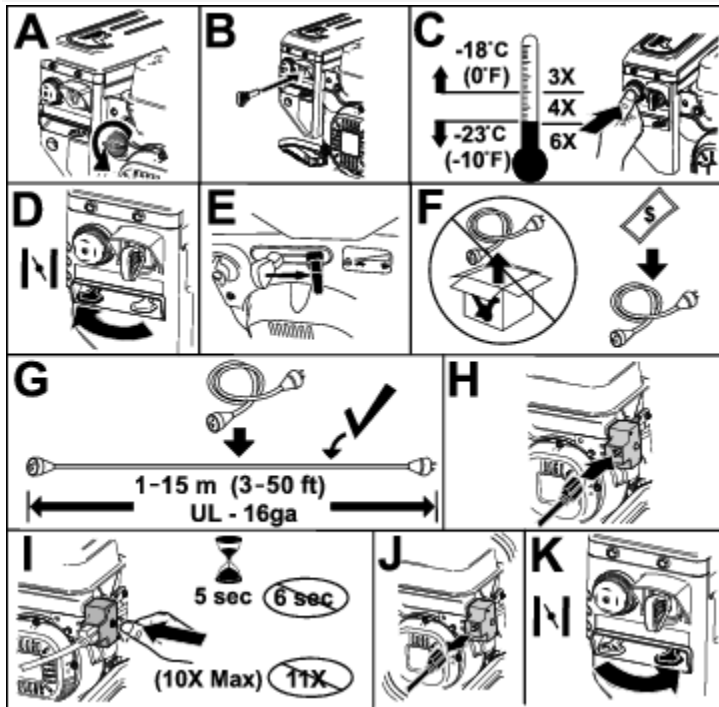
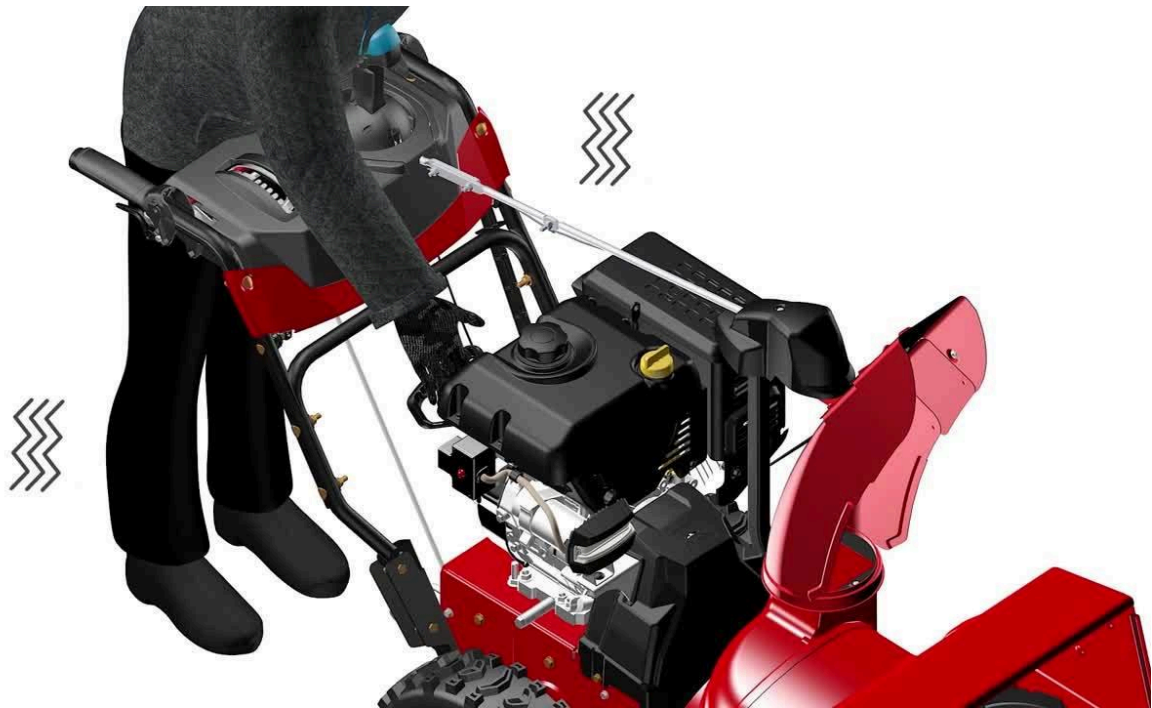


Figure 14

Recoil Start



Video 3

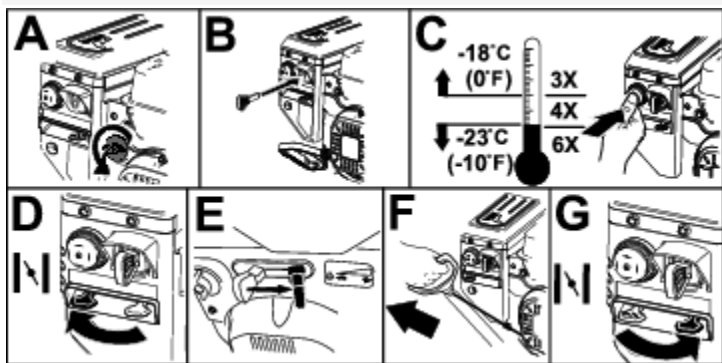


Figure 15

## Shutting Off the Engine

**Important:** Wait for all moving parts to stop before leaving the operating position.

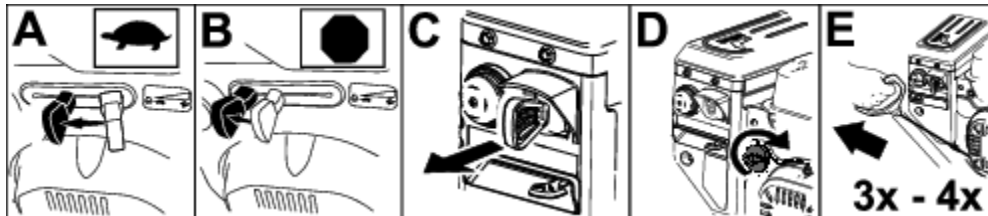


Figure 16

## Operating the Traction Drive

### Caution

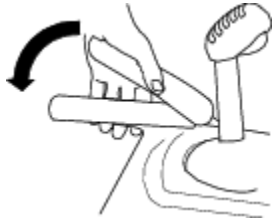
If the traction drive is not properly adjusted, the machine may move in the direction opposite of what you intended, causing injury and/or property damage.

Carefully check the traction drive and adjust it properly, if necessary.

**Important:** If the machine moves when the traction lever is in the released position, check the traction cable; refer to [Checking and Adjusting the Traction Cable](#) or take the machine to an Authorized Service Dealer for service.

**Important:** To operate the traction drive, you must operate the machine with the self-propel feature engaged.

1. To engage the traction drive, squeeze the left (traction) lever to the handgrip (Figure 17).



**Figure 17**

2. To stop the traction drive, release the traction lever.

## Operating the Speed Selector

The speed selector has 6 forward and 2 reverse gears. To change speeds, release the traction lever and shift the speed-selector lever to the desired position (Figure 18). The lever locks in a notch at each speed selection.



**Figure 18**

## Operating the Auger/Impeller Drive

1. To engage the auger/impeller drive, squeeze the right (auger/impeller) lever to the handgrip (Figure 19).



**Figure 19**

2. To stop the auger and impeller, release the right lever.  
**Important: When you engage both the auger/impeller lever and the traction lever, the traction lever locks the auger/impeller lever down, freeing your right hand. To release both levers, simply release the left (traction) lever.**
3. If the auger and impeller continue to rotate when you release the auger/impeller lever, do not operate the machine. Check the auger/impeller cable; refer to [Checking and Adjusting the Auger/Impeller Cable](#) and adjust it if necessary. Otherwise, take the machine to an Authorized Service Dealer for service.
4. **Warning**  
If the auger and impeller continue to rotate when you release the auger/impeller lever, you could seriously injure yourself or others.  
Do not operate the machine. Take it to an Authorized Service Dealer for service.

## Operating the Quick Stick®

Hold the blue trigger cap down to use the Quick Stick to move the discharge chute and the chute deflector. Release the trigger cap to lock the discharge chute and chute deflector into position (Figure 20).



**Figure 20**

## Moving the Discharge Chute

Hold the blue trigger cap down and move the Quick Stick to the left to move the discharge chute to the left; move the Quick Stick to the right to move the discharge chute to the right (Figure 21).

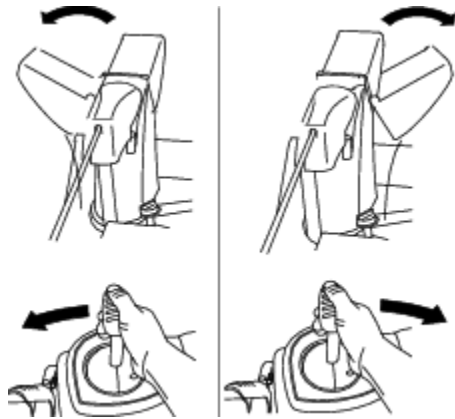


Figure 21

If the chute does not turn as far to the left as it does to the right, ensure that the cable is routed to the inside of the handles.

## Moving the Chute Deflector

Hold the blue trigger cap down and move the Quick Stick forward to lower the chute deflector; move it rearward to raise the chute deflector (Figure 22).



Figure 22

## Clearing a Clogged Discharge Chute

### Warning

If the auger/impeller is running but there is no snow coming out of the discharge chute, the discharge chute may be clogged.

Never use your hands to clear a clogged discharge chute. This could result in personal injury.

- To unclog the discharge chute, stay in the operating position and release the left (traction) lever. While running the auger/impeller, push down on the handles to raise the front of the machine a few centimeters (inches) off the pavement. Then lift the handles quickly to bump the front of the machine on the pavement. Repeat if necessary until a stream of snow comes out the discharge chute.
- If you cannot unclog the discharge chute by bumping the front of the machine, **shut off the engine, wait for all moving parts to stop, and use the snow-cleanout tool (Figure 12).** Important: Unclogging the discharge chute by bumping the front of the machine on the pavement may cause the skids to move. Adjust the skids and tighten the skid bolts securely; refer to [Checking and Adjusting the Skids and Scraper](#).

## Operating Tips

### Danger

When the machine is in operation, the impeller and auger rotate and can injure or amputate hands or feet.

- Before adjusting, cleaning, inspecting, troubleshooting, or repairing the machine, shut off the engine and wait for all moving parts to stop. Disconnect the wire from the spark plug and keep it away from the plug to prevent someone from accidentally starting the engine.
- Remove an obstruction from the discharge chute; refer to [Clearing a Clogged Discharge Chute](#). Use the snow-cleanout tool (Figure 13), not your hands, to remove an obstruction from the discharge chute.
- Stay behind the handles and away from the discharge opening while operating the machine.
- Keep your face, hands, feet, and any other part of your body or clothing away from concealed, moving, or rotating parts.

### Warning

The impeller can throw stones, toys, and other foreign objects and cause serious personal injury to you or bystanders.

- Keep the area to be cleared free of all objects that the auger could pick up and throw.
- Keep all children and pets away from the area of operation.
- Always set the throttle to the FAST position when throwing snow.
- If the engine slows down under a load or the wheels slip, shift the machine into a lower gear.
- If the front of the machine rides up, shift the machine into a lower gear. If the front continues to ride up, lift up on the handles.

## After Operation

## After Operation Safety

### General Safety

- Never store the machine with fuel in the fuel tank inside a building where ignition sources are present, such as hot water heaters, space heaters, or clothes dryers. Allow the engine to cool before storing the machine in any enclosure.
- When storing the machine for more than 30 days, refer to [Before storage](#) for important information.
- Run the machine a few minutes after throwing snow to prevent freeze-up of the collector and impeller.

### Preventing Freeze-up after Use

- In snowy and cold conditions, some controls and moving parts may freeze. **Do not use excessive force when trying to operate frozen controls.** If you have difficulty operating any control or part, start the engine and let it run for a few minutes.
- After using the machine, let the engine run for a few minutes to prevent moving parts from freezing. Engage the auger/impeller to clear any remaining snow from inside the housing. Rotate the Quick Stick to prevent it from freezing. Shut off the engine, wait for all moving parts to stop, and remove all ice and snow from the machine.
- With the engine off, pull the recoil-start handle several times and push the electric-start button once to prevent the recoil starter and electric starter from freezing up.