



# 622R and 622E Power Throw® Snowthrowers

Model No. 38606—Serial No. 270000001 and Up

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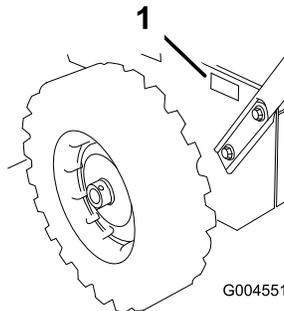
Operator's Manual

## 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](http://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. Figure 1 identifies the location of the model and serial numbers on the product. Write the numbers in the space provided.



**Figure 1**

1. Model and serial number location

<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 2), which signals a hazard that may cause serious

injury or death if you do not follow the recommended precautions.



**Figure 2**

1. Safety alert symbol

This manual uses 2 words to highlight information.

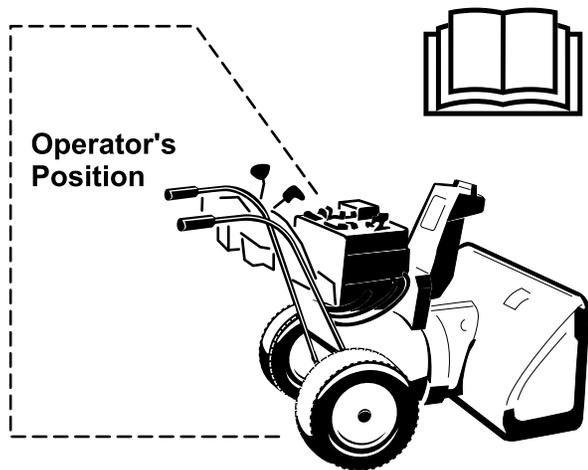
**Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

**Replacement Engine Owner's Manuals may be ordered through the engine manufacturer.**

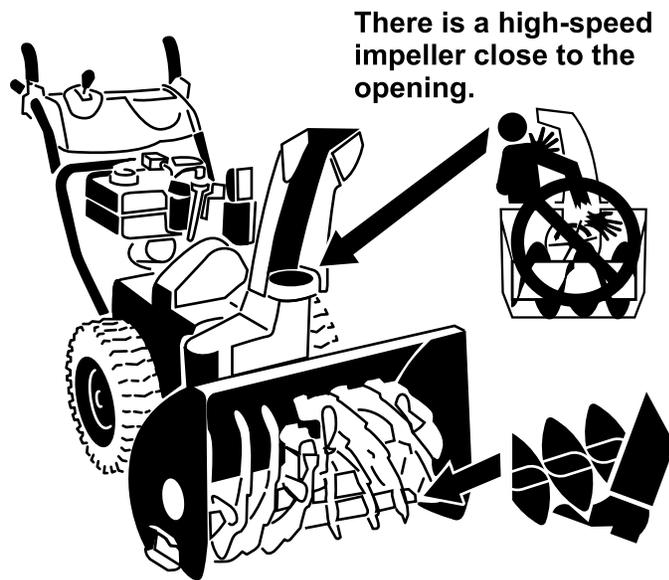
# Safety

## Before Operating

- Read and understand the contents of this manual before operating the snowthrower.
- Become familiar with all controls and know how to stop the engine quickly.



## Caution: Improper use may result in loss of fingers, hands, or feet.



There is a high-speed impeller close to the opening.

The low-speed auger has a moving pinch point close to the opening.

This snowthrower meets or exceeds the ISO standard 8437 in effect at the time of production.

Read and understand the contents of this manual before the engine is ever started.

**▲**This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

Improperly using or maintaining this snowthrower could result in injury or death. To reduce this potential, comply with the following safety instructions.

## Training

- Read the operating and service instruction manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
  - Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instruction.
  - Keep the area of operation clear of all persons, particularly small children, and pets.
  - Exercise caution to avoid slipping or falling, especially when operating in reverse.
- Thoroughly inspect the area where the equipment is to be used and remove all doormats, sleds, boards, wires, and other foreign objects.
  - Disengage all clutches and shift into neutral before starting the engine.
  - Do not operate the equipment without wearing adequate winter garments. Wear footwear which will improve footing on slippery surfaces.
  - Handle fuel with care; it is highly flammable.
    - Use an approved fuel container.
    - Never add fuel to a running or hot engine.
    - Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
    - Replace gasoline caps securely and wipe up spilled fuel.
  - Adjust the collector housing height to clear gravel or crushed rock surface.
  - Never attempt to make any adjustments while the engine is running (except where specifically recommended by manufacturer).
  - Let engine and machine adjust to outdoor temperatures before starting to clear snow.
  - The operation of any powered machine can result in foreign objects being thrown into the eyes. Always

wear safety glasses or eye shields during operation or while performing an adjustment or repair.

## Operation

- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
- After striking a foreign object, stop the engine, remove the wire from the spark-plug, thoroughly inspect the snow thrower for any damage, and repair the damage before restarting and operating the snow thrower.
- If the unit should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
- Stop the engine whenever you leave the operating position, before unclogging the collector/impeller housing or discharge guide, and when making any repairs, adjustments, or inspections.
- When cleaning, repairing, or inspecting, make certain the collector/impeller and all moving parts have stopped. Disconnect the spark-plug wire, and keep the wire away from the plug to prevent accidental starting.
- Do not run the engine indoors, except when starting it and for moving the snow thrower in or out of the building. Open the outside doors; exhaust fumes are dangerous.
- Do not clear snow across the face of slopes. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.
- Never operate the snow thrower without proper guards, plates, or other safety protective devices in place.
- Never operate the snow thrower near glass enclosures, automobiles, window wells, drop-offs, etc. without proper adjustment of the snow discharge angle. Keep children and pets away.
- Do not overload the machine capacity by attempting to clear snow at too fast a rate.
- Never operate the machine at high transport speeds on slippery surfaces. Use care when reversing.
- Never direct discharge at bystanders or allow anyone in front of the unit.
- Disengage power to the collector/impeller when snow thrower is transported or not in use.

- Use only attachments and accessories approved by the manufacturer of snow thrower (such as wheel weights, counterweights, cabs, etc.).
- Never operate the snow thrower without good visibility or light. Always be sure of your footing, and keep a firm hold on the handles. Walk; never run.
- Never operate the snow thrower without good visibility or light.
- Take all possible precautions when leaving the machine unattended. Shift into neutral, set the parking brake, stop the engine and remove the key.

## Maintenance and Storage

- Check all fasteners at frequent intervals for proper tightness to be sure the equipment is in safe working condition.
- Never store the machine with fuel in the fuel tank inside a building where ignition sources are present such as hot water and space heaters, clothes dryers, etc. Allow the engine to cool before storing in any enclosure.
- Always refer to owner's guide instructions for important details if the snow thrower is to be stored for an extended period.
- Maintain or replace safety and instructions labels, as necessary.
- Run the machine a few minutes after throwing snow to prevent freeze-up of the collector/impeller.

## Toro Snowthrower Safety

The following list contains safety information specific to Toro products or other safety information that you must know.

- **Rotating rotor blades can injure fingers or hands.** Stay behind the handles and away from the discharge opening while operating the snowthrower. **Keep your face, hands, feet, and any other part of your body or clothing away from moving or rotating parts.**
- Before adjusting, cleaning, repairing, and inspecting the snowthrower, and before unclogging the discharge chute, **stop the engine, remove the key, and wait for all moving parts to stop.**
- Use the cleanout tool, **not your hands**, to remove obstructions from the discharge chute.
- **Before** leaving the operating position, stop the engine, remove the key, and wait for all moving parts to stop.

- Do not wear loose-fitting clothing that could get caught in moving parts.
- If a shield, safety device, or decal is damaged, illegible, or lost, repair or replace it before beginning operation. Also, tighten any loose fasteners.
- **Do not** smoke while handling gasoline.
- **Do not** use the snowthrower on a roof.
- Do not touch the engine while it is running or soon after it has stopped because the engine may be hot enough to cause a burn.
- Perform only those maintenance instructions described in this manual. Before performing any maintenance, service, or adjustment, stop the engine, remove the key, and disconnect the wire from the spark plug. If major repairs are ever needed, contact an Authorized Service Dealer.
- Do not change the governor settings on the engine.
- When storing the snowthrower for more than 30 days, drain the fuel from the fuel tank to prevent a potential hazard. Store fuel in an approved fuel

container. Remove the key from the ignition switch before storing the snowthrower.

- Purchase only genuine Toro replacement parts and accessories.

## Sound Pressure

This unit has a maximum sound pressure level at the operator's ear of 95 dBA, based on measurements of identical machines per EN 11201.

## Sound Power

This unit has a guaranteed sound power level of 108 dBA, based on measurements of identical machines per EN 3744.

## Vibration

This unit does not exceed a hand/arm vibration level of 3.1 m/s<sup>2</sup>, based on measurements of identical machines per EN 1033.

## Safety and Instructional Decals

**Important:** Safety and instruction decals are located near areas of potential danger. Replace damaged decals.



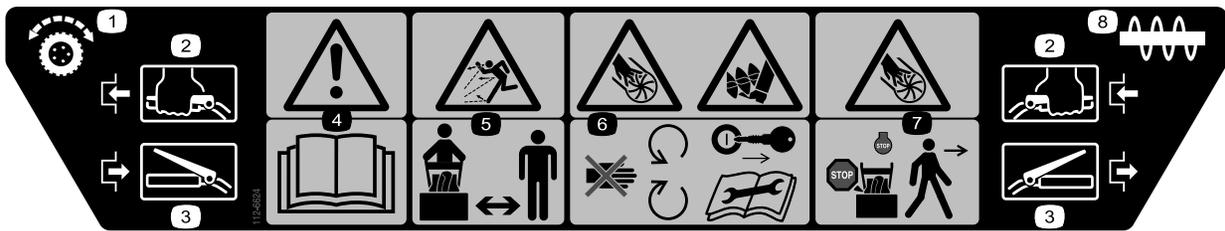
107-3040

1. Cutting/dismemberment, impeller and cutting dismemberment, auger hazards—keep bystanders a safe distance from the snowthrower.



112-6620

1. Cutting/dismemberment hazard, impeller—do not place your hand in the chute; stop the engine before leaving the operator's position, use the tool to clear the chute.



112-6624

- |                |  |  |   |
|----------------|--|--|---|
| 1. Wheel drive | 3. Disengage                                   | 5. Thrown object hazard—keep bystanders a safe distance from the snowthrower.  | 7. Cutting/dismemberment hazard, impeller—stop the engine and wait for all moving parts to stop before leaving the operator's position. |
| 2. Engage      | 4. Warning—read the <i>Operator's Manual</i> . | 6. Cutting/dismemberment hazard, impeller—keep away from moving parts; remove the ignition key and read the instructions before servicing or performing maintenance. | 8. Auger  |



112-6637

Model 38607 only

- |                                 |                   |                                |
|---------------------------------|-------------------|--------------------------------|
| 1. Forward drive speed settings | 2. Speed selector | 3. Reverse drive speed setting |
|---------------------------------|-------------------|--------------------------------|



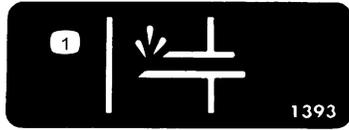
112-6638

Model 38606 only

- |                                 |                   |                                |
|---------------------------------|-------------------|--------------------------------|
| 1. Forward drive speed settings | 2. Speed selector | 3. Reverse drive speed setting |
|---------------------------------|-------------------|--------------------------------|

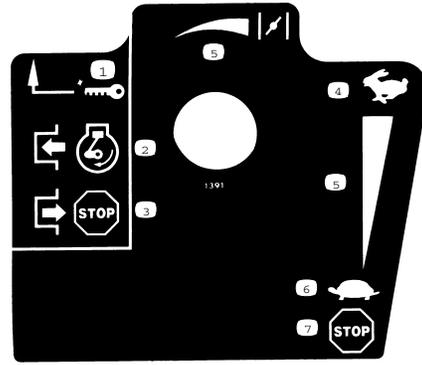


1. Warning—hot surface, do not touch



**Tecumseh Part No. 36501**

1. Primer



**Tecumseh Part No. 35077**

- 1. Key ignition
- 2. Engage to start the engine
- 3. Disengage to stop the engine
- 4. Fast
- 5. Increasing scale
- 6. Slow
- 7. Stop the engine

# Setup

## Loose Parts

Use the chart below to verify that all parts have been shipped.

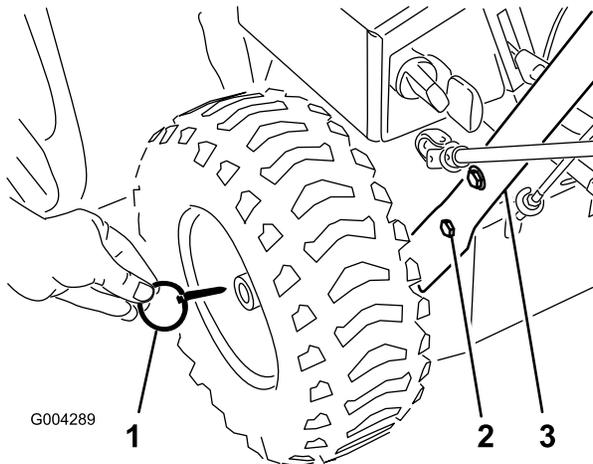
Procedure	Description	Qty.	Use
<b>1.</b>	Handle Bolts Belleville washers Flange nut	1 4 4 1	Install the handle.
<b>2.</b>	Speed selector rod Cotter pin Flat washer	1 1 1	Install the speed selector rod.
<b>3.</b>	Flange locknut	1	Install the traction rod.
<b>4.</b>	Clevis pin Cotter pin	1 1	Install the auger/impeller drive control linkage.
<b>5.</b>	Chute control rod assembly (rod and bracket, worm gear, and bracket) Belleville washer Bolt Carriage bolt Locknut Curved washer Flat washer	1 1 2 1 3 1 1	Install the chute control rod.
<b>6.</b>	No parts required	–	Fill the engine with oil.
<b>7.</b>	No parts required	–	Check the tire pressure.
<b>8.</b>	No parts required	–	Check the skids and scraper.

# 1. Installing the Handle

1	Handle
4	Bolts
4	Belleville washers
1	Flange nut

## Procedure

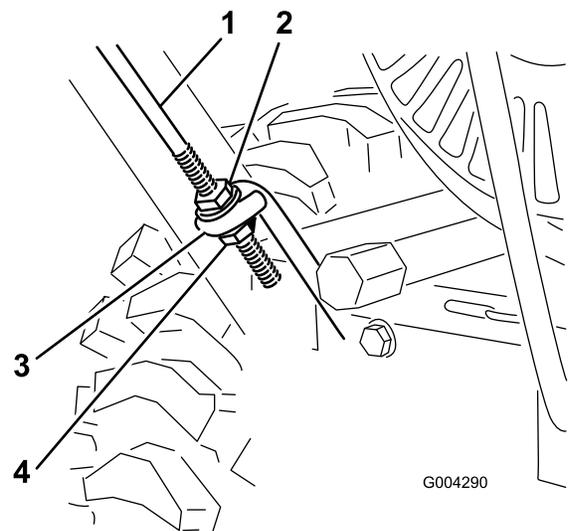
1. Remove the tie straps that secure the control rods to the handle.
2. Remove the axle pins from both wheels and slide the wheels outward on the axle approximately 1 inch (2.5 cm) (Figure 3).



**Figure 3**

1. Axle pin (2)
2. Cap screw and Belleville washer (4)
3. Handle

3. Thread a flange nut (not the flange locknut) with the flange down onto the traction rod attached to the left side of the handle (Figure 4).



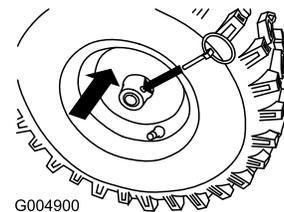
**Figure 4**

1. Traction rod
2. Flange nut
3. Lower traction rod loop
4. Flange locknut

4. Position the left side of the handle assembly against the side of the snowthrower and insert the end of the traction rod through the lower traction rod loop (Figure 4).
5. Align the holes in the left side of the handle assembly with the holes in the left side plate, and secure the handle with 2 cap screws and Belleville washers until they are finger tight (Figure 3).

**Note:** The concave side of the Belleville washer goes against the outside of the handle.

6. Align the holes in the right side of the handle assembly with the holes in the right side plate, and secure the handle with 2 cap screws and Belleville washers until they are finger tight.
7. Ensure that the handles are at the same height, then tighten the handle fasteners securely.
8. Slide the wheels inward and insert each axle pin through the hole in each wheel hub and through the **outer** hole of the axle (Figure 5).



**Figure 5**

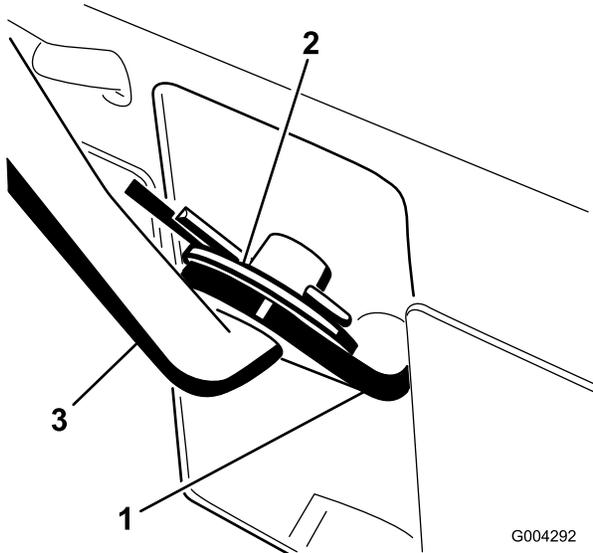
**Note:** To use tire chains (optional), install the axle pins through the **outer** axle holes.

## 2. Installing the Speed Selector Rod

1	Speed selector rod
1	Cotter pin
1	Flat washer

### Procedure

1. Pull the speed selector arm (Figure 6) to the most outward position.



**Figure 6**

1. Speed selector arm
2. Flat washer and cotter pin
3. Speed selector rod

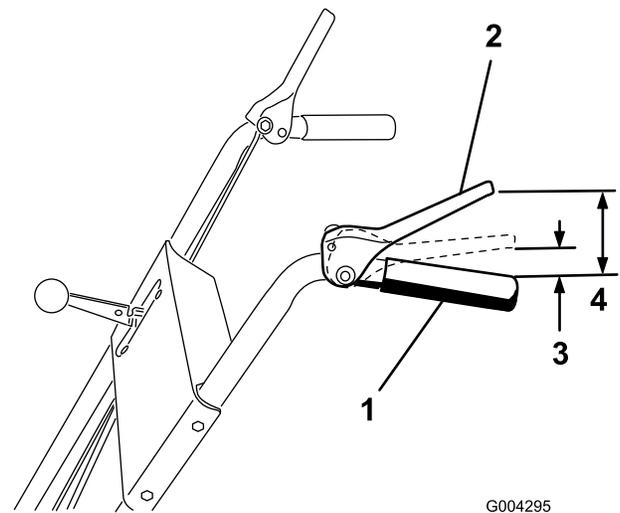
2. Move the speed selector lever (Figure 13) on the control panel to the R (Reverse) position.
3. Install the speed selector rod into the speed selector arm, add a flat washer on the selector rod, and secure it with a cotter pin (Figure 6).

## 3. Installing the Traction Rod

1	Flange locknut
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### Procedure

1. Thread the flange locknut (flange side up) onto the bottom of the traction control rod, below the loop in the lower traction rod (Figure 4).
2. Adjust the 2 flange nuts up or down on the traction rod until the distance between the top of the handgrip and the bottom of the traction control lever is approximately 4-1/2 inches (11.4 cm) as shown in Figure 7.



**Figure 7**

1. Handgrip
2. Traction control lever
3. 1 to 2 inches (2.5 to 5 cm)
4. 4-1/2 inches (11.4 cm)

4. Move the speed selector lever (Figure 7) into third gear.
5. Slowly pull the snowthrower backward while slowly pressing the traction control lever toward the handgrip.

**Note:** If the speed selector lever does not move into third gear, adjust the speed selector before continuing. Refer to Adjusting the Speed Selector.

6. Adjust the 2 flange nuts, if necessary, to obtain the proper distance between the top of the handgrip and the bottom of the traction control lever.

**Note:** The adjustment is correct when the wheels stop rolling backward and the distance between the top of the handgrip and the bottom of the traction control lever is 1 to 2 inches (2.5 to 5 cm) as shown in Figure 7.

7. Tighten the flange nuts securely.

## 4. Installing the Auger/Impeller Drive Control Linkage

1	Clevis pin
1	Cotter pin

### Procedure

1. Loosen the jam nut above the clevis on the upper control rod (Figure 8).

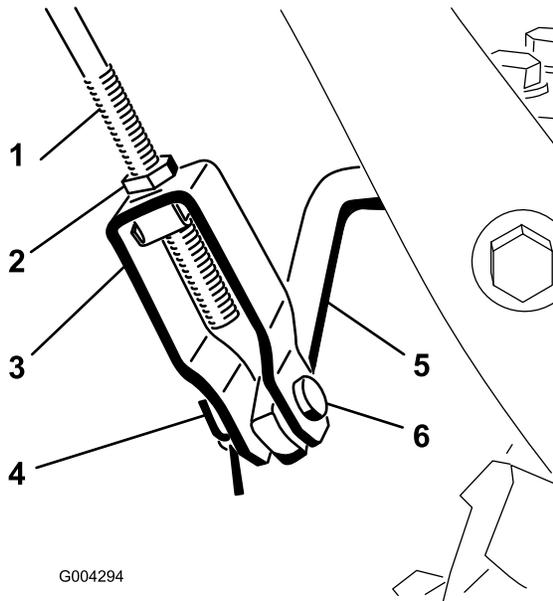


Figure 8

- |                      |                      |
|----------------------|----------------------|
| 1. Upper control rod | 4. Cotter pin        |
| 2. Jam nut           | 5. Lower control rod |
| 3. Clevis            | 6. Clevis pin        |

2. Align the holes in the clevis and the lower control rod and insert the clevis pin (Figure 8).
3. Check the distance between the top of the handgrip and the bottom of the auger/impeller drive control lever (Figure 9).

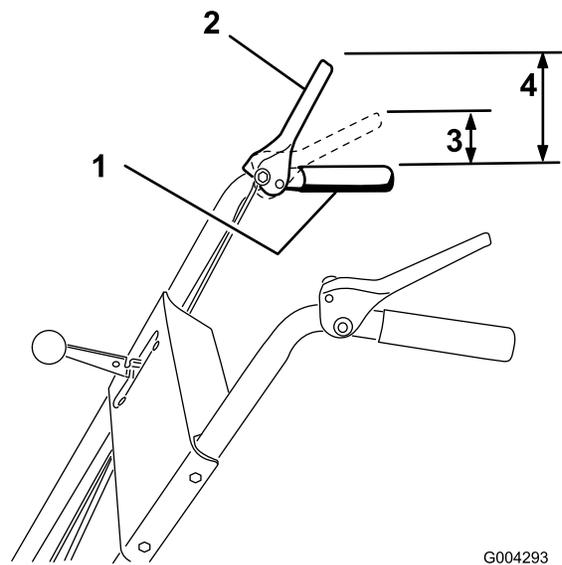


Figure 9

- |                                 |                                |
|---------------------------------|--------------------------------|
| 1. Handgrip                     | 3. 1 to 2 inches (2.5 to 5 cm) |
| 2. Auger/impeller control lever | 4. 5 inches (12.7 cm)          |

**Note:** The distance should be approximately 5 inches (12.7 cm).

4. Press the auger/impeller drive control lever slowly toward the handgrip.

**Note:** The amount of force needed to compress the lever increases noticeably when you remove the slack from the auger/impeller drive belt (approximately 1/2 of the lever movement). The adjustment is correct when the force begins to increase and the distance between the top of the handgrip and the bottom of the auger/impeller drive control lever is 1 to 2 inches (2.5 to 5 cm) as shown in Figure 9.

**Note:** If the force does not noticeably increase, remove the belt cover (refer to step 2 of Replacing the Traction Drive Belt) and measure 2 inches (5 cm) above the handgrip at the point where you remove the slack from the auger/impeller drive belt.

5. To adjust the distance:
  - A. Remove the clevis pin.
  - B. Loosen the jam nut.
  - C. Thread the clevis up or down to increase or decrease the distance between the top of the handgrip and the bottom of the auger/impeller drive control lever (Figure 8).
6. When the adjustment is correct, install the clevis pin and secure it in place with the cotter pin (Figure 8).
7. Tighten the jam nut to secure the clevis (Figure 8).

## 5. Installing the Chute Control Rod

1	Chute control rod assembly (rod and bracket, worm gear, and bracket)
1	Belleville washer
2	Bolt
1	Carriage bolt
3	Locknut
1	Curved washer
1	Flat washer

### Procedure

1. Secure the upper chute control bracket (attached to the chute control rod) to the upper left side of the handle with a bolt and a locknut (Figure 10).

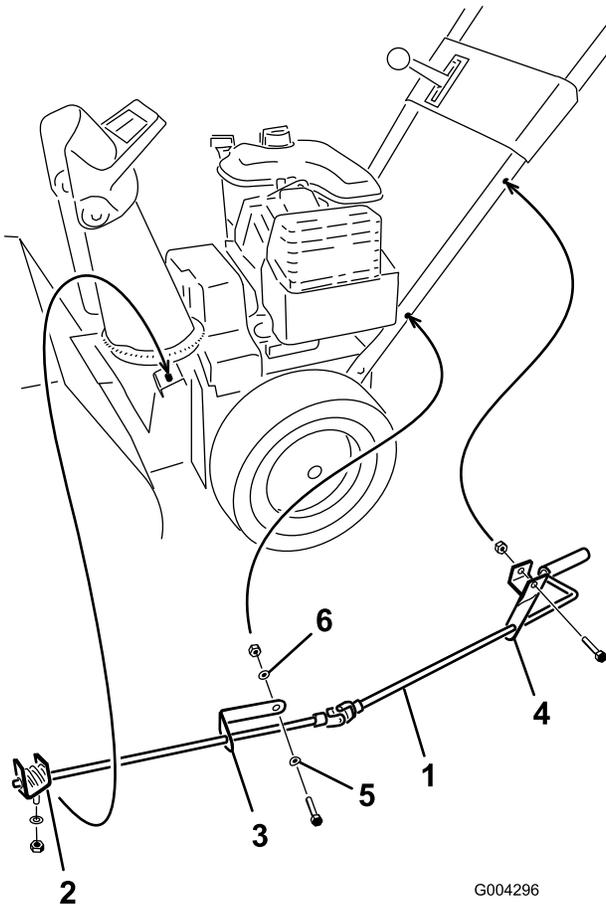


Figure 10

- |  |                                |
|--|--------------------------------|
| 1. Chute control rod                       | 4. Upper chute control bracket |
| 2. Worm gear, bracket, and mounting flange | 5. Curved washer               |
| 3. Lower chute control bracket             | 6. Flat washer                 |

**Note:** Leave the locknut loose.

2. Secure the lower chute control bracket (attached to the chute control rod) to the lower left side of the handle with a bolt, a curved washer, a flat washer, and a locknut (Figure 10).

**Note:** The bracket should be fastened on the inside of the handle, and the rod should be approximately parallel to the ground and not touch the handle.

**Note:** Leave the locknut loose.

3. Apply No. 2 general purpose grease to the worm gear (Figure 11).

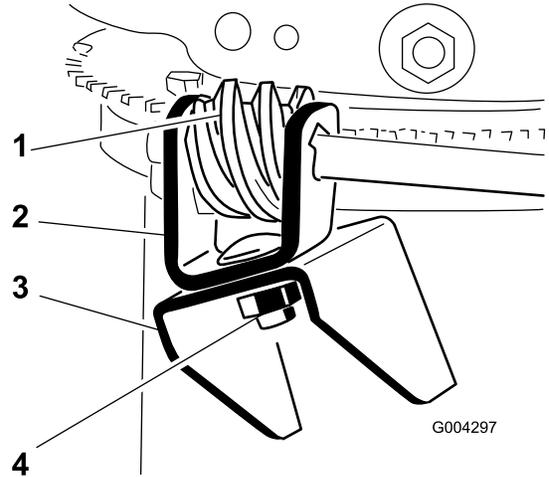


Figure 11

- |              |   |
|--------------|---|
| 1. Worm gear | 3. Mounting flange                      |
| 2. Bracket   | 4. Bolt, Belleville washer, and locknut |

4. Loosely mount the worm gear and the bracket to the mounting flange with a bolt, a Belleville washer, and a locknut as shown in Figure 11.
5. Slide the worm gear into the teeth of the chute retaining ring and tighten the locknut (Figure 11).
6. Tighten the locknuts that secure the 2 chute control brackets (Figure 10).
7. Check the operation of the chute control rod, and move the worm gear slightly outward if it binds.

## 6. Filling the Engine with Oil

### Procedure

Your snowthrower comes with 21 oz. (0.62 l) of oil in the engine.

**Note:** Before starting the engine, check the oil level and add oil if necessary.

Max. fill: 21 oz. (0.62 l), type: automotive detergent oil with an API service classification of SF, SG, SH, SJ, SL, or higher.

- For temperatures above 32°F (0°C), use SAE 30.
  - For temperatures between 0°F and 32°F (-18°C to 0°C), use SAE 5W30 or SAE 10.
  - For air temperatures below 0°F (-18°C), use SAE 0W30.
1. Move the snowthrower to a level surface to ensure an accurate oil level reading.
  2. Clean around the dipstick (Figure 12).

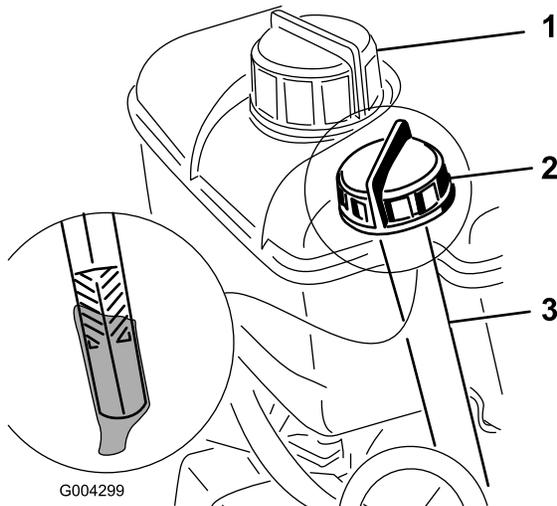


Figure 12

1. Fuel tank cap
2. Dipstick
3. Filler hole

3. Remove the dipstick by rotating the cap counterclockwise and pulling it out.
4. Slowly pour about 3/4 of the crankcase capacity of oil into the crankcase.
5. Wipe the dipstick clean with a clean cloth.
6. Install the dipstick into the filler neck, then remove it.

**Note:** To ensure an accurate oil level reading, you must fully install the dipstick.

7. Read the oil level on the dipstick.
8. If the oil level is below the Add mark on the dipstick, slowly pour only enough oil into the filler hole to raise the oil level to the Full mark on the dipstick.

**Important:** Do not overfill the crankcase with oil and run the engine; engine damage will result. Drain the excess oil until the oil level on the dipstick reads Full.

9. Insert the dipstick into the filler neck and rotate the cap clockwise until it is tight.

## 7. Checking the Tire Pressure

### Procedure

The tires are overinflated at the factory for shipping. Reduce the pressure equally in both tires to between 12 and 15 psi (83 and 103 kPa).

## 8. Checking the Skids and Scraper

### Procedure

Refer to Checking and Adjusting the Skids and Scraper in Maintenance.

## Product Overview

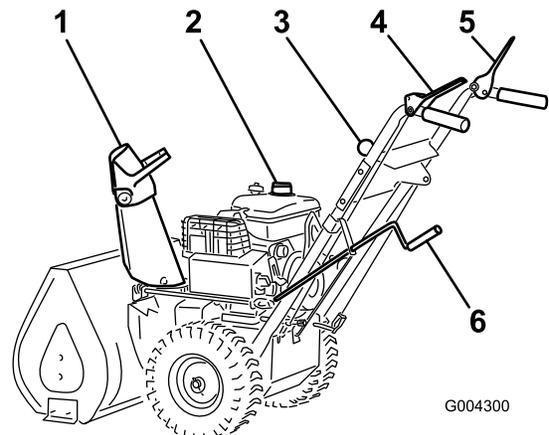


Figure 13

1. Chute deflector
2. Fuel tank
3. Speed selector lever
4. Traction control lever
5. Auger/impeller drive control lever
6. Discharge chute control

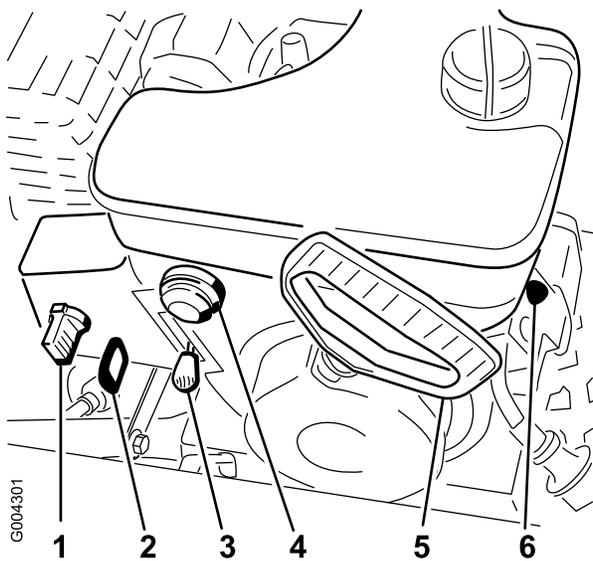


Figure 14

- |                   |                     |
|-------------------|---------------------|
| 1. Choke          | 4. Primer           |
| 2. Ignition       | 5. Recoil starter   |
| 3. Throttle lever | 6. Electric starter |

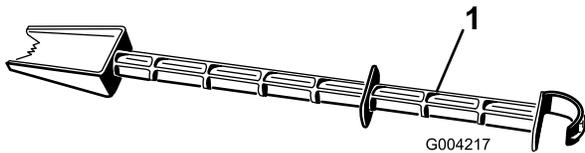


Figure 15

1. Snow cleanout stick (attached to the top of the auger housing)

## Controls

- **Auger/Impeller Drive Control Lever**—To engage both the auger and impeller, press the lever against the right handgrip. To disengage, release the lever.
- **Traction Control Lever**—To engage the traction (wheel drive), press the lever against the left handgrip. To stop the traction, release the lever.
- **Speed Selector Lever**—This control has 4 positions: 3 forward speeds and 1 reverse. To change speeds, move the speed selector lever to the desired position. The lever locks in a notch at each speed selection.

**Note:** Before shifting gears into or out of reverse, you must release the traction control lever. You may shift between any of the forward speeds without releasing the traction control lever.

- **Discharge Chute Control**—Rotate the discharge chute control clockwise to move the discharge chute to the left; counterclockwise to move the chute to the right.

- **Chute Deflector Handle**—Move the deflector handle forward to move the snow stream down; move it rearward to move the snow stream up.
- **Fuel Shutoff Valve**—Close the valve by rotating clockwise. Open the valve by rotating it counterclockwise. Close the valve when you do not use the snowthrower.
- **Choke**—Move the choke to the (Full) position to start a cold engine. As engine warms up, gradually move the choke to the Off position.
- **Ignition Switch**—Insert the key before starting the engine. To stop the engine, remove the key.
- **Throttle Lever**—Move the throttle lever upward to increase the engine speed; move it downward to decrease the engine speed. Move the throttle lever to the Stop position to stop the engine.
- **Prime**—Press the primer to pump a small amount of gasoline into the engine for improved cold-weather starting.
- **Recoil Starter**—The recoil starter is on the back side of the engine. Pull the recoil starter to start the engine.

## Operation

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

### Freewheeling or Using the Self-propel Drive

You can operate the snowthrower with the self-propel feature engaged or disengaged (freewheeling).

To freewheel, slide the wheels inward and insert the axle pins through the outer axle holes, but not through the wheel hubs (Figure 16).

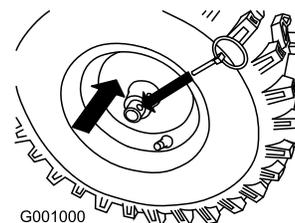


Figure 16

To self-propel, slide the wheels outward and insert the axle pins through the holes in the wheel hubs and the outer axle holes (Figure 17).

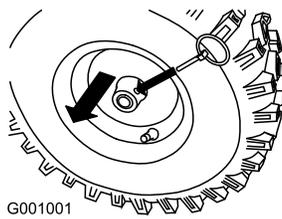


Figure 17

## Removing the Carburetor Heater Box

If you operate the engine when the air temperature is above 40°F (4°C), remove the carburetor heater box (Figure 18).

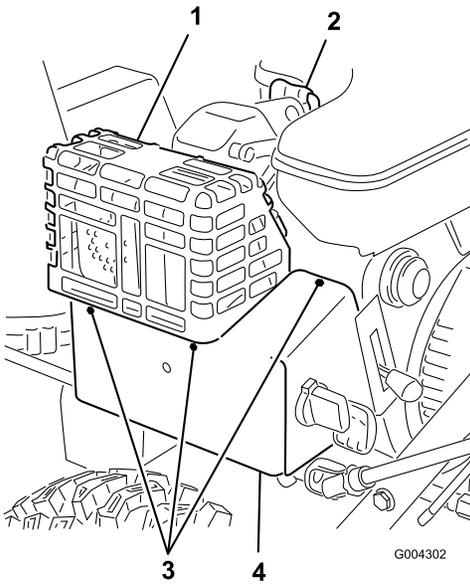


Figure 18

- |                    |                          |
|--------------------|--------------------------|
| 1. Muffler guard   | 3. Screws                |
| 2. Spark-plug wire | 4. Carburetor heater box |

1. Disconnect the wire from the spark plug and ensure that the wire does not contact the plug (Figure 18).
2. Remove the key from the ignition switch (Figure 14).
3. Pull the choke knob off (Figure 14).
4. Remove the fasteners that secure the carburetor heater box in place (Figure 18).  
**Note:** Install these fasteners in their holes for safe keeping.
5. Lift the carburetor heater box up and away from the engine.
6. Disconnect the green ground wire clip under the throttle (Figure 19).

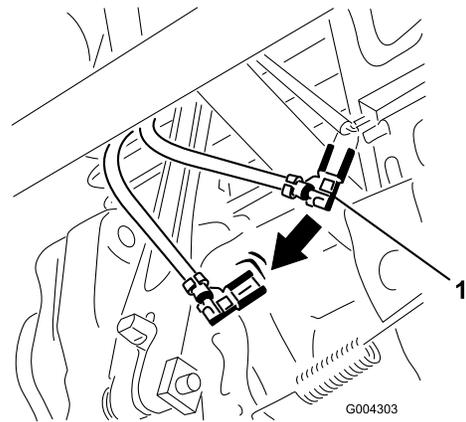


Figure 19

1. Green ground wire clip
7. Install the choke knob.
8. Insert the ignition key.
9. Connect the wire to the spark plug.

**Important:** Use the carburetor heater box as a reference for the choke and throttle positions.

## Installing the Carburetor Heater Box

To install the carburetor heater box, reverse the steps given in Removing the Carburetor Heater Box. Remove the fasteners from their holes before installing the carburetor heater box.

## Filling the Fuel Tank



**Gasoline is extremely flammable and explosive. A fire or explosion from gasoline can burn you and others.**

- To prevent a static charge from igniting the gasoline, place the container and/or snowthrower on the ground before filling, not in a vehicle or on an object.
- Fill the tank outdoors when the engine is cold. Wipe up spills.
- Do not handle gasoline when smoking or around an open flame or sparks.
- Store gasoline in an approved fuel container, out of the reach of children.

Fill the fuel tank with fresh unleaded regular gasoline from a major name-brand service station.

**Important:** To reduce starting problems, add fuel stabilizer to the fuel all season, mixing it with gasoline less than 30 days old. *Do not add oil to the gasoline.*

1. Clean around the fuel tank cap (Figure 12).
2. Remove the fuel tank cap.
3. Fill the fuel tank with unleaded gasoline to within 1/4 to 1/2 (6 to 13 mm) from the top of the tank. **Do not fill into the filler neck.**

**Important:** Do not fill the fuel tank more than 1/4 inch (6 mm) from the top of the tank because the gasoline must have room to expand.

4. Install the fuel tank cap and wipe up any spilled gasoline.

## Starting the Engine

1. Connect the spark plug wire (Figure 18).
2. Move the throttle lever to the Fast position (Figure 14).
3. Release the auger/impeller drive control lever and the traction control lever (Figure 13).
4. Open the fuel shutoff valve below the fuel tank (Figure 20).

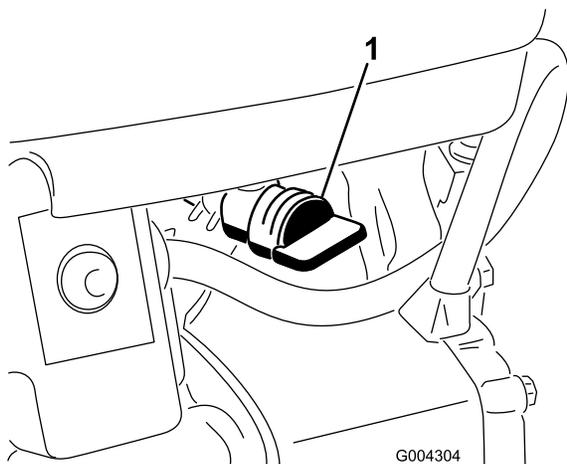


Figure 20

1. Fuel shutoff valve

- 
5. Rotate the choke (Figure 14) to the On position.
  6. Insert the ignition key (Figure 14).

**Important:** Do not use the primer or the choke if the engine has been running as is hot. Excessive priming may flood the engine and prevent it from starting.

7. Cover the hole in the center of the primer (Figure 14) with your thumb and slowly push in the primer 3 times, pausing a moment between pushes.

8. Grasp the recoil starter handle (Figure 14) and pull it out slowly until positive engagement results; then pull the handle vigorously to start the engine.
9. Keep a firm grip on the starter handle and return the rope slowly.

**Note:** If engine does not start or if the air temperature is -10°F (-23°C) or below, the engine may need additional priming. After pushing in the primer, try to start the engine before priming again.

10. After the engine starts, immediately rotate the choke (Figure 14) to the 3/4 position. As the engine warms up, rotate the choke to the 1/2 position. When the engine warms up sufficiently, rotate the choke to the Off position.
11. Shift the speed selector lever (Figure 13) into first gear, squeeze the traction control lever to the handgrip, and then release the traction control lever. If the snowthrower moves forward before engaging the traction drive control lever or after releasing the lever, see Adjusting the Traction Drive.

**Important:** Do not operate the snowthrower if the auger and impeller rotate when you disengage the auger/impeller drive control lever.

## Stopping the Engine

1. Engage the auger to clear any remaining snow from inside the housing.
2. Run the engine for a few minutes to dry off any accumulated moisture.
3. Release the auger/impeller drive control lever and the traction control lever (Figure 13).
4. Stop the engine by doing one of the following:
  - A. Move the throttle lever to the Slow position, and remove the ignition key.
  - B. Move the throttle lever to the Stop position.
5. Close the fuel shutoff valve (Figure 20).
6. Pull the recoil starter with a rapid, continuous, full-arm stroke 3 or 4 times. This helps prevent the recoil starter from freezing up.
7. Wait for all moving parts to stop before leaving the operating position.

## Unclogging the Discharge Chute

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

- To unclog the discharge chute, stay in the operating position and release the left hand (traction) lever. While running the auger/impeller, push down on the handles to raise the front of the snowthrower a few inches (cm) off the pavement. Then lift the handles quickly to bump the front of the snowthrower 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 snowthrower, **stop the engine, wait for all moving parts to stop, and use the cleanout tool; never use your hand.**

**Important:** Unclogging the discharge chute by bumping the front of the snowthrower on the pavement may cause the skids to move. Adjust the skids and tighten the skid bolts securely.

## Preventing Freeze-up

- 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 snowthrower, 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 discharge chute control to prevent it from freezing. Stop the engine, wait for all moving parts to stop, and remove all ice and snow from the snowthrower.
- With the engine off, pull the recoil starter handle several times to prevent the recoil starter from freezing up.

## Operating Tips



**When the snowthrower is in operation, the impeller and auger can rotate and cut off or injure hands and feet.**

- **Before adjusting, cleaning, inspecting, troubleshooting, or repairing the snowthrower, stop 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 Unclogging the Discharge Chute. If necessary, use a stick, not your hands, to remove an obstruction from the discharge chute.**
- **Stay behind the handles and away from the discharge opening while operating the snowthrower.**
- **Keep face, hands, feet, and any other part of your body or clothing away from concealed, moving, or rotating parts.**



**The rotor blades can throw stones, toys, and other foreign objects and cause serious personal injury to the operator or to bystanders.**

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

# Maintenance

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

## Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first hour	<ul style="list-style-type: none"><li>• Inspect and adjust the traction drive belt.</li><li>• Inspect and adjust the auger/impeller drive belt.</li></ul>
After the first 2 hours	<ul style="list-style-type: none"><li>• Change the engine oil.</li></ul>
Before each use or daily	<ul style="list-style-type: none"><li>• Check the engine oil level and add oil if necessary.</li><li>• Inspect and adjust or replace the traction drive belt when necessary.</li><li>• Inspect and adjust or replace the auger/impeller drive belt when necessary.</li></ul>
Every 20 hours	<ul style="list-style-type: none"><li>• Lubricate the snowthrower.</li></ul>
Every 25 hours	<ul style="list-style-type: none"><li>• Change the engine oil.</li></ul>
Every 100 hours	<ul style="list-style-type: none"><li>• Inspect the spark plug. Replace and/or gap it if necessary.</li></ul>
Yearly	<ul style="list-style-type: none"><li>• Check the skids and the scraper and adjust them if necessary.</li><li>• Check the auger gearbox oil and add oil if necessary.</li><li>• Change the engine oil.</li></ul>
Yearly or before storage	<ul style="list-style-type: none"><li>• Lubricate the snowthrower.</li><li>• Drain the gasoline and run the engine to dry out the fuel tank and the carburetor at the end of the season.</li></ul>

**Important:** Refer to your engine operator's manual for additional maintenance procedures. For engine adjustments, repairs, or warranty service not covered in this manual, contact an Authorized Tecumseh Servicing Dealer.



If you leave the wire on the spark plug, someone could accidentally start the engine and seriously injure you or bystanders.

Disconnect the wire from the spark plug before you do any maintenance. Set the wire aside so that it does not accidentally contact the spark plug.

## Preparing for Maintenance

1. Move the snowthrower to a level surface.
2. Stop the engine and wait for all moving parts to stop.
3. Disconnect the spark plug wire (Figure 18).

## Checking the Engine Oil Level

**Service Interval:** Before each use or daily

Each time before using the snowthrower, first ensure that the oil level is between the Add and the Full marks on the dipstick.

1. Clean around the dipstick (Figure 18).
2. Remove the dipstick by rotating the cap counterclockwise and pulling it out.
3. Wipe the dipstick clean with a clean cloth.
4. Install the dipstick into the filler neck, then remove it.

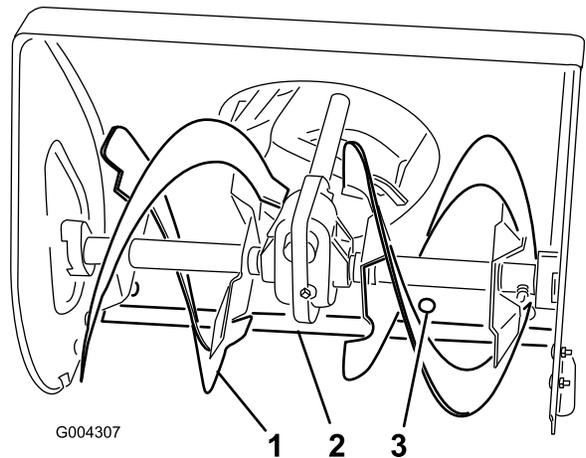
**Note:** To ensure an accurate oil level reading, you must fully install the dipstick.

5. Read the oil level on the dipstick.
6. If the oil level is below the Add mark on the dipstick, slowly pour only enough oil into the filler hole to raise the oil level to the Full mark on the dipstick.

**Note:** Use only a high-quality, SAE 5W-30 or SAE 10 weight detergent oil that has the American Petroleum Institute (API) service classification SF, SG, SH, or SJ. For extremely cold conditions (below 0°F or -18°C), use 0W-30 weight detergent oil that has the American Petroleum Institute (API) service classification SF, SG, SH, or SJ.

**Important:** Do not overfill the crankcase with oil and run the engine; engine damage will result. Drain the excess oil until the oil level on the dipstick reads Full.

7. Insert the dipstick into the filler neck and rotate the cap clockwise until it is tight.



**Figure 22**

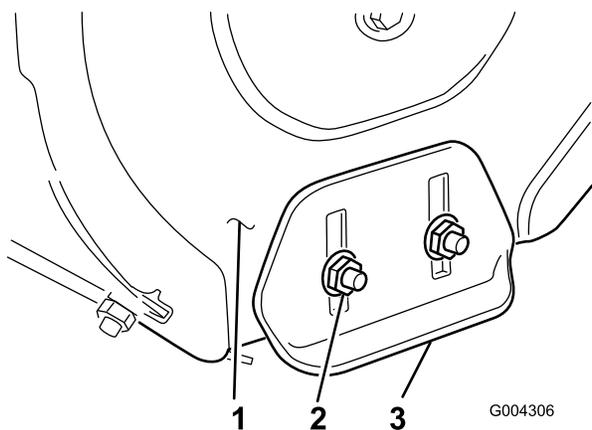
1. Auger blade
2. Scraper
3. Mounting screw (5)

## Adjusting the Skids and Scraper

**Service Interval:** Yearly

Adjust the skids and the scraper initially and then as needed to ensure that the auger does not contact the paved or gravel surface. Also, adjust them as needed to compensate for wear.

1. Move the snowthrower to a level surface.
2. Check the tire pressure in the tires. Refer to Checking the Tire Pressure.
3. Loosen the 4 flange nuts that secure both skids to the auger side plates (Figure 21) until the skids slide up and down easily.



**Figure 21**

1. Auger side plate (2)
2. Flange nuts (4)
3. Skid (2)

4. Support the auger blades so that they are 1/8 inch (3 mm) off the ground (Figure 22).

5. Check the scraper adjustment. The scraper should be 1/8 inch (3 mm) above and parallel to a level surface.

### A. For Concrete and Asphalt Surfaces:

If the snowthrower does not clear the snow close enough to the pavement, adjust the skids to lower the scraper; if the pavement surfaces are cracked, rough, or uneven, adjust the skids to raise the scraper.

### B. For Gravel Surfaces:

Support the auger blades a few inches (cm) above the ground, and adjust the skids to prevent the snowthrower from picking up rocks.

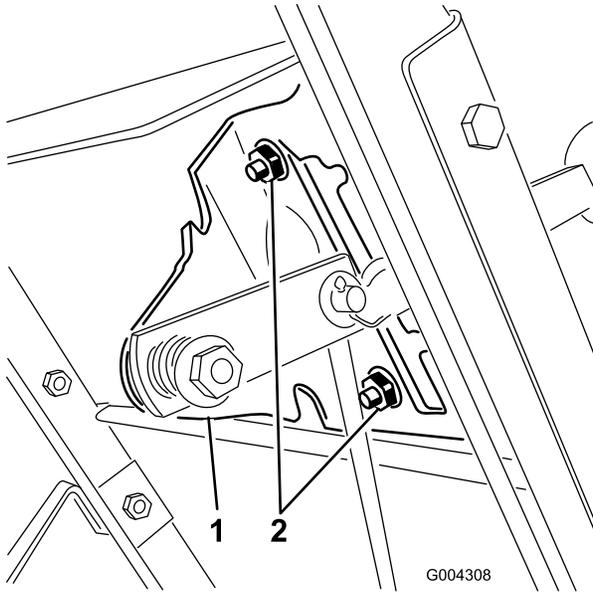
6. To adjust the scraper, loosen the 5 mounting screws (Figure 22), level the scraper, and tighten the mounting screws.
7. Move the skids down as far as possible.
8. Tighten the 4 flange nuts that secure both skids to the auger side plates (Figure 21).
9. Connect the wire to the spark plug.

## Adjusting the Speed Selector

Adjust the speed selector linkage initially and when the snowthrower is slow, first gear has no speed, or the speed selector lever does not move into third gear.

1. Drain gasoline from the fuel tank and the oil from the crankcase. Refer to Emptying the Fuel Tank and to Changing the Engine Oil.
2. Tip the snowthrower forward and block it so that it cannot fall.
3. Remove the 4 flange-head bolts that secure the bottom cover to the frame and remove the cover (Figure 27).

- Loosen the flange nuts that secure the selector plate to the control panel (Figure 23).

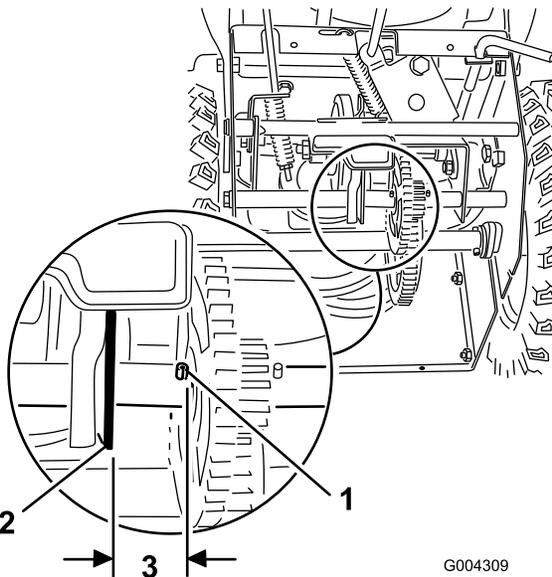


**Figure 23**

- Speed selector plate
- Flange nuts

- Shift the speed selector lever to third gear and push down on the speed selector plate to move the drive assembly to the right.

**Note:** The drive assembly should be 1/8 inch (3 mm) from the roll pin; if not, slide the selector plate (Figure 23) until the gap is 1/8 inch (3 mm); refer to Figure 24.



**Figure 24**

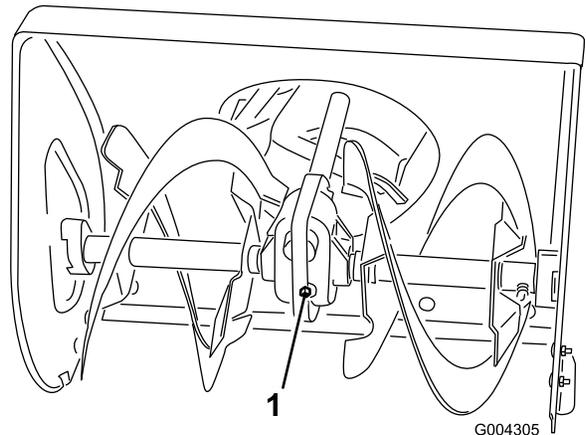
- Roll pin
- Drive assembly
- 1/8 inch (3 mm)

- With the drive assembly 1/8 inch (3 mm) from the roll pin, tighten the flange nuts that secure the speed selector plate.
- Shift the speed selector lever to the R (Reverse) position and back to third gear to check the adjustment.
- If the space between the roll pin and the drive assembly is more than 3/16 inch (5 mm), repeat steps 3 through 6.
- Install the bottom cover and return the snowthrower to the upright position.
- Connect the wire to the spark plug.

## Checking the Auger Gearbox Grease

**Service Interval:** Yearly

The auger gearbox is packed with 5 oz. (140 g) of Lubriplate MAG-1 (a low-temperature, high-pressure grease) and is sealed at the factory. The pipe plug (Figure 25) is for factory use only; you do not need to check or add grease. If the gearbox is leaking grease, contact an Authorized Service Dealer.



**Figure 25**

- Pipe plug

## Changing the Engine Oil

**Service Interval:** After the first 2 hours

Yearly

Every 25 hours

Change the engine oil after the first 2 operating hours, then yearly thereafter. If possible, run the engine just before changing the oil because warm oil flows better and carries more contaminants.

Max. fill: 21 oz. (0.62 l), type: automotive detergent oil with an API service classification of SF, SG, SH, SJ, SL, or higher.

- For temperatures above 32°F (0°C), use SAE 30.
  - For temperatures between 0°F and 32°F (-18°C to 0°C), use SAE 5W30 or SAE 10.
  - For air temperatures below 0°F (-18°C), use SAE 0W30.
1. Block up the rear of the snowthrower.
  2. Remove the left wheel.
  3. Clean the area around the oil drain plug (Figure 26).

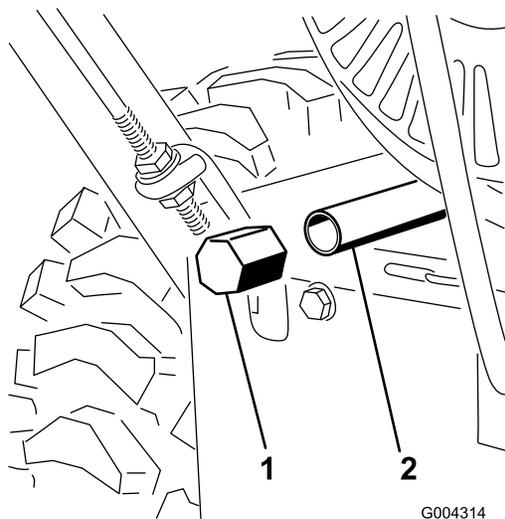


Figure 26

1. Oil drain plug
2. Drain extension

4. Slide an oil drain pan under the drain extension and remove the oil drain plug (Figure 26).

**Note:** Place a funnel under the drain extension so the oil drains directly into the oil drain pan and away from the snowthrower.

5. Drain the oil.

**Note:** Dispose of the used oil properly at a local recycling center.

6. Install the oil drain plug.
7. Install the left wheel.
8. Fill the crankcase with oil. Refer to Filling the Engine Crankcase with Oil.
9. Wipe up any spilled oil.

## Lubricating the Snowthrower

**Service Interval:** Every 20 hours

Yearly or before storage

Lightly lubricate all moving parts of the snowthrower after every 20 operating hours and at the end of the snowthrowing season.

**Important:** Do not get oil or grease on the rubber wheel or friction drive plate because the wheel will slip and the rubber may deteriorate.

1. Drain gasoline from the fuel tank and the oil from the crankcase. Refer to Emptying the Fuel Tank and to Changing the Engine Oil.
2. Tip the snowthrower forward onto the auger/impeller housing and block it so that it cannot fall.
3. Remove the 4 flange-head bolts that secure the bottom cover and remove the cover (Figure 27).

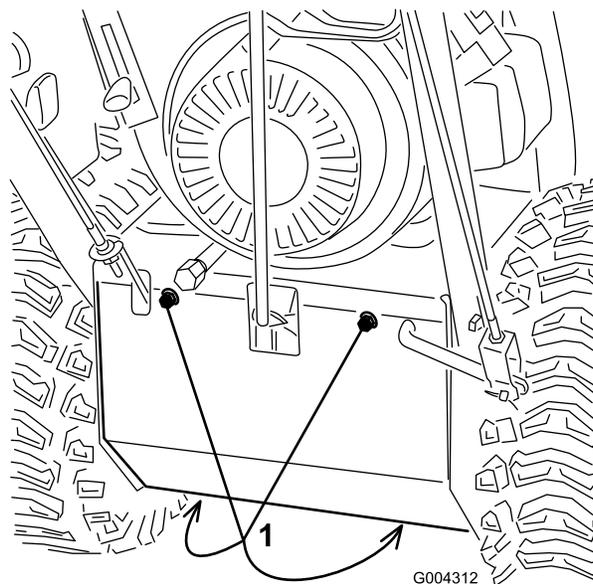


Figure 27

1. Flange-head bolts

4. Lightly lubricate the snowthrower with light oil as shown in Figure 28.

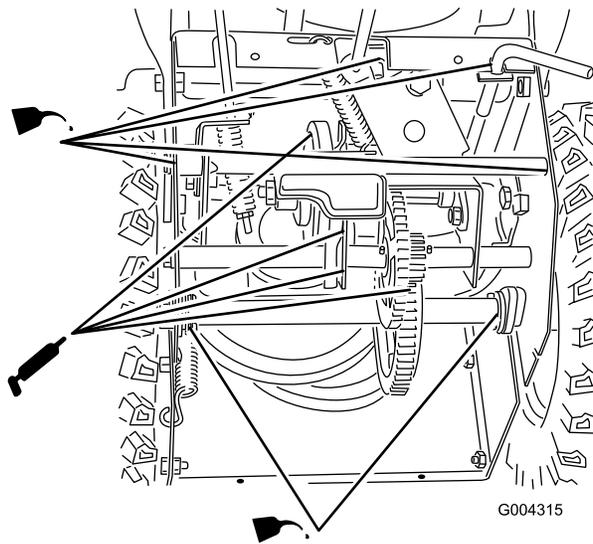


Figure 28

**Important:** Do not excessively oil the snowthrower; extra oil may enter the traction drive and cause the traction drive belt to slip.

5. Wipe up any excess oil.
6. Grease the snowthrower as shown in Figure 28.
7. Wipe up any excess grease.
8. Install the bottom cover.
9. Return the snowthrower to its upright position.
10. Connect the wire to the spark plug.

## Inspecting and Replacing the Spark Plug

**Service Interval:** Every 100 hours

Use a **Champion RN4C** or equivalent spark plug. Check and gap the spark yearly, and replace the plug if necessary.

1. Clean around the base of the spark plug.
2. Remove the spark plug.
3. Examine the spark plug and replace it if it is cracked, fouled, dirty, or if the electrodes are worn.

**Important:** Do not clean the electrodes because grit could enter the cylinder and damage the engine.

4. Set the gap between the electrodes on the spark plug at 0.030 inch (0.76 mm) (Figure 29).

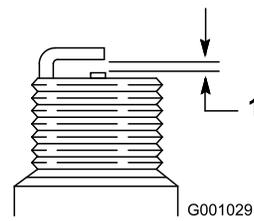


Figure 29

1. 0.030 inch (0.76 mm)

5. Install the spark plug by hand and then torque it to 15 ft-lb (20.4 N-m).

**Note:** If you do not have a torque wrench, tighten the plug firmly.

## Adjusting the Traction Drive Belt

**Service Interval:** After the first hour

Before each use or daily

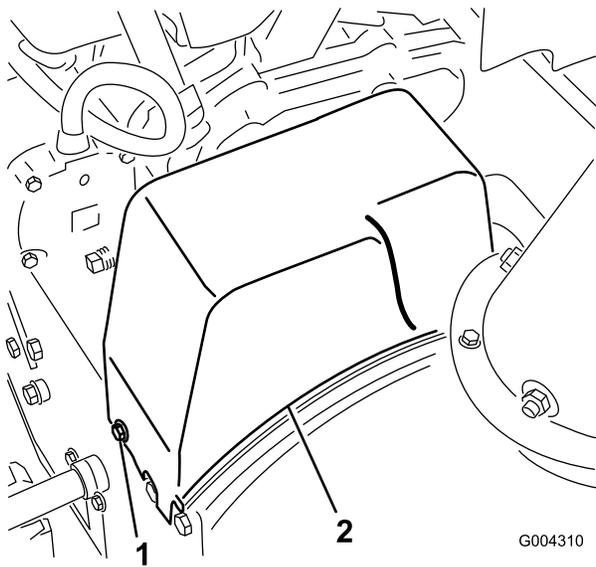
Adjust the traction drive belt after the first operating hour, after every 5 operating hours thereafter, and when the speed selector lever shifts properly but the snowthrower does not drive in the forward or reverse speeds.

1. Check and adjust the traction drive as described in Installing the Traction Rod.
2. If the problem persists after adjusting the linkage, contact an Authorized Service Dealer.
3. Connect the wire to the spark plug.

## Replacing the Traction Drive Belt

If the traction drive belt becomes worn, oil-soaked, or otherwise damaged, replace the belt.

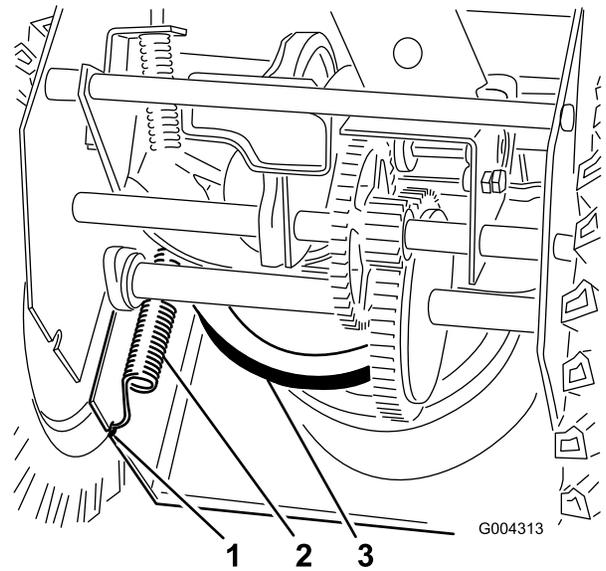
1. Drain gasoline from the fuel tank and the oil from the crankcase. Refer to Emptying the Fuel Tank and to Changing the Engine Oil.
2. Remove the 2 flange-head bolts that hold the belt cover in place and set the cover aside (Figure 30).



**Figure 30**

1. Flange-head bolt (2)      2. Belt cover

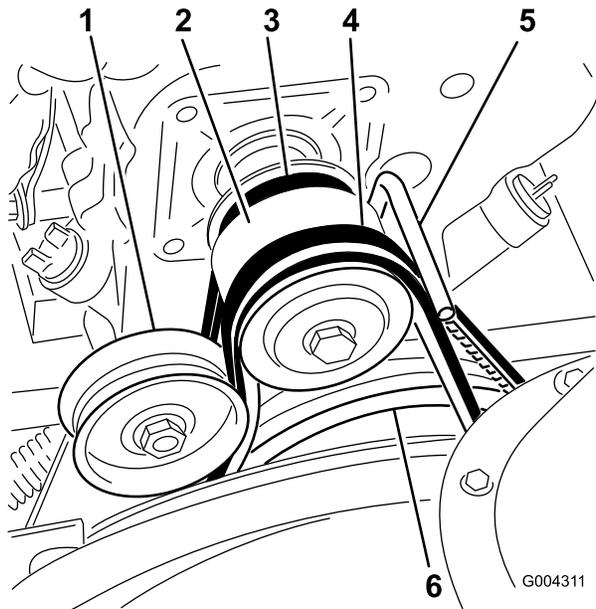
7. Disconnect the spring from the notch in the bottom edge of the side plate (Figure 32).



**Figure 32**

1. Notch in side plate      3. Large traction pulley  
2. Spring

3. Loosen the belt guide (Figure 31).



**Figure 31**

1. Idler pulley      4. Auger/impeller drive belt  
2. Engine pulley      5. Belt guide  
3. Traction drive belt      6. Large auger/impeller pulley

4. Remove the auger/impeller drive belt from the engine pulley and the large auger/impeller pulley (Figure 31).
5. Tip the snowthrower forward and block it so that it cannot fall.
6. Remove the 4 flange-head bolts that secure the bottom cover to the frame and remove the cover (Figure 27).

**!**

**The spring is under heavy tension and could injure you or a bystander if you do not carefully remove it.**

**Carefully remove the spring.**

8. Set the snowthrower upright.
9. Remove the traction drive belt from the engine pulley and the large traction pulley (Figure 31).
10. Install a new belt around the large traction pulley.
11. Loop the belt over the engine pulley, ensuring that the belt is on the inside of the belt guide (Figure 31).
12. Tip the snowthrower forward and block it so that it cannot fall.
13. Hook the spring into the notch in the bottom edge of the side plate (Figure 32).
14. Replace the bottom cover with the 4 flange-head bolts.
15. Set the snowthrower upright.
16. Install the auger/impeller drive belt around the large auger/impeller pulley and engine pulley, ensuring that the belt is on the inside of the idler pulley and the belt guide (Figure 31).
17. Adjust the belt guide so that there is 1/8 inch (3 mm) of clearance between the auger/impeller drive belt

and the guide, and secure the belt guide when the auger/impeller drive belt is tight.

18. Check the auger/impeller drive linkage and adjust it if necessary. Refer to steps 4 through 7 of Installing the Auger/Impeller Drive Control Linkage.
19. Install the belt cover.
20. Connect the wire to the spark plug.

## Adjusting the Auger/Impeller Drive Belt

**Service Interval:** After the first hour

Before each use or daily

Operating the snowthrower with an auger/impeller drive belt that slips decreases the snowthrowing performance and damages the belt. Check the auger/impeller drive belt for the proper tension after the first operating hour, then adjust the belt when necessary.



**Improperly adjusting the auger/impeller may cause it to turn when disengaged. A rotating auger or impeller can cut off or injure fingers, hands, or feet.**

- Keep your face, hands, feet, and any other part of your body or clothing away from concealed, moving, or rotating parts.
- Ensure that the impeller brake arm clearance is maintained.
- Do not adjust the auger/impeller drive belt too tight because it may cause the auger/impeller to turn when the control lever is in the Disengaged position. If this occurs, decrease the belt tension.

1. Check and adjust the belt as instructed in Installing the Auger/Impeller Drive Control Linkage.
2. Connect the wire to the spark plug.
3. Check the belt tension by operating the auger.
4. If the belt still slips, replace it. Refer to Replacing the Auger/Impeller Drive Belt.

**Important:** Do not operate the snowthrower if the auger and the impeller rotate when you disengage the auger/impeller drive control lever.

## Replacing the Auger/Impeller Drive Belt

If the auger/impeller drive belt becomes worn, oil-soaked, or otherwise damaged, replace the belt.

1. Remove the 2 flange-head bolts that hold the belt cover in place and set the cover aside (Figure 30).
2. Loosen the belt guide (Figure 31).
3. Remove the auger/impeller drive belt from the engine pulley and the large auger/impeller pulley (Figure 31).
4. Install a new belt around the large auger/impeller pulley (Figure 31).
5. Loop the belt over the engine pulley, ensuring that the belt is on the inside of the idler pulley and the belt guide (Figure 31).
6. Adjust the belt guide so that there is 1/8 inch (3 mm) of clearance between the auger/impeller drive belt and the guide, and secure the belt guide.
7. Check and adjust the auger/impeller drive belt as instructed in Installing the Auger/Impeller Drive Control Linkage.
8. Install the belt cover.
9. Connect the wire to the spark plug.

**Important:** Do not operate the snowthrower if the auger and the impeller rotate when you disengage the auger/impeller drive control lever.

## Emptying the Fuel Tank

1. Close the fuel shutoff valve (Figure 20).



**Gasoline is highly flammable; it can ignite and cause serious personal injury.**

- Drain gasoline outdoors
- Drain gasoline from a cold engine only.
- Wipe up any gasoline that may have spilled.
- Do not drain gasoline near any open flame or where gasoline fumes may be ignited by a spark.
- Do not smoke a cigar, a cigarette, or a pipe when handling gasoline.

2. Place a clean drain pan under the fuel shutoff valve.
3. Loosen the hose clamp that secures the fuel line to the valve and slide the fuel line off the fuel shutoff valve (Figure 20).

4. Open the fuel shutoff valve and allow the fuel to drain out of the fuel tank into the drain pan.
5. Install the fuel line onto the fuel shutoff valve and secure it with a hose clamp.
6. Connect the wire to the spark plug.
7. Start the snowthrower and run the engine until it stops. Repeat this step 2 more times to ensure that the fuel tank and the carburetor are empty.

## Storage



- Gasoline vapors can explode.
- Do not store gasoline more than 30 days.
- Do not store the snowthrower in an enclosure near an open flame.
- Allow the engine to cool before storing it.

## Preparing the Snowthrower for Storage

1. On the last refueling of the year, add fuel stabilizer to fresh fuel as directed by the engine manufacturer.
2. Run the engine for 10 minutes to distribute the conditioned fuel through the fuel system.
3. Stop the engine, allow it to cool, and drain the fuel tank or run the engine until it stops. Refer to Emptying the Fuel Tank.
4. Start the engine and run it until it stops.
5. Choke or prime the engine, start it a third time, and run the engine until it will not start.
6. Dispose of unused fuel properly. Recycle it according to local codes, or use it in your automobile.

**Note:** Do not store stabilized gasoline for more than 90 days.

7. While the engine is still warm, change the engine oil. Refer to Changing the Engine Oil.
8. Remove the spark plug.
9. Squirt 2 teaspoons of oil into the spark plug hole.
10. Install the spark plug by hand and then torque it to 15 ft-lb (20.4 N-m). If you do not have a torque wrench, tighten the plug firmly. **Do not connect the wire to the plug.**

11. Pull the recoil starter slowly to distribute the oil on the inside of the cylinder.
12. Lubricate the snowthrower. Refer to Lubricating the Snowthrower.
13. Clean the snowthrower.
14. Touch up chipped surfaces with paint available from an Authorized Service Dealer. Sand affected areas before painting, and use a rust preventative to prevent the metal parts from rusting.
15. Tighten any loose fasteners. Repair or replace any damaged parts.
16. Cover the snowthrower and store it in a clean, dry place out of the reach of children. Allow the engine to cool before storing it in any enclosure.

## Removing the Snowthrower from Storage

1. Remove the spark plug and spin the engine rapidly using the starter to blow the excess oil from the cylinder.
2. Install the spark plug by hand and then torque it to 15 ft-lb (20.4 N-m).
3. Connect the spark plug wire.
4. Perform the annual maintenance procedures as given in the Recommended Maintenance Schedule.

# Troubleshooting

Problem	Possible Cause	Corrective Action
Electric starter does not turn (electric-start models only)	<ol style="list-style-type: none"> <li>1. The power cord is disconnected at the outlet or the snowthrower.</li> <li>2. The power cord is worn, corroded, or damaged.</li> <li>3. The power outlet is not energized.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect the power cord to the outlet and/or the snowthrower.</li> <li>2. Replace the power cord.</li> <li>3. Have a qualified electrician energize the outlet.</li> </ol>
Engine does not start or starts hard	<ol style="list-style-type: none"> <li>1. The key is not in the ignition or is in the Stop position.</li> <li>2. The choke is in the Off position and the primer has not been pressed.</li> <li>3. The fuel shutoff valve is not open.</li> <li>4. The throttle is not in the Fast position.</li> <li>5. The fuel tank is empty or the fuel system contains stale fuel.</li> <li>6. The spark plug wire is loose or disconnected.</li> <li>7. The spark plug is pitted, fouled, or the gap is incorrect.</li> <li>8. The fuel vent cap is restricted.</li> <li>9. The engine oil level in the engine crankcase is too low or too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Insert the key into the ignition and turn it to the On position.</li> <li>2. Move the choke to the On position and press the primer 3 times.</li> <li>3. Open the fuel shutoff valve.</li> <li>4. Move the throttle to the Fast position.</li> <li>5. Drain and/or fill the fuel tank with fresh gasoline (not more than 30 days old). If the problem persists, contact an Authorized Service Dealer.</li> <li>6. Connect the wire to the spark plug.</li> <li>7. Check the spark plug and adjust the gap if necessary. Replace the spark plug if it is pitted, fouled, or cracked.</li> <li>8. Remove the vent restriction or replace the fuel cap.</li> <li>9. Add or drain oil to adjust the oil level in the engine crankcase to the Full mark on the dipstick.</li> </ol>
Engine runs rough	<ol style="list-style-type: none"> <li>1. The choke is in the On position.</li> <li>2. The fuel shutoff valve is not completely open.</li> <li>3. The fuel tank is nearly empty or contains stale fuel.</li> <li>4. The spark plug wire is loose.</li> <li>5. The spark plug is pitted, fouled, or the gap is incorrect.</li> <li>6. The engine oil level in the engine crankcase is too low or too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Move the choke to the Off position.</li> <li>2. Open the fuel shutoff valve.</li> <li>3. Drain and fill the fuel tank with fresh gasoline (not more than 30 days old). If the problem persists, contact an Authorized Service Dealer.</li> <li>4. Connect the wire to the spark plug.</li> <li>5. Check the spark plug and adjust the gap if necessary. Replace the spark plug if it is pitted, fouled, or cracked.</li> <li>6. Add or drain oil to adjust the oil level in the engine crankcase to the Full mark on the dipstick.</li> </ol>
Engine runs, but the snowthrower discharges snow poorly or not at all	<ol style="list-style-type: none"> <li>1. The throttle is not in the Fast position when throwing snow.</li> <li>2. The snowthrower is moving too fast to clear the snow.</li> <li>3. You are trying to remove too much snow per swath.</li> <li>4. You are trying to remove extremely heavy or wet snow.</li> <li>5. The discharge chute is plugged.</li> <li>6. The auger/impeller drive belt is loose or is off the pulley.</li> </ol>	<ol style="list-style-type: none"> <li>1. Move the throttle to the Fast position.</li> <li>2. Shift the snowthrower into a lower gear.</li> <li>3. Reduce the amount of snow removed per swath.</li> <li>4. Don't overload the snowthrower with extremely heavy or wet snow.</li> <li>5. Unclog the discharge chute.</li> <li>6. Install and/or adjust the auger/impeller drive belt; refer to <a href="http://www.Toro.com">www.Toro.com</a> for servicing information or take the snowthrower to an Authorized Service Dealer.</li> </ol>

Problem	Possible Cause	Corrective Action
	7. The auger/impeller drive belt is worn or broken.	7. Replace the auger/impeller drive belt; refer to <a href="http://www.Toro.com">www.Toro.com</a> for servicing information or take the snowthrower to an Authorized Service Dealer.
Discharge chute either does not lock into place or does not move	1. The discharge chute latch is not properly adjusted.	1. Adjust the discharge chute latch.
Snowthrower does not properly clear the snow off the surface	1. The skids and/or scraper are not properly adjusted. 2. The pressure in the tires is not equal.	1. Adjust the skids and/or the scraper. 2. Check and adjust the pressure in one or both tires.

**Notes:**

## International Distributor List

<b>Distributor:</b>	<b>Country:</b>	<b>Phone Number:</b>
Atlantis Su ve Sulama Sistemleri Lt	Turkey	90 216 344 86 74
Balama Prima Engineering Equip	Hong Kong	852 2155 2163
B-Ray Corporation	Korea	82 32 551 2076
Casco Sales Company	Puerto Rico	787 788 8383
Ceres S.A	Costa Rica	506 239 1138
CSSC Turf Equipment (pvt) Ltd	Sri Lanka	94 11 2746100
Cyril Johnston & Co	Northern Ireland	44 2890 813 121
Equivier	Mexico	52 55 539 95444
Femco S.A.	Guatemala	502 442 3277
G.Y.K. Company ltd.	Japan	81 726 325 861
Geomechaniki of Athens	Greece	30 10 935 0054
Guandong Golden Star	China	86 20 876 51338
Hako Gorund and Garden	Sweden	46 35 10 0000
Hayter Limited (U.K.)	United Kingdom	44 1279 723 444
Hydroturf Int. Co Dubai	United Arab Emirates	97 14 347 9479
Hydroturf Egypt LLC	Egypt	202 519 4308
Ibea S.p.A.	Italy	39 0331 853611
Irriamc	Portugal	351 21 238 8260
Jean Heybroek b.v.	Netherlands	31 30 639 4611
Lely (U.K.) Limited	United Kingdom	44 1480 226 800
Maquiver S.A.	Colombia	57 1 236 4079
Maruyama Mfg. Co. Inc.	Japan	81 3 3252 2285
Metra Kft	Hungary	36 1 326 3880
Mountfield a.s.	Czech Republic	420 255 704 220
Munditol S.A.	Argentina	54 11 4 821 9999
Oslinger Turf Equipment SA	Ecuador	593 4 239 6970
Oy Hako Ground and Garden Ab	Finland	358 987 00733
Parkland Products Ltd	New Zealand	64 3 34 93760
Prochaska & Cie	Austria	43 1 278 5100
RT Cohen 2004 Ltd	Israel	972 986 17979
Riversa	Spain	34 9 52 83 7500
Roth Motorgerate GmBh & Co	Germany	49 7144 2050
Sc Svend Carlsen A/S	Denmark	45 66 109 200
Solvart S.A.S	France	33 1 30 81 77 00
Spypros Stavrinides Limited	Cyprus	357 22 434131
Surge Systems India Limited	India	91 1 292299901
T-Markt Logistics Ltd	Hungary	36 26 525 500
Toro Australia	Australia	61 3 9580 7355
Toro Europe BVBA	Belgium	32 14 562 960



## The Toro Warranty

### Conditions and Products Covered

The Toro® Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly promises to the original purchaser\* to repair any Toro Product used for normal residential purposes\* if defective in materials or workmanship. The following time periods apply from the date of original purchase:

Products	Warranty Period
Walk Power Mowers	2-year limited warranty
Rear Engine Riders	2-year limited warranty
Lawn & Garden Tractors	2-year limited warranty
Electric Hand Held Products	2-year limited warranty
Snowthrowers	2-year limited warranty
Consumer Zero Turn	2-year limited warranty

\* "Original purchaser" means use the person who originally purchased Toro products.

\* "Normal residential purposes" means use of the product on the same lot as your home. Use at more than one location is considered commercial use, and the commercial use warranty would apply.

### Limited Warranty for Commercial Use

Toro Consumer Products and attachments used for commercial, institutional, or rental use are warranted against defects in materials or workmanship for the following time periods from the date of original purchase:

Products	Warranty Period
Walk Power Mowers	90 day warranty
Rear Engine Riders	90 day warranty
Lawn & Garden Tractors	90 day warranty
Electric Hand Held Products	90 day warranty
Snowthrowers	90 day warranty
Consumer Zero Turn	45 day warranty

### Instructions for Obtaining Warranty Service

If you think that your Toro Product contains a defect in materials or workmanship, follow this procedure:

1. Contact your seller to arrange service of the product. If for any reason it is impossible for you to contact your seller, you may contact any Toro Authorized Distributor to arrange service.
2. Bring the product and your proof of purchase (sales receipt) to your seller or the Service Dealer.

If for any reason you are dissatisfied with the Service Dealer's analysis or with the assistance provided, contact the Toro importer or contact us at:

Customer Care Department, Consumer Division  
Toro Warranty Company  
8111 Lyndale Avenue South  
Bloomington, MN 55420-1196  
Manager: Technical Product Support: 001-952-887-8248

See attached Distributor List

### Owner Responsibilities

You must maintain your Toro Product by following the maintenance procedures described in the operator's manual. Such routine maintenance, whether performed by a dealer or by you, is at your expense.

### Items and Conditions Not Covered

This express warranty does not cover:

- Cost of regular maintenance service or parts, such as filters, fuel, lubricants, tune-up parts, blade sharpening, brake and clutch adjustments.
- Any product or part which has been altered or misused or required replacement or repair due to normal wear, accidents, or lack of proper maintenance.
- Repairs necessary due to improper fuel, contaminants in the fuel system, or failure to properly prepare the fuel system prior to any period of non-use over three months.
- Engine and transmission. These are covered by the appropriate manufacturer's guarantees with separate terms and conditions.

All repairs covered by this warranty must be performed by an Authorized Toro Service Dealer using Toro approved replacement parts.

### General Conditions

The purchaser is covered by the national laws of each country. The rights to which the purchaser is entitled with the support of these laws are not restricted by this warranty.