

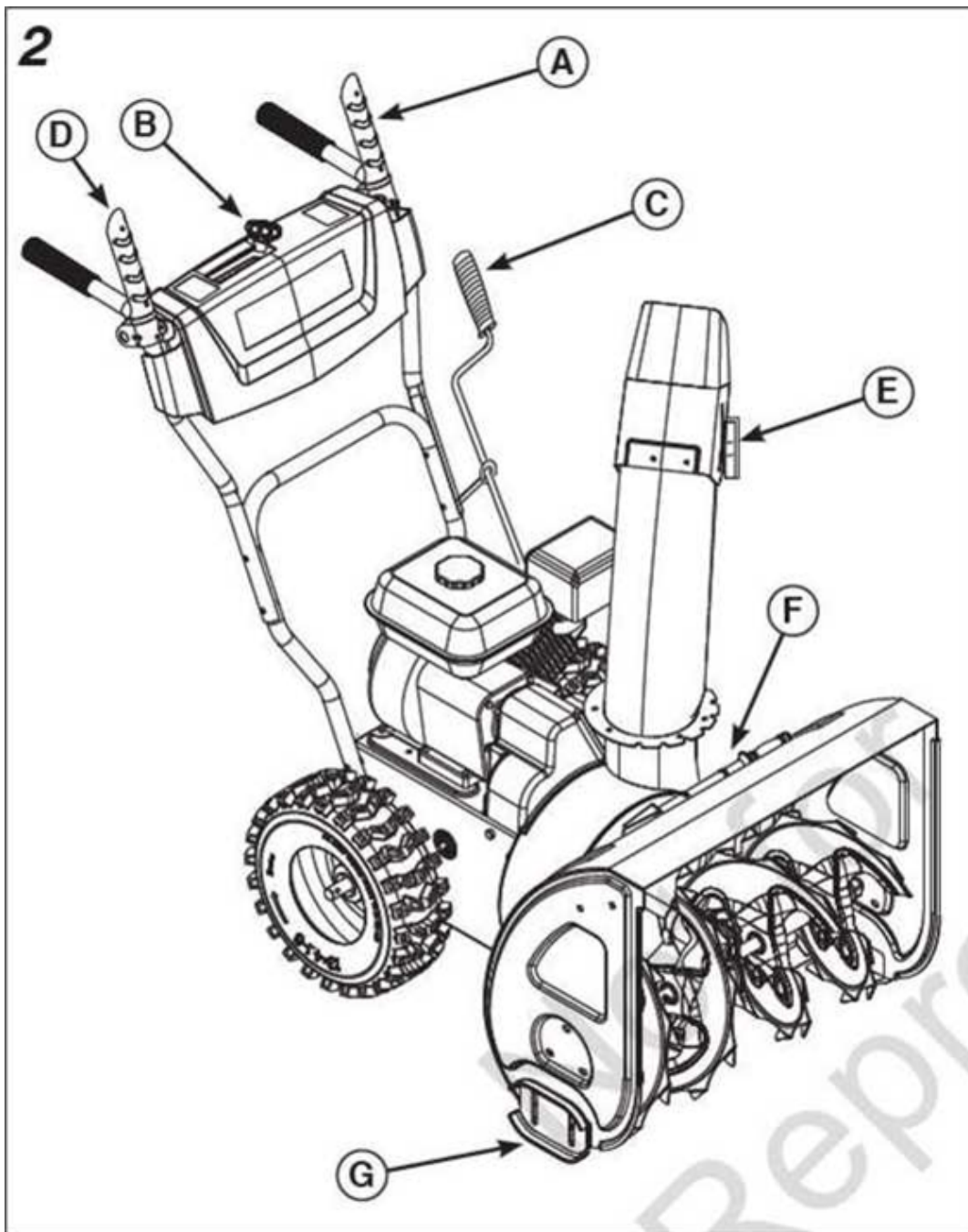
## Features and Controls


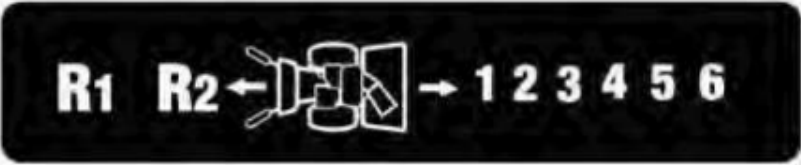


### Engine Features and Controls



Please refer to the engine operator's manual for engine features and controls.

### Snowthrower Features and Controls

Compare Figure 2 with the table below.



A		<p><b>Auger Control Lever</b> - Used to engage and disengage the auger and impeller.</p>
B		<p><b>Speed Select Lever</b> - Allows the operator to select forward and reverse speeds.</p> <p><b>NOTICE:</b> Do not move speed select lever while Traction Control is engaged. This may result in severe damage to the drive system.</p>
C		<p><b>Chute Rotation Crank - Left Side</b> - Used to rotate the discharge chute to the left or right.</p>
D		<p><b>Traction Control Lever</b> - Used to propel snowthrower forward or reverse.</p>
E		<p><b>Deflector Control - Manual</b> - Used to control the angle of the deflector (up or down).</p>

F		<b>Clean-Out Tool</b> - Used to remove snow and debris from the discharge chute and the auger housing.
G		<b>Skid Shoes</b> - Used to adjust the ground clearance of the auger housing.

## Operation

### Before Operating the Snowthrower



**WARNING**

Read the operator's manual before operating the machine. This machine can be dangerous if used carelessly.

- Never operate the snowthrower without all guards, covers, and shields in place.
- Stop the engine whenever leaving the operating position.
- Remove the key before unclogging the impeller housing or discharge chute, and before making repairs or adjustments.
- When leaving the machine, remove the key.
- To reduce the risk of fire, keep the machine clean and free from spilled fuel, oil, and debris.
- On electric start models, disconnect the extension cord before operating.
- Be sure to check the engine oil level before starting the engine. See the engine operator's manual for oil recommendations.

### Operating the Snowthrower



**DANGER**

#### Amputation hazard

The discharge chute contains a rotating impeller to throw snow. Fingers can quickly become caught in the impeller. Never clear or unclog the discharge chute with your hands. Always use a clean-out tool.

**Failure to observe these safety instructions will result in traumatic amputation or severe laceration.**

**Hand contact with the rotating impeller inside the discharge chute is the most common cause of injury associated with snowthrowers. Never use your hands to clean out the discharge chute.**

To safely clear a clogged discharge chute, follow these instructions:

1. Shut OFF the engine.
2. Wait 10 seconds to be sure the impeller blades have stopped rotating.
3. Always use a clean-out tool, not your hands.



#### **Toxic fume hazard**

**Engines give off carbon monoxide, an odorless, colorless, poison gas.**

**Breathing carbon monoxide can cause nausea, fainting, or death.**

- Start and run the engine outdoors.
- Do not run the engine in an enclosed area, even if doors and windows are open.



#### **Thrown objects hazard**

This machine is capable of throwing objects that could injure bystanders, or cause damage to buildings.

Be sure the operating area is clear of bystanders. Never direct the discharge toward anyone, or toward buildings or cars.

1. Start the engine. Please refer to the engine operator's manual for instructions.

**NOTE:** Always set engine speed to FAST (full throttle).

2. Rotate the chute rotation crank (C, Figure 2) to set the direction of the discharge chute.

3. Loosen the wingnut (E) securing the chute deflector. Raise the deflector to throw snow further. Set the deflector to the desired position and tighten the wingnut.

4. Use the speed select lever (B) to select the forward or reverse drive speed. Use lower speeds when clearing wet, heavy snow. Use higher speeds for light snow or transporting.

**NOTE:** Always release the traction control lever before changing speeds.

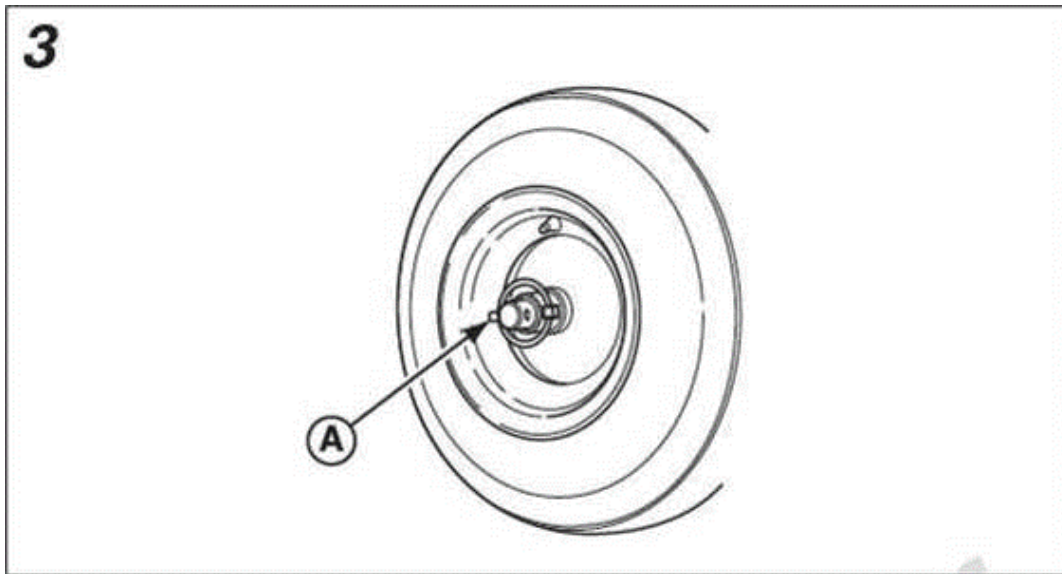
5. Fully press the auger control lever (A) to engage the auger. Release the lever to stop the auger.
6. Fully press and hold the traction control lever (D) to engage the traction drive and propel the snowthrower. Release the lever to stop the snowthrower.

### Stopping the Snowthrower

1. Release the auger control lever (A, Figure 2).
2. Release the traction control lever (D).
3. Stop the engine. Please refer to the engine operator's manual for instructions.

### Wheel Release - Lock Pins

Wheels equipped with a traction lock pin (A, Figure 3) can be completely released by removing the pin and installing it in the outer axle hole. Reverse this process to engage the drive wheel.



### Filling the Fuel Tank

Please refer to the engine operator's manual for instructions about filling the fuel tank, and for fuel recommendations.

### Clearing a Clogged Discharge Chute



**Amputation hazard**

**The discharge chute contains a rotating impeller to throw snow. Fingers can quickly become caught in the impeller. Never clear or unclog the discharge chute with your hands. Always use a clean-out tool.**

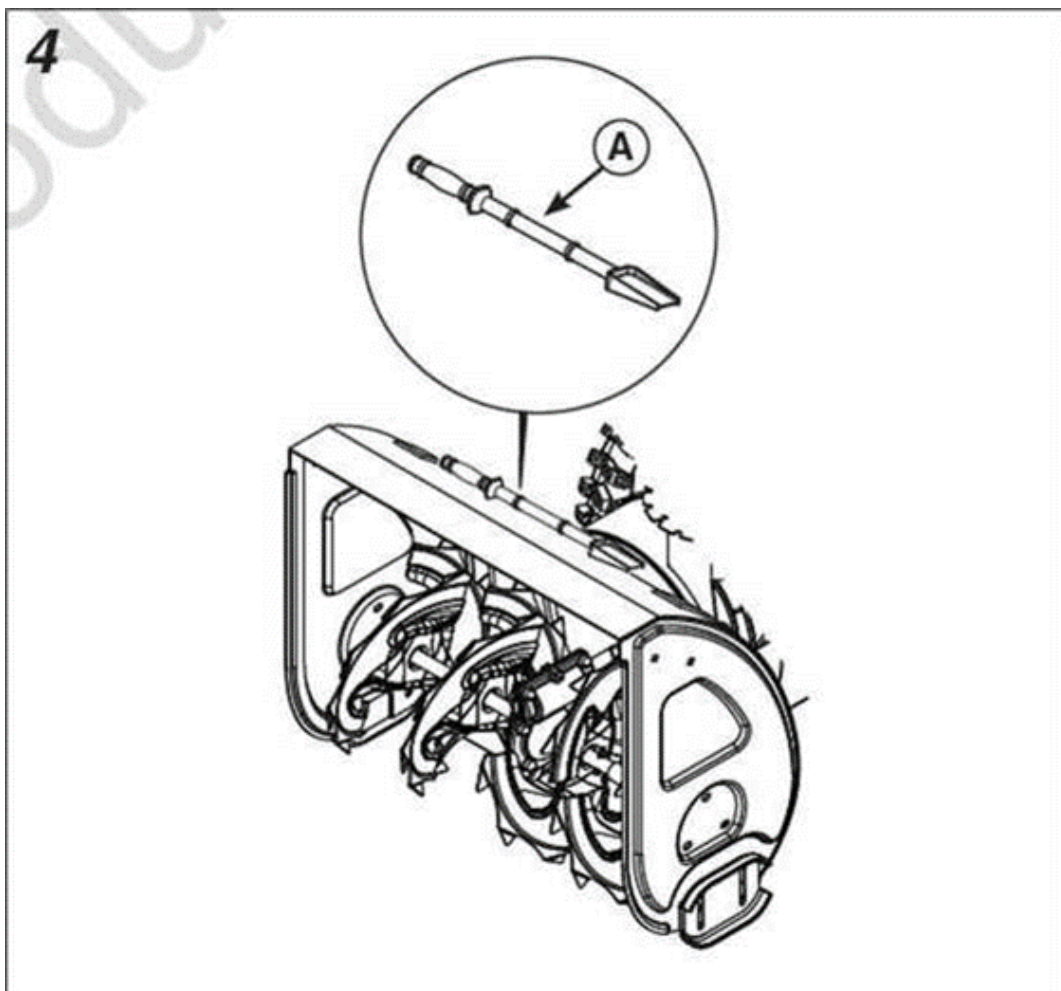
**Failure to observe these safety instructions will result in traumatic amputation or severe laceration.**

Hand contact with the rotating impeller inside the discharge chute is the most common cause of injury associated with snowthrowers. Never use your hands to clean out the discharge chute.

A clean-out tool (A, Figure 4) is provided with the unit.

To safely clear a clogged discharge chute, follow these instructions:

1. Shut OFF the engine.
2. Wait 10 seconds to be sure the impeller blades have stopped rotating.
3. Always use a clean-out tool, not your hands.



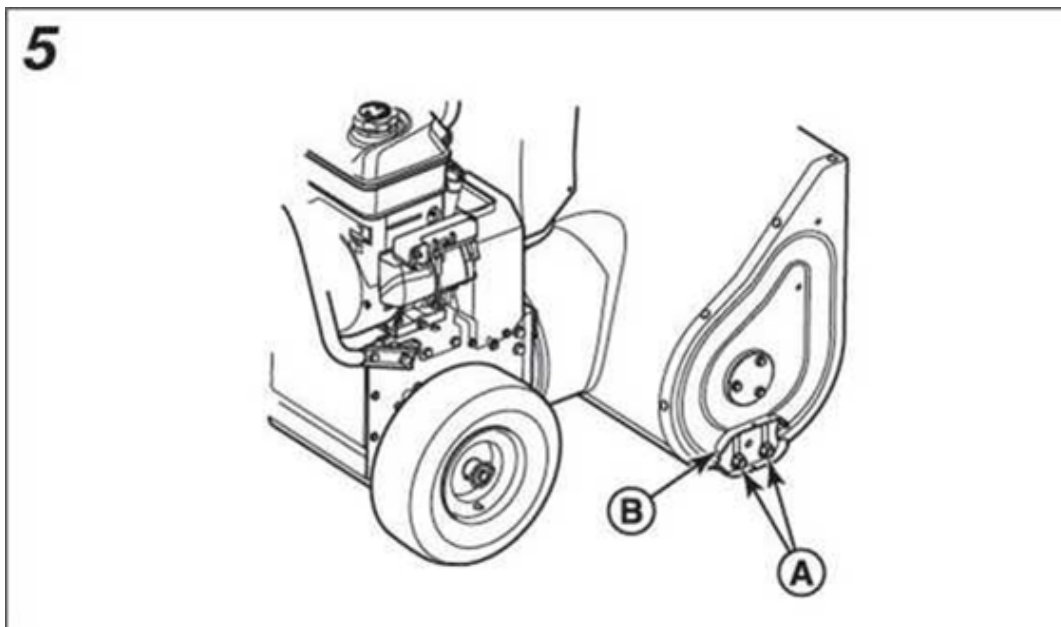
### **Skid Shoe Height Adjustment**

This snowthrower is equipped with two skid shoes secured to the outside of the auger housing. These adjust the height of the front of the snowthrower.

When removing snow from a hard surface area such as a paved driveway or walk, raise the skid shoes to bring the front of the snowthrower down.

When removing snow from gravel-covered or uneven surfaces, lower the skid shoes to bring the front of the snowthrower up. This will help to prevent rocks and other debris from being picked up and thrown by the augers.

1. Determine the clearance needed between the scraper bar at the bottom of the auger housing and the ground.
2. Place a block with a thickness equal to the desired
3. Loosen the skid shoe mounting nuts (A, Figure 5) and push the skid shoe (B) down until it touches the ground Re-tighten mounting nuts.
4. Set the skid shoe on the other side at the same height.



## Maintenance

### Maintenance Schedule

#### Before Each Use

- Check engine oil level
- Perform Safety System Tests

#### Every 8 Hours or Daily

- Check engine oil level

#### Every 25 Hours or Annually

- Lubricate control lever linkages

- Lubricate the auger assembly
- Lubricate the discharge chute rotation gear and deflector
- Lubricate the hex shaft and gears

### Every 50 Hours or Annually

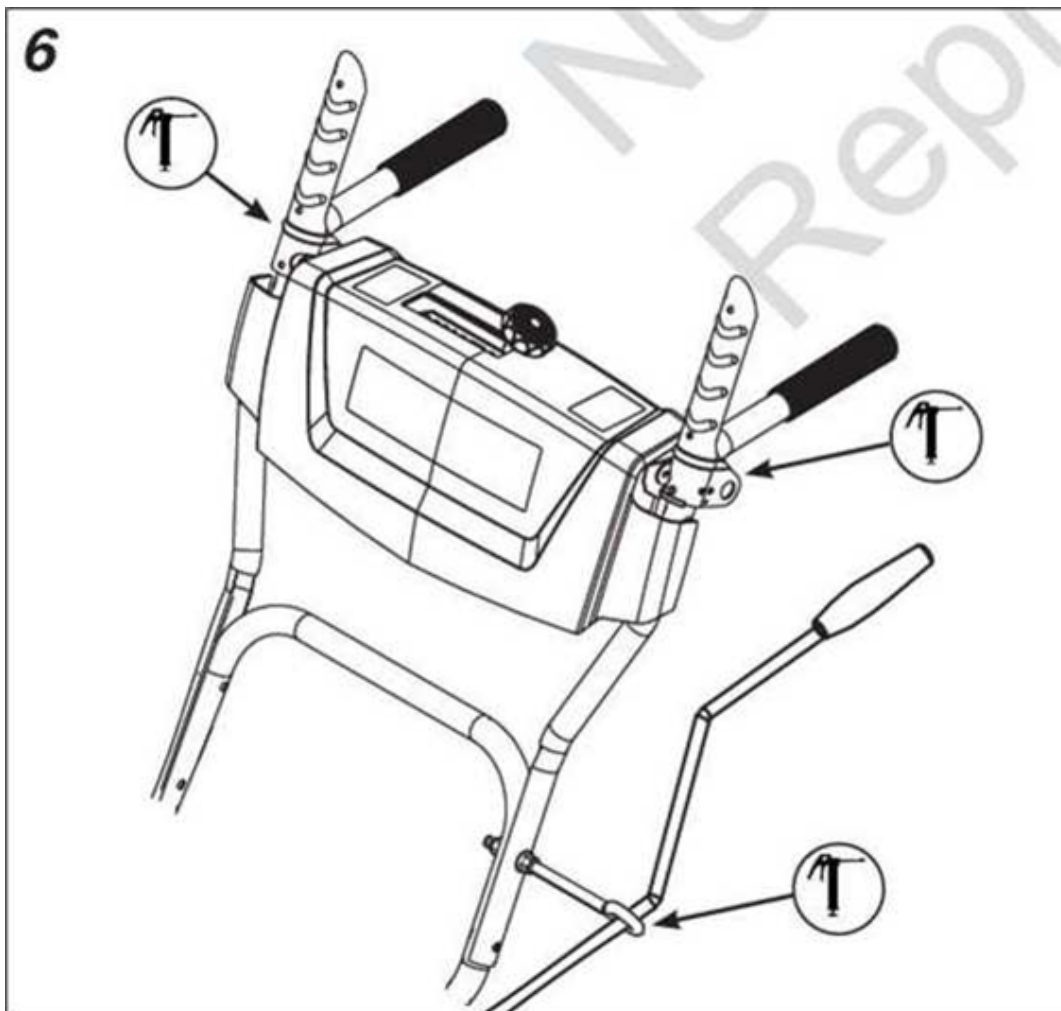
- Check muffler and spark arrester (if equipped)
- Check tire pressure

### Engine Maintenance

Please refer to the engine operator's manual for engine maintenance schedules and procedures.

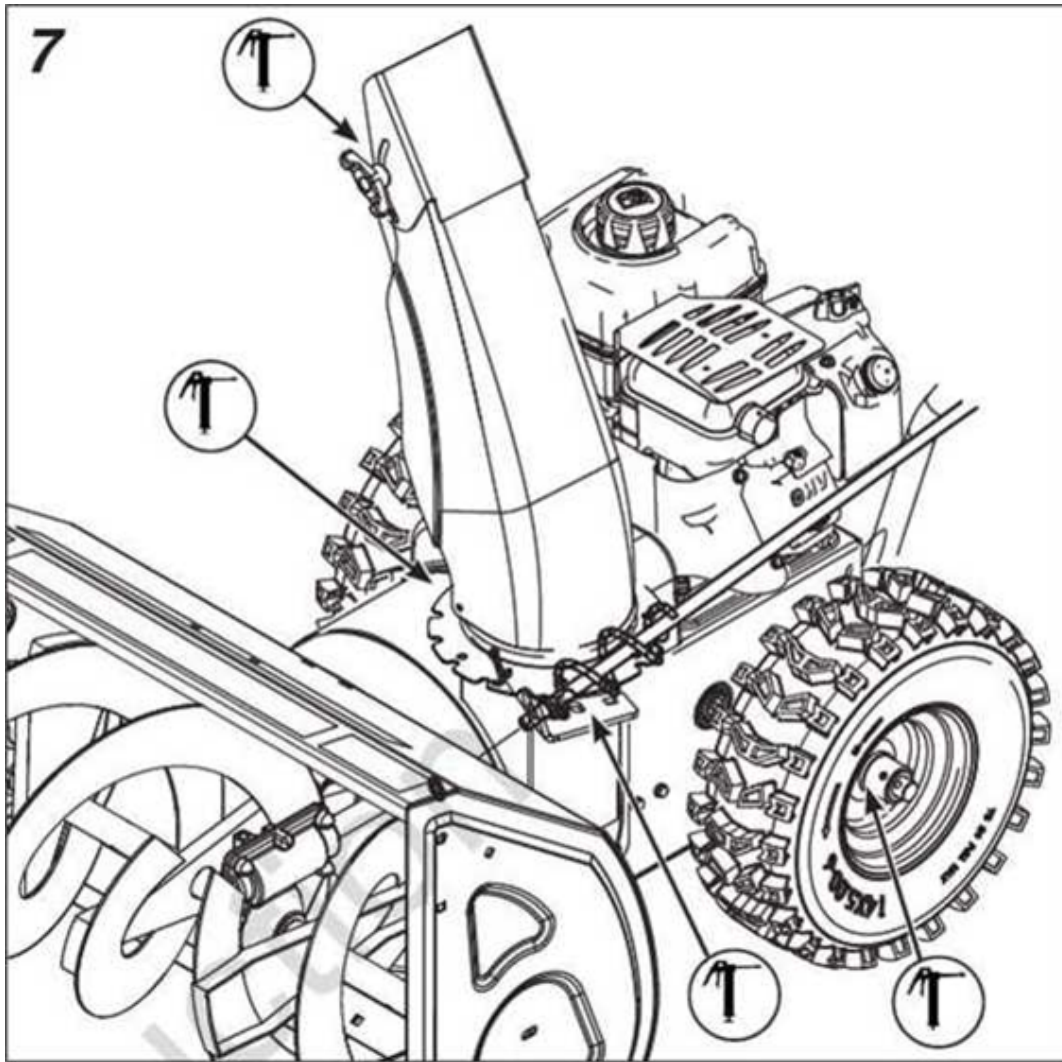
### Lubricate Control Lever Linkage

Lubricate the control lever linkage at the locations shown in Figure 6.



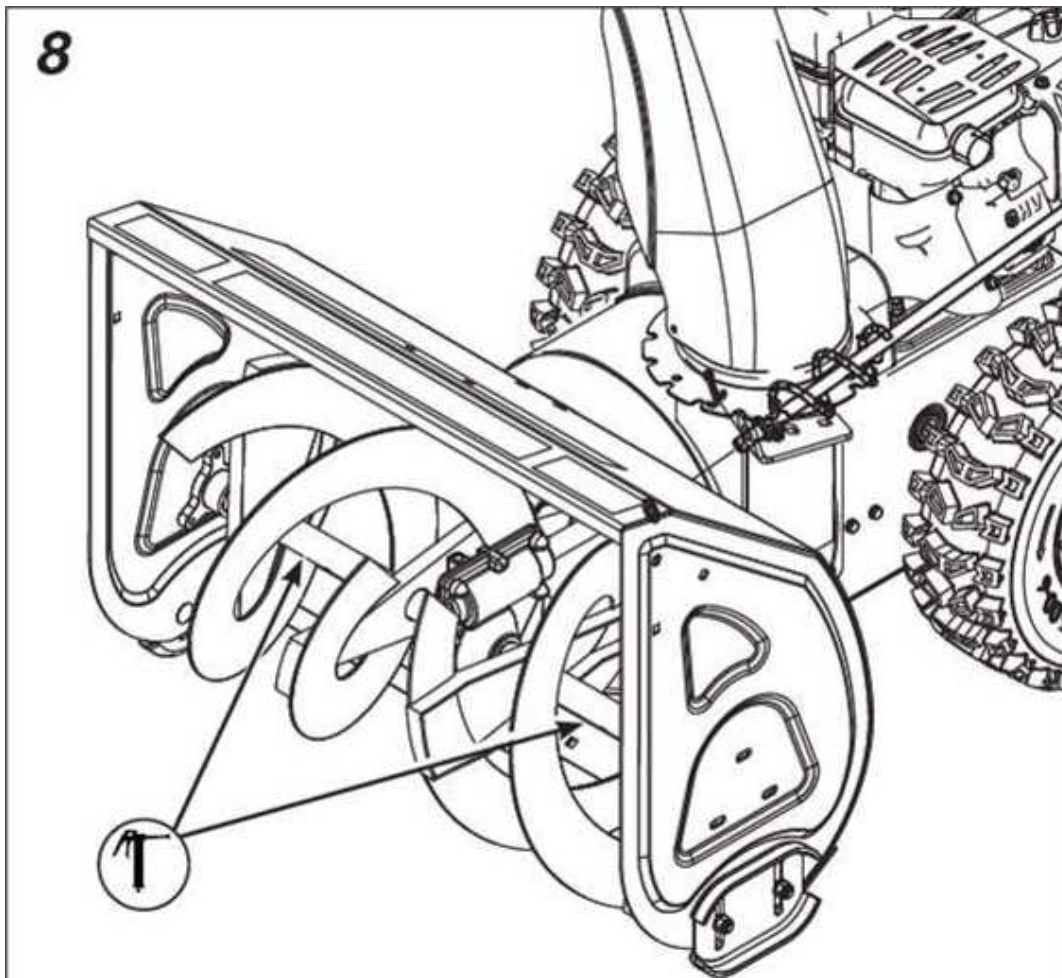
### Lubricate Discharge Chute, Deflector, and Axle Wheel

Lubricate the discharge chute, deflector, and wheel axle at the locations shown in Figure 7.



### Lubricate Auger Assembly

Lubricate the auger assembly at the location shown in Figure 8.



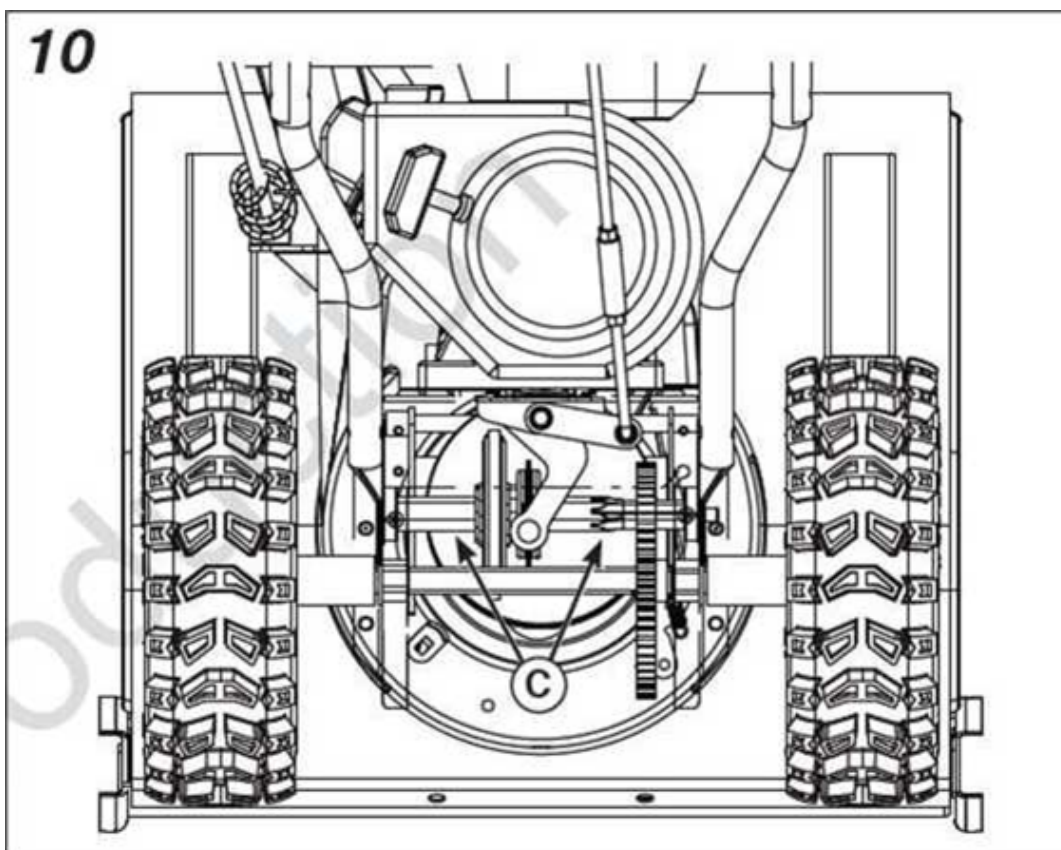
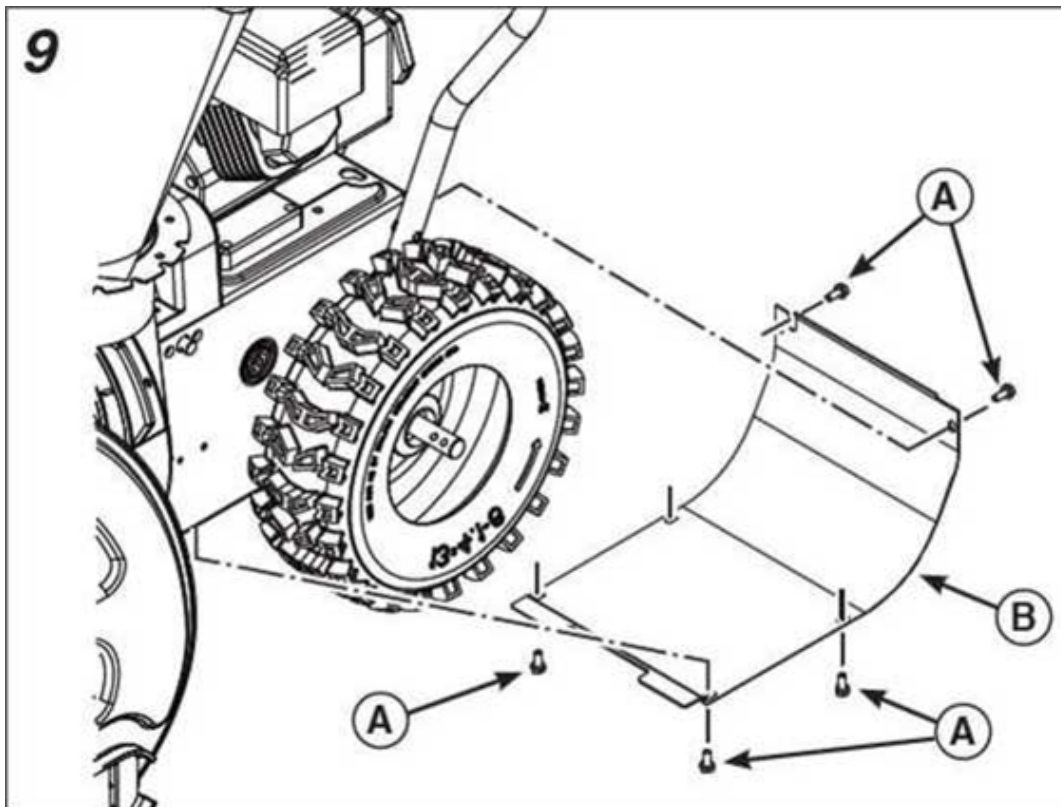
## Hex Shaft and Gear Lubrication

**NOTICE:** Do not allow grease or oil to contact the rubber friction wheel or the disc drive plate. If grease or oil comes into contact with the friction wheel, replace it. Do not attempt to clean it. If grease or oil comes into contact with disc drive plate, clean it thoroughly with an alcohol based solvent.

1. Position speed select lever in the first forward gear.
2. Drain fuel to an approved container.
3. Stand the snowthrower up on the auger housing end.

**NOTE:** When the crankcase is filled with oil, do not leave the snowthrower standing up on the auger housing for an extended period of time.

4. Remove screws (A, Figure 9) and bottom panel (B).
5. Wipe the hex shaft (C, Figure 10) with 5W30 synthetic motor oil, before storage and at the beginning of each season.
6. Install the bottom panel (B, Figure 9) and screws (A).



## Auger and Traction Cable Adjustment

**NOTE:** If the auger or traction cables become stretched or are sagging, adjustment is necessary.

1. Loosen finger nut (A, Figure 11).

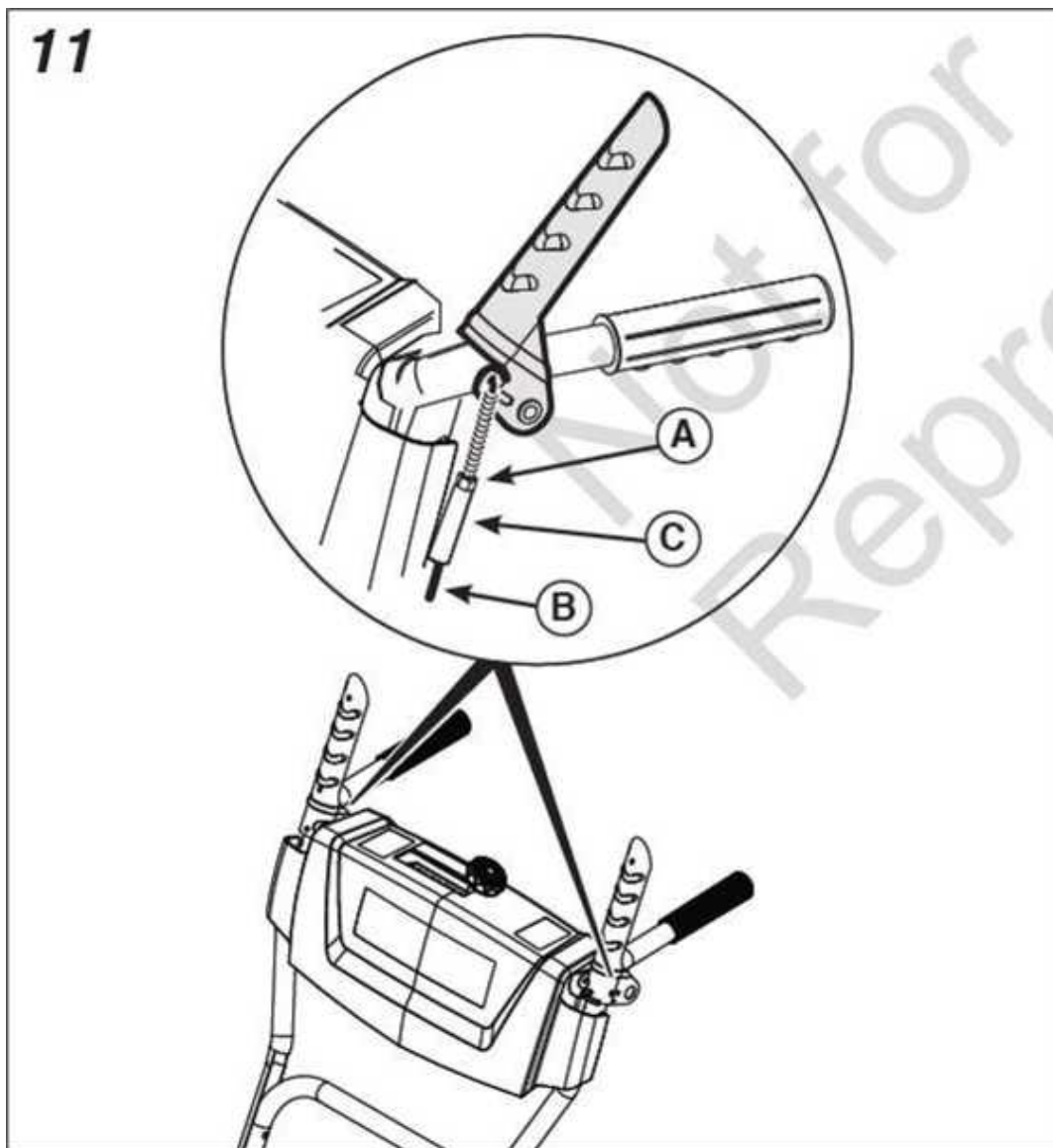
2. Hold control cable (B) to keep it from rotating.

**NOTE:** The cable should not rotate while making adjustment.

3. Turn collar (C) to remove slack but do not over-tighten.

4. Tighten finger nut.

5. Perform snowthrower safety test to ensure proper operation. See *Safety System Tests*. If necessary, make additional adjustments.



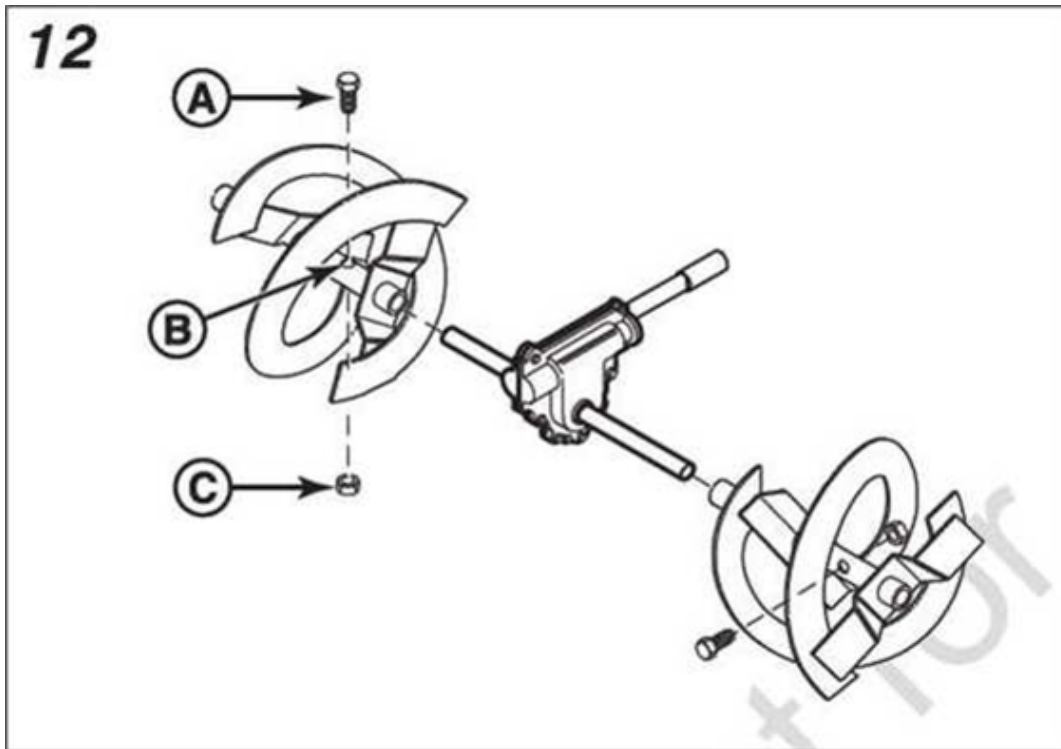
### Speed Control Rod Adjustment

If the speed control rod requires adjustment, see an authorized dealer.

### Checking Tire Pressure

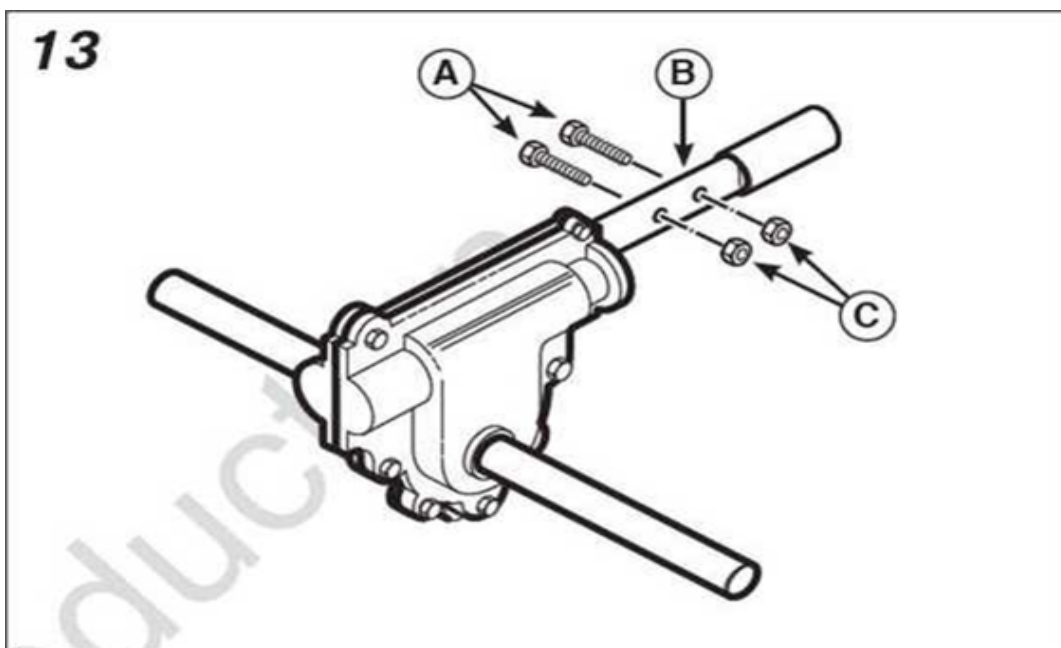
Tire pressure should be checked periodically. The maximum tire pressure is stamped on the sidewall of the tires. Do not exceed this pressure.

## Auger Shear Bolt Replacement



1. Turn the engine OFF, wait for all moving parts to stop, and remove the engine key.
2. Remove the existing shear bolt (A, Figure 12) and locknut (C) from auger shaft (B).
3. Align the bolt holes. Install the replacement shear bolt through the auger shaft. Secure with the locknut.

## Gear Box Shear Bolt Replacement



1. Turn the engine OFF, wait for all moving parts to stop, and remove the engine key.
2. Remove the existing shear bolt (A, Figure 13) and locknut (C) from impeller shaft (B).
3. Align the bolt holes. Install the replacement shear bolt through the impeller shaft. Secure with the locknut.

## Storage

### Equipment

- Thoroughly clean the unit.
- Lubricate the hex shaft (see *Maintenance* section).
- Make sure all nuts, bolts, and screws are securely fastened. Inspect all visible moving parts for damage, breakage, and wear. Replace if necessary.
- Apply a rust preventative to any bare metal parts of the snowthrower auger and impeller.
- If possible, store the unit indoors and cover it to give protection from dust and dirt.
- If the machine must be stored outdoors, cover it with a heavy tarpaulin.

### Fuel System

Fuel can become stale when stored over 30 days. Stale fuel causes acid and gum deposits to form in the fuel system or on essential carburetor parts. To keep fuel fresh, use **Briggs & Stratton® Advanced Formula Fuel Treatment & Stabilizer**, available wherever Briggs & Stratton genuine service parts are sold.

There is no need to drain gasoline from the engine if a fuel stabilizer is added according to instructions. Run the engine for 2 minutes to circulate the stabilizer throughout the fuel system before storage. If gasoline in the engine has not been treated with a fuel stabilizer, it must be drained into an approved container. Run the engine until it stops from lack of fuel. The use of a fuel stabilizer in the storage container is recommended to maintain freshness.

### Engine Oil

While the engine is still warm, change the engine oil. See *Changing the Oil* in the engine operator's manual.

### Before starting the unit after it has been stored:

- Check all fluid levels. Check all maintenance items.
- Perform all recommended checks and procedures found in this manual.
- Allow the engine to warm up for several minutes before use.

# Troubleshooting

## Troubleshooting the Snowthrower



Problem	Look for	Remedy
<b>Auger does not stop within 5 seconds after auger control lever is released.</b>	Auger control cable out of adjustment.	Adjust auger control cable. See <i>Maintenance</i> section.
<b>Discharge chute or deflector does not work</b>	Discharge chute or deflector out of adjustment or needs lubrication.	Adjust and/or lubricate chute or deflector.
<b>Scraper bar does not clean hard surface.</b>	Skid shoes and scraper bar improperly adjusted.	Raise or lower skid shoes and scraper bar.
<b>Unit does not propel itself.</b>	Traction control cable out of adjustment.	Adjust traction control cable. See <i>Maintenance</i> section.
<b>Engine does not start.</b>	Key is in OFF position.	Set key to ON position.
	Primer button not pressed (cold engine).	Press primer button twice.
	Fuel shut-off valve (if equipped) is in CLOSED position.	Turn valve to OPEN position.
	Out of fuel.	Fill fuel tank.
	Choke turned to OPEN/RUN) cold engine).	Turn choke to CLOSE position, move throttle to FAST.
	Engine flooded.	Move the choke to OFF position, move throttle to FAST position, and crank until engine starts.
<b>Engine starts hard or runs poorly.</b>	Water in fuel, or old fuel.	Drain tank. (Dispose of fuel in an authorized hazardous waste container.) Fill with fresh fuel.



	Fuel cap vent is blocked.	Clear vent or replace
<b>Excessive vibration.</b>	Loose parts or damaged impeller.	Stop engine immediately and check hardware. If vibration persists, the unit serviced by an authorized dealer.
<b>Snowthrower does not stop when traction control lever is released.</b>	Traction control cable out of adjustment.	Adjust traction control cable. See <i>Maintenance</i> section.
<b>Unit does not discharge snow.</b>	Auger control cable out of adjustment.	Adjust auger control cable. See <i>Maintenance</i> section.
	Broken auger shear bolt.	Replace auger shear bolt. See <i>Maintenance</i> section.
	Broken gear box shear bolt.	Replace gear box shear bolt. See <i>Maintenance</i> section.

<b>Problem</b>	<b>Look for</b>	<b>Remedy</b>
<b>Unit does not discharge snow (continued).</b>	Discharge chute clogged.	Stop engine immediately and use the clean-out tool to clear the discharge chute, not your hands. See <i>Discharge Chute Warning</i> to <i>Discharge Chute Warning</i> in the <i>Operator Safety</i> section.
	Foreign object lodged in auger.	Stop engine immediately and use the clean-out tool to remove the object, not your hands. See <b>WARNINGS</b> in the <i>Operator Safety</i> section.

**NOTE:** For all other problems, contact an Authorized Service Dealer.



## Specifications

Engine Brand	Briggs & Stratton
Engine Model Series	Snow Series
Engine Type	4-Cycle
Starting System	Recoil Start and Electric Start 110V 1-2-3 Start Package (if equipped)
Oil Capacity	20 oz (0,59 L)
Fuel Tank Capacity	3.2 qts (3,0 liters)
Sparkplug Gap	.030 in (0,76 mm)
Sparkplug Torque	180 lb-in (20 Nm)

### Warning

This content is compiled from multiple sources and is provided for reference purposes only. It may not be complete or fully applicable to all situations. If you are unable to resolve your issue, please contact the product manufacturer or an authorized service provider for official support.