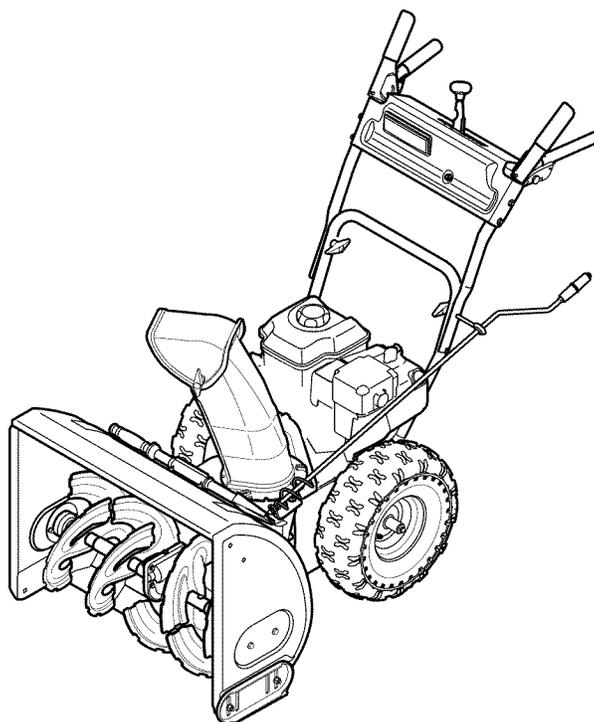


OPERATOR'S MANUAL



600-Series Snow Thrower — E/F Style

⚠ WARNING

**READ AND FOLLOW ALL SAFETY RULES AND INSTRUCTIONS IN THIS MANUAL
BEFORE ATTEMPTING TO OPERATE THIS MACHINE.
FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.**

MTD LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019

Thank You

Thank you for purchasing a Snow Thrower manufactured by MTD LLC. It was carefully engineered to provide excellent performance when properly operated and maintained.

Please read this entire manual prior to operating the equipment. It instructs you how to safely and easily set up, operate and maintain your machine. Please be sure that you, and any other persons who will operate the machine, carefully follow the recommended safety practices at all times. Failure to do so could result in personal injury or property damage.

All information in this manual is relative to the most recent product information available at the time of printing. Review this manual frequently to familiarize yourself with the unit, its features and operation. Please be aware that this Operator's Manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable to all models. MTD LLC reserves the right to change product specifications, designs and equipment without notice and without incurring obligation.

If you have any problems or questions concerning the machine, phone your local authorized MTD service dealer or contact us directly. MTD's Customer Support telephone numbers, website address and mailing address can be found on this page. We want to ensure your complete satisfaction at all times.

Throughout this manual, all references to *right* and *left* side of the machine are observed from the operating position.

The engine manufacturer is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's/Operator's Manual, packed separately with your machine, for more information.

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Record Product Information

Before setting up and operating your new equipment, please locate the model plate on the equipment and record the information in the provided area to the right. You can locate the model plate by standing at the operator's position and looking at the lower, rear section of the frame. This information will be necessary, should you seek technical support via our web site, Customer Support Department, or with a local authorized service dealer.

MODEL NUMBER

--	--	--	--	--	--	--	--	--	--	--	--

SERIAL NUMBER

--	--	--	--	--	--	--	--	--	--	--	--

Customer Support

Please do NOT return the unit to the retailer or dealer without first contacting our Customer Support Department.

If you have difficulty assembling this product or have any questions regarding the controls, operation, or maintenance of this unit, you can seek help from the experts. Choose from the options below:

- ◇ Visit us on the web at www.mtdproducts.com
- ◇ Call a Customer Support Representative at (800) 800-7310 or (330) 220-4683
- ◇ Write us at MTD LLC • P.O. Box 361131 • Cleveland, OH • 44136-0019



WARNING! This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury.

When you see this symbol. **HEED ITS WARNING!**

CALIFORNIA PROPOSITION 65



WARNING! Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.



DANGER: This machine was built to be operated according to the safe operation practices in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating fingers, hands, toes and feet and throwing foreign objects. Failure to observe the following safety instructions could result in serious injury or death.

Training

1. Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
3. Never allow children under 14 years of age to operate this machine. Children 14 and over should read and understand the instructions and safe operation practices in this manual and on the machine and be trained and supervised by an adult.
4. Never allow adults to operate this machine without proper instruction.
5. Thrown objects can cause serious personal injury. Plan your snow-throwing pattern to avoid discharge of material toward roads, bystanders and the like.
6. Keep bystanders, pets and children at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.
7. Exercise caution to avoid slipping or falling, especially when operating in reverse.

Preparation

Thoroughly inspect the area where the equipment is to be used. Remove all doormats, newspapers, sleds, boards, wires and other foreign objects, which could be tripped over or thrown by the auger/impeller.

1. Always wear safety glasses or eye shields during operation and while performing an adjustment or repair to protect your eyes. Thrown objects which ricochet can cause serious injury to the eyes.
2. Do not operate without wearing adequate winter outer garments. Do not wear jewelry, long scarves or other loose clothing, which could become entangled in moving parts. Wear footwear which will improve footing on slippery surfaces.
3. Use a grounded three-wire extension cord and receptacle for all machines with electric start engines.
4. Adjust collector housing height to clear gravel or crushed rock surfaces.
5. Disengage all control levers before starting the engine.
6. Never attempt to make any adjustments while engine is running, except where specifically recommended in the operator's manual.
7. Let engine and machine adjust to outdoor temperature before starting to clear snow.

Safe Handling of Gasoline

To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.

- a. Use only an approved gasoline container.
 - b. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
 - c. Never fuel machine indoors.
 - d. Never remove gas cap or add fuel while the engine is hot or running.
 - e. Allow engine to cool at least two minutes before refueling.
 - f. Never over fill fuel tank. Fill tank to no more than ½ inch below bottom of filler neck to provide space for fuel expansion.
 - g. Replace gasoline cap and tighten securely.
 - h. If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.
 - i. Never store the machine or fuel container inside where there is an open flame, spark or pilot light (e.g. furnace, water heater, space heater, clothes dryer etc.).
 - j. Allow machine to cool at least 5 minutes before storing.
 - k. Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
 - l. If possible, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
 - m. Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
5. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
 6. Do not operate machine while under the influence of alcohol or drugs.
 7. Muffler and engine become hot and can cause a burn. Do not touch. Keep children away.
 8. Exercise extreme caution when operating on or crossing gravel surfaces. Stay alert for hidden hazards or traffic.
 9. Exercise caution when changing direction and while operating on slopes.
 10. Plan your snow-throwing pattern to avoid discharge towards windows, walls, cars etc. Thus, avoiding possible property damage or personal injury caused by a ricochet.
 11. Never direct discharge at children, bystanders and pets or allow anyone in front of the machine.
 12. Do not overload machine capacity by attempting to clear snow at too fast of a rate.
 13. Never operate this machine without good visibility or light. Always be sure of your footing and keep a firm hold on the handles. Walk, never run.
 14. Disengage power to the auger/impeller when transporting or not in use.
 15. Never operate machine at high transport speeds on slippery surfaces. Look down and behind and use care when backing up.
 16. If the machine should start to vibrate abnormally, stop the engine, disconnect the spark plug wire and ground it against the engine. Inspect thoroughly for damage. Repair any damage before starting and operating.
 17. Disengage all control levers and stop engine before you leave the operating position (behind the handles). Wait until the auger/impeller comes to a complete stop before unclogging the chute assembly, making any adjustments, or inspections.
 18. Never put your hand in the discharge or collector openings. Always use the clean-out tool provided to unclog the discharge opening. Do not unclog chute assembly while engine is running. Shut off engine and remain behind handles until all moving parts have stopped before unclogging.
 19. Use only attachments and accessories approved by the manufacturer (e.g. wheel weights, tire chains, cabs etc.).
 20. When starting engine, pull cord slowly until resistance is felt, then pull rapidly. Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go. Broken bones, fractures, bruises or sprains could result.
 21. If situations occur which are not covered in this manual, use care and good judgment. Contact Customer Support for assistance and the name of your nearest servicing dealer.

Operation

1. Do not put hands or feet near rotating parts, in the auger/impeller housing or chute assembly. Contact with the rotating parts can amputate hands and feet.
2. The auger/impeller control lever is a safety device. Never bypass its operation. Doing so makes the machine unsafe and may cause personal injury.
3. The control levers must operate easily in both directions and automatically return to the disengaged position when released.
4. Never operate with a missing or damaged chute assembly. Keep all safety devices in place and working.

Maintenance & Storage

1. Never tamper with safety devices. Check their proper operation regularly. Refer to the maintenance and adjustment sections of this manual.
2. Before cleaning, repairing, or inspecting machine disengage all control levers and stop the engine. Wait until the auger/impeller come to a complete stop. Disconnect the spark plug wire and ground against the engine to prevent unintended starting.
3. Check bolts and screws for proper tightness at frequent intervals to keep the machine in safe working condition. Also, visually inspect machine for any damage.
4. Do not change the engine governor setting or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
5. Snow thrower shave plates and skid shoes are subject to wear and damage. For your safety protection, frequently check all components and replace with original equipment manufacturer's (OEM) parts only. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
6. Check control levers periodically to verify they engage and disengage properly and adjust, if necessary. Refer to the adjustment section in this operator's manual for instructions.
7. Maintain or replace safety and instruction labels, as necessary.
8. Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.
9. Prior to storing, run machine a few minutes to clear snow from machine and prevent freeze up of auger/impeller.
10. Never store the machine or fuel container inside where there is an open flame, spark or pilot light such as a water heater, furnace, clothes dryer etc.
11. Always refer to the operator's manual for proper instructions on off-season storage.
12. Check fuel line, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.
13. Do not crank engine with spark plug removed.
14. According to the Consumer Products Safety Commission (CPSC) and the U.S. Environmental Protection Agency (EPA), this product has an *Average Useful Life* of seven (7) years, or 60 hours of operation. At the end of the *Average Useful Life* have the machine inspected annually by an authorized service dealer to ensure that all mechanical and safety systems are working properly and not worn excessively. Failure to do so can result in accidents, injuries or death.

Do not modify engine

To avoid serious injury or death, do not modify engine in any way. Tampering with the governor setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.

Notice Regarding Emissions

Engines which are certified to comply with California and federal EPA emission regulations for SORE (Small Off Road Equipment) are certified to operate on regular unleaded gasoline, and may include the following emission control systems: Engine Modification (EM), Oxidizing Catalyst (OC), Secondary Air Injection (SAI) and Three Way Catalyst (TWC) if so equipped.

Spark Arrestor



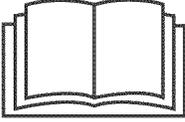
WARNING! This machine is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any).

If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands.

A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 361131 Cleveland, Ohio 44136-0019.

Safety Symbols

This page depicts and describes safety symbols that may appear on this product. Read, understand, and follow all instructions on the machine before attempting to assemble and operate.

Symbol	Description
	READ THE OPERATOR'S MANUAL(S) Read, understand, and follow all instructions in the manual(s) before attempting to assemble and operate
	WARNING— ROTATING BLADES Keep hands out of inlet and discharge openings while machine is running. There are rotating blades inside
	WARNING— ROTATING BLADES Keep hands out of inlet and discharge openings while machine is running. There are rotating blades inside
	WARNING— ROTATING AUGER Do not put hands or feet near rotating parts, in the auger/impeller housing or chute assembly. Contact with the rotating parts can amputate hands and feet.
	WARNING—THROWN OBJECTS This machine may pick up and throw and objects which can cause serious personal injury.
	WARNING—GASOLINE IS FLAMMABLE Allow the engine to cool at least two minutes before refueling.
	WARNING— CARBON MONOXIDE Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
	WARNING— ELECTRICAL SHOCK Do not use the engine's electric starter in the rain



WARNING! Your Responsibility—Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

SAVE THESE INSTRUCTIONS!

Contents of Carton

- One Snow Thrower
- One Snow Thrower Operator's Manual
- Two Replacement Auger Shear Pins
- One Briggs & Stratton Engine Operator's Manual
- One Chute Assembly
- One Product Registration Card

Assembly

Handle

1. Place the shift lever in the Forward-6 position
2. Observe the lower rear area of the snow thrower to be sure both cables are aligned with roller guides before pivoting the handle upward. See Fig. 3-1.

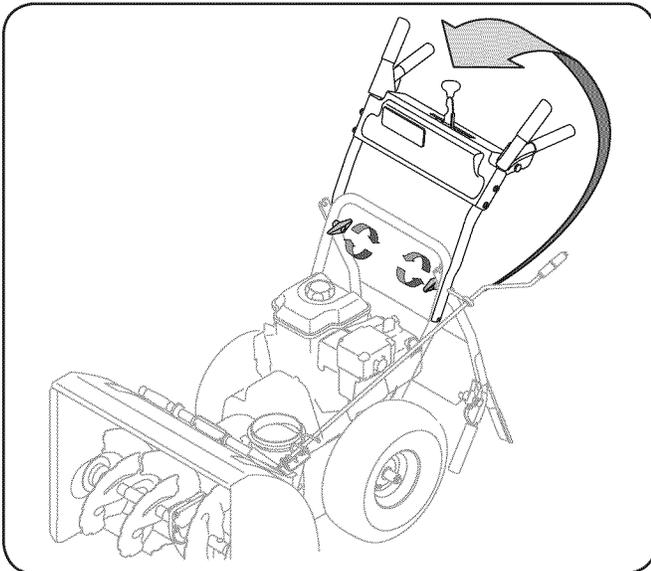


Figure 3-1

NOTE: Make certain the upper ends of each cable are seated properly in its bracket.

3. Secure the handle by tightening the plastic knob located on both the left and right sides of the handle. Remove and discard any rubber bands, if present. They are for packaging purposes only.

Chute Assembly

1. Position the chute assembly over the base. See Fig. 3-2.
2. Close the flange keepers to secure the chute assembly to the chute base. The flange keepers will click into place when properly secure. See Fig. 3-3.

NOTE: If the flange keepers will not easily click into place, use the palm of your hand to apply swift, firm pressure to the back of each.

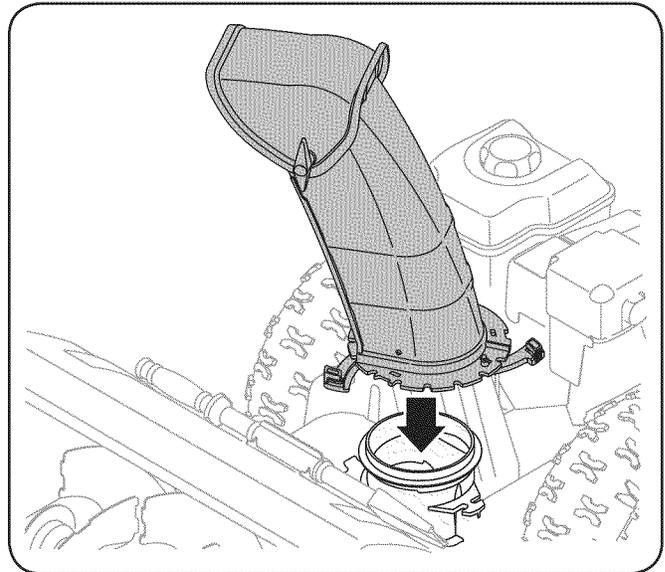


Figure 3-2

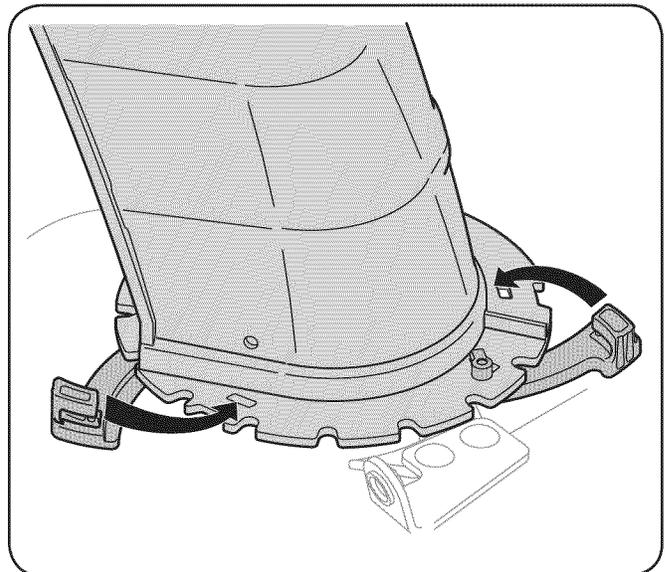


Figure 3-3

Chute Directional Control

1. Remove the plastic cap (if present), flat washer and hairpin clip from the end of the chute directional control. See Fig. 3-4.

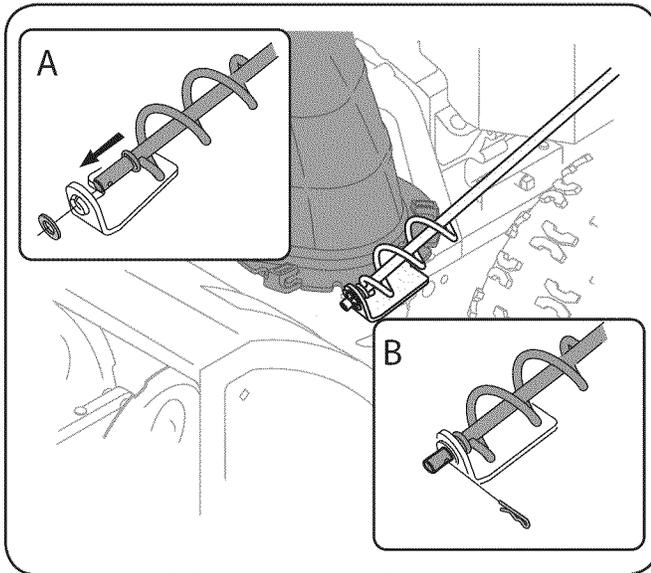


Figure 3-4

2. Insert the end of the chute directional control into the lower bracket and secure with the flat washer and hairpin clip just removed. If necessary, the lower bracket can be adjusted. Refer to Chute Bracket Adjustment on Page 16.

Set-Up

Shear Pins

A pair of replacement auger shear pins and bow tie cotter pins are included with your snow thrower. See Fig. 3-5 Store them in a safe place until needed.

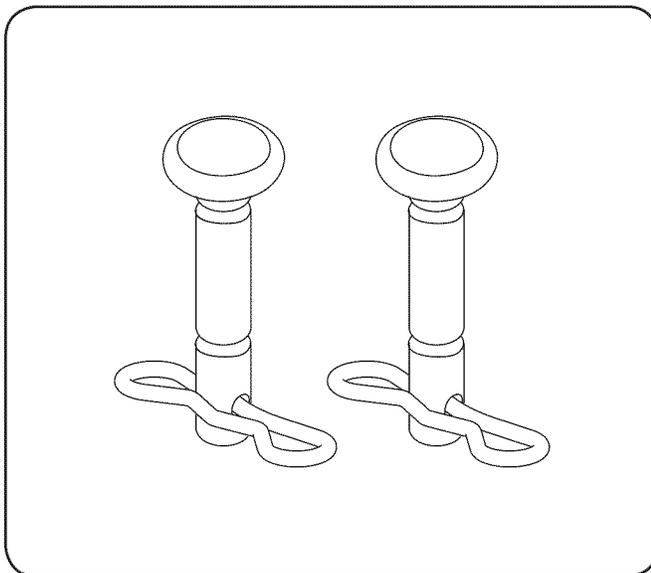


Figure 3-5

Chute Clean-Out Tool

The chute clean-out tool is fastened to the top of the auger housing with a mounting clip and a cable tie at the factory. Cut the cable tie before operating the snow thrower. See Fig. 3-6.

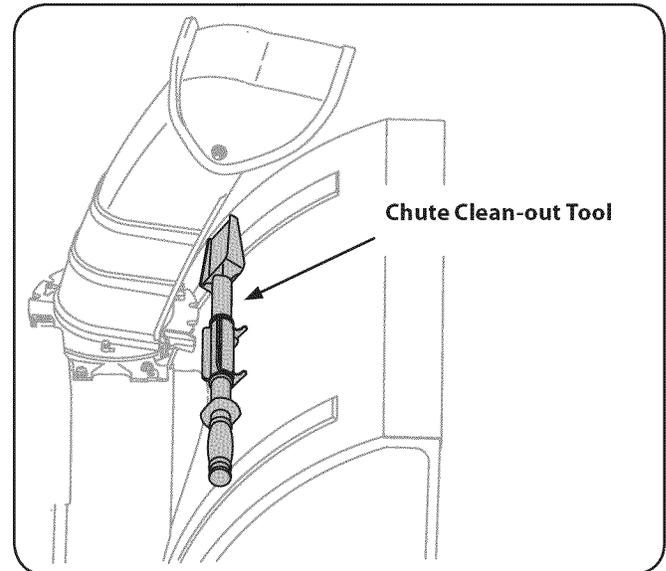


Figure 3-6

Tire Pressure

Before operating, check tire pressure and reduce pressure in both tires to between 15 psi and 20 psi.

NOTE: If the tire pressure is not equal in both tires, the machine may not travel in a straight path and the shave plate may wear unevenly.

Gas & Oil Fill-Up



WARNING! Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel the machine indoors or while the engine is hot or running. Extinguish cigarettes, cigars, pipes and other sources of ignition.

Service the engine with gasoline and oil as instructed in the Briggs & Stratton Engine Operator's Manual packed separately with your snow thrower. Read instructions carefully.

NOTE: Your snow thrower is shipped with oil in the engine. However, you **MUST** check the oil level before operating. Refer to Briggs & Stratton Engine Operator's Manual for detailed instructions.

Adjustments

Skid Shoes

The snow thrower skid shoes are adjusted upward at the factory for shipping purposes. Adjust them downward, if desired, prior to operating the snow thrower.



CAUTION: It is not recommended that you operate this snow thrower on gravel as it can easily pick up and throw loose gravel, causing personal injury or damage to the snow thrower and surrounding property.

- For close snow removal on a smooth surface, raise skid shoes higher on the auger housing.
- Use a middle or lower position when the area to be cleared is uneven, such as a gravel driveway

NOTE: If you choose to operate the snow thrower on a gravel surface, keep the skid shoes in position for maximum clearance between the ground and the shave plate.

To adjust the skid shoes:

1. Loosen the four hex nuts (two on each side) and carriage bolts. Move skid shoes to desired position. See Fig. 3-7.

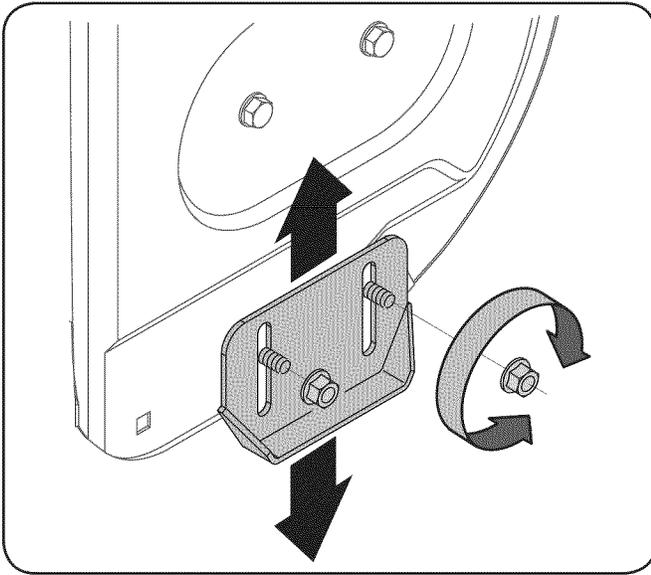


Figure 3-7

2. Make certain the entire bottom surface of skid shoe is against the ground to avoid uneven wear on the skid shoes.
3. Retighten nuts and bolts securely.

Chute Assembly

The distance snow is thrown can be adjusted by changing the angle of the chute assembly. To do so:

1. Stop the engine by removing the ignition key and loosen the plastic knob found on the left side of the chute assembly.
2. Pivot the chute upward or downward before retightening the wing knob. See Fig. 3-8.

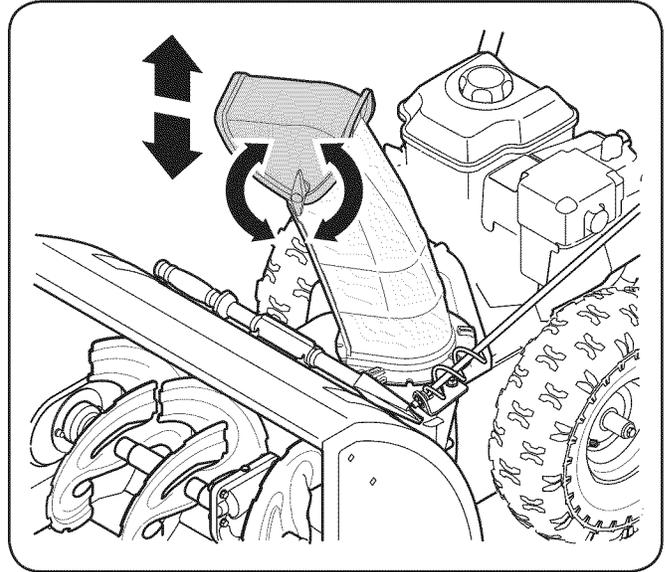


Figure 3-8

Auger Control



WARNING! Prior to operating your snow thrower, carefully read and follow all instructions below. Perform all adjustments to verify your snow thrower is operating safely and properly.

Check the adjustment of the auger control as follows:

1. When the auger control is released and in the disengaged “up” position, the cable should have very little slack. It should NOT be tight.
2. In a well-ventilated area, start the snow thrower engine. Refer to Starting the Engine on page 13. Make sure the throttle is set in the FAST position.
3. While standing in the operator’s position (behind the snow thrower), engage the auger.
4. Allow the auger to remain engaged for approximately ten (10) seconds before releasing the auger control. Repeat this several times.
5. With the throttle control in the FAST (rabbit) position and the auger control in the disengaged “up” position, walk to the front of the machine.
6. Confirm that the auger has completely stopped rotating and shows NO signs of motion. If the auger shows ANY signs of rotating, immediately return to the operator’s position and shut off the engine. Wait for ALL moving parts to stop before re-adjusting the auger control.
7. To readjust the control cable, loosen the upper hex nut on the auger cable bracket. See Fig. 3-9.

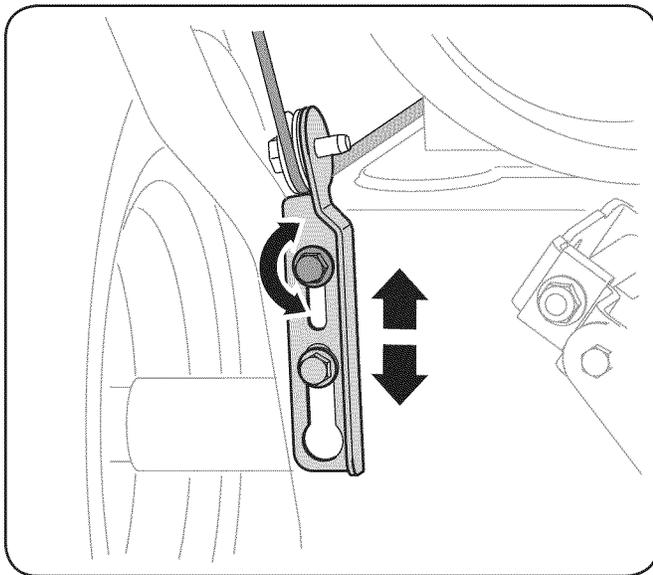


Figure 3-9

8. Position the bracket upward to provide more slack (or downward to increase cable tension).
9. Retighten the upper hex nut.
10. Repeat steps 2-6 above to verify proper adjustment has been achieved.

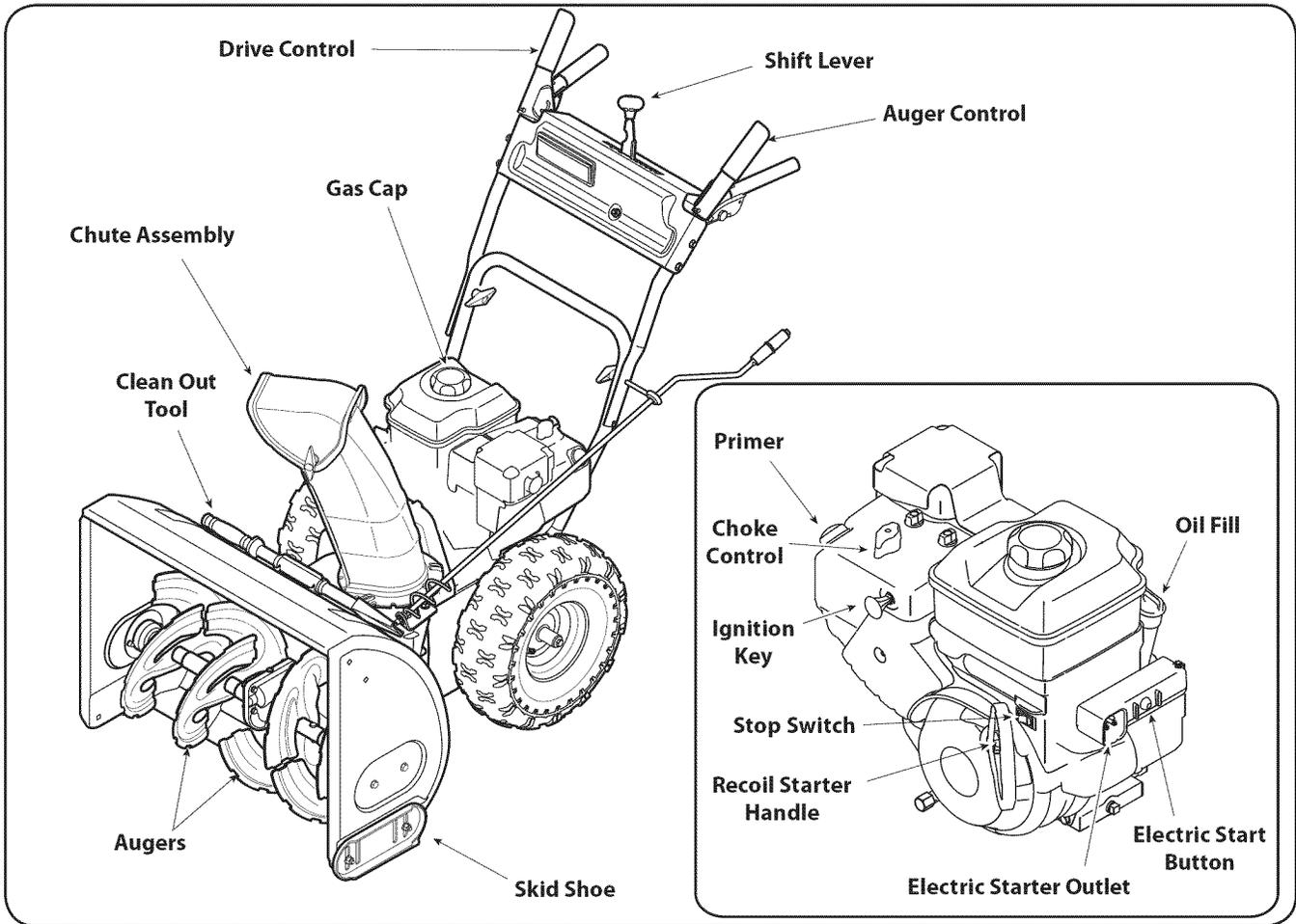


Figure 4-1

Snow thrower controls and features are described below and illustrated in Fig. 4-1.

NOTE: For detailed information on all engine controls, refer to the separate Briggs & Stratton Engine Operator's Manual.

Shift Lever



The shift lever is located in the right side of the handle panel and is used to determine ground speed and direction of travel.

Forward

There are six forward (F) speeds. Position one (1) is the slowest and position six (6) is the fastest.

Reverse

There are two reverse (R) speeds. One (1) is the slower and two (2) is the faster.

Choke Control

The choke control is found on the rear of the engine and is activated by rotating the knob. Activating the choke control closes the choke plate on the carburetor and aids in starting the engine.

Ignition Key

The ignition key is a safety device. It must be fully inserted in order for the engine to start. Remove the ignition key when the snow thrower is not in use.

Note: Do not turn the ignition key in an attempt to start the engine. Doing so may cause it to break.

Stop Switch

The stop switch is located on the rear of the engine. It will shut off the engine when moved into the STOP position.

Primer

Pressing the primer forces fuel directly into the engine's carburetor to aid in cold-weather starting.

Oil Fill

Engine oil level can be checked and oil added through the oil fill.

Skid Shoes

Position the skid shoes based on surface conditions. Adjust upward for hard-packed snow. Adjust downward when operating on gravel or crushed rock surfaces.

Electric Starter Outlet

Requires the use of a three-prong outdoor extension cord and a 120V power source/wall outlet.

Recoil Starter Handle

This handle is used to manually start the engine.

Electric Starter Button

Pressing the electric starter button engages the engine's electric starter when plugged into a 120V power source.

Augers

When engaged, the augers rotate and draw snow into the auger housing.

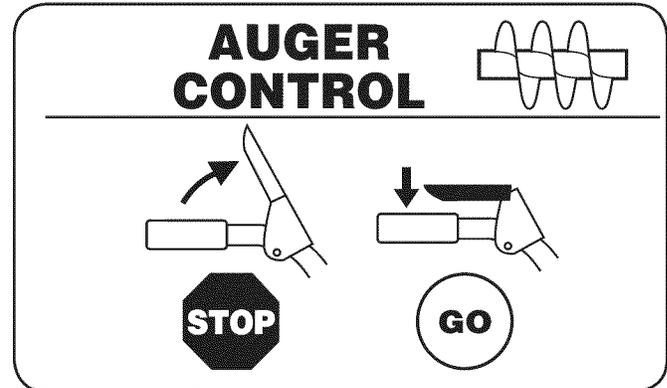
Chute Assembly

Snow drawn into the auger housing is discharged out the chute assembly.

Gas Cap

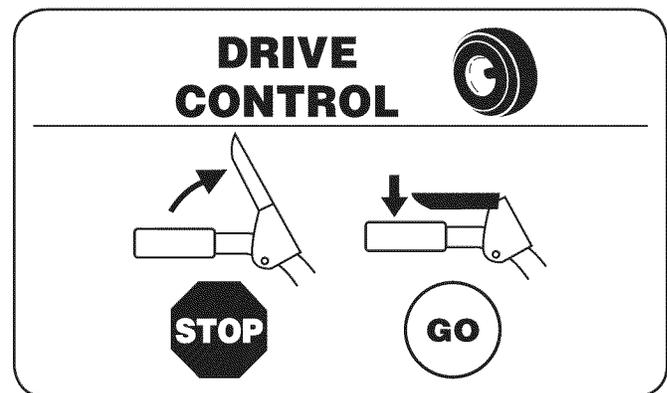
Unthread the gas cap to add gasoline to the fuel tank.

Auger Control



The auger control is located on the left handle. Squeeze the control grip against the handle to engage the augers and start snow throwing action. Release to stop.

Drive Control / Auger Clutch Lock*

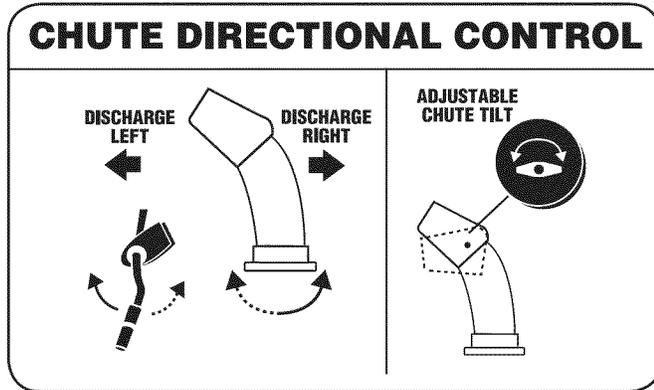


The drive control is located on the right handle. Squeeze the control grip against the handle to engage the wheel drive. Release to stop.

*On select models, the drive control also locks the auger control so that you can operate the chute directional control without interrupting the snow throwing process. If the auger control is engaged simultaneously with the drive control, the operator can release the auger control (on the left handle) and the augers will remain engaged. Release both controls to stop the augers and wheel drive.

Note: Always release the drive control before changing speeds. Failure to do so will result in increased wear on your machine's drive system.

Chute Directional Control



The chute directional control is located on left side of the snow thrower. To change the direction in which snow is thrown, turn chute directional control as follows:

- Crank clockwise to discharge to the left.
- Crank counterclockwise to discharge to the right.

Chute Clean-Out Tool



WARNING! Never use your hands to clear a clogged chute assembly. Shut off engine and remain behind handles until all moving parts have stopped before unlogging.

The chute clean-out tool is conveniently fastened to the rear of the auger housing with a mounting clip. Should snow and ice become lodged in the chute assembly during operation, proceed as follows to safely clean the chute assembly and chute opening:

1. Release both the Auger Control and the Drive Control.
2. Stop the engine by removing the ignition key.
3. Remove the clean-out tool from the clip which secures it to the rear of the auger housing.
4. Use the shovel-shaped end of the clean-out tool to dislodge and scoop any snow and ice which has formed in and near the chute assembly.
5. Refasten the clean-out tool to the mounting clip on the rear of the auger housing, reinsert the ignition key and start the snow thrower's engine.

While standing in the operator's position (behind the snow thrower), engage the auger control for a few seconds to clear any remaining snow and ice from the chute assembly.

Starting The Engine

1. Make certain both the auger control and drive control are in the disengaged (released) position.
2. Insert ignition key into slot. Make sure it snaps into place. Do not attempt to turn the key.

NOTE: The engine cannot start unless the key is inserted into ignition switch.

Electric Starter

Determine that your home's wiring is a three-wire grounded system. Ask a licensed electrician if you are not certain.



WARNING! The optional electric starter is equipped with a grounded three-wire power cord and plug, and is designed to operate on 120 volt AC household current. It must be used with a properly grounded three-prong receptacle at all times to avoid the possibility of electric shock. Follow all instructions carefully prior to operating the electric starter.

If you have a grounded three-prong receptacle, proceed as follows:

1. Plug the extension cord into the outlet located on the engine's surface. Plug the other end of extension cord into a three-prong 120-volt, grounded, AC outlet in a well-ventilated area.
2. Rotate choke control to FULL choke position (for a cold engine start).
NOTE: If the engine is already warm, place choke control in the OFF position instead of FULL.
3. Push the primer two to four times
4. for cold engine start, making sure to cover vent hole in the center of the primer when pushing.
NOTE: Do NOT use primer to restart a warm engine after a short shutdown.
4. Push starter button to start engine.
NOTE: Do NOT Do NOT hold the button down for longer than seven (7) seconds at a time. Doing so may damage your engine's electric starter.
5. Once the engine starts, release starter button.
6. As the engine warms, slowly rotate the choke control to the OFF position. If the engine falters, quickly rotate the choke control back to FULL and then slowly into the OFF position again.

7. When disconnecting the extension cord, always unplug the end at the three-prong wall outlet before unplugging the opposite end from the snow thrower.

Recoil Starter

1. RotatechokecontroltoFULLchokeposition(coldenginestart).
NOTE: If the engine is already warm, place choke control in the OFF position instead of FULL.
2. Push the primertwo times for cold engine start, making sure to cover vent hole in the center of the primer when pushing.
NOTE: DO NOT use primer to restart a warm engine after a short shutdown.
NOTE: Additional priming may be necessary if the temperature is below 15° Fahrenheit.
3. Grasp the recoil starter handle and slowly pull the rope out. At the point where it becomes slightly harder to pull the rope, slowly allow the rope to recoil.
4. Pull the starter handle with a firm, rapid stroke. Do not release the handle and allow it to snap back. Keep a firm hold on the starter handle and allow it to slowly recoil.
5. As the engine warms, slowly rotate the choke control to the OFF position. If the engine falters, quickly rotate the choke control back to the FULL position and then slowly into the OFF position again.
NOTE: Allow the engine to warm up for a few minutes after starting. The engine will not develop full power until it reaches operating temperatures.

Stopping The Engine

Run engine for a few minutes before stopping to help dry off any moisture on the engine.

1. Move the Stop Switch into the STOP position.
2. Remove the ignition key and store in a safe place.
3. Wipe all snow and moisture from the area around the engine as well as the area in and around the drive control and auger control. Also, engage and release both controls several times.

To Engage Drive

1. With the throttle control in the Fast (rabbit) position, move shift lever into one of the six forward (F) positions or two reverse (R) positions. Select a speed appropriate for the snow conditions and a pace you're comfortable with.
2. Squeeze the drive control against the handle the snow thrower will move. Release it and drive motion will stop.

To Engage Augers

1. To engage the augers and start throwing snow, squeeze the auger control against the left handle. Release to stop the augers.

Replacing Shear Pins

The augers are secured to the spiral shaft with two shear pins and cotter pins. If the auger should strike a foreign object or ice jam, the snow thrower is designed so that the pins may shear. If the augers will not turn, check to see if the pins have sheared. See Fig. 5-1.



CAUTION: NEVER replace the auger shear pins with anything other than OEM Part No.738-04124A replacement shear pins. Any damage to the auger gearbox or other components as a result of failing to do so will NOT be covered by your snow thrower's warranty.



WARNING! Always turn off the snow thrower's engine and remove the key prior to replacing shear pins.

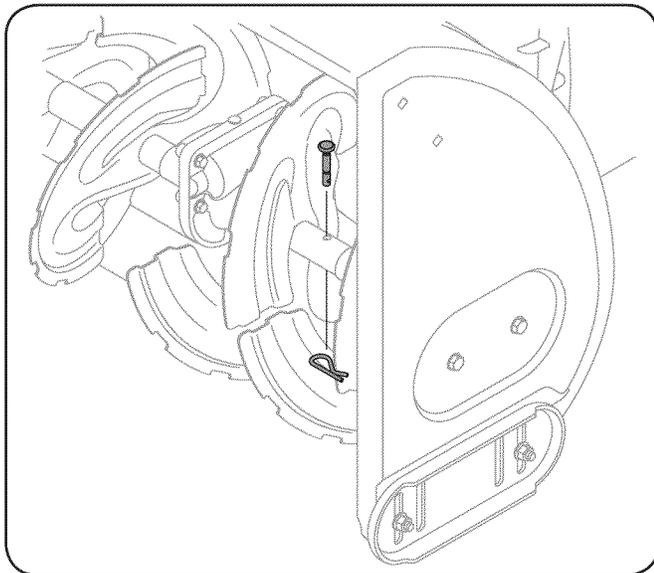


Figure 5-1

Maintenance

Engine

Refer to the Briggs & Stratton Engine manual packed with your machine for all engine maintenance.

Shave Plate and Skid Shoes

The shave plate and skid shoes on the bottom of the snow thrower are subject to wear. They should be checked periodically and replaced when necessary.

To remove skid shoes:

1. Remove the four carriage bolts and hex flange nuts which secure them to the snow thrower.
2. Reassemble new skid shoes with the four carriage bolts (two on each side) and hex flange nuts. Refer to Fig. 6-1.

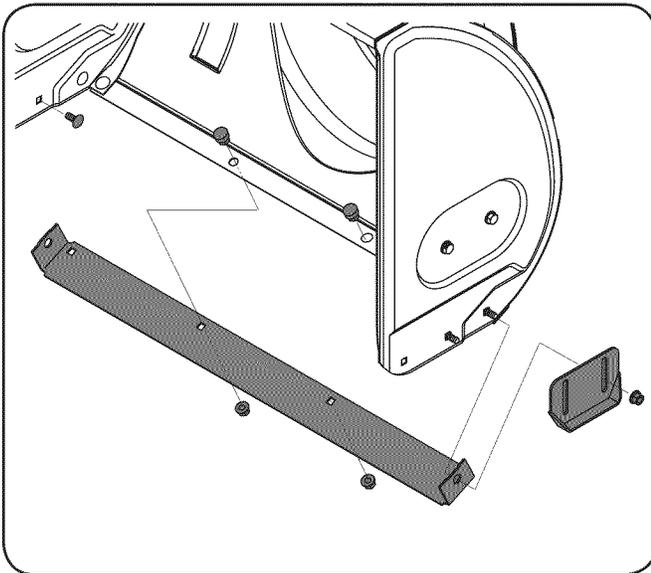


Figure 6-1

To remove shave plate:

1. Remove the carriage bolts and hex nuts which attach it to the snow thrower housing.
2. Reassemble new shave plate, making sure heads of carriage bolts are to the inside of housing. Tighten securely.

Tire Pressure

Before operating, check tire pressure and reduce pressure to between 15 psi and 20 psi.

If the tire pressure is not equal in both tires, the unit may pull to one side or the other.

Lubrication

Gear Shaft

The gear (hex) shaft should be lubricated at least once a season or after every twenty-five (25) hours of operation.

1. Carefully pivot the snow thrower up and forward so that it rests on the auger housing.
2. Remove the frame cover from the underside of the snow thrower by removing four self-tapping screws which secure it. Refer to Fig 7-3.
3. Apply a light coating of engine oil (or 3-in-1 oil) to the hex shaft. See Fig. 6-2.

NOTE: When lubrication the hex shaft, be careful not to get any oil on the aluminum drive plate or the rubber friction wheel. Doing so will hinder the snow thrower's drive system. Wipe off any excess or spilled oil.

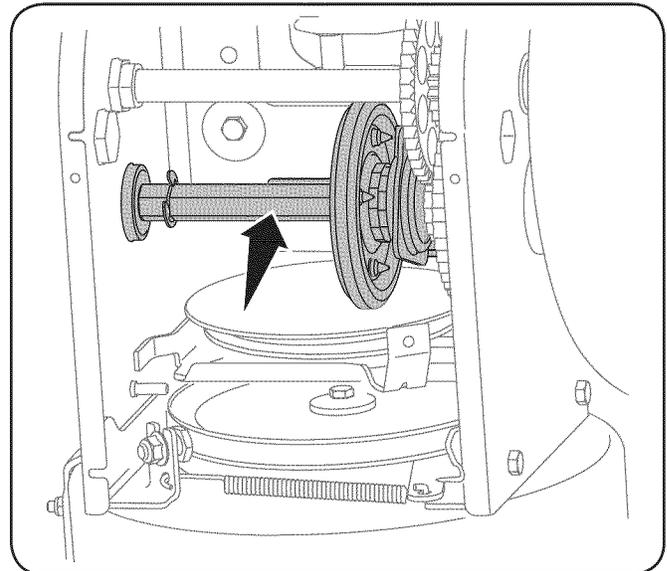


Figure 6-2

Wheels

At least once a season, remove both wheels. Clean and coat the axles with a multipurpose automotive grease before reinstalling wheels.

Chute Directional Control

Once a season, lubricate the eye-bolt bushing and the spiral with 3-in-1 oil.

Auger Shaft

At least once a season, remove the shear pins from the auger shaft. Spray lubricant inside the shaft and around the spacers and the flange bearings found at either end of the shaft. See Fig. 6-3.

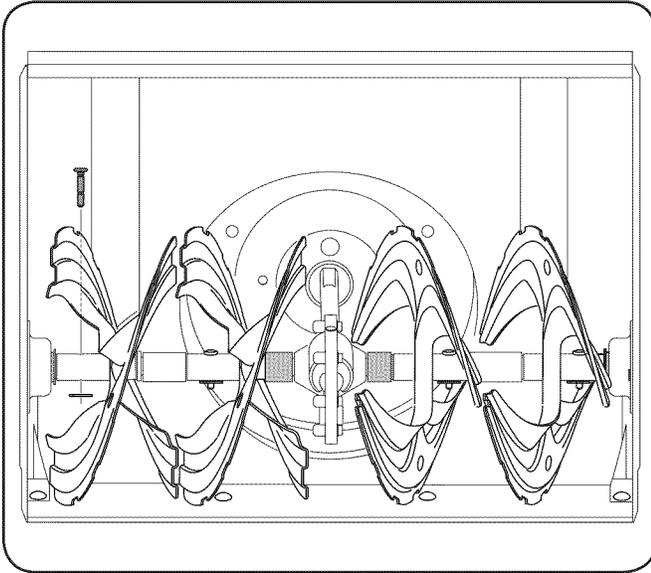


Figure 6-3

Adjustments

Shift Cable

If the full range of speeds (forward and reverse) cannot be achieved, refer to the figures to the right and adjust the shift cable as follows:

1. Place the shift lever in the fastest forward speed position.
2. Loosen the hex nut on the shift cable index bracket. See Fig. 6-4.

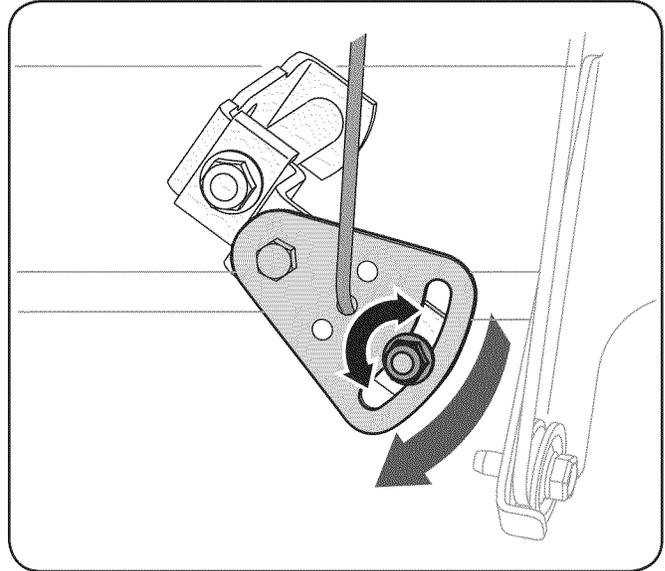


Figure 6-4

3. Pivot the bracket downward to take up slack in the cable.
4. Retighten the hex nut.

Auger Control

Refer to the Assembly and Set-up section for instructions on adjusting the auger control cable.

Chute Assembly

Refer to the Assembly and Set-up section for instructions on adjusting the skid shoes chute assembly.

Skid Shoes

Refer to the Assembly and Set-up section for instructions on adjusting the skid shoes.

Drive Control

When the drive control is released and in the disengaged “up” position, the cable should have very little slack. It should NOT be tight.

NOTE: If excessive slack is present in the drive cable or if the snow thrower’s drive is disengaging intermittently during operation, the cable may be in need of adjustment.

Check the adjustment of the drive control as follows:

1. With the drive control released, push the snow thrower gently forward. The unit should roll freely.
2. Engage the drive control and gently attempt to push the snow thrower forward. The wheels should not turn. The unit should not roll freely.
3. With the drive control released, move the shift lever back and forth between the R2 position and the F6 position several times. There should be no resistance in the shift lever.
4. If any of the above tests failed, the drive cable is in need of adjustment. Proceed as follows:
5. Loosen the lower hex nut on the drive cable bracket. See Fig. 6-5.

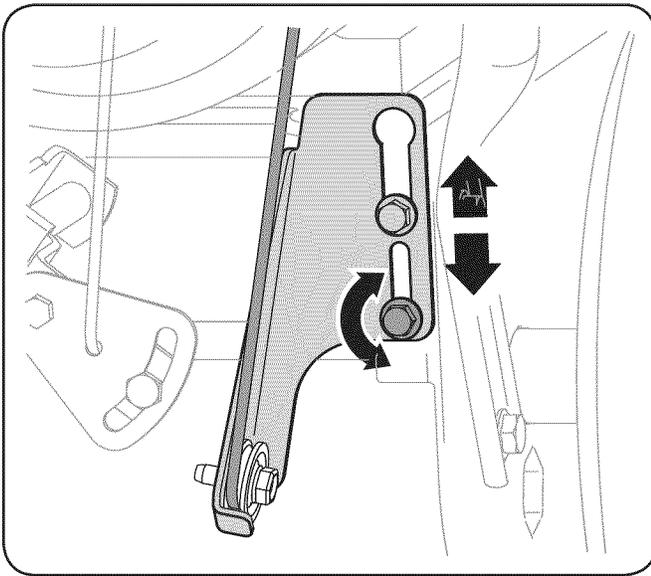


Figure 6-5

6. Position the bracket upward to provide more slack (or downward to increase cable tension).
7. Retighten the upper hex nut.

Chute Bracket Adjustment

If the spiral at the bottom of the chute directional control is not fully engaging with the chute assembly, the chute bracket can be adjusted. To do so:

1. Loosen the two nuts which secure the chute bracket and reposition it slightly. See Fig. 6-6.

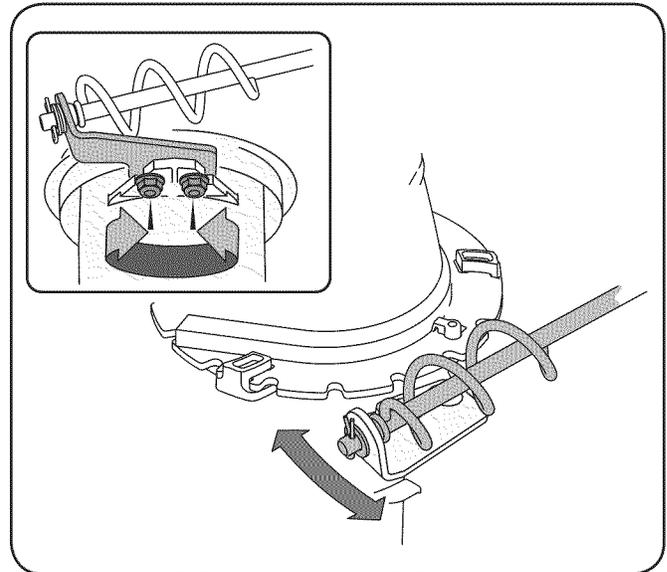


Figure 6-6

2. Retighten the nuts.

Off-Season Storage

If the snow thrower will not be used for 30 days or longer, follow the storage instructions below.

1. Lubricate the machine as instructed earlier in this section.
2. Store in a clean, dry area.
3. If storing the snow thrower in an unventilated area, rustproof the machine using a light oil or silicone to coat the snow thrower.
4. Clean the exterior of the engine and the snow thrower.

NOTE: Refer to the Briggs & Stratton Engine manual packed with your machine for information on storing your engine.

Belt Replacement

Auger Belt

To remove and replace your snow thrower's auger belt, proceed as follows:

1. Allow the engine to run until it is out of fuel.
2. Remove the plastic belt cover on the front of the engine by removing the two self-tapping screws. See Fig. 7-1.

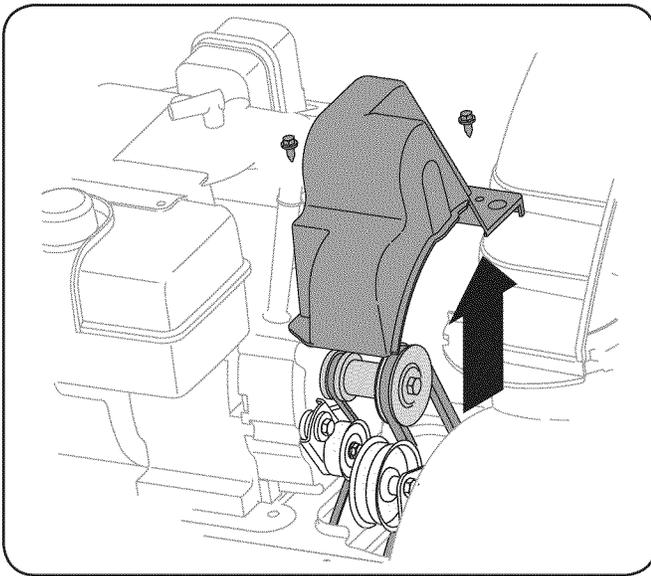


Figure 7-1

3. Roll the auger belt off the engine pulley. See Fig. 7-2.

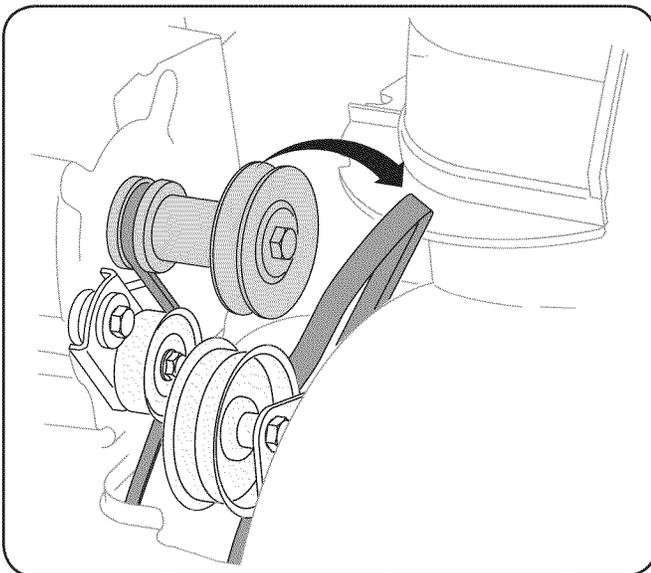


Figure 7-2

4. Carefully pivot the snow thrower up and forward so that it rests on the auger housing.
5. Remove the frame cover from the underside of the snow thrower by removing four self-tapping screws which secure it. See Fig 7-3.

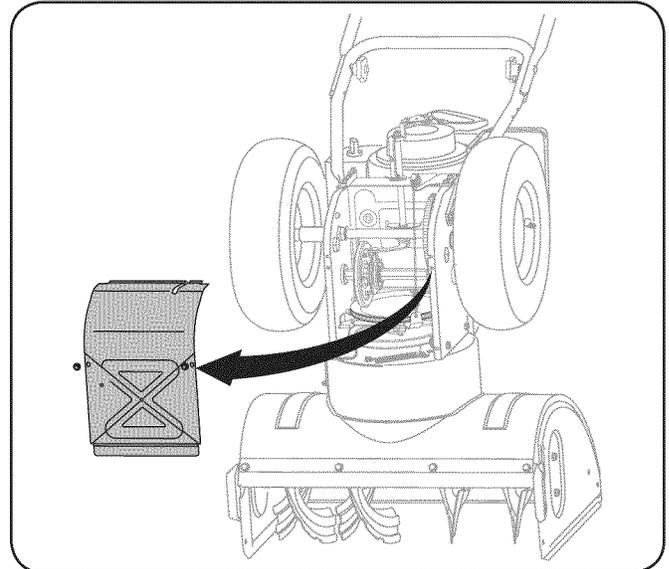


Figure 7-3

6. Remove the belt as follows. See Fig. 7-4 and Fig. 7-5.
 - a. Loosen and remove the shoulder screw which acts as a belt keeper.
 - b. Unhook the support bracket spring from the frame.

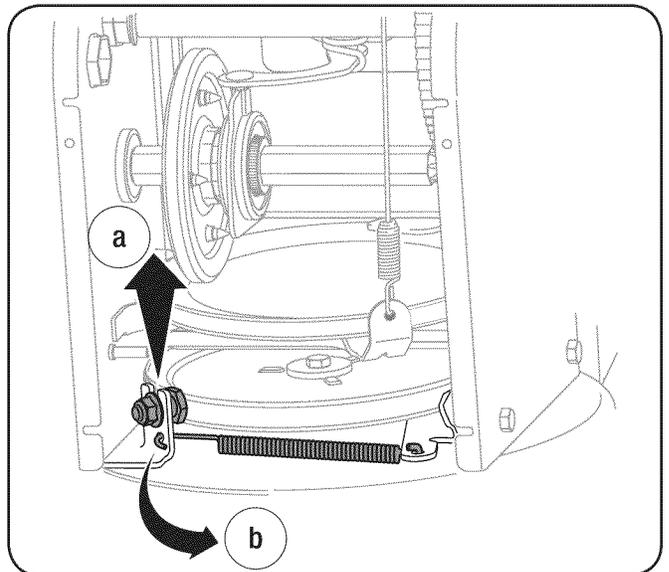


Figure 7-4

3. Remove the belt from around the auger pulley, and slip the belt between the support bracket and the auger pulley. See Fig. 7-5.

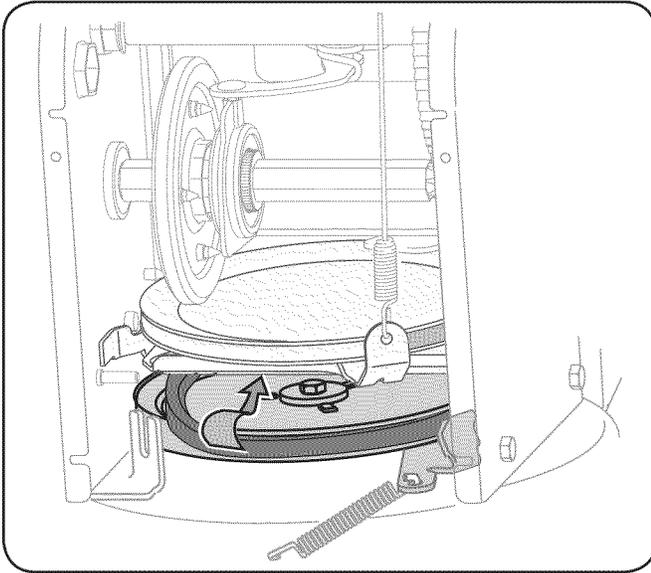


Figure 7-5

4. Reassemble auger belt by following instructions in reverse order.

NOTE: Do not forget to reinstall the shoulder screw and reconnect the spring to the frame after installing a replacement auger belt.

Drive Belt

To remove and replace your snow thrower's drive belt, proceed as follows:

1. Allow the engine to run until it is out of fuel.
2. Remove the plastic belt cover on the front of the engine by removing the two self-tapping screws. Refer to Fig. 7-1.
3. Remove the belt as follows. See Fig. 7-6.:
 - a. Roll the auger belt off the engine pulley.
 - b. Use a wrench to pivot the idler pulley toward the right.
 - c. Lift the drive belt off engine pulley

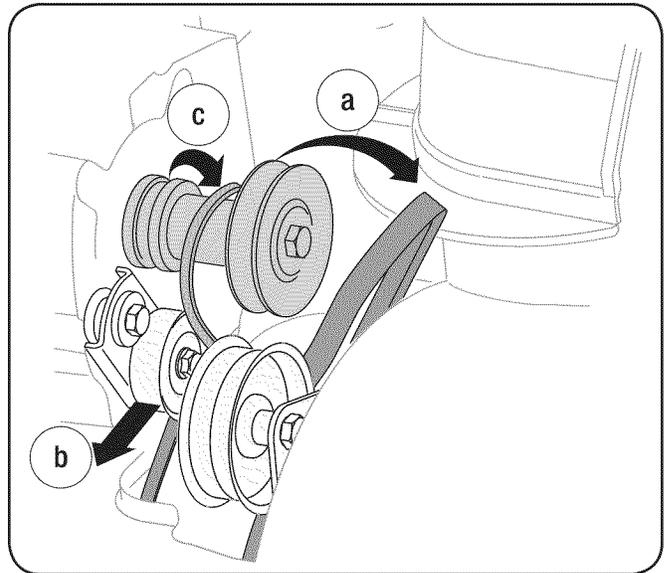


Figure 7-6

4. Carefully pivot the snow thrower up and forward so that it rests on the auger housing.
5. Remove the frame cover from the underside of the snow thrower by removing four self-tapping screws which secure it. Refer to Fig. 7-3.

- Slip the drive belt off the pulley and between friction wheel and friction wheel disc. See Fig. 7-7.

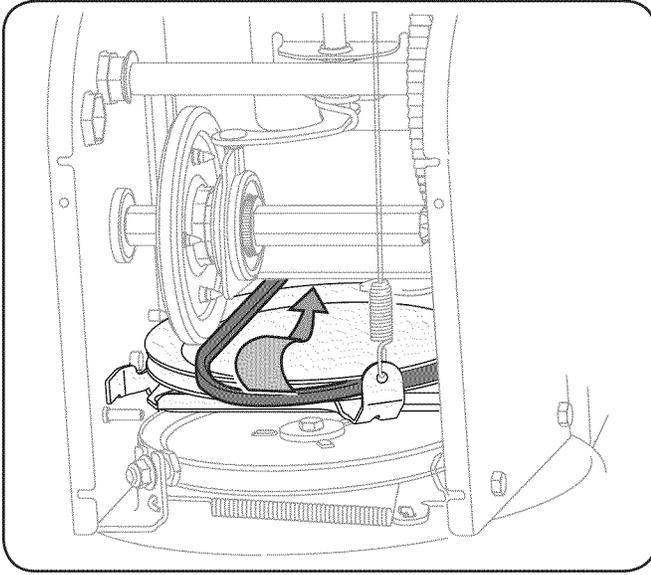


Figure 7-7

- Remove and replace belt in the reverse order.
NOTE: Engaging the drive control will ease reassembly of the belt.

Friction Wheel Removal

If the snow thrower fails to drive with the drive control engaged, and performing the drive control cable adjustment fails to correct the problem, the friction wheel may need to be replaced. Follow the instructions below. Examine the friction wheel for signs of wear or cracking and replace if necessary:

- Allow the engine to run until it is out of fuel.
- Place the shift lever in third Forward (F3) position.
- Carefully pivot the snow thrower up and forward so that it rests on the auger housing.
- Remove the frame cover from the underside of the snow thrower by removing four self-tapping screws which secure it. Remove the right-hand wheel by removing the screw and bell washer which secure it to the axle. See Fig. 7-8.

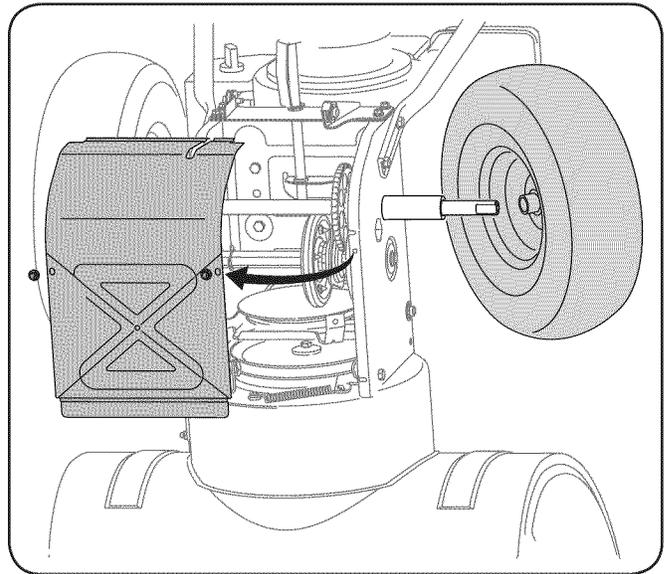


Figure 7-8

- Carefully remove the hex nut which secures the hex shaft to the snow thrower frame and lightly tap the shaft's end to dislodge the ball bearing from the right side of the frame. See Fig. 7-9.

NOTE: Be careful not to damage the threads on the shaft.

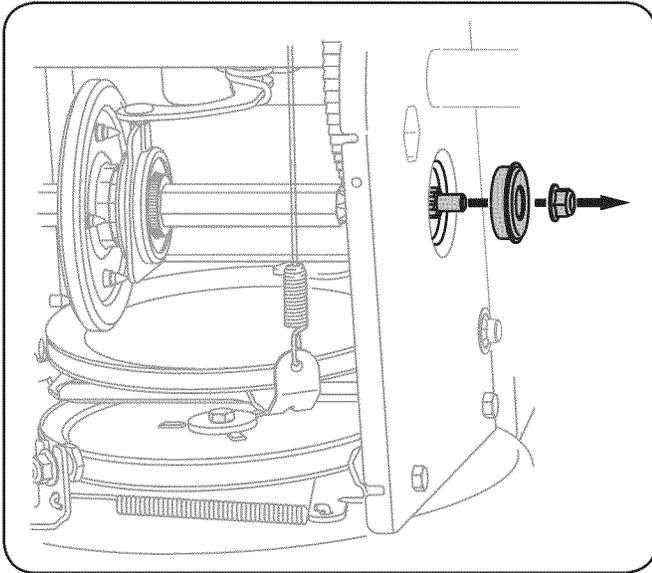


Figure 7-9

- Carefully position the hex shaft downward and to the left before carefully sliding the friction wheel assembly off the shaft. See Fig. 7-10.

NOTE: If you're replacing the friction wheel assembly as a whole, discard the worn part and slide the new part onto the hex shaft.

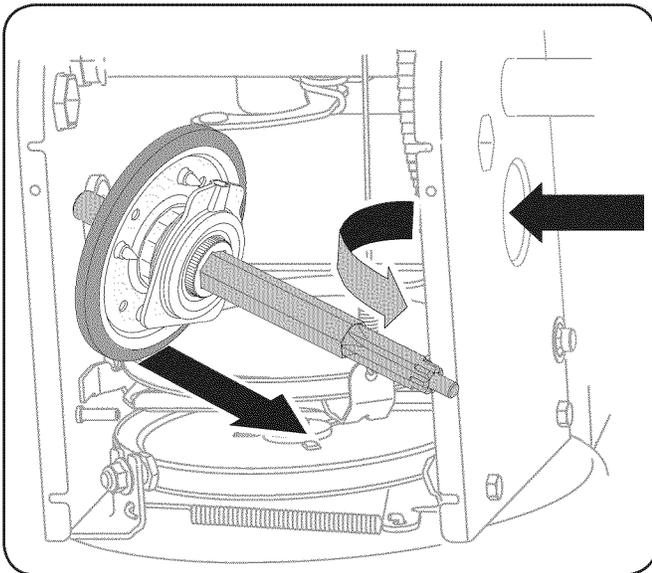


Figure 7-10

Follow the previous steps in reverse order to reassemble components. If you're disassembling the friction wheel and replacing only the rubber ring, proceed as follows:

- Remove the four screws which secure the friction wheel's side plates together. See Fig. 7-11

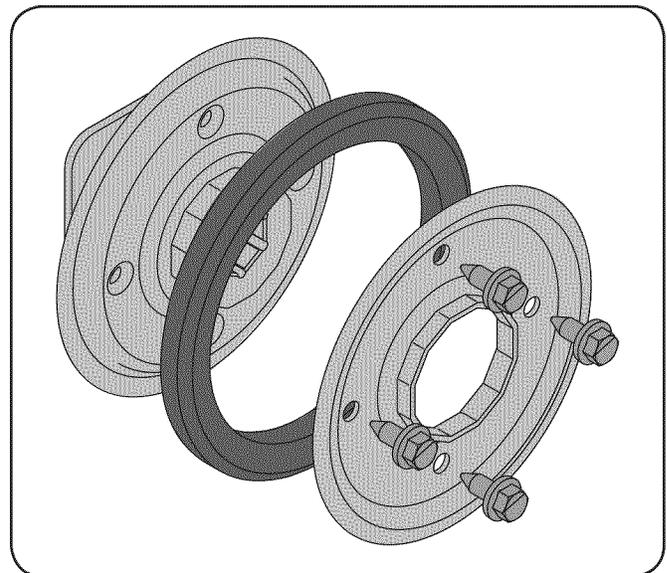


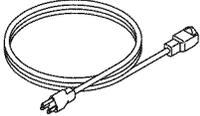
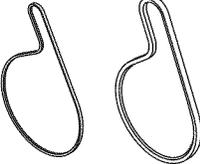
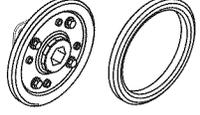
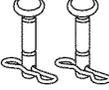
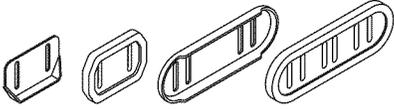
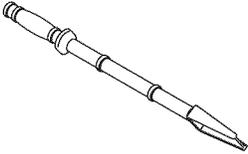
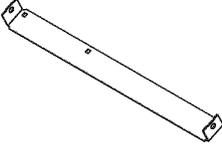
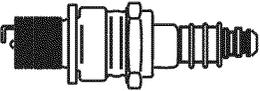
Figure 7-11

- Remove the rubber ring from between the plates.
- Reassemble the side plates with a new rubber ring.

NOTE: When reassembling the friction wheel assembly, make sure that the rubber ring is centered and seated properly between the side plates. Tighten each screw only one rotation before turning the wheel clockwise and proceeding with the next screw. Repeat this process several times to ensure the plates are secured with equal force (between 6 ft-lbs and 9 ft-lbs).

- Slide the friction wheel assembly back onto the hex shaft and follow the steps above in reverse order to reassemble components.

Problem	Cause	Remedy
Engine fails to start	<ol style="list-style-type: none"> 1. Choke control not in ON position. 2. Spark plug wire disconnected. 3. Fuel tank empty or stale fuel. 4. Engine not primed. 5. Faulty spark plug. 6. Safety key not inserted . 	<ol style="list-style-type: none"> 1. Move choke control to ON position. 2. Connect wire to spark plug. 3. Fill tank with clean, fresh gasoline. 4. Prime engine as instructed in the Operation section. 5. Clean, adjust gap, or replace spark plug. 6. Insert key fully into the switch.
Engine runs erratic	<ol style="list-style-type: none"> 1. Engine running on CHOKE. 2. Blocked fuel line or stale fuel. 3. Water or dirt in fuel system. 4. Carburetor out of adjustment. 	<ol style="list-style-type: none"> 1. Move choke lever to OFF position. 2. Fill tank with clean, fresh gasoline. 3. Drain fuel tank. Refill with fresh fuel. 4. Contact a Briggs & Stratton Service Center.
Engine overheats	<ol style="list-style-type: none"> 1. Carburetor not adjusted properly. 	<ol style="list-style-type: none"> 1. Contact a Briggs & Stratton Service Center.
Excessive vibration	<ol style="list-style-type: none"> 1. Loose parts or damaged auger. 	<ol style="list-style-type: none"> 1. Stop engine immediately and disconnect spark plug wire. Tighten all bolts and nuts. If vibration continues, have unit serviced by an authorized Service Center.
Loss of power	<ol style="list-style-type: none"> 1. Spark plug wire loose. 2. Gas cap vent hole plugged. 	<ol style="list-style-type: none"> 1. Connect spark plug wire. 2. Remove ice and snow from gas cap. Be certain vent hole is clear.
Unit fails to propel itself	<ol style="list-style-type: none"> 1. Drive control cable in need of adjustment. 2. Drive belt loose or damaged. 3. Friction wheel worn. 	<ol style="list-style-type: none"> 1. Adjust drive control cable. Refer to Maintenance and Adjustments section. 2. Replace drive belt. Refer to Service section 3. Replace friction wheel. Refer to Service section.
Unit fails to discharge snow	<ol style="list-style-type: none"> 1. Chute assembly clogged. 2. Foreign object lodged in auger. 3. Auger control cable in need of adjustment. 4. Auger belt loose or damaged. 5. Shear pin(s) sheared. 	<ol style="list-style-type: none"> 1. Stop engine immediately and disconnect spark plug wire. Clean chute assembly and inside of auger housing with clean-out tool or a stick. 2. Stop engine immediately and disconnect spark plug wire. Remove object from auger with clean-out tool or a stick. 3. Adjust auger control cable. Refer to Assembly & Set-Up section. 4. Replace auger belt refer to Service section. 5. Replace shear pin(s).

Component	Part Number and Description
	929-0071 Extention Cord, 110V
	954-04050 Auger Drive Belt 754-0367 Wheel Drive Belt
	684-04153 Friction Wheel Assembly 935-04054 Friction Wheel Rubber
	925-1658 Halogen Lamp, 12V, 27W
	738-04124A Shear Pin, 1.50 714-04040 Bow-tie Cotter Pin
	784-5580 Slide Shoe, Standard (Steel) 731-06439 Slide Shoe, Standard (Polymer) 790-00091 Slide Shoe, Deluxe (Steel) 731-05984 Slide Shoe, Deluxe (Polymer)
	731-2643 Chute Clean-out Tool
	790-00117 Shave Plate, 22" 790-00120 Shave Plate, 24" 790-00121 Shave Plate, 26" 790-00118 Shave Plate, 28"
	BS-794696 Key
	759-3336 <i>Champion</i> RC12YC Resistor Spark Plug

Phone (800) 800-7310 to order replacement parts or a complete Parts Manual (have your full model number and serial number ready). Parts Manual downloads are also available free of charge at www.mtdproducts.com.

MANUFACTURER'S LIMITED WARRANTY FOR



The limited warranty set forth below is given by MTD LLC with respect to new merchandise purchased and used in the United States and/or its territories and possessions, and by MTD Products Limited with respect to new merchandise purchased and used in Canada and/or its territories and possessions (either entity respectively, "MTD").

"MTD" warrants this product (excluding its *Normal Wear Parts and Attachments* as described below) against defects in material and workmanship for a period of two (2) years commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water, or damage because of other peril or natural disaster. Damage resulting from the installation or use of any part, accessory or attachment not approved by MTD for use with the product(s) covered by this manual will void your warranty as to any resulting damage.

Normal Wear Parts are warranted to be free from defects in material and workmanship for a period of thirty (30) days from the date of purchase. Normal wear parts include, but are not limited to items such as: batteries, belts, blades, blade adapters, tines, grass bags, wheels, rider deck wheels, seats, snow thrower skid shoes, friction wheels, shave plates, auger spiral rubber and tires.

Attachments — MTD warrants attachments for this product against defects in material and workmanship for a period of one (1) year, commencing on the date of the attachment's original purchase or lease. Attachments include, but are not limited to items such as: grass collectors and mulch kits.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE, through your local authorized service dealer. To locate the dealer in your area:

In the U.S.A.

Check your Yellow Pages, or contact MTD LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, or call 1-800-800-7310, 1-330-220-4683 or log on to our Web site at www.mtdproducts.com.

In Canada

Contact MTD Products Limited, Kitchener, ON N2G 4J1, or call 1-800-668-1238 or log on to our Web site at www.mtdcanada.com.

This limited warranty does **not** provide coverage in the following cases:

- The engine or component parts thereof. These items may carry a separate manufacturer's warranty. Refer to applicable manufacturer's warranty for terms and conditions.
- Log splitter pumps, valves, and cylinders have a separate one-year warranty.

- Routine maintenance items such as lubricants, filters, blade sharpening, tune-ups, brake adjustments, clutch adjustments, deck adjustments, and normal deterioration of the exterior finish due to use or exposure.
- Service completed by someone other than an authorized service dealer.
- MTD does not extend any warranty for products sold or exported outside of the United States and/or Canada, and their respective possessions and territories, except those sold through MTD's authorized channels of export distribution.
- Replacement parts that are not genuine MTD parts.
- Transportation charges and service calls.
- MTD does not warrant this product for commercial use.

No implied warranty, including any implied warranty of merchantability of fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind MTD. During the period of the warranty, the exclusive remedy is repair or replacement of the product as set forth above.

The provisions as set forth in this warranty provide the sole and exclusive remedy arising from the sale. MTD shall not be liable for incidental or consequential loss or damage including, without limitation, expenses incurred for substitute or replacement lawn care services or for rental expenses to temporarily replace a warranted product.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. **Alteration of safety features of the product shall void this warranty.** You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser or to the person for whom it was purchased as a gift.

HOW STATE LAW RELATES TO THIS WARRANTY: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

IMPORTANT: Owner must present Original Proof of Purchase to obtain warranty coverage.

MTD LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019; Phone: 1-800-800-7310, 1-330-220-4683
MTD Canada Limited - KITCHENER, ON N2G 4J1; Phone 1-800-668-1238