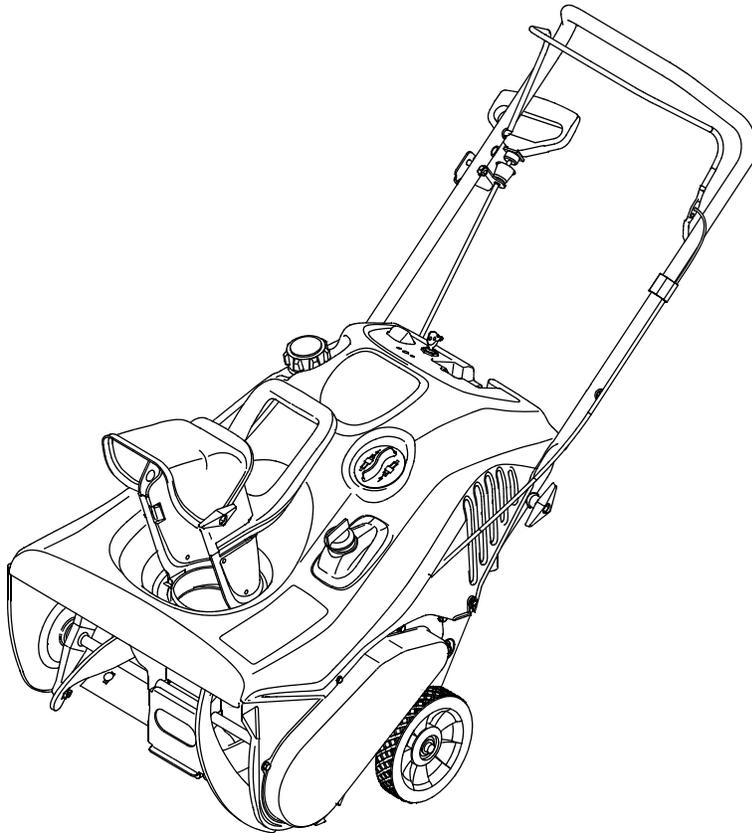




Operator's Manual



Single Stage Snow Thrower

Models: 2B5 & 295
E2B5 & E295

IMPORTANT: Read safety rules and instructions carefully before operating equipment.

Warning: This unit 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.

MTD Products Ltd., P. O. BOX 1386, KITCHENER, ONTARIO N2G 4J1

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FINDING MODEL NUMBER

This Operator's Manual is an important part of your new snow thrower. It will help you to assemble, prepare and maintain the unit for best performance. Please read and understand what it says.



Before you start assembling your new equipment, please locate the model plate on the equipment and copy the information from it in the space provided below. A sample model plate is also given below. You can locate the model number by standing behind the unit in the operating position and looking at the rear of the snow thrower. The information will be necessary to use the manufacturer's web site and/or help the Customer Support Department or an authorized service dealer.

Model Number Numéro de modèle	Serial Number Numéro de série	Copy the model number here: _____
XXX-XXXXXX	XXXXXXXXXXXX	
 TROY-BILT® TROYBILT - CANADA KITCHENER, ON N2G 4J1		Copy the serial number here: _____

ENGINE INFORMATION

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 unit for more information.

CALLING CUSTOMER SUPPORT

Please do NOT return the unit to the retailer from which it was purchased, without first contacting Customer Support.



If you have difficulty assembling this product or have any questions regarding the controls, operation or maintenance of this unit, please call a Customer Support Representative.

1-800-668-1238

Please have your unit's model number and serial number ready when you call. See previous section to locate this information. You will be asked to enter the serial number in order to process your call.

SECTION 1: IMPORTANT SAFE OPERATION PRACTICES



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.**



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 rules for safe operation 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 hands and feet and throwing 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 old to operate this machine. Children 14 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.
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, helpers, 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.
8. Let engine and machine adjust to outdoor temperature before starting to clear snow.
9. 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.

Preparation

1. Thoroughly inspect the area where the equipment is to be used. Remove all door mats, newspapers, sleds, boards, wires and other objects which could be tripped over or thrown by the auger.
2. 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.
3. 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.
4. Use a grounded extension cord and receptacle for all units with electric start engines.
5. Adjust collector housing height to clear gravel or crushed rock surfaces.
6. Disengage the auger control bail before starting the engine.
7. Never attempt to make any adjustments while engine is

Operation

1. Do not put hands or feet near rotating parts, in the auger housing or discharge chute. Contact with rotating parts can amputate hands and feet.
2. The auger control bail is a safety device. Never bypass its operation. Doing so, makes the machine unsafe and may cause personal injury.
3. The auger control bail must operate easily in both directions and automatically return to the disengaged position when released.
4. Never operate with a missing or damaged discharge chute. Keep all safety devices in place and working.
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.
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. To avoid 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 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 in reverse.
16. If the machine should start to vibrate abnormally, stop the engine, disconnect the spark plug and ground it against the engine. Inspect thoroughly for damage. Repair any damage before starting and operating.
17. Disengage the auger control bail and stop engine before you leave the operating position (behind the handles). Wait until the auger comes to a complete stop before unclogging the discharge chute, making any adjustments, or inspections.
18. Never put your hand in the discharge or collector openings. Always use a clearing tool to unclog the discharge opening.
19. Use only attachments and accessories approved by the manufacturer.
20. If situations occur which are not covered in this manual, use care and good judgment. Call customer assistance for the name of your nearest servicing dealer.

Maintenance & Storage

1. Never tamper with safety devices. Check their proper operation regularly.
2. Disengage the auger control bail and stop engine. Wait until the auger comes to a complete stop. Disconnect the spark plug wire and ground against the engine to prevent unintended starting before cleaning, repairing, or inspecting.
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 (O.E.M.) parts only. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
6. Check the auger control bail 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.
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.

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.



SECTION 2: ASSEMBLING YOUR SNOW THROWER

NOTE: This Operator's Manual covers several models. **Snow thrower features vary by model.** Not all features discussed in this manual are applicable to all snow thrower models.

Unpacking From Carton

- Cut along corners of the carton and lay it down flat. Remove packing material.
- Remove any loose parts included with unit (i.e., operator's manual, etc.).
- Roll unit out of carton. Check carton thoroughly for any remaining loose part.

Items Required For Assembly

1. Engine oil
2. Fresh gasoline

NOTE: All references to left or right side of the snow thrower is from the operating position only.

Before Assembly



WARNING: Disconnect the spark plug wire and ground it against the engine to prevent unintended starting. Refer to the separate engine manual packed with your unit.

Raising Upper Handle

- Loosen the hand knob on each side of the handle. Remove packing material, if any.

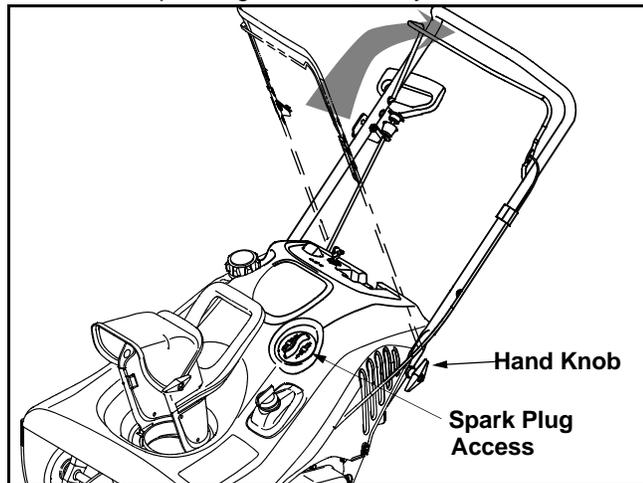


Figure 1

- Raise the upper handle in the direction shown in Figure 1 until it clicks into the operating position. Make sure not to pinch or crimp the cable.
- Tighten the hand knobs.

Assembling the Discharge Chute

For shipping reasons, the snow thrower has been packaged with the upper chute pivoted all the way down as shown in Figure 2. To pivot it upward, proceed as follows:

1. Turn the chute until the chute opening is facing straight ahead.
2. Remove the wing knob, flat washer and carriage bolt from the lower chute.
3. Pivot the upper chute upward **over the lip on the lower chute** so that there is **NO** gap between the upper chute and the lower chute.
4. Resecure with the hardware just removed.



CAUTION: Do not use the Chute Handle to lift the machine.

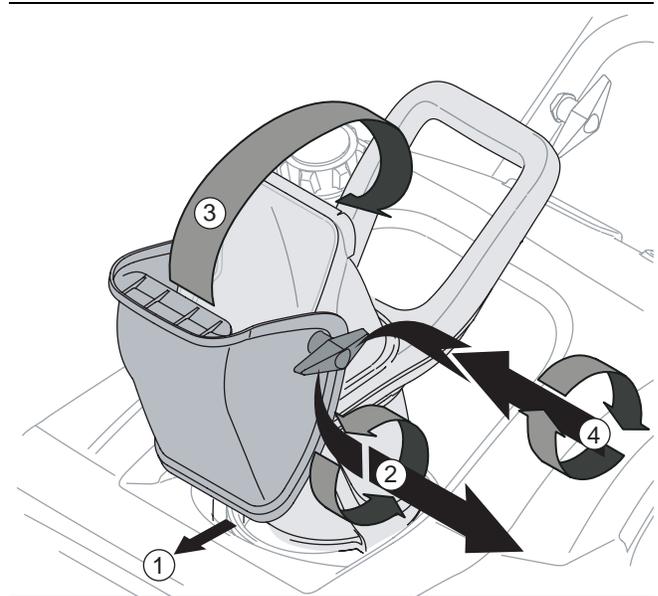


Figure 2

SECTION 3: KNOW YOUR SNOW THROWER



WARNING: Be familiar with all the controls on the snow thrower and their proper operation. Know how to stop the machine and disengage them quickly.

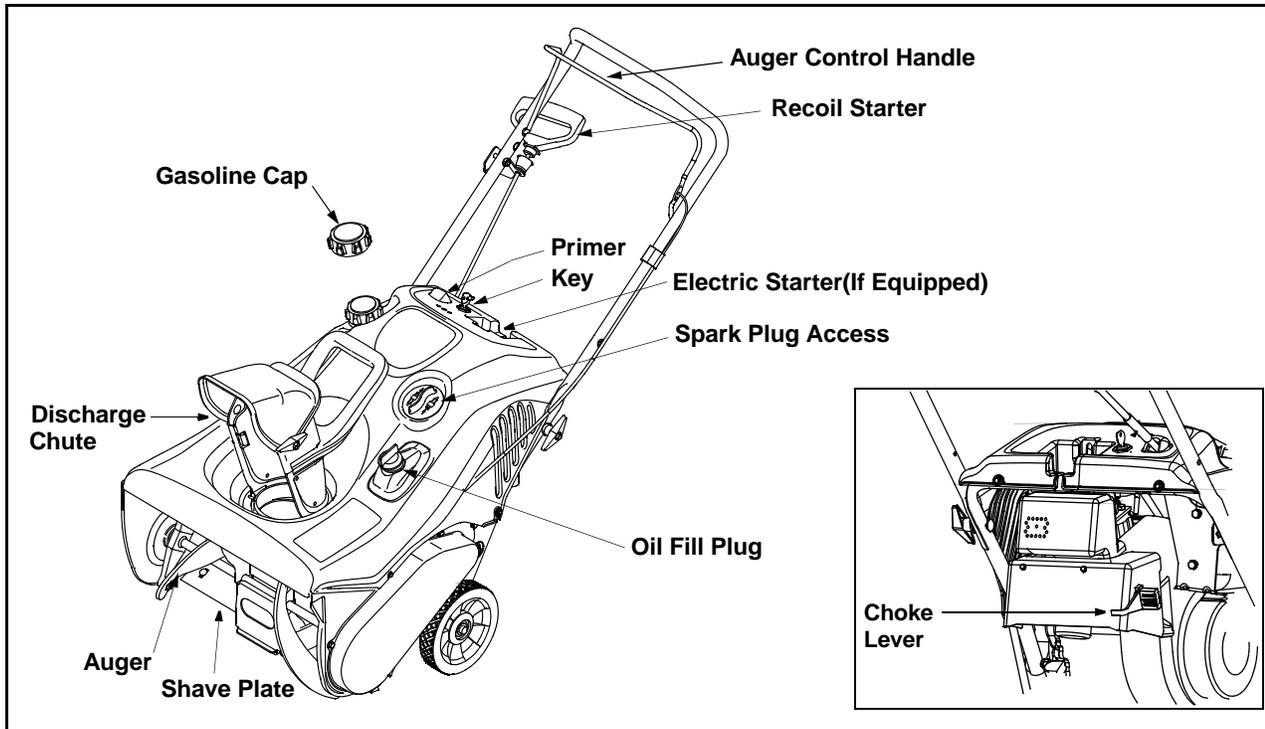


Figure 3

Auger Control Handle

Located on the upper handle, the auger control handle is used to engage and disengage the auger. The snow thrower is designed to propel by the rotation of the auger. Pull the auger control handle back against the upper handle to engage the auger; release to disengage.

Discharge Chute

The angle of the discharge chute controls the distance that the snow is thrown. Tilt the discharge chute up for greater distance; tilt down for less distance. Loosen the hand knob on the side of the discharge chute to adjust. Tilt the chute to the desired position, and tighten the knob.

Choke Lever

The location of the choke lever is indicated in Figure 3 inset. You will have to use this lever to start the engine. Push the lever all the way up to the FULL/ON position, or all the way down to the OFF position as desired.

Primer Button

Used to inject fuel directly into the carburetor to insure fast starts in cold weather. Follow engine manual to prime engine.

Ignition Key

Used to start engine. Put key in "ON" position to start for both electric and recoil start engines. Follow starting instructions given in the next section.

Recoil Starter

Used to manually start the engine.

Electric Starter (If Equipped)

Used to start engine with a 120V power source.

Plug for Electric Start

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

Spark Plug Access

Spark plug located under the access cover.

SECTION 4: OPERATING YOUR SNOW THROWER

Before Starting



WARNING: Read, understand, and follow all instructions and warnings on the machine and in this manual before operating.

- The spark plug wire was disconnected for safety. Attach spark plug wire to spark plug before starting.

Gas and Oil Fill-Up

- Check oil and gasoline level and add if necessary. Follow related instructions in the separate engine manual packed with your snow thrower.



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.

To Start Engine

- Insert ignition key into slot. Turn key to ON position.
- Now follow the instructions below as it pertains to your unit. See Figure 4 for location of controls.

Electric Starter(If Equipped)



WARNING: The electric starter 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.

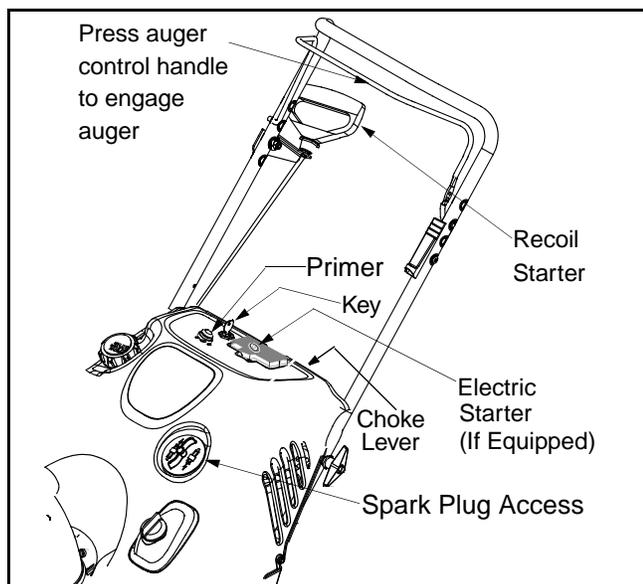


Figure 4

- The electric starter is equipped with a grounded three-wire power cord and plug, and is designed to operate on 120 volt AC household current.
- Determine that your house wiring is a three-wire grounded system. Ask a licensed electrician if you are not certain.
- **If your home wiring system is not a three-wire grounded system**, do not use this electric starter under any conditions.
- **If your home electrical system is grounded**, but a three-hole receptacle is not available, one should be installed by a licensed electrician before using the electric starter.
- **If you have a grounded three-prong receptacle**, proceed as follows.
- Move Choke Control to "Full" position.
- Push Primer three (3) times, making sure to cover vent hole when pushing.
- Connect power cord to switch box on dash panel. Plug the other end of power cord into a three-prong 120-volt, grounded, AC receptacle.
- Push starter button to crank engine. As you crank the engine, move choke lever to FULL choke position.
- When engine starts, release starter button, and move choke gradually to OFF. If engine falters, move choke immediately to FULL and then gradually to OFF.
- When disconnecting the power cord, always unplug from the three-prong receptacle first, and then from the snow thrower.

Recoil Starter

- Move choke lever to FULL choke position (cold engine start).
- If engine is warm, place choke in OFF position instead of FULL.
- Push primer button two or three times for cold engine start.
- If engine is warm, push primer button only once.

NOTE: Always cover vent hole in primer button when pushing. Additional priming may be necessary for first start if temperature is below 15° F (-9° C).

- Grasp starter handle and pull rope out slowly, until it pulls slightly harder. Let rope rewind slowly.
- Pull starter handle rapidly. Do not allow handle to snap back. Allow it to rewind slowly while keeping a firm hold on the starter handle.
- As engine warms up and begins to operate evenly, rotate choke lever slowly to OFF position. If engine falters, return to FULL choke, then slowly move to OFF position.

To Stop Engine

- To stop engine, turn ignition key counter-clockwise. Disconnect the spark plug wire from the spark plug to prevent accidental starting while equipment is unattended.

To help prevent possible freeze-up of starter, proceed as follows:

- Run engine for a few minutes before stopping to help dry off any moisture on the engine.
- **Electric Starter (If Equipped):** Connect power cord to switch box on engine, then to 120 volt AC receptacle. With the engine running, push starter button and spin the starter for several seconds. The unusual sound made by spinning the starter will not harm engine or starter. Disconnect the power cord from receptacle first, and then from switch box.

Recoil Starter: With engine running, pull starter rope with a rapid, continuous full arm stroke three or four times. Pulling the starter rope will produce a loud clattering sound, which is not harmful to the engine or starter.

- Wipe all snow and moisture from the carburetor cover in the area of the control levers. Also, move control levers back and forth several times. Leave throttle control lever in the STOP or OFF position. Leave choke control in the FULL choke position.
- Remove ignition key and disconnect spark plug wire to prevent accidental starting.

Operating the Snow Thrower

The pitch of the discharge chute controls the angle at which the snow is thrown.

- Loosen the wing knob found on the left side of the discharge chute and pivot the upper chute upward or downward to the desired pitch. Retighten the wing knob before operating the snow thrower.

- Position the discharge chute opening by using the Chute Handle to throw the snow in the desired direction. See Figure 5.

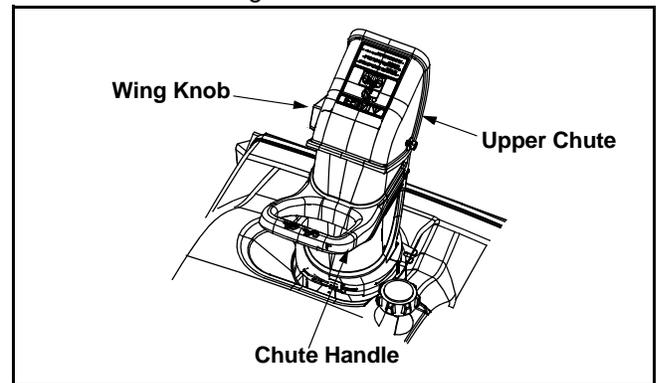


Figure 5

Operating Tips

- Discharge snow downwind whenever possible. Slightly overlap each previously cleared path.
- Lifting up on the handle will allow the rubber on the augers to propel the snow thrower forward. Pushing downward on the handle will raise the augers off the ground and stop forward motion.

NOTE: Excessive upward pressure on the handle will result in premature wear on the rubber auger blades which would not be covered by warranty.

- Run the engine for a few minutes before stopping to help dry any moisture on the engine.
- Clean the snow thrower thoroughly after each use.



WARNING: Muffler, engine and surrounding areas become hot and can cause a burn. Do not touch.

SECTION 5: MAKING ADJUSTMENTS



WARNING: NEVER attempt to make any adjustments while the engine is running, except where specified in the operator's manual.

Shave Plate

- To check the adjustment of the shave plate, place the unit on a level surface. See Figure 6. The wheels, shave plate and augers should all contact level surface. Note that if the shave plate is adjusted too high, snow may blow under the housing. If the shave plate wears out excessively, or the unit does not self-propel, the shave plate may be too low and needs to be adjusted.

NOTE: On new units or units with a new shave plate installed, the augers may be slightly off the ground.

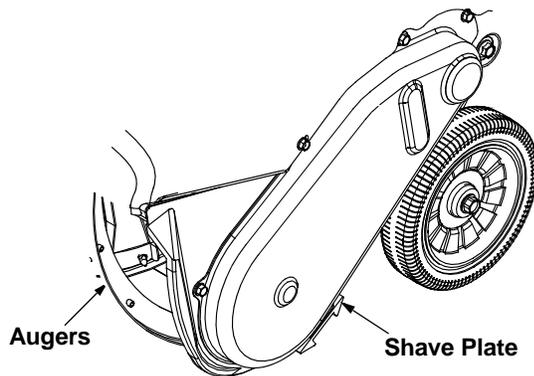
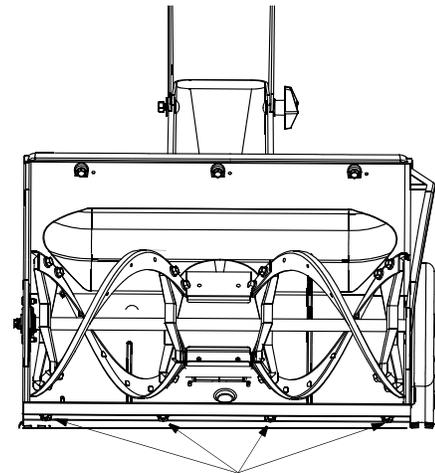


Figure 6

- To adjust, tip the snow thrower back so that it rests on the handle. Loosen the four lock nuts and bolts which secure the shave plate to the housing. See Figure 7. Move the shave plate to desired position and retighten the nuts and bolts securely.



Lock Nut & Carriage Bolt

Figure 7

Control Cable

As a result of both the control cable and the drive belt stretching due to wear, periodic adjustments may be necessary.

If the auger seems to hesitate when rotating while the engine maintains a constant speed, an adjustment is necessary. Proceed as follows:

The upper hole in the control handle provides an adjustment in cable tension. To adjust, disconnect the end of control cable from the bottom hole in the control handle and reinsert it in the upper hole. Test the snow thrower to see if there is a noticeable difference.

Carburetor



WARNING: If any adjustments need to be made to the engine while the engine is running (e.g. carburetor), keep clear of all moving parts. Be careful of muffler, engine and other surrounding heated surfaces.

- Refer to the separate engine manual, packed with your unit, for carburetor adjustment information.

SECTION 6: MAINTAINING YOUR SNOW THROWER



WARNING: Before servicing, repairing, or inspecting, disengage the auger control bail and stop engine. Wait until all moving parts have come to a complete stop. Disconnect spark plug wire and ground it against the engine to prevent unintended starting.

Replacing Belt

- Remove the belt cover by removing five hex screws. See Figure 8.

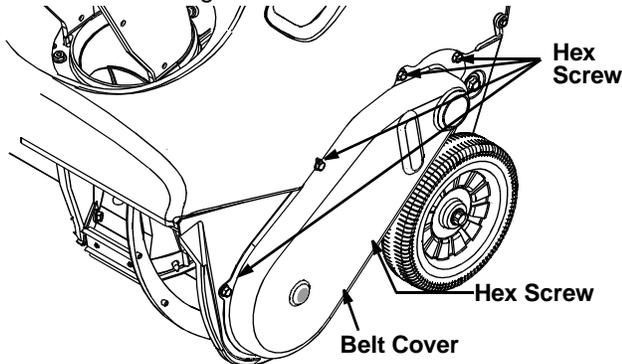


Figure 8

- Pull up on the idler pulley and slip the belt off the engine and auger pulley. See Figure 9.

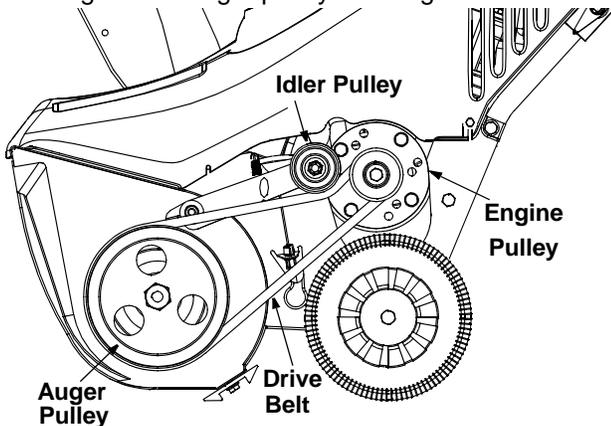


Figure 9

- Reassemble new belt. Reinstall the belt cover.

Replacing Shave Plate

The shave plate is attached to the bottom of the auger housing and is subject to wear. It should be checked periodically. There are two wearing edges and the shave plate can be reversed. Refer to Figure 6. To replace or reverse the shave plate proceed as follows:

- Remove the four carriage bolts and hex lock nuts which attach it to the snow thrower housing.
- Install new shave plate, making sure the heads of the carriage bolts are on the inside of the housing.
- Adjust the shave plate according to instructions on page 9. Tighten securely.

Engine

- Refer to the separate engine manual for all engine maintenance procedures.
- Check engine and snow thrower frequently for loose hardware, and tighten as needed.

Lubrication

Lubricate pivot points on the auger control handle and the extension spring at the end of the control cable with a light oil once every season and before storage of the snow thrower at the end of the season.

Replacing the Auger's Rubber Paddles

The snow thrower auger's rubber paddles are subject to wear and should be replaced if any signs of excessive wear is present.

To change the rubber paddles, proceed as follows:

- Remove the existing rubber paddles by unthreading the self-tapping screws which secure them to the auger.
- Secure the replacement rubber paddles to the auger using the hardware removed earlier.

SECTION 7: OFF-SEASON STORAGE



WARNING: Never store engine with fuel in tank indoors or in enclosed, poorly ventilated areas where fuel fumes may reach an open flame, spark or pilot light as on a furnace, water heater, clothes dryer, or other gas appliance.

- Clean snow thrower thoroughly.
- Lubricate as instructed in "Maintaining Your Snow Thrower" section of this manual.

- Follow "Storage" instructions in the Engine Manual.
- Store in a clean, dry area. Block the snow thrower up so it is not resting on the rubber auger blades.

NOTE: When storing any type of power equipment in a poorly ventilated or metal storage shed, care should be taken to rustproof the equipment, especially springs, cables and all moving parts.

SECTION 8: TROUBLESHOOTING GUIDE

Problem	Cause	Remedy
Engine fails to start	<ol style="list-style-type: none"> 1. Key not in ignition switch or not in ON position. 2. Fuel tank empty, or stale fuel 3. Blocked fuel line 4. Spark plug wire disconnected 5. Faulty spark plug 	<ol style="list-style-type: none"> 1. Insert key and turn to ON position 2. Fill tank with clean fresh gasoline/ oil mixture as specified in the engine manual. 3. Clean fuel line 4. Connect wire to spark plug. 5. Clean spark plug, readjust gap, or replace.
Engine runs erratic	<ol style="list-style-type: none"> 1. Unit running on choke 2. Fuel line blocked, 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. Clean fuel line and fill tank with fresh, clean gasoline. 3. Refer to engine manual on remedy. 4. Refer to engine manual.
Loss of power	<ol style="list-style-type: none"> 1. Spark plug wire loose 2. Vent in fuel cap plugged 3. Engine exhaust pipe plugged. 	<ol style="list-style-type: none"> 1. Connect and tighten spark plug wire. 2. Clear vent. 3. Remove obstruction from exhaust pipe.
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. Check for possible damage. Tighten all bolts and nuts. Repair as needed. If the problem persists, take unit to an authorized service dealer.
Unit fails to self-propel	<ol style="list-style-type: none"> 1. Drive cable out of adjustment 2. Drive belt damaged 	<ol style="list-style-type: none"> 1. Adjust the control cable as instructed on page 9 of this manual. 2. Inspect the drive belt for damage and replace if necessary as instructed on page 10 of this manual.
Unit fails to discharge snow	<ol style="list-style-type: none"> 1. Discharge chute clogged 2. Foreign object lodged in auger 3. Drive cable out of adjustment 4. Drive belt loose or damaged 	<ol style="list-style-type: none"> 1. Stop engine immediately and disconnect spark plug wire. Clean discharge chute and the auger housing. 2. Stop engine immediately and disconnect spark plug wire. Remove object. 3. Adjust the control cable as instructed on page 9 of this manual. 4. Inspect the drive belt for damage and replace if necessary as instructed on page 10 of this manual

For repairs beyond the minor adjustments listed above, contact your nearest authorized service representative or call for the Customer Support Center. Refer to the engine manual for more engine related information.

For US Customers: 1- (330) 220-4MTD (4683) or 1- (800)-800-7310

For Canadian Customers: 1-800-668-1238