Owner's Manual

CRAFTSMAN°

9 Horse Power 28" Two-Stage Wheel Drive **Snow Thrower**

Model No. 247.888530



CAUTION: Before

using this product, read this manual and follow all safety rules and operating instructions.

- Safety
- Assembly
- Operation
- Service
- Maintenance
- Español

Sears, Roebuck And Co., Hoffman Estates, IL 60179, U.S.A.

Visit our website: www.sears.com/craftsman

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TABLE OF CONTENTS

Content	Page
Warranty Information	2
Safe Operation Practices	3
Assembly	6
Operation	12
Maintenance	17

Content	Page
Service & Adjustment	20
Off-Season Storage	25
Trouble-Shooting	26
Parts List	28
Espanòl	40

WARRANTY INFORMATION

Two -Year Warranty on Craftsman Snow Thrower

For two years from the date of purchase, when this Craftsman Snow Thrower is maintained, lubricated and tuned up according to the instructions in the owner's manual, Sears will repair, free of charge, any defect in material and workmanship.

If this Craftsman snow thrower is used for commercial or rental purposes, this warranty applies for only 30 days from the date of purchase.

This warranty does not cover:

Expendable items which become worn during normal use, such as skid shoes, shave plate and spark plugs.

Repairs necessary because of operator abuse or negligence, including bent crankshafts and the failure to maintain the equipment according to the instructions contained in the owner's manual.

WARRANTY SERVICE IS AVAILABLE BY RETURNING THE CRAFTSMAN SNOW THROWER TO THE NEAREST SEARS SERVICE CENTER/DEPARTMENT IN THE UNITED STATES.

This warranty applies only while this product is in use in the United States.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

SEARS, ROEBUCK AND CO., D/817WA, HOFFMAN ESTATES, IL 60179

PRODUCT SPECIFICATIONS	
Horsepower:	Model Number 247.888530
Engine Oil SAE 5W30 oil	Serial Number Date of Purchase
Fuel Capacity: 1 gallon	Record both serial number and date of purchase and keep in a safe place for future reference.
Spark Plug: RJ-19LM	
Engine: 143.999005	

SAFE OPERATION PRACTICES



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 your snow thrower. Failure to comply with these instructions may result in personal injury. When you see this symbol—heed its warning.



Your snow thrower 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 **DANGER:** operator can result in serious injury. If you violate any of these rules, you may cause serious injury to yourself or others.



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 Sears Authorized Service Center (See the REPAIR PARTS section of this manual.)

The engine exhaust from this product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

TRAINING

- Read this owner's guide carefully in its entirety before attempting to assemble or operate this machine. Be completely familiar with the controls and the proper use of this machine before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
- Never allow children under 14 years old to operate a snow thrower. Children 14 years old and over should only operate a snow thrower under close parental supervision. Only persons well acquainted with these rules of safe operation should be allowed to use your snow thrower.
- No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.
- Keep the area of operation clear of all persons, especially small children and pets.
- Exercise caution to avoid slipping or falling, especially when operating in reverse.

PREPARATION

- Thoroughly inspect the area where the equipment is to be used and remove all door mats, sleds, boards, wires and other foreign objects.
- Do not operate equipment without wearing adequate outer garments for winter. Do not wear jewelry, long scarfs or other loose clothing which could become entangled in moving parts. Wear footwear which will improve footing on slippery surfaces.
- Before working with gasoline, extinguish all cigarettes and other sources of ignition. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill the gasoline tank indoors, while the engine is running, or until engine has been allowed to cool at least two minutes. Replace

gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.

- Use a grounded three wire plug-in for all units with electric drive motors or electric starting motors.
- Adjust collector housing height to clear gravel or crushed rock surface.
- Never attempt to make any adjustments while engine is running (except where specifically recommended by manufacturer).
- Let engine and machine adjust to outdoor temperature before starting to clear snow.
- Always wear safety glasses or eye shields during operation or while performing an adjustment or repair, to protect eyes from foreign objects that may be thrown from the machine in any direction.

OPERATION

- Do not put hands or feet near or under rotating parts. Keep clear of discharge opening and auger at all times.
- Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
- Do not carry passengers.
- After striking a foreign object, stop the engine, remove wire from the spark plug and thoroughly inspect the snow thrower for any damage. Repair the damage before restarting and operating the snow thrower.
- If the snow thrower starts to vibrate abnormally, stop the engine and check immediately for the cause.
 Vibration is generally a warning of trouble.
- Stop the engine whenever you leave the operating position, before unclogging the collector/impeller housing or discharge guide and before making any repairs, adjustments, or inspections. Never place your

hand in the discharge or collector openings. Use a stick or wooden broom handle to unclog the discharge opening.

- Take all possible precautions when leaving the unit unattended. Disengage the collector/impeller, stop the engine and remove the key.
- When cleaning, repairing, or inspecting, make certain collector/impeller and all moving parts have stopped. Disconnect spark plug wire and keep away from plug to prevent accidental starting.
- Do not run the engine indoors, except when starting it and/or transporting the snow thrower in or out of building. Open doors before starting the engine in that case. Exhaust fumes are dangerous.
- Do not clear snow across the face of slopes. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.
- Never operate the snow thrower without guards, plates or other safety protection devices in place.
- Never operate the snow thrower near glass enclosure, automobiles, window wells, drop off, etc., without proper adjustments of snow thrower discharge angle. Keep children and pets away.
- Do not overload machine capacity by attempting to clear show at too fast a rate. Never operate the maciume at high transport speeds on slippery surfaces. Look behind and use care when backing.
- Never direct discharge at bystanders or allow anyone in front of unit while throwing snow.
- Disengage power to collector/impeller of the snow thrower when transporting it or when the unit is not in use.
- Use only attachments and accessories (such as wheel weights, counter weights, cabs, etc.) approved

by the snow thrower manufacturer.

- Never operate the snow thrower without good visibility or light. Always be sure of your footing and keep a firm hold on the handles. Walk, never run.
- Muffler and engine become hot and can cause severe burn injury. Do not touch the muffler or the engine while starting or operating the snow thrower.

MAINTENANCE AND STORAGE

- Check shear bolts, engine mounting bolts, etc., at frequent intervals for proper tightness, thus ensuring that the equipment is in safe working condition.
- Never store the machine with fuel in the fuel tank inside a building where ignition sources are present, such as hot water heaters, space heaters, clothes dryers and the like. Allow engine to cool before storing in any enclosure.
- Always refer to owner's guide instructions for important details if the snow thrower is to be stored for an extended period.
- Run machine a few minutes after throwing snow to prevent freeze-up of the collector/impeller.
- Check clutch controls periodically to verify that these engage and disengage properly and readjust if necessary. Refer to Service and Adjustments section page of this owner's guide.

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.

Following are representations of some of the safety labels on your Craftsman snowthrower. Please follow the instruction on these labels and maintain safety while using or servicing the equipment.







HARDWARE PACK

Lay the hardware pieces from the hardware pack on the figure here and you will have automatically sorted these according to the steps of the assembly procedure described later. (Only one unit of each hardware has been shown per group. The number in parenthesis indicates the total number of the hardware needed in that group.)



ASSEMBLY



Figure 1

IMPORTANT: This unit is shipped with engine oil in the engine, but without gasoline. After assembly, see OPERATION section of this manual for fuel selection and fill-up.

NOTE: To determine right and left hand sides of your snow thrower, stand behind the unit in the operating position. See Figure 1 inset.

Your snow thrower has been assembled at the factory except the handles and the handle panel, the discharge chute assembly, the chute crank assembly and the shift rod. These parts are shipped loose in the carton.

Removing From Carton

- Cut the corners of the carton and lay the sides flat on the ground. Remove all packing inserts.
- Remove all loose parts. For a complete list of the loose parts, refer to the following section.
- Move the snow thrower out of the carton.
- Make certain all parts and literature have been removed before discarding the carton.

Loose Parts

(See Figure 1.)

- a. Handle Panel and Chute Assembly
- b. Right Hand & Left Hand Handles

- c. Electric Start Cord
- d. Two-piece Chute Crank Assembly
- e. Shift Rod
- f. Hardware Pack

Assembly Tips: For easier assembly purposes, remove the chute from the carton and lay it on top of the engine. Do not unwrap the chute till you have installed the handle panel and the clutch cables.

Tools Required

- 1. 1/2", 7/16", 3/8" wrenches or a set of adjustable wrenches
- 2. Set of pliers
- 3. Set of philips head screw drivers
- 4. Funnel to fill up gasoline



WARNING: Make certain the spark plug wire is disconnected and moved away from the spark plug before assembling the snow thrower.

Attaching Handle Assembly

 Stretch out control cables and place on the floor. Place the right handle in position with the flat side against the snow thrower. You can identify the right handle by the traction drive control label on it and the left handle by the auger clutch control label on it. Secure bottom hole in the handle to the snow thrower using 5/16 x .75" hex bolt and lock washer from the hardware pack (group A on page 5). Do not tighten at this time. See Figure 2.



Figure 2

- Place a handle tab, included in the hardware pack (group A on page 5), over the upper hole in handle so that the contour of the handle tab matches that of the handle. See Figure 2.
- Secure handle tab to the snow thrower using hex bolt (5/16 x 1.75" long) and lock washer from the same group in the hardware pack. Do not tighten at this time.
- Attach the left handle in the same manner. Do not tighten at this time.
- Place the handle panel in position between the handles so the ends of the curved part of the handles go through the slots in the handle panel. While placing the handle panel, make sure to route chute and chute cable between the handles underneath the panel keeping the cable on top of the engine. Align the holes in the handle with the holes on two sides of the handle panel. See Figure 3.



Figure 3

- Attach the handle panel to the handle with two carriage bolts, cupped washers (cupped side against the handle panel) and hex nuts on each side. Align the contour of the carriage bolt head with the handle. See Figure 3. You will find these fasteners in the hardware pack (group B on page 5). Repeat on other side.
- Align the hole on the curved part of the right handle with the corresponding hole on the right side of handle panel making sure that this end of the handle is firmly placed in the slot on the handle panel. See Figure 3.
- Insert a hex bolt, cupped washer and hex nut from Group F of the hardware pack through these holes as shown in Figure 3.Tighten to secure. Do not attach the left side now.

Attaching Chute

 Place the chute assembly over the chute opening with the chute facing front of the unit.

NOTE: Make sure that the chute cables are straightened while assembling the chute.

- Place the chute flange keeper (flat side down) beneath lip of chute assembly as shown in Figure 4.You will find the chute flange keepers in group E of the hardware pack.
- Insert hex bolt (1/4-20 x .75") and flange nut from group E up through chute flange keeper and chute assembly as shown in Figure 4. Do not tighten at this time. Rotate chute to install all the flange keepers.



Figure 4

 After assembling all three chute flange keepers, tighten, then back off 1/4 turn to allow easier movement of the chute. Use (2) 7/16" wrenches.

Attaching Chute Crank

 On the left side of the handle panel, place the upper chute crank bracket on to the inside of the handle panel support. See Figure 5. You will find this bracket and associated hardware in group F of hardware pack. Insert hex bolt through the upper chute crank bracket, handle panel support, and upper left handle. Secure the bracket using cupped washer and hex nut. Make sure that the cupped side of the washer is set against the handle.



Figure 5

• You may have to loosen the carriage bolts and hex lock nuts which secure the lower chute crank bracket to the extension on the left side of the chute assembly. See Figure 6.



Figure 6

Place one 3/8 ID flat washer (from group G of the hardware pack) on the end of the chute crank, then insert the end of the chute crank into the eye hole in the plastic bushing in the lower chute crank bracket. See Figure 7.





- Place the other 3/8 ID flat washer (from the same group of hardware) on the end of the chute crank and insert hairpin clip into hole at the end of the chute crank. See Figure 7.
- Adjust the chute bracket so that the spiral on the chute crank fully engages the teeth on the chute assembly.
- Slide the upper chute crank through the plastic bushing in the upper chute crank bracket and then into the lower chute crank. See Figure 8. Align the holes on the two pieces of the chute crank, and secure with hairpin clip from group C of the hardware pack.



Figure 8

- Fully rotate the chute, using the chute crank, to make sure that it moves freely.
- Using a wrench, tighten the hex bolt and the hex nut on the upper chute crank bracket.
- Slip the cables that run from the handle panel to the chute into the cable guide located on top of the engine. See Figure 9.





 Tighten all loose hardware on the handle assembly in the following order — first the four hex bolts at the bottom of the handle, then the carriage bolts and lastly the hex bolts on the rear of the handle panel.

Attaching Clutch Cables

The clutch control cables are attached to the snow thrower. For shipping purposes, if the cables are attached to the top of the engine with cable ties, cut the cable ties now. The Z ends of the clutch cables are hooked into the clutch grips on each handle.

- Ensure there is a hex jam nut threaded all the way up the threaded portion of the Z fitting; extras are supplied in the hardware pack. See Figure 10.
- Place the clutch grip in the raised (up) position.



(Viewed from the underside of the handle panel)

Figure 10

- Swing the left auger cable up making sure the cable is routed correctly in the cable roller guides located at the lower rear of the unit.
- Hold the end of the cable at the barrel so the ferrule turns freely without twisting the cable. Thread the ferrule on to the Z fitting. You may have to pull on the cable slightly to relieve tension. Keep the ferrule turning without twisting the cable.
- You will reach correct adjustment when there is minimal slack in the cable but it is not tight. Hold the flats on the ferrule with pliers and tighten the jam nut against the ferrule. CAUTION: Cables will become loose if you do not tighten the jam nut.



WARNING: There must not be any tension on either clutch cable with the drive or auger clutch grip in the disengaged (up) position. These clutches are a safety feature. Do not override their function.

Attaching Shift Rod

- Place the shift lever in the sixth (6) speed.
- Place the bent end of the shift rod into the hole in the shift arm assembly. See Figure 11. Secure with 5/16 flat washer and hairpin clip from group D of the hardware pack.
- Thread ferrule (included in group D) from the right side onto the other end of the shift rod till it lines up with the upper hole in the shift lever (beneath the handle panel). While aligning the ferrule, push down on the shift rod and the shift arm assembly as far as it will go.

NOTE: You may have to pull the shift lever out of the sixth speed position and move it towards the fifth speed position until the ferrule slides into the hole without force.

 Once the ferrule slides into the hole, turn it counter-clockwise one more full turn and insert it in the hole in the shift lever. For proper positioning of the ferrule and the associated hardware, see Figure 11.



Figure 11

- Secure the ferrule to the shift lever with another 5/16 flat washer and hairpin clip from group D of the hardware pack. See Figure 11.
- Make certain to check for correct adjustment of the shift rod as instructed in the Adjustment section before operating the snow thrower.

Attaching Turn Triggers

- Check and make sure that the right hand trigger cable is routed in front of the traction drive cable.
- Feed the trigger cable up through the outer side of the slot in the handle panel. Do not feed the cable through the same side of the slot as the Z fitting.

 Place the cable barrel fitting into the hole in the trigger. You can find the triggers and associated hardware in group H of the hardware pack. See Figure 12.



Figure 12

 Pull on the cable and rotate it around the bottom of the trigger, with the inner cable in the slot, until the cable end can be pushed into the trigger housing and snapped tight. See Figure 12.

NOTE: When the cable is installed correctly, you should not be able to pull the cable out of the trigger housing.

 Place the right turn trigger in position underneath the right handle. Secure with screw and weld nut from group H of the hardware pack. See Figure 13. You will need a phillips screwdriver for tightening the screw. Repeat on left side.



Figure 13

• Secure the right turn trigger cable to the right lower handle using cable tie provided in the hardware pack. Make sure not to wrap *the drive cable*. See Figure 14.



Figure 14

Secure the left turn trigger cable to the lower handle using the other cable tie. Make sure to route the cable tie *below the auger drive cable* so that when the trigger cable is secured by the cable tie, the auger drive cable is left outside the cable tie. Trim excess ends from each cable tie.

NOTE: The right side cable tie must be used to keep cable from coming in contact with the moving shift arm from the transmission.

Lamp Wiring

- Wrap the wire from the lamp down the right handle as shown in Figure 15.
- Plug wire into the alternator lead wire under the fuel tank. See Figure 15.



Figure 15

IMPORTANT: Assemble your snow thrower, then check the adjustments as instructed and make any final adjustments necessary *before* operating the unit. Failure to follow these instructions may cause damage to the snow thrower.

Final Adjustments

Auger Control

- To check the adjustment of the auger control, push forward the left hand clutch grip until the rubber bumper is compressed. There should be slack in the clutch cable.
- Release the clutch grip. The cable should be straight. Make certain you can depress the auger control grip against the left handle completely.
- If adjustment is necessary, loosen the hex jam nut and thread the cable in (for less slack) or out (for more slack).
- Recheck the adjustment. Tighten the jam nut against the cable when correct adjustment is reached.

Traction Drive Clutch and Shift Lever

- Tip the snow thrower forward so that it rests on the auger housing.
- Move the shift lever all the way forward to the sixth (6) position
- With the traction drive lever released, spin the snow thrower wheels by hand. The wheels should turn; however, you may feel some resistance.
- Engage the traction drive clutch grip. The wheels should no longer turn.
- Now release the traction drive clutch grip, and spin the wheels again.
- Move the shift lever back to the fast reverse position, then all the way forward again. There should be no resistance in the shift lever, and the wheels should turn.
- If you face resistance when moving the shift lever or the snow thrower wheels stop when they should not, loosen the lock nut on the traction drive cable and unthread the cable one turn.
- If the wheels can still be turned when you engage the traction drive clutch grip, loosen the lock nut on the traction drive cable and thread the cable in one turn.
- Recheck the adjustment and repeat adjustment as necessary. Tighten the jam nut to secure the cable when correct adjustment is reached.

NOTE: If you are not sure that you have reached correct adjustment, refer to the Adjustment section on page 20.

Skid Shoe

The space between the shave plate and the ground can be adjusted. For close snow removal, place skid shoes in the low position. Use middle or high position when area to be cleared is uneven.

NOTE: It is not recommended that you operate this snow thrower on gravel as loose gravel can be easily picked up and thrown by the auger causing an injury or damage to the snow thrower.

- If for some reason, you have to operate the snow thrower on gravel, keep the skid shoe in the highest position for maximum clearance between the ground and the shave plate.
- Adjust skid shoes by loosening the four hex nuts and carriage bolts and moving skid shoes to desired position.
- Make certain the entire bottom surface of skid shoe is against the ground to avoid uneven wear on the skid shoes.
- Tighten nuts and bolts securely.



Loosen these hardware to adjust skid shoe

Figure 16

Tire Pressure (Pneumatic Tires)

The tires are over-inflated for shipping purposes. Check tire pressure and reduce to 15 to 20 psi. **NOTE:** If the tire pressure is not equal in both tires, the unit may pull to one side or the other.

OPERATION

Knowing Your Snow Thrower



Read this owner's manual and safety rules before operating your snow thrower. Compare illustration below with your snow thrower to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.

The operation of any snow thrower can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always **wear safety glasses** for operating the snow thrower, or while performing any adjustments or repairs on it.



Meets ANSI Safety Standards

Sears snow throwers conform to the safety standards B71.3 of the American National Standards Institute (ANSI).

Operating Controls

(See Figure 17.)

Chute Crank

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

Turn *clockwise* to discharge to the left; Turn *counterclockwise* to discharge to the right.

Throttle Control

The throttle control is located on the engine. It regulates the speed of the engine.

Safety Ignition Switch

The ignition key must be inserted into the switch for the unit to start. Remove the ignition key when the snow thrower is not in use.

Left and Right Turn Trigger

The left and right turn triggers are located on the underside of the handles and are used to assist in steering your snow thrower. Squeeze the right turn trigger when turning right, squeeze the left turn trigger when turning left. Operate your snow thrower in open areas until you become familiar with these controls.

Shift Lever

The shift lever is located in the center of the handle panel. It may be moved into one of eight positions:

- a. Forward—one of six speeds; position one (1) is the slowest and position six (6) is the fastest.
- b. *Reverse*—two reverse (R) speeds; R₂ is faster.

Use the shift lever to determine ground speed. Do not shift to different speed while the unit is moving.

Auger Control

The auger control is located on the left handle. Squeeze the auger control against the handle to engage the augers; release to disengage the augers. (Traction drive control must also be released.)

Traction Drive Control

The traction drive control is located on the right handle. Squeeze the traction drive control to engage the wheel drive; release to stop.

This same lever also locks the auger control so that you can turn the chute crank without interrupting the snow throwing process. If the auger control is engaged with the traction drive control engaged, you can release the auger control (on the left handle) and the augers will remain engaged. Release the traction drive control to stop both the augers and the wheel drive. (Auger control must also be released).

Chute Distance Control Lever

The distance that snow is thrown can be adjusted by adjusting the angle of the chute assembly. Push the chute distance control lever forward to move the upper chute down and decrease the distance. Pull the lever back toward the rear to move the upper chute up and increase the distance.

Stopping Snow Thrower

- To stop the wheels, release the traction drive lever of the snow thrower.
- To stop throwing snow, release the auger drive lever.
- To stop the engine, push the throttle control lever to OFF and pull out the ignition key. Do not turn key.

Before Starting Engine

Fill Gas



WARNING: Gasoline is flammable and caution must be used when handling or storing it.

Do not fill fuel tank while the snow thrower is running, when it is hot or when it is in an enclosed area.

Keep your snow thrower away from any open flame or an electrical spark and do not smoke while filling the fuel tank.

Never fill the fuel tank completely. Fill the tank to within 1/4"-1/2" from the top to provide space for expansion of fuel.

Always fill the fuel tank outdoors and use a funnel or spout to prevent spilling.

Make sure to wipe off any spilled fuel before starting the engine.

- Store gasoline in a clean, approved container and keep the cap in place on the container.
- Make sure that the container from which you pour the gasoline is clean and free from rust or other foreign particles.
- Fill fuel tank with clean, fresh, unleaded grade automotive gasoline.
- At the end of the job, empty the fuel tank if the snow thrower is not going to be used for 30 days or longer. See storage instructions on page 25 of this manual.

CAUTION: Experience indicates that alcohol blended fuels (called gasohol) or those using ethanol or methanol can attract moisture which leads to separation and formation of acids during storage.

Acidic gas can damage the fuel system of an engine while in storage.

To avoid engine problems, the fuel system should be emptied before storage for 30 days or longer. Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. See storage Instructions for additional information.

Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.

To Start Engine



WARNING: Be sure no one other than the operator is standing near the snow thrower while starting or operating. Do not operate this snow thrower unless the discharge chute assembly has been properly installed and is secured.

A. Electric Starter

For location of all the engine controls referred to in this section, see Figure 17 inset. For illustration of starting instructions, see Figure 18.

Before starting, make sure that the engine has sufficient oil. The snow thrower engine is equipped with a 120 volt A.C. electric starter and recoil starter. The electric starter is equipped with a three-wire power cord and plug and is designed to operate on 120 volt AC household current. Follow all instructions carefully.

Cold Start

NOTE: If the unit shows any sign of motion (drive or augers) with the clutch grips disengaged, shut the engine off immediately. Readjust as instructed in the "Final Adjustments" section of the Assembly Instructions.



WARNING: The electric starter must be properly grounded at all times to avoid the possibility of electric shock which may be injurious to the operator.

• Determine whether your house wiring is a threewire grounded system. Ask a licensed electrician if you are not certain.



WARNING: If your house wiring system is not a three-wire grounded system, do not use this electric starter under any conditions.

If your house wiring system is grounded and a three-hole receptacle is not available at the point the snow thrower starter will normally be used, one should be installed by a licensed electrician.



Figure 18

- When connecting the power cord, always connect cord to starter on engine first, then plug the other end into a three-hole grounded receptacle.
- When disconnecting the power cord, always unplug the end from the three-hole, grounded receptacle first.
- Attach spark plug wire to spark plug.

Snow Thrower	Spark Plug wire	Drive Levers	Throttle control	Ignition Key	Choke	Power Cord	Primer	Starter	After starting
Electric Starter	Connect	Release	Move to FAST	Push to snap in	Move to FULL	Connect to source		Push button	1. Release button 2. Move Choke to Off 3. Disconnect cord
Recoil Starter	Connect	Release	Move to FAST	Push to snap in	Move to FULL	_	Prime	Pull handle	1. Release handle 2. Move Choke to Off.

$\frac{2}{3}$ Starting Instructions At A Glance

- Make sure that the auger drive and the traction drive levers are in the disengaged RELEASED position.
- Move throttle control lever to FAST position.
- Remove the keys from the plastic bag. Push key into the ignition slot. Make sure it snaps into place. *Do not turn key.* Keep the second key in a safe place.
- Rotate the choke knob to FULL choke position.
- Connect the power cord to the switch box on the engine.
- Plug the other end of the power cord into a three-hole, grounded 120 volt A.C. receptacle.



WARNING: Do **not** use primer while starting the engine with an electric starter.

- Push down on the starter button until the engine starts. Do not crank for more than 10 seconds at a time. This electric starter is thermally protected. If overheated, it will stop automatically and can be restarted only when it has cooled to a safe temperature (a wait of about 5 to 10 minutes is required).
- When the engine starts, release the starter button and slowly rotate the choke to OFF position. If the engine falters, rotate the choke to FULL and then gradually to OFF.
- Disconnect the power cord from the receptacle first and then from the switch box on the engine.
- Allow the engine to warm up for a few minutes because the engine will not develop full power until it reaches operating temperature.
- Operate the engine at full throttle (FAST) when throwing snow.

Warm Start

 If restarting a warm engine after a shut down, rotate choke to OFF instead of FULL and press the starter button.

B. Recoil Starter

Make sure that the engine has sufficient oil and the auger drive and the traction drive levers are released.

- Move throttle control to FAST position.
- Push key into the ignition slot so that it snaps into place. Do not turn key. Remove plastic bag and keep the second key in a safe place.
- Rotate choke control to FULL choke position.
- Push the primer button while covering the vent hole. Remove your finger from the primer between primes. Do not prime if temperature is above 50° F; prime two times between 50° F and 15° F; and prime four times below 15° F.
- Pull the starter handle rapidly. Do not allow the handle to snap back, but allow it to rewind slowly while keeping a firm hold on the starter handle.

- As the engine warms up and begins to operate evenly, rotate the choke knob slowly to OFF position. If the engine falters, return to FULL choke, then slowly move to OFF choke position.
- Allow the engine to warm up for a few minutes because the engine will not develop full power until it reaches operating temperature.
- Operate the engine at full throttle (FAST) when throwing snow.

Warm Start

 If restarting a warm engine after a temporary shut down, rotate choke to OFF instead of FULL and do *not* prime. Press the starter button.

Frozen Recoil Starter

If the starter is frozen and will not turn the engine, proceed as follows:

- Pull as much rope out of the starter as possible.
- Release the starter handle and let it snap back against the starter.
- If the engine still fails to start, repeat the first two steps. If continued attempts do not free starter, follow the electric starter procedures to start.
- Avoid possible freezing of recoil starter and the engine controls.

Operating Snow Thrower

To Engage Drive

- With the engine running near top speed, move shift lever to one of six FORWARD positions or two REVERSE positions. Select a speed appropriate for the snow conditions that exist. Use slower speeds until you are familiar with the operation of the snow thrower.
- Squeeze the traction drive clutch grip against the right handle and the snow thrower will move. Release it and the drive motion will stop.

To Engage Augers

- To engage the augers and start snow throwing, squeeze the left hand auger clutch grip against the left handle. Release to stop augers.
- While the auger control is engaged, squeeze the traction drive control to move, release to stop.
 Do not shift speeds while the drive is engaged.

NOTE: This same lever also locks the auger control so you can turn the chute crank without interrupting the snow throwing process.

- Release the auger control; the interlock mechanism should keep the auger control engaged until the traction drive control is released.
- Release the traction drive control to stop both the augers and the wheel drive.



WARNING: To stop the auger, both levers must be released.

To Throw Snow

CAUTION: Check the area to be cleared for foreign objects. Remove, if any.

- Start the engine following Starting instructions.
- Rotate the discharge chute to the desired direction, away from bystanders and/or buildings. Move the chute distance control forward or backward to adjust the distance the snow is to be thrown.
- Select the speed according to snow condition.

CAUTION: Never move the shift lever without first releasing the drive clutch.

- Engage the auger control and traction drive control levers following instructions above.
- The interlock feature will allow you to remove your left hand from the auger control lever.
- When clearing the first pass through the snow, control the traction speed of the snow thrower according to the depth and condition of snow.
- To turn the unit left, squeeze left trigger; to turn right, squeeze right trigger.
- On each succeeding pass, readjust the chute deflector to the desired position and slightly overlap the previously cleared path.
- After the area is cleared, stop the snow thrower following instructions given below.

Operating Tips

NOTE: Allow the engine to warm up for a few minutes as the engine will not develop full power until it reaches operating temperature.



Warning: The temperature of muffler and surrounding areas may exceed 150° F. Avoid these areas.

• For most efficient snow removal, remove snow immediately after it falls.

- Discharge snow downwind whenever possible. Slightly overlap each previous swath.
- Set the skid shoes 1/4" below the scraper bar for normal usage. The skid shoes may be adjusted upward for hard-packed snow.

NOTE: It is not recommended that you operate this snow thrower on gravel as loose gravel can be easily picked up and thrown by the auger causing an injury or damage to the snow thrower.

- If for some reason, you have to operate the snow thrower on gravel, keep the skid shoe in the highest position for maximum clearance between the ground and the shave plate.
- Clean the snow thrower thoroughly after each use.

Before Stopping

- Run engine for a few minutes to help dry off any moisture on engine.
- To avoid possible freeze-up of the starter, follow these steps:

Recoil Starter

a. With the engine running, pull the starter rope with a rapid, continuous full arm stroke three or four times.

Electric Starter

- a. Connect power cord to switch box, then to 120 Volt AC receptacle.
- b. While the engine is running, push the starter button and spin the starter for several seconds.
- c. Disconnect power cord from the receptacle first, then from the snow thrower.

NOTE: The unusual sound from pulling the starter rope in the case of the recoil starter, or from spinning the starter in the case of the electric starter, will not harm the engine.

To Stop The Snow Thrower

- To stop the wheel, release the traction drive lever on the snow thrower.
- To stop throwing snow, release auger drive lever.
- To stop engine, push throttle control lever to OFF and pull out the key. *Do not turn key*.

MAINTENANCE

General Recommendations

- Always observe safety rules when performing any maintenance.
- The warranty on this snow thrower does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain the snow thrower as instructed in this manual.
- Some adjustments will have to be made periodically to maintain your unit properly.
- All adjustments in the Service and Adjustments section of this manual should be checked at least once each season.
- Follow the maintenance schedule given below.
- Periodically check all fasteners and make sure these are tight.



WARNING: Always stop the engine and **disconnect** the spark plug wire before performing any maintenance or adjustments.

est constant 141 1416 160 100 100 - K- COUNCIE Kiester Provis Store Proving MAINTENANCE SCHEDULE SERVICE DATES* \checkmark \checkmark Lubricate pivot points $\sqrt{}$ $\sqrt{}$ Clean snow thrower RODUCT $\sqrt{}$ Clean shave plate $\langle \rangle$ Clean skid shoes $\sqrt[]{}$ Check V-belts Check friction wheel $\sqrt{}$ rubber $\sqrt{}$ Check engine oil $\overline{\sqrt{}}$ $\sqrt{}$ Change engine oil ENGINE $\bar{\sqrt{}}$ \checkmark Check spark plug $\sqrt{}$ Check muffler Empty fuel system $\sqrt{}$

Customer Responsibilities

* Fill in dates as you complete regular service

✓ Check; service if needed

Lubrication

For a view of the lubrication points on the snow thrower, see Figure 19.

Sprocket Shaft

 Lubricate the sprocket shaft with grease at least once a season or after every 25 hours of operation.

IMPORTANT: Keep all grease and oil off of the friction wheel and the drive plate.

Shifting Mechanism

 Lubricate the shifting mechanism and pivot points on the shift rod with engine oil at least once a season or after every 25 hours of operation.

Traction Drive Control

• Lubricate cams on the ends of the control rods, which interlock the traction drive and auger controls, at least once a season or every 25 hours of operation with grease. The cams can be accessed beneath the handle panel.

Gear Case

 The gear case is lubricated with grease at the factory and does not require checking. If disassembled for any reason, lubricate with two ounces of Shell Alvania grease.

Bearings

 Once a season lubricate the auger bearings and the bearings on the side of the frame with light oil. See lube chart below.



Figure 19: Lubrication Chart

Check V-belts

Follow the instructions below to check the condition of the drive belts every 50 hours of operation.

- Remove the plastic belt cover on the front of the engine by removing two self-tapping screws.
- Visually inspect for frayed, cracked, or excessively worn out belts.

Check Friction Wheel

Follow the instructions below to check the condition of the friction wheel rubber every 25 hours of operation.

 Remove the six self-tapping screws from the frame cover underneath the snow thrower. See Figure 20.



Figure 20

- Visually inspect the friction wheel rubber for excessive wear, cracks, or loose fit on the friction wheel drive hub.
- Also engage traction drive control and check if the friction wheel is making contact with the friction plate.
- If it does not make contact, adjust the traction drive cable following instructions and recheck the friction wheel.
- Replace friction wheel rubber if necessary. Refer to instructions on page 23.

Engine Maintenance

Engine Oil

Only use high quality detergent oil rated with API service classification SF, SG or SH. Select the oil's SAE viscosity grade according to the expected operating temperature.



Viscosity Chart

NOTE: Although multi-viscosity oils (5W30, 10W30 etc.) improve starting in cold weather, these multi-viscosity oils will result in increased oil consumption when used above 32°F. Check your snow thrower's engine oil level more frequently to avoid possible engine damage from running low on oil.

Refer to the viscosity chart for proper selection of engine oil.

Checking Oil Level

Before operating the snow thrower, check the oil level.

- With engine on level ground, the oil must be to FULL mark on dipstick.
- Stop engine and wait several minutes before checking oil level. Remove oil fill cap and dipstick.
- Wipe dipstick clean, insert it into oil fill hole and tighten securely.
- Remove dipstick and check. If oil is not up to the FULL mark on dipstick, add oil.

Changing Oil

Change engine oil after first two hours of operation and every 25 hours thereafter.

In order to change the oil, you will have to first drain the spent engine oil from the engine and then refill with fresh oil.

 Drain oil while engine is warm. Remove oil drain cap located at the bottom of the recoil starter of the engine. Catch oil in a suitable container.

- When engine is drained of all oil, replace drain plug securely.
- Remove the dipstick from the oil fill. For location of the oil fill, see Figure 17. Pour fresh oil slowly through the plug. Replace dipstick.
- Check and make sure that the level of oil is up to the FULL mark on the dipstick.



WARNING: Temperature of muffler and nearby areas may exceed 150° F(65°C). Avoid these areas.

Spark Plug

- Clean area around the spark plug base.
- Remove and inspect the spark plug.
- Replace the spark plug if electrodes are pitted, burned, or the porcelain is cracked. See Figure 21.
- Clean the spark plug and reset the gap to 0.030" at least once a season or every 50 hours of operation. See Figure 21.
- Spark plug replacement is recommended at the start of each season. Refer to engine parts list for correct spark plug type.

NOTE: Do not sandblast spark plug. Spark plug should be cleaned by scraping or wire brushing and washing with a commercial solvent.



Figure 21

SERVICE & ADJUSTMENTS



WARNING: Always stop the engine, disconnect spark plug wire and move it away from the spark plug before performing any adjustments or repairs.

Never attempt to clean the chute or make any adjustments while the engine is running.

Adjustments

WARNING: Never attempt to clean chute or make any adjustments while engine is running.

Chute Assembly

The distance that snow is thrown can be adjusted by adjusting the angle of the chute assembly. Refer to the Controls section of this manual.

 The remote chute control cables have been preadjusted at the factory. Move the remote chute lever on the control panel back and forward to adjustmangle of the chute asssembly.

Skid Shoe

The space between the shave plate and the ground can be adjusted. For close snow removal, place skid shoes in the low position. Use middle or high position when area to be cleared is uneven.

- Adjust skid shoes by loosening the four hex nuts and carriage bolts and moving skid shoes to desired position.
- Make certain the entire bottom surface of skid shoe is against the ground to avoid uneven wear on the skid shoes.
- Retighten nuts and bolts securely.

NOTE: It is not recommended that you operate this snow thrower on gravel as loose gravel can be easily picked up and thrown by the auger causing an injury or damage to the snow thrower.

 If for some reason, you have to operate the snow thrower on gravel, keep the skid shoe in the highest position for maximum clearance between the ground and the shave plate.

Traction Drive Clutch

Refer to the Final Adjustment section of the Set-Up Instructions to adjust the traction drive clutch. To check the adjustment, proceed as follows:

- With the snow thrower tipped forward (be certain to drain the gasoline or place plastic film under the gas cap if the snow thrower has already been operated), remove the frame cover underneath the snow thrower by removing six self-tapping screws.
- With the traction drive clutch released, there must be clearance between the friction wheel

and the drive plate in all positions of the shift lever.

- With the traction drive clutch engaged, the friction wheel must contact the drive plate (shown in Figure 30).
- If adjustment is necessary, loosen the jam nut on the traction drive cable and thread the cable in or out as necessary. See Figure 22. Tighten the jam nut to secure the cable when correct adjustment is reached. Reassemble the frame cover.

NOTE: If you placed plastic under the gas cap, be certain to remove it.

Auger Clutch

To adjust the auger clutch, refer to Final Adjustment section of Set-Up Instructions.



Shift Rod

To adjust the shift rod, proceed as follows.

- Remove the hairpin clip and flat washer from the shift handle under the handle panel.
- Place shift lever in sixth (6) position or the fastest forward speed.
- Push shift arm assembly down as far as it will go.
- Rotate the ferrule up or down on the shift rod as necessary until the ferrule lines up with the upper hole in the shift lever. See Figure 22.
- Insert ferrule from the left side of the snowthrower into the upper hole in shift lever.
- Reinstall the hairpin clip and the washer.



CAUTION: Check for correct adjustment before operating the snow thrower.

Carburetor



WARNING: If any adjustments are made to the engine while the engine is running (e.g. carburetor), **keep clear** of all moving parts. **Be careful** of heated surfaces and mufflers.

Minor carburetor adjustments may be required to compensate for differences in fuel temperature, altitude and load.

Service

Augers

The augers are secured to the spiral shaft with two shear bolts and hex lock nuts. See Figure 23. If you hit a foreign object or ice jam, the snow thrower is designed so that the bolts will shear. This type of nut is used where vibration occurs.

If the augers do not turn, check to see if the bolts have sheared. Two replacement shear bolts (shown in Figure 23 inset) and hex lock nuts have been provided with the snow thrower. Since lock nuts cannot be threaded onto a bolt by hand, use a wrench. When replacing bolts, spray an oil lubricant into shaft before inserting new bolts.



Figure 23

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.

- Remove the four carriage bolts, belteville washers and hex nuts which attach skid shoes to the snow thrower on two sides. See Figure 23.
- Reassemble new skid shoes with the four carriage bolts, belleville washers (cupped side goes against skid shoes) and hex nuts. Make certain the skid shoes are adjusted to be level.
- To remove shave plate, remove the skid shoe and the rest of hardware including carriage

bolts, belleville washers and hex nuts which attach shave plate to the snow thrower housing. For location of shave plate, see Figure 23.

 Reassemble new shave plate, making sure heads of the carriage bolts are to the inside of the housing. Reinstall skid shoe. Tighten securely.

Replacing Belt



WARNING: Disconnect the spark plug wire from the spark plug and ground.

Auger Belts

 Remove the plastic belt cover on the front of the engine by removing the two self-tapping screws.
See Figure 24.



Figure 24

Disconnect chute crank assembly at the discharge chute by removing the hairpin clip and the two flat washers. See Figure 25.



Figure 25

 Remove the six hex nuts and lock washers which attach the auger housing assembly to the frame assembly. See Figure 26.



WARNING: Do not attempt to change the auger belt without the help of an assistant. It is very important that one person, standing at the operating position, firmly hold the snow thrower housing to prevent it from tipping while the other person replaces the belt. Failure to comply with this may result in injury.



Figure 26

- Standing in the operating position, lift up on the handles and pull the frame assembly towards the rear. The frame and the housing will separate, and the rear auger belt will come off the pulley. Maintain control of the frame assembly while pulling it.
- Remove the two belts from the two engine pulleys. For location of the pulleys, see Figure 27.

Auger Belt



Figure 27

To remove the front auger drive belt, push the idler pulley to the left. See Figure 28. The belt brake should move outward. Lift the front auger drive belt from the front auger pulley.



Figure 28

- Place new belts on the two auger pulleys making sure that the front auger belt is under the belt brake. Route belts under and to the left of the flat idler pulley. Hold the belts upward in this position.
- While lifting up on the handles, bring the frame assembly close to the auger housing, and place the two belts on the front and rear engine pulleys. See Figure 29.



Figure 29

 Level the frame assembly and tip the auger housing forward to align studs with the corresponding holes on both sides of the frame assembly. See Figure 26. Push the frame assembly fully on to the studs.

NOTE: Use care to avoid pinching the control cable.

• From the frame assembly side, insert six lock washers and hex nuts on to the studs. These pieces of hardware were removed earlier. See Figure 26. Tighten the nuts securely.

- Reinstall the belt cover on front of the engine with the two self-tapping screws and flat washers.
- Reattach the chute crank to the chute assembly with the hairpin clip and flat washer.

NOTE: Make sure that the auger cable is routed in front of the belt.

Drive Belt

- Check drive belt every 50 hours of operation for wear and tear.
- Drain the gasoline from the snow thrower, or place a piece of plastic under the gas cap.
- Remove the plastic belt cover on the front of the engine by removing the two self-tapping screws.
- Tip the snow thrower up and forward, so that it rests on the housing.
- Remove six self-tapping screws from frame cover underneath the snow thrower.
- Pull the idler pulley away from the drive belt and remove the belt from the engine pulley. You will find the idler pulley in front of the engine and under the belt cover that you removed earlier. See Figure 27.
- Working from the underside of the frame, slip belt between the friction wheel and the friction wheel disc. See Figure 30. You may have to twist the belt flat in order to slide it through the clearance between the friction wheel and the friction wheel disc. Remove the belt.
- Install new belt. Reassemble following the instructions in reverse order.



Figure 30

Changing Friction Wheel Rubber

- Check the rubber on the friction wheel after 25 hours of operation, and periodically thereafter. Replace the rubber if any signs of wear or cracking are found.
- Drain the gasoline from the snow thrower, or place a piece of plastic under the gas cap.
- Tip the snow thrower up and forward, so that it rests on the housing.
- Remove six screws from the frame cover underneath the snow thrower.
- Remove klick pin securing the left wheel, and remove the wheel from the axle.
- Remove the four screws securing the left drive cover to the frame. Remove the drive cover from the side of the frame. See Figure 31.



Figure 31

- Holding the friction wheel assembly, slide the hex shaft out of the left side of the unit. The spacer on the right side of the hex shaft will fall and the sprocket should remain hanging lose in the chain.
- Lift the friction wheel assembly out between the axle shaft and the drive shaft assemblies.
- Remove the six screws from both sides of the friction wheel assembly. Remove friction wheel rubber from between the friction wheel plate.
- Reassemble new friction wheel rubber to the friction wheel assembly, tightening the six screws in rotation and with equal force. It is important to assemble the rubber on the friction wheel equally for proper functioning.
- Insert the pin from the shift arm assembly into the friction wheel assembly and hold assembly in position. See Figure 32.



Figure 32

- Slide the hex shaft through the left side of the housing and through the friction wheel assembly.
- Insert the hex shaft through the sprocket and the spacer. See Figure 33. Make certain that the chain engages both the large and the small sprocket.

NOTE: If the sprocket fell from the snow thrower while removing the hex shaft, place the sprocket on the hex shaft. Position the hex hub of the sprocket toward the friction wheel when sliding the sprocket on to the hex shaft. See Figure 33.



Figure 33

- Align the hex shaft with the right hand bearing and carefully guide the left hand bearing into the left side of the housing.
- Reassemble the drive cover with the four screws that were earlier removed.

Note: If you placed plastic under the gas cap, be certain to remove it.

Carburetor

If you think the carburetor needs to be adjusted, see your nearest authorized Sears Service Outlet. If your snow thrower is left unused for 30 days or longer, it needs to be prepared for storage. Also, at the end of the snow season, you should follow the same set of instructions and store the snow thrower properly for the off-season. Proper storage ensures longer life of the snow thrower.



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

OFF-SEASON STORAGE

If the snow thrower will not be used for 30 days or longer, or at the end of the snow season when the last possibility of snow is gone, the equipment needs to be stored properly. Follow storage instructions below to ensure top performance from the snow thrower for many more years.

Preparing Engine



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

It is important to prevent gum deposits from forming in essential fuel system parts of the engine such as the carburetor, fuel filter, fuel hose or tank during storage. Also experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage.

To avoid engine problems, the fuel system *should be emptied* before storage for 30 days or longer. Follow these instructions to prepare your snow thrower for storage:

 Remove all gasoline from the carburetor and the fuel tank to prevent gum deposits from forming on these parts and harming the engine.



Figure 34



WARNING: Drain fuel into approved container outdoors, away from any open flame. Be certain engine is cool. Do not smoke.

Fuel left in engine during warm weather deteriorates and will cause serious starting problems.

- Run the engine until the fuel tank is empty and it stops due to lack of fuel.
- Drain carburetor by pressing upward on bowl drain, located below the carburetor cover. See Figure 34.



WARNING: Do not drain carburetor if using fuel stabilizer. Never use engine or carburetor cleaning products in the fuel tank or permanent damage may occur.

NOTE: Fuel stabilizer (such as STA-BIL) is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to gasoline in fuel tank or storage container. Always follow mix ratio found on stabilizer container. Run engine at least 10 minutes after adding stabilizer to allow it to reach the carburetor. Do not drain carburetor if using fuel stabilizer.

 Remove the spark plug and pour one (1) ounce of engine oil through the spark plug hole into the cylinder. Cover spark plug hole with a rag and crank the engine several times to distribute the oil. Replace spark plug.

Preparing Snow Thrower

- When storing the snow thrower in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any chains, springs, bearings and cables.
- Remove all dirt from exterior of engine and equipment.
- Follow lubrication recommendations on page 18.
- Store in a clean, dry area.

TROUBLE-SHOOTING

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	Fuel tank empty, or stale fuel.	Fill tank with clean, fresh gasoline. Fuel will not last over thirty
		days unless a fuel stabilizer is used.
	Blocked fuel line.	Clean fuel line.
	Choke not in ON position	Move switch to ON position
	Faulty spark plug.	Clean, adjust gap or replace.
	Key not in switch on engine.	Insert key.
	Spark plug wire	Connect spark plug wire.
	disconnected.	
	Primer button not depressed.	Refer to the engine manual packed with your unit.
	Fuel shut-off valve closed	Open fuel shut-off valve.
	(if so equipped).	
	Throttle in Stop position	Move Throttle to RUN position.
Engine runs erratic	Unit running on CHOKE.	Move choke lever to OFF position.
	Blocked fuel line or stale fuel.	Clean fuel line; fill tank with clean fresh gasoline. Fuel will not last
		over thirty days unless a fuel stabilizer is used.
	Water or dirt in fuel system.	Drain fuel tank. Refill with fresh fuel.
	Carburetor out of adjustment.	Refer to the engine manual packed with your unit or have
▶		carburetor adjusted by an authorized service dealer.
oss of power	Spark plug wire loose.	Connect and tighten spark plug wire.
	Gas cap vent hole plugged.	Remove ice and snow from cap. Be certain vent hole is clear.
	Exhaust port plugged.	Clean-see Maintenance section of engine manual.
Engine overheats	Carburetor not adjusted	Refer to the engine manual packed with your unit or have
	properly.	carburetor adjusted by an authorized service dealer.
Excessive vibration	Loose parts or damaged	Stop engine immediately and disconnect spark plug wire. Tighten
	auger.	all bolts and nuts. Make all necessary repairs. If vibration
		continues, have unit serviced by an authorized service dealer.
Unit fails to propel	Incorrect adjustment of drive	Adjust drive cable. Refer to Adjustment section of this manual.
itself	cable.	Replace drive belt. Refer to Belt Replacement in Maintenance
	Drive belt loose or damaged.	section of this manual.
	Rubber on friction wheel worn	Replace rubber following instructions on page 23.
	off	
Unit fails to	Discharge chute clogged.	Stop engine immediately and disconnect spark plug wire. Clean
discharge snow		discharge chute and inside of auger housing.
	Foreign object lodged in	Stop engine immediately and disconnect spark plug wire.
	auger.	Remove object from auger.
	Incorrect adjustment of drive	Adjust drive cable. Refer to Adjustment section of this manual.
	cable.	Replace drive belt. Refer to Belt Replacement in Maintenance
	Drive belt loose or damaged.	section of this manual.



NOTE: For repairs beyond the minor adjustments listed above, please contact your nearest SEARS service center.

LABELS MAP



REPAIR PARTS



NOTE: For painted parts, please refer to the list of color codes below. Please add the applicable color code, wherever needed, to the part number to order a replacement part. For instance, if a part, numbered 700-xxxx, is painted polo green, the part number to order would be 700-xxxx-0689. Polo Green: 0689 Powder Black: 0637

Key. No.	Part No.	Description	Key. No.	Part No.	Description
1.	05931A	Bearing Housing	22.	736-0167	Flat Washer
2.	684-0041C	Auger Housing Assy. 28"	23.	736-0188	Flat Washer
З.	684-0065	Impeller Assy. 12" dia.	24.	736-0242	Belleville Washer
4.	705-5226	Chute Reinforcement	25.	736-0463	Flat Washer
6.	710-0451	Carriage Bolt 5/16-18 x .75" Gr.2	26.	737-0318	Grease
7.	710-0459A	Hex Screw 3/8-24 x 1.5" Gr.5	27.	738-0281	Shoulder Screw
8.	710-0604	Hex Washer Head Self-Tapping	28.	741-0245	Hex Flange Bearing
		Screw 5/16-18 x .62"	29.	741-0309	Flange Ball Bearing
9.	710-0703	Carriage Screw 1/4-20 x .75"	30.	741-0475	Bushing
10.	710-0890A	Shear Bolt 5/16-18 x 1.5"	31.	741-0493A	Flange Bushing
11.	712-0116	Jam Nut 3/8-24	32.	756-0178	Flat Idler
12.	712-0324	Hex Lock Nut 1/4-20	34.	784-5632A	Auger Idler Arm
13.	712-0429	Hex Lock Nut 5/16-18	35.	784-5647	Chute Crank Bracket
14.	712-0798	Hex Nut 3/8-16 Gr.2	36.	605-5196A	Spiral Assembly: RH 28"
15.	712-3010	Hex Nut 5/16-18 Gr.5	37.	605-5197A	Spiral Assembly: LH 28"
16.	712-3068 🖌 🖕	Hex Patch Nut 5/16-18	38.	618-0122	Gear Assembly: Auger 28"
17.	715-0114	Spiral Pin	39.	784-5582A	Shave Plate: Auger 28"
18.	731-1379B	Chute Adapter	40.	710-0451	Carr. Bolt: 5/16-18 x 0.75
19.	732-0611	Extension Spring	41.	712-3010	Hex Nut: 5/16-18 Gr.5
20.	736-0119	Lock Washer	42.	736-0242	Belleville Washer
21.	736-0169	Lock Washer	43.	784-5580	Slide Shoe



Key. No.	Part No.	Description	Key. No.	Part No.	Description
1.	618-0043	Dogg Assembly: RH	28.	736-0105	Bell Washer
2.	618-0044	Dogg Assembly: LH	29.	736-0160	Flat Washer
3.	618-0303B	Shift Assembly: Steerable Drive	30.	736-0169	Lock Washer
4.	656-0012A	Friction Wheel Disc Assy.	32.	736-0351	Flat Washer
5.	684-0014B	Shift Rod Assembly	33.	736-0626	Flat Washer
6.	684-0042CB	Bearing	34.	737-0170	Lubricant: 6 in !
7.	784-5731A	Transmission Frame	35.	737-0318	Grease
8.	684-0131A	Support Bracket Assembly	36.	738-0924	Shoulder Screw
9.	710-0599	Hex Washer Hd. TT Screw 1/4-20 x	37.	741-1111	Hex Flange Bearing
		0.5"	38.	741-0598	Hex Flange Bearing
10.	710-0809	Hex Washer Hd. TT Screw 1/4-20 x	39.	741-0600	Ball Bearing
l		1.25"	40.	741-0701	Flange Bushing
11.	710-1652	Hex Washer Hd. TT Screw 1/4-20 x	41.	746-0897	Auger Clutch Cable
	[.625"	42.	746-0898	Drive Clutch Cable
12.	711-1267	Drive Shaft	43.	746-0956	Steering Cable
13.	711-1268	Actuator Shaft	44.	748-0190	Spacer
14.	711-1364	Pin	45.	750-1161A	Support Tube: Axle
15.	712-0711	Jam Nut 3/8-24 Gr.8	46.	750-1162	Spacer
16.	712-3017	Hex Nut: 3/8-16	47.	756-0625	Roller Cable
17.	713-0233	Chain	48.	784-5590	Shift Bracket
18.	713-0374	Chain	49.	784-5687A	Auger Clutch Cable Guide Bracket
19.	713-0413	Sprocket: 10⊤	50.	784-5689A	Front Support Guide Bracket
20.	713-0472	Sprocket	51.	784-5730A	Retaining Shaft: Actuator Drive
21.	714-0104	Cotter Pin	52.	784-5732	Frame Cover
22.	736-0142	Flat Washer	53.	784-5733	Roller Bracket: Drive Cable
23.	714-0474	Cotter Pin	54.	710-1233	Oval C-Sunk Machine Screw
24.	716-0102	Snap Ring	55.	712-0127	Weld Nut
25.	721-0263	Adhesive: Loctite	56.	725-0157	Cable Tie (not shown)
26.	732-0209	Extension Spring	57.	746-0950	Turn Trigger
27.	732-0264	Extension Spring		<u> </u>	



Key No.	Part No.	Description	Key No.	Part No.	Description
1	629-0058	Harness for Headlight	40	737-0133	Grease
2	684-0008A-	Shift Arm Assembly	43	746-0896	Chute Deflector Control Cable
	0637		44	746-0901	Chute Deflector Cable
3	684-0053A	Lower Chute Crank Assembly			w/ Clip
4	684-0066	Hardware Pack*	45	747-0798A	Shift Rod
5	684-0102	Handle Panel Assembly w/ Tilt	46	747-0877	Cam Rod
6	684-0111A	Handie Assembly Engagement	47	748-0362	Cam Handle Lock
		(L.H.)	48	748-0363	Pawl Handle lock
7	684-0112	Handle Assembly Engagement	49	749-0908A	Right Handle
	710.0000	(R.H.)	50	749-0909	Left Handle
8	710-0262	Carriage Bolt 5/16-18 x 1.50 Hex Bolt 5/16-18 x 1.5	51	784-5594	Cable Bracket
9	710-0442		52	784-5604	Chute Tilt Handle
10	710-0451	Carriage Bolt 5/16-18 x.75	53	784-5619A	Shift Handle
11	710-0459	Hex Screw 3/8-24 x 1.5	54	784-5679	Handle Support Bracket (L.H.) 5/8
12	710-0599	Hex Washer Hd. TT Screw 1/4-20 x 0.5"	55	784-5680	Handle Support Bracket (R.H.) 5/8
10	710-0896	Hex AB Tap Screw 1/4 x .62	56	784-5681	Handie Support Bracket (L.H.) 3/8
13	710-0090	Hex B-Tapp Screw # 10-16 x .62	57	784-5682	Handle Support Bracket (R.H.) 3/8
14		Clevis Pin	58	712-3010	Hex Nut 5/16-18 Thd.
15		Hex Ins. Lock Nut 3/8-24	59	712-3027	Hex Flange Locked Nut 1/4-20 Thd.
16	712-0116		60	712-0287	Hex Nut 1/4-20
17	712-0415	Self-Threading Nut Lock Nut 5/16-18	61	736-0119	Lock Washer 5/16
18	712-0429	Cotter Pin	62	784-5599	Handle Tab
20	714-0104	Boll Pin	63	710-3180	Hex Bolt 5/16-18 x 1.75 Gr.5
21	715-0138		64	710-3008	Hex Bolt
22	720-0201A	Chute Crank Knob	65	736-0275	Flat Washer 5/16
23	720-0300	Shift Knob	66	736-0185	Flat Washer 3/8 x .738 x .063
24	725-1300	Headlight	67	714-0104	Hairpin Clip
25	726-0100	Push Cap	68	731-0851A	Chute Flange Keeper
26	731-1300A	Lower Chute	69	710-3015	Hex Bolt 1/4-20 x 0.75" Gr.5
27	731-1313B	Cable Guide	70	711-0677	Ferrule
28	731-1317	Headlight Bezel	71	710-0262	Carriage Bolt 5/16-18 x 1.50
29	731-1320	Upper Chute	72	746-0778	Z Fitting
30	731-1773A	Handle Panel	73	712-0121	Hex Nut # 10-24
31	732-0145	Compression Spring	74	705-5266	Chute Crank Reinforcement
32	732-0193	Compression Spring	1		Bracket
33	732-0705	Cable Control Wire	75	736-0242	Cupped Washer
34	732-0746	Torsion Spring	76	714-0101	Hairpin Clip
35	735-0199A	Rubber Bumper	77	750-0785	Spacer
36	736-0105	Bell Washer .380 x .880 x .062	78	747-0737	Upper Chute Crank
37	736-0159	Washer 5/6 I.D.	79	736-0270	Bell Washer
38	736-0506	Special Washer	80	715-0138	Roll Pin
39	736-0509	Special Washer		1	

* Includes references 58 through 75

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Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1.	05896A	Idler Bracket	13.	736-0247	Flat Washer
2.	710-0230	Hex Bolt 1/4-28 x 0.5" Gr.5	14.	736-0270	Beil Washer
З.	710-0627	Hex Screw w/ patch: 5/16-24 x 0.75"	15.	736-0331	Bell Washer
4.	710-0654A	Hex Washer HeadTT Sems Screw	16.	736-0505	Flat Washer
5.	710-0696	Hex Bolt 3/8-24 x .875" Gr.8	17.	737-3007	Grease
6.	710-1245	Hex Screw w/ Patch: 5/16-24 x .875"	18.	748-0234	Shoulder Spacer
		Gr.5	19.	748-0360	Adapter Pulley
7.	710-1652	Hex Washer Head TT	20.	754-0346	V-Belt
8.	710-3005	Hex Screw: 3/8-16 x 1.0"	21.	754-0430A	Belt
9.	712-0181	Top Lock Jam Nut: 3/8-16	22.	756-0313	Flat Idler
10.	731-1324	Belt Cover	23.	756-0569	Pulley Half
11.	732-0710	Extension Spring	24.	756-0967	Auger Pulley
12.	736-0242	Bellevile Washer	25.	756-0986	Pulley Half
			26.	756-0987	Pulley Half



Key No.	Part No.	Description	Qty.	Key No.	Part No.	Description	Qty.
1	35385	Cylinder	1	93	650881	Flywheel Nut	1
2	27652	Dowel Pin	2	100	35135	Solid State Ignition	1
3	650820	Screw	2	101	610118	Spark Plug Cover	1
4	—	Oil Drain Extension	1	102	651024	Solid State Mounting Stud	2
5	30969	Extension Cap	1	103	651007	Screw, Torx	2
15	30699C	Governor Rod	1	110	35187	Ground Wire	1
15A	30700	Governor Yoke	1	110A	37047	Ground Wire	1
15B	650494	Screw	1	119	36448	Cylinder Head Gasket	1
16	33454	Governor Lever	1	120	36449	Cylinder Head	1
17	29916	Governor Lever Clamp	1	125	27878A	Exhaust Valve (Std.)	1
18	651028	Screw, Torx	1	125	27880A	Exhaust Valve (1/32" Os)	1
19	34663	Speed Control Spring	1	126	34035	Intake Valve(Std.)	1
20	35319	Oil Seal	1	126	34036	Intake Valve (1/32" Os)	1
25	36460	Blower Housing Baffle		127	650691	Washer	2
26	650561	Screw	2	130	6021A	Screw	7
28	30322	Leck Nut	1	130A	650727	Screw	2
30	35980A	Crankshaft		130B	651055	Screw	2
35			_	+ 1			
	29826	Screw	1	135	35395	Resistor Spark Plug	1
36	29918	Lock Washer	1	139	33369	Governor Gear Bracket	1
37	29216	Lock Nut	1	140	650836	Screw	2
38	29642	Retaining Ring	1	149	27882	Valve Spring Cap	1
40	40011	Piston, Pin & Ring Set (Std.)	1	149A	35862	Valve Spring Cap	1
40	40012	Piston, Pin & Ring Set (.010" O	1.	150	27881	Valve Spring	2
41	40009	Piston, & Pin Ass'y.(Std.)	1	151	32581	Valve Spring Keeper	2
41	40010	Piston, & Pin Ass'y.(.010" OS)	1	169	27896A	Valve Cover Gasket	1
42	40013	Ring Set (Std.)	1	170	28423	Breather Body	1
42	40014	Ring Set (.010" OS)	1	171	28424	Breather Element	1
43	27888	Piston Pin Retaining Ring	2	172	28425	Valve Cover	1
45	36897	Connecting Rod Ass'y.	1	173	35350	Breather Tube	1
47	651033	Connecting Rod Bolt	2	174	650128	Screw	2
48	34034	Valve Lifter	2	178	29752	Nut & Lock Washer	2
49	36896	Oil Dipper	1	182	30088A	Screw	2
50	36655	Camshaft (MCR)	1 1	183	34587A	Choke Bracket	1
60	33273A	Blower Housing Extension	1	184	33263	Carburetor to intake	1
65	650128	Screw	1			pipe gasket	
69	35262A	Cylinder Cover Gasket	1	185	33877	Intake Pipe	1
70	35445A	Cylinder Cover	1	186	34667	Governor Link	1
71	35377	Crankshaft Bushing	1	186B	36652	Choke Spring	1
75	35319	Oil seal		200	34677	Control Bracket	1
76	28926	Camshaft Seal	1	203	31342	Compression Spring	1
80	31845	Governor Shaft		204	651029	Torx. Screw	1
81	30590A			206	610973	Terminal	1
82	35378	Governor Gear Asss'y.		200	33878	Throttle Link	1
83	30588A	Governor Spool		209	650821	Screw	2
84	29193	Retaining Ring		215	35440	Control Knob	
86	650833	Screw	7	213	34586	Choke Rod	
87	650832	Screw		219	35438	Choke Knob	1
89				220	28820	Screw	2
	32589	Flywheel Key	1				2
90 02	611093	Flywheel (W/ Ring Gear)		223	650378	Screw, Torx	
92	650880	Belleville Washer	1	224	27915A	Intake Pipe Gasket	1

Table continued from previous page

Key No.	Part No.	Description	Qty.	Key No.	Part No.	Description	Qty.
260	35447A	Blower Housing	1	327	35392	Starter Plug	1
261	650788	Screw	2	328	35593	Ignition Key	2
262	29747B	Screw, Torx	2	329	610973	Terminal	1
264A	650802	Screw	1	335	35057A	Carburetor Cover	1
265	33272B	Cylinder Head Cover	1	336	650765	Screw	1
275	35056	Muffler	1	338	28942	Screw	2
276	31588	Locking Plate	1	340	34154	Fuel Tank Bracket	1
277	651002	Screw	2	341	34155	Fuel Tank Bracket	1
281	33013	Starter Bubble Cover	1	342	650561	Screw	1
282	650760	Screw	1	343	35079	Key Switch Bracket	1
285	35985B	Starter Cup	1	350	570682A	Primer Bulb	1
287	29752	Nut & Lock Washer	4	351	32180C	Primer Line	1
290	30705	Fuel Line	1	355	590574	Starter Handle	1
292	26460	Fuel Line Clamp	4	364	33377	Carburetor Cover Bracket	1
298	650665	Screw	2	365	650767	Screw	2
300	34156A	Fuel Tank	1	370A	36501	Primer Decal	1
301	35355	Fuel Cap	1	370B	35077	Choke Decal	1
305	35554	Oil Fill Tube	1	370C	35878	Warning Decal	1
307	35499	"O" Ring	1	380	640052	Carburetor	1
308	35540	Fill Tube Clip	1	390	590749	Rewind Starter	-
310	36205	Dipstick	1	396	37000	Electric Starter Motor	1
314	650873	Screw	1	400	36450A	Gasket Set] -
315	611111	Alternator Coil	1	900	—	Replacement Engine-none	0
323B	611118	Terminal	1	900	-	Short Block 756325	
325	29443	Wire Clip	1			Order from 71-999	

Recoil Starter



Key	Part		
No.	No.	Description	Qty.
0	590733	Rewind Starter	1
1	590599A	Spring Pin (Incl. 4)	1
2	590600	Washer	1
3	590696	Retainer	1
4	590601	Washer	1
5	590697	Brake Spring	1
6	590698	Starter Dog	2 2
7	590699	Dog Spring	2
8	590709	Pulley & Rewind Spring Ass'y.	1
11	590734	Starter Housing Ass'y.	1
12	590535	Starter Rope (Length 98" x	
		9/64" Dia.)	1
13	590574	Mitten Grip Handle (Not	
		Included With Starter)	1

CARBURETOR



Key	Part		
No.	No.	Description	Qty.
0	640052	Carburetor (Incl. 184 of	
U	040002	Engine Parts List)	4
1	631776A	Throttle Shaft & Lever Ass'y.	1
2	631970	Throttle Return Spring	1
6	631778	Throttle Shutter	1
7	650506	Shutter Screw	
10	632112	Choke Shaft & Lever Ass'y.	2
14	632172	Choke Shutter	
15	630735		
16	632164	Choke Positioning Spring Fuel Fitting	
17	650417	Throttle Crack Screw/Idle	
17	000417	Speed Screw	-
18	630766	Tension Spring	1
20	640016	Idle Restrictor Screw	
20A	640053	Idle Restrictor Screw Cap	1
25	631951	Float Bowl Ass'y. (Incl. 32 &	
20	031951	33)	4
27	631024	Float Shaft	1
28	632019	Float	
20	631028	Float Bowl "O" Ring	
30	631028	Inlet Needle, Seat & Clip	
30	031021		4
31	631022	(Incl. 31) Spring Clip	
32	27136A	Bowl Drain Ass'y.	
32	27554	Drain Plunger Gasket	
36	640005	Main Nozzle Tube	1 1 2 1
37	632547	O Ring	5
40	640055	High Speed Bowl Nut	1
40	27110	Bowl Nut Washer	
44	630748	Welch Plug, Idle Mix. Well	
47	631027	Welch Plug, Atmospheric	'
40	031027	Vent	1
	632760		
	032700	Repair Kit	1
L	I		1

In U.S.A. or Canada for in-home major brand repair service: Call 24 hours a day, 7 days a week 1-800-4-MY-HOMESM(1-800-469-4663) Para pedir servicio de reparación a domicillio — 1-800-676-5811 Au Canada pour tout le service ou les pièces — 1-800-469-4663

> For the repair or replacement parts you need: Call 6 a.m. — 11 p.m. CST, 7 days a week PartsDirectSM

1-800-366-PART (1-800-366-7278) Para ordenar piezas con entrega a domicillio — 1-800-659-7084

For the location of a Sears Service Center in your area: Call 24 hours a day, 7 days a week 1-800-488-1222

To purchase or inquire about a Sears Maintenance Agreement: Call 7 a.m. — 5 p.m. CST, Monday — Saturday 1-800-827-6655

