

SEARS

**OWNER'S
MANUAL**

**MODEL NO.
247.884410**



CRAFTSMAN®

**4 HORSEPOWER
2 CYCLE ENGINE
21" SINGLE STAGE
120 V. ELECTRIC STARTER
SNOW THROWER**

**Caution:
Read and Follow
all Safety Rules
and Instructions
Before Operating
This Equipment**

**Assembly
Operation
Maintenance
Service and Adjustment
Repair Parts**

SAFETY RULES



WARNING: TO REDUCE THE POTENTIAL FOR ANY INJURY, COMPLY WITH THE FOLLOWING SAFETY INSTRUCTIONS. FAILURE TO COMPLY WITH THE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.

TRAINING

- Read this owner's guide carefully. Be thoroughly familiar with the controls and proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
- Never allow children to operate equipment. Never allow adults to operate equipment without proper instructions.
- 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.
- Disengage all clutches and shift into neutral before starting engine.
- Do not operate equipment without wearing adequate winter outer garments. Wear footwear which will improve footing on slippery surfaces.
- Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill the fuel tank indoors, while the engine is running, or while the engine is still hot. 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.
- 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 rotating parts. Keep clear of discharge opening at all times.
- Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.
- After striking a foreign object, stop the engine, remove wire from 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 should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.

- Stop engine whenever you leave the operating position, before unclogging the collector/impeller housing or discharge guide, and making any repairs, adjustments, or inspections.
- Take all possible precautions when leaving the unit unattended. Disengage the collector/impeller, shift into neutral, 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 engine indoors, except when starting engine and transporting snow thrower in or out of building. Open doors. Exhaust fumes are dangerous.
- Do not clear snow across the face of slopes. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.
- Never operate snow thrower without guards, plates, or other safety protection devices in place.
- Never operate 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 snow at too fast a rate.
- Never operate the machine 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.
- Disengage power to collector/impeller when transporting or not in use.
- Use only attachments and accessories approved by the manufacturer of snow thrower (such as wheel weights, counter weights, cabs, etc.).
- Never operate the snow thrower without good visibility or light. Always be sure of your footing and keep a firm hold on the handles. Walk, never run.

MAINTENANCE AND STORAGE

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



LOOK FOR THIS SYMBOL TO POINT OUT IMPORTANT SAFETY PRECAUTIONS. IT MEANS—ATTENTION!!! BECOME ALERT!!! YOUR SAFETY IS INVOLVED.

CONGRATULATIONS on your purchase of a Sears Craftsman Snow Thrower. It has been designed, engineered and manufactured to give you the best possible dependability and performance.

Should you experience any problem you cannot easily remedy, please contact your nearest Sears Service Center/Department. We have competent, well-trained technicians and the proper tools to service or repair this unit.

Please read and retain this manual. The instructions will enable you to assemble and maintain your snow thrower properly. Always observe the "SAFETY RULES."

MODEL NUMBER 247.884410

SERIAL NUMBER _____

DATE OF PURCHASE _____

THE MODEL AND SERIAL NUMBERS WILL BE FOUND ON A LABEL ATTACHED TO THE REAR OF THE SNOW THROWER HOUSING.

YOU SHOULD RECORD BOTH SERIAL NUMBER AND DATE OF PURCHASE AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.

PRODUCT SPECIFICATIONS

Horsepower:	4.0
Displacement:	8.46 cu. in.
Fuel Capacity:	2 Quarts
Gasoline/Oil Mix Ratio:	32:1 (4 oz. of oil per 1 gal. of gas)
Spark Plug (Gap .030 in.):	Champion CJ-8Y or Equivalent
Solid State Ignition Air Gap:	.0125 in.

MAINTENANCE AGREEMENT

A Sears Maintenance Agreement is available on this product. Contact your nearest Sears store for details.

CUSTOMER RESPONSIBILITIES

- Read and observe the safety rules.
- Follow a regular schedule in maintaining, caring for and using your snow thrower.
- Follow the instructions under "Maintenance" and "Storage" sections of this Owner's Manual.

WARRANTY

ONE YEAR LIMITED WARRANTY ON CRAFTSMAN SNOW THROWER

For one year 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 scraper bars, belts 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. Department 731CR-W Sears Tower, Chicago, IL 60684

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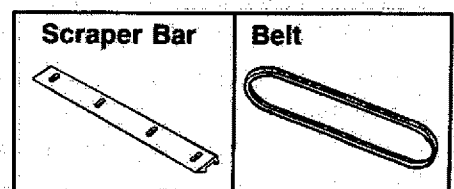
SNOW THROWER ACCESSORIES

These accessories were available when the snow thrower was purchased. They are also available at most Sears retail outlets, catalog and service centers. Most Sears stores can order repair parts for you, when you provide the model number of your snow thrower.

ENGINE



SNOW THROWER MAINTENANCE



ASSEMBLY INSTRUCTIONS

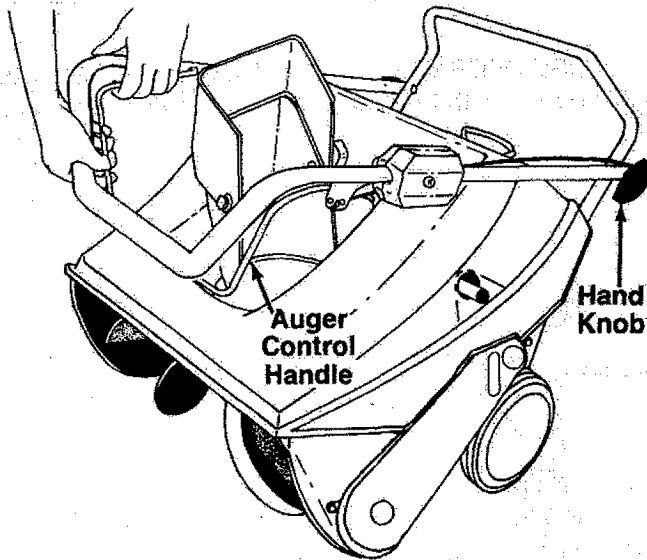


FIGURE 1.

Your snow thrower has been completely assembled at the factory, except for the chute crank, control cable and the upper handle which has been folded down for shipping.

The loose parts pack contains one chute crank, the owner's manual, two ignition keys and one power cord.

TO REMOVE SNOW THROWER FROM CARTON

- Cut the corners of the carton. Remove all packing inserts. Make certain all parts and literature have been removed before the carton is discarded. Keep one piece of cardboard to put under the housing when tipping the unit forward.
- Loosen the hand knob on each side of the handle. Squeeze the auger control handle against the upper handle as shown in figure 1. Pull handle up into operating position. Retighten the hand knobs.

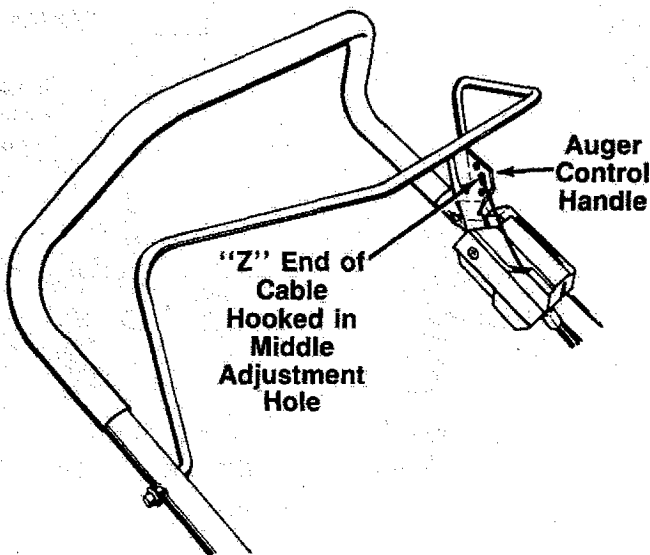


FIGURE 2.

HOW TO SET-UP YOUR SNOW THROWER ATTACHING THE CONTROL CABLE

- The three holes in the auger control handle provide adjustment for the belt tension.
- Connect the control cable to the control handle by hooking the "Z" end of the control cable into the middle hole in the control handle. See figure 2.
- Refer to Belt Tension Adjustment in the Adjustments/Repairs section of this manual when adjustment is needed.

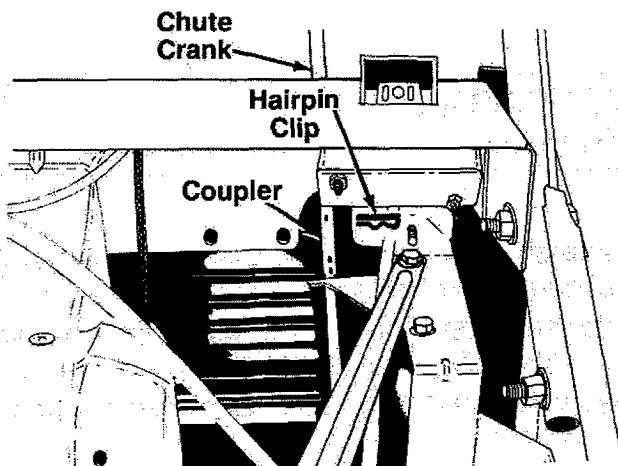


FIGURE 3.

INSTALLING THE CHUTE CRANK

- Place a piece of cardboard from the carton on a level surface. Tip the snow thrower forward so that the housing rests on the cardboard.
- Remove the hairpin clip from the coupler located inside the snow thrower. See figure 3.
- Insert the chute crank into the hole provided in the snow thrower cover. Place the end of the crank into the coupler.
- Rotate the crank to align holes, and secure with hairpin clip just removed.
- Tip the snow thrower back into operating position.

OPERATION

KNOW YOUR SNOW THROWER

READ THIS OWNER'S MANUAL AND SAFETY RULES BEFORE OPERATING YOUR SNOW THROWER. Compare the illustrations with your Snow Thrower to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.

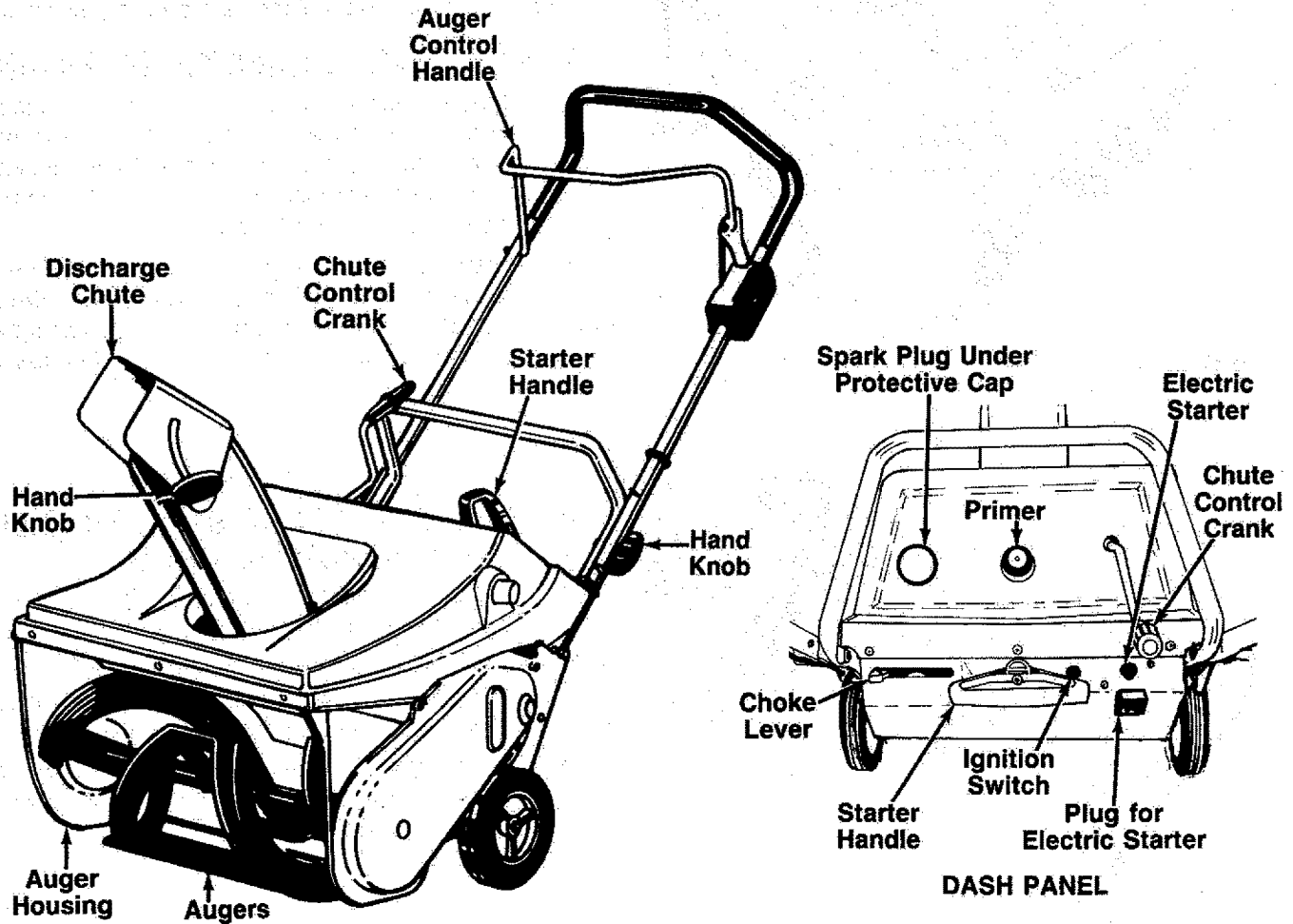


FIGURE 4.

MEETS ANSI SAFETY STANDARDS

Sears snow throwers conform to the safety standards of the American National Standards Institute.

OPERATING CONTROLS

AUGER CONTROL HANDLE—Located on the upper handle, the auger control handle is used to engage and disengage the augers.

CHUTE CONTROL CRANK—Controls the direction snow is thrown. The distance snow is thrown is determined by the position of the upper chute.

CHOKE LEVER—Used to enrich the fuel mixture in the carburetor when starting a cold engine.

PRIMER BUTTON—Used to pump fuel directly into the carburetor when starting a cold engine.

IGNITION KEY—Must be inserted into ignition switch and turned before engine will start.

STARTER HANDLE—Used to manually start the engine.

ELECTRIC STARTER—Starts engine using a 120 volt power source.

OPERATION

BEFORE USING YOUR SNOW THROWER, AGAIN REFER TO THE "SAFETY RULES" AS SHOWN ON PAGE 2 OF THIS MANUAL. ALWAYS BE CAREFUL.



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 or eye shields before starting power tool operation or while performing any adjustments or repairs. We recommend Wide Vision Safety Mask for over spectacles or standard glasses available at Sears Retail or Catalog Stores.

HOW TO USE YOUR SNOW THROWER

AUGER CONTROL HANDLE

The snow thrower is propelled by the rotation of the augers.

- Pull the control handle back against the upper handle to engage the augers and drive the unit forward.
- Push downward on the handle to raise the augers off the ground and stop the forward motion.
- Release the control handle to stop the augers. To stop the engine, turn ignition key to OFF position.

DISCHARGE CHUTE

The direction snow is thrown can be changed by turning the chute control crank.

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

The distance snow is thrown can be changed by adjusting the upper chute.

- To adjust, loosen the hand knob on the side of the discharge chute. See figure 5.
- Raise the end of upper chute to increase the distance snow is thrown; lower it to decrease.
- Retighten hand knob.

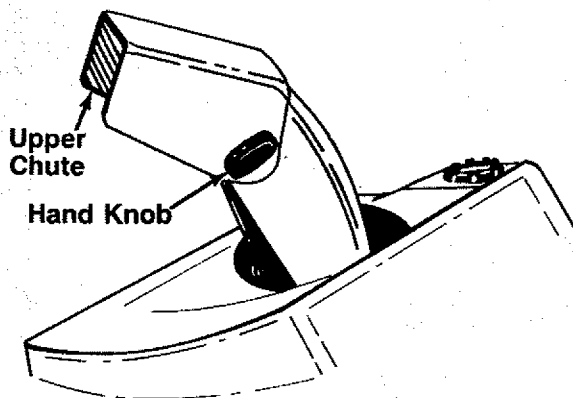


FIGURE 5.

BEFORE STARTING

FUEL MIXTURE

- Use a clean, high quality 2 cycle oil. Do not use multi-viscosity oils.

- Use fresh, clean, unleaded automotive gasoline (Leaded "regular" grade gasoline is an acceptable substitute).

FUEL MIX CHART

Mixture: 32:1

U.S. S.I. (METRIC)

Gas	Oil To Be Added	Petrol	Oil To Be Added
1 Gal.	4 oz.	4 Liters	.125 L
2 Gal.	8 oz.	8 Liters	.250 L
5 Gal.	20 oz.	20 Liters	.625 L

WARNING: 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. 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 THOROUGHLY MIX OIL AND GASOLINE, fill an approved, clean container with recommended gasoline to one quarter full. Add recommended oil per 32:1 mix ratio (one gallon of gasoline requires 4 ounces of oil).
- Screw cap on container and shake vigorously. Then remove cap and fill container with proper amount of gasoline. Once oil and gasoline are mixed they will not separate. DO NOT MIX OIL AND GASOLINE DIRECTLY IN THE ENGINE FUEL TANK.
- Fill fuel tank with fuel mixture using a clean funnel. Wipe up any fuel spillage from engine and snow thrower before starting engine.



WARNING: NEVER FILL FUEL TANK IN-DOORS, WHEN ENGINE IS RUNNING OR WHILE ENGINE IS STILL HOT. DO NOT SMOKE WHEN FILLING FUEL TANK.

OPERATION

TO START ENGINE

USING THE ELECTRIC STARTER

- Make certain the auger control handle is disengaged (released).
- Insert ignition key into ignition switch and turn to ON position.
- To start a cold engine, move choke lever to ON position. If you are starting an engine which has already been run for a few minutes, do not choke.
- To start a cold engine, push primer button one time. Use a firm push. This step is not necessary when starting an engine which has been run for a few minutes.
- Connect power cord to plug on snow thrower, then to a three-hole, grounded 120-volt AC household outlet.



WARNING: ALWAYS CONNECT POWER CORD TO PLUG ON SNOW THROWER FIRST, THEN PLUG THE OTHER END IN THE HOUSEHOLD OUTLET. WHEN DISCONNECTING, ALWAYS UNPLUG FROM THE HOUSEHOLD OUTLET FIRST.

- Push starter button to engage starter motor and crank engine.

IMPORTANT: THIS ELECTRIC STARTER IS NOT EQUIPPED WITH A THERMAL CUT-OUT SWITCH. DO NOT CRANK ENGINE FOR MORE THAN A TOTAL OF 20 SECONDS WITHOUT ALLOWING ELECTRIC STARTER TO COOL DOWN FOR 10 MINUTES, OR SEVERE DAMAGE TO ELECTRIC STARTER CAN RESULT.

NOTE: If the starter motor runs but the engine does not turn over, the starter gear is apparently covered with ice and frozen. Place the unit in a warm atmosphere until the gear is free and the starter will engage.

- After engine starts, release starter button. Allow the engine to warm up for a few minutes. Then move choke gradually to OFF position. If engine falters, return to ON position, then slowly move to OFF position.
- Unplug the power cord from the household outlet, then from the plug on snow thrower.

USING THE RECOIL STARTER

- Make certain auger control handle is disengaged (released).

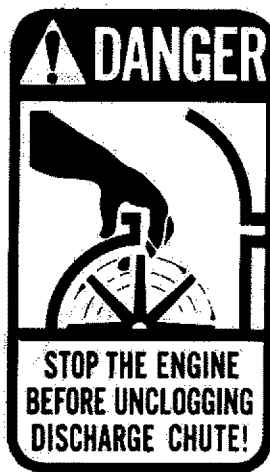
- Insert ignition key into ignition switch and turn to ON position.
- To start a cold engine, move choke lever to ON position. If you are starting an engine which has already been run for a few minutes, do not choke.
- To start a cold engine, push primer button two or three times. Use a firm push. This step is not necessary when starting an engine which has been run for a few minutes.

Note: If the temperature is below 15°F., additional priming may be necessary for initial start only.

- Grasp starter handle and pull rope out slowly, until it pulls slightly harder. Let rope rewind slowly.
- Pull starter handle rapidly. Keep a firm hold on the handle and allow it to rewind slowly. Do not allow handle to snap back.
- If engine fails to start after 3 pulls on the starter handle, prime engine two times and pull starter handle again.
- After engine starts and begins to operate evenly, move choke lever gradually to OFF position. If engine falters, return to ON position, then slowly move to OFF position.



WARNING: TEMPERATURE OF MUFFLER AND SURROUNDING AREAS MAY EXCEED 150°F. AVOID THESE AREAS.



TO STOP ENGINE

- Run engine for a few minutes before stopping to help dry off any moisture on the engine.
- To stop engine, turn the ignition key to OFF position. Remove the key from the unit.
- Wipe all snow and moisture from the unit. Move the control levers back and forth several times.

OPERATION

OPERATING TIPS

- Use your snow thrower to remove fresh snow before it is packed down by footprints or tire tracks.
- Discharge snow in the direction the wind is blowing whenever possible.
- Slightly overlap each previous swath.

- Snow up to about an 8 inch depth can be removed easily by walking at a moderate rate. Slow your pace for wet or deep snow.
- Run engine for a few minutes before stopping to help dry off any moisture on the engine.

MAINTENANCE

GENERAL RECOMMENDATIONS

- Periodically check all fasteners and be sure they are tight.
- Follow the Service Recommendation Schedule on page 12.

SNOW THROWER

BELT TENSION ADJUSTMENT

Periodic adjustment of the belt tension may be required due to normal stretch and wear on the belt. Adjustment is needed if the augers seem to hesitate while turning, but the engine maintains the same speed.

There are three holes in the control handle which provide this adjustment. Move the clutch cable to the highest hole to increase the belt tension. Refer to figure 3.

If additional adjustment is needed, there are three adjustment holes provided in the idler brake bracket assembly. To adjust, remove the belt cover by following the first three steps under "Belt Removal and Replacement" on page 11. Move the extension spring on the end of the clutch cable to the next higher adjustment position on the idler brake bracket assembly. Reassemble belt cover. See figure 6.

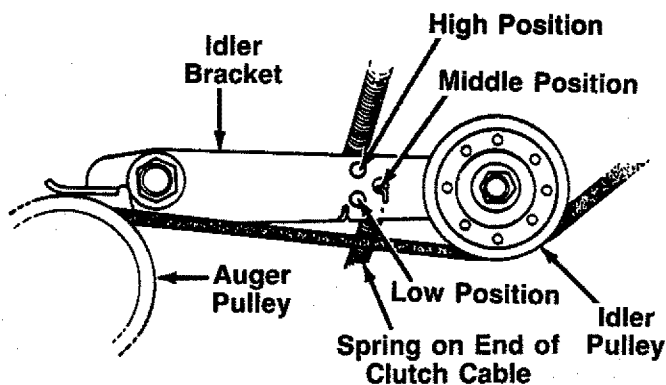


FIGURE 6.

LUBRICATION

Your snow thrower has been designed so that no lubrication is necessary.

ENGINE

SPARK PLUG

Check spark plug once a season or every 100 operating hours.

- Pry off the protective plastic cap from the dash panel. Refer to figure 4.
- Clean area around spark plug. Remove and inspect plug.
- Replace spark plug if electrodes are pitted, burned or porcelain is cracked. For replacement, use Champion CJ-8Y or equivalent.
- Check electrode gap with a wire feeler gauge. Set gap at .030 if necessary.
- Install spark plug and tighten securely. If torque wrench is available, torque plug to approximately 15 foot pounds.

MUFFLER AND CYLINDER EXHAUST PORTS

The muffler and cylinder exhaust ports should be cleaned after each seventy-five (75) to one hundred (100) hours of operation. For this maintenance procedure it is recommended that you take your unit to your SEARS Service Center.



WARNING: TEMPERATURE OF MUFFLER AND NEARBY AREAS MAY EXCEED 150°F.

CLEANING

Wipe moisture off snow thrower after each use.

STORAGE

Your snow thrower and engine should be prepared for off-season storage as follows.

SNOW THROWER

- Thoroughly clean the snow thrower.
- If storing in an unventilated or metal storage shed, coat any metal parts with a light oil or silicone to prevent rust.
- Block the unit up so that it is not resting on the rubber augers.
- Store in a clean, dry area.

HANDLE

The upper handle on your snow thrower may be folded down for storage.

- Place the upper chute in the position shown in figure 1. Loosen the hand knob and pivot the chute upward to its highest position. Use the chute crank to turn it to the side.
- Loosen the hand knobs on the side of the handle. Push the upper handle forward and down. Be careful not to bend or kink the cable.

ENGINE



WARNING: NEVER STORE ENGINE WITH FUEL IN TANK INDOORS OR ENCLOSED, IN POORLY VENTILATED AREAS WHERE FUMES MAY REACH AN OPEN FLAME, SPARK OR PILOT LIGHT SUCH AS ON A FURNACE, WATER HEATER, CLOTHES DRYER OR OTHER GAS APPLIANCE.

IMPORTANT: IT IS IMPORTANT TO PREVENT GUM DEPOSITS FROM FORMING IN ESSENTIAL FUEL SYSTEM PARTS SUCH AS THE CARBURETOR, FUEL HOSE OR FUEL 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.

- Run engine until fuel tank is empty and engine stops due to lack of fuel.
- Disconnect fuel line at carburetor or fuel tank. Be careful not to damage fuel line, fittings or fuel tank. Drain any remaining fuel from the system.



WARNING: DRAIN FUEL INTO APPROVED CONTAINER OUTDOORS, AWAY FROM OPEN FLAME.

NOTE: If gasohol has been used, complete the preceding instructions. Then put a small amount, one pint or less, of unleaded (or regular) grade gasoline properly mixed with oil per Fuel Mix Chart on page 7. Repeat the two above steps.

- Pull starter handle out slowly until it pulls slightly harder. Let rope rewind slowly. This procedure will close both the intake and exhaust ports, to prevent corrosion of the piston and cylinder bore.

SERVICE & ADJUSTMENT



WARNING: ALWAYS STOP ENGINE AND DISCONNECT SPARK PLUG WIRE BEFORE PERFORMING ANY ADJUSTMENTS OR REPAIRS.

SHAVE PLATE

The shave plate on the bottom of the snow thrower housing is subject to wear. It should be checked periodically and adjusted or replaced when necessary to prevent damage to the snow thrower housing.

To adjust the shave plate, loosen the four carriage bolts and hex nuts which attach it to the snow thrower housing. Move the shave plate forward and retighten the hardware.

To replace shave plate, remove the four carriage bolts, flat washers and hex nuts. Reassemble new shave plate, making sure the heads of the carriage bolts are on the inside of the housing. Tighten securely.

CARBURETOR ADJUSTMENT

The carburetor has been pre-set at the factory and should not require adjustment. However, if your engine does not operate properly due to suspected carburetor problems, take your snow thrower to your nearest SEARS Service Center.



WARNING: IF ANY ADJUSTMENTS ARE MADE TO THE ENGINE WHILE THE ENGINE IS RUNNING (e.g. CARBURETOR), DISENGAGE ALL CLUTCHES AND AUGERS. KEEP CLEAR OF ALL MOVING PARTS. BE CAREFUL OF HEATED SURFACES AND MUFFLER.

BELT REMOVAL AND REPLACEMENT

- Remove three self-tapping screws and flat washers which secure the front of the shroud to the snow thrower housing, and also three screws and washers on the rear of the shroud.
- Lift upward on the shroud (be careful to clear the muffler) until you can reach the belt cover on the side of the snow thrower. See figure 7. Do not disconnect the primer hose underneath the shroud.
- Remove the belt cover by removing four hex head screws with a 3/8" wrench.

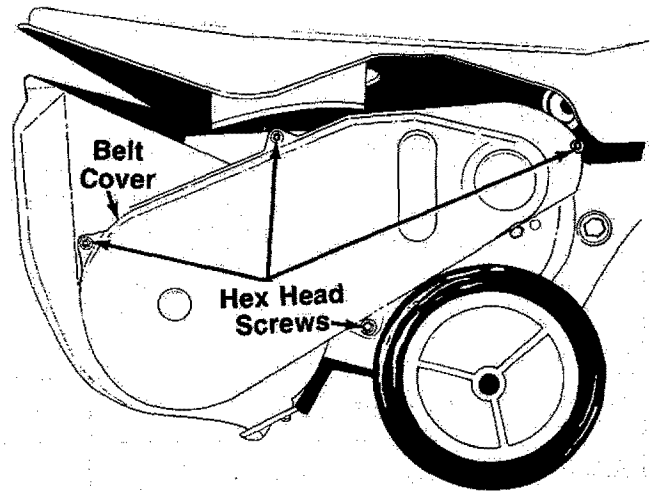


FIGURE 7.

- Pull upward on the idler pulley and slip the belt off engine pulley. See figure 8.
- Push down on idler pulley and slip the belt off auger pulley.
- Reassemble new belt in reverse order.

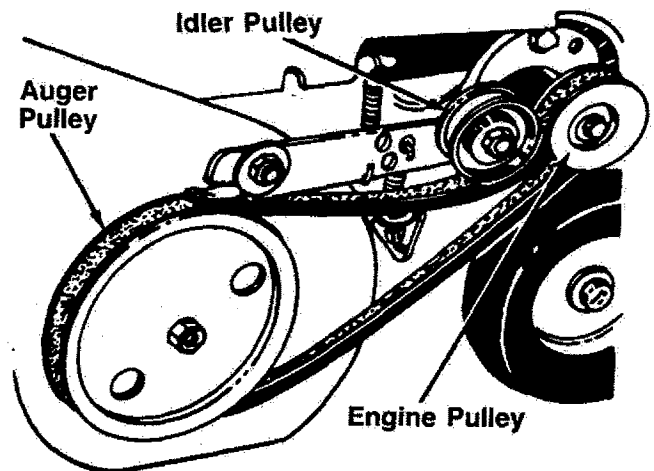


FIGURE 8.

ENGINE SPEED

Your engine speed has been factory set. Do not attempt to increase engine speed or it may result in personal injury. If you believe the engine is running too fast or too slow, take your snow thrower to the nearest SEARS Service Center for repair and adjustment.

SERVICE RECOMMENDATIONS

SERVICE RECORD Fill in dates as you complete regular service	SCHEDULE							SERVICE DATES						
	First 2 Hours	Before Each Use	Fre- quently	Every 25 Hours	Every 75 to 100 Hours	Begin- ning Each Season	Before Storage							
Check Fuel		✓												
Drain Fuel							✓							
Tighten All Bolts and Nuts	✓		✓											
Adjust Belt Tension	✓			✓		✓								
Check Spark Plug					✓	✓								
Clean Muffler & Cylinder Exhaust Ports					✓									

The Service Recommendations Chart is supplied to assist the operator in proper maintenance of the snow thrower. This is only a check list; instructions will be found in the Maintenance and Service/Adjustment sections of this manual.

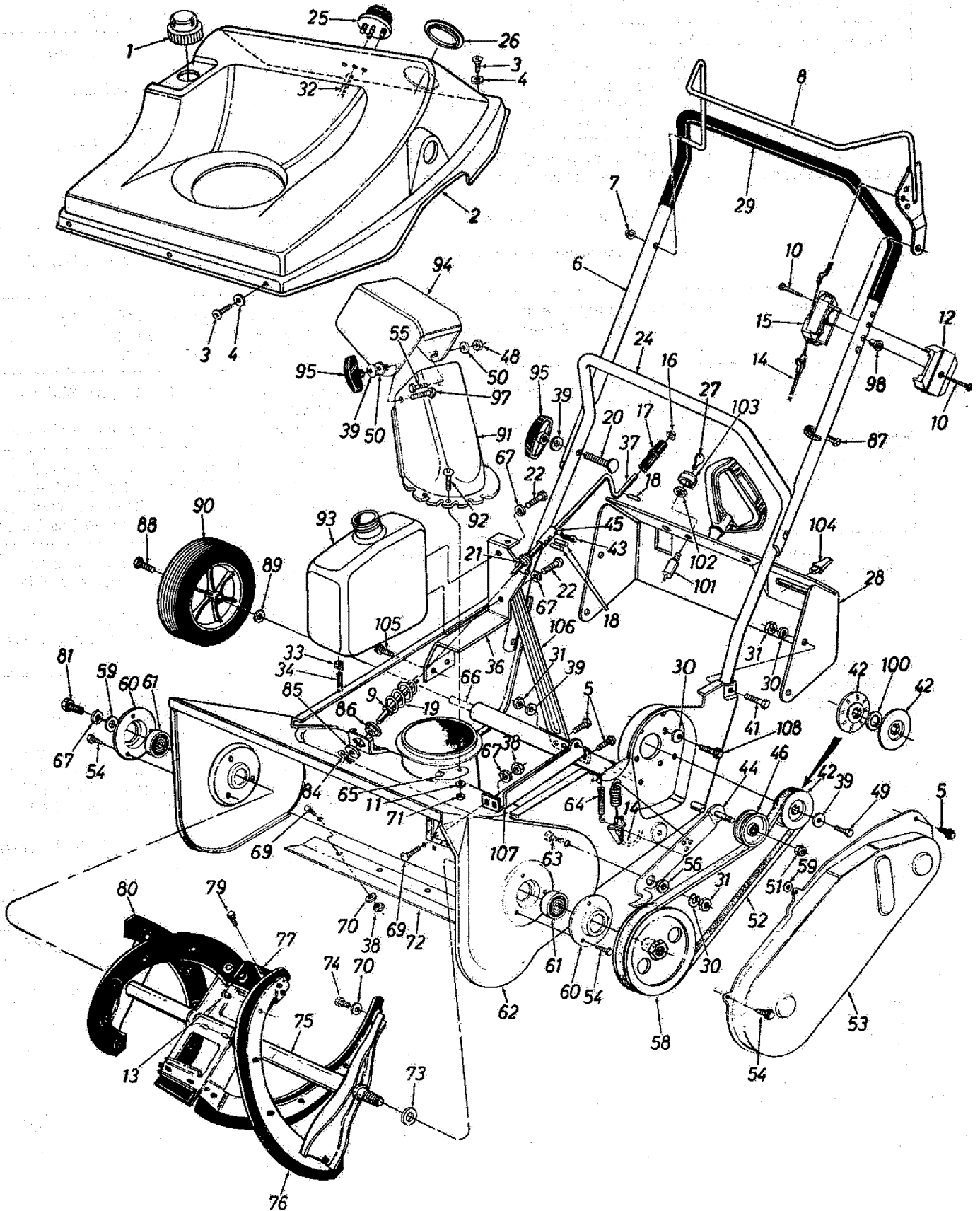
Some adjustments will need to be made periodically to properly maintain your snow thrower. All adjustments in Service/Adjustment section of this manual should be checked at least once a season. Check all bolts and nuts often to make certain they are tight, preferably after each use.

TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Engine fails to start	<ol style="list-style-type: none"> 1. Fuel tank empty, or stale fuel. 2. Blocked fuel line. 3. Key not in switch on engine. 4. Spark plug wire disconnected. 5. Faulty spark plug. 	<ol style="list-style-type: none"> 1. Fill tank with clean, fresh fuel mixture. 2. Clean fuel line. 3. Insert key and turn to ON position. 4. Connect wire to spark plug. 5. Clean, adjust gap or replace.
Loss of power; operation erratic	<ol style="list-style-type: none"> 1. Unit running on CHOKE. 2. Blocked fuel line or stale fuel. 3. Water or dirt in fuel system. 4. Carburetor out of adjustment. 	<ol style="list-style-type: none"> 1. Move choke lever to OFF position. 2. Clean fuel line; fill tank with clean fresh gasoline. 3. Disconnect fuel line at carburetor to drain fuel tank. Refill with fresh fuel. 4. Have carburetor adjusted by your SEARS Service Center.
Loss of power	<ol style="list-style-type: none"> 1. Spark plug wire loose. 2. Gas cap vent hole plugged. 	<ol style="list-style-type: none"> 1. Connect and tighten spark plug wire. 2. Remove ice and snow from cap. Be certain vent hole is clear.
Engine overheats	<ol style="list-style-type: none"> 1. Carburetor not adjusted properly. 2. Incorrect fuel mixture. 	<ol style="list-style-type: none"> 1. Have carburetor adjusted by your SEARS Service Center. 2. Drain fuel tank. Refill with proper fuel mixture.
Too much vibration	Loose parts or damaged auger.	Stop engine immediately and disconnect spark plug wire. Tighten all bolts and nuts. Make all necessary repairs. If vibration continues, have unit serviced by a SEARS Service Center.
Unit does not propel itself	<ol style="list-style-type: none"> 1. Incorrect adjustment of drive cable. 2. Drive belt loose or damaged. 	<ol style="list-style-type: none"> 1. Adjust drive cable. Refer to Belt Tension Adjustment in Maintenance section of this manual. 2. Replace drive belt. Refer to Belt Replacement in Maintenance section of this manual.
Unit does not discharge snow	<ol style="list-style-type: none"> 1. Discharge chute clogged. 2. Foreign object lodged in auger. 3. Incorrect adjustment of drive cable. 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 inside of auger housing. 2. Stop engine immediately and disconnect spark plug wire. Remove object from auger. 3. Adjust drive cable. Refer to Belt Tension Adjustment in Maintenance section of this manual. 4. Replace drive belt. Refer to Belt Replacement in Maintenance section of this manual.

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

SEARS CRAFTSMAN 21" SNOW THROWER MODEL NO. 247.884410
Repair Parts



SEARS CRAFTSMAN 21" SNOW THROWER MODEL NO. 247.884410

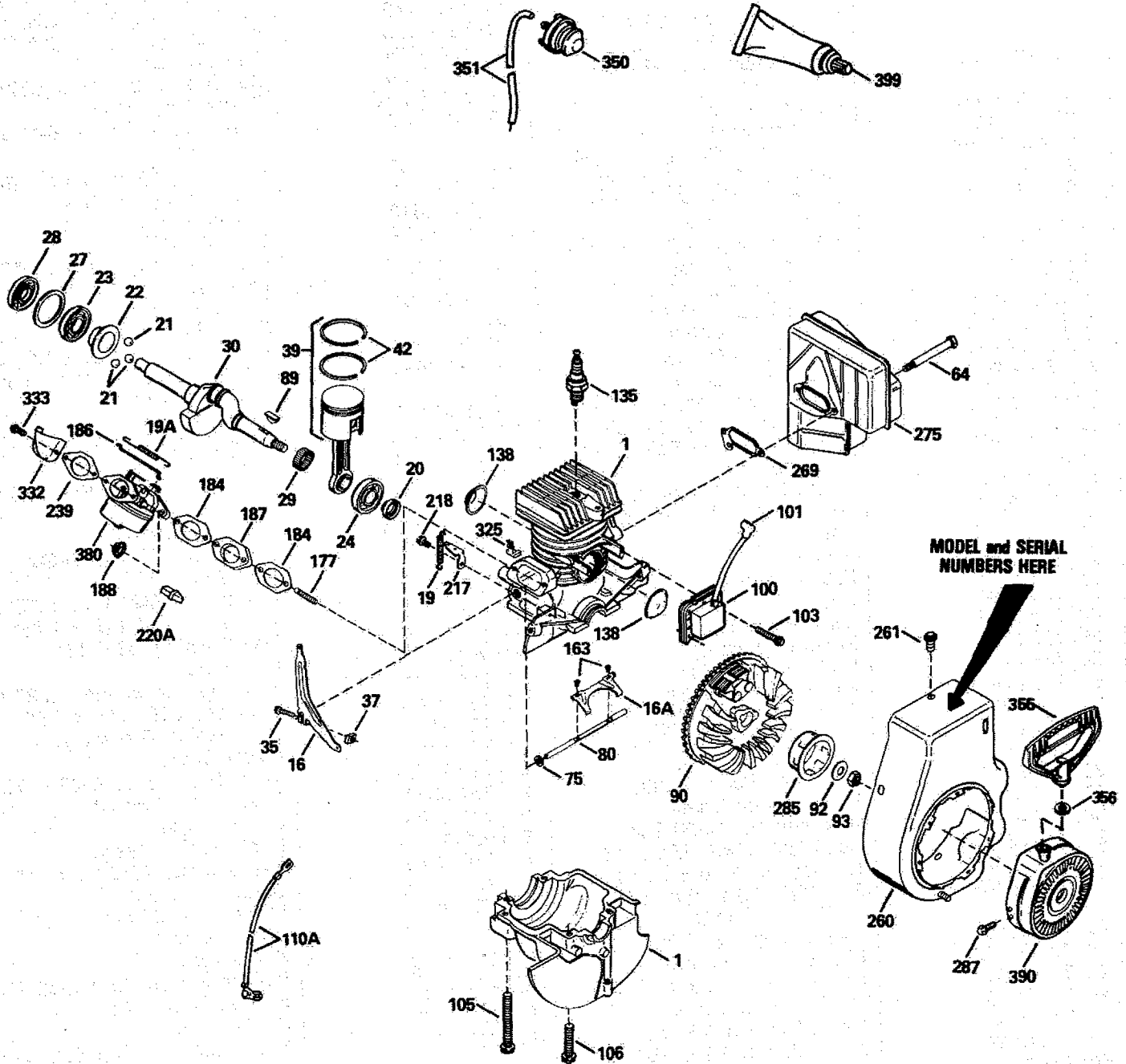
Repair Parts

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	751-3071	Gas Tank Cap	56	748-0234	Shld. Spacer .50" Dia. x .27"
2	731-1121	Shroud	58	756-0475	1/2" "V"-Pulley 1/2-20 L.H. x 6"
3	710-0351	Hex B-Tap Scr. #10 x .5" Lg.	59	736-0176	FI-Wash. 1/4" I.D. x .93" O.D.
4	736-0931	FI-Wash. .203" I.D. x .41"	60	784-5174	Bearing Cup
5	710-0892	Hex L-Wash. Hd. AB-Tap 1/4 x .62" Lg.	61	741-0124	Ball Brg. .669" I.D. x 1.574"
6	749-0711A	Upper Handle	62	784-5325C	Blower Hsg. Ass'y.
7	726-0135	Cap Speed Nut	63	710-0323	Truss Mach. Scr. 5/16-18 x .75" Lg.*
8	784-5346A	Control Handle Ass'y.—L.H.	64	732-0357	Extension Spring 1.12" Lg.
9	736-0140	FI-Wash. .385" I.D. x .62"	65	731-0851	Chute Flange Keeper
10	710-0796	Truss Mach. Hi-B Tap Scr. #12 x 1.5" Lg.	66	749-0810	Wheel Axle 20.6" Lg.
11	736-0142	FI-Wash. .281" I.D. x .5" O.D.	67	736-0329	L-Wash. 1/4" I.D.*
12	731-0815	Control Panel Half	69	710-0167	Carriage Bolt 1/4-20 x .50"*
13	728-0123	Pop Rivet .188" Dia.	70	736-0173	FI-Wash. .281" I.D. x .73"
14	746-0506	Clutch Cable 35" Lg.	71	712-0291	Hex L-Nut 1/4-20 Thd.
15	731-0816	Control Panel Half	72	731-1033	Shave Plate
16	726-0100	Push Cap 3/8" Rod	73	736-0326	FI-Wash. .510" I.D. x 1.0" O.D.
17	720-0201A	Knob—3/8" Dia. Hole	74	710-0896	Hex Wash. B-Tap Scr. 1/4 x .62" (Spec.)
18	715-0138	Roll Pin 1/8" Dia. x .63" Lg.	75	784-5485	Auger Ass'y.
19	784-5497	Lower Chute Crank Ass'y.	76	731-0781A	Rubber Spiral—L.H.
20	710-0405	Curved Carriage Bolt 5/16-18 x 1.75" Lg.	77	731-0782	Rubber Paddle
21	735-0234	Chute Crank Grommet	79	710-1003	Hex Wash. B-Tap Scr. #10 x .62" Lg.
22	710-0289	Hex Bolt 1/4-20 x .5" Lg.*	80	731-0780A	Rubber Spiral—R.H.
24	749-0805	Lower Handle	81	710-0875	Hex Wash. TT-Tap Cl-Scr. 1/4-20 x .75" Lg.
25	751-0354	Primer	84	714-0507	Cotter Pin 3/32" Dia. x .75"
26	731-0732	Plastic Plug	85	736-0133	FI-Wash. .406" I.D. x 1.25"
27	725-1341A	Key	86	741-0403	Hex Bushing .385" I.D.
28	784-5499	Dash Panel Ass'y.	87	726-0240	Cable Tie
29	720-0226	Foam Grip 22 Lg.	88	710-0649	Hex Tap Scr. 3/8-24 x .88" Lg.
30	736-0119	L-Wash. 5/16" I.D.*	89	736-0108	FI-Wash. .510" I.D. x .75"
31	712-0267	Hex Nut 5/16-18 Thd.*	90	734-1529	7" Wheel & Tire Ass'y.
32	723-0354	Primer Hose—9" Lg.	91	731-1126	Lower Chute
33	726-0205	Hose Clamp—1/2" O.D.	92	710-0255	Truss Mach. Scr. 1/4-20 x .75"
34	751-0535	Gas Line—16" Lg.	93	751-0540	Fuel Tank—Two Qt.
36	705-5139	Gas Tank Support Brkt.	94	731-1125	Upper Chute
37	747-0743	Upper Chute Crank	95	09966	Knob Handle Ass'y.
38	712-0298	Hex Jam Nut 1/4-20 Thd.	97	710-0276	Carriage Bolt 5/16-18 x 1"*
39	736-0242	Bell-Wash. .345" I.D. x .88"	98	731-0524	Control Disc Pin
41	710-0442	Hex Bolt 5/16-18 x 1.5" Lg.*	100	736-0116	FI-Wash. .635" I.D. x .93" O.D. x .06"
42	756-0416A	3/8" "V"-Pulley Half .625" I.D. x 6.0" O.D.	101	725-1425	Key Switch
43	714-0145	Hairpin Clip 3/8" Dia.	102	725-1346	Ignition Switch Nut 5/8-32 Thd.
44	784-5180A	Idler Brake Brkt. Ass'y.	103	725-1347	Ignition Switch Cap
45	750-0785	Spacer .38" I.D. x 1.12" Lg.	104	731-1127	Choke Knob
46	756-0313	FI-Idler w/Flanges 2.12" O.D.	105	710-1005	Hex Wash. Hd. Tap Scr. 1/4-.5" Lg.
48	712-0158	Hex L-Nut 5/16-18 Thd.	106	784-5603	Gas Tank Brace
49	710-0157	Hex Bolt 5/16-24 x .75" Lg.*	107	784-5495	Engine Support
50	736-0231	FI-Wash. .344" I.D. x 1.25"	108	710-0237	Hex Bolt 5/16-24 x 5/8" Lg.
51	712-0296	Hex Patch L-Nut 3/8-24 Thd.	—	390-996	120V Electric Starter Kit
52	754-0101A	"V"-Belt	—	770-7038E	Owner's Manual
53	784-5176	Belt Cover			
54	710-0352	Hex B-Tap Scr. 1/4" x .38" Lg.			
55	710-0451	Carriage Bolt 5/16-18 x .75"			

*Common Hardware—May be purchased locally.

SEARS CRAFTSMAN 4 H.P. ENGINE MODEL NO. HSK840-8204

Repair Parts



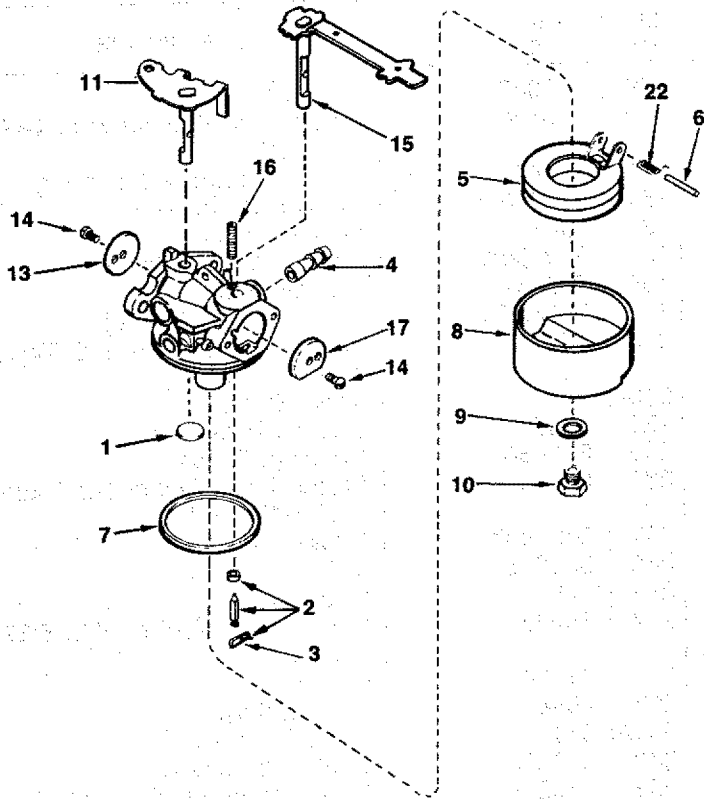
SEARS CRAFTSMAN 4 H.P. ENGINE MODEL NO. HSK840-8204

Repair Parts

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	250295	Cylinder & Cover Ass'y. (Incl. Nos. 105, 106 & 138)	138	570683	Cover, Port
16	490317	Lever, Governor	163	650506	Screw, Pan Washer Hd., 4-40 x 3/16
16A	490304	Lever, Governor	177	650527	Stud, Carburetor Mounting
19	490308	Spring, Governor	184	510326A	Gasket, Carburetor
19A	490318	Spring, Backlash	186	490319	Link, Governor
20	510340	Seal (Flywheel End)	187	570438A	Spacer, Carburetor
21	570673	Ball	188	650457	Nut, Whizlock
22	510338	Ring, Slide	217	570667A	Lever, Speed Control
23	530158	Bearing, Ball (PTO End)	218	650847	Screw, Hex Washer Hd. Taptite, 8-32 x 1/2
24	530161	Bearing, Ball (Magneto End)	220A	35511	Knob, Control
27	530159	Retainer, Bearing	239	510206A	Gasket, Filter Base
28	510339	Seal (PTO End)	260	350436	Housing, Blower
29	530164	Bearing Strip (31 Needles)	261	650894	Screw, Hex Washer Hd. Taptite, 5/16-18 x 5/8
30	290614	Crankshaft	269	510343A	Gasket, Muffler
35	29826	Screw, Hex Washer Hd., 10-32 x 3/4	275	390318	Muffler
37	29216	Nut, Square	285	34449	Hub, Starter
39	310277A	Piston & Rod Ass'y. (Incl. Nos. 29 & 42)	287	650884	Screw, Hex Washer Hd., 8-32 x 1/2
42	310278	Ring Set, Piston	301	410240	Cap, Fuel
64	650893	Screw, Muffler (5/16-18 x 3-13/64)	325	29443	Clip, Spring
75	510337	Seal, Oil	330A	611157	Wire, Ground
80	490305	Shaft, Governor	332	570695	Baffle, Carburetor
89	611107	Key, Flywheel	333	650229	Screw, Pan Hd. Torx, 10-32 x 3/8
90	611151	Flywheel	350	570682	Primer Ass'y.
92	650815	Washer, Belleville	351	32180C	Line, Primer
93	650816	Nut, Flywheel	355	590574	Handle, Mitten Grip (Not Included with Replacement Starter, Must Order Separately)
100	34443A	Solid State Ass'y.	356	650168	Washer, Flat
101	610118A	Cover, Spark Plug	380	632562	Carburetor (Incl. No. 184)
103	650814	Screw, Torx Washer Hd. Sems, 10-24 x 1	390	590652	Starter, Rewind (Does Not Include No. 355)
105	650892	Screw, Hex Hd., 5/16-18 x 2-3/16	399	510334	Gasket Eliminator
106	650891	Screw, Hex Hd., 5/16-18 x 1-5/8			
135	611049	Plug, Spark (Champion RCJ8Y or Equivalent)			

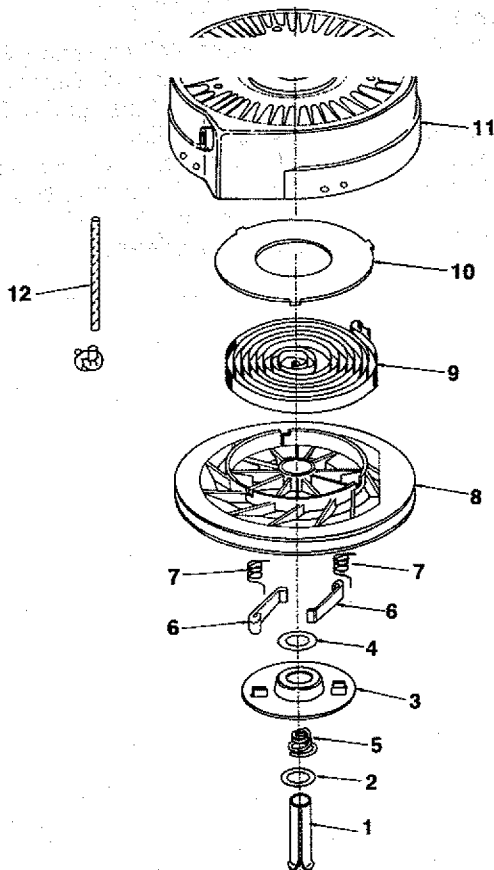
SEARS CRAFTSMAN 4 H.P. ENGINE MODEL NO. HSK840-8204

Repair Parts



PARTS LIST FOR CARBURETOR

KEY NO.	PART NO.	DESCRIPTION
1	631027	Plug, Welch
2	631021	Inlet Needle, Seat & Clip Ass'y. (Incl. No. 3)
3	631022	Clip, Inlet Needle
4	632164	Fitting, Fuel Inlet
5	632019	Float, Carburetor
6	631024	Shaft, Float
7	631028	"O" Ring, Bowl-to-Body
8	631867	Bowl, Float
9	27110	Gasket, Bowl-to-Body
10	632503	Nut, Float Bowl
11	632538	Shaft & Lever Ass'y., Throttle
13	631621	Shutter, Throttle
14	650506	Screw, Throttle & Choke Shutter
15	31841A	Shaft & Lever Ass'y., Choke
16	630735	Spring, Choke Positioning
17	631815	Shutter, Choke
22	632386	Spring, Float Shaft
—	632562	Carburetor Comp.



PARTS LIST FOR REWIND STARTER

KEY NO.	PART NO.	DESCRIPTION
1	590599A	Pin, Spring (Incl. No. 4)
2	590600	Washer
3	590615	Retainer
4	590601	Washer
5	590598	Spring, Brake
6	590616	Dog, Starter
7	590617	Spring, Dog
8	590645	Pulley
9	590619	Spring, Rewind
10	590620	Cover, Spring
11	590643	Housing Ass'y., Starter
12	590535	Rope, Starter (Length 98" & 9/64" Dia.)
—	590652	Rewind Starter Comp.

SEARS

OWNER'S MANUAL

**MODEL NO.
247.884410**

HOW TO ORDER REPAIR PARTS

CRAFTSMAN®

**4 HORSEPOWER
2 CYCLE ENGINE
21" SINGLE STAGE
120 V. ELECTRIC STARTER
SNOW THROWER**

Each snow thrower has its own model number. Each engine has its own model number.

The model number for your snow thrower will be found on a label attached to the rear of the housing.

The model number for the engine will be found on the blower housing of the engine adjacent to the spark plug.

All parts listed herein may be ordered through Sears, Roebuck and Co. Service Centers and most Retail Stores.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

- * **PRODUCT - "21" Snow Thrower"**
- * **MODEL NUMBER - 247.884410**
- * **ENGINE MODEL NO. - HSK 840-8204**
- * **PART NUMBER**
- * **PART DESCRIPTION**

Your Sears merchandise has added value when you consider that Sears has service units nationwide staffed with Sears trained technicians. . . professional technicians specifically trained on Sears products, having the parts, tools and the equipment to insure that we meet our pledge to you. . . we service what we sell."

SEARS, ROEBUCK AND CO., Chicago, IL 60684 U.S.A.