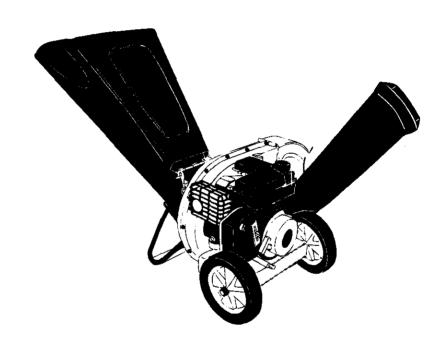
### **Owner's Manual**

# CRAFTSMAN

6.5 Horse Power3" diameter chipping capacity

### **CHIPPER-SHREDDER**

Model No. **247.775870** 



**CAUTION:** Before using this product, read this manual and follow all Safety Rules and Operating Instructions.

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

### **TABLE OF CONTENTS**

Content	Page	Content	Page
Warranty Information	2	Service & Adjustment	14
Safe Operation Practices	3	Off-Season Storage	16
Assembly	5	Trouble-Shooting	17
Operation	8	Repair Parts	18
Maintenance	11		

### **WARRANTY INFORMATION**

### One-Year Warranty on Craftsman Chipper-Shredder

For one year from the date of purchase, when this Craftsman chipper-shredder is maintained, lubricated, and tuned up according to the operating and maintenance instructions in the operator's manual, Sears will repair, free of charge, any defect in material or workmanship.

This warranty excludes the blades, chipper blades, flails, air cleaners, spark plugs, catcher bags and tires which are expendable parts and become worn during normal use.

If this chipper-shredder is used for commercial or rental purposes, this warranty applies for only 30 days from the date of purchase.

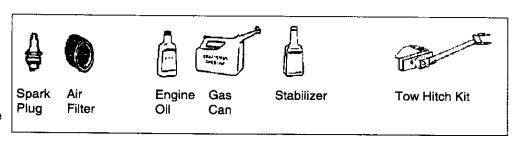
WARRANTY SERVICE IS AVAILABLE BY CONTACTING THE NEAREST SEARS SERVICE CENTER IN THE UNITED STATES. THIS WARRANTY APPLIES ONLY WHILE THIS PRODUCT IS IN USE IN THE UNITED STATES.

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

Sears, Roebuck and Co., D/817WA, Hoffman Estates, II 60179

### **ACCESSORIES**

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



PRODUCT	SPECIFICATION
HORSEPOWER:	6.5 H.P.
CRANKCASE CAPACITY:	21oz. SAE 30 ENGINE OIL
FUEL TANK CAPACITY:	3 QUARTS (UNLEADED)
SPARK PLUG:	Champion (N4C)
SPARK PLUG GAP:	.030

Model Number247.775870
Serial Number
Date of Purchase
Record both serial number and date of purchase and keep in a safe place for future reference.

### 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 chipper shredder. Failure to comply with these instructions may result in personal injury. When you see this symbol—heed its warning.



Your chipper-shredder was built to be operated according to the rules for safe operation in DANGER: this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. If you violate any of these rules, you may cause serious injury to yourself or others.



WARNING: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

### GENERAL OPERATION

- Read this owner's guide carefully in its entirety before attempting to assemble this machine. Read, understand, and follow all instructions on the machine and in the manual(s) before operation. Be completely familiar with the controls and the proper use of the machine before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
- Your chipper-shredder is a powerful tool, not a plaything. Therefore, exercise extreme caution at all times. Your unit has been designed to perform two jobs; to chip and shred vegetation found in a normal yard. Do not use it for any other purpose.
- Never allow children under age 16 to operate the unit. Children 16 years and older should only operate the unit under close parental supervision. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use your
- Keep the area of operation clear of all persons, particularly small children and pets. Stop the engine when they are in the vicinity of the unit. Keep work area clean and clear of branches or obstacles which could cause you to stumble or fall.
- When feeding material into this equipment, be extremely careful that pieces of metal, rocks, bottles, cans or other foreign objects are not included. Personal injury or damage to the machine could result.
- Always wear safety glasses or safety goggles, during operation and while performing an adjustment or repair, to protect eyes from foreign objects that may be thrown from the machine.
- Wear sturdy, rough-soled work shoes and close fitting slacks and shirt. Shirt and slacks that cover the arms and legs and steel-toed shoes are recommended. Do not wear loose fitting clothes or jewelry and secure hair so it is above shoulder length. They can be caught in moving parts. Never operate a unit in bare feet, sandals or sneakers. Wear gloves when feeding material in the chipper chute or shredder hopper.
- Never place your hands, feet, or any part of your body into the shredder hopper, chipper chute, discharge opening, or near any moving part while the engine is

- running. Keep clear of the discharge opening at all times. If it becomes necessary to push material into the chipper chute or shredder hopper, use a small diameter stick, NOT YOUR HANDS.
- If it is necessary for any reason to unclog the feed intake or discharge openings or to inspect or repair any part of the machine where a moving part can come in contact with your body or clothing, stop the machine, allow it to cool, disconnect the spark plug wire from the spark plug and move it away from the spark plug before attempting to unclog, inspect or repair.
- Do not operate unit while under the influence of alcohol or drugs.
- The machine should only be operated on a level surface. Never operate your unit on a slippery, wet, muddy or icy surface. Keep your work area clean and clear of branches or obstacles which could cause you to stumble and fall. Do not overreach. Maintaining proper footing and balance is essential to preventing
- Do not allow an accumulation of processed material to build-up in the discharge area as this will prevent proper discharge and can result in kick-back from the chipper chute.
- Keep your face and body back from chipper chute to avoid accidental bounce back of any material.
- Do not transport machine while engine is running.
- If the cutting mechanism strikes a foreign object or if your machine should start making an unusual noise or vibration, immediately stop the engine and allow the machine to come to a complete stop. Disconnect the spark plug wire and move it away from the spark plug. Take the following steps.
  - a. inspect for damage.
  - Repair or replace any damaged parts.
  - Check for any loose parts and tighten to assure continued safe operation.
  - Never attempt to attach or remove catcher bag when engine is running. Shut the engine off and wait for the impeller to come to a complete stop. The impeller continues to rotate for a few seconds after the engine is shut off. Never place any part of the body in the impeller area until you are sure the impeller has stopped rotating.
- Muffler and engine become hot and can cause a burn. Do not touch.

- Do not allow leaves or other debris to build-up on engine's muffler. The debris could ignite and cause a fire.
- Do not attempt to shred or chip material larger than specified in this manual. Personal injury or damage to the machine could result.
- Do not operate engine if air cleaner or cover over carburetor air-intake is removed, except for adjustment. Removal of such parts could create a fire hazard.
- Only use accessories approved for this machine by the manufacturer. Read, understand, and follow all instructions provided with the approved accessory.
- If situations occur which are not covered by this manual, use care and good judgment. Contact your dealer for assistance.
- Keep discharge discharge chute, chipper chute door, and all other guards and safety devices in place and operating properly.
- Only operate unit in good daylight. Do not operate unit at night or in dark areas where your vision may be impaired.

### **CHILDREN**

Tragic accidents can occur if the operator is not alert to the presence of small children. Children are often attracted to the chipper-shredder and the chipping and shredding activity. Never assume that children will remain where you last saw them.

- Keep children out of the work area and under the watchful eye of a responsible adult other than the operator.
- Be alert and turn the unit off if a child enters the area.
- Never allow children under the age of 16 to operate the chipper-shredder.

### SERVICE

- Use extreme care in handling gasoline and other fuels. They are extremely flammable and the vapors are explosive.
  - a. Store fuel and oil in approved containers, away from heat and open flame, and out of the reach of children. Check and add fuel before starting the engine. Never remove gas cap or add fuel while the engine is running. Allow engine to cool at least two minutes before refueling.
  - Replace gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.

- Extinguish all cigarettes, cigars, pipes and other sources of ignition.
- d. Never refuel unit indoors because flammable vapors will accumulate in the area.
- e. Never store the machine or fuel container inside where there is an open flame or spark such as a gas hot water heater, space heater, clothes dryer or furnace.
- Never run your machine in an enclosed area as the exhaust from the engine contains carbon monoxide, which is an odorless, tasteless and deadly poisonous gas.
- To reduce fire hazard, keep engine and muffler free of leaves, grass, and other debris build-up. Clean up fuel and oil spillage. Allow unit to cool at least 5 minutes before storing.
- Before cleaning, repairing, or inspecting, make certain the impeller and all moving parts have stopped.
   Disconnect the spark plug wire and keep wire away from spark plug to prevent accidental starting. Do not use flammable solutions to clean air filter.
- Check the blade and engine mounting screws at frequent intervals for proper tightness. Also visually inspect blades for wear and/or damage (e.g., bent, cracked). Replace with blades which meet original equipment specifications.
- Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly.
- After striking a foreign object, immediately stop the engine, disconnect the spark plug wire from the spark plug, and thoroughly inspect the unit for any damage.
   Repair damage before starting and operating unit.
- Do not alter or tamper with the engine's governor setting. The governor controls the maximum safe operating speed of the engine. Over-speeding the engine is dangerous and will cause damage to the engine and to other moving parts of the machine.

### YOUR RESPONSIBILITY



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

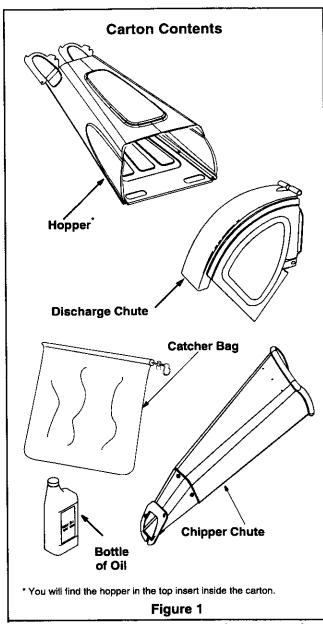
## SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.



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.)

### **ASSEMBLY**



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

**NOTE:** To determine right and left hand sides of your chipper-shredder, stand behind the unit with the engine farthest away from you.

Your chipper-shredder has been completely assembled at the factory, except for the hopper assembly, discharge chute and the catcher bag.

These parts are shipped loose in the carton. A pair of safety glasses and a bottle of oil are also included in the carton.

## REMOVE CHIPPER-SHREDDER FROM CARTON

- Cut the corners of the carton.
- · Remove all packing inserts.
- Remove all loose parts including owner's manual. See figure 1.
- Roll chipper-shredder out of the carton.
- Make certain all parts and literature have been removed before the carton is discarded.

### **LOOSE PARTS**

(Refer to figure 1.)

- a. Hopper Assembly
- b. Discharge Chute
- c. Catcher Bag
- d. Bottle of Oil
- e. Safety Glasses (not shown in figure 1)
- f. Owner's Manual (not shown in figure 1)
- g. Chipper Chute

### **TOOLS REQUIRED**

- 1. 1/2" or Adjustable Wrenches
- 2. 7/16" or Adjustable Wrenches
- 3. 9/16" or Adjustable Wrenches
- 4. Funnel

### **DISCONNECTING SPARK PLUG**

 Disconnect the spark plug wire and move it away from the spark plug before assembling the chipper-shredder. See figure 2.

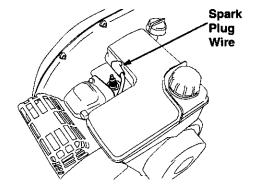


Figure 2

### ATTACHING DISCHARGE CHUTE

- Remove the wing knobs from each side of the discharge opening on the chipper-shredder. See figure 3.
- Using two 7/16" wrenches, remove hex lock nut, two spacers, and the hex bolt from top of the housing assembly. For easy assembly, do not remove the second spacer from the hex bolt.
- Place the discharge chute in position on the discharge opening. Insert hex bolt and spacer through hinge on discharge chute and housing (spacer fits inside of hinge). See figure 3 inset.

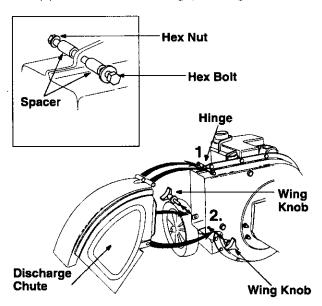


Figure 3

- Place second spacer over hex bolt inside the other half of the hinge. Secure with hex lock nut. Tighten securely.
- Secure both sides of discharge chute to housing using wing knobs that you earlier removed.
   Tighten wing knobs.

### ATTACHING HOPPER ASSEMBLY

- Remove the 8-3/8" long hex bolt and the hex nut from the bottom of the inlet guide opening. See figure 4 inset.
- Place the hopper assembly on the ground and hold it in the position shown in step 1 in figure 4.
- Holding the hopper, push hopper pivot door down inside the hopper. See figure 4.
- Slide the hopper assembly towards the chippershredder housing so that the upper guide on the hopper assembly slides under the stop washer on each side of the inlet guide. See figure 4.
- Align the two holes (one on each side) of the lower hopper with the two holes (one on each side) of the inlet guide.

Insert the hex bolt (that you earlier removed)
from the left through the hole on the hopper and
the inlet guide. Insert the hex nut onto the bolt
from the other side. See figure 4 inset.

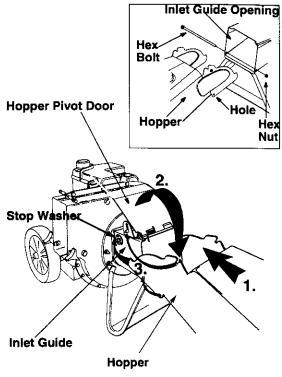


Figure 4

- Tighten the bolt to remove all sideplay ( after tightening the bolt, the hopper will pivot up and down). This will secure the hopper assembly to the inlet guide.
- To raise the hopper, hold the hopper by the hand-hold and lift it up till it clicks into position. See figure 5.

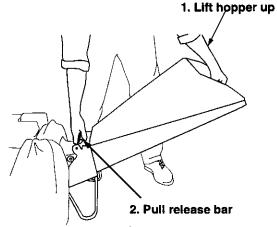


Figure 5

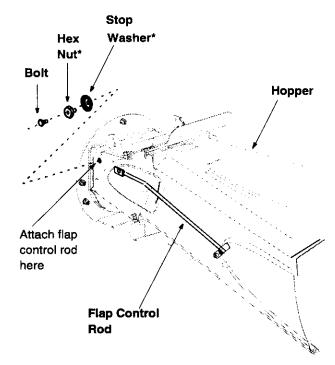
To *lower* the hopper, hold the hopper by the hand-hold and pull the release bar. The hopper should drop down. See figure 5.

The flap control rod is already attached to the hopper at the top. The other end of the rod has to be attached

to the stop washer on the inlet guide. See figure 6.



**WARNING:** This flap control rod is a safety device to hold the flap in place inside the hopper while shredding branches. **Do not operate** the chipper-shredder without properly attaching this flap control rod.



\* Do not remove these hardware from the inlet guide assembly while attaching the flap control rod.

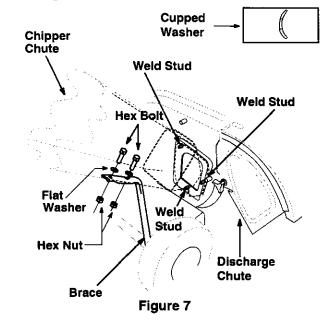
#### Figure 6

- Raise the hopper till it clicks into position.
- Unscrew the shoulder bolt from the stop washer on the inlet guide. See figure 6.
- Align the loose end of the flap control rod with the stop washer on the inlet guide.
- Slide the shoulder bolt through the opening in the flap control rod. Secure tightly. See figure 6.

### ATTACHING THE CHIPPER CHUTE

- Your unit is shipped with one end of the brace already secured to the lower frame. Loosen the bolts securing the brace to the frame.
- Remove the three cupped washers and hex nuts from the weld studs beside the opening on the left side of the housing. See figure 7.
- Remove the two sets of hex bolt, lock nut, and flat washer from the two holes on the upper end of the brace as shown in figure 7.
- Place the chipper chute over the weld studs so the slot on the chute is towards the bottom. Align the three holes at the bottom of the chute with the three weld studs.
- Secure with the three pairs of cupped washers

- and hex nuts that you earlier removed. Do not tighten the nuts at this time. Make sure to place the cupped side of the washer against the chipper chute.
- Align the holes towards the front opening of the chute with the holes on the brace. See figure 7.
- Insert one each of the hex botts, lock nuts, and flat washers (that you earlier removed) through each hole in the chute and the brace. Tighten these bolts to secure brace to the chute.
- Tighten bolts securing the brace to the lower frame. These bolts had been removed earlier.
- Tighten the three nuts on the weld studs.



### ATTACHING THE CATCHER BAG

Your chipper-shredder is equipped with a catcher bag to catch the shredded material.

- To attach the bag, place the bag opening over the discharge chute so it completely covers the discharge chute and goes over the chute flanges.
- Depress the plunger on the draw-string, and pull on the draw-string until the bag is tight around the chute opening. Release plunger to lock it into position. See figure 8.

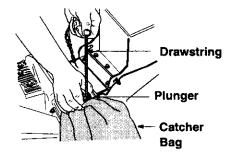


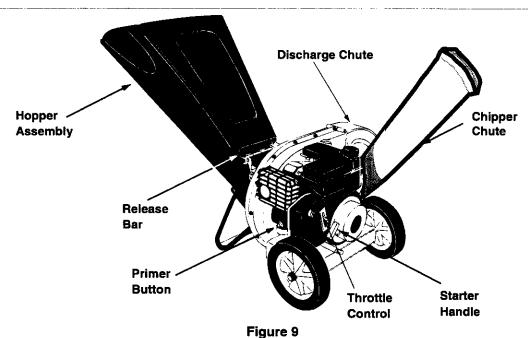
Figure 8

### **OPERATION**

Read this owner's manual and safety rules before operating your chipper-shredder. Compare the illustration in figure 9 with your chipper-shredder to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.



The operation of any chipper-shredder can result in foreign objects being thrown into the eyes, which can result in severe eye damage. **Always wear safety glasses** provided with the chipper-shredder or eye shields before chipping or shredding, or while performing any adjustments or repairs.



### **OPERATING CONTROLS**

#### Release Bar

Used to release the hopper when raising or lowering.

#### Starter Handle

Used to manually start the engine.

#### **Throttle Control**

Regulates speed of the engine.

### **Catcher Bag**

Used to collect the shredded material. (not shown)

### **Hopper Assembly**

Allows leaves and small branches upto 0.5 "diameter to be fed into the impeller for chipping and shredding.

Lower the hopper to collect raked material for shredding.

#### **Chipper Chute**

Allows bulky vegetation like stalks or heavy branches upto 3" diameter to be fed into the impeller for chipping and shredding.

#### **Primer Button**

Fills carburetor with gasoline to aid in starting a cold engine.

### STOPPING ENGINE

Move throttle control lever to STOP position. Disconnect spark plug wire and move away from spark plug to prevent accidental starting.

### **MEETS ANSI SAFETY STANDARDS**

Sears chipper-shredders conform to the safety standard B 71.6 - 1990 of the American National Standards Institute.

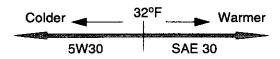


WARNING: Before using your chippershredder, refer to the safety rules on pages 3 and 4 of this manual again. Always be careful.

### **GAS AND OIL FILL-UP**

### Oil (Packed with unit)

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



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

Fill engine with oil as follows.

Remove dipstick. See figure 10.

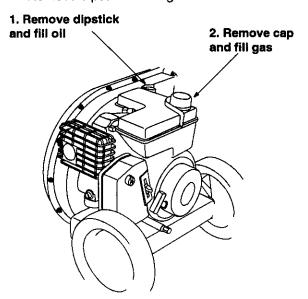


Figure 10

 With chipper-shredder on level ground, use a funnel to fill engine with oil to FULL mark on dipstick. Capacity is approximately 20 ounces. Be careful not to overfill. Tilt chipper-shredder toward the left (from behind the hopper). See figure 11. Check oil level. Put the unit back on the ground carefully.



**WARNING:** Do **not** tilt unit holding the hand-hold.

Add oil if necessary. Replace dipstick and tighten.

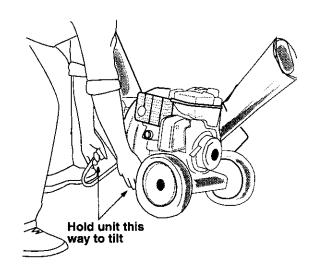


Figure 11

NOTE: Do not overfill. Oil bottle packed with unit contains 20 oz. of oil.

#### Gasoline

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.

Fill gas tank with gas as follows.

- Remove fuel cap. See figure 10.
- Make sure the container (from which you will pour the gasoline) is clean and free from rust or foreign particles. Never use gasoline that may be stale from long periods of storage in the container.
- Fill fuel tank with fresh, lead-free gasoline. DO NOT use Ethyl or high octane gasoline. Replace fuel cap.



**WARNING:** Do not fill closer than 1/2 inch of top of fuel tank to prevent spills and to allow for fuel expansion. If gasoline is accidently spilled, move chipper-shredder away from area of spill. Avoid creating any source of ignition until gasoline vapors have disappeared.

- Check the fuel level periodically to avoid running out of gasoline while operating the chipper-shredder.
- If the unit runs out of gas as it is shredding or chipping, it may be necessary to unclog the unit before it can be restarted. Refer to Removing the Flail Screen in SERVICE AND ADJUSTMENT section.

### STARTING ENGINE



WARNING: Be sure no one other than the operator is standing near the chipper-shredder while starting or operating. Do not operate this chipper-shredder unless the discharge chute has been properly installed and is secured with the hand knobs.

**NOTE:** To prevent the unit from sliding, place your foot firmly against the tire.

 Attach spark plug wire and rubber boot to spark plug. See figure 12.

#### 1. Attach spark plug wire

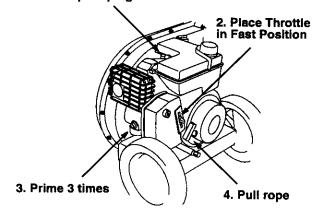


Figure 12

- Place the throttle control lever in FAST position (UP).
- Push primer 2 or 3 times, waiting a couple of seconds between each push. In cold weather (50°F or below) prime 5 times.
- Grasp starter handle and pull rope out slowly until engine reaches start of compression cycle (rope will pull slightly harder at this point). Let the rope rewind slowly.

- Pull rope with a rapid full arm stroke. Let rope return to starter slowly. See figure 12.
- When engine starts, move throttle control to IDLE position for a few minutes warm-up.

NOTE: A noise will be heard when finding the start of the compression cycle. This noise is caused by the flails and fingers which are part of the shredding mechanism falling into place, and should be expected. In addition, the flails and fingers will be noisy after the engine is started, until the impeller reaches full speed.

### STOPPING ENGINE

- Move throttle control lever to STOP position (DOWN).
- Disconnect spark plug wire and move away from spark plug to prevent accidental starting.

### **USING YOUR CHIPPER-SHREDDER**



**WARNING:** Do not attempt to shred or chip any material other than vegetation found in a normal yard (i.e., branches, leaves, twigs, etc.).

The chipper-shredder is designed for two different methods of operation.

- Leaves and small branches up to 1/2"
   diameter (maximum) can be fed into the
   hopper assembly when it is in the raised or
   lowered position. See figure 13.
- b. Bulky material, such as stalks or heavy branches, up to 3" in diameter can be fed into the chipper chute. See figure 13.



WARNING: Do not put material larger than is specified into the hopper or the chipper chute. Personal injury and/or damage to the machine could result.

If it becomes necessary to push material into the chipper-shredder, use a small diameter stick — **not your hands.** The stick should be small enough that it will be ground up if it gets into the impeller assembly.



WARNING: Never remove discharge chute till the unit has completely stopped. Never turn off the engine until all chipping is completed.

For best performance, it is important to keep the shredding blade and the chipper blades sharp. If the composition of the material being discharged changes (becomes stringy, etc.) or if the rate at which the material is discharged slows down considerably, it is likely that the shredding blade and/or chipper

blades are dull and need to be sharpened or replaced. To sharpen or replace the blades, refer to Service and Adjustments section.

**IMPORTANT:** There is a flail screen located inside the housing in the discharge area. If the flail screen becomes clogged, remove and clean as instructed in the Service and Adjustments section on page 14.

# TO LOWER THE HOPPER ASSEMBLY

- To lower the hopper assembly, use one hand to grasp the hand-hold at the top of the hopper assembly and lift slightly. Refer to figure 5.
- Pull up on the release bar, and lower the hopper assembly to the ground. Release the bar. Refer to figure 5.



**WARNING:** The chipper-shredder discharges materials with considerable velocity. **Keep away** from the area around the discharge chute. Always **stop the engine** and disconnect spark plug wire when removing or attaching the bag, changing containers, or removing the shredded material. Wear safety glasses and gloves whenever using your chipper-shredder.

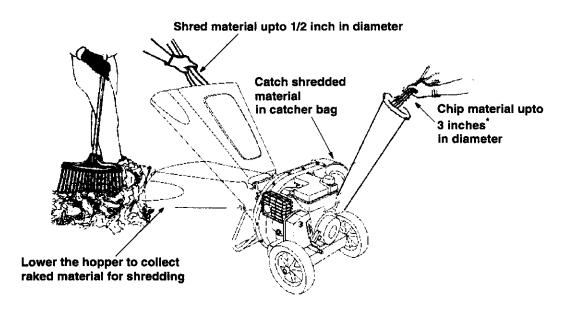


Figure 13

### **MAINTENANCE**

### GENERAL RECOMMENDATIONS

- Always observe safety rules when performing any maintenance.
- The warranty on this chipper shredder does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain the chipper-shredder as instructed in this manual.
- Some adjustments will be needed periodically for proper maintenance of your chipper shredder.
   These adjustments are covered in the following section of this manual.
- All adjustments mentioned here should be checked at least once each season.
- Follow the maintenance schedule given below.

Periodically check all fasteners and make sure these are tight.

### **CLEANING**

- Clean the chipper-shredder by running water from a hose through the hopper assembly and chipper chute with the engine running. Allow the chipper-shredder to dry thoroughly.
- Wash the bag periodically with water. Allow to dry thoroughly in the shade. Do not use heat.



WARNING: Always stop the engine and disconnect the spark plug wire before performing any maintenance or adjustments. Never remove discharge chute till the engine has completely stopped.

### **ENGINE MAINTENANCE**

### **Engine Oil**

- Only use high quality detergent oil rated with API service classification SF, SG or SH. Select the oil's viscosity grade according to your expected operating temperature. Refer to page 9 of this manual for viscosity chart.
- The four-cycle engine of your chipper-shredder will normally consume some oil. Therefore, check engine oil level regularly approximately every five hours of operation and before each usage.
- Stop engine and wait several minutes before checking oil level. With engine on level ground, the oil must be to FULL mark on dipstick.
- Change engine oil after the first five hours of operation, and every twenty-five hours thereafter.

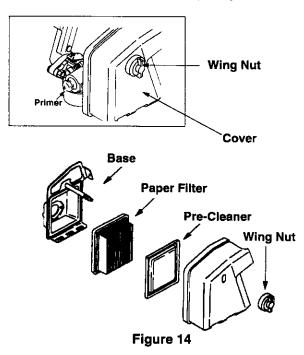
#### To Drain Oil

Drain oil while engine is warm. Follow the instructions given below.

- Remove oil drain plug. Catch oil in a suitable container.
- When engine is drained of all oil, replace drain plug securely.
- Refill with fresh oil. Refer to GAS AND OIL FILL-UP section. Replace dipstick.

#### Air Cleaner

The air cleaner prevents damaging dirt, dust, etc., from entering the carburetor and being forced into the engine and is important to engine life and performance. The air cleaner consists of a precleaner or foam filter, and a paper filter. **Never run** the engine without air cleaner completely assembled.



### **CUSTOMER RESPONSIBILITIES**

	MAINTENANCE SCHEDULE	8000	The Sach Use	SA TON TON	No N	STON TOO TO	Short Stock	Sol of the second		VICI TES	<b>E</b>	
PRODUCT	Oil pivot points						<b>\langle</b>			:		
PRO	Clean shredder		$\checkmark$				<b>⊘</b>					
	Check engine oil	$\checkmark$										
	Change engine oil			$\triangleleft$	$\triangleleft$							
ENGINE	Service air cleaner				√				•			
<u> </u>	Clean engine				∜		$\checkmark$					
	Reset spark plug				$\checkmark$		$\checkmark$					
	Clean muffler					$\checkmark$						

#### To Service Air Cleaner:

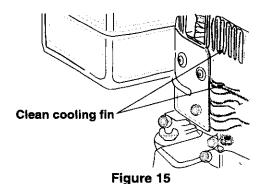
- 1. Service pre-cleaner after every 25 hours of use, or at least once a season.
- 2. Service filter every 100 hours of use, or at least once a season.
- 3. Service pre-cleaner and filter more often under dusty conditions.
- Remove wing nut and cover. For location, see figure 14 inset.
- Slide pre-cleaner off filter. Clean the inside of base and cover thoroughly. See figure 14.
- Clean pre-cleaner as follows:
  - Wash in water and detergent solution, and squeeze (do not twist) until all dirt is removed.
  - d. Rinse thoroughly in clear water.
  - e. Wrap in a clean cloth and squeeze (do not twist) until completely dry, or allow to air dry.
  - f. Saturate with engine oil and squeeze (don't twist) to distribute oil and remove excess oil.

**NOTE:** If the pre-cleaner is torn or damaged in any way, replace it.

- If necessary, replace paper filter —do not attempt to clean. Install new filter on base.
- Slide pre-cleaner over filter.
- Install cover and wing nut.
- Tighten wing nut securely.

### Clean Engine

- Clean engine periodically. Remove dirt and debris with a cloth or brush.
- Frequently remove grass clippings, dirt and debris from cooling fins, air intake screen and levers and linkage. This will help ensure adequate cooling and correct engine speed. See figure 15.



 Yearly or every 25 hours, whichever occurs first, remove the blower housing and clean the areas shown in figure 15 to avoid overspeeding, overheating and engine damage. Clean more often if necessary.

NOTE: Cleaning with a forceful spray of water is not recommended as water could contaminate the fuel system.



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

### Spark Plug

Clean the spark plug and reset the gap to .030"
 at least once a season or every 50 hours of
 operation. See figure 16. Spark plug
 replacement is recommended at the start of
 each season. Refer to engine parts list for
 correct spark plug type.

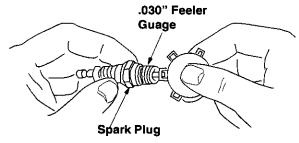


Figure 16

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

#### Muffler

 Inspect periodically, and replace if necessary. If your engine is equipped with a spark arrester screen assembly, remove every 50 hours for cleaning and inspection. Replace if damaged.



**WARNING:** Do not operate the chippershredder **without a muffler**, or tamper with the exhaust system. Damaged mufflers or spark arresters could create a fire hazard.

### **LUBRICATION**

Lubricate the pivot points on the release bar, hopper assembly, and discharge chute once a season using a light oil. Refer to the lubrication chart in figure 17.

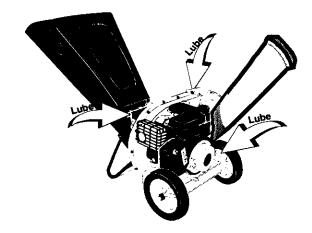


Figure 17

### **SERVICE & ADJUSTMENTS**

### **CLEANING THE FLAIL SCREEN**

If the discharge area becomes clogged, remove the flail screen and clean area as follows.

- Stop engine, make certain the chipper-shredder has come to a complete stop and disconnect spark plug wire from the spark plug.
- Remove the two hand knobs on each side of the discharge chute. Lift the discharge chute up, and keep it out of the way.
- Remove two hairpin clips from the clevis pins which extend through the housing. Remove the clevis pins. See figure 18.

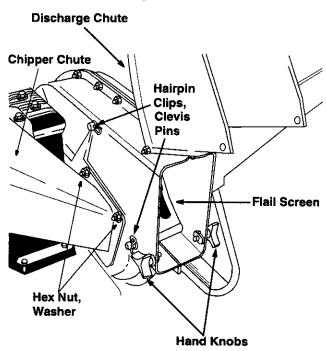


Figure 18

- Pull the flail screen from inside the housing. See figure 18. Clean the screen by scraping or washing with water.
- Reinstall the screen. Put the discharge chute back to its original position and tighten the hand knobs.

NOTE: Be certain to reassemble the flail screen with the curved side down.

# SHARPENING OR REPLACING THE BLADES

#### **Chipper Blades**

 Disconnect spark plug wire and move it away from spark plug.

- Remove the flail screen as instructed in previous section.
- Using a 1/2" wrench, remove the chipper chute by removing three hex nuts and washers. See figure 18. (Only two hex nut positions shown in figure.)

**NOTE:** When reassembling, the cupped washer goes on the slot toward the bottom of the chipper chute with the cupped side against the chute.

 Rotate the impeller assembly by hand until you locate one of the two chipper blades in the chipper chute opening. Remove the blade, using a 3/16" allen wrench on the outside of the blade and 1/2" wrench on the impeller assembly (inside the housing). See figure 19.

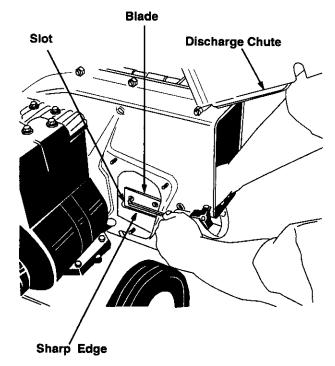


Figure 19

- Remove the other blade in the same manner.
- Replace or sharpen blades.
- If sharpening, make certain to remove an equal amount from each blade.
- Reassemble in reverse order. Make certain blades are reassembled with the sharp edge facing the direction shown in figure 19 (sharp edge is assembled toward the slotted opening at the bottom).
- Torque bolts and nuts to 250-350 inch-pounds.

#### **Shredding Blade**

The shredding blade may be removed for sharpening or replacement as follows.

- Disconnect spark plug wire and move it away from spark plug.
- Lower the hopper assembly. Block up the housing. See figure 20.

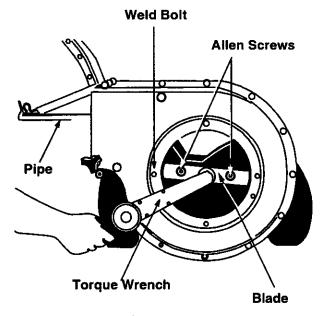


Figure 20

- Remove the six hex lock nuts and lock washers from the housing weld bolts using a 1/2" wrench.
   Separate the chipper-shredder into two halves.
- Remove the back-up plate.

NOTE: When reassembling, make certain the embossed tab faces inward towards the impeller, and opening on the back-up plate is toward the bottom of the unit.

- Remove the two hand knobs and cupped washers which secure the discharge chute.
   Raise the discharge chute.
- Insert a 1/2" or 3/4" diameter pipe through the flail screen into the impeller to keep it from turning, or remove the flail screen and insert a piece of wood (2 x 4) into the chute opening.
- Remove the two outside screws on the blade, using a 3/16" allen wrench and a 1/2" wrench.
- Remove the blade by removing the center bolt, lock washer and flat washer.



**WARNING:** Use caution when removing the blade to avoid contacting the weld bolts on the housing.

When sharpening the blade, follow the original

- angle of grind as a guide. It is extremely important that each cutting edge receives an equal amount of grinding to prevent an unbalanced blade.
- An unbalanced blade will cause excessive vibration when rotating at high speeds and may cause damage to the unit. The blade can be tested for balance by balancing it on a round shaft screwdriver or nail. Remove metal from the heavy side until it is balanced evenly. See figure 21.
- When reassembling the blade, tighten center bolt to between 550 and 650 inch-pounds and the two outer bolts to between 250 and 350 inchpounds, or lacking torque wrench, tighten securely.

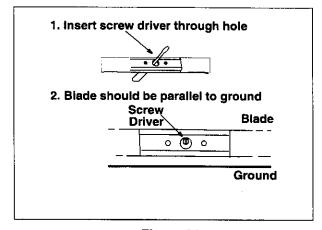


Figure 21

### ADJUSTING 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 muffler.

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 chipper-shredder to your nearest SEARS service center.

### **ENGINE SPEED**

The engine speed on your chipper-shredder has been set at the factory. 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 chipper-shredder to the nearest SEARS service center for repair and adjustment.

### **STORAGE**



WARNING: Never store machine with fuel in the fuel tank inside of building where fumes may reach an open flame or spark, or where ignition sources are present such as hot water and space heaters, furnaces, clothes dryers, stoves, electric motors, etc.

A yearly check-up by your local Sears service center is a good way to make certain your chipper-shredder will provide maximum performance for the next season.

### CHIPPER-SHREDDER

- Clean the chipper-shredder thoroughly.
- Wipe unit with an oiled rag to prevent rust (use a light oil or silicone).

### **ENGINE**

IMPORTANT: It is important to prevent gum deposits from forming in essential fuel system parts such as 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.

- Drain the fuel tank.
- Start the engine and let it run until the fuel lines and carburetor are empty.
- Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.
- Use fresh fuel next season.

**NOTE:** Fuel stabilizer 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 the mix ratio found on stabilizer container.
- Run engine at least 10 minutes after adding stabilizer to allow the stabilizer to reach the carburetor.
- Do not drain the gas tank and carburetor if using fuel stabilizer. Drain all the oil from the crankcase (this should be done after the engine has been operated and is still warm) and refill the crankcase with fresh oil.
- If you have drained the fuel tank, protect the inside of the engine as follows.
- Remove spark plug, pour approximately 1/2 ounce (approximately one tablespoon) of engine oil into cylinder and crank slowly to distribute oil.
- Replace spark plug.

### **OTHER**

- Do not store gasoline from one season to another.
- Replace your gasoline can if your can starts to rust. Rust and/or dirt in your gasoline will cause problems. Store unit in a clean, dry area. Do not store next to corrosive materials, such as fertilizer.

**NOTE:** If storing in an unventilated or metal storage shed, be certain to rustproof the equipment by coating with a light oil or silicone.

## TROUBLE-SHOOTING

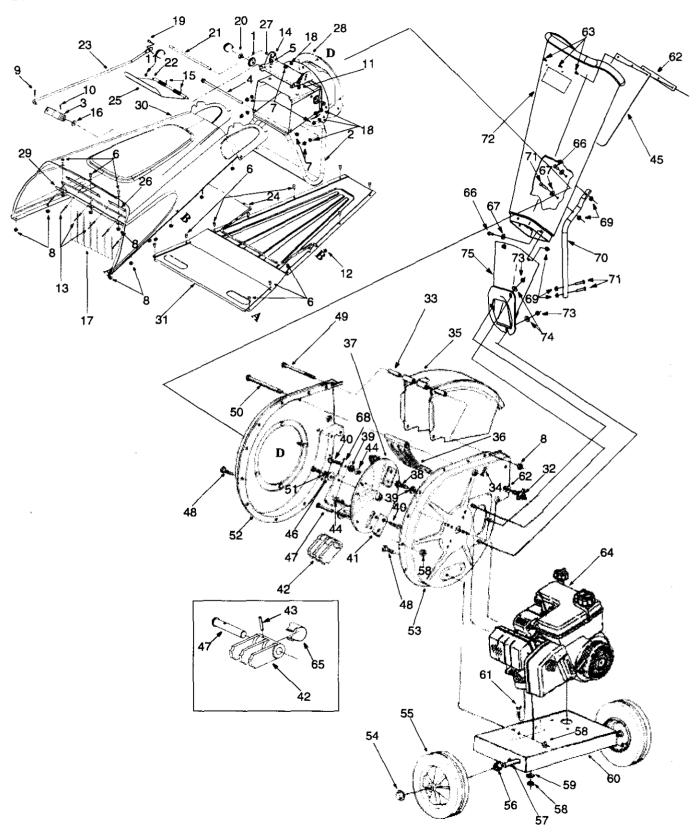
PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION	
Engine fails to start	Fuel tank empty, or stale fuel     Spark plug wire disconnected     Faulty spark plug     Throttle control not in correct position	<ol> <li>Fill tank with clean, fresh fuel</li> <li>Connect wire to spark plug.</li> <li>Clean, adjust gap or replace.</li> <li>Move throttle control to FAST position</li> </ol>	
Loss of power; operation erratic	<ol> <li>Spark plug wire loose</li> <li>Unit running on Choke</li> <li>Blocked fuel line or stale fuel</li> </ol>	<ol> <li>Connect and tighten spark plug wire.</li> <li>Move choke lever to OFF position.</li> <li>Clean fuel line; fill tank with</li> </ol>	
	4. Water or dirt in fuel system	clean, fresh gasoline.  4. Disconnect fuel line at carburetor to drain fuel tank. Refill with fresh fuel.	
	Carburetor out of adjustment     Dirty air cleaner	<ul><li>5. Contact your SEARS service center.</li><li>6. Service air cleaner.</li></ul>	
Engine overheats	<ol> <li>Carburetor not adjusted properly</li> <li>Engine oil level low</li> </ol>	Contact your SEARS service center.     Fill crankcase with proper oil.	
Too much vibration	Loose parts or damaged impeller	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 discharge	Discharge chute clogged      Even and the clogged in impeller	Stop engine immediately and disconnect spark plug wire. clean flail screen and inside of blower housing.     Stop engine immediately and disconnect spark plug wire. Remove lodged object.	
Rate of discharge slows considerably or composition of discharged material changes	Shredding blade and/or chipping blade dull	Sharpen or replace blade(s).	



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

## **PARTS LIST**

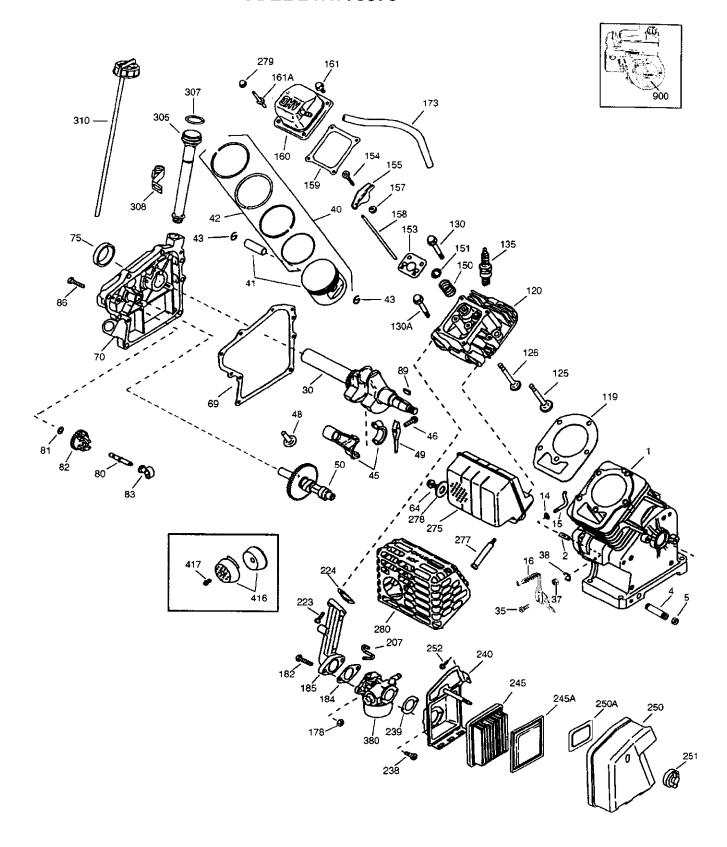
### SEARS CRAFTSMAN 6.5 H.P. CHIPPER-SHREDDER MODEL 247.775870



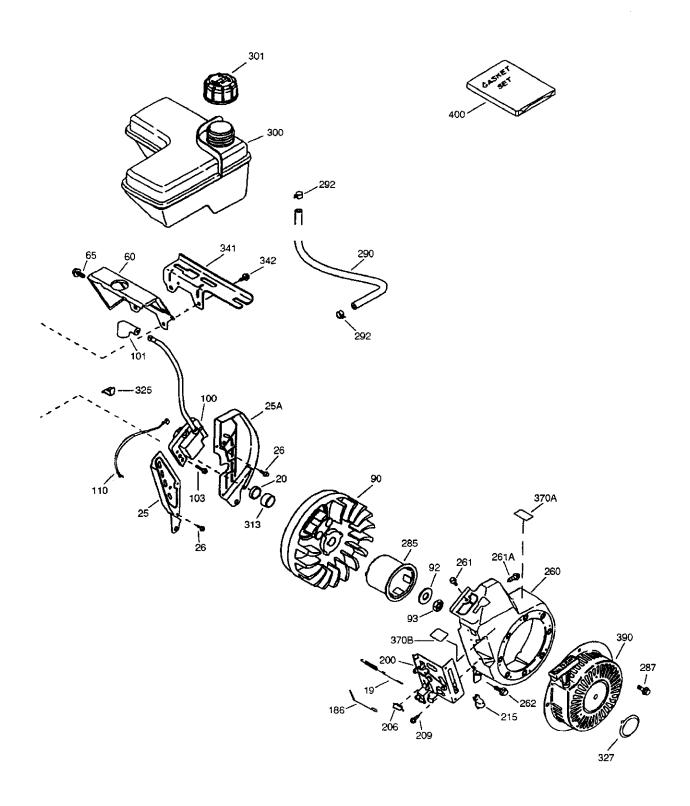
### SEARS CRAFTSMAN 6.5 H.P. CHIPPER-SHREDDER MODEL 247.775870

Key No	Part No	Description	Key No	Part No	Description
_	770-1231A	Owner's Manual	38	710-0157	Hex Bolt 5/16-24 X .75"
1	11480	Stop Washer	39	736-0119	Lock Washer 5/16" ld
2	681-0111	Inlet Guide Assembly	40	710-1054	Flat Hd. Screw 5/16-24 X .75"
3	681-0144	Arm Bracket Assembly	41	781-0490	Chipper Blade
4	710-0542	Hex Flange Bolt: 5/16-18 x	42	719-0329	Flail Blade
		8.375" (gr.5)	43	715-0166	Spring Roll Pin
5	710-0607	Hex Washer Head Self-Tap- ping Screw: 5/16-18 x 0.5"	44	712-0411	Hex Top Lock Nut 5/16-24 (gr. 5)
6	710-3256	Button-Head Screw 1/4-20 x 0.5"	45	735-0249	Shredder Chute Flap
7	712-0429	Lock Nut: 5/16-18	46	736-0247	Flat Washer .406" ID X 1.25" OD
8	712-3027	Hex Flange Lock Nut: 1/4-20	47	711-0833B	Clevis Pin
9	714-0104	Internal Cotter Pin	48	710-3008	Hex Bolt 5/16-18 X 1.5"
10	715-0129	Spiral Pin	49	710-0825	Hex Bolt 1/4-20 X 3.75"
11	726-0106	Cap Nut	50	711-0835	Clevis Pin
12	726-0135	Speed Cap Nut	51	736-0217	Lock Washer
13	728-0175	Pop Rivet	52	681-0004A	Flail Housing Assembly: Outer
14	732-0546	Torsion Spring	53	681-0117	Flail Housing Assembly: Inner
15	732-0629	Hopper Door Spring	54	726-0214	Push Cap 5/8" Dia.
16	735-0127	Rubber Washer	55	734-1600	Wheel Assembly Comp.
17	735-0651	Hopper Flap	56	750-0786	Spacer
18	736-0119	Lock Washer	57	738-0814	Shredder Axle
19	738-0137A	Shdr. Scr: .340 x .285 x 1/4-20	58	712-3004A	Hex Lock Nut 5/16-18 (Gr.5)
20	738-0946	Shdr. Scr: .56 x .165 x 5/16-18	59	736-0170	Special Lock Washer
21	747-0531A	Ret. Rod: 5/16" dia.	60	781-0510B	Shredder Frame
22	747-0747	Hopper Door Rod	61	710-0805	Hex Bolt 5/16-18 x 1.5"
23	747-1124	Flap Retaining Rod	62	781-0633	Chute Flap Strip
24	747-1125	Flap Retaining Bail	63	728-0175	Pop Rivet
25 26	781-0492A 781-0633	Hopper Pivot Door Chute Flap Strip	64		Engine: Tecumseh 6.5 hp. OHH65-71701
27	781-0698	Hopper Lock Bracket	65	781-0735	Pin Retaining Clip
28	781-0715	Shredder Plate	66	710-0751	Hex Bolt 1/4-20 x .625
29	781-0752	Flap Mounting Bracket	67	736-0173	Flat Washer .28 i.D. x .74 O.D.
30	781-0754-0483	Upper Hopper	68	742-0571	Shredder Blade
31	781-0755-0483	Lower Hopper	69	712-3027	Flanged Lock Nut
32	720-0170	Hand Knob	70	749-1004	Chipper Chute Support
33	750-0793	Chute Hinge Spacer	71	710-0106	Hex Screw 1/4-20 x .625 (gr. 2)
34	714-0149B	Internal Cotter Pin	72	681-0068	Chipper Chute Assembly
35	681-0094-0483	Discharge Chute Assembly	73	712-3010	Hex Nut 5/16-18 (gr. 5)
36	781-0457	Shredder Screen	74	736-0242	Bell Washer .345" I.D. x .88"
37	681-0030	Impeller Assembly	75	731-1899	Chipper Chute

# SEARS CRAFTSMAN 6.5 H.P. ENGINE MODEL 143.986501 FOR CHIPPER-SHREDDER MODEL 247.775870



# SEARS CRAFTSMAN 6.5 H.P. ENGINE MODEL 143.986501 FOR CHIPPER-SHREDDER MODEL 247.775870



### SEARS CRAFTSMAN 6.5 H.P. ENGINE MODEL 143.986501 FOR

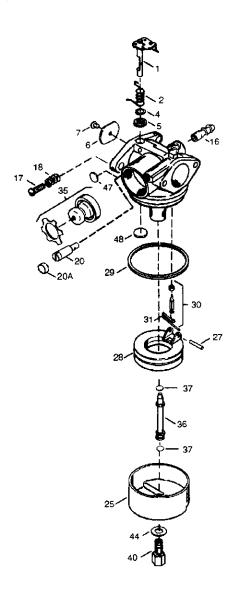
### **CHIPPER-SHREDDER MODEL 247.775870**

Key No.	Part No.	Description	Key No.	Part No.	Description
	-	RPM High 3450 to 3750	119	36719	Cylinder Head Gasket
	-	RPM Low 2000 to 2300	120	36721	Cylinder Head
1	37120A	Cylinder (Incl. 2, 20 & 72)	125	36471	Exhaust Valve (Std.) (Incl. 151)
2	26727	Dowel Pin		36472	Exhaust Valve (1/32" O.S.) (Incl. 151)
4	31857	Oil Drain Extension	126	29314C	Intake Valve (Std.) (Incl. 151)
5	30969	Extension Cap		29315C	Intake Valve (1/32" O.S.) (Incl. 151)
14	651051	Washer	130	650912	Screw, 5/16-18 x 1-1/2"
15	37108	Governor Rod	130A	650999	Screw, 5/16-18 x 2-41/64"
16	37110	Governor Lever	135	34645	Spark Plug (N4C)
19	37111	Extension Spring	150	37039	Valve Spring
20	32600	Oil Seal	151	31673	Valve Spring Cap
25	36621	Air Baffle (Left)	153	36649	Push Rod Guide
25A	36622	Air Baffle (Right)	154	650913	Rocker Arm Stud
26	30200	Screw, 10-24 x 9/16"	155	35624A	Rocker Arm
30	36831	Crankshaft	157	650914	Nut, 1/4-28
35	651053	Screw, 10-32 x 63/64"	158	36629	Push Rod
37	29216	Lock Nut, 10-32	159	35626	Rocker Arm Cover Gasket
38	37109	Retaining Ring	160	36630A	Rocker Arm Cover Gasket
40	40004	Piston, Pin, And Ring Set (Std.)	161	651008	Screw, 1/4-20 x 31/64"
	40005	Piston, Pin, And Ring Set (.010" O.S.)	161A	651012	Stud
41	36070	Piston & Pin Ass'y. (Std.) (Incl. 43)	173	36675A	Breather Tube
	36071	Piston & Pin Ass'y. (.010" O.S.)(Incl. 43)	178	650852	Nut, 1/4-20
42	40006	Ring Set (Std.)	182	650451	Screw, 1-4-20 x 1"
	40007	Ring Set (.010" O.S.)	184	26756	Carburetor to Intake Pipe Gasket
43	20381	Piston Pin Retaining Ring	185	36631	Intake Pipe
45	32875A	Connecting Rod Ass'y. (Incl. 46 & 49)	186	36711	Governor Link
46	32610A	Connecting Rod Bolt	200	36736	Control Bracket (Incl. 206 & 215)
48	35616	Valve Lifter	206	610973	Terminal
49	36611	Oil Dipper	207	36632	Throttle Link
50	37040	Camshaft	209	650821	Screw, 10-32 x 1/2"
60	36623A	Blower Housing Extension	215	36638	Control Knob
64	651015	Screw, 1/4-20 x 1-1/8"	223	650451	i
65	30200	Screw, 10-24 x 9/16"	224	36581	Screw, 1/4-20 x 1"
69	36624	Cylinder Cover Gasket	238	28820	Intake Pipe Gasket
70	36625	Cylinder Cover (Incl. 75 thru 83)	239	27272A	Screw, 10-32 x 1/2"
72	00020	Oil Drain Plug	240		Air Cleaner Gasket
75	27897	Oil Seal	245	36633	Air Cleaner Body (Incl. 239) Air Cleaner Filter
80	30574A	Governor Shaft	245 245A	36046 36634	
81	30590A	Washer	250 250	37073	Air Cleaner Filter
82	30591	Governor Gear Ass'y. (Incl. 81)	250	l	Air Cleaner Cover
83	36057	Governor Spool	252	650886	Wing Nut
86	650488	Screw, 1/4-20 x 1-1/4"		650821	Screw, 10-32 x 1/2"
89	610961	Flywheel Key	260	36864	Blower Housing
90	611205	Flywheel	261	651008	Screw, 1/4-20 x 31/64"
92	650815	Belleville Washer	261A	650821	Screw, 10-32 x 1/2"
93		1	262	651008	Screw, 1/4-20 x 31/64"
100	650816 34443B	Flywheel Nut Solid State Ignition	275	36722	Muffler
100	610118	Solid State Ignition   Spark Plug Cover	277	650988	Screw, 1/4-20 x 2-9/32"
103	651007	Spark Flug Cover   Screw, Torx T-15, 10-24 x 15/16"	278	36674	Spacer
110	36054	Ground Wire	279	650852	Nut & Lock Washer
110	30034	Ground wire	280	36893	Heat Shield
			285	35985B	Starter Cup
			287		Rivet (Can be purchased locally)
			290	30705	Fuel Line
			292	26460	Fuel Line Clamp
			300	36863	Fuel Tank (Incl. 292 & 301)
			301	36246	Fuel Cap

# SEARS CRAFTSMAN 6.5 H.P. ENGINE MODEL 143.986501 FOR CHIPPER-SHREDDER MODEL 247.775870

Key No.	Part No.	Description	Key No.	Part No.	Description
305 307 308 310 313 325 327 341 342	35554 35499 37079 36902 34080 29443 35392 36644 651010	Oil Fill Tube "O"-Ring Fill Tube Clip Dipstick Spacer Wire Clip Starter Plug Fuel Tank Bracket Screw, 1/4-20 x 7/8"	370A 370B 380 390 400 416 417 900 900	36261 35703 640025B 590736 36720 36085 650760	Lubrication Decal Speed Control Decal Carburetor (Incl. 184) Rewind Starter Gasket Set Spark Arrester Kit (Incl. 417)(Optional) Screw, 8-32 x 3/8" Replacement Engine — none Replacement S/B 754299A Order Form 71-999

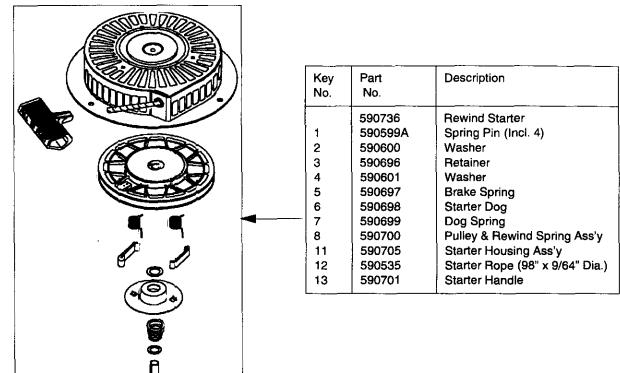
### Carburetor



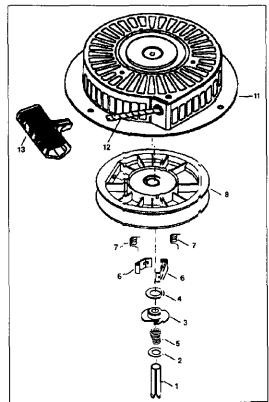
Key No.	Part No.	Description
INU.	140.	
	640025B	Carburetor (Incl. 184 of Engine
İ		Parts List)
1	631615	Throttle Shift & Lever Assembly
2	631767	Throttle Return Spring
4	631184	Dust Seal Washer
5	631183	Dust Seal (Throttle)
6	631036	Throttle Shutter
7	650506	Shutter Screw
16	632164	Fuel Fitting
17	651025	Throttle Crack Screw/Idle Speed
		Screw
18	630766	Tension Spring
20	640018	Idle Restrictor Screw
20A	640053	Idle Restrictor Screw Cap
25	631867	Float Bowl
27	631024	Float Shaft
28	632019	Float
29	631028	Float Bowl "O"-Ring
30	631021	Inlet Needle, Seat & Clip (Incl. 31)
31	631022	Spring Clip
35	36045A	Primer Bulb/Retainer Ring
36	640019	Main Nozzle Tube
37	632547	"O"-Ring, Main Nozzle Tube
40	640015	High Speed Bowl Nut
44	27110	Bowl Nut Washer
47	630748	Welch Plug, Idle Mixture Well
48	631027	Welch Plug, Atmospheric Vent

# SEARS CRAFTSMAN 6.5 H.P. ENGINE MODEL 143.986501 FOR CHIPPER-SHREDDER MODEL 247.775870

#### **Recoil Starter**



Key Part No. No.					
	590748	Rewind Starter			
1	590599A	Spring Pin (Incl. 4)			
2	590600	Washer			
3	590679	Retainer			
4	590601	Washer			
5	590678	Brake Spring			
6	590680	Starter Dog			
7	590412	Dog Spring			
8	590681	Pulley & Rewind Spring Ass'y			
11	590747	Starter Housing Ass'y			
12	590535	Starter Rope (98" x 9/64" Dia.)			
13	590701	Starter Handle			

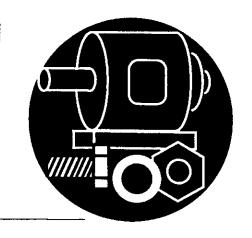


For the repair or replacement parts you need delivered directly to your home

Call 7 am - 7 pm, 7 days a week

1-800-366-PART

(1-800-366-7278)



For in-home major brand repair service

Call 24 hours a day, 7 days a week

1-800-4-REPAIR (1-800-473-7247)



For the location of a Sears Parts and Repair Center in your area

Call 24 hours a day, 7 days a week

1-800-488-1222



For information on purchasing a Sears Maintenance Agreement or to inquire about an existing Agreement

call 9 am - 5 pm, Monday-Saturday

1-800-827-6655





America's Repair Specialists

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com