

DR[®] CHIPPER/SHREDDER

Safety & Operating Instructions

Model: 18.0 HP

IMPORTANT! This manual contains information concerning proper and improper operation procedures, warnings, maintenance, troubleshooting and assembly tips. Everyone who operates this machine should read these instructions and be thoroughly familiar with them.

SECTION I - SAFETY

THIS CHIPPER-SHREDDER IS DESIGNED FOR CHIPPING AND SHREDDING LAWN AND GARDEN DEBRIS. IT HAS BEEN DESIGNED FOR THIS PURPOSE AND ANY OTHER USE MAY CAUSE INJURY.

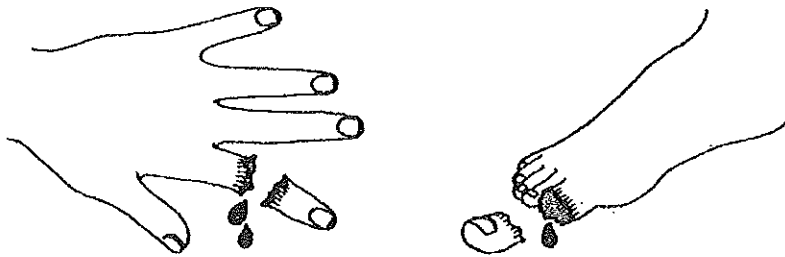


This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate your tiller. Failure to comply with these instructions may result in personal injury. When you see this symbol - heed its warning.



DANGER: *Rotating cutting hammers.*

Keep hands and feet out of inlet and discharge area while machine is running.



DANGER: This machine can CRUSH, GRIND, CUT and SEVER parts of your body if they enter the operating areas of the chipper-shredder.

THIS MACHINE IS CAPABLE OF INFLECTING SERIOUS INJURY IF OPERATED IMPROPERLY--READ WARNINGS & CAUTION.



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



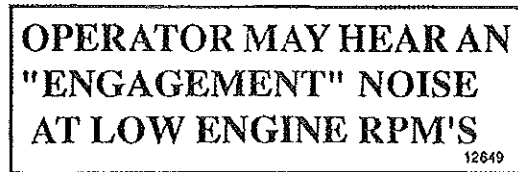
WARNING: The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Make certain that all safety labels on this equipment are kept clean and in good condition. If you need replacement labels, please order by part number.

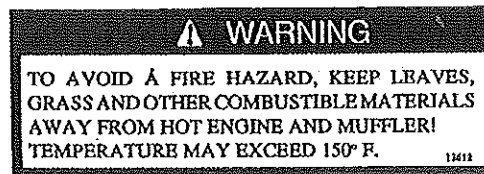
Belt guard labels



PART #912-2609



PART #912-2649

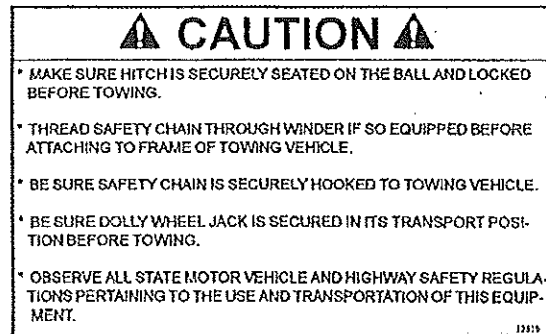


PART #912-2612

Frame Labels

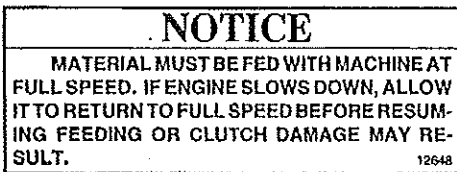


PART #912-2605



PART #912-2610

Shredder Hopper Labels



PART #912-2648



PART #091-0055



DANGER

SHREDDER PARTICLES CAN KICKBACK UP THROUGH THE SHREDDER HOPPER INLET UNLESS THE RUBBER RETAINER FLAP IS IN PLACE AND SECURELY FASTENED. PERSONAL INJURY CAN RESULT FROM FLYING PARTICLES.

BEFORE USING YOUR EQUIPMENT, BE SURE THE RETAINER FLAP IS SECURELY ATTACHED AND THAT YOU ARE WEARING PROTECTIVE SAFETY GOGGLES OR GLASSES.

12643

PART #912-2614

NOTHING



LARGER THAN
THIS DOWN

SHREDDER HOPPER

PART #091-0064



DANGER

DO NOT PLACE HANDS INTO HOPPER! HIGH SPEED FLAIL KNIVES COULD CAUSE SERIOUS INJURY OR LOSS OF HANDS!

VERY FAST FEED RATE

DROP MATERIAL INTO HOPPER.

DO NOT HOLD ON TO MATERIAL!

DO NOT PLACE HANDS IN HOPPER BELOW THIS LINE!



12603

PART #912-2603

OPERATING INSTRUCTIONS

ANYONE OPERATING THIS EQUIPMENT SHOULD WEAR GLOVES, SAFETY GOGGLES AND HEARING PROTECTION. READ OPERATION MANUAL BEFORE OPERATING THIS UNIT.

BEFORE STARTING ENGINE:

1. DISCHARGE SCREEN MUST BE INSTALLED WITH RODS AND PINS IN PLACE BEFORE OPERATING UNIT.
2. MAKE SURE THAT THE DISCHARGE DOOR IS CLOSED AND SECURED WITH THE SPRING LOADED LOCK PIN.

TO START ENGINE:

1. MOVE ENGINE CHOKE LEVER TO FULL CHOKE POSITION. IF ENGINE HAS BEEN RUNNING RECENTLY, DO NOT CHOKE.
2. MOVE ON-OFF SWITCH TO 'ON' POSITION.
3. PULL ROPE FIRMLY TO START ENGINE. ONCE ENGINE STARTS, SLOWLY MOVE THE CHOKE LEVER TO THE 'NO CHOKE' POSITION.
4. GRADUALLY MOVE THROTTLE CONTROL TO 'WIDE OPEN'.

TO OPERATE THE CHIPPER/SHREDDER:

1. MAKE SURE THAT ENGINE IS RUNNING AT FULL RPM'S WHEN FEEDING MATERIAL.
2. FEED LARGER LIMBS INTO THE LIMB CHIPPER IN FEED HOPPER. **DO NOT PLACE HANDS IN THE HOPPER FEED OPENING OR NEAR DISCHARGE AREA.** FEED WOOD ONLY INTO THE CHIPPER HOPPER.
3. FEED BRANCHES 1" OR SMALLER AND LEAVES, CLIPPINGS, AND ORGANIC WASTE INTO THE SHREDDER HOPPER. DO NOT FEED METAL, BOTTLES, CANS, ROCKS OR PLASTIC INTO SHREDDER.

TO STOP UNIT:

1. REDUCE ENGINE SPEED AND ALLOW ENGINE TO SLOW BEFORE MOVING ON-OFF SWITCH TO 'OFF' POSITION.

12646

PART #912-264

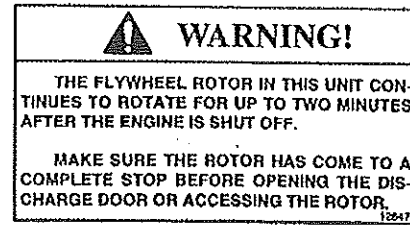
Basic Machine Labels



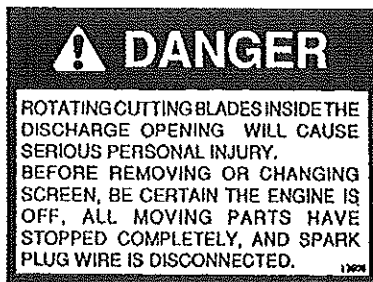
PART #912-2618



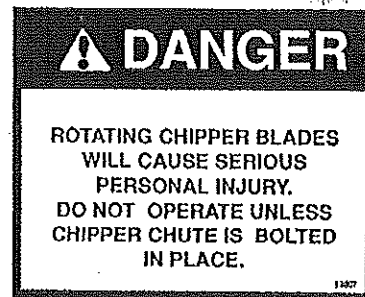
PART #912-2611



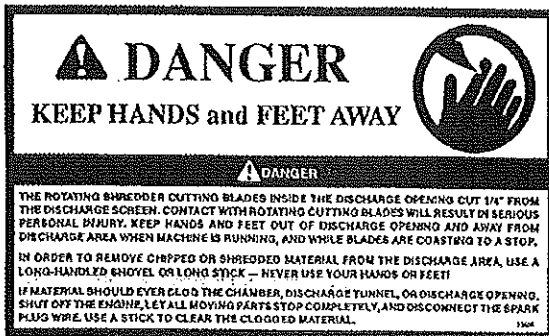
PART #912-2647



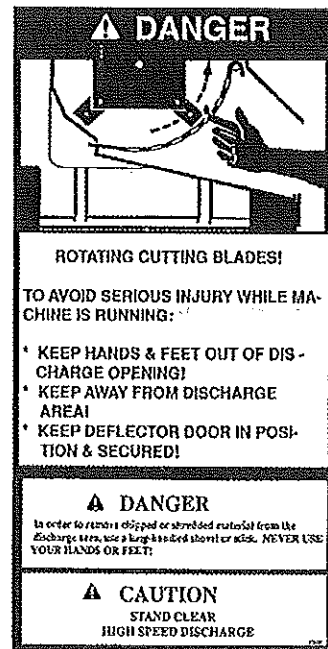
PART #912-2608



PART #912-2607

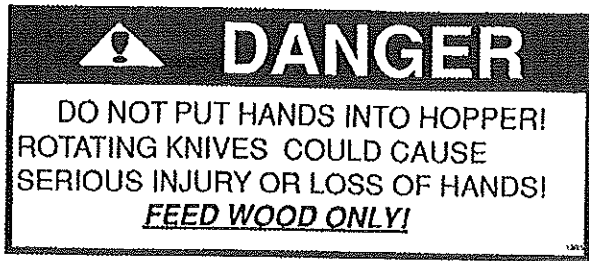


PART #912-2604

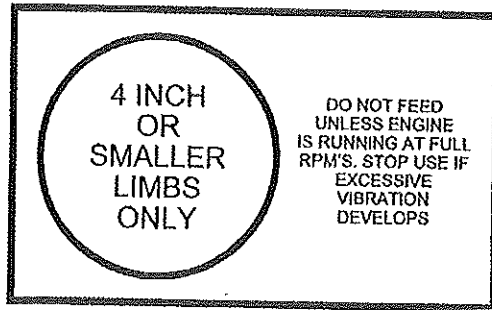


PART #912-2606

Chipper Hopper Labels



PART #912-2613



PART #912-3501

**THIS MACHINE IS CAPABLE OF INFLICTING
SERIOUS INJURY IF OPERATED IMPROPERLY
READ WARNING & CAUTION LABELS**

**CHECK OIL LEVEL
BEFORE STARTING**

GENERAL OPERATION

- Read this owner's manual carefully in its entirety before attempting to assemble this machine. Read, understand, and follow all instructions on the machine 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 is a powerful tool, not a plaything. Therefore, exercise extreme caution at all times. Your unit has been designed to chip and shred. Do not use it for any other purpose.
- Never allow children under the age 16 to operate the unit. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use your unit.
- Always wear safety glasses or goggles during operation or while performing an adjustment or repair to protect eyes from foreign objects that may be thrown from the machine. Be sure your glasses fit properly.
- Wear sturdy, rough-soled work shoes and close fitting slacks and shirt. Shirts and slacks that cover the arms and legs and steel-toed shoes are recommended. Secure hair above shoulders and do not wear loose clothes or jewelry that can be caught in moving parts. Never operate a unit in bare feet, sandals or sneakers. Wear gloves when feeding material into the chipper chute. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.
- Do not operate while under the use of alcohol, drugs, or medication. A clear mind is essential for safety.
- Do not allow anyone who is not alert to operate this machine.
- The machine should only be operated on a level surface. Never operate your unit on a slippery, wet, muddy, or icy surface.
- 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.
- Never place your hands, feet or any part of your body in the chipper chute, discharge 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, use a small diameter stick, NOT YOUR HANDS.
- Keep your face and body back from chipper chute to avoid accidental bounce back of any material.
- Do not attempt to chip material larger than specified in the manual. Personal injury or damage to the machine could result.
- If it is necessary for any reason to unclog the feed intake or discharge openings, or to inspect or repair the machine where a moving part can come in contact with your body or clothing, stop the machine and allow it to cool. Disconnect both spark plugs before attempting to unclog, inspect or repair.
- When feeding material into this equipment, be extremely careful that pieces of metal, rocks, or other foreign objects are not included. Personal injury or damage to the machine could result.
- 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 kickback from the chipper chute.
- 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 wires and move them away from the spark plug.

Take the following steps:

- a. Inspect for damage.
 - b. Repair or replace any damaged parts.
 - c. Check for any loose parts and tighten to assure continued safe operation.
- Muffler and engine become hot and can cause a severe burn. Do not touch.
 - Do not allow any part of the engine, especially around the cooling fans and muffler, to become clogged with leaves, oil, grease or any other combustible material.
 - 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.
 - Keep all other guards and safety devices in place and operating properly.
 - Do not use the unit with the chipper or shredder hopper removed.
 - Only use accessories approved for this machine by the manufacturer. Read, understand, and follow all the instructions provided with the approved accessory.
 - Only operate unit in good daylight. Do not operate unit at night or in dark areas where your vision may be impaired.
 - If situations occur which are not covered by this manual, use care and good judgment. Contact your dealer for assistance.

CHILDREN

- Tragic accidents can occur if the operator is not alert to the presence of small children.
- 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.

REPAIR AND MAINTENANCE SAFETY

- Use extreme care in handling gasoline and other fuels. They are extremely flammable and the vapors are explosive.
- 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 three 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.
- Never refuel unit indoors because flammable vapors will accumulate in the area.
- 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 this 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 debris build-up. Clean up fuel and oil spillage. Allow unit to cool at least five minutes before storing.
- Before cleaning, repairing, or inspecting, make certain the tines 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 belt and engine mounting screws at frequent intervals for proper tightness. Also visually inspect tines for wear or damage.
- Never tamper with safety devices. Check their proper operation regularly. Be sure all safety guards and shields are in proper position. These safety devices are for your protection.
- Never operate your chipper-shredder in poor mechanical condition or when in need of repair. Periodically check and keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
- Inspect the belt each time you use the unit. Look for damage, worn areas, or tears. Do not use the unit if this condition exists.
- If your machine strikes any foreign object or starts making an unusual noise or vibration, immediately shut off engine, disconnect spark plug wire from spark plug, and allow all moving parts to come to a complete stop. Inspect for damage and repair and or replace damaged parts. Check for and tighten any loose parts.
- Do not tamper with the engine's governor setting. The governor controls the maximum safe operation speed and protects the engine. Overspeeding the engine is dangerous and will cause damage to the engine and to the other moving parts of the machine. See your authorized dealer for engine governor adjustments.

TOWING SAFETY

- Obey all state and local regulations when towing on public roads and highways.
- Before towing, be certain the chipper-shredder is correctly and securely attached to the towing vehicle and the safety chains are in place. Leave slack in chains for turning allowance.
- Do not allow anyone to sit on or ride on your chipper-shredder. They can easily fall off and be seriously injured.
- Never carry any cargo or wood on your chipper-shredder. It may fall off and endanger vehicles following you.
- Allow for added length for your chipper-shredder when turning, parking, crossing intersections and in all driving situations.
- Be careful when backing up. You can easily jack-knife your chipper-shredder if not using caution.
- Adjust towing speed for terrain and conditions. Do not drive at excessive when towing. Be extra cautious when towing over bumpy or rough terrain including railroad crossings.

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.**



HAZARD: 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 to 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 Briggs & Stratton servicing dealer.

SECTION II – ASSEMBLY INSTRUCTIONS

PACKAGE CONTENTS

SKID	POLYBAG	BOLTBAG
• CHIPPER-SHREDDER	• OWNER'S MANUAL	• 6 EA – 5/16-18 X 1 1/4" HHCS
• CHIPPER HOPPER	• ENGINE MANUAL	• 6 EA – 5/16-18 NYLOCK NUT
• SHREDDER HOPPER	• WARRANTY CARD	• 12 EA – 5/16 FLATWASHER
• POLYBAG	• SAFETY GLASSES	
	• KNIFE GUAGE	
	• BOLT BAG	

STEP I – Unpacking and Checking Contents

1. Remove all pieces from the skid.
2. Compare all items with list above.
3. If any parts appear missing or damaged, contact the place which you ordered the unit from.
4. Assembly should be done on a clean level surface.

STEP II – Attaching Chipper Hopper

1. Take the chipper-hopper (item #25, pg. 18) and place the rod on the small end of the hopper into the top slots on the chipper chute.
2. With this rod in place the chipper-hopper will pivot down into place against the chipper chute.
3. Secure the chipper-hopper with two 5/16-18 x 1 1/4" HHCS, four 5/16 flatwashers and two 5/16-18 nylock nuts from the bolt bag.

STEP III – Attaching Shredder Hopper

1. Place the shredder-hopper (item #23, pg. 18) on top of the machine making certain the slanted end of the hopper is towards the discharge end of the unit.
2. Push the shredder-hopper as far towards the engine end of the machine as possible. If the hopper is not all the way forward, debris may kick back out in front of the hopper.
3. Secure the hopper to the top of the chipper-shredder with four 5/16-18 x 1 1/4" HHCS, eight 5/16 flatwashers and four 5/16-18 nylock nuts.

SECTION III – LUBRICATION & ENGINE START UP

FOR INFORMATION ABOUT SAFETY, ENGINE PARTS, OIL, FUEL, STARTING AND STOPPING, MAINTENANCE, ADJUSTMENTS, SERVICE AND STORAGE AND WARRANTY INFORMATION, REFER TO THE ENGINE OPERATING AND MAINTENANCE INSTRUCTIONS MANUAL.

THE ENGINE HAS BEEN SHIPPED DRY.

BE SURE TO SERVICE THE ENGINE ACCORDING TO THE ENGINE OWNER'S MANUAL PRIOR TO STARTING.

FAILURE TO DO SO CAN RESULT IN DAMAGE NOT WARRANTED BY THE ENGINE MANUFACTURER.

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

CAUTION: Experience indicates that alcohol blended fuels (gasohol, ethanol, methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system or an entire engine while in storage. To avoid engine problems, the fuel system should be empty before storage for periods over 30 days. For more information, refer to the engine owner's manual. Use fresh fuel each season. Never use engine or carburetor cleaner products in the fuel tank or permanent damage may result.

CHECK OIL LEVEL PRIOR TO STARTING TILLER

SECTION IV – OPERATION

BEFORE USING YOUR CHIPPER-SHREDDER READ THIS SECTION IN ITS ENTIRETY TO BECOME FAMILIAR WITH THE FUNCTION OF THE MACHINE.

CONTACT WITH INTERNAL ROTATING HAMMERS WILL CAUSE SERIOUS PERSONAL INJURY. DO NOT PUT HANDS, FACE, FEET OR CLOTHING INTO THE SHREDDER HOPPER, CHIPPER CHUTE, DISCHARGE OPENING OR NEAR THE DISCHARGE AREA AT ANY TIME.

MAINTENANCE AND SERVICE SHOULD ONLY BE PERFORMED AFTER THE ENGINE IS OFF, THE SPARK PLUG WIRE IS DISCONNECTED, AND ALL MOVING PARTS HAVE COME TO A COMPLETE STOP. USE ONLY A WOODEN STICK TO CLEAR JAMMED MATERIAL AFTER ALL MOVING PARTS HAVE STOPPED COMPLETELY.

1. **Shredder-Hopper** - The shredder hopper is located on the top of the unit and is the opening into which all materials to be shredded should be fed. Most organic materials can be shredded. A rubber flap is secured to the hopper. Material must be pushed past this flap using a wooden stick in order to enter the main chipper-shredder chamber where revolving steel hammers do the shredding. The rubber flap is an important feature. It prevents kickback of materials! Do not use your machine unless the rubber flap is securely fastened.

The maximum diameter of material that can be shredded is 1 ½". Any larger material should be fed through the chipper-hopper. Material larger than 1 ½" can cause serious damage to any of the internal parts of the chipper-shredder chamber. The unit should be inspected after every use for bent hammers, missing spacers, damage to the screen or any other obvious problems. If damage occurs, the rotor assembly can become unbalanced causing excessive vibration. If used in this state, damage can occur. Do not use the machine if vibration is present.

2. **Chipper-Hopper** - This side-mounted chipper-hopper is designed to chip the larger, heavier materials that the shredder-hopper isn't designed to handle. Branches fed into the chute are turned into "chips" by the revolving chipper knives mounted on a flywheel. The chipper-hopper can chip branches and vines ranging in size from 1" to 4" in diameter. Cut your materials into manageable lengths before feeding them into the chipper. Note: The chipper hopper must be securely bolted to the side of your equipment before using the chipper-shredder!

The chipper is designed to draw the complete limbs in through the chipping area. Do not force material into the chipper. If the machine does not self feed, the chipper knives need replaced or sharpened or the gap between the knives and the wear plate needs adjusting.

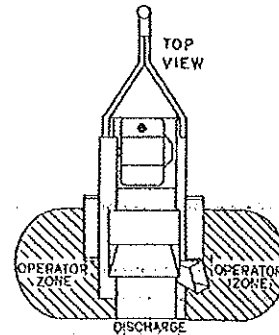
3. **Chipper-Shredder Chamber** - The inside of the machine is the chipper-shredder chamber. This chamber houses the rotor assembly. The rotor assembly has two knives which do the chipping and 48 steel hammers which do the shredding. The rotor assembly is very heavy and moves very fast. Always allow the rotor assembly to completely stop and remove the spark plug before inspecting or performing any maintenance to the machine.
4. **Discharge Area** - The discharge area of the machine is where all material exits the machine after being processed. Never clear this area while the machine is running. After the machine has stopped, clear the area with a wooden stick. Never allow anything or anyone to stand near the discharge area while the machine is running. Injury can result from flying material.
5. **Screen** - Inside the discharge area is a removable metal screen. The size of the holes or openings in the screen determines how finely the material will be shredded. Optional screens are available with different hole sizes.

BEFORE STARTING

- Grease both rotor bearings before initial use and then after every eight hours of use. Use a good quality lithium grease.
- With engine key in the off position and the spark plug wire removed, open the shredder hopper and reach in and spin the rotor. The rotor and hammers should turn freely with no obstruction. If it does not turn freely, determine what the obstruction is and remove it.
- Inspect rotor assembly for any bent hammers or missing spacers.
- With the engine key in the off position and the spark plug wire removed, raise the discharge baffle plate, and make sure a screen is in place.

OPERATING PROCEDURE

- Only operate your chipper-shredder from the operator zone.
- This machine is equipped with a centrifugal clutch. The flywheel should not start rotating until the engine reaches 1100 RPM's.
- If the rotor turns prematurely during start up, then the clutch may be malfunctioning or belt adjustment may be required. **DO NOT OPERATE THE MACHINE IF THIS OCCURS.**
- Know how to turn the machine off.
- Never clear the discharge area with your hands, feet or any other part of your body.
- Do not clear the discharge area while the unit is running. After it is shut off and has stopped moving, use a long handled tool or wooden stick to clear the area.
- Never leave the chipper-shredder unattended while running.
- Do not operate on slippery, wet, muddy or icy surfaces. Accidents can occur.
- Only operate the chipper-shredder on earthen, level ground.
- Check the bearing collar set screws regularly to be sure they are tight. If they are loose, reset them with EV grade Loctite or equivalent.
- Do not allow an accumulation of processed material to build up under the discharge area. This can result in clogging. Use a long handled stick or spade to remove processed material build-up. **DO NOT USE YOUR HAND OR FOOT.** Always shut the unit off before clearing build-up.
- If chipper or shredder becomes jammed or clogged, shut the engine off immediately. To avoid injury, make sure all moving parts have come to a complete stop. Disconnect the spark plug wire. Only then inspect the shredder hopper, chute, the discharge screen, and the internal chamber. Remember, rotating hammers can take from 90 to 120 seconds or longer to stop after the engine is shut off. Use only a wooden stick to clear away jammed material.
- Never allow your hands or any part of your body or clothing inside the feed hopper or discharge area of the chipper-shredder. Use a wood stick to push material down the hopper.
- Keep all protective guards on the machine and deflectors in place and in good working condition.
- Always stand clear of the discharge area when the shredder is running.
- Keep your face and body back from the feed hopper to avoid being struck by any material that may bounce back. Do not overreach. Keep proper balance and footing.
- Do not transport the chipper-shredder while the engine is running.
- Do not refuel the engine while it is hot, warm or running.
- Do not cover the chipper-shredder while the muffler is still hot.
- Do not allow the engine, especially around the cooling fins and muffler, to become clogged with leaves, oil, grease or any other combustible material. Keep these areas clean to avoid a potential fire hazard.
- Only feed material into the machine while the engine is running at full RPM's. If the engine slows down, stop feeding material until it returns to full speed. Failure to do this can result in clutch damage.



TO GET THE GREATEST BENEFITS FROM YOUR CHIPPER-SHREDDER, IT IS IMPORTANT TO KNOW WHICH MATERIALS ARE BEST SUITED FOR THE SHREDDER-HOPPER AND WHICH MATERIALS ARE BEST SUITED FOR THE CHIPPER-HOPPER.

UNDER NO CIRCUMSTANCES SHOULD YOU FEED METAL, GLASS, PLASTIC, ROCKS OR OTHER FOREIGN OBJECTS INTO YOUR MACHINE.

MATERIALS BEST SUITED FOR SHREDDING

Due to the wide variety of materials that can be shredded, and their very different physical characteristics, only feed limited quantities of any material into the hopper at first. The amount and length of material can be increased if you find that the material is being processed without any difficulty. Your judgment is very important. Be sure not to overload the machine by feeding too much material into the hopper at one time. Overloading will cause engine speed to decrease significantly, making the engine labor and cause clutch slippage. If you hear the RPM's decreasing, stop feeding material into the machine at once. Do not resume feeding the machine until it has returned to full speed.

- Twigs and branches up to 1 1/2" in diameter. Several small branches can be fed into the shredder-hopper at once providing their combined diameter is less than 1 1/2". Branches longer than three feet should be cut to make them more manageable. Green materials should be allowed to dry, or processed in small batches with dry materials to avoid winding around the rotor assembly and binding the cylinder.
- Wet materials will clog easily. It works best to process them with the screen removed.
- Leaves, grass clippings and all other light, loose materials. These process most easily.
- Organic waste materials and organic garbage.
- Sections of vines 1 1/2" in diameter or smaller. Long vines should be cut to manageable lengths of three feet or less.
- Wood chips processed by the chipper if even finer particles are desired.
- All paper trash.
- Partially finished compost.
- Stalks and most brush material.
- A mixture of any of the materials listed above.

NOTE - The hammers within the chipper-shredder chamber can tug suddenly at material being fed into the shredder-hopper. Do not hold on tightly to branches and vines, and don't feed material straight down into the hopper with your arm pointing downward toward the opening. Instead, keep your arms parallel to the ground and several inches above the top edge of the hopper.

MATERIALS BEST SUITED FOR CHIPPING

- Branches, vines or stalks from 1 1/2" to 4" in diameter are best suited for chipping. Extremely hard knots will not process very well. Short stubs that have not self-fed through the chipper can be pushed through with the next branch to be chipped. **DO NOT THROW REMAINING STUBS OR UNCHIPPABLE KNOTS INTO THE SHREDDER-HOPPER. DAMAGE WILL RESULT.**
- Cut chipping material into manageable lengths of no more than five or six feet long before chipping them.
- Overloading the chipper will cause the engine speed to decrease significantly, making the engine labor and cause clutch slippage. If you hear the RPM's decreasing, stop feeding material into the machine until the machine has returned to full speed.
- Normally the branches will feed themselves into the chipper-hopper if trimmed to an appropriate size. Once the self-feeding starts, release the branch quickly to avoid ripping from your hands. If brushy tops do not feed all the way in use the next branch to feed it through the chipper-hopper.

SECTION V – SERVICE – MAINTENANCE – REPAIR

THE CHIPPER-SHREDDER HAS BEEN DESIGNED TO PROVIDE YEARS OF HARD WORKING SERVICE.

Before any service, maintenance, cleaning, inspection, changing shredder discharge screens or work of any kind is to be done, be sure the engine has been shut off, all moving parts have come to a complete stop and the spark plug wire has been disconnected. If the engine has been running, allow the hot muffler to cool before working near it or installing a storage cover.

BELTS

The belt tension has been preset on the chipper-shredder. It should be checked after the initial 20-30 minutes of operation, and with each usage thereafter. If the belt needs tightened or replaced, follow these instructions carefully.

1. Remove the belt guard.
2. Loosen engine bolts and nuts. Replace belt if necessary.
3. Check alignment of the clutch with rotor pulley by placing a straightedge across both faces (see figure 1). If adjustment is necessary, adjust rotor pulley. **DO NOT ADJUST BY MOVING CLUTCH ON ENGINE SHAFT.**
4. Tighten belt tensioner until belt deflection is as shown in Figure 2.
5. Tighten engine mounting bolts and nuts securely.
6. Re-install the belt guard before operating your unit.

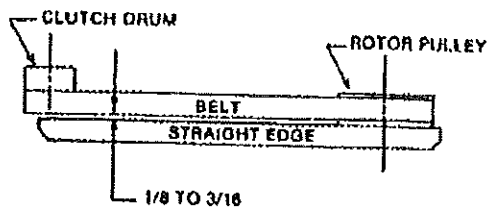


Figure 1

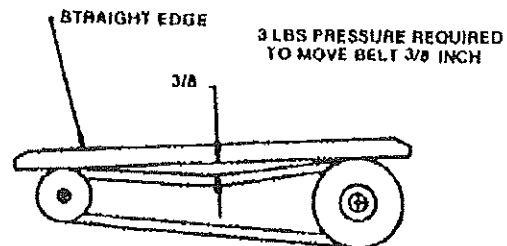


Figure 2

LUBRICATION

Engine – The engine has been shipped dry. Be sure to service the engine according to the engine owner's manual prior to starting. Failure to do so can result in damage not warranted by the engine manufacturer.

Bearings - Grease both rotor bearings before initial use and then after every eight hours of use. Use good quality lithium grease.

CHIPPER KNIVES

There are two main factors which affect the chipping ability of your machine – knife angle and sharpness and gap setting. The chipper knives come sharpened from the factory at a 37-degree angle. It is critical to maintain this angle for proper performance. The gap between the knives and the wear plate is factory set at .040" and must also be maintained. If this gap needs adjustment, remove the chipper-hopper (item #25, pg. 18), turn the rotor until chipper knife (item #8, pg. 20) lines up with the wear plate (item #12, pg. 20), remove one of the lower screen lock rods (item #18, pg. 20) and insert it through the hole near the end of the rotor shaft and the hole in the tab directly below the shaft. Loosen the two bolts (item #19, pg. 20) holding the wear plate, put the knife gauge from the poly

bag between the knife and the wear plate and slide the wear plate in or out to achieve the proper setting. Secure the bolts on the wear plate once the adjustment has been made. Always check the clearance of both knives.

KNIFE REMOVAL AND REPLACEMENT

1. Remove chipper and shredder hoppers.
2. Lock the rotor assembly (item #9, pg. 20) in place by inserting a screen lock rod (item #18, pg. 20) in the hole at end of rotor shaft and the hole in the tab directly below the shaft.
3. Using a long "T" handle Allen wrench and a socket wrench, remove the three knife bolts (item #19, pg. 20).
4. Rotate shaft 180°, re-lock and remove the second knife.

When installing new knives, be sure disc is clean before positioning knife. Torque knife bolts to 27 ft. lbs.

NOTE: When installing new knives they will require the wear plate to be backed out for additional clearance before the new knife can pass. Once both knives are installed, check and reset clearance per pervious instructions.

KNIFE SHARPENING

Chipper Knives - These hardened knives must be routinely checked for sharpness. Using dull knives decreases performance and causes excessive vibration and damage to the unit. **DO NOT ATTEMPT TO SHARPEN KNIVES FREE HAND.** Knives must be parallel ground and kept in a matched set. Return knives to your local dealer or sharpening service to be sharpened. When sharpening, it is critical to maintain the original 37-degree angle. The unit will not self-feed if this angle is not maintained. After sharpening the knives, be sure to re-gap the knife and wear plate.

WEAR PLATE

The wear plate should be kept sharp with a square edge. It can be sharpened using a standard grinding wheel. The wear plate is reversible and can be rotated for double life. To remove, use an allen wrench and a socket wrench to remove the two bolts. When reversing or replacing, be sure you reset gap.

Test the unit by turning the rotor assembly by hand to check for proper clearance. Watch and listen carefully for any unusual noises, clicking or vibration. If any of these are detected inspect the machine for damage, repair or replace any damaged parts and check for any loose parts and retighten.

Do not start or run chipper until the chipper-hopper is reinstalled and bolted in place. When starting the machine after maintenance, run at low RPM's until you are confident the machine is performing properly.

HAMMERS AND SPACERS

The shredder hammers need to be rotated when the corners become worn. Each hammer can be reversed giving two cutting edges. When both edges are used the hammers should be discarded and replaced. Hammers are not to be re-sharpened. Hammers and spacers should be inspected after every use for damage. Bent hammers can be straightened and reinstalled. Bent or missing hammers will cause vibration due to improper balance. Missing spacers must be replaced.

Replacing Hammers - Use the following procedure when reversing or replacing the hammers:

1. Remove the hammer rod access opening covers from both sides of your machine.
2. From the access hole on the drive (belt) side of the unit, remove the bolt holding the hammer rod (item #10, pg. 20) in place.
3. Slide rod through access opening, allowing all hammers and spacers to be removed. It may be necessary to use a hammer and punch to drive the hammer rod out of the rotor assembly.
4. Replace one rod at a time being sure that the new hammers and spacers are in the same order as removed. See following drawing on page 16.
5. Replace access covers and secure tightly.

IMPORTANT NOTE:

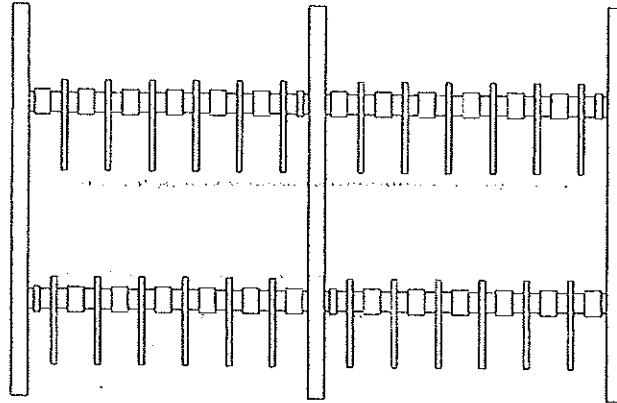
When both corners have been used and new hammers need to be installed, you must also install new rods and spacers.

When reinstalling the hammer rods, hammers and spacers, they must be installed as per the following picture.

On rods #1 and #3, be sure that a small spacer is all the way to the right, against the right and center rotor plates. After the small spacer is in place, alternate six hammers and six large spacers. Each section between rotor plates must begin and end with the appropriate spacer.

On rods #2 and #4, alternate six large spacers and six hammers from the right and center rotor plates and add a small spacer after the last hammer. As on rods #1 and #3, each section between rotor plates must begin and end with the appropriate spacer.

RODS #1 & #3

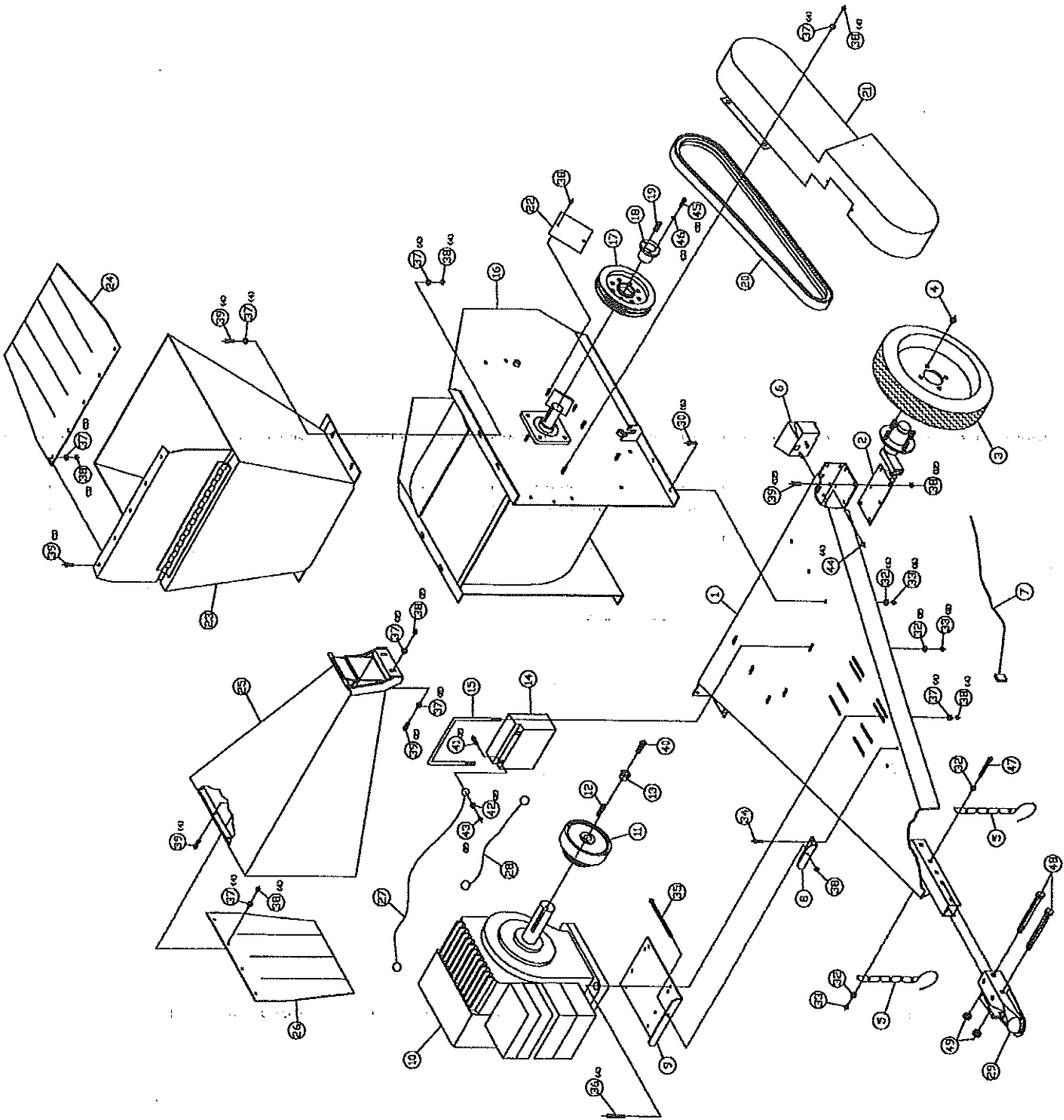


RODS #2 & #4

**ALWAYS CHECK OIL LEVEL
BEFORE STARTING CHIPPER**

PARTS LIST - SC260-18EHP

ITEM #	QTY.	PART #	DESCRIPTION
1	1	912-2401	A-FRAME WELDMENT
2	1	912-2601-L	LH FLEX AXLE WITH HUB
---	1	912-2601-R	RH FLEX AXLE WITH HUB
3	2	030-0207	WHEEL AND TIRE ASSEMBLY
4	8	---	LUG NUTS - COMES WITH ITEM #2
5	2	912-2332	SAFETY CHAIN
6	1	030-0266	ROAD SIDE LIGHT
---	1	030-0265	CURB SIDE LIGHT
7	1	030-0267	WIRE HARNESS
8	1	912-3507	BELT ADJUSTMENT BASE ANGLE
9	1	912-3508	BELT ADJUSTMENT MOTOR PLATE
10	1	030-0231	18 HP BRIGGS & STRATTON ENGINE
11	1	912-2644	CLUTCH
12	1	703-0424	1/4 X 1/4 X 2" KEY
13	1	912-3006	CLUTCH RETAINER
14	1	913-0086	BATTERY
15	1	912-3506	BATTERY HOLD DOWN
16	1	912-1001	BASIC CHIPPERSHREDDER
17	1	030-0211	PULLEY
18	1	030-0212	BUSHING
19	1	080-0084	3/8 X 3/8 X 1 1/2 " KEY
20	1	030-0209	BELT
21	1	912-3510	BELT GUARD WELDMENT
22	1	912-2224	ACCESS DOOR
23	1	912-3009	SHREDDER HOPPER
24	1	912-2320	SHREDDER HOPPER BLOWBACK GUARD
25	1	912-3008	CHIPPER HOPPER
26	1	912-2319	CHIPPER HOPPER BLOWBACK GUARD
27	1	913-0059	POSITIVE BATTERY CABLE
28	1	911-0228	NEGATIVE BATTERY CABLE
29	1	911-0056	TRAILER HITCH
30	8	090-0111	3/8-16 X 1 1/4" HHCS
32	10	090-0234	3/8 USS FLATWASHER
33	9	090-0461	3/8-16 NYLOCK NUT
34	2	090-0503	5/16-18 X 3/4" SELT TAPPING HHCS
35	1	710-2359	5/16-18 X 7" CARRIAGE BOLT
36	4	090-0072	5/16-18 X 2" HHCS
37	29	090-0233	5/16 USS FLATWASHER
38	38	090-0460	5/16-18 NYLOCK NUT
39	27	090-0089	5/16-18 X 1 1/4" HHCS
40	1	090-0529	3/8-24 X 1 1/4" SHCS
41	2	090-0012	1/4-20 X 3/4" HHCS
42	2	090-0232	1/4 USS FLATWASHER
43	2	090-0470	1/4-20 NYLOCK NUT
44	4	090-0453	1/4-20 WHIZ NUT
45	3	090-0061	1/4-20 X 1 1/4" HHCS
46	3	090-0378	1/4 LOCKWASHER
47	1	090-0123	3/8-16 X 3 1/2" HHCS
48	2	090-0370	1/2-13 X 3" HHCS
49	2	090-0050	1/2-13 GRIPCO NUT



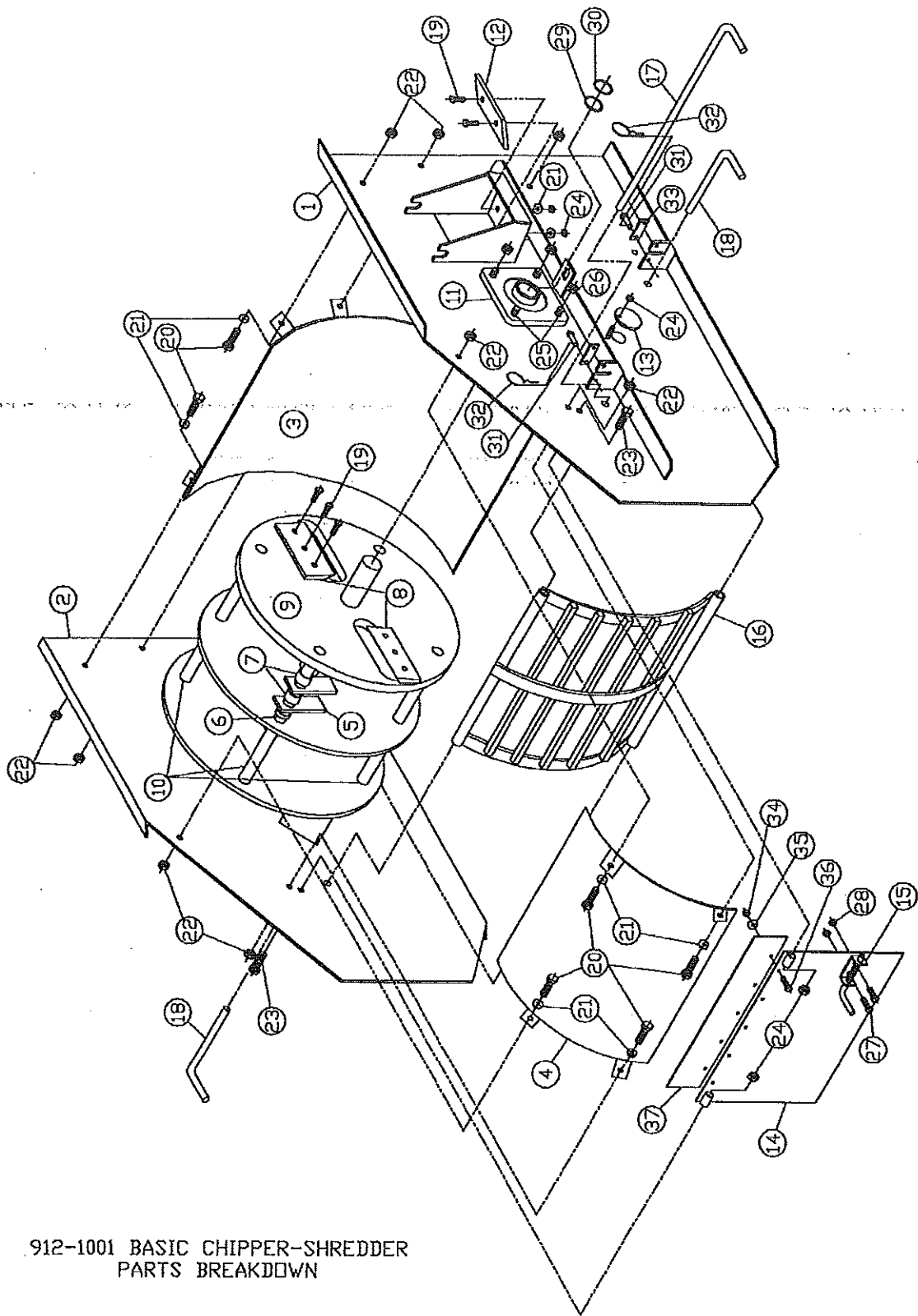
SC260-18EHP PARTS BREAKDOWN

**912-1001 BASIC CHIPPER-SHREDDER
PARTS LIST**

ITEM #	QTY.	PART #	DESCRIPTION
1	1	912-2203	CHUTE SIDE WELDMENT
2	1	912-2204	DRIVE SIDE WELDMENT
3	1	912-3019	FRONT SCROLL WELDMENT
4	1	912-3018	REAR SCROLL WELDMENT
5	48	912-2215	HAMMER
6	8	912-2216	SMALL SPACER
7	48	912-2218	LARGE SPACER
8	2	912-2221	KNIFE
9	1	912-2406	ROTOR WELDMENT
10	4	912-2407	HAMMER ROD WELDMENT
11	2	030-0208	BEARING - 1 1/2"
12	1	912-2220	WEAR PLATE
13	1	900-0040	COVER PLATE
14	1	912-2405	DISCHARGE DEFLECTOR WELDMENT
15	1	912-2415	SPRING LATCH
16	1	912-2409	BAR SCREEN WELDMENT
17	1	912-2353	SCREEN PIVOT ROD
18	2	912-2346	SCREEN LOCK RODS
19	8	090-0526	3/8-16 X 1 3/4" FHSCS
20	12	090-0111	3/8-16 X 1 1/4" HHCS
21	14	090-0233	5/16 USS FLATWASHER
22	12	090-0049	3/8-16 GRIPCO NUT
23	2	090-0113	3/8-16 X 1 3/4" HHCS
24	5	090-0461	3/8-16 NYLOCK NUT
25	8	090-0463	1/2-13 X 1 1/2" HHCS
26	8	090-0050	1/2-13 GRIPCO NUT
27	2	090-0003	1/4-20 X 5/8" RHMS
28	2	090-0470	1/4-20 NYLOCK NUT
29	2	090-0543	SHIM
30	2	090-0544	RETAINING RING
31	4	807-0057	1/4 X 7/8 CLEVIS PIN
32	6	100-0015	3/32 HAIR SPRING COTTER
33	2	912-2357	SCREEN ROD RETAINING PLATE
34	5	706-1539	10-32 KEP NUT
35	5	090-0232	1/4 USS FLATWASHER
36	5	090-0400	10-32 X 1 1/4" RHMS
37	1	912-3523	DEFLECTOR FLAP

**912-1001 BASIC CHIPPER-SHREDDER
PARTS LIST**

ITEM #	QTY.	PART #	DESCRIPTION
1	1	912-2203	CHUTE SIDE WELDMENT
2	1	912-2204	DRIVE SIDE WELDMENT
3	1	912-3019	FRONT SCROLL WELDMENT
4	1	912-3018	REAR SCROLL WELDMENT
5	48	912-2215	HAMMER
6	8	912-2216	SMALL SPACER
7	48	912-2218	LARGE SPACER
8	2	912-2221	KNIFE
9	1	912-2406	ROTOR WELDMENT
10	4	912-2407	HAMMER ROD WELDMENT
11	2	030-0208	BEARING - 1 1/2"
12	1	912-2220	WEAR PLATE
13	1	900-0040	COVER PLATE
14	1	912-2405	DISCHARGE DEFLECTOR WELDMENT
15	1	912-2415	SPRING LATCH
16	1	912-2409	BAR SCREEN WELDMENT
17	1	912-2353	SCREEN PIVOT ROD
18	2	912-2346	SCREEN LOCK RODS
19	8	090-0526	3/8-16 X 1 1/4" FHSCS
20	12	090-0111	3/8-16 X 1 1/4" HHCS
21	14	090-0233	5/16 USS FLATWASHER
22	12	090-0049	3/8-16 GRIPCO NUT
23	2	090-0113	3/8-16 X 1 1/4" HHCS
24	5	090-0461	3/8-16 NYLOCK NUT
25	8	090-0463	1/2-13 X 1 1/2" HHCS
26	8	090-0050	1/2-13 GRIPCO NUT
27	2	090-0003	1/4-20 X 5/8" RHMS
28	2	090-0470	1/4-20 NYLOCK NUT
29	2	090-0543	SHIM
30	2	090-0544	RETAINING RING
31	4	807-0057	1/4 X 7/8 CLEVIS PIN
32	6	100-0015	3/32 HAIR SPRING COTTER
33	2	912-2357	SCREEN ROD RETAINING PLATE
34	5	706-1539	10-32 KEP NUT
35	5	090-0232	1/4 USS FLATWASHER
36	5	090-0400	10-32 X 1 1/4" RHMS
37	1	912-3523	DEFLECTOR FLAP



912-1001 BASIC CHIPPER-SHREDDER
PARTS BREAKDOWN

We Want You to be Totally Satisfied

The DR® CHIPPER is designed to provide year after year of trouble-free performance. To ensure that you are totally satisfied with this important purchase, we offer the following three-part Assurance of Satisfaction.

1. THE DR® CHIPPER is GUARANTEED FOR THREE FULL YEARS against defects in materials and workmanship in consumer use. In rental and commercial use the machine is guaranteed for 90 days. If you believe that a part is defective, please write or call us immediately. We will do our best to remedy the problem, including repairing or replacing defective parts as quickly as possible.
2. IF WITHIN THE FIRST 30 DAYS of actual hands-on use you have questions or you are less than 100% satisfied with your DR® CHIPPER, please write or call us TOLL FREE 1-800-DR-OWNER (376-9637). We'll do everything possible to answer your questions or make things right--even if it means that you return your DR® CHIPPER for a full refund of its purchase price, shipping costs included. (Refund on shipping is for standard method, and applies to the contiguous United States and Canada only).
3. We operate, for our Owners, a 7-Day-a-Week Customer Service Department with well-trained and friendly folks whose sole job it is to ensure that you get any help you need...parts that need to be replaced...or questions courteously and as promptly as possible.

LIMITED WARRANTY

Any product manufactured by Country Home Products and found, in the judgment of Country Home Products, Inc. to be defective in material or workmanship, will be repaired or replaced by a Country Home Products Service Dealer without charge for parts and labor to the original owner of the Country Home Products unit.

The Country Home Products unit including any defective part must be returned to an Authorized Country Home Products Service Dealer within the warranty period. The expense of delivering the product to the dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be borne by the owner. Country Home Products' responsibility is limited to making the required repairs or replacements only. No claim of breach of warranty shall be cause for cancellation or rescission of the sales contract of any Country Home Products unit. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by a Country Home Products Service Dealer.

This warranty is limited to three years from the date of original retail purchase for any Country Home Products unit that is used for consumer purposes or 90 days for commercial and rental use.

This warranty does not cover any product that has been subject to misuse, abuse, neglect, negligence, or accident, or that has been operated in any way contrary to or inconsistent with the operating instructions as specified in the owner's manual. The warranty does not apply to any damage to the product that is the result of improper maintenance, or to any product or parts that have not been assembled or installed as specified in the owner's manual.

The warranty does not cover any product that has been altered or modified. In addition, the warranty does not extend to repairs made necessary by normal wear, or by the use of parts or accessories which, in the judgment of Country Home Products are either incompatible with the Country Home Products unit or adversely affect its operation, performance or durability. This warranty does not cover engines, electric starters, batteries, or tires which are warranted separately by their manufacturer and for a different period of time.