

DR CHIPPER/SHREDDER

SAFETY AND OPERATING INSTRUCTION MANUAL

MODEL: 18 HP

SC183-18VECHP

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

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

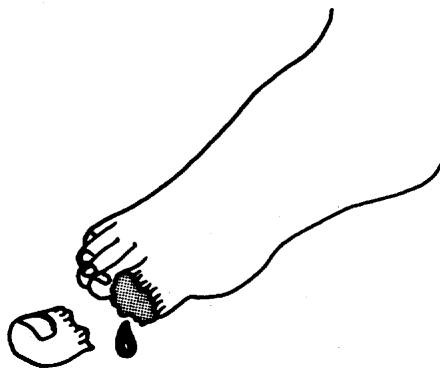
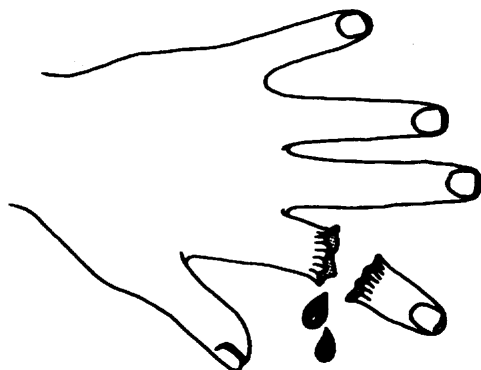
INTENDED USE

Never use your shredder/chipper for any other purpose than shredding and chipping limbs or other lawn and garden debris. It is designed for this use and any other use many cause serious injury.



DANGER: *Rotating cutting blade.*

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

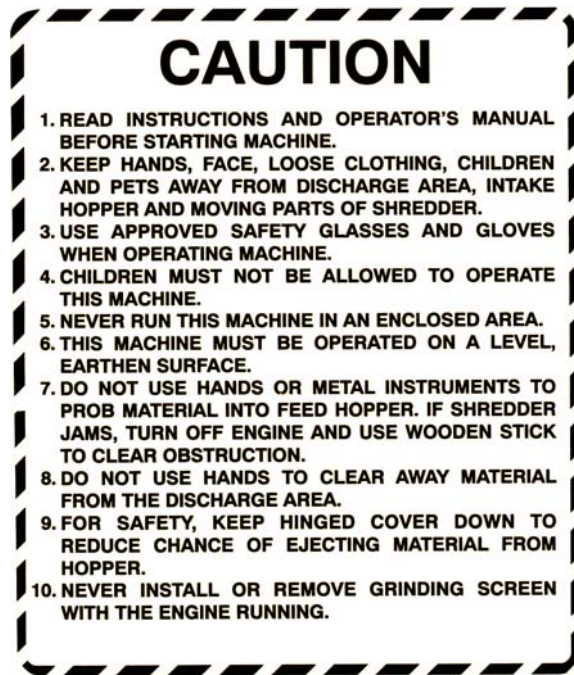


DANGER: This machine can **CRUSH, GRIND, CUT**, and **SEVER** parts of your body if they enter the inlet or discharge area of your shredder/chipper.



DANGER: Your shredder/chipper 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.

MAKE CERTAIN THAT ALL SAFETY LABELS ON THIS EQUIPMENT ARE KEPT CLEAN AND IN GOOD CONDITION. IF YOU NEED REPLACEMENT LABELS, ORDER BY PART NUMBER.



080-0962



080-0967



080-0970



091-0044



091-0055



091-0059

**MADE IN
U.S.A.**

091-0062



091-0088



091-0380



091-0057



091-0381

SAFE OPERATION PRACTICES

TRAINING

- 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.
- Know how to stop the unit and disengage the controls quickly.
- Never allow children to operate the unit. Never allow adults to operate the equipment without proper instruction. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use your unit.
- 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.
- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people, their property, and themselves.
- Your shredder/chipper is a powerful tool, not a plaything. Exercise extreme caution at all times. Your unit has been designed to shred and chip. Do not use it for any other purpose.
- If situations occur which are not covered in this manual, use care and good judgment. Contact your place of purchase for additional assistance.

PREPARATION

- Thoroughly inspect the area where the equipment is to be used and remove all foreign objects.
- Do not operate the machine without wearing adequate outer garments and safety goggles. Always wear safety glasses or goggles during operation and while performing any adjustment or repair, to protect eyes from foreign objects that may be thrown from the machine. Be sure your glasses or goggles fit properly.
- Avoid loose-fitting clothes and use protective footwear that will improve footing on slippery surfaces. Shirt and slacks that cover the arms and legs and steel-toed shoes are recommended. Secure hair above shoulders. 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 shredder hopper or chipper chute. Be sure your gloves fit properly and do not have loose cuffs or drawstring.
- Warning: Fuel is highly flammable and the vapors are explosive. Take the following precautions.
 - Store fuel and oil in approved containers.
 - Keep away from heat and open flame, and out of the reach of children.
 - Refuel outdoors only and do not smoke while refueling.
 - Check and add fuel before starting the engine. Never remove gas cap or add fuel while the engine is running or when the engine is hot. Allow engine to cool before refueling.
 - If fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until fuel vapors have disappeared.
 - Replace all fuel tank and container caps securely.
 - 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.
 - 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.
- Never attempt to make any adjustments while the engine is running.

OPERATION

- Never place your hands, feet, or any part of your body in the shredder hopper, chipper chute, discharge opening, or near or under any moving part while the shredder/chipper is running. Keep clear of the discharge opening at all times. If it becomes necessary to push material into the shredder hopper or chipper chute, use a small diameter stick, NOT YOUR HANDS.
- Keep your face and body back from the shredder hopper and chipper chute to avoid accidental bounce back of any material.
- The machine should only be operated on a level surface. Never operate your unit on a slippery, wet, muddy, or icy surface.
- Exercise caution to avoid slipping or falling.
- Stay alert for hidden hazards or traffic. Do not carry passengers.
- If the cutting mechanism strikes a foreign object or if your machine should start making an unusual noise or vibration, immediately stop the engine, remove the spark plug wire(s) and wait for all moving parts to come to a complete stop. After the machine has come to a complete stop proceed as follows:
 - Inspect for any damage.
 - Repair or replace any damaged parts before restarting and operating the machine.
- If the machine should start to vibrate abnormally, immediately stop the engine, remove the spark plug wire(s) and wait for all moving parts to come to a complete stop and inspect for the cause. Vibration is generally a warning sign of trouble.
- Stop the engine when leaving the operating position, and when making any repairs, adjustments and inspections.
- Take all possible precautions as recommended by the manufacturer when leaving the machine unattended. Stop the engine and remove the key if so equipped.
- Before cleaning, repairing, or inspecting, shut off the engine and make certain the flywheel and all moving parts have come to a complete stop. Disconnect the spark plug wire and keep the wire away from spark plug to prevent accidental starting. Do not use flammable solutions to clean air filter.
- 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.
- Keep all guards and safety devices in place and operating properly. Do not operate the machine if all safety guards are not in place.
- Do not use the unit with the shredder hopper or chipper hopper removed.
- The muffler and engine become hot and can cause a severe burn. Do not touch.
- Keep children and pets away.
 - 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 to operate the shredder/chipper.
- Do not overload or attempt to shred or chip material beyond manufacturers recommendation. Personal injury or damage to the machine could result.
- Never operate the machine at high transport speeds or on hard or slippery surfaces.
- Never allow bystanders near the unit while running.
- 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.
- Use extreme caution when reversing or pulling the machine towards you.
- Do not tamper with the engine's governor setting. The governor controls the maximum safe operation speed and protects the engine. Over-speeding 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.
- Start the engine according to the manufacturers instructions. Keep hands and feet away from inlet and discharge areas.
- Never pick up or carry the machine while the engine is running.
- 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.

- 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.
- Keep area of discharge clear of people, animals, buildings, glass or anything else that will obstruct clear discharge, cause injury or damage. Wind can also change discharge direction, so be aware.
- 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 shredder hopper or chipper chute.
- Do not allow any part of the engine, especially around the cooling fans and muffler, to become clogged with processed material, 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.

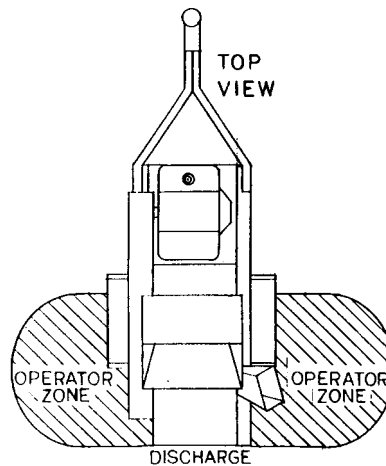
TOWING

- Obey all state and local regulations when towing on public roads and highways.
- Before towing, be certain the chipper is correctly and securely attached to the towing vehicle and the safety chains are in place. Leave slack in the chains to allow for turning.
- Do not allow anyone to sit or ride on the shredder/chipper. This can cause serious injury.
- Stay alert for hidden hazards or traffic. Do not carry passengers.
- Never carry any cargo or wood on your shredder/chipper. It may fall off and endanger following vehicles.
- Allow for added length when turning, parking, and crossing intersections and in all driving situations.
- Be careful when backing up. You can easily jackknife your shredder/chipper.
- Adjust towing speed for terrain and conditions. Do not exceed 45 MPH when towing.
- Because there is no suspension on the shredder/chipper, it will tend to bounce more on rough roads. Be extra cautious when towing over bumpy or rough terrain including railroad crossings.

MAINTENANCE AND STORAGE

- Keep machine, attachments and accessories in safe working condition.
- Check engine mounting bolts and other hardware at frequent intervals for proper tightness. Never operate your shredder/chipper in poor mechanical condition or when in need of repair. Be sure all safety guards and shields are in proper position. These safety devices are for your protection.
- Never store machine with fuel in the fuel tank inside a building where ignition sources are present, such as hot water and space heaters, clothes dryers and the like. Allow the engine to cool before storing in any enclosure.
- Always refer to the operator's manual for important details if the machine is to be stored for an extended period.
- If the fuel tank is to be drained, do this outdoors.
- Follow the manufacturer's recommendations for safe loading, unloading and storage of machine.
- 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, shut the machine off, allow all moving parts to come to a complete stop and disconnect spark plug wire(s) before attempting to unclog, inspect or repair.
- Check the knife mounting screws at frequent intervals for proper tightness. Also visually inspect the knife for wear or damage. Replace the knife with parts that meet original equipment specifications.
- Knives should be checked for sharpness and the bolts attaching them to the flywheel for tightness every 8-10 hours of operation.
- Check the gap between the knife and wear plate every time you sharpen or replace the knife, or every 8-10 hours of operation.
- Never tamper with safety devices. Check their proper operation regularly.
- 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.
- Do not tamper with the engine's governor setting. The governor controls the maximum safe operation speed and protects the engine. Over-speeding 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 adjustment.

- Only operate your chipper from the operator zone.
- Know how to turn your unit off.
- Never move your chipper or leave it unattended with the engine running.
- Follow engine owner's manual for engine maintenance and repair.



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 INSTRUCTION
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 local or state laws (if any). If a spark arrester is used, the operator should maintain it in effective working order.

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	BOLT BAG	PART #
SHREDDER/CHIPPER	OWNER'S MANUAL	4 EA – ½-13 X 1 ¼" HHCS	090-0128
HITCH ARMS (2)	ENGINE MANUAL	2 EA – ½-13 X 3" HHCS	090-0370
SHREDDER HOPPER	WARRANTY CARD	2 EA – ½-13 GRIPCO LOCKNUT	090-0050
HITCH ASSEMBLY	GLASSES	1 EA – 3/16" HAIRSPRING COTTER PIN	500-0039
CHIPPER HOPPER	STAND	8 EA – 5/16-18 NYLOCK NUT	090-0460
POLYBAG	BOLT BAG	6 EA – 5/16 USS FLATWASHER	090-0233
	KNIFE GAUGE	4 EA – VIBRATION DAMPENERS	500-0068
		4 EA – 5/16-18 X 1 ½" HHCS	090-0090
		4 EA – 5/16-18 X ¾" CARRIAGE BOLT	090-0462
		2 EA – HITCH ARM MOUNT PLATES	911-0221
		2 EA – ENGINE KEYS	

TOOLS REQUIRED FOR ASSEMBLY

- ¾" WRENCH
- ¾" RATCHET AND SOCKET
- ½" WRENCH
- ½" RATCHET AND SOCKET

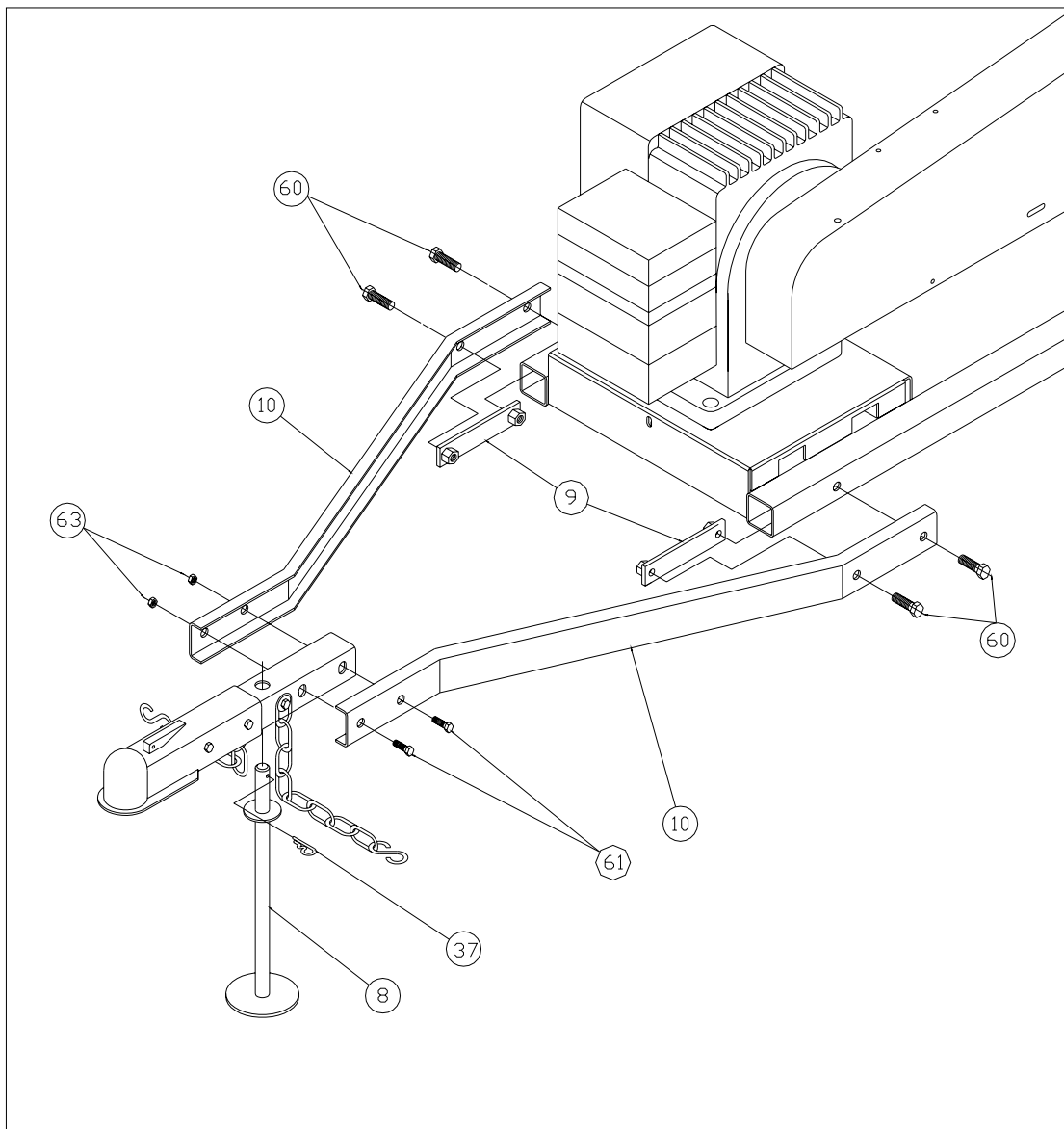
ASSEMBLY

STEP I – UNPACKING AND CHECKING CONTENTS

- Remove the all items from the crate.
- After unpacking the crate, compare the contents with the list above.
- If any parts are missing, contact your place of purchase.
- Assembly should be done on a clean, level surface.

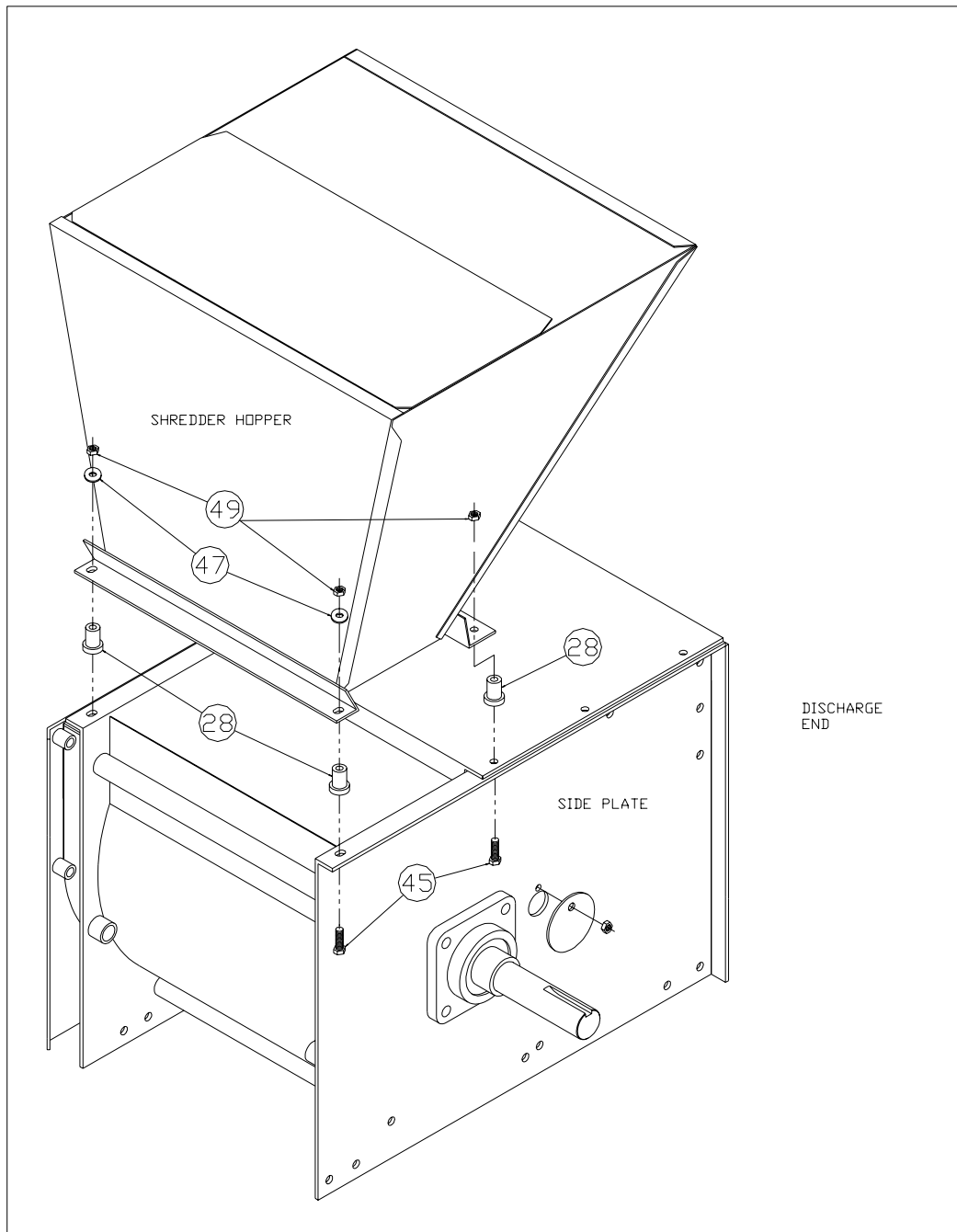
STEP II – ATTACHING THE HITCH ARMS AND HITCH ASSEMBLY

- Attach the hitch arms (item #10) to the trailer frame using the two hitch arm mounting plates (item #9) and four 1/2"-13 x 1-1/4" HHCS (item #60) from the bolt bag. Do not tighten hardware at this time.
- Attach the trailer hitch assembly to the hitch arms as shown with two 1/2"-13 x 3" HHCS (item #61) and two 1/2"-13 gripco nuts (item #63) from the bolt bag. Tighten all hardware.
- Slide the stand (item #8) up through the holes in the hitch assembly and secure with the hair cotter pin (item #37).



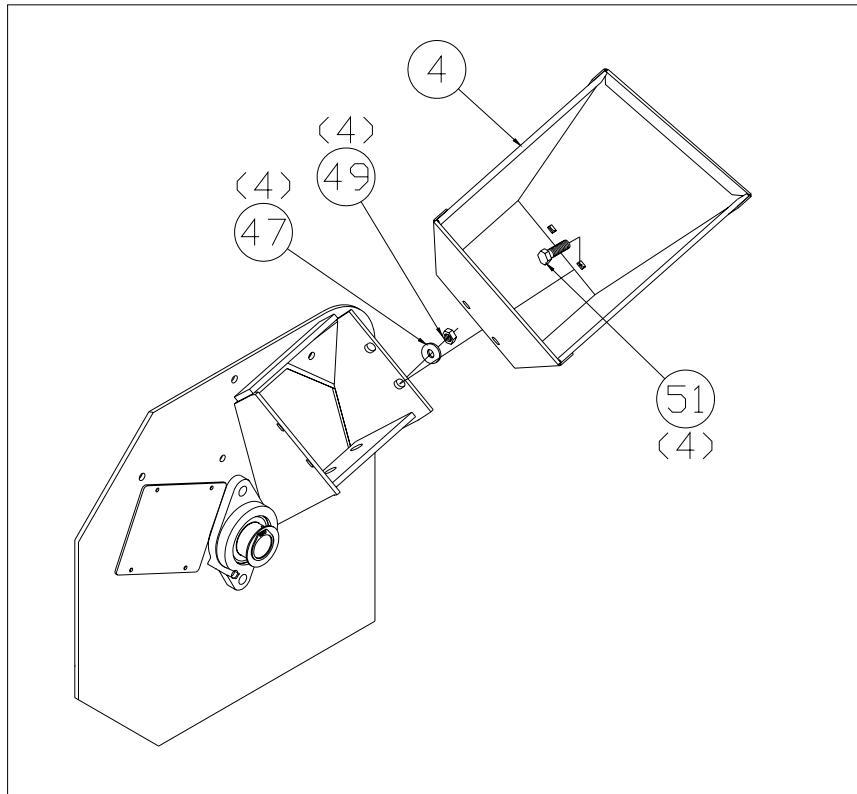
STEP III – ATTACHING THE SHREDDER HOPPER

- To attach the shredder hopper, push the four vibration dampeners (item #28) up into the mount holes on the hopper.
- With the vibration dampeners in the hopper mount holes from step 1, place the hopper on top of the unit.
NOTE: the slanted side of the hopper faces the discharge end of the shredder/chipper. Align the holes in the side plates with the vibration dampeners.
- Push the four bolts (item #45) up through the side plates and thread them into each vibration dampener until one or two threads appear. Place flatwashers (item #47) on the two vibration dampeners on the flat side of the hopper. Do not use washers on the slanted side of the hopper. Put the locknuts (item #49) in place on top of the bolts coming up through the vibration dampeners. Hold the locknut with a wrench and tighten the bolt until two threads are completely through the nut. **DO NOT OVER TIGHTEN AS THIS WILL DAMAGE THE VIBRATION DAMPENER AND POSSIBLY LEAD TO FURTHER DAMAGE TO YOUR MACHINE.**



STEP IV – ATTACHING THE CHIPPER HOPPER

- Attach the chipper hopper (item #4) to machine using four each 5/16"-18 x 3/4" carriage bolts (item #51), 5/16" flatwashers (item #47) and 5/16"-18 nylock nuts (item #49). Put head of bolt inside hopper with threads sticking out. Tighten all hardware with a 1/2" wrench.



SECTION III – LUBRICATION & ENGINE START UP

BEFORE STARTING ENGINE, ALWAYS CHECK OIL LEVEL!

Refer to the engine owner's manual for further details regarding OPERATION AND MAINTENANCE OF the engine.

NOTE: ENGINE IS SHIPPED *WITHOUT* OIL! FILL CRANKCASE WITH OIL BEFORE STARTING ENGINE. BE VERY CAREFUL NOT TO ALLOW DIRT TO ENTER THE ENGINE WHEN CHECKING OR ADDING OIL OR FUEL.

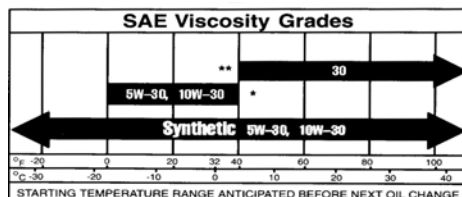
NOTE: IF YOU START THE ENGINE WITHOUT OIL, THE ENGINE WILL BE DAMAGED BEYOND REPAIR AND WILL NOT BE COVERED UNDER WARRANTY.

BEFORE STARTING: Oil and Gas Fill-Up

Oil Capacity: 1 ½ quarts (48 ounces)
Fuel Capacity: 9 quarts

OIL

- Use a high quality detergent oil classified “For Service SF, SG, SH, SJ” or higher.
- Do not use special additives.
- Choose a viscosity according to the following table.



* **CAUTION:** Air cooled engines run hotter than automotive engines. The use of non-synthetic multi-viscosity oils (5W-30, 10W-30, etc.) in temperatures above 40 deg. F (4 deg. C) will result in higher than normal oil consumption. When using a multi-viscosity oil, check oil level more frequently.

** **CAUTION:** SAE 30 oil, if used below 40 deg. F (4 deg. C), will result in hard starting and possible engine bore damage due to inadequate lubrication.

CHECKING AND ADDING OIL

- Check oil level before starting the engine.
- Check level daily, or after every eight hours.
- Keep oil level at FULL.
- Do not overfill.

Oil filling procedure: first add 1 quart. Start and run engine at idle for 30 seconds. Shut engine off and wait 30 seconds. Then add more oil slowly to bring level to **Full** mark on dipstick.

Oil checking procedure: before starting engine, check oil level.

- Place engine level. Clean around oil fill and dipstick.
- Remove dipstick and wipe clean with cloth.
- Push dipstick back in and remove to check oil level.
- Remove oil fill cap. Pour oil slowly.
- Fill to **Full** line on dipstick – recheck.
- Replace dipstick firmly.

FUEL

- Use clean, fresh, regular unleaded gasoline with a minimum of 85 octane. Fresh fuel prevents gum from forming in the fuel system or on essential carburetor parts. Purchase fuel in quantity that can be used within 30 days.
- Do not use gasoline which contains Methanol.
- Do not mix oil with gasoline.

<p>CAUTION: Some fuels, called oxygenated or reformulated gasoline, are gasoline blended with alcohols or ethers. Excessive amounts of these blends can damage the fuel system or cause performance problems. If any undesirable operating symptoms occur, use gasoline with a lower percentage of alcohol or ether.</p>

ADDING FUEL

- Fill tank outdoors or in a well-ventilated area, away from sparks, open flames, pilot lights, heat and other ignition sources
- If fuel spills, wait until it evaporates before starting engine.
- Turn engine OFF and let engine cool at least 2 minutes before removing gas cap.
- Remove cap. Fill tank to approximately 1-½ inches below top of neck to allow for fuel expansion. Be careful not to overfill.
- Replace cap before starting.

STARTING AND STOPPING

STARTING AND OPERATING TIPS

- Store and fuel equipment in level position.
- Use fresh fuel.
- Use correct type of oil for expected starting temperature.
- Remove external equipment/engine loads.
- Periodically remove any debris buildup from the machine.
- After engine has started, let it warm up several seconds to several minutes, depending on outside temperature.
- For maximum performance and life, operate engine with choke in RUN and throttle in FAST.

TO START ENGINE

- Check oil level.
- Open fuel shut-off valve.
- Move choke control to CHOKe position.
- Move throttle to FAST position. Operate engine with throttle in FAST.
- Insert key and turn to START. **CAUTION:** to prolong starter life, use short starting cycles, 5 seconds maximum, then wait one minute.
- Let engine warm up. Slowly adjust choke control toward RUN position. Wait until engine runs smoothly before each choke adjustment.

TO STOP ENGINE

- Move throttle to SLOW.
- Turn key to off. Remove key and store out of reach of children.
- Close fuel shut-off valve.

CAUTION: Do not stop engine by moving choke control to CHOKe. Backfire, fire or engine damage could occur.

Operation Notes

- At engine start-up, the engine of your shredder/chipper operates under no load until approximately 1600-1800 RPM'S at which speed the centrifugal clutch engages and begins driving the rotor assembly.
- Proper rotor speed is 2400 RPM +/- 200 RPM.
- When viewed from the chipper hopper side, the flywheel turns in a clockwise direction. This rotation pulls material into the shredder hopper and chipper hopper.
- Always wear protective gloves and safety glasses during operation of the shredder/chipper.
- If it becomes necessary to push material into either hopper, only use a wood stick, never your hands or anything steel.
- Never assume you know where the knife is. You don't know where it is. Always keep hands out of the shredder and chipper hopper.
- Keep area of discharge clear of people, animals, buildings, glass or anything else that will obstruct clear discharge, cause injury or damage. Wind can also change discharge direction, so be aware.

SECTION IV – SHREDDING & CHIPPING

THIS SHREDDER/CHIPPER WAS DESIGNED FOR SHREDDING LEAFY GARDEN OR ORGANIC MATERIAL AND CHIPPING LIMBS OR BRANCHES. NEVER USE THIS MACHINE FOR ANY OTHER PURPOSE AS IT COULD CAUSE SERIOUS INJURY.

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 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.

SAFETY FIRST

- Always wear protective gloves and safety glasses during operation of the shredder/chipper.
- Never allow your hands or any part of your body or clothing inside the feed hoppers or discharge area of the shredder/chipper.
- Keep all protective guards and warning labels on the machine and in good working condition.
- Always stand clear of the discharge area when the shredder/chipper is running.
- Keep your face and body back from the feed hoppers to avoid being struck by any material that may bounce back.
- Keep proper balance and footing while operating the shredder/chipper.
- If it becomes necessary to push material into the feed hoppers, only use a wood stick, never your hands or anything steel.
- Never assume you know where the chipper knife is. You do not know where it is.
- Keep area of discharge clear of people, animals, buildings, glass or anything else that will obstruct clear discharge, cause injury or damage. Wind can also change discharge direction, so be aware.
- Always keep hands out of the feed hoppers.
- Never operate the shredder/chipper without the chipper hopper in place.
- Do not transport the shredder/chipper with the engine running.

PROCESSING MATERIAL

- Your shredder/chipper can process dry or green material.
- Green material will process quicker and easier than dry material.
- Soft wood processes easier the hard wood.
- Your operator experience will teach you how different materials shred and chip.
- Your operator experience will teach you how fast you can process different materials.
- Most materials process well with the standard screen provided with the unit.

- When chipping branches, sometimes a tail will be left at the end of a branch. To avoid this, rotate the branch as it is fed into the chute.
- Rotating the branch as you feed it into the machine will improve chipping performance.
- An optional screen is available for greater reduction of the material being processed through the shredder hopper.

USING THE 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 flex guard, or blowback shield is secured to the hopper. Material must be pushed past this flap using a wooden stick in order to enter the main shredding chamber where revolving steel hammers do the shredding. **The blowback shield is an important feature. It prevents kickback of materials! Do not use your machine unless the blowback shield is securely fastened in place.**
- 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 and operator experience is very important. Be sure not to overload the machine by feeding too much material into the hopper at one time. 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.
- 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 shredding 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. Vibration is generally a warning sign of trouble.
- Several small branches can be fed into the shredder-hopper at once providing their combined diameter is less than 1 ½". 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.
- Wet materials will clog the machine easily. They are best processed with the optional bar screen.

MATERIALS BEST SUITED FOR SHREDDING

- | | | |
|-------------------|-------------------|-------------------|
| • Leaves | • Flowers | • Corn Stalks |
| • Roots | • Soil | • Palm frond tops |
| • Grass clippings | • Garden debris | • Potato vines |
| • Straw | • Hedge clippings | • Tomato vines |
| • Hay | • Kitchen Waste | • Paper |
| • Small branches | • Manure | |

NOTE - The hammers within the shredding 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.

USING THE CHIPPER HOPPER

- This chipper-hopper is mounted on the side of the machine and 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 knife mounted on a flywheel. The chipper-hopper can chip branches and vines ranging in size from 1" to 4 ½" 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 machine!**
- Do not force material into the chipper. If the machine does not chip well, the chipper knives need replaced or sharpened or the gap between the knives and the wear plate needs adjusting.
- 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 shredder/chipper will cause the rotor speed to decrease. If you hear the RPM's decreasing, stop feeding material into the machine until the machine has returned to full speed.

MATERIALS BEST SUITED FOR CHIPPING.

- Branches, vines or stalks from 1" to 4 ½" in diameter.

USE COMMON SENSE WHEN USING YOUR SHREDDER/CHIPPER.

- **LEARN TO RECOGNIZE THE CHANGE IN THE SOUND OF YOUR MACHINE WHEN IT IS OVERLOADED.**
- **BECOME FAMILIAR WITH SUCCESSFUL OPERATING CONDITIONS AND AVOID THOSE THAT CAN OVERLOAD AND DAMAGE THE MACHINE.**
- **IF THE MACHINE BECOMES JAMMED BY OVERLOADING OR ANY OTHER CAUSE, STOP THE MACHINE IMMEDIATELY.**
- **IF YOU JAM THE MACHINE AND DO NOT STOP THE ENGINE, IT CAN DAMAGE THE MACHINE. THIS DAMAGE CAN BE COSTLY AND IT MAY NOT BE COVERED UNDER WARRANTY. FOR THIS REASON, IT IS IMPORTANT THAT YOU IMMEDIATELY STOP THE ENGINE IF THE MACHINE BECOMES JAMMED.**
- **ONLY YOUR OPERATOR EXPERIENCE WILL TELL YOU HOW FAST TO FEED MATERIAL TO BE PROCESSED.**
- **CHECK TO SEE THAT THE FLYWHEEL WILL TURN FREELY BEFORE YOU START THE SHREDDER/CHIPPER.**
- **VISUALLY CHECK CHIPPER KNIFE FOR DAMAGE EACH TIME YOU USE YOUR SHREDDER/CHIPPER.**
- **CHECK KNIFE CONDITION, WEAR PLATE CONDITION, GAP SETTING AND THE NUTS AND BOLTS THAT HOLD THE KNIFE IN PLACE FOR TIGHTNESS EVERY 8-10 HOURS OF OPERATION.**
- **DO NOT ALLOW PROCESSED MATERIAL TO BUILD UP WITHIN 3" OF DISCHARGE CHUTE OPENING. MOVE SHREDDER/CHIPPER OR PILE AS NEEDED. FAILURE TO DO THIS COULD RESULT IN UNNECESSARY JAMMING OF THE MACHINE.**
- **TO MOVE PILE OF PROCESSED MATERIAL, USE SPADE, RAKE, OR LONG HANDLE TOOL. NEVER USE YOUR HANDS OR FEET!**

SECTION V – MAINTENANCE & STORAGE

IMPORTANT: The knife should be checked for sharpness and the bolts attaching them to the flywheel for tightness every 8-10 hours of operation.

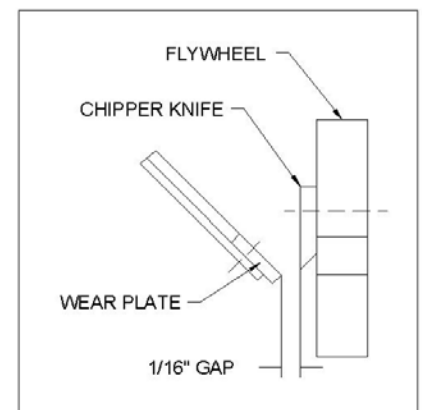
IMPORTANT: Every time you perform maintenance or any kind of service or check on the knife, be sure to check the gap between the knife and wear plate for proper setting.

NOTE: A knife gauge has been provided with your machine. It is 1/16th” thick and should be used to set the correct gap between the knife and wear plate.

If the cutting mechanism strikes any foreign object or if your machine should start making an unusual noise or is vibrating, stop the engine, disconnect the spark plug wire(s) from the spark plug(s). Allow the engine to cool before you:

- a. Inspect and examine for damage.
- b. Check for loose nuts, bolts or parts.
- c. Repair or replace any damaged parts before restarting and operating the machine.

1. When not in use, your shredder/chipper should be stored out of the reach of children. Be sure that there are no gasoline fumes in the storage area. For long periods of storage (over the winter), refer to the engine owner’s manual.
2. After every 8 hours of operation, lubricate the chipper side and drive side bearings. To do this, wipe all dirt, etc., from the grease fittings with a clean cloth, then apply no more than 3 shots of quality general-purpose grease with a hand-pumped grease gun. Over lubrication can also damage bearings. Also, check the bearing collar set screws regularly to be sure they are tight. If they are loose, reset them with Loctite 243, obtainable at any hardware store.
3. You will find information included referring to operation and maintenance of the engine. Look it over carefully. **BE CERTAIN TO ADD OIL BEFORE STARTING IT.**
4. When the steel chipping knife needs replacing or sharpening, refer to the section on removal, sharpening and re-installation.
5. Care must be exercised when sharpening the knife to maintain the correct bevel and a straight edge. Refer to sharpening directions. When you install a knife, the clearance between the knife and wear plate must be checked and set. This clearance or gap should be set to 1/16” (see figure 1).
6. To adjust this clearance, loosen the three ¼” nuts and bolts holding the wear plate in place. The wear plate can be slid up or down (in or out) to achieve the correct gap setting.
7. Take the knife gauge and slide between the knife and wear plate. If the gap is set correctly, the knife gauge will lightly touch both the knife and wear plate. If the gap is too small, you will not be able to get the gauge between the knife and wear plate. If the gap is too large, there will be excess room between the knife gauge, knife and wear plate. Tighten the nuts and bolts when the wear plate is in the correct position. Be certain the flywheel rotates without hitting anything before starting the chipper.
8. If the gap between the wear plate and the knife is not set correctly, you will have excessive vibration when chipping and the blade will seem to be dull. This should be checked every 8-10 hours of operation.
9. If at any time it becomes necessary to disassemble the chipper for repairs, the chipper disk must be re-installed in exactly the same position on the rotor shaft.



NOTE: Proper gap setting is critical to the proper operation of your machine.

REMOVAL, SHARPENING AND RE-INSTALLATION OF CHIPPER KNIFE

HOW TO REMOVE THE KNIFE

- Stop the engine.
- Remove spark plug wire(s) and keep away from spark plug(s).
- Disconnect battery at negative terminal.
- Open the access cover on the chipper basic machine.
- Rotate the chipper disk until the three countersunk screws attaching the knife to the flywheel are visible through the access door.
- Clean out the heads of the allen screws with an awl or sharp tool.
- Insert a 3/16" allen wrench into the heads of the screws.
- While applying pressure with the allen wrench, apply heat from a propane torch to the screws to break loose the Loctite on the screws.
- Remove the heat once the screws have loosened.
- Remove all three allen screws in this manner.

KNIFE SHARPENING

- You should never attempt to sharpen the chipper knife (or knives) freehand.
- It is extremely important that the 45 degree angle be maintained consistently for proper performance.
- The chipper knife (or knives) should be taken to a machine shop for proper sharpening.
- Excessive heat generated during the sharpening process will damage knives and weaken the metal. Be sure the knife is not overheated.

KNIFE INFORMATION

- The chipper knife should be checked routinely for sharpness.
- Using a dull knife will decrease performance and cause excessive vibration that will cause damage to the shredder/chipper.
- How many times a knife can be sharpened is determined by how much material needs to be taken off to sharpen or to compensate for dents or gouges.
- A new chipper knife has 5/16" measurement between the short side bevel edge and the knife mounting holes. See figure 2.

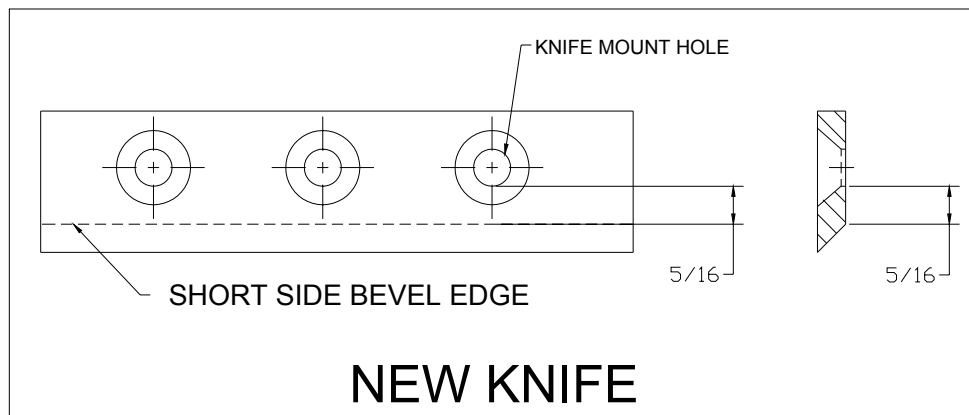


Figure 2

- The knife should never be sharpened to the extent that more than $3/32$ " is taken off this measurement.
- Once this measurement is below $7/32$ " (see figure 3) the knife should be replaced.
- If you are unable to remove dents or gouges with these guidelines, replace the knife.

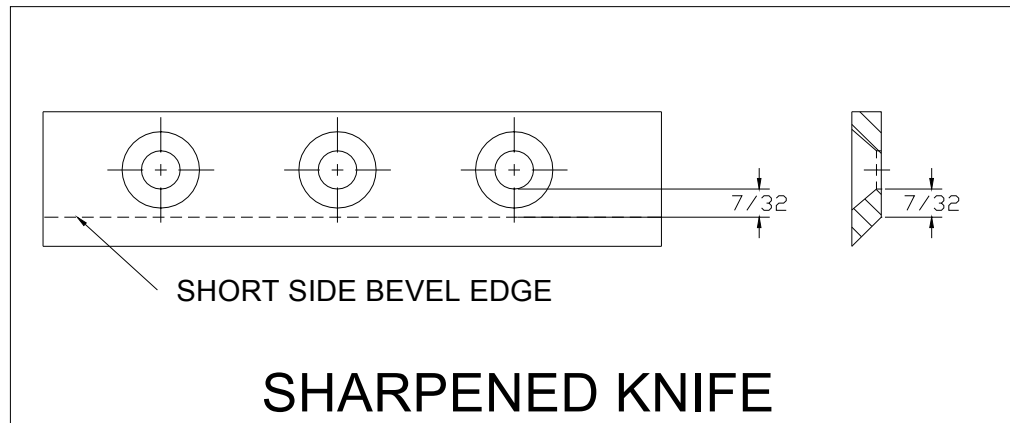


Figure 3

KNIFE INSTALLATION

- Clean chipper disk where knife is going to be attached.
- Visually inspect the chipper disk slot and knife mounting area and be sure they are clean and that the knife will be able to mount flush against the chipper disk.
- Visually inspect and clean the knife.
- Apply Loctite 243 to the screws that hold the knife in place.
- Hand tighten the knife to the chipper disk. If you are installing a new knife, use the new hardware that comes with the knife when attaching it to the chipper disk.
- Tighten the center bolt.
- Tighten the outer bolt.
- Tighten the inner bolt.
- Double check all three for tightness one more time.

WEAR PLATE

- The wear plate should have a square edge and be free of dents or gouges.
- The wear plate can be sharpened by hand, but as with the knife, do not overheat during the sharpening process. This will change the characteristics of the steel and it should be replaced.
- Check the gap between the knife and wear plate every time any adjustments are done to either piece, or every 8-10 hours of operation.

AFTER ANY BLADE OR WEAR PLATE MAINTENANCE OR ADJUSTMENT, ROTATE THE CHIPPER DISK BY HAND. 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.

KNIVES MUST BE CHECKED AND MAINTAINED!

KNIVES MUST BE SHARP!

BE SURE TO REINSTALL THE KNIFE CORRECTLY AND DOUBLE CHECK FOR TIGHTNESS!

HAMMERS

When the hard steel hammers of the rotor assembly become dull or round on the cutting edge, they may be rotated or reversed. **These hammers have four cutting edges that may be used before replacement is necessary.** To reverse the hammers proceed as follows.

- Remove belt guard.
- Remove round cover plate from behind belt guard.
- Remove the top plate.
- Remove shredder hopper.
- Turn rotor assembly until hammer rod is facing up.
- Turn hammer rod until small end of groove pin is facing up.
- Drive the groove pin from the hammer rod with a punch.
- Remove hammer rod through access hole on side of machine.
- Reverse hammers and reinstall with spacers on hammer rod.
- Replace old groove pin with new groove pin.

NOTE: Be sure the hammers and spacers are reinstalled in exactly the order in which they were removed. Refer to the rotor assembly drawing for the correct order.

INSTRUCTIONS FOR ADJUSTING OR REPLACING BELT

BELT ADJUSTMENT

The belt on your chipper should deflect 3/8" under three pounds of pressure as shown in figure 1 below. If it doesn't, adjust per the following directions.

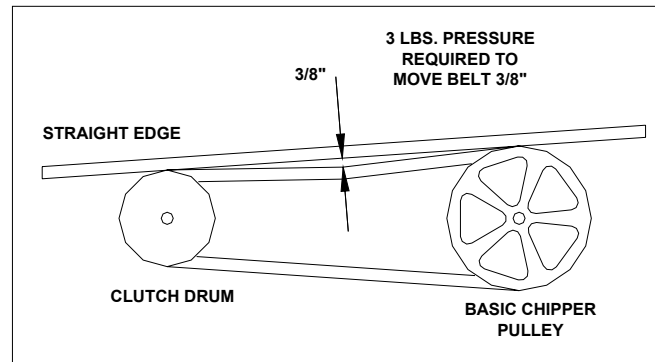


Figure 1

- Remove belt guard.
- Loosen engine bolts.
- Tighten or loosen the nut on the belt tensioner until you have the correct tension as shown in figure 1.
- Retighten engine bolts.
- Check alignment of the clutch with the drive pulley by placing a straightedge across both faces as shown in figure 2. If adjustment is necessary, correct alignment by moving rotor pulley in or out on the rotor shaft. **Do not make adjustment by moving the clutch on the engine shaft.**
- Replace belt guard.

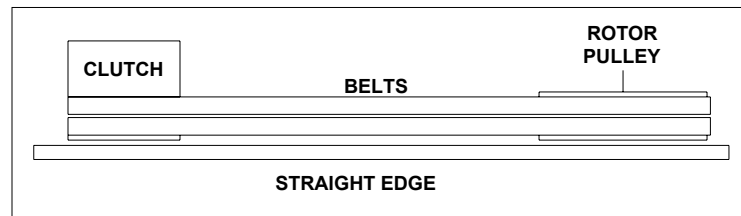


Figure 2

BELT REPLACEMENT

- To replace the belt, follow the above belt adjustment directions.
- After you have loosened the engine bolts, remove the old belts and replace them with new belts. **Always replace both belts as they come in a matched set. This is required for proper operation.**
- Set belt tension and alignment per above directions.

NOTE: Check and re-tighten belts after initial break-in period, one hour of use.

CENTRIFUGAL CLUTCH TECH TIPS

CLUTCH PART NO. 911-0236

THE SHOES AND SPRINGS ON THE CLUTCH ARE NORMAL WEAR ITEMS. IF YOU NOTICE DECREASED PERFORMANCE OF THE CLUTCH THEY SHOULD BE CHECKED AND REPLACED IF NECESSARY.

The clutch on your machine is designed for rugged, dependable service, however, it is important to understand the limitations of a clutch. A clutch is designed to provide load free starting of the engine, and slippage under excessive overloading of the driven application. These features help protect the engine from damages such as broken crankshafts and starters.

The clutch obtains its power from engine RPM's. The lower the engagement speed, and the higher the maintained engine speed, the more torque the clutch can transfer to the driven unit. **Do not operate at less than full RPM's.**

- At engine start-up, the engine of your chipper operates under no load until approximately 1000-1200 RPM'S at which speed the centrifugal clutch engages and begins driving the rotor.
- Proper rotor speed is 2400 RPM +/- 200 RPM.
- Do not tamper with the engine's governor setting. The governor controls the maximum safe operation speed and protects the engine. Over-speeding 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.
- Become familiar with successful operating conditions and avoid those that can overload and damage the machine.
- Do not overload or attempt to shred or chip material beyond manufacturers recommendation. Personal injury or damage to the machine could result.
- Learn to recognize the sound of the machine when it is overloaded.
- If the machine becomes jammed by overloading or any other cause, stop the machine immediately.
- If you jam the machine and do not stop the engine, it can:
 - Burn the belt.
 - Ruin the clutch.
- Only your operator experience will tell you how fast you can successfully feed material into the machine.
- **Clutch damage can be costly and it may not be covered under warranty. For this reason, it is important that you immediately shut off the machine if it becomes jammed.**

CLUTCH MAINTENANCE

The centrifugal clutch on this machine is permanently lubricated and does not require oil or grease. If, after long periods of use, the drum wobbles excessively, replace the drum assembly. Always replace shoes and springs in sets. Whenever shoes are changed, replace all springs.

CLUTCH REMOVAL

1. Remove clutch from shaft by removing bolt and washers.
2. Slide clutch off shaft.
3. Remove key from keyway.

DISASSEMBLY OF EXISTING CLUTCH

1. Remove retainer ring and slide off drum assembly.
2. Unhook one spring from its shoe. Use tape wrapped pliers to avoid nicking spring.
3. Carefully note position of shoes. Remove shoes from hub.

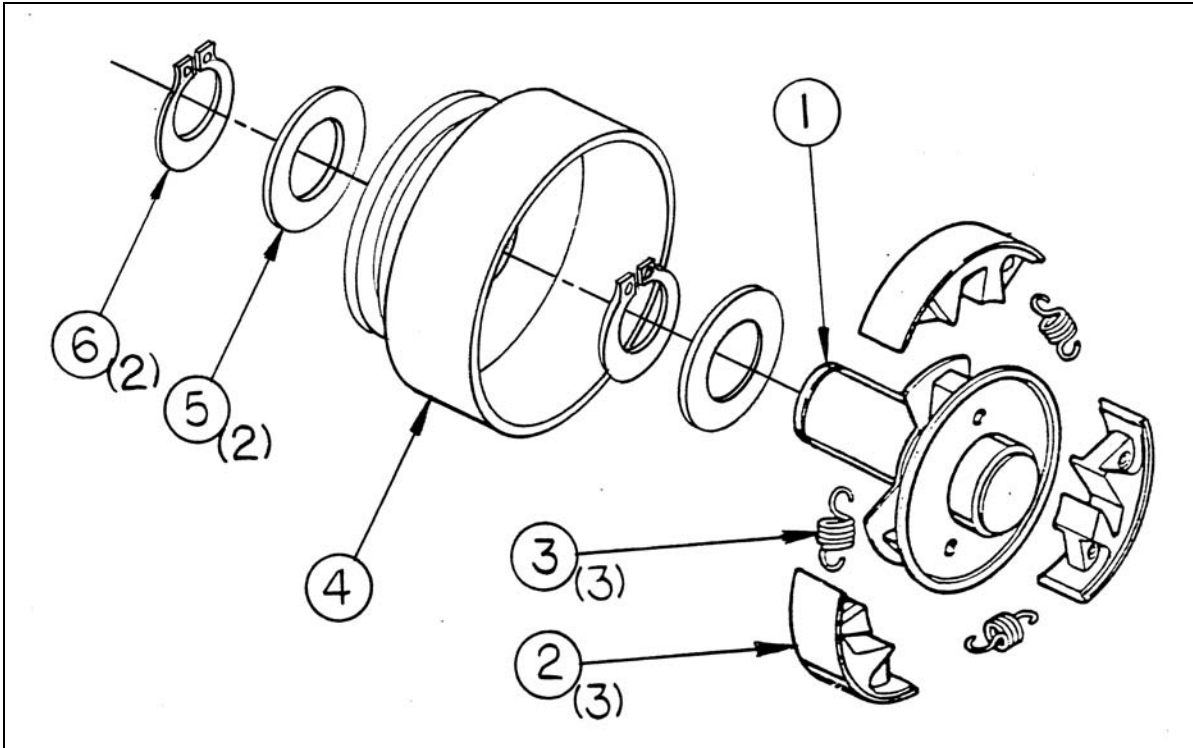
REASSEMBLE

1. Locate shoes correctly on hub for rotation required.
2. Place one end of each spring over a shoe pin, stretch spring just enough to clear pin on the other shoe. Use tape wrapped pliers to avoid nicking spring. Avoid over stretching that may damage spring. Repeat for all shoes.
3. Replace washer on hub shaft.
4. Reassemble drum to hub, secure with retaining ring.
5. Locate key in keyway of hub.
6. Slide clutch onto crankshaft, then washers.
7. Secure hub by tightening cap screw and allen head set screws.

INSTALLATION OF A NEW CLUTCH

1. Clean shaft and remove any burrs.
2. Apply anti-seize compound to the shaft.
3. Place key in keyway on shaft.
4. Slide clutch onto shaft, secure with bolt, flatwasher and lockwasher (items 40, 41, and 42).
5. Tighten two allen head set screws.

911-0236 CLUTCH BREAKDOWN



<u>Item</u>	<u>Part No.</u>	<u>Qty</u>	<u>Description</u>
1	911-0236-3	1	Hub Assembly
2	911-0236-1	3	Shoe
3	030-0202-5	3	Spring
4	911-0236-2	1	Drum Assembly
6	030-0164-6	1	Retaining Ring
Not Shown	030-0202-1	2	Retaining Ring

TROUBLESHOOTING

SYMPTOM	PROBLEM	CORRECTION
Clutch overheats. Belt burns. Flywheel won't turn.	Clutch is slipping or rotor is jammed or stopped.	<ul style="list-style-type: none"> • Immediately stop engine. • Remove spark plug wires. • Turn flywheel by hand to be sure it turns freely. • Check belt tension. • Clear chipper chamber.
Shredding and chipping action seems too slow or flywheel stalling.	Engine speed is too slow. Belts are slipping.	<ul style="list-style-type: none"> • Run engine at full throttle. • Check for loose or missing belt & tighten.
When chipping, log seems to vibrate excessively & "hammers" hands.	Knife is dull. Gap between knife & wear plate is too great.	<ul style="list-style-type: none"> • Remove knife & sharpen - be sure to maintain same bevel of 45 degrees. • Adjust gap as per instructions.
Chipper knife is hitting wear plate.	The gap between the knife and wear plate is set incorrectly.	<ul style="list-style-type: none"> • Adjust gap per directions in the front of this section.
Engine runs but flywheel doesn't rotate.	Inner shoes of clutch worn. Retaining springs weak or broken. Loose drive belt.	<ul style="list-style-type: none"> • Replace worn or broken clutch parts. • Check belt tension. • Clear chipper chamber.
Machine has excessive vibration.	Rotor is out of balance.	<ul style="list-style-type: none"> • Check rotor assembly for any missing or broken hammers or spacers. Replace if necessary.

LUBRICATION AND MAINTENANCE

OPERATION TIME	PROCEDURE	COMMENTS
BREAK IN	<ul style="list-style-type: none"> • Change engine oil and filter after first five hours. • Check belt tension. • Check all nuts and bolts for tightness. 	<ul style="list-style-type: none"> • Follow oil recommendations per the engine & owner's manual. • Adjust per directions. • Tighten if necessary.
8 HOURS	<ul style="list-style-type: none"> • Check engine oil. • Check chipper knife for sharpness. • Check knife and wear plate gap. • Clean air filter. • Grease bearings in basic chipper. * • Check for broken rotor hammers or spacers. 	<ul style="list-style-type: none"> • Per recommendations. Do not overfill. • See knife information. • See gap setting information. • Per engine recommendations. • Use high quality multi-purpose lithium grease. • Replace with new parts.
40 HOURS	<ul style="list-style-type: none"> • Change engine oil. ** • Check tire pressure. • Remove and sharpen or replace chipper knife. • Sharpen wear plate. 	<ul style="list-style-type: none"> • Per recommendations. Do not overfill. • Add or adjust as required. • See knife information. • See wear plate information.
100 HOURS	<ul style="list-style-type: none"> • Replace belt. • Change engine oil. • Reverse hammers. 	<ul style="list-style-type: none"> • Order replacement belts. • Per recommendations. Do not overfill.
200 HOURS	<ul style="list-style-type: none"> • Change engine oil filter. • Clean and adjust, or replace spark plugs. 	<ul style="list-style-type: none"> • Per recommendations in engine manual. • Per recommendations in engine manual.

* No more than 3 shots from a hand grease gun. Do not over-grease as this may damage the bearing.

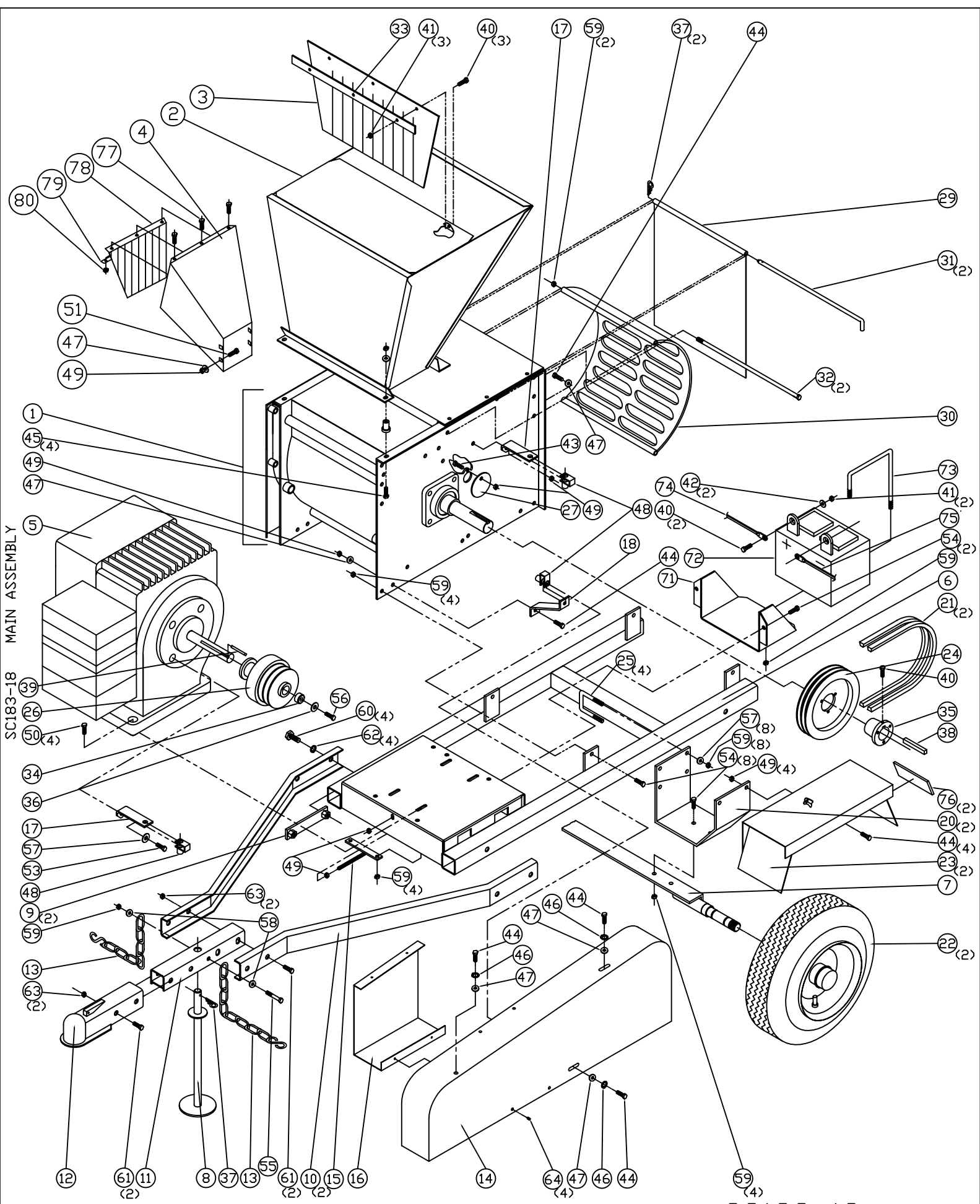
** Lubrication schedule may vary depending on working environment. Overly dirty and dusty situations will require more frequent oil changes to protect the engine.

SECTION VI - PARTS

SC183-18VECHP PARTS LIST

ITEM #	PART #	QTY.	DESCRIPTION
1	911-0150	1	SC183 BASIC UNIT
2	911-0028	1	SHREDDER HOPPER WELDMENT
3	911-0034	1	FLEX GUARD
4	913-0375	1	CHIPPER HOPPER WELDMENT
5	030-0325	1	ENGINE-18 HP B&S VANGUARD ELECTRIC
6	911-0239	1	FRAME WELDMENT
7	911-0070	1	AXLE WELDMENT
8	911-0035	1	STAND ASSY
9	911-0221	2	MOUNTING PLATE - HITCH ARM
10	911-0219	2	HITCH ARM
11	911-0220	1	HITCH TUBE WELMENT
12	913-0218	1	TRAILER HITCH
13	408-0078	2	3/16 CLASS 1 TRAILER SAFETY CHAIN
14	911-0248	1	BELT GUARD WELDMENT
15	912-3005	1	BELT TENSIONER
16	911-0240	1	INNER BELT GUARD
17	911-0214	2	L-BRACKET
18	911-0215	1	Z-BRACKET
20	911-0212	2	FORMED BRACKET
21	030-0193	2	BELT 5H680 (MUST BUY TWO)
22	702-0040	2	WHEEL & TIRE ASSY W/ HUB
23	911-0025	2	FENDER WELDMENT
24	030-0211	1	6.8 X 2B GROOVE SHEAVE
25	911-0229	4	U-BOLT, 3/8-16 X 3 DP X 2 BETWEEN
26	911-0236	1	CLUTCH, 5-1/4 X 1" DIA BORE
27	900-0040	1	COVER PLATE
28	500-0068	4	VIBRATION DAMPENERS
29	911-0033	1	BAFFLE WELDMENT
30	911-0054	1	BAR SCREEN WELDMENT
31	911-0036	2	SCREEN & BAFFLE ROD
32	911-0050	2	TIE ROD (3/8-16 X 15" HHCS)
33	911-0049	1	RETAINING BAR
34	911-0249	1	SPACER
35	911-0139	1	SDS BUSHING 1 7/16" DIA BORE
36	704-0106	1	WASHER
37	500-0039	3	3/16" HAIR SPRING COTTER - PLT
38	080-0084	1	3/8 SQ X 1 1/2 SHAFT KEY
39	703-0424	1	1/4 SQ X 2" KEY
40	090-0012	6	1/4-20 X 3/4 HHCS GR5 PLTD
41	090-0470	5	1/4-20 NYLOK LOCKNUT PLTD
42	090-0232	2	1/4 USS FLATWASHER PLTD
43	090-0067	5	5-16-18 X 5/8 HHCS GR 5 PLTD

44	090-0088	9	5/16-18 X 1" HHCS GR 5 PLTD
45	090-0090	4	5/16-18 X 1 1/2 HHCS GR5 PLTD
46	090-0394	3	5/16 MED SPLIT LOCK WASHER
47	090-0233	7	5/16" USS FLATWASHER
48	090-0438	3	5/16-18 J-NUT
49	090-0460	12	5/16-18 NYLON INSERT LOCKNUT
50	090-0072	4	5/16-18 X 2 HHCS
51	090-0462	4	5/16-18 X 3/4" CARRIAGE BOLT
53	090-0098	1	3/8-16 X 3/4 HHCS
54	090-0111	10	3/8-16 X 1 1/4 HHCS
55	090-0123	1	3/8-16 X 3 1/2 HHCS
56	090-0633	1	3/8-24 X 1 1/2 HHCS
57	090-0228	8	3/8 MED SPLIT LOCK WASHER
58	090-0234	2	3/8 USS FLATWASHER
59	090-0461	24	3/8-16 NYLON INSERT LOCKNUT
60	090-0128	4	1/2-13 X 1 1/4 HHCS
61	090-0370	4	1/2-13 X 3 HHCS
62	090-0351	4	1/2 SPLIT LOCK WASHER
63	090-0050	4	1/2-13 GRIPCO LOCKNUT
64	090-0162	4	#10-32 X 3/8 SELF TAPPING SCREW
71	913-0124	1	BATTERY BOX
72	913-0086	1	BATTERY
73	913-0217	1	BATTERY HOLD DOWN
74	913-0266	1	POSITIVE BATTERY CABLE
75	911-0228	1	NEGATIVE BATTERY CABLE
76	030-0375	2	REFLECTOR- DECAL
77	090-0704	3	10-24 X 3/4" PHMS
78	913-0376	1	BLOW BACK SHIELD
79	913-0378	1	BLOW BACK SHIELD MOUNT STRIP
80	090-0703	3	10-24 NYLOCK NUT



SC183-18
MAIN ASSEMBLY

SC183-18
MAIN ASSEMBLY

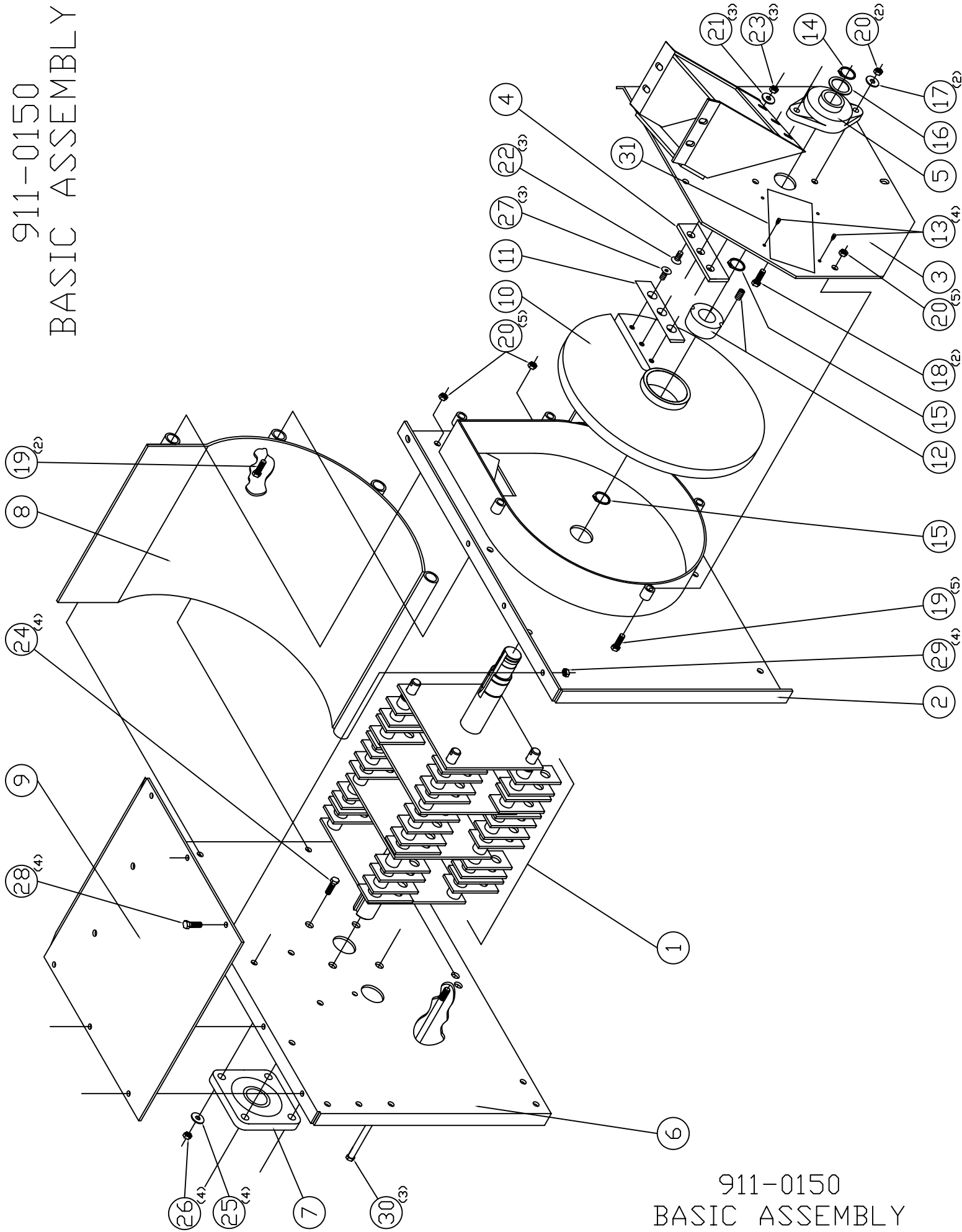
911-0150 BASIC MACHINE

ITEM #	PART #	QTY.	DESCRIPTION
1	911-0064	1	ROTOR ASSY W/HAMMERS
2	911-0152	1	CHIPPER SIDE PLATE WLDMNT
3	911-0268	1	CHIPPER CHUTE PLATE WELDMENT
4	913-0326	1	WEAR PLATE
5	030-0279	1	1 3/16" 2 BOLT BEARING
6	911-0151	1	DRIVE SIDE PLATE
7	030-0166	1	4 BOLT BEARING 1 7/16" BORE
8	911-0003	1	SCROLL WELDMENT
9	911-0026	1	TOP PLATE
10	911-0267	1	CHIPPER DISC
11	913-0270	1	CHIPPER KNIFE
12	030-0167	1	1610 x 1 7/16" ID TAPER LOCK BUSHING
13	090-0162	4	#10-32 X 3/8 SELF TAPPING SCREW
14	030-0117	1	RETAINING RING - 1 3/16"
15	030-0171	2	1 7/16" RETAINING RING
16	090-0024	1	1.565 OD X 1.192 ID X .050 THK
17	090-0233	2	5/16"USS FLATWASHER
18	090-0111	2	3/8-16 X 1-1/4 HHCS
19	090-0016	7	3/8-16 X 1 1/2 HHCS
20	090-0049	12	3/8-16 GRIPCO LOCKNUT
21	090-0245	3	1/4 SAE FLATWASHER
22	090-0677	3	1/4-20 X 1" CARRIAGE BOLT
23	090-0470	3	1/4-20 NYLOK LOCKNUT
24	090-0463	4	1/2-13 X 1 1/2 HHCS
25	090-0351	4	1/2 SPLIT LOCK WASHER
26	090-0050	4	1/2-13 GRIPCO LOCKNUT
27	090-0413	3	5/16-18 X 1" FLAT HD SOCKET CAP
28	090-0066	4	5/16-18 X 3/4 HHCS
29	090-0048	4	5/16-18 GRIPCO NUT
30	911-0050	3	3/8-16 X 15"LG HHCS (TIE ROD)
31	913-0210	1	ACCESS COVER

911-0064 ROTOR ASSEMBLY

ITEM #	PART #	QTY.	DESCRIPTION
1	911-0135	1	ROTOR WELDMENT
2	900-0100-4	4	HAMMER ROD
3	500-0008	48	HAMMER
4	500-0010	12	SPACER-5/16"
5	500-0011	24	SPACER-7/8"
6	500-0012	18	SPACER-5/8"
7	030-0153	4	13/64" DIA X 1 1/2" LG DRIVE PIN

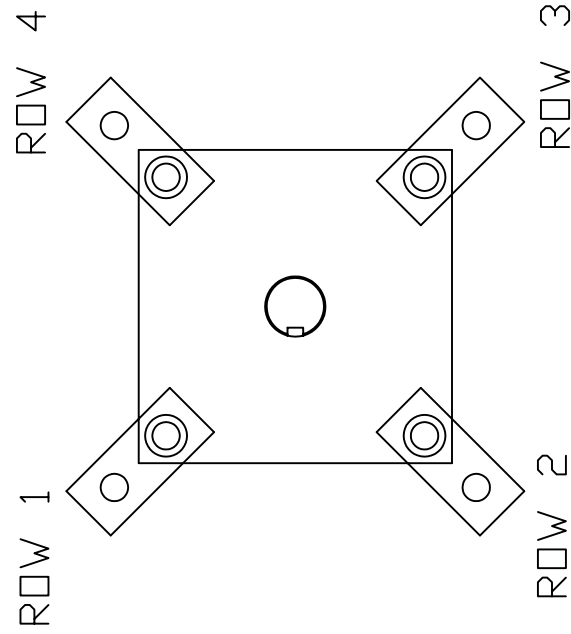
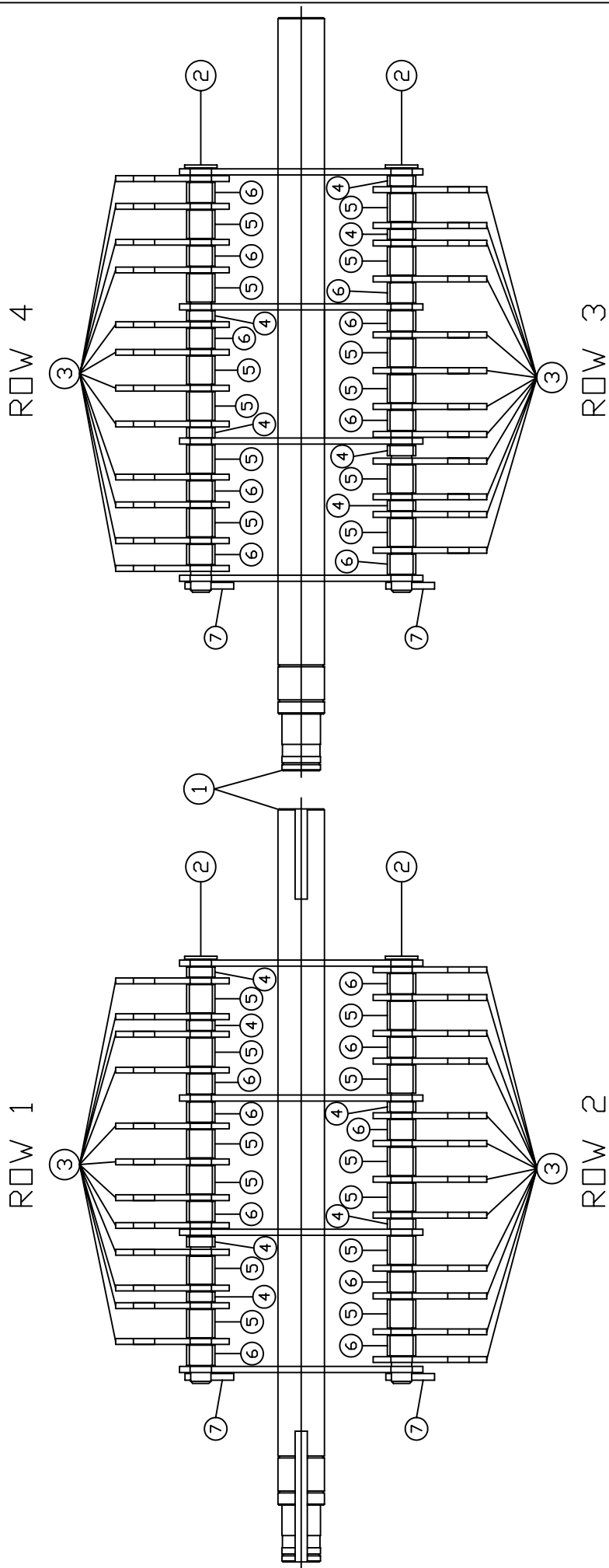
911-0150
BASIC ASSEMBLY



911-0150
BASIC ASSEMBLY

911-0064 ROTOR ASSEMBLY

911-0064



911-0064
ROTOR ASSEMBLY

NOTES

COUNTRY HOME PRODUCTS

Meigs Road, P.O. Box 25, Vergennes, Vermont 05491

1(800) DR-OWNER (376-9637)

10/28/04