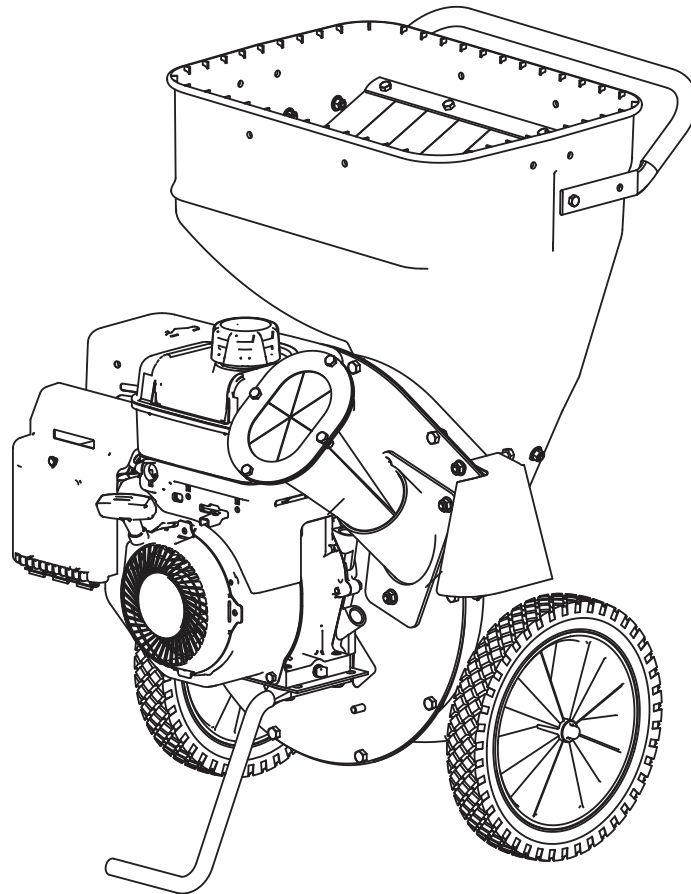


Earthquake

Operator's Manual
Original Operating Instructions
Chipper/Shredders



Includes:

Model No.	Description
14267	212cc Viper Earthquake Chipper / Shredder
14268	212cc Viper Earthquake Chipper / Shredder (CE)
9060300	8.50 Torque Rated Briggs Earthquake Chipper / Shredder
9060140	8.25 Torque Rated Briggs Earthquake Chipper / Shredder (CE)
9070300	11.50 Torque Rated Briggs Earthquake Chipper / Shredder
9010400	14.50 Torque Rated Briggs Earthquake Chipper / Shredder
12547	14.50 Torque Rated Briggs Earthquake Chipper / Shredder (CE)
1692327	Tow Bar Kit
1692210	Vacuum Kit

Get parts online at
www.getearthquake.com



P/N: 14306
ECN: 9496
REV2: 01/03/13
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INTRODUCTION

Congratulations on your investment in quality. Thank you for purchasing a Chipper/Shredder from Earthquake™. We have worked to ensure that your product meets the highest standards for usability and durability. With proper care, your Chipper/Shredder will provide many years of service.

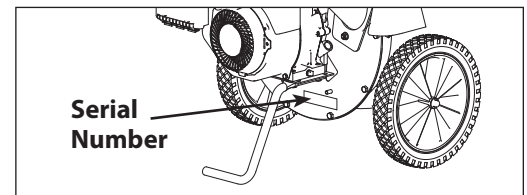
Please read this entire manual before installation and use. Earthquake reserves the right to change, alter or improve the product and this document at any time without prior notice.

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FEDERAL EMISSIONS INFORMATION

Earthquake warrants to the retail purchaser, that this small, off-road engine was designed, built and equipped to conform at the time of initial sale to all applicable regulations of the U.S. Environmental Protection Agency (EPA).



REGISTRATION AND SERVICE

Record the engine model number and serial number in the space provided for easy reference when ordering parts or requesting technical support. Excluding emissions-related warranty items, the warranty is valid only if the completed registration is received by Ardisam within 30 days of purchase. **(SEE WARRANTY SECTION FOR MORE INFORMATION.)** You can register your warranty online by visiting www.getearthquake.com, or by mailing it to: Ardisam, 1160 Eighth Avenue, Cumberland, WI 54829. If you do not have a computer, call our customer service department at (800) 345-6007 Mondays through Fridays from 8 a.m. to 5 p.m. CST.

OWNERSHIP RECORDS		
Owner's Name:		
Owner's Address:		
City:	State/Province:	Zip Code/Postal Code:
Model Number:	Serial Number:	
Date of Purchase:		
Notes:		

This manual may contain information for several models. Read and keep this manual for future reference. This manual contains important information on SAFETY, ASSEMBLY, OPERATION, AND MAINTENANCE. The owner must be certain that all the product information is included with the unit. This information includes the MANUAL, the REPLACEMENT PARTS and the WARRANTIES. This information must be included to make sure state laws and other laws are followed. This manual should remain with the engine even if it is resold.

SAFETY

OWNER'S RESPONSIBILITY

Accurate assembly, and safe and effective use of the chipper/shredder is the owner's responsibility.

- Read and follow all safety instructions.
- Carefully follow all assembly instructions.
- Maintain the chipper/shredder according to directions and schedule included in this Earthquake operator's manual.
- Ensure that anyone who uses the chipper/shredder is familiar with all controls and safety precautions.

SPECIAL MESSAGES

Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.

NOTE: General information is given throughout the manual that may help the operator in the operation or service of the machine.

IMPORTANT SAFETY PRECAUTIONS

Please read this section carefully. Operate the chipper/shredder according to the safety instructions and recommendations outlined here and inserted throughout the text. Anyone who uses this chipper/shredder must read the instructions and be familiar with the controls. Learn how to control the chipper/shredder at all times.



This symbol points out important safety instructions which if not followed could endanger your personal safety. Read and follow all instructions in this manual before attempting to operate this equipment.

- Do not allow children to operate this chipper/shredder. Keep small children away from the area being tilled. Do not allow adults to operate the chipper/shredder without proper instruction.

PREPARATION

- Dress appropriately when operating the chipper/shredder. Always wear sturdy footwear and safety goggles. Never wear sandals, sneakers or open shoes, and never operate the chipper/shredder with bare feet. Do not wear loose clothing that might get caught in moving parts.
- Make sure chipper/shredder is free of debris before starting the engine.
- Do not allow anyone near the equipment while it is running.
- Do not operate without the debris bag in place because this unit discharges debris at high speeds.
- Never attempt to make any adjustments while the engine is running.

DANGER

DANGER INDICATES A SERIOUS INJURY OR FATALITY WILL RESULT IF THE SAFETY INSTRUCTIONS THAT FOLLOW THIS SIGNAL WORD ARE NOT OBEYED.

WARNING

WARNING INDICATES A SERIOUS INJURY OR FATALITY COULD RESULT IF THE SAFETY INSTRUCTIONS THAT FOLLOW THIS SIGNAL WORD ARE NOT OBEYED.

CAUTION

CAUTION INDICATES YOU CAN OR YOUR EQUIPMENT CAN BE HURT IF THE SAFETY INSTRUCTIONS THAT FOLLOW THIS SIGNAL WORD ARE NOT OBEYED.

IMPORTANT

IMPORTANT INDICATES HELPFUL INFORMATION FOR PROPER ASSEMBLY, OPERATION, OR MAINTENANCE OF YOUR EQUIPMENT.

WARNING

YOU MUST READ, UNDERSTAND AND COMPLY WITH ALL SAFETY AND OPERATING INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO SETUP AND OPERATE YOUR ROTOTILLER.

FAILURE TO COMPLY WITH ALL SAFETY AND OPERATING INSTRUCTIONS CAN RESULT IN LOSS OF MACHINE CONTROL, SERIOUS PERSONAL INJURY TO YOU AND/OR BYSTANDERS, AND RISK OF EQUIPMENT AND PROPERTY DAMAGE. THE TRIANGLE IN THE TEXT SIGNIFIES IMPORTANT CAUTIONS OR WARNINGS WHICH MUST BE FOLLOWED.

CALIFORNIA PROPOSITION 65 WARNING

ENGINE EXHAUST FROM THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM.

- Handle fuel with care; it is highly flammable.
 - a. Use an approved fuel container.
 - b. Never add fuel to a running engine or hot engine.
 - c. Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
 - d. Replace gasoline cap securely and clean up spilled fuel before restarting.

TRAINING

1. Read the operating and service instructions carefully. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the unit and disengage the control quickly.
2. Keep the area of operation clear of all persons, particularly small children, and pets.

GENERAL OPERATION

1. Read, understand, and follow all instructions in the manual and on the unit before starting.
2. Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.
3. Only allow responsible adults, who are familiar with the instructions, to operate the unit (local regulations can restrict operator age).
4. Be sure the area is clear of other people before operating. Stop the unit if anyone enters the area.
5. Never direct discharge material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator.
6. Operate the machine only in daylight or good artificial light.
7. Do not operate the unit while under the influence of alcohol or drugs.
8. Always wear eye and hearing protection when operating this unit.
9. Keep in mind the operator is responsible for accidents occurring to other people or property.
10. It is a violation of California Public Resource Code Section 4442 to use or operate the engine on or near any forest-covered, brush-covered, or grass-covered land unless the exhaust system is equipped with a spark arrester meeting any applicable local or state laws. Other states or federal areas may have similar laws.
11. Always operate the chipper/shredder outdoors, on a firm, level, earthen or grassy surface where the unit will be stable and stay in position. Never attempt to operate the unit on a slope, or on a wet or slippery surface where you could slip and fall toward the chipper cone or hopper openings.
12. Never operate the chipper/shredder on asphalt, concrete, or other hard surfaces as material being ejected out of the discharge chute could ricochet, causing injury to you or bystanders.
13. Always obey the size limitations for tree limbs and branches stated in the Waste Materials Guide portion of this manual.
14. Never leave the machine running unattended. Always turn off the engine, wait for the rotor to come to a complete stop, and disconnect the spark plug before leaving the area. Always move the unit to a safe storage area when not in use.

IMPORTANT

THE RIGHT AND LEFT SIDES OF YOUR CHIPPER/SHREDDER ARE DETERMINED FROM THE OPERATING POSITION, STANDING AND FACING THE UNIT.

ENGINE IS SHIPPED FROM FACTORY WITHOUT OIL. YOU MUST ADD ENGINE OIL BEFORE STARTING ENGINE.

DANGER

THE CHIPPER/SHREDDER HAS SPINNING BLADES THAT CAN AMPUTATE HANDS AND FEET. DO NOT PLACE HANDS OR FEET IN THE HOPPER OR CHIPPER CONE, OR DISCHARGE CHUTE.

WARNING

THIS UNIT DISCHARGES DEBRIS AT HIGH SPEEDS. ALWAYS WEAR PROTECTIVE GOGGLES AND DO NOT OPERATE WITHOUT THE DEBRIS BAG IN PLACE.

DO NOT ALLOW ANYONE IN THE AREA WHILE THE UNIT IS RUNNING. IF SOMEONE DOES ENTER THE AREA, SHUT THE UNIT OFF IMMEDIATELY UNTIL THEY LEAVE. ORGANIZE THE WORK AREA PRIOR TO STARTING WORK.

15. Always maintain secure footing and solid balance while starting or operating the chipper/shredder. Never lean directly over the machine.
16. Always stand to the side of the chipper cone when feeding tree limbs and branches into the unit, as tree limbs, branches, and harder woods may kick back while being chipped.
17. Always keep hands out of the chipper cone and shredder hopper when feeding materials. Never wrap fingers tightly around branches as you are feeding them into the unit, as a sudden inward surge could pull your hands and arms into the unit.
18. Never allow material to build up in the discharge area or shredding chamber, as this may cause new material being fed into the machine to kickback with sufficient force to injure you or other bystanders.
19. Never allow material to build up around the engine during chipper/shredder operation. This could result in a fire, or overheating of the engine.
20. Never attempt to reposition or move the chipper/shredder unit while it is running. Doing so could cause the machine to tip over, and reaching to steady the unit could result in accidental insertion of your hands into the chipper cone or shredder hopper areas.

21. Never continue to operate the machine if it starts making unusual noise or vibration. Shut the engine off immediately, allow the rotor to stop, disconnect the spark plug wire and secure the wire away from the spark plug. Inspect the unit for any signs of damage or foreign material in the chipping or shredding areas. Remove any solid material that may be preventing the unit from operating properly.
22. Never attempt to clear clogs from the chipper cone, shredder hopper or discharge chute while the unit is running. Always shut the engine off, allow the rotor to come to a complete stop, and remove the spark plug wire from the spark plug before removing excess materials.
23. Never attempt to perform any maintenance, repairs, or attachment of accessories while the unit is running. Always shut the unit off, allow the rotor to come to a complete stop, and remove the spark plug wire from the spark plug before beginning these activities.
24. Always make sure that the shredding chamber, shredder hopper, and chipper cone are empty before starting the unit after it has been idle. Attempting to start the unit with material in these areas could cause the engine starting cord to stop suddenly, injuring your hand and fingers, or toppling the unit over. Vibration is generally a warning sign of trouble.
25. Before cleaning, repairing, or inspecting, shut off the engine and make certain that all moving parts have come to a complete stop. Disconnect the spark plug wire and secure the wire away from the spark plug to prevent accidental starting.
26. Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
27. Never operate the machine without proper guards, plates, or other safety protective devices in place.
28. Use only attachments and accessories approved of by the manufacturer of the machine.

TRANSPORTING AND STORAGE

1. Always observe safe refueling and fuel handling practices when refueling the unit after transportation or storage.
2. Never store the unit (with fuel) in an enclosed poorly ventilated structure. Fuel vapors can travel to an ignition source (such as a furnace, water heater, etc.) and cause an explosion. Fuel vapor is also toxic to humans and animals.
3. Always use the hopper handle and built-in wheels to move the chipper/shredder. Never lift the unit using the fuel tank for support. If the unit must be lifted, always use at least two people, and always grip the unit securely using the front leg and hopper handle.
4. Always follow the engine manual instructions for storage preparations before storing the unit for both short and long term periods.

5. Always follow the engine manual instructions for proper start-up procedures when returning the unit to service.
6. Never store the unit or fuel container inside where there is an open flame or pilot light, such as in a water heater. Allow unit to cool before storing.

CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the unit and the operating activity. Never assume that children will remain where you last saw them.

1. Keep children out of the work area and under the watchful care of another responsible adult.
2. Be alert and turn unit off if children enter the area.
3. Never allow children to operate the unit.

EMISSIONS

1. Engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects, or other reproductive harm.
2. Look for the relevant Emissions Durability Period and Air Index information on the engine emissions label.

IGNITION SYSTEM

1. This spark ignition system complies with Canadian ICES-002.

SERVICE AND MAINTENANCE

Safe Handling of Gasoline

1. Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
2. Use only approved gasoline containers.
3. Never remove the gas cap or add fuel with the engine running. Allow the engine to cool before refueling.
4. Never fuel the machine indoors.
5. Never store the machine or fuel container where there is an open flame, spark, or pilot light such as near a water heater or other appliance.
6. Never fill containers inside a vehicle or on a truck bed with a plastic bed liner. Always place containers on the ground away from your vehicle before filling.
7. Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.

Safety Decals

This unit has been designed and manufactured to provide you with the safety and reliability you would expect from an industry leader in outdoor power equipment manufacturing.

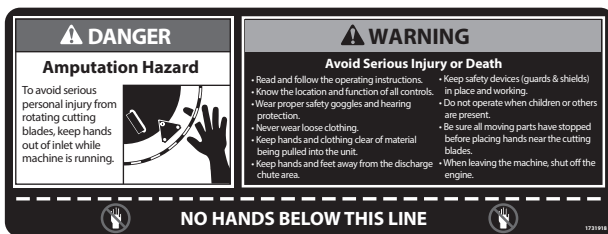
Although reading this manual and the safety instructions it contains will provide you with the necessary basic knowledge to operate this equipment safely and effectively, we have placed several safety labels on the unit to remind you of this important information while you are operating your unit.

All DANGER, WARNING, CAUTION and instructional messages on your unit should be carefully read and obeyed. Personal bodily injury can result when these instructions are not followed. The information is for your safety and it is important! The safety decals below are on your unit.

If any of these decals are lost or damaged, replace them at once. See your local dealer for replacements.

These labels are easily applied and will act as a constant visual reminder to you, and others who may use the equipment, to follow the safety instructions necessary for safe, effective operation.

Decal - Operating Instructions, North American Models



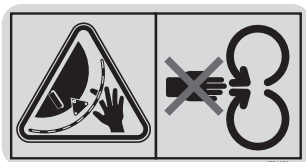
Decal - Operating Instructions, CE Models



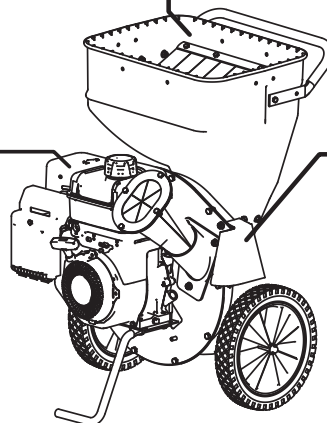
Decal - Danger, Rotating Cutting Blades, North American Models



Decal - Danger, Rotating Cutting Blades, Warning, Debris, North American Models



Decal - Danger, Rotating Cutting Blades, CE Models



Decal - Danger, Thrown Objects, Do Not Operate Without Collection Bag, CE Models

Safety Icons (European Models)

Warning: Read Operator's Manual.

Read and understand the Operator's Manual before using this machine.



Danger: Thrown Objects.

This machine is capable of throwing objects and debris. Keep bystanders away.



Danger: Amputation Hazard.

To avoid serious personal injury from rotating cutting blades, keep hands out of inlet while machine is running.



Danger: Thrown Objects.

This machine is capable of throwing objects and debris. Keep bystanders and children away when engine is running.



Danger: Wear Appropriate Safety Equipment.

This machine is capable of throwing objects and debris. Always wear safety goggles while operating.

This machine's operating sound power level is 109 dB(A) or more. Wear hearing protection while operating.



Danger: Do Not Place Hands in the Machine.

To avoid serious personal injury from rotating cutting blades, keep hands out of inlet while machine is running. Do not place hands in areas where this symbol is present.



Warning: Disconnect the Spark Plug Wire Before Servicing.

Disconnect the spark plug wire, and secure it away from the spark plug before servicing the unit.



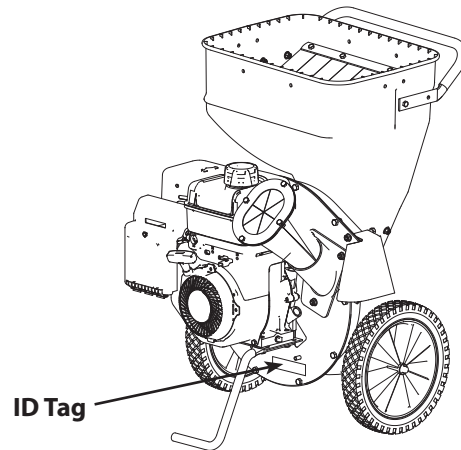
Identification Numbers

When contacting your authorized dealer for replacement parts, service, or information you MUST have these numbers.

Record your model name/number, manufacturer's identification numbers, and engine serial numbers in the space provided for easy access. These numbers can be found in the locations shown.

NOTE: For location of engine identification numbers, refer to the engine owner's manual.

CE Models: Place the extra copy of the identification tag in the manual.



CE Identification Tag Markings

This unit complies with European Harmonized Lawn Mower Standard EN 836, European Machinery Directive 98/37/EC, and European EMC Directive 89/336/EC

* Tested according to EN836:1997/A2:2001

** Tested according to 2000/14/EC

ARDISAM, INC.

1160 8th Avenue | Cumberland, WI 54829 | USA



Serial No.

LBLINFOXXXXXX

Model: **XXXXXXX** Year: **XXXX**
 Type: **Chipper Shredder** Mass: **XX kg**
 Max. Operating Speed: **XXXX rpm**
 L_{PA} (dBA): **XXX** L_{WA} (dBA): **XXX**

Intended Use / Foreseeable Misuse

This is a petrol engine-powered chipper/shredder that breaks up leaves and wooded pieces such as tree branches, brush and limbs into smaller volume via a high-speed rotor containing chipping blades and shredding hammers. It shall not be used for any other purpose.

PRODUCT REFERENCE DATA	
Model Description Name/Number	
Unit PART Number	Unit SERIAL Number
Dealer Name	Date Purchased
ENGINE REFERENCE DATA	
Engine Make	Engine Model
Engine Type/Spec	Engine Code/Serial Number

CE Specifications

Model Number: 9060140 / 9010140

Engine Maximum RPMs: 3700

Power Rating: 4 kW

Mass: 52kg

Noise Guaranteed Sound Power (L_{WA}): 109 dB(A)

Noise Sound Pressure Level (L_{PA}): 96 dB(A)

Assembly

Install Chipper Cone - All Models

1. Position the chipper cone (A) over the three 5/16-18 threaded studs protruding from the engine plate, and attach using three 5/16-18 flange nuts (B). **SEE FIGURE 1**
2. Rotate cone and cone base away from engine so cone does not contact engine.
3. Tighten the flange nuts securely.

Install the Hopper - All Models

1. Attach the hopper to the rotor housing. Make sure to engage the metal lip of the hopper liner inside the housing.
2. Secure the hopper to the rotor housing using two 5/16 x 1/2 hex head bolts, two 5/16 flat washers. Do not tighten hardware at this time. **SEE FIGURE 2**
3. From the inside of the hopper install one 5/16-18 flange nut on each 5/16 weld stud. Finger tighten only at this time.
4. Check that the hopper is seated correctly and tighten all hardware.

Install the Handle - All Models

1. Lift the hopper handle up until the outer holes in the handle align with the holes in the shredder hopper and secure with 1/4-20 x 3/4 screws, washers, and nuts (A). Insert the screws from the outside of the shredder hopper. **SEE FIGURE 3**

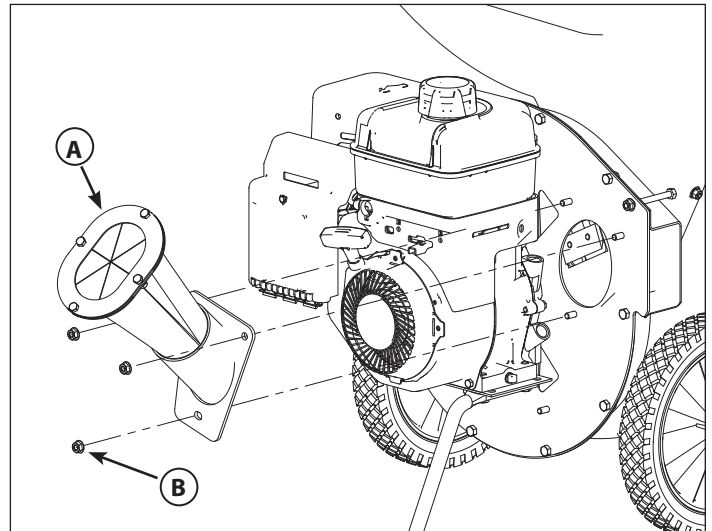


FIGURE 1 - Installing the Chipper Cone
A. Metal Cone Assembly
B. 5/18-18 Flange Nut

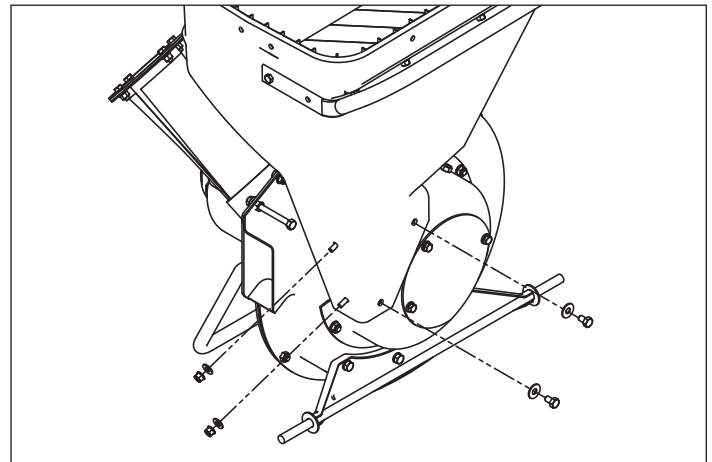


FIGURE 2 - Attaching the Hopper

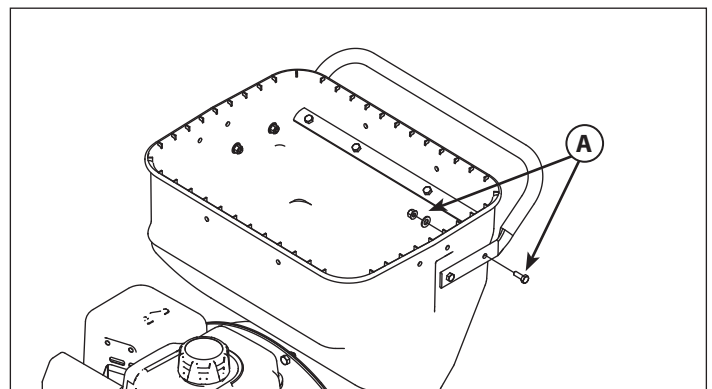


FIGURE 3 - Installing the Hopper Handle
A. 1/4-20 x 3/4 Screw & Nut

ATTACHING HOPPER EXTENSION TO HOPPER

For European models only (14268, 9060140, and 12547)

Tools Required:

5/32" Hex drive wrench (i.e: allen wrench)

7/16" Wrench for 1/4-20 flange nut

NOTE: Assemble extension before adding fuel or engine oil.

To attach the hopper extension:

- 1) Before bolting the handle into position, slide one hopper extension half (1709470) over the rim of the hopper. The groove around the inside bottom of the hopper extension should fit over the rim around the top of the hopper. **SEE FIGURE 4**
- 2) Ensuring the hopper and hopper extension holes are now aligned along the top rim of the hopper, place a 1/4-20 x 3/4 bolts (1960507) through each of the four holes in the extension and hopper. Secure bolts in place with the included 17/64 x 5/8 flat washers (1921319) and 1/4-20 flange nuts (1930642). **DO NOT fully tighten hardware at this point. SEE FIGURE 4**
- 3) Bolt handle into position using appropriate hardware. Lay the unit down, resting the handle on a piece of cardboard to prevent scratching.
- 4) Follow Step 1 to install the second extension half to the opposite side of the hopper. Again, the bottom groove of the hopper extension should fit over the rim at the top of the hopper. Align the bolt holes between the top of the hopper and bottom of the hopper extension and insert hardware. **SEE FIGURE 5**
- 5) Place a 1/4-20 x 3/4 bolt (1960507) in each of the three holes along the two seams of the joined hopper extension halves. Secure each bolt with a flat washer and flange nut. **DO NOT fully tighten. SEE FIGURE 6**
- 6) Place bolt through each of the two holes on top of the joined hopper extension. Secure with flat washer and flange nut. **SEE FIGURE 7**
- 7) Once all hardware has been inserted, use 5/32" allen wrench and 7/16" wrench to fully tighten all hardware, including those around hopper rim and along the hopper extension seams.

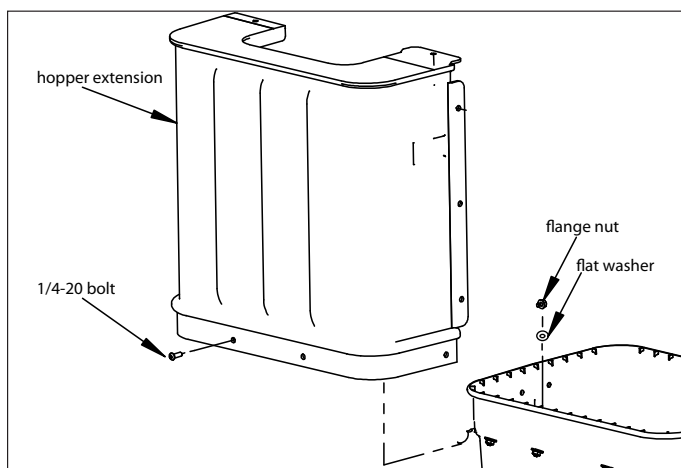


FIGURE 4

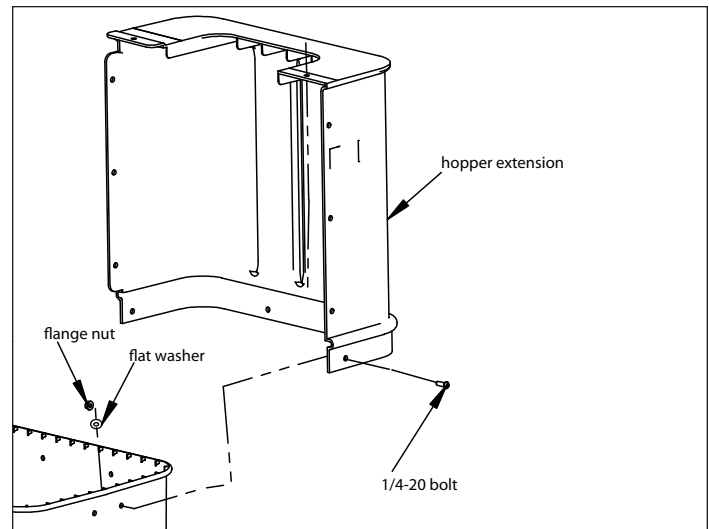


FIGURE 5

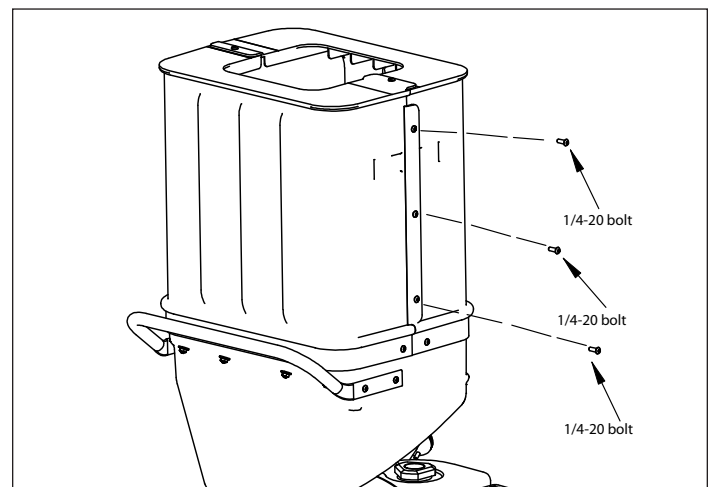


FIGURE 6

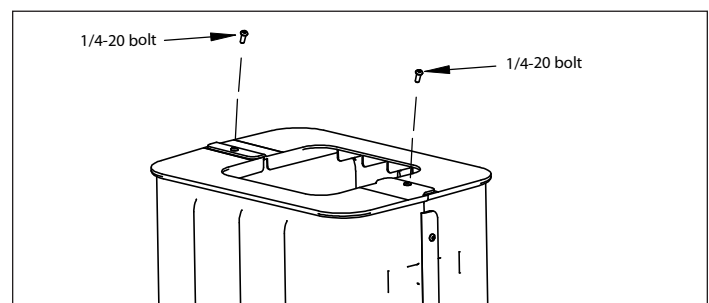


FIGURE 7

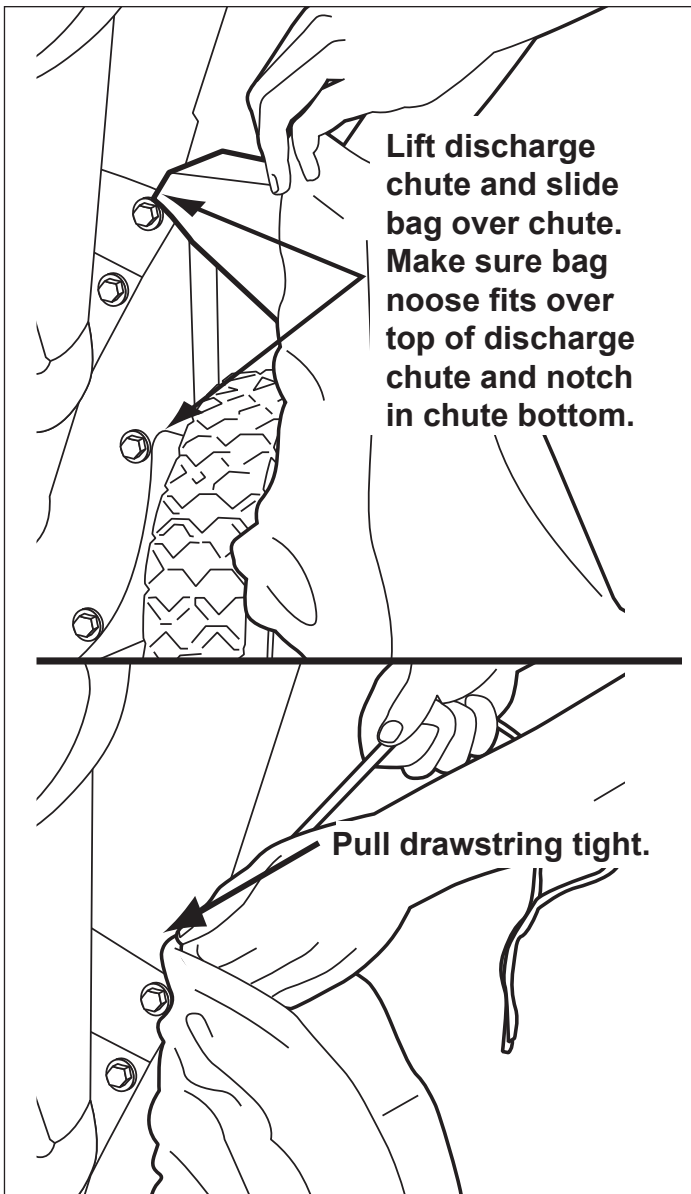


FIGURE 8 - Discharge Bag (North American Models)

Install Discharge Bag

This product comes with a discharge bag for collection of debris as it exits the discharge chute. Install the bag as shown in **FIGURE 8** or **9**.

Add Engine Oil

Refer to "Engine Oil Type and Capacity" in the Regular Maintenance section for oil type and fill procedures.

Add Fuel

Refer to "Adding Fuel" in the Operation section for fuel specifications and filling procedures.

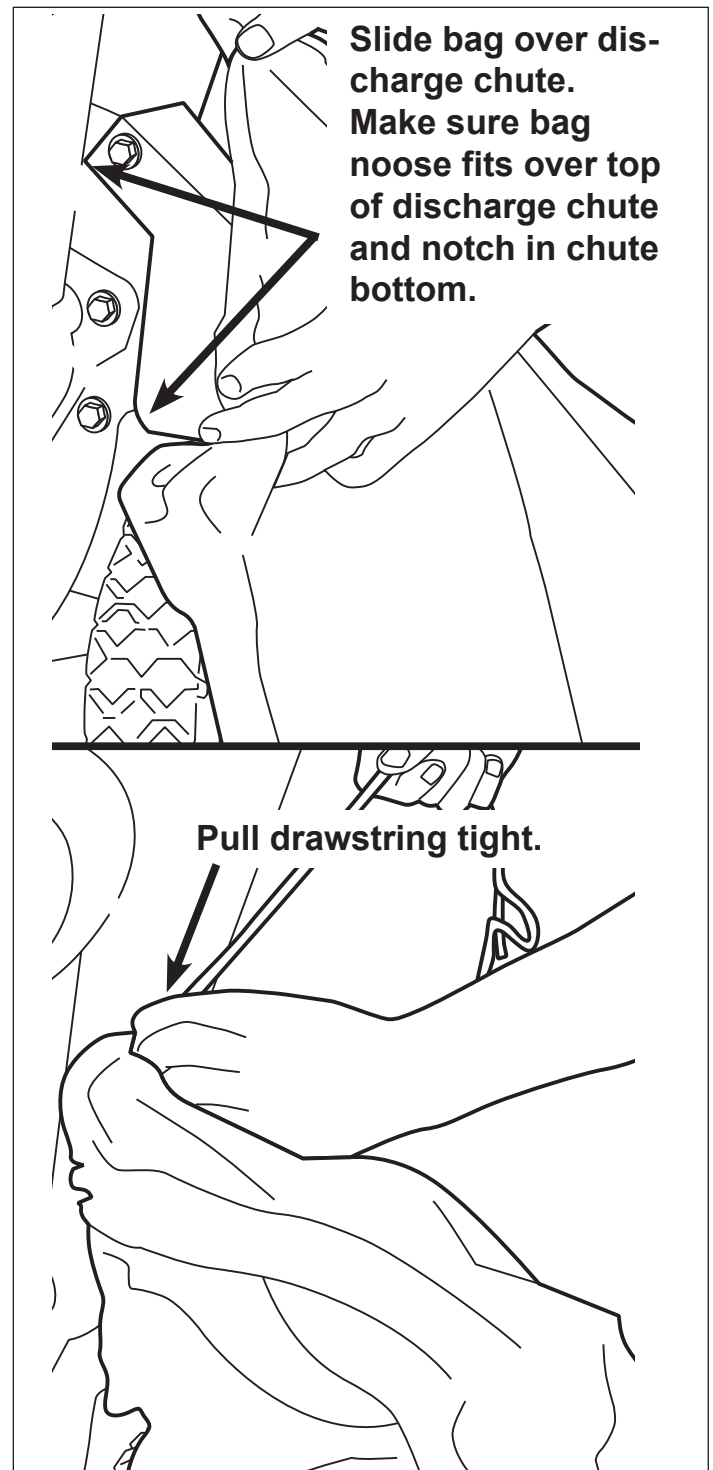
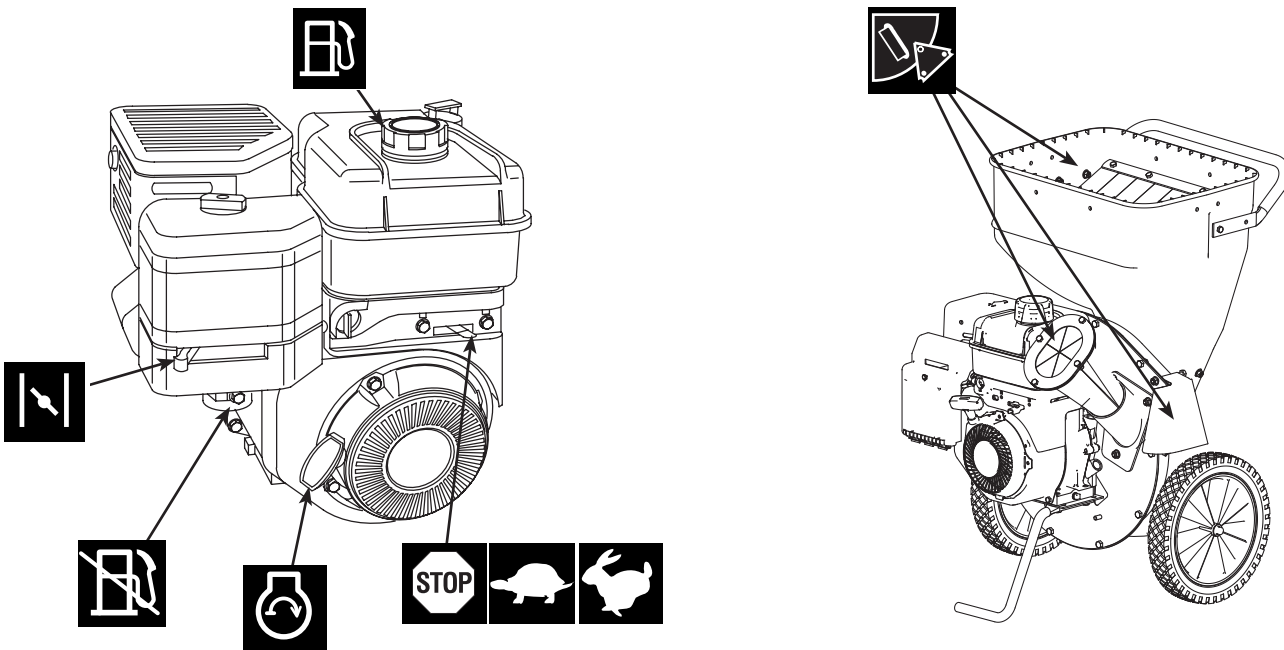


FIGURE 9 - Discharge Bag (CE Models)

Features & Controls



Control Functions

The information below briefly describes the function of individual controls. Operating requires the combined use of several controls applied in specific sequences. To learn what combination and sequence of controls to use for various tasks see the OPERATION section.

Engine Stop / Throttle Control

The engine stop / throttle control lever controls turn the engine off and controls the engine speed. Move the throttle right to increase engine speed and left to decrease engine speed. Moving the lever all the way to the left stops the engine. Always operate at FULL throttle (lever fully right).

Recoil Starter

The recoil starter is used to turn the engine over for starting.

Fuel Shut-Off Valve

The fuel shut-off valve is located below the air cleaner housing. Always close the valve when the unit is not in use.

Choke

Close the choke for cold starting. Open the choke once the engine starts. A warm engine may not require choking. Move the lever right to close the choke.

Fuel Tank

To remove the cap, turn counterclockwise.

Chipper Cone / Shredder Hopper

Chipper Cone: The chipper cone is located on the front of the unit next to the engine. Insert branches and tree limbs up to approximately 3" (7.6 cm) in diameter into the chipper cone. NEVER insert hands past the mouth of the cone.

Shredder Hopper: The shredder hopper is on top of the unit. Leaves and other light waste can be loaded into the shredder hopper. NEVER insert hands into the hopper.

Debris Bag: Use the debris bag to collect the material discharged from the unit. Do not operate the unit without the debris bag in place.

General Operating Safety

Be sure to read all information in the Safety and Operation sections before attempting to operate this unit. Become familiar with all of the controls and how to stop the unit.

Upon start-up and shut-down, you may hear the metal-to-metal sound of the triangular hammers and J-hammers positioning themselves on the rotor. This is normal. If this sound continues after the machine has reached full speed, contact your dealer for an inspection of the unit. Overloading the equipment will shorten its life, and can cause mechanical failures.

Chipper Operation

The chipper is designed to handle tree limbs and branches up to approximately 3" (7,6 cm) in diameter. The chipping knives also permit the processing of course organic matter like corn stalks. Tree branches must be inserted large-end first into the chipper cone. Since occasional kick-backs may occur, always stand off to the side of the unit. Allow the self-feeding action of the unit to draw the sticks in.

Shredder Operation

The shredder is designed to shred light brush, leaves, and other soft but bulky organic waste. As material is loaded into the shredder hopper it is pulled into the path of the triangular and J-hammers by air flow.

Vacuum Attachment (Optional)

In addition to the chipper cone and hopper, loose debris may be processed by the Vacuum hose adapter kit. Leaves may be raked directly into the leaf tray where vacuum action will draw them into the shredder. For hard-to-reach areas, the nozzle and hose assembly may be used. The strength of the Vacuum may be changed using the rotating sleeve on the nozzle. (See Vacuum Kit parts explosion on page 28.)

Operating Location

Select an area with firm, level ground, covered by dirt or grass. Do not operate on wet or slick surfaces, or near bystanders. Locate and organize the materials to be processed so that you don't have to walk in front of the inlet or discharge openings, and so you have adequate room to work safely.

Adding Fuel

To add fuel:

1. Remove the fuel cap (see Figure 1).
2. Fill the tank. Do not overfill. Leave room in the tank for fuel expansion. Refer to your engine manual for specific fuel recommendations.
3. Install and hand tighten the fuel cap.

DANGER

THE EXHAUST FROM THIS PRODUCT CONTAINS CARBON MONOXIDE GAS. CARBON MONOXIDE IS A COLORLESS, ORDERLESS AND TASTELESS GAS THAT CAN CAUSE DIZZINESS, NAUSEA, UNCONSCIOUSNESS OR EVEN BRAIN DAMAGE AND DEATH IF INHALED FOR PROLONGED PERIODS.

OPERATE THE UNIT OUTDOORS IN A WELL VENTILATED LOCATION ONLY. KEEP CHILDREN, PETS AND BYSTANDERS AWAY.

FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN SERIOUS INJURY OR DEATH

WARNING

TO AVOID SERIOUS PERSONAL INJURY FROM ROTATING CUTTING BLADES, KEEP HANDS OUT OF INLET WHILE MACHINE IS RUNNING.

WARNING

GASOLINE IS HIGHLY FLAMMABLE AND MUST BE HANDLED WITH CARE. NEVER FILL THE TANK WHEN THE ENGINE IS STILL HOT FROM RECENT OPERATION. DO NOT ALLOW OPEN FLAME, SMOKING OR MATCHES IN THE AREA. AVOID OVER-FILLING AND WIPE UP ANY SPILLS.

WARNING

DO NOT USE GASOLINE CONTAINING METHANOL, GASOHOL CONTAINING MORE THAN 10% ETHANOL, GASOLINE ADDITIVES OR WHITE GAS BECAUSE ENGINE/FUEL SYSTEM DAMAGE COULD RESULT.

Starting the Engine

1. Set the throttle to FULL.
2. Close the choke.

NOTE: A warm engine may not require choking.

3. Place one foot on the front support leg to hold the unit firmly in place.
4. Pull the starting rope out to begin turning the engine over. Pull slowly at first and increase speed with each successive pull.
5. After the engine starts, open the choke and move the engine throttle control to SLOW. Warm up the engine by running it for at least a minute.
6. Set throttle to FULL and begin chipping/shredding.

Stopping the Engine

NOTE: In the event of an emergency the engine can be stopped by setting the throttle control to STOP.

1. Slide the throttle control fully left to the STOP position.

NOTE: Upon start-up and shut-down, you may hear the metal-to-metal sound of the triangular hammers and J-hammers positioning themselves on the rotor. This is normal.

2. After the engine has stopped moving, remove the spark plug wire and remove any debris from the unit and engine.

Processing Materials

Most materials to be processed can be handled more efficiently by following these tips.

Chipping Tips:

- Prune branches down close to the main branch to make feeding them into the chipper cone easier.
- Large, hard, dried tree branches that resist chipping can be processed by rotating them as you alternately insert and retract them.
- If the material to be chipped is extremely hard, kicks back forcefully when being fed into the chipper cone, or cannot be easily controlled, remove the material immediately and set it aside.
- If additional force is required to insert materials into the chipper, the blades probably need to be sharpened. Consult the Troubleshooting and Repair section of this manual, or see your authorized dealer.
- Maintain control of the materials you are feeding to prevent them from whipping around.
- Do not insert short pieces of material into the chipper cone by hand. Use a larger piece of material to force them into the chipper cone.

Shredding Tips

- Don't overload the shredder by dumping large volumes of material into the hopper opening.
- Alternate loads of wet and dry material to prevent the discharge from becoming plugged.
- Never use any object to force material into the shredding chamber. It could get caught in the shredding hammers and damage the unit.

Storage

Before you store your unit for the off-season, read the Maintenance and Storage instructions in the Safety Rules section, then perform the following steps:

- Perform engine maintenance and storage measures listed in the engine owner's manual. This includes draining the fuel system, or adding stabilizer to the fuel (do not store a fueled unit in an enclosed structure - see warning).

Before starting the unit after it has been stored:

- Check all fluid levels. Check all maintenance items.
- Perform all recommended checks and procedures found in the engine owner's manual.
- Allow the engine to warm up for several minutes before use.

Chipping & Shredding Recommendations

Operation	Type of Waste Permitted	Size Limitations	Notes
Shredding	Dry or moist organic material including leaves, plants, flowers, fruits, or vegetables.	Branches and twigs up to 1/2" diameter and 18" long.	Alternately chip or shred moist green waste with dry waste to avoid plugging of the discharge chute. Process at a feeding rate that allows the rotor to keep up and maintain a high rate of speed.
Chipping	Long, thicker tree limbs or small bunches of smaller sticks grouped together for ease of handling.	Tree limbs and branches, or bundles of small sticks grouped for easier handling. Maximum diameter of approximately 3" (7,6 cm).	Bulky tree limbs should be pruned close to the main stem. Always use a shorter piece of wood to push end pieces into the chipper cone. Never place hands in the chipper cone. Never chip very hard or dry materials such as kiln dried dimensional lumber (2x4's etc.) or other building materials. Never use the chipper to process pressure-treated wood products.
Vacuum Attachment	Light, loose, dry waste such as leaves, grass clippings, or sawdust.	Small materials that will not obstruct the vacuum hose.	The vacuum is engineered for small, loose waste and for cleaning around decorative landscaping and flower beds. Twigs, wet leaves, and other bulky materials will clog the hose or obstruct the shredding chamber.

Maintenance

Schedule & Procedures

The following schedule should be followed for normal care of your unit.

SAFETY ITEMS	Before Each Use	Every 5 Hours	Every 25 Hours	Every 100 Hours	Every 250 Hours	Spring & Fall
Check for loose hardware		X				X
Check all safety labels						X
Inspect cone, hopper, and guards.						X
CHIPPER MAINTENANCE ITEMS	Before Each Use	Every 5 Hours	Every 25 Hours	Every 100 Hours	Every 250 Hours	Spring & Fall
Clean debris from engine and chipper. **	X			X		
Inspect/Rotate Shredding Hammers			X			
Inspect/Rotate Chipping Knives			X			
ENGINE MAINTENANCE ITEMS	Before Each Use	Every 8 Hours	Every 25 Hours	Every 50 Hours	Every 100 Hours	Spring & Fall
Check Engine Oil Level *	X	X				
Change Engine Oil * **				X		
Check / Change Engine Air Filter * **			X			
Replace Spark Plug *					X	

* Refer to engine owner's manual. Change original engine oil after initial break-in period of 5-8 hours.

** More often in hot (over 85° F: 30° C) weather or dusty operating conditions.

Check for Loose Hardware

Service Interval: Every 5 hours; every spring and fall.

Inspect the unit, checking for loose hardware or components. Pay special attention to the hardware attaching the chipper cone, hopper, axle, and front leg.

Check Safety Labels

Service Interval: Every spring and fall.

Check that the safety labels are in place and undamaged. Sample illustrations and part numbers of the decals can be found on page 6. Replace any damaged or missing decals.

Inspect Cone, Hopper, & Guards

Service Interval: Every spring and fall.

Check that the chipper cone, shredder hopper, and discharge guards are in place, undamaged, and secure. Replace any damaged or missing parts.

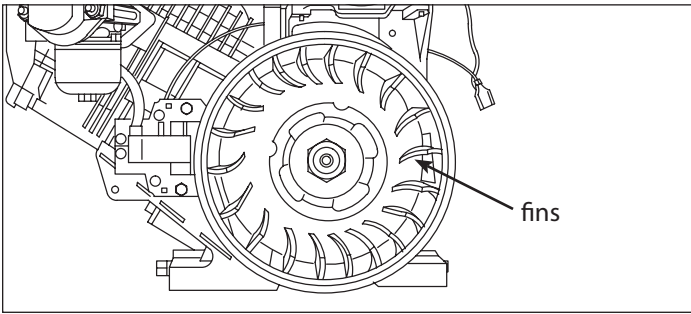


FIGURE 10 - Clean Debris from Engine Cooling Fins

Clean Debris from Engine & Chipper

Service Interval: Before each use and every 100 hours.

The engine requires air flow to cool itself and for combustion. Before each use, clean any debris from the unit especially from around the air shroud intake, air filter, and muffler. Every 100 hours, remove the engine air shroud and clean out any debris from the engine cooling fins (SEE FIGURE 10). We recommend having this service performed by an authorized dealer.

Inspect / Rotate Shredding Hammers

Service Interval: Every 25 Hours, or As Necessary

The shredding hammers of this unit can be rotated to provide a new cutting surface as required. The triangular hammers can be rotated twice, then flipped over for a total of 6 sharp cutting surfaces. The J-hammers can be flipped over once. To inspect the shredding hammers:

1. Disconnect the spark plug wire and secure it away from the spark plug.
2. Remove the small circular access panel (B) from the back of the shredder housing. SEE FIGURE 11
3. Inspect the cutting edges of the triangular hammers (A) and J-hammers (A). SEE FIGURES 11 AND 12

To rotate or replace the shredding hammers, see the Troubleshooting and Repair section.

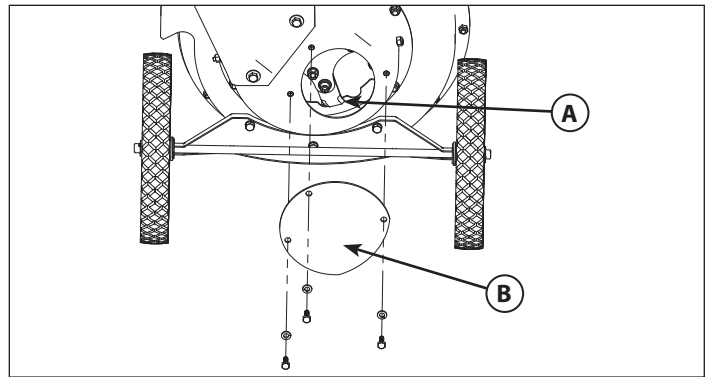


FIGURE 11
A. J-Hammer Wear Area
B. Access Panel

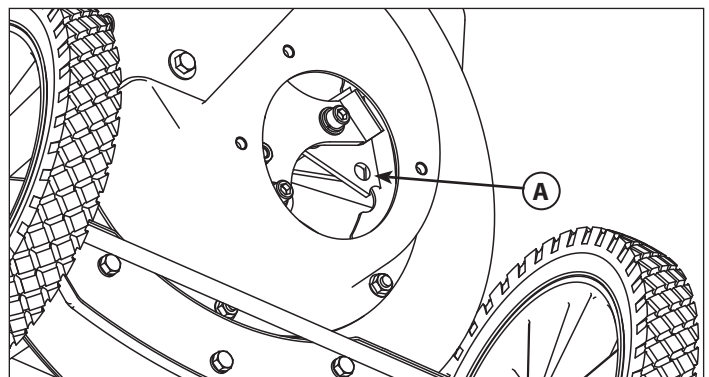


FIGURE 12
A. Triangular Hammer Wear Area

WARNING

AMPUTATION HAZARD. TO AVOID SERIOUS INJURY FROM ACCIDENTAL STARTING, ALWAYS DISCONNECT THE SPARK PLUG WIRE AND SECURE IT AWAY FROM THE SPARK PLUG WHEN SERVICING THE UNIT.

WARNING

TO AVOID SERIOUS INJURY FROM ACCIDENTAL STARTING, ALWAYS DISCONNECT THE SPARK PLUG WIRE AND SECURE IT AWAY FROM THE SPARK PLUG WHEN SERVICING THE UNIT.

Inspect Chipping Knives

Service Interval: Every 25 Hours, or As Necessary

The chipping knives of this unit can be rotated or sharpened to provide a new cutting surface as required. When inspecting the knives be careful to avoid touching the sharpened edges. To inspect the chipping knives:

1. Disconnect the spark plug wire and secure it away from the spark plug.
2. Remove the nuts securing the chipper cone to the front of the chipper. Remove the chipper cone (A) to access the knives. **SEE FIGURE 13**
3. Using the recoil starter, slowly pull the starter rope to rotate the rotor into position so the blades can be seen.

To sharpen or replace the chipper knives, see the Troubleshooting and Repair section.

Check / Change Engine Air Cleaner

Service Interval: Every 25 Hours

The engine air cleaner assembly should be opened, inspected, and the filter element replaced every 25 hours, or as required if debris has built up in the assembly.

To replace the air filter and pre-cleaner assembly:

1. Loosen the screw (A) and remove the filter cover (B). **SEE FIGURE 14**
2. Inspect the pre-cleaner (C) and air filter element (D). If either are soiled, then replace.
3. Insert the new pre-cleaner (C) and air filter element (D) inside the filter cover (B). Make sure the arrows on the filter element are pointed up, and the lip of the pre-cleaner covers the bottom filter pleats.
4. Insert the cover tabs (F) into the filter base slots.
5. Tilt the cover up into place and tighten the screw (A).

Replace Spark Plug

Please contact your authorized dealer to perform this service.

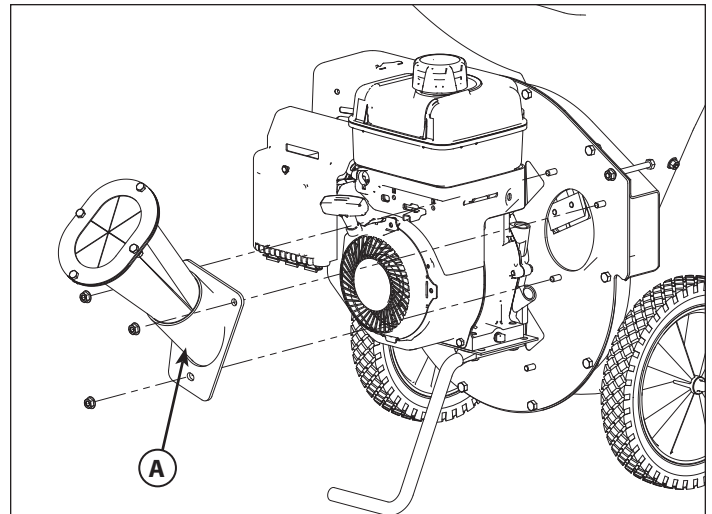


FIGURE 13 - Inspect Chipper Knives
A. Chipper Cone

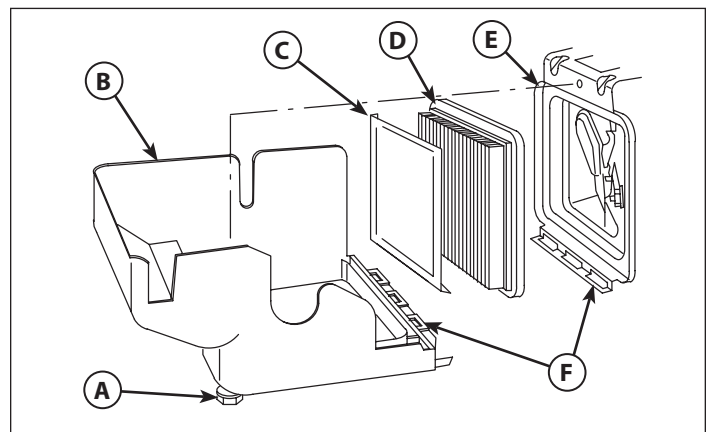


FIGURE 14 - Change Air Filter.
NOTE: This illustration is for general reference only. Some engine models may appear different. Refer to the engine manual for more detailed instruction.

- A. Screw
- B. Filter Cover
- C. Pre-Cleaner (Not included in some engine models)
- D. Air Filter Element
- E. Air Filter Base
- F. Slots and Tabs

Engine Oil Type & Capacity

Select a quality engine oil using the chart in **Figure 15**. 8.5 torque rated models require 5/8 quart (0.6L) of oil.

Check Engine Oil Level

Service Interval: Before Each Use

Check the engine oil level at the oil fill and level check plug (A). **SEE FIGURE 16**

1. Stop the engine and wait for all moving parts to stop.
2. Remove the oil fill and level check plug (A) by twisting it counter-clockwise. The oil should be filled up to the mouth of the filler opening as shown in the **FIGURE 16** inset.

Change Engine Oil

Service Interval: Every 50 Hours

1. Stop the engine and wait for all moving parts to stop. Allow the unit to cool before changing the oil.
2. Remove the oil fill and level check plug (A) by twisting it counter-clockwise. **SEE FIGURE 16**
3. Place an oil drain pan below the engine and remove the oil drain plug (B). Allow the oil to drain completely. **SEE FIGURE 16**
4. Reinstall the oil drain plug (B). Tighten the plug to 125 inch pounds (14 Nm)
5. Add oil to the oil fill hole (A) until the oil level is even with the bottom edge of the oil fill hole. **SEE FIGURE 16**

Use oil classified API Service Class SF, SG, SH, SJ or better with SAE Viscosity:

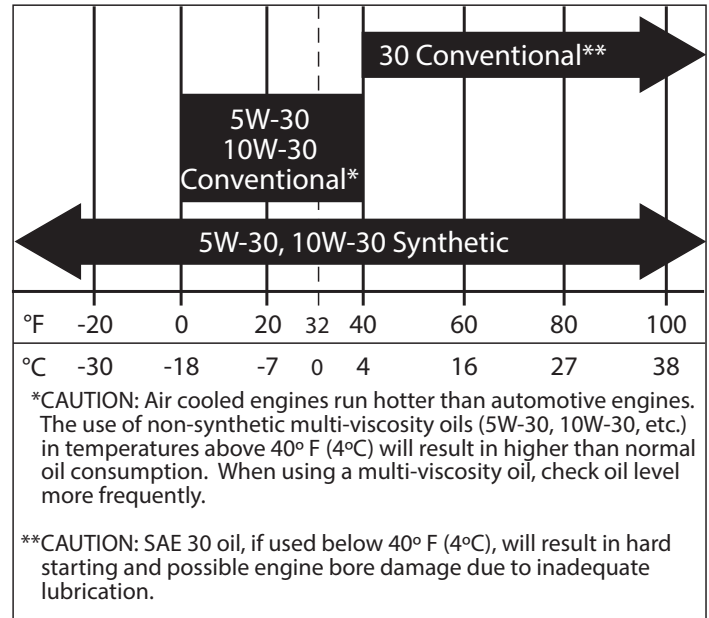


FIGURE 15 - Oil Recommendations

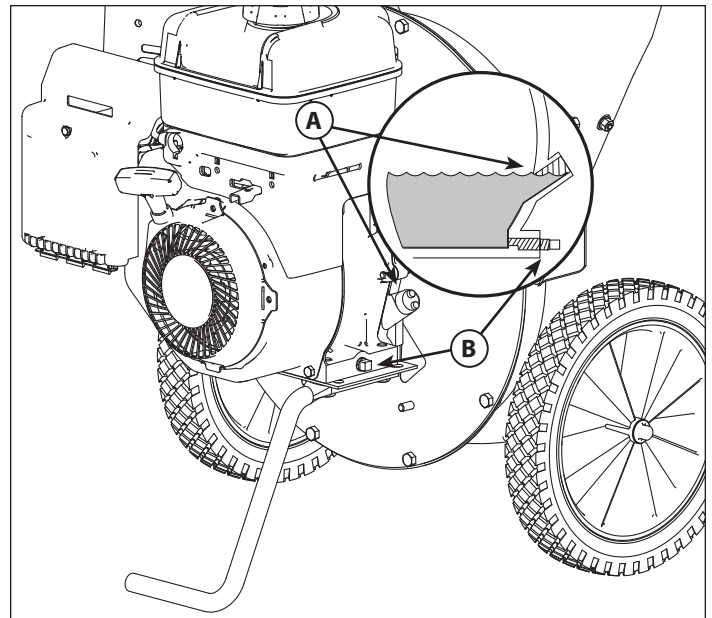


FIGURE 16 - Oil Fill and Oil Drain

A. Oil Fill & Level Check Plug

B. Oil Drain Plug

Troubleshooting Chart

While normal care and regular maintenance will extend the life of your equipment, prolonged or constant use may eventually require that service be performed to allow it to continue operating properly.

The troubleshooting guide below lists the most common problems, their causes, and remedies.

See the information on the following pages for instructions on how to perform most of these minor adjustments and service repairs yourself. If you prefer, all of these procedures can be performed for you by your local authorized dealer.

WARNING

TO AVOID SERIOUS INJURY, PERFORM MAINTENANCE ON THE UNIT ONLY WHEN THE ENGINE IS STOPPED.

ALWAYS DISCONNECT THE SPARK PLUG WIRE AND FASTEN IT AWAY FROM THE PLUG BEFORE BEGINNING THE MAINTENANCE, TO PREVENT ACCIDENTAL STARTING OF THE ENGINE.

PROBLEM	CAUSE	REMEDY
Engine will not start.	<ol style="list-style-type: none"> 1. Out of fuel. 2. Spark plug wire disconnected. 3. Engine controls not set correctly. 4. Spark plug fouled. 5. No compression. Recoil starter pulls with no resistance. 6. No spark. Ignition problem. 7. Old or stale fuel. 	<p>Add fuel. Reconnect spark plug wire. Refer to Starting in the Operation section. Remove the spark plug, clean or replace. See your authorized dealer.</p> <p>See your authorized dealer. See your authorized dealer.</p>
Engine exhaust is black.	<ol style="list-style-type: none"> 1. Dirty air filter. 2. Choke closed. 	<p>Replace air filter. See engine manual. Open choke.</p>
Engine runs but no material is discharged.	<ol style="list-style-type: none"> 1. Discharge chute clogged. 2. Engine not running at full speed. 	<p>Clean out debris. Set throttle control to FAST.</p>
Excessive branch vibration when chipping materials.	<ol style="list-style-type: none"> 1. Chipper knives dull. 2. Tree limbs are extremely hard or dried out. 	<p>Sharpen or replace chipper knives. Material is not suitable for chipping.</p>
Unusual noise or vibration when processing material.	<ol style="list-style-type: none"> 1. Rotor overloaded with material. 2. Hammers are broken, bent, or loose. 3. Hammers frozen in place. 	<p>Allow unit to clear itself before adding more material to the hopper. Check assembly. Tighten or replace as required. Check for obstructions and debris. Repair as necessary.</p>
Vacuum not working.	<ol style="list-style-type: none"> 1. Hopper lid not in place. 2. Material too wet. 3. Hose not attached properly. 4. Hose obstructed or damaged. 5. Engine not running at full RPM. 	<p>Install lid. Allow material to dry. Attach hose per instructions (see hose kit). Clear blockage or replace. Set throttle control to FAST.</p>

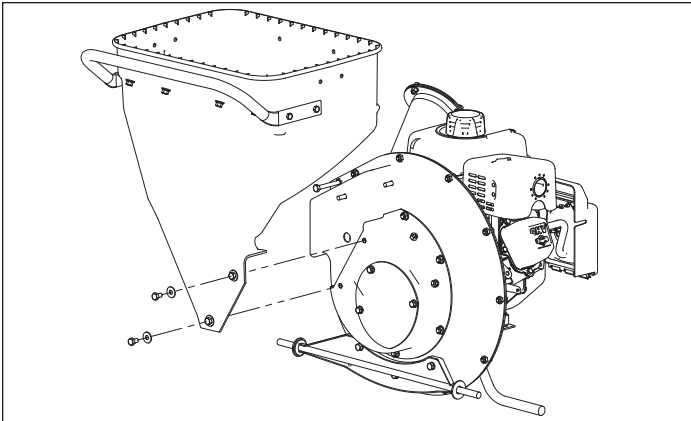


FIGURE 17 - Removing the Shredder Hopper

Repair

Shredding Hammer Rotation and Replacement

The cutting edges of the shredding hammers may eventually wear out requiring rotation of the hammer or replacement if all cutting edges have been dulled.

Triangular hammers can be rotated twice after the first edge dulls, then flipped over once and rotated again for a total of 6 edges. J-hammers can be flipped over once for a total of two cutting edges.

To rotate the shredding hammers:

1. Turn the engine off and wait for all moving parts to stop.
2. Disconnect the spark plug wire and secure it away from the spark plug.
3. Detach the shredder hopper from the rotor housing.
SEE FIGURE 17
4. Remove the rotor cover by removing the hardware that secures it to the main housing. **SEE FIGURE 18**
5. Note the assembly sequence of the hardware used to secure the hammers. Using a 5/16" allen wrench remove the socket head cap screw (A) and related hardware. **SEE FIGURE 19**
6. Inspect the hammers (G, H), spacer tubes (D, E), and hardware. If the spacer tube (D, E) shows signs of wear, replace it. Inspect and flip, or replace the hammers (G, H).
7. Reassemble the hammers, spacers, washers, and cap screws. Torque the socket head cap screws (A) to 30-35 ft. lbs. (41-47 N.m.) Refer to Figure 14 for assembly. The J-hammer (G) on the opposite side of the rotor faces outward for balanced rotation.
8. Repeat for all the hammers.

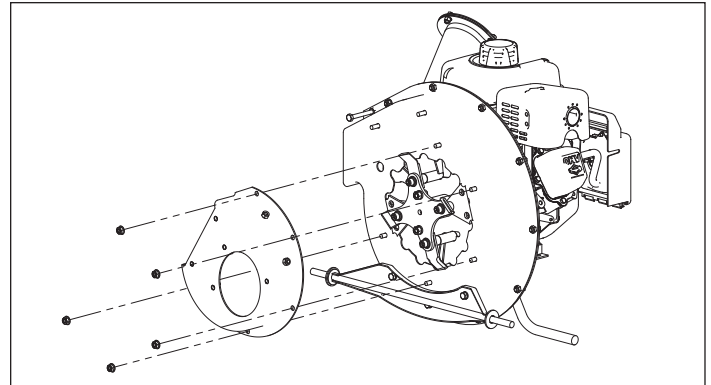


FIGURE 18 - Removing the Rotor Housing

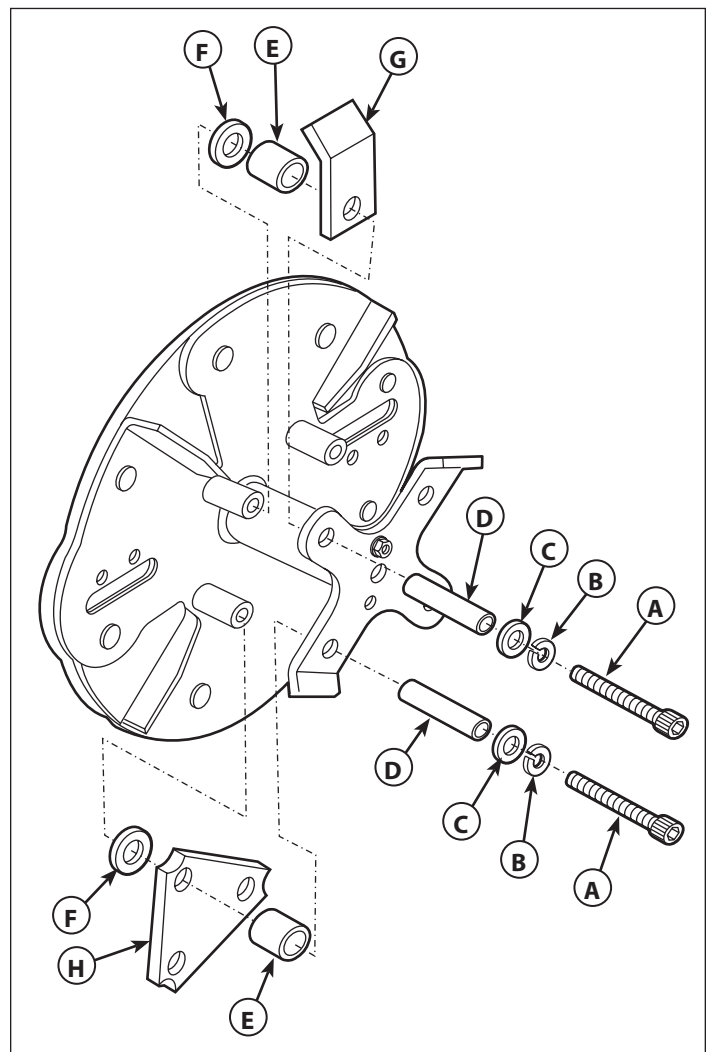


FIGURE 19 - Rotor Housing

- | | |
|-------------------------|---|
| A. Socket Hd. Cap Screw | E. Spacer, Short |
| B. Lock Washer, 3/8 | F. Washer, 3/8 (9070300, 9010400, 9010140 only) |
| C. Washer, 7/8 | G. J-Hammer |
| D. Spacer, Long | H. Triangular Hammer |

Chipping Knives Sharpening and Replacement

The chipping knives should be sharpened or replaced when tree limbs require extra force to feed into the chipper cone.

The chipping knives may be sharpened at a 30 degree angle until the distance between the edge of the blade bevel and the mounting hole is less than 1/16" (1.6mm). **SEE FIGURE 22**

To inspect, sharpen, or replace the chipping knives:

1. Turn the engine off and wait for all moving parts to stop.
2. Disconnect the spark plug wire and secure it away from the spark plug.
3. Detach the shredder hopper from the rotor housing. **SEE FIGURE 17** (previous page)
4. Remove the rotor housing by removing the hardware that secures it to the main housing. **SEE FIGURE 18**
5. Remove the chipper cone base. Rotate the rotor such that one of the chipper knives is visible through the cone hole. **SEE FIGURE 20**
6. Using a 1/4" hex wrench, reach into the main housing and remove the two socket head cap screws and the chipper knife (**SEE FIGURE 21**). Make sure to hold onto the chipper knife through the cone hole, be aware of the sharp cutting edge. **SEE FIGURE 20**
7. Inspect, rotate, sharpen, or replace the chipper knife. **SEE FIGURE 22**
8. Reinstall the chipper knife and tighten the socket head cap screws to 18-20 ft-lb (24-27 N.m.). We recommend the use of high strength threadlocker on screws.
9. Rotate the rotor 180 degrees and repeat with the other chipper knife. Reinstall the rotor cover and shredder hopper when completed.

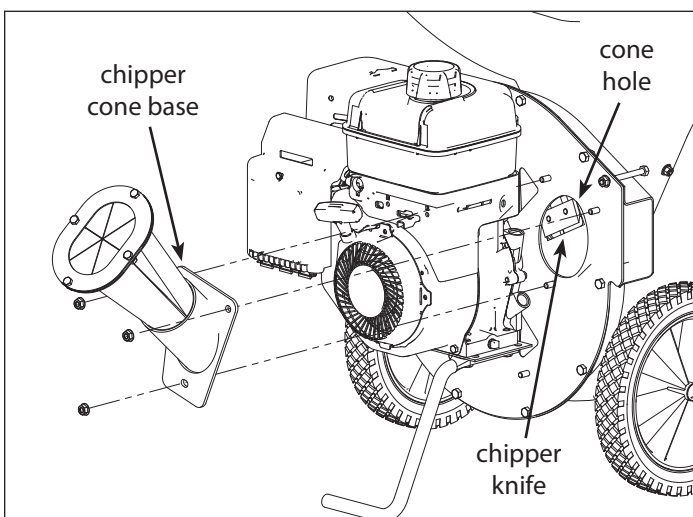


FIGURE 20 - Removing the Chipper Cone

⚠ WARNING

AMPUTATION HAZARD. TO AVOID SERIOUS INJURY FROM ACCIDENTAL STARTING, ALWAYS DISCONNECT THE SPARK PLUG WIRE AND SECURE IT AWAY FROM THE PLUG WHEN SERVICING THE UNIT.

⚠ WARNING

CUTTING HAZARD. TO AVOID SERIOUS INJURY, AVOID CONTACTING THE SHARP CUTTING EDGES OF THE CHIPPING KNIVES.

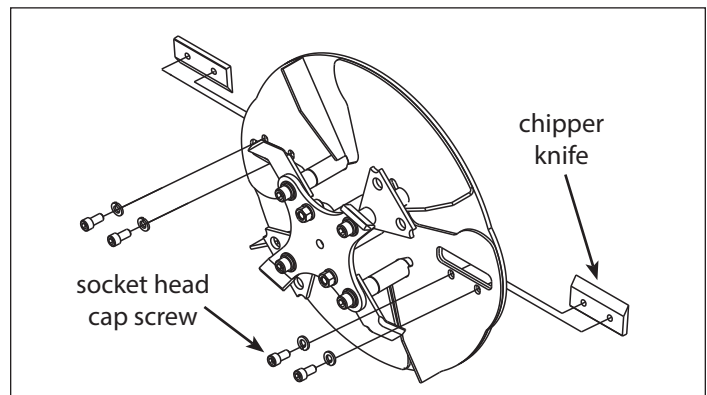


FIGURE 21 - Removing the Chipper Knives

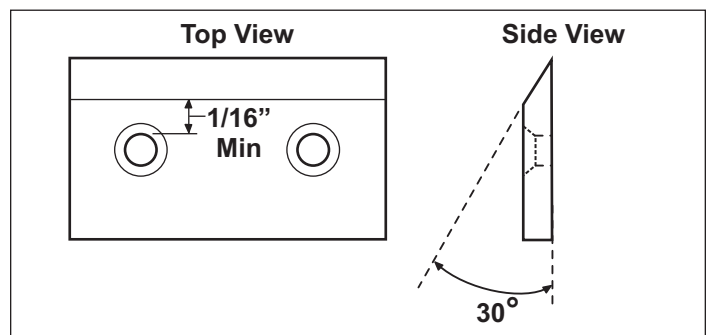


FIGURE 22 - Chipper Knife Minimum Cutting Edge

Specifications

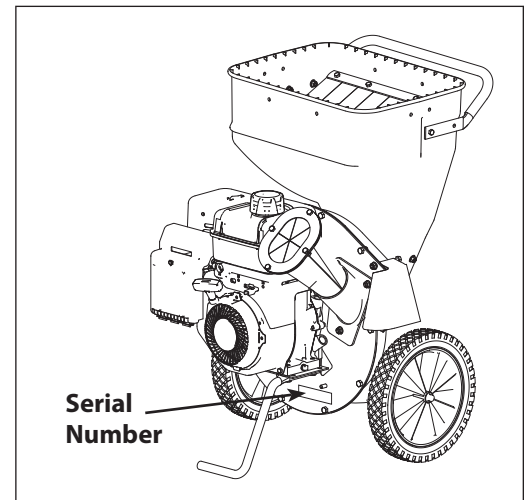
NOTE: Specifications are correct at time of printing and are subject to change without notice.

* Actual sustained equipment horsepower will likely be lower due to operating limitations and environmental factors.

CHASSIS:

All Models

Chipping Capacity	Approximately 3" (7.6 cm)
Shredding Capacity	1/2" x 18" Long
Chipping Knives	2
Shredding Hammers	2 J-hammers, 2 triangular hammers
Waste Reduction Ratio	Approximately 20:1
Weight	Model 14267 212cc 110 lbs. Model 14268 212cc 118 lbs. Model 9060300 8.50 Torque Rating 107 lbs. Model 9060140 8.25 Torque Rating 115 lbs. Model 9070300 11.50 Torque Rating 120 lbs. Model 12547 14.50 Torque Rating 129 lbs. Model 9010140 14.50 Torque Rating 137 lbs.



Parts & Accessories

Replacement Parts

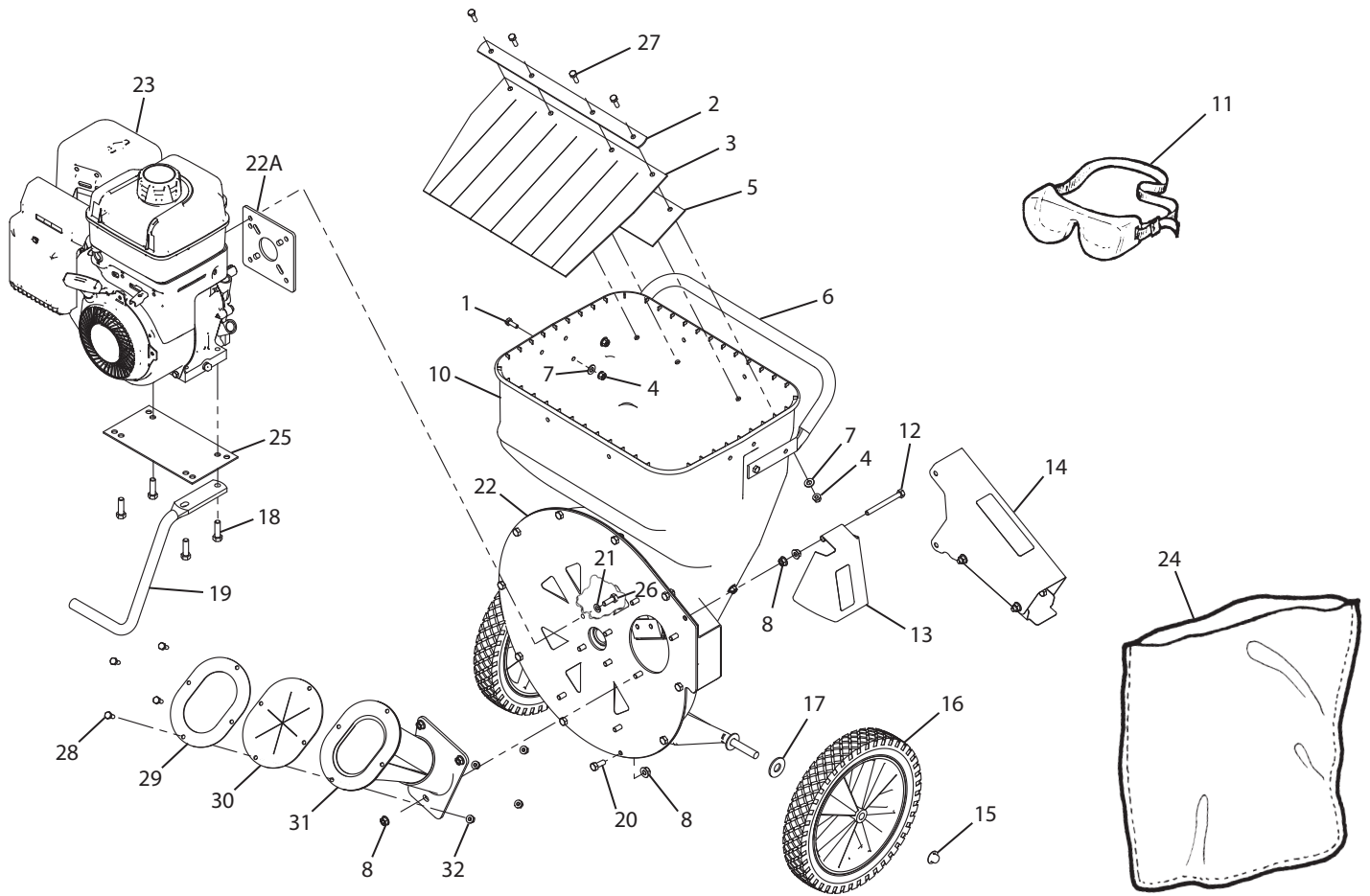
Replacement parts are available from your authorized dealer. Always use genuine Earthquake Service Parts.

Optional Accessories

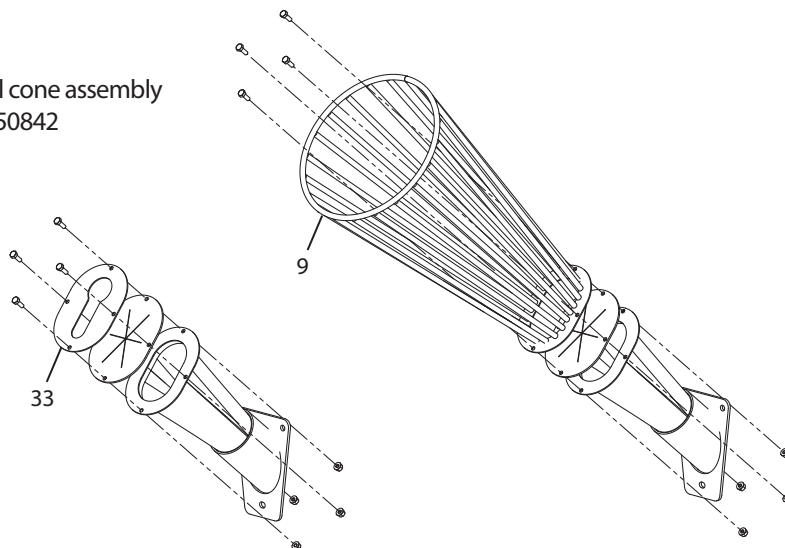
Vacuum Kit Model No. 1692327

Tow Bar Kit Model No. 1692210

HOPPER & ENGINE GROUP PARTS EXPLOSION



Optional CE metal cone assembly
P/N 3550842

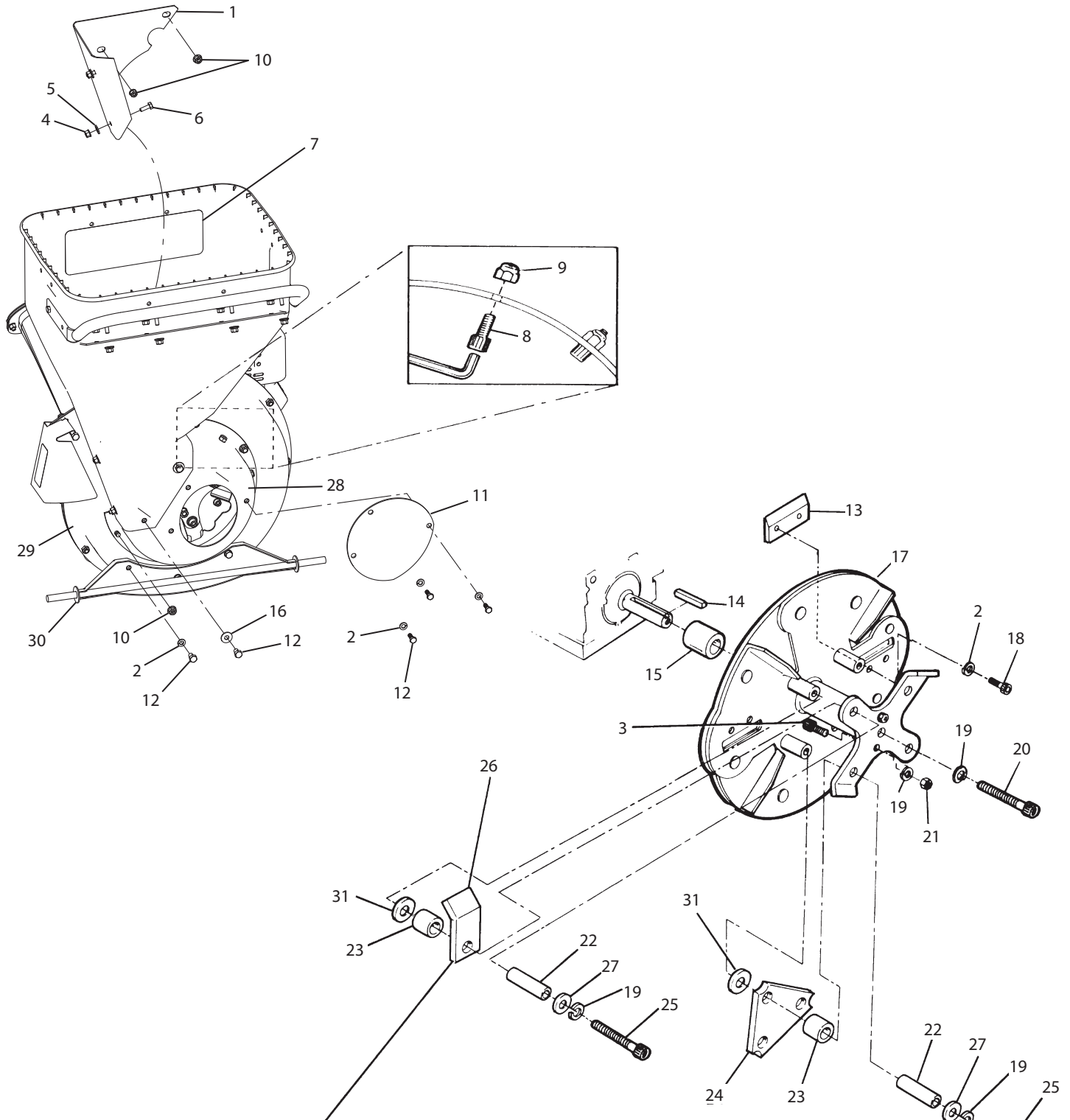


HOPPER & ENGINE GROUP PARTS LIST

KEY #	PART #	DESCRIPTION	QTY.
1	1960507	BOLT, SOCKET BUTTON HD, 1/4-20 X 3/4	10
2	1098100	RETAINER, HOPPER GUARD	1
3	1095100	GUARD, HOPPER	1
4	1930642	NUT, FLANGE, 2-WAY LOCK, 1/4-20	14
5	1709603	SUPPORT, HOPPER GUARD	1
6	3621100	HANDLE	1
7	1919326	WASHER, PLAIN, 17/64 X 5/8 X 3/64	8
8	1931277	NUT, WHIZ, 5/18-18	18
9	3550841	CHIPPER CONE ASSEMBLY, METAL (OPTIONAL)	1
10	1709469	HOPPER, RED	1
11	2005612	SAFETY GOGGLES	1
12	1926106	CAP SCREW, HEX, 5/16-18 X 3-1/4 GR5	1
13	3685100	DEFLECTOR	1
14	1709556	DEFLECTOR, FIXED (EUROPEAN MODELS)	1
15	1960519	NUT, PUSH, 1/2	2
16	1714252	WHEEL & TIRE ASSEMBLY, 11 X 1.75	2
17	1924361	WASHER, PLAIN, 17/32 X 1-1/4 X 5/64	2
18	1928635	SCREW, TAPTITE, 3/8-16 X 1-1/4	4
19	1713099	KICKSTAND ROD	1
20	1925205	CAP SCREW, HEX, 5/16-18 X 5/8	1
21	1917356	LOCK WASHER, 5/16	10
22	1713281	ENGINE PLATE ASSEMBLY (ROTOR HOUSING)	1
22A	4321	ADAPTER PLATE (9050300 & 9050140 ONLY)	1
23	-	ENGINE, 8.25 TORQUE RATED BRIGGS CE (9060140)	1
	-	ENGINE, 8.50 TORQUE RATED BRIGGS INTEK HORZ SHAFT (9060300)	1
	-	ENGINE, 11.50 TORQUE RATED BRIGGS (9070300)	1
	-	ENGINE, 14.50 TORQUE RATED BRIGGS CE (12547)	1

KEY #	PART #	DESCRIPTION	QTY.
23	-	ENGINE, 14.50 TORQUE RATED BRIGGS INTEK (9010400)	1
	-	ENGINE, 212CC VIPER (14267 & 14268)	1
24	1709403	COLLECTION BAG, 24" X 36"	1
25	1713203	PLATE, ENGINE KICKSTAND	1
26	1921515	CAP SCREW, HEX HD, 5/16-24 X 3/4	4
27	1960506	BOLT, SOCKET BUTTON HD, 1/4-20 X 7/8	4
METAL CONE ASSEMBLY PARTS			
28	8930B	BOLT, 1/4X3/4 HH GR5 BLK ZN	4
29	3550813	PANEL, CONE TOP FLANGE	1
30	3550840	COVER, CONE FLAP	1
31	3550815	WELDMENT, CONE	1
32	48752B	NUT, FLANGED, TOP LOCK 1/4-20	4
33	3550814	PANEL CONE TOP EURO EUROPEAN MODELS ONLY	1
ADDITIONAL PARTS (NOT SHOWN)			
-	1709480	BASE PLATE, ENGINE	1
-	1713200	SPACER, BRIGGS ENGINE	1
-	1713201	PLATE, KICKSTAND, BRIGGS ENGINE	1
	1713203	PLATE, KICKSTAND, BRIGGS ENGINE, 14.50 TORQUE RATED	1
-	1732039	DECAL, DANGER (U.S. VERSION) CONE	1
-	1731920	DECAL, DANGER (CE EUROPEAN VERSION) CONE	1
-	1732181	DECAL, DANGER (U.S. VERSION)	1
-	1731921	DECAL, DANGER (CE EUROPEAN)	1
-	LBL200201	DECAL, EARTHQUAKE DASH	1

HOUSING & ROTOR GROUP EXPLOSION



The J-Hammer (not shown) on the opposite side of the rotor faces outward for balanced rotation. There is also a second Chipper Knife and Tri-Hammer (not shown) opposite the ones in the explosion above.

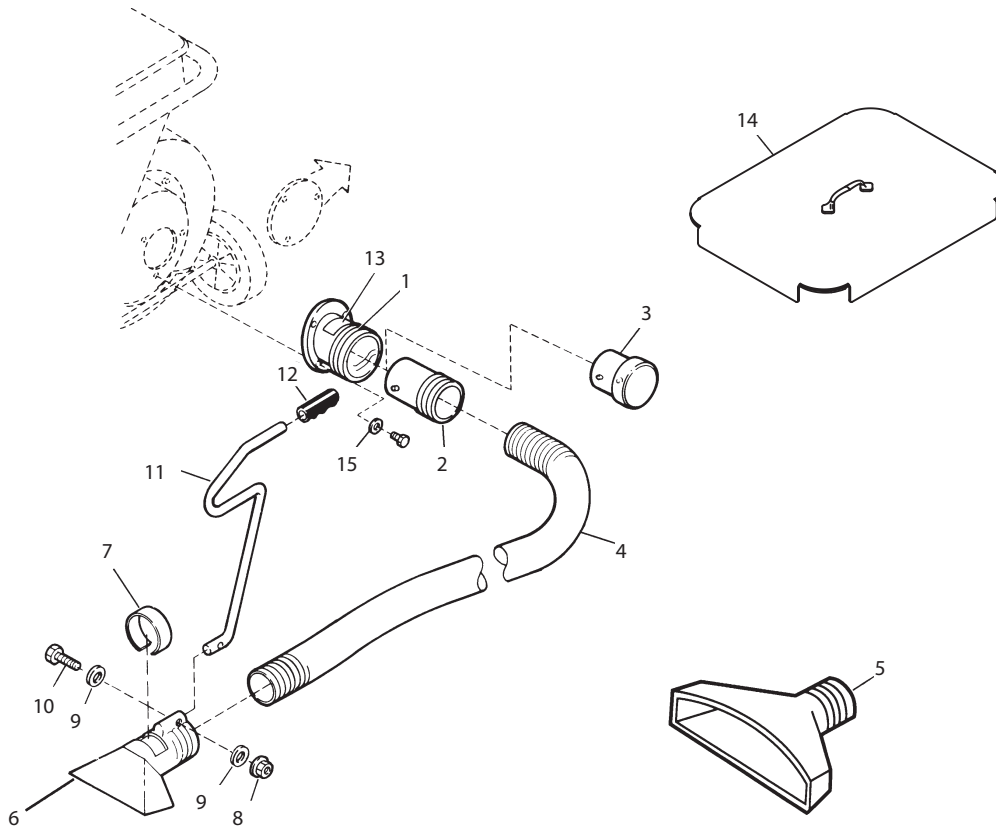
HOUSING & ROTOR GROUP PARTS LIST

KEY #	PART #	DESCRIPTION	QTY.
1	3525100	LINER, HOPPER	1
2	1917356	LOCK WASHER, SPLIT 5/16	10
3	6518100	CAP SCREW, SOCKET HD 3/8-16 X 5/8	2
4	1930642	NUT, 2-WAY LOCK 1/4-20	2
5	1919326	WASHER, FLAT 1/4	2
6	1960507	BOLT, SOCKET BUTTON HD, 1/4-20 X 3/4	2
7	1731918	DECAL, CAUTION (U.S VERSION)	1
	1731919	DECAL, CAUTION (CE, EUROPEAN)	
8	6005100	CAP SCREW, SOCKET HD 5/16-28 X 1/2	2
9	1919438	NUT, NYLOCK 5/16-18	2
10	1931277	NUT, HEX FLANGE 5/16-18	7
11	3520100	COVER, ROTOR HOUSING	1
12	1920787	CAP SCREW, HEX HD 5/16-18 X 1/2	8
13	3315612	CHIPPER KNIFE	2
14	905100	KEY 1/4 SQ. X 1-7/8	1
15*	3299100	SPACER, ROTOR, .822" LONG (9060300, 9060140, 14267, 14268)	1
	1713206	SPACER, ROTOR, .72" LONG (9070300, 9010400, 9010140)	1
16	1924874	WASHER, FLAT 5/16	2
17	1660071	ROTOR HAMMERS & KNIVES ASMY 5/14 CS (9060300, 9060140, 14267, 14268)	1
	1660092	ROTOR HAMMERS & KNIVES ASMY 8/14 CS (9070300, 9010400, 9010140)	1
18	6005612	CAP SCREW, SOCKET HD 5/16-24 X 5/8	4
19	1916965	LOCK WASHER, SPLIT 3/8	7
20	6516100	CAP SCREW, SOCKET HD 3/8-24 X 2	1

KEY #	PART #	DESCRIPTION	QTY.
21	1916950	NUT, HEX 3/8-16	2
22	1709614	SPACER, TUBE	4
23*	1709616	SPACER, 3/4" O.D. X 3/4" LONG (9070300, 9010400, 9010140)	4
	1713207	SPACER, 1" O.D. X 33/64" LONG (9060300, 9060140, 14267, 14268)	4
24	3307612	HAMMER, TRIANGULAR	2
25	1960508	CAP SCREW, HEX SOCKET HD W/PATCH 3/8-16 X 2 GR8	4
26	3307100	J HAMMER	2
27	1924940	WASHER, FLAT 7/8" O.D.	4
28	3521100	HOUSING, ROTOR	1
29	3501100	HOUSING, FAN	1
30	3505100	AXLE ASSEMBLY	1
31	1676435	WASHER, PLAIN 1/2 X 1-1/4 X 3/16	4
-	1921333	BOLT, HEX HD CAP SCREW, 5/16-18 X 1 GR5	1
-	1714177	ROTOR ASSEMBLY	1
-	1685698	ROTOR KIT (INCLUDES KEY #'S: 2, 17, 22, 23, 26, 29)	1
-	1660071	ROTOR HAMMERS & KNIVES ASSEMBLY (14267, 14268, 9060300, 9060140 MODELS)	1
-	1660092	ROTOR HAMMERS & KNIVES ASSEMBLY (9070300, 9010400, 9010140 MODELS)	1

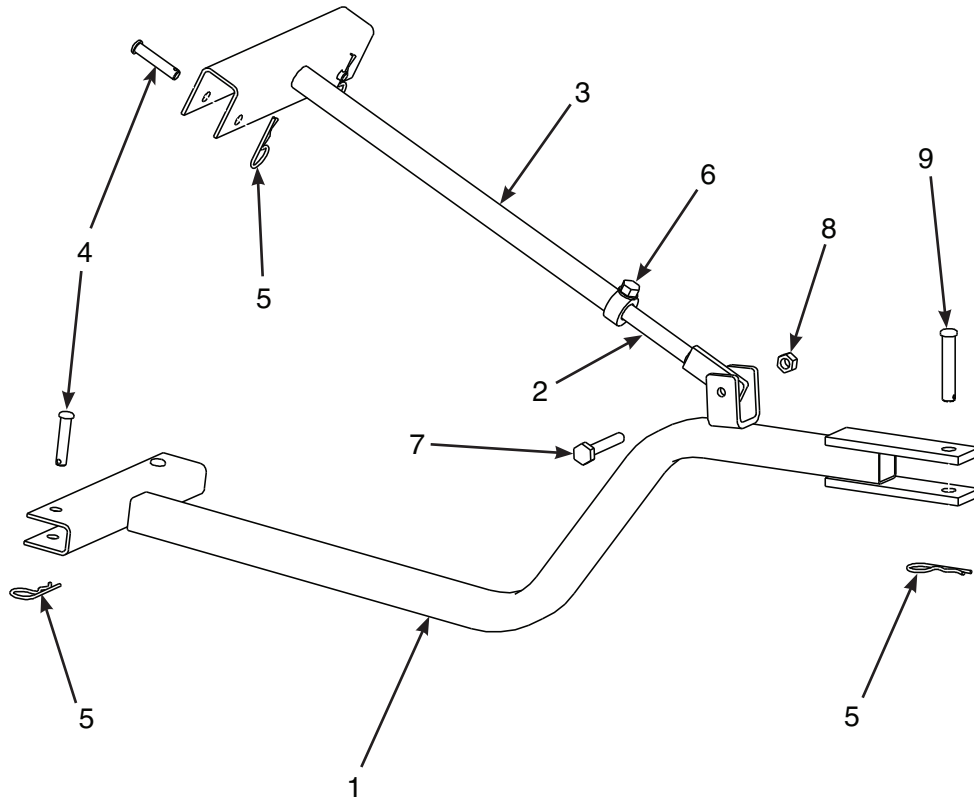
* Measure length to determine which spacer to use.

12727 VACUUM KIT (OPTIONAL ACCESSORY)



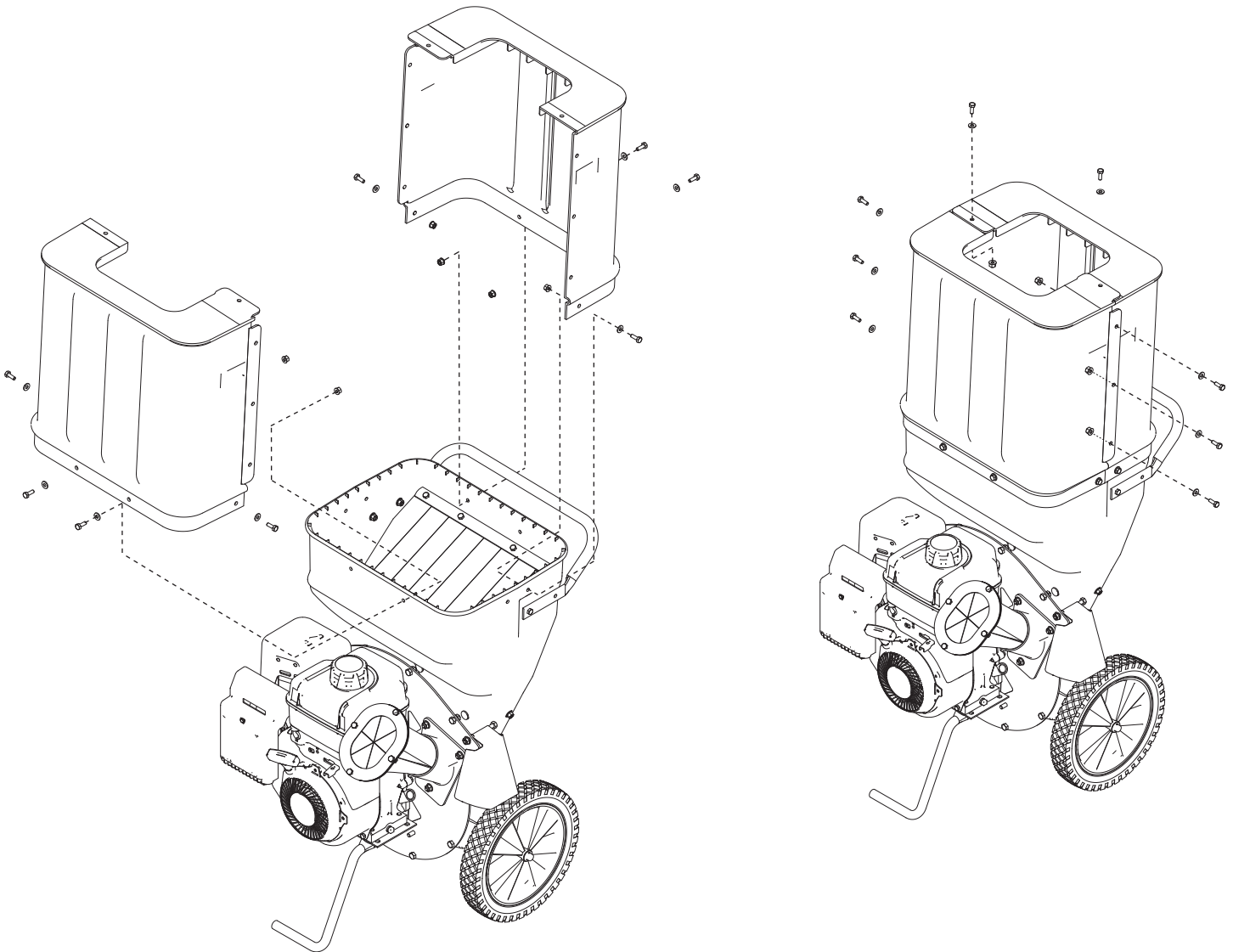
KEY #	PART #	DESCRIPTION	QTY.
1	1021100	ADAPTER	1
2	1023100	COUPLER	1
3	1025100	PLUG, CAP	1
4	1035100	HOSE, 4" DIA. X 10' LONG	1
5	1027100	LEAF TRAY	1
6	1030100	NOZZLE	1
7	1024100	RING, NOTCHED, 5" DIA. X 3" LONG	1
8	1960294	NUT, HEX FLANGE, 1/4-20	1
9	1921319	WASHER, 1/4	2
10	6041612	BOLT, PHILLIPS TRUSS HD, 1/4-20 X 1-1/2	1
11	1026100	HANDLE	1
12	1028100	GRIP, HANDLE	1
13	5001612	DECAL, DANGER	1
14	12664	HOPPER LID, BLACK	1
15	1919326	WASHER, FLAT, 5/16	3
-	1732039	DECAL, DANGER	1

1692327 TOW BAR KIT (OPTIONAL ACCESSORY)



KEY #	PART #	DESCRIPTION	QTY.
1	1713352	BENT ARM ASSEMBLY	1
2	1713414	ROD ASSEMBLY	1
3	1713357	ROD HOLDER ASSEMBLY	1
4	1710726	PIN, CLEVIS, 5/16 X 1-1/2	4
5	1918196	PIN, QUICK, 3/32 X 1-7/8	5
6	1925205	BOLT, HEX HD CAP SCREW, 5/16-18 X 5/8 GR5	1
7	1423B	BOLT, HEX HD CAP SCREW, 5/16-18 X 2 GR5	1
8	1919438	NUT, HEX LOCK, 5/16-18	1
9	118053	PIN, ROUND HD, 3/8 X 2	1

HOPPER EXTENSION PARTS EXPLOSION, PARTS LIST AND FULL ASSEMBLY (CE EUROPEAN MODELS ONLY)



KEY #	PART NO.	DESCRIPTION	QTY.
1	1960507	BOLT 1/4-20 X 3/4 SBH BLK ZN	16
2	1930642	NUT 1/4-20 HFLTPLK BLK ZN	16
3	179470	EXTENSION CHIPPER HOPPER CE	2
4	1921319	WASHER, PLAIN 17/64 X 5/8 X 3/64 (NOT SHOWN)	16



ARDISAM Inc.

1360 First Avenue, P.O. Box 666, Cumberland, Wisconsin, 54829 USA
Phone: - 001 (715) 822 2415 Fax: - 001 (715) 822 4180

Declaration of Conformity

Ardisam Inc. hereby certify that the machinery stipulated below complies with all the relevant provisions of the:

Machinery Directive 98/37/EC Noise Directive 2000/14/EC annex V

As amended, and the National Laws and Regulations adopting these directives.


Machine description	:	Chipper Shredder 10.0hp
Make	:	Ardisam
Type	:	12547
Serial No.	:	10000 – 99999

And Is in conformity with the provisions of the following other EEC Directives:

*The Electromagnetic Compatibility Directive 89/336/EC (as implemented by the
Electromagnetic (Amendment) Regulations 1994 – (SI 1994/3060)*

Applicable standard: BS EN 13684:2004

The Technical File is held at the offices of Ardisam, Inc. for review by authorized parties.

Authorised Person empowered to sign: -  Mr. Kirk Hyatt
Position in Company: - **Product Development Manager**

Date: - 02-20-2008

DOCCS10



ARDISAM Inc.

1360 1st Avenue, P.O. Box 666, Cumberland, Wisconsin, 54829 USA
Phone:- 001 (715) 822 2415 Fax:- 001 (715) 822 4180

EC Declaration of Conformity (Noise)

<i>Manufacturers Name:</i>	ARDISAM Inc.
<i>Manufacturers Address:</i>	1360 1 st Avenue P.O. Box 666 Cumberland Wisconsin 54829 USA Phone: - 001 (715) 822 2415 Fax: - 001 (715) 822 4180
<i>Declares that this product:</i>	
<i>Description of equipment:</i>	Chipper Shredder 212cc
<i>Conforms to the following directive:</i>	Outdoor Noise Directive 2000/14/EC Annex V
<i>Measured Sound Power level</i>	106 db _{L_{wa}}
<i>Guaranteed Sound Power level</i>	109 db _{L_{wa}}
<i>Cutting width</i>	N/A
<i>Contact Name / Address</i>	Kirk Hyatt / as above
<i>Notified Body:</i>	N/A
<i>Place of Declaration:</i>	Wisconsin
<i>Date:</i>	04/25/2007



ARDISAM Inc.

1360 1st Avenue, P.O. Box 666, Cumberland, Wisconsin, 54829 USA
Phone: - 001 (715) 822 2415 Fax: - 001 (715) 822 4180

Declaration of Conformity

Ardisam Inc. hereby certify that the machinery stipulated below complies with all the relevant provisions of the:

Machinery Directive 98/37/EC
Noise Directive 2000/14/EC annex V

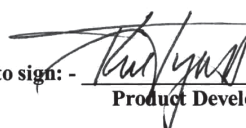
As amended, and the National Laws and Regulations adopting these directives.

Machine description	:	Chipper Shredder 212cc
Make	:	Ardisam
Type	:	14268
Serial No.	:	10000 – 99999

And Is in conformity with the provisions of the following other EEC Directives:

*The Electromagnetic Compatibility Directive 89/336/EC (as implemented by the
Electromagnetic (Amendment) Regulations 1994 – (SI 1994/3060)*

Applicable standard: BS EN 13684:2004

Authorised Person empowered to sign: -  Mr. Kirk Hyatt
Position in Company: - **Product Development Manager**

Date: - 1/28/10



ARDISAM Inc.

1360 1st Avenue, P.O. Box 666, Cumberland, Wisconsin, 54829 USA
Phone:- 001 (715) 822 2415 Fax:- 001 (715) 822 4180

EC Declaration of Conformity (Noise)

<i>Manufacturers Name:</i>	ARDISAM Inc.
<i>Manufacturers Address:</i>	1360 1 st Avenue P.O. Box 666 Cumberland Wisconsin 54829 USA Phone: - 001 (715) 822 2415 Fax: - 001 (715) 822 4180
<i>Declares that this product:</i>	
<i>Description of equipment:</i>	Chipper Shredder 5.5hp
<i>Conforms to the following directive:</i>	Outdoor Noise Directive 2000/14/EC Annex V
<i>Measured Sound Power level</i>	106 db _{L_{wa}}
<i>Guaranteed Sound Power level</i>	109 db _{L_{wa}}
<i>Cutting width</i>	N/A
<i>Contact Name / Address</i>	Kirk Hyatt / as above
<i>Notified Body:</i>	N/A
<i>Place of Declaration:</i>	Wisconsin
<i>Date:</i>	04/25/2007



ARDISAM Inc.

1360 1st Avenue, P.O. Box 666, Cumberland, Wisconsin, 54829 USA
Phone: - 001 (715) 822 2415 Fax: - 001 (715) 822 4180

Declaration of Conformity

Ardisam Inc. hereby certify that the machinery stipulated below complies with all the relevant provisions of the:

Machinery Directive 98/37/EC Noise Directive 2000/14/EC annex V

As amended, and the National Laws and Regulations adopting these directives.


Machine description	:	Chipper Shredder 5.5hp
Make	:	Ardisam
Type	:	9060140
Serial No.	:	10000 – 99999

And is in conformity with the provisions of the following other EEC Directives:

*The Electromagnetic Compatibility Directive 89/336/EC (as implemented by the
Electromagnetic (Amendment) Regulations 1994 – (SI 1994/3060)*

Applicable standard: BS EN 13684:2004

The Technical File is held at the offices of Ardisam, Inc. for review by authorized parties.

Authorised Person empowered to sign:  Mr. Kirk Hyatt
Position in Company: - Product Development Manager

Date: - 5-17-07

Earthquake

CHIPPER/SHREDDERS

Warranty Terms and Conditions

PRODUCT WARRANTY: 1-YEAR LIMITED WARRANTY

Ardisam, Inc., a manufacturing company, warrants this **EARTHQUAKE™ CHIPPER/SHREDDER** to be free from defects in the material or workmanship for a period of one year from the date of purchase. During the one-year warranty of this product, Ardisam will furnish, at their discretion, parts and labor to correct any defect caused by faulty material or workmanship. Any unit used in a commercial application is covered for a period of 90 days after purchase. This warranty applies to the original owner with a proof of purchase and is not transferable. For the warranty to be valid, the product must be registered online, or the warranty card must be filled out and received by Ardisam, Inc., within 30 days of purchase.

14267 AND 14268 ENGINE WARRANTY: 2-YEAR LIMITED EMISSIONS CONTROL WARRANTY (SEE EXPLANATION OF EMISSIONS CONTROL WARRANTY PROVISIONS FOR DETAILS)

Ardisam, Inc., a manufacturing company warrants its Viper® Engines under a two-year limited emissions control warranty to be free from defects in materials and workmanship for the service life of the product not to exceed twenty-four consecutive months from the date of purchase for consumer applications.

*These warranties apply only to products which have not been subjected to negligent use, misuse, alteration, accident, unauthorized parts, failure to use proper fuel and oil, or if repairs have been performed at non-authorized service centers. These warranties supersede all other warranties either expressed or implied and all other obligations or liabilities on our part. Ardisam, does not assume, and does not authorize any other person to assume for us, any liability in connection with the sale of our products. **To be at "No Charge," warranty work must be sent directly to Ardisam, Inc. or one of our authorized service centers and performed by them.** To obtain warranty service and/or replacement instructions, contact our customer service department. If you choose to ship your product to Ardisam for warranty repair, you must first have prior approval from Ardisam by calling our customer service department for a return material authorization number (RMA#). Under these circumstances, all items must be shipped prepaid. Ardisam will at no charge, repair or replace, at their discretion, any defective part which falls under the conditions stated above. Ardisam retains the right to change models, specifications and price without notice.

Earthquake™, Division of Ardisam, Inc.
1160 Eighth Avenue; P.O. Box 666
Cumberland, Wisconsin 54829
800-345-6007 · Fax (715) 822-4180
E-mail: info@getearthquake.com

EXPLANATION OF EMISSIONS CONTROL WARRANTY PROVISIONS

The United States Environmental Protection Agency, the California Air Resources Board and Ardisam, Inc., are pleased to explain the emission control system warranty on your small off-road engine/equipment. In the United States and California, new small off-road engine/equipment must be designed, built and equipped to meet the State's stringent anti smog standards. Ardisam must warrant the emission control system on your small off-road engine/equipment for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your small off-road engine/equipment.

Viper Engines are designed, built and equipped to meet all EPA and CARB requirements. It warrants that it is free from defects in material and workmanship that could cause failure to the warranted part; and that it is identical in all material respects to the engine described in the manufacturer's application for certification. When a warrantable condition exists, Ardisam will repair your engine at no cost to you, including parts and labor. The engine emissions label will indicate certification information. If the purchaser is in need of a warrantable repair and is not within 100 miles distance from an Viper authorized repair center, Ardisam will pay for shipping costs to and from an authorized Viper repair center.

Listed below are the parts covered by the emissions control systems warranty. Some parts listed below may require scheduled maintenance and are warranted up to the first scheduled replacement point for that part. Coverage under this warranty includes only the parts listed below (the emission and evaporation control systems) if so equipped:

- Air Filter Assembly (only to the first scheduled replacement point)
- Fuel Filter (only to the first scheduled replacement point)
- Carburetor
- Fuel Lines, Fuel Line Fittings and Clamps
- Fuel Metering Valve (if equipped)
- Evaporative System (if equipped)
 - Canister (if equipped)
 - Canister filter (if equipped)
 - Vapor hose (if equipped)
 - Orifice connector (if equipped)
 - Fuel tank
 - Fuel cap
 - Primer bulb canister (if equipped)
- Spark Plugs
- Magneto Ignition System
- Muffler Assembly

For engines less than or equal to 80cc, only the fuel tank is subject to the evaporative emission control warranty requirements.

LIMITATIONS

The Emission Control Systems Warranty shall not cover any of the following:

- a) Repair or replacement required because of misuse or neglect, improper maintenance, repairs improperly performed or replacements not conforming to Ardisam specifications that adversely affect performance and/or durability and alterations or modifications not recommended or approved in writing by Ardisam.

- b) Replacement of parts and other services and adjustments necessary for required maintenance at or after the first scheduled replacement point;
- c) Consequential damages such as loss of time, inconvenience, loss of use of the engine or equipment, etc.
- d) Diagnosis and inspection fees that do not result in eligible warranty service being performed; and
- e) Any add-on or modified part, or malfunction of authorized parts due to the use of add-on or modified parts.

These items will be covered for a period of **two years** from the date of the original purchase. Ardisam warrants that: the components are designed, built and equipped so as to conform with all applicable regulations adopted by the EPA; that they are free from defects in material and workmanship that could cause failure to the engine or other; and that the components used are identical in all material respects to the engine described in the manufacturer's application for certification. The warranty period begins on the date the engine is originally purchased.

MAINTENANCE AND REPAIR REQUIREMENTS

The owner is responsible for the proper use and maintenance of the engine. Viper recommends that all receipts and records covering the performance of regular maintenance be retained in case questions arise. If the engine is resold during the warranty period, the maintenance records should be transferred to each subsequent owner. Ardisam reserves the right to deny warranty coverage if the engine has not been properly maintained; however, Ardisam may not deny warranty repairs solely because of the lack of repair maintenance or failure to keep maintenance records.

Normal maintenance replacement or repair of emission control devices and systems may be performed by any repair establishment or individuals; however, warranty repairs must be performed by an Viper authorized service center. Any replacement parts or service that is equivalent in performance and durability may be used in non-warranty maintenance or repairs, and shall not reduce the warranty obligations of the engine manufacturer.

The warranty on emissions-related parts is as follows:

- Any warranted part that is not scheduled for replacement as required maintenance in the owner's manual supplied, is warranted for the warranty period stated above. If any such part fails during the period of warranty coverage, that part will be repaired or replaced at no charge to the owner. Any such part repaired or replaced under the warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled only for regular inspection in the owner's manual supplied, is warranted for the warranty period. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled for replacement as required maintenance in the owner's manual supplied, is warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part will be repaired or replaced at no charge to the owner. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
- Add on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add on or modified parts by the owner will be grounds for disallowing a warranty claim. The manufacturer will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add on or modified part.



Earthquake™, Division of Ardisam, Inc.

1160 8th Avenue, PO Box 666

Cumberland, WI 54829

800-345-6007 | Fax 715-822-2223

E-mail: info@getearthquake.com

All weights, specifications and features are approximate and are subject to change without notice. Due to continuous product improvements, product images may not be exact. Items used for props not included. Some assembly may be required.

Check for parts online at www.getearthquake.com or call 800-345-6007 M-F 8-5