

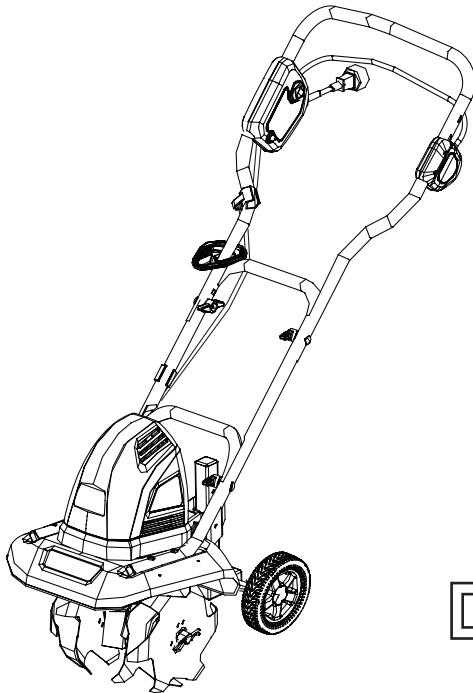
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**greenworks™**

# 8A ELECTRIC CULTIVATOR

## 27012



Owner's Manual

**TOLL-FREE HELPLINE: 1-888-90WORKS (888.909.6757)**

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 Read all safety rules and instructions carefully before operating this tool.

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# SPECIFICATIONS

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## 8 A ELECTRIC CULTIVATOR

Motor .....	120V, AC only, 60Hz, 8Amps
Speed.....	13,500 RPM
Wheel Size .....	7"
Tilling Width .....	Max 10" Adjusts to 8-1/4"
Cultivating Depth.....	8"
Tine Diameter .....	8"
Unit Weight.....	30.8lbs.



# IMPORTANT SAFETY INSTRUCTIONS

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## READ AND UNDERSTAND ALL INSTRUCTIONS.

Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

## READ THESE INSTRUCTIONS BEFORE USING THE ELECTRIC CULTIVATOR

- Read the operator's manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
- Do not operate cultivators in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Cultivators create sparks which may ignite the dust or fumes.
- Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is grounded.
- Avoid Dangerous Environment — Don't expose to rain or use cultivator in damp or wet locations. Water entering a cultivator will increase the risk of electric shock.
- Do not abuse the cord — Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges, or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.
- WARNING — To reduce the risk of electric shock, use only with an extension cord intended for outdoor use, such as an extension cord of cord type SW-A, SOW-A, STW-A, STOW-A, SJW-A, SJOW-A, SJTW-A. or SJTOW-A. These cords are rated for outdoor use and reduce the risk of electric shock.
- Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instruction.
- Always wear safety glasses with side shields — Everyday glasses have only impact resistant lenses. They are NOT safety glasses. Following this rule will reduce the risk of eye injury. Use face mask if operation is dusty.
- Dress Properly — Do not wear loose clothing or jewelry. They can be caught in moving parts. Use of rubber gloves and substantial footwear is recommended when working outdoors. Wear protective hair covering to contain long hair. Wear heavy long pants, long sleeves, boots, and gloves. Avoid loose garments or jewelry that could get caught in moving parts of the machine or its motor. Secure long hair so it is above shoulder level to prevent entanglement in any moving parts.
- Do not force cultivator — Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
- Do not operate the equipment while barefoot or when wearing sandals or similar lightweight footwear. Wear protective footwear that will protect your feet and improve your footing on slippery surfaces.
- Do not operate the cultivator while under the influence of alcohol or drugs.
- Keep hands and feet away from tines.
- Do not overreach — Keep firm footing and balance at all times. Overreaching can result in loss of balance.

# IMPORTANT SAFETY INSTRUCTIONS

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- Avoid Unintentional Starting – Don't carry plugged-in appliance with finger on switch. Be sure switch is off when plugging in.
- Never pick up or carry the cultivator while the tines are turning or the motor is running.
- Keep cultivator in good working condition. Check all nuts, bolts, and screws at frequent intervals for proper tightness to be sure the equipment is in safe working condition.
- Keep the unit free of grass, leaves, or grease to reduce the chance of a fire hazard.
- Do not use cultivator if switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect appliance — Disconnect the appliance from the power supply when not in use, before servicing, when changing accessories such as blades, and the like. Such preventive safety measures reduce the risk of starting the cultivator accidentally.
- Before cleaning, repairing, or inspecting, unplug the cultivator and make certain all moving parts have stopped.
- Never spray water directly into the motor compartment of the cultivator.
- Service on the cultivator must be performed by qualified repair personnel only. Service or maintenance performed by unqualified personnel could result in injury to the user or damage to the product.
- Use only identical replacement parts when servicing the cultivator. Use of unauthorized parts may create a risk of serious injury to the user, or damage to the product.

## CHILD SAFETY

Tragic accidents can occur if the operator is not aware of the presence of children.

- Keep children out of the working area and under the watchful care of a responsible adult.
- Do not allow children under the age of 14 to operate this hedger. Children who are 14 years of age and older must read and understand the operating instructions and safety rules in this manual and must be trained and supervised by a parent.
- Stay alert, and turn the cultivator off if a child or any other person enters the working area.
- Look behind and down for small children before and while cutting backwards.
- Use extreme care when approaching blind corners, doorways, shrubs, trees, or other objects that may obscure your view of a child who may run into the path of the cultivator.

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## **WARNING (PROPOSITION 65)**

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically treated lumber.

Your risk of exposure to these chemicals varies depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

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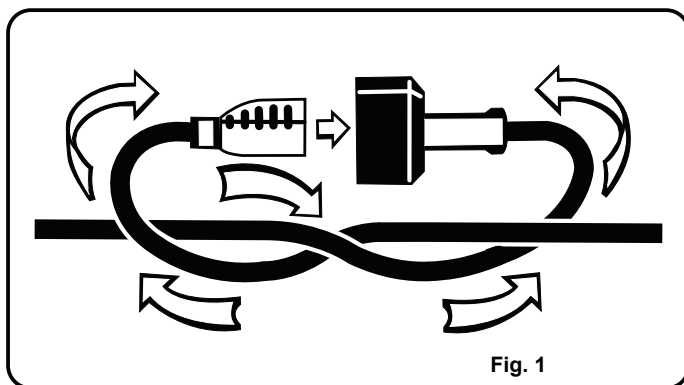
## SAVE THESE INSTRUCTIONS

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## SPECIFIC SAFETY RULES

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- Do not use near underground electric cables, telephone, lines, pipes, or hoses. If in doubt, contact your utility or telephone company to locate underground services.
- If the unit strikes a foreign object, stop the motor, disconnect the extension cord, thoroughly inspect the machine for any damage, and repair the damage before restarting and operating the machine.
- Do not overload the machine capacity by cultivating too deep in a single pass or at too fast a rate.
- Stay alert. Watch what you are doing. Use common sense. Do not operate cultivator when you are tired, ill, or upset.
- Be aware that the equipment may unexpectedly bounce upward or jump forward if the tines should strike buried obstacles such as large stones, roots, or stumps.
- Extension Cord – To reduce the risk of disconnection of appliance cord from the extension cord during operating, it is possible to tie the extension cord and power cord in a knot to prevent them from becoming disconnected during use. Make the knot as shown in figure 1, then connect the plug end of the power cord into the receptacle end of the extension cord. This method can also be used to tie two extension cords together.



- Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. A wire gauge size (A.W.G.) of at least 14 is recommended for an extension cord 50 feet or less in length. A cord exceeding 100 feet is not recommended. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.
- Wear hearing protection.
- Ensure that people and pets are at least 50' (15 m) away from cultivator while in use.

**SAVE THESE INSTRUCTIONS**

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## SPECIFIC SAFETY RULES

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- Replace worn or damaged parts only with identical replacement parts.
- Ensure that work area is free of slippery spots or excessive quantities of stone.
- Start the cultivator carefully according to instructions from a normal operating position and with feet well away from the tines. Do not force cultivator. It will do the job better and with less likelihood of a risk of injury at the rate for which it was designed.
- Unplug the unit before unclogging the tines and when making any repairs, adjustments, or inspections.
- Never operate the equipment on a slope.
- Use extreme caution when pulling the machine towards you.
- Store Idle Appliances Indoors — When not in use, appliances should be stored indoors in dry, and high or locked-up place – out of reach of children.
- Maintain Appliance with Care — Keep tines clean for best performance and reduce the risk of injury. Follow instructions for lubrication and changing accessories. Inspect cultivator cord periodically and, if damaged, have it replaced. Keep handles dry, clean, and free from grease and oil.
- Keep Children Away — All visitors and bystanders should be kept at a distance of at least 50 feet from work area.
- Use Right Appliance — Do not use appliance for any job except that for which it is intended.
- Ground Fault Circuit Interrupter (GFCI) protection should be provided on the circuit (s) or outlet (s) to be used for the gardening appliance. Receptacles are available having built-in GFCI protection and may be used for this measure of safety.
- Don't grasp the exposed cutting blades or cutting edges when picking up or holding the appliance.
- Check damaged parts. Before further use of this cultivator, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other condition that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this manual.
- Save these instructions. Refer to them frequently and use them to instruct others who may use this cultivator. If you loan someone this unit, loan them these instructions also.

**SAVE THESE INSTRUCTIONS**

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# SYMBOLS




Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
min	Minutes	Time
~	Alternating Current	Type of current
≡	Direct Current	Type or a characteristic of current
	Class II Construction	Double-insulated construction
	Wet Conditions Alert	Do not expose to rain or use in damp locations
	Read The Operator's Manual	To reduce the risk of injury user must read and understand operator's manual before using this product.
	Safety Alert	Precautions that involve your safety.
	Keep Bystanders Away	Keep all bystanders at least 50 ft. away.
	Eye Protection	Always wear safety goggles or safety glasses with side shields and, as necessary, a full face shield when operating this product.
	Long Hair	Failure to keep long hair away from the air inlet could result in personal injury.
	Loose Clothing	Failure to keep loose clothing from being drawn into air intake could result in personal injury.
	Ricochet	Thrown objects can ricochet and result in personal injury or property damage.
	Cutting Hazard	Keep feet and hands away from rotating tines.
	No Hand Symbol	Failure to keep your hands away from the blade will result in serious personal injury.

# SYMBOLS

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The following signal words and meanings are intended to explain the levels of risk associated with this product.

<b>SYMBOL</b>	<b>SIGNAL</b>	<b>MEANING</b>
	<b>DANGER</b>	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	<b>WARNING</b>	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	<b>CAUTION</b>	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	<b>CAUTION</b>	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.

## SERVICE

Servicing requires extreme care and knowledge and should be performed only by a qualified service technician. For service we suggest you return the product to your nearest **AUTHORIZED SERVICE CENTER** for repair. When servicing, use only identical replacement parts.

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### **W A R N I N G**

To avoid serious personal injury, do not attempt to use this product until you read thoroughly and understand completely the operator's manual. If you do not understand the warnings and instructions in the operator's manual, do not use this product. Call YARDWORKS customer service for assistance.

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### **W A R N I N G**



The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and, when needed, a full face shield. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1.

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# ELECTRICAL

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## **WARNING**

THIS CULTIVATOR IS FOR OUTDOOR USE ONLY. DO NOT EXPOSE TO RAIN OR USE IN DAMP LOCATIONS.

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## **GUIDELINES FOR USING EXTENSION CORDS**

USE THE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one of heavy enough gauge to carry the current your product will draw. An undersized cord will cause overheating. The table below shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

\*\*Ampere rating (on tool faceplate)

### **MINIMUM GAUGE FOR EXTENSION CORDS (AWG)** (WHEN USING 120V ONLY)

<b>Amp Rating</b>		<b>Total Length of Cord in Feet (meters)</b>			
<b>More Than</b>	<b>Not More Than</b>	<b>25' (7.6 m)</b>	<b>50' (15 m)</b>	<b>100' (30.4 m)</b>	<b>150' (45.7 m)</b>
0	6	18	16	16	14
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not Recommended	

Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified technician before use. Keep extension cords away from sharp objects, excessive heat and damp or wet areas.

Use a separate electrical circuit for tools. This circuit should not be less than #12 wire and should be protected with a 15 A time delayed fuse. Before connecting the motor to the power line, make sure the switch is in the OFF position and the electric current is rated the same as the current stamped on the motor nameplate. Running at a lower voltage will damage the motor.

## **WARNING**

KEEP THE EXTENSION CORD CLEAR OF THE TINES AND WORKING AREA. POSITION THE CORD SO THAT IT WILL NOT GET CAUGHT ON LUMBER, TOOLS OR OTHER OBSTRUCTIONS WHILE YOU ARE WORKING WITH A CULTIVATOR. FAILURE TO DO SO CAN RESULT IN SERIOUS PERSONAL INJURY.

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# ELECTRICAL

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## WARNING

CHECK EXTENSION CORDS BEFORE EACH USE. IF DAMAGED REPLACE IMMEDIATELY. NEVER USE TOOL WITH A DAMAGED CORD SINCE TOUCHING THE DAMAGED AREA COULD CAUSE ELECTRICAL SHOCK RESULTING IN SERIOUS INJURY.

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## ELECTRICAL CONNECTION

This tool is powered by a precision built electric motor. It should be connected to a **power supply that is 120 volts, 60 Hz, AC only (normal household current)**. Do not operate this tool on direct current (DC). A substantial voltage drop will cause a loss of power and the motor will overheat. If the product does not operate when plugged into an outlet, double check the power supply.

## SPEED AND WIRING

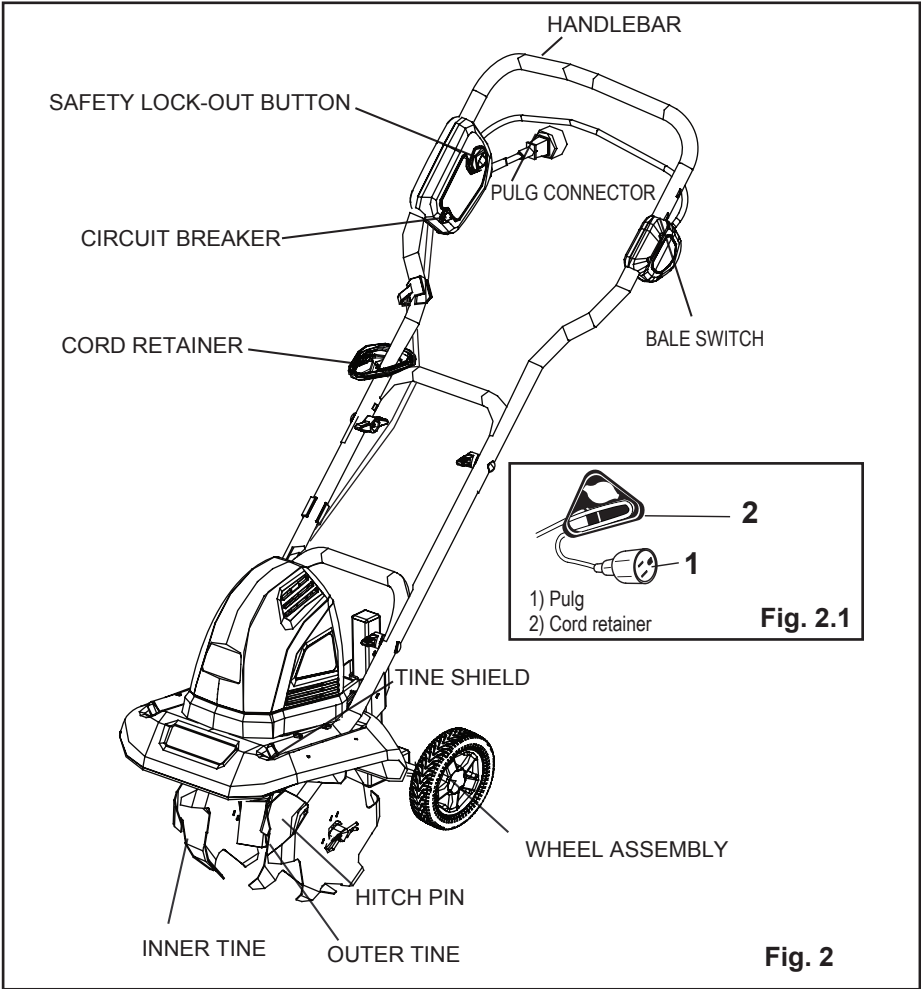
The speed is not constant and decreases under a load or with lower voltage. For voltage, the wiring in a shop is as important as the motor's horsepower rating. A line intended only for lights cannot properly carry a cultivator motor. Wire that is heavy enough for a short distance will be too light for a greater distance. A line that can support one cultivator may not be able to support two or three tools.

## FOR ALL DOUBLE-INSULATED APPLIANCES

**Replacement Parts** — When servicing use only identical replacement parts.

**Polarized Appliance Connections** — To reduce the risk of electric shock, this appliance has a polarized plug (one blade is wider than the other) and will require the use of a polarized extension cord. The appliance plug will fit into a polarized extension cord only one way. If the plug does not fit fully into the extension cord, reverse the plug. If the plug still does not fit, obtain a correct polarized extension cord. A polarized extension cord will require the use of a polarized wall outlet. This plug will fit into the polarized wall outlet only one way. If the plug does not fit fully into the wall outlet, reverse the plug. If the plug still does not fit, contact a qualified electrician to install the proper wall outlet. Do not change the equipment plug, extension cord receptacle, or extension cord plug in any way.

# KNOW YOUR CULTIVATOR



Read this operator's manual and safety rules before operating your cultivator. Compare the illustration in Fig.2.1 to your cultivator in order to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.

### **ATTACHING EXTENSION CORD TO CULTIVATOR (See Figure 2.)**

The cord restraint should be located on the right side of upper handle bar, and when used properly, helps to protect the motor/tine assembly from striking the extension cord.

# ASSEMBLY

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## UNPACKING

This product requires assembly.

- Carefully remove the product and any accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the tool carefully to verify no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated.
- If any parts are damaged or missing, please call **1-888- 909-6757** for assistance.

## PACKING LIST

- Cultivator
- Hitch Pins (2)
- Inner Tines (2)
- Outer Tines (2)
- Felts (4)
- Wheel Assembly
- Operator's Manual

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### **W A R N I N G**

If any parts are damaged or missing, do not operate this product until the parts are replaced. Failure to heed this warning could result in serious personal injury.

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### **W A R N I N G**

Do not attempt to modify this tool or create accessories that are not recommended for use with this tool. Any such alteration or modification constitutes misuse, and could result in a hazardous condition that may lead to serious personal injury.

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### **W A R N I N G**

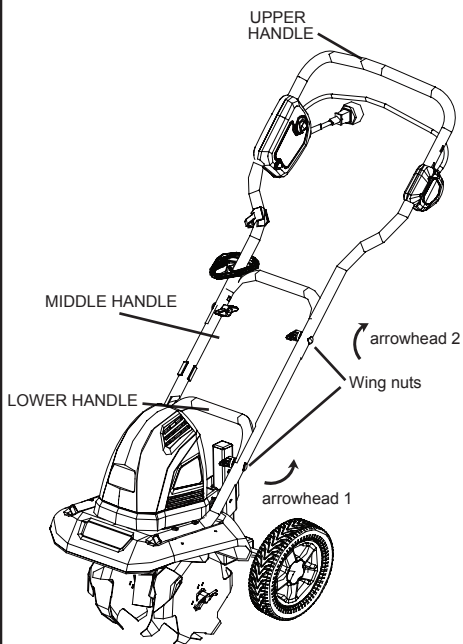
Do not plug the tiller into the outlet until assembly is complete. Failure to comply could result in accidental starting, and possible serious personal injury.

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# ASSEMBLY

## ASSEMBLING THE HANDLEBAR (See Figure. 3)

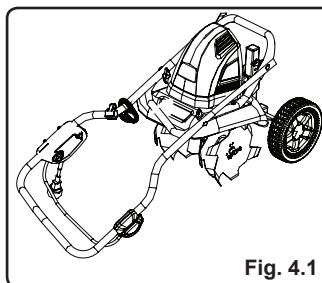
- Align the holes on the middle with the holes on the lower handles. Insert the bolts, and tighten them using the wing nuts provided.
- Align the holes on the upper handle with the holes on the middle handle. Insert the bolts, and tighten them using the wing nuts provided.
- Fold the handle base on the Fig.4 - 4.2



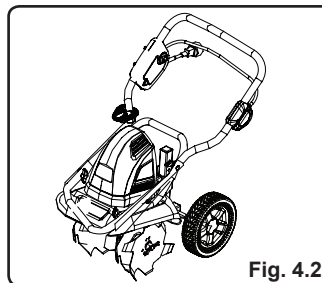
**Fig. 3**

- Step1: Release the wing nuts  
Step2: Rotate the middle handle base on the arrowhead 1 way (See Fig 3-1)  
Step2: Rotate the upper handle base on the arrowhead 2 way (See Fig 3-2)

**Fig. 4**



**Fig. 4.1**



**Fig. 4.2**

# ASSEMBLY

## ASSEMBLING THE WHEELS (See Figure. 5)

The wheels are used to control the depth of operation. To adjust the height of the wheels.

1. Disconnect from power source.
2. Place cultivator in a stable position as shown in Fig. 5
3. Insert the wheel assembly (2) into the support rod (3). (Fig. 5)
4. Pull out on spring-loaded knob (4) and slide wheel shaft up or down depending on the depth trying to be achieved.
5. The deepest tilling is Position A and highest, Position B.

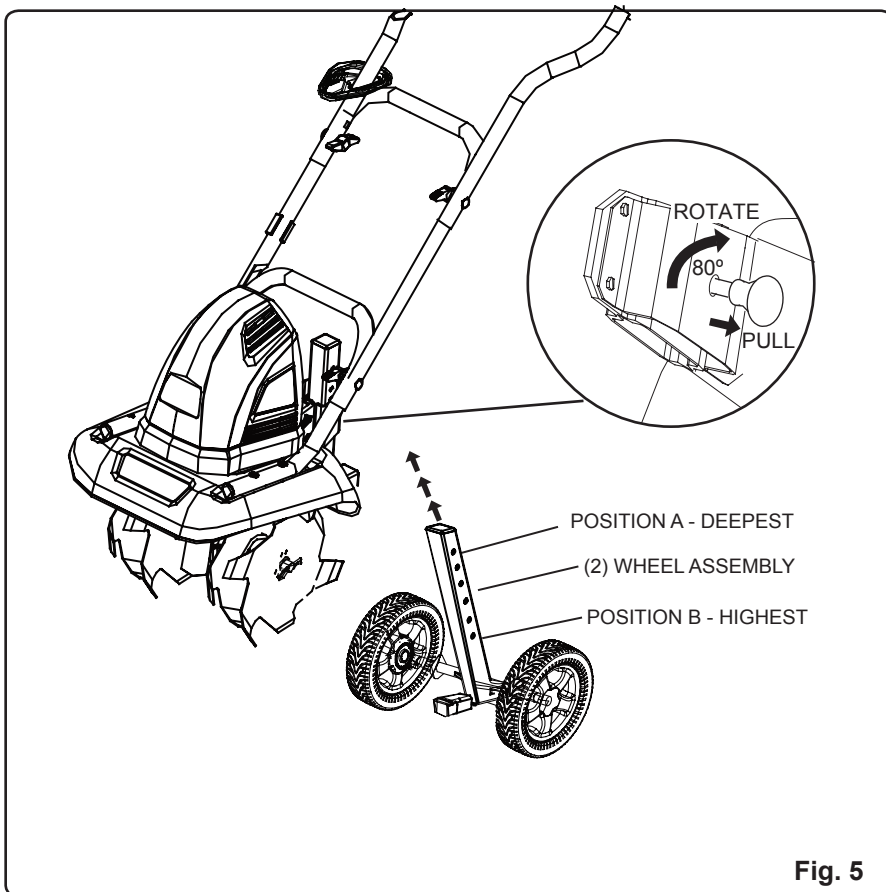


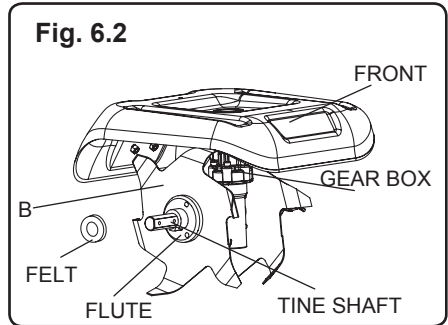
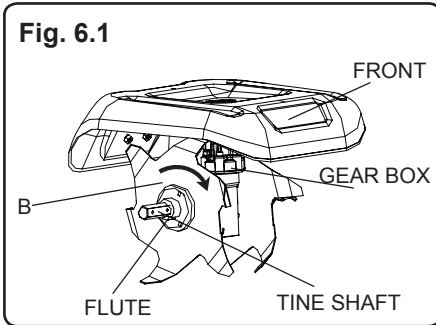
Fig. 5

# ASSEMBLY

## INSTALLING THE TINES (See Figure 6.1-6.6)

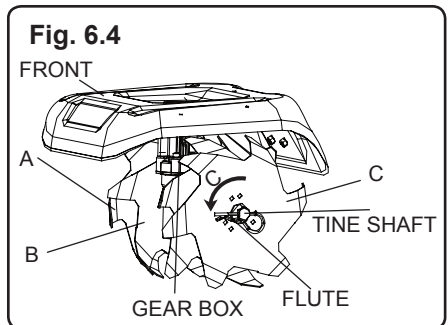
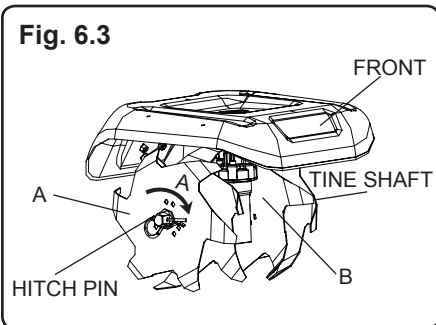
The cultivator comes with four tines—For correct operation of the unit, the tines must be installed in the correct order. The cultivator may be used with four tines or two tines.

- Disconnect from power source.
- Lean the unit back on its wheels so that it is resting securely with the handlebar on the ground.



1. Place the tine (B) onto the shaft. The flute of tine (B) should face away from the gear box. (Fig.6.1)

2. Place the felt onto the shaft (Fig.6.2)

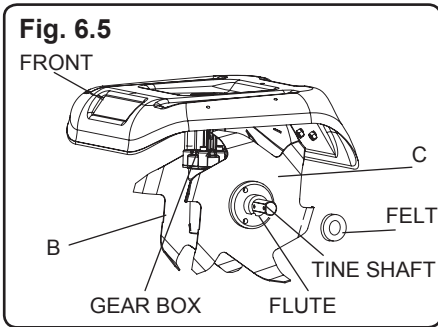


3. Place the tine (A) onto the shaft. The flute of tine (A) should face in toward tine (B). Insert the hitch pin into the holes that are located on shaft in order to secure the tines to the tine shaft (Fig.6.3).

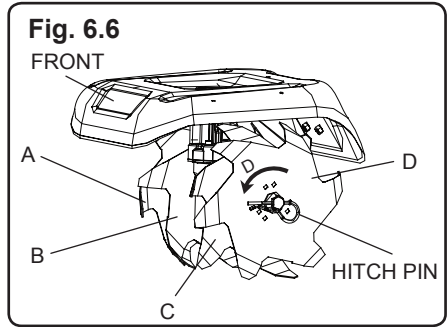
4. Place the tine (C) onto the shaft. The flute of tine (C) should face away from the gear box (Fig.6.4).

# ASSEMBLY

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5. Place the felt onto the shaft (Fig.6.5).



6. Place the tine (C) onto the shaft. The flute of tine (D) should face in toward tine (C). Insert the hitch pin into the holes that are located on shaft in order to secure the tines (Fig.6.6).

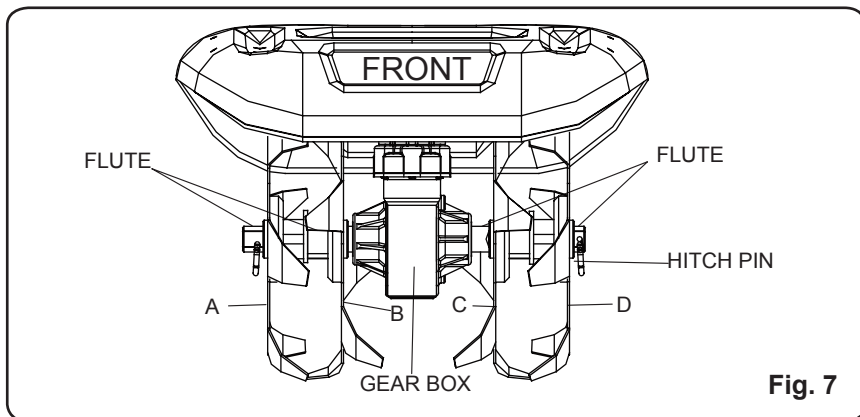
# ASSEMBLY

## TINES INSTALLED CORRECTLY (See Figure. 7)

*NOTE: When the tines are installed correctly, the flute on the tines should line-up, and the angled edge of the tine blades should point towards the ground (Fig. 7).*

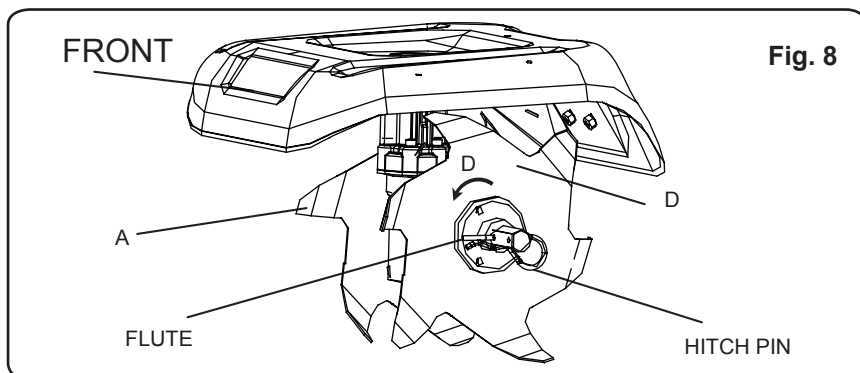
*NOTE: The tiller will not operate properly if the tines are not installed correctly. If there is a problem with the cultivating operation of the tiller, check the tines for proper positioning.*

*NOTE: The directional arrow that is displayed on each tine should point toward the front.*



## INSTALLING TWO TINES FOR TILLING A NARROW AREA (See Figure. 8)

Place tine (A) onto the shaft, and place tine (D) onto the other side shaft. Insert the hitch pin into the holes in order to secure the tines to the tine shaft. (Fig. 8)



# OPERATION

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## **⚠ WARNING**

Do not allow familiarity with tools to make you care-less. Remember that a careless fraction of a second is sufficient to inflict serious injury

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## **⚠ WARNING**

Always wear safety goggles or safety glasses with side shields when operating tools. Failure to do so could result in objects being thrown into your eyes, resulting in possible serious injury.

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## **⚠ WARNING**

Do not use any attachments or accessories not recommended by the manufacturer of this tool. The use of attachments or accessories not recommended can result in serious personal injury.

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## **⚠ WARNING**

Do not allow hands, feet, or any other part of the body or clothing near the rotating tines or any other moving part. The tines begin to rotate forward once the switch trigger is depressed. The tines continue to rotate until the switch trigger is released. Failure to avoid contact could cause serious personal injury.

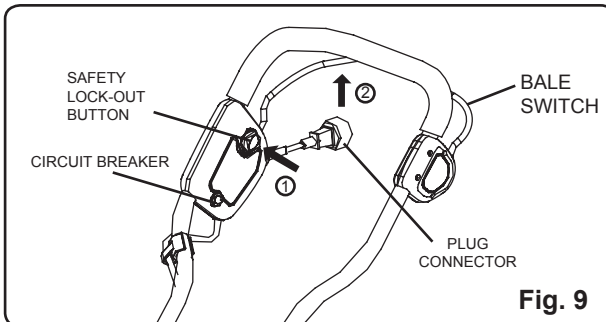
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### **STARTING THE CULTIVATOR** (See Figure. 9.)

1. Plug the cultivator into an approved outdoor extension cord.
2. Press the Safety-lock out button (1) and pull the Bale Switch (2) upwards to the handle bar to begin the rotation. Release Safety lock-out button while continuing to hold upward on Bale Switch to continue use.

### **STOPPING THE TILLER/CULTIVATOR** (See Figure. 9)

1. Release bale switch to stop the cultivator.
2. Circuit breaker, push to reset



# OPERATION

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## PREPARING THE SEED BED

The cultivator can be used to break up garden soil and prepare a seedbed for planting. Plan ahead to leave enough room between the seed rows to allow for machine cultivating after the plants have grown.

### TILLING SOD:

Tilling sod into the soil is not recommended. If sod must be removed to perform application then it is suggested to do as follows:

1. Map out the area of sod required to be removed.
2. Cut into 16 x 36" sections using a spade shovel or edger at a depth of 3 inches.
3. Lift the sod from the edges using a shovel sliding below at the roots.
4. Remove the sod. Carry sod to compost or other pile turned grass down to allow grass to decompose.
5. Once sod layer is removed, begin to till the soil to desired depth.

## GENERAL TILLING/CULTIVATING

Shallow cultivating (less than 2" [5 cm] deep) can be used to disrupt weeds and aerate soil without injuring nearby plant roots. It should be done often so that weeds do not grow large and get tangled in the tines of the tiller.

The two inner blades can be removed from the unit to allow a narrower cultivating width. See pages 17 for correct tine installation process.

1. With the wheel assembly installed to the desired depth position as described on page 14, roll the tiller to the work area.
2. Route the extension cord through the extension cord retainer as shown on page 11.
3. Plug the tiller into an approved extension cord.
4. Stand behind tiller, with tines on ground and the work area clean and free of obstructions.
5. Start the tiller using directions from page 18.

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*NOTE: It may take several passes over the same path in order to reach the desired depth. Do not try to dig too deep on the first pass. If the tiller jumps or bucks, allow it to move forward at a slightly faster pace. In order to dig more deeply, lift up on the handlebar pushing the front harder into the ground. Apply downward pressure on the handlebar, pulling unit down towards you for more shallow cultivating. If the tiller stays and digs in at one spot, try rocking it from side to side in order to start it moving forward again. If the soil is very hard, water it a few days before cultivating. Avoid working soil that is soggy or wet. Wait a day or two after heavy rain for the ground to dry.*

**IMPORTANT:** If weeds, roots, vines or other growth gets collected around the bottom of the tiller it is important to stop tiller. Disconnect from power source and clean tines using a screwdriver or other object which can help remove debris. If necessary, removes tines to untangle debris from shaft and tines.

### QUICK TIPS:

Remove rocks and roots before tilling in order to prevent damage to the tiller. Work the soil when it is neither too wet nor too dry. To test the moisture level of the soil, take a handful of soil and squeeze it. If it remains in a tight ball when you release your grip, it is too wet. If it crumbles, it is ready to till. Dry soil is difficult to cultivate, and valuable topsoil can be blown away when tilling on a windy day. Fall tilling presents many advantages over spring tilling. It eliminates the need to till in the spring, and it allows for earlier planting. Soil moisture and temperature conditions are favorable for decomposition of the organic matter that is turned under in the fall. Furthermore, disease organisms, insects, and perennial weeds can be reduced by tilling in the fall.

# MAINTENANCE

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## **WARNING**

WHEN SERVICING, USE ONLY IDENTICAL REPLACEMENT PARTS. USE OF ANY OTHER PARTS MAY CREATE A HAZARD OR CAUSE PRODUCT DAMAGE.

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## **WARNING**

ALWAYS WEAR SAFETY GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS DURING PRODUCT OPERATION. IF OPERATION IS DUSTY, ALSO WEAR A DUST MASK.

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## **WARNING**

BEFORE INSPECTING, CLEANING, OR SERVICING THE MACHINE, DISCONNECT THE PLUG FROM POWER SOURCE AND WAIT FOR ALL MOVING PARTS TO STOP. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS PERSONAL INJURY OR PROPERTY DAMAGE.

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## **GENERAL MAINTENANCE**

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

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## **WARNING**

DO NOT AT ANY TIME LET BRAKE FLUIDS, GASOLINE, PETROLEUM-BASED PRODUCTS, PENETRATING OILS, ETC., COME IN CONTACT WITH PLASTIC PARTS. CHEMICALS CAN DAMAGE, WEAKEN, OR DESTROY PLASTIC WHICH MAY RESULT IN SERIOUS PERSONAL INJURY. ONLY THE PARTS SHOWN ON THE PARTS LIST ARE INTENDED TO BE REPAIRED OR REPLACED BY THE CUSTOMER. ALL OTHER PARTS SHOULD BE REPLACED AT AN AUTHORIZED SERVICE CENTER.

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## **STORING THE CULTIVATOR**

The following steps should be taken before storing the cultivator for the season.

- Clean dirt, grass, and other materials from the entire unit.
- Wipe the tines with oil or spray them with silicone lubricant to prevent rusting.
- Oil the switch trigger cable and all visible moving parts. Do not remove the motor cover.
- Order new parts to replace any that are badly worn or broken.
- Store in an upright position in a clean, dry place. Store with the handles in the extended position, or loosen handle knobs and fold handles down. Do not allow switch trigger cable to become pinched when lowering the handlebar.

## **PREPARING FOR USE AFTER STORAGE**

The following steps should be taken before using the cultivator after it has been stored.

- Unfold the handles into the upright position and secure by tightening handlebar knobs. Do not allow the switch trigger cable to become pinched when raising the handlebar.
  - Follow the steps to restart the cultivator.
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# TROUBLESHOOTING

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<u>PROBLEM</u>	<u>CAUSE</u>	<u>REMEDY</u>
Motor fails to start when switch trigger is depressed.	Power cord is not plugged in or connection is loose.	Plug in the power cord.
	Household circuit breaker is tripped.	Check circuit breaker.
Motor runs but tines do not move.	Gear train failure.	Take unit to authorized service center.

# LIMITED FOUR-YEAR WARRANTY

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GREENWORKS™ hereby warrants this product, to the original purchaser with **proof of purchase**, for a period of four (4) years against defects in materials, parts or workmanship. GREENWORKS™, at its own discretion will repair or replace any and all parts found to be defective, through normal use, free of charge to the customer. This warranty is valid only for units which have been used for personal use that have not been hired or rented for industrial/commercial use, and that have been maintained in accordance with the instructions in the owners' manual supplied with the product from new.

Battery carries a one (1) year warranty against defects in workmanship and materials. Batteries must be charged in accordance with the operator's manuals directions and regulations in order to be valid.

## **ITEMS NOT COVERED BY WARRANTY:**

1. Any part that has become inoperative due to misuse, commercial use, abuse, neglect, accident, improper maintenance, or alteration; or
2. The unit, if it has not been operated and/or maintained in accordance with the owner's manual; or
3. Normal wear, except as noted below;
4. Routine maintenance items such as lubricants, blade sharpening;
5. Normal deterioration of the exterior finish due to use or exposure.

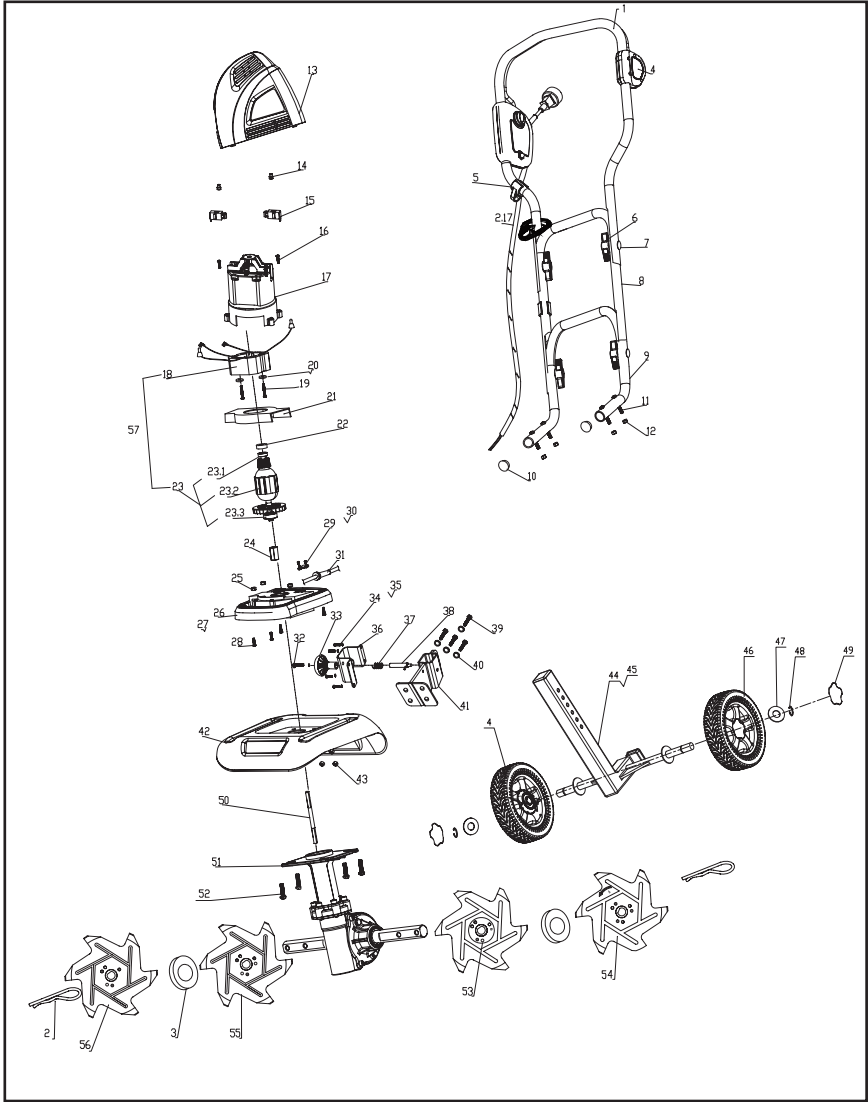
## **GREENWORKS HELPLINE (1-888-90WORKS):**

Warranty service is available by calling our toll-free helpline, 9am to 5pm EST. Monday – Friday at **1-888-909-6757 (1-888-90WORKS)**.

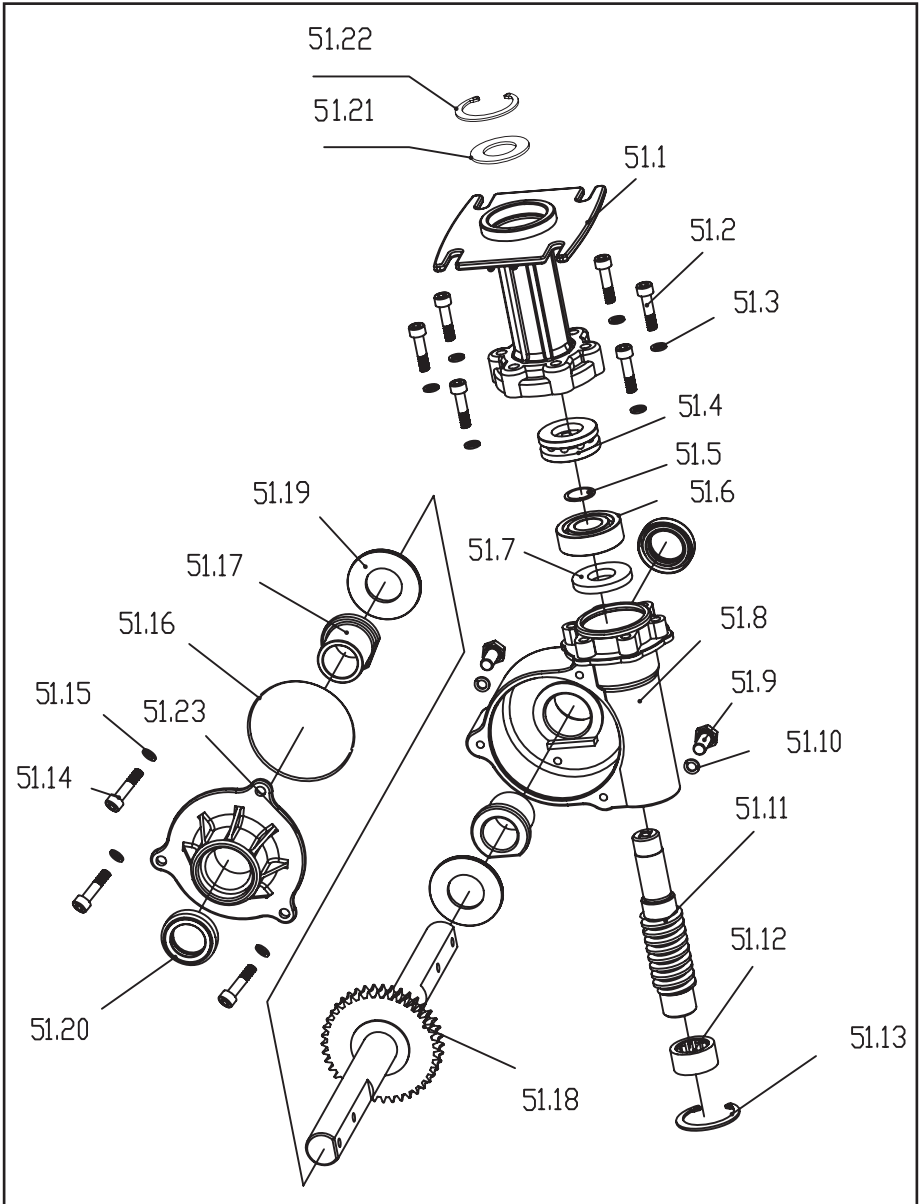
## **TRANSPORTATION CHARGES:**

Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. It is the purchaser's responsibility to pay transportation charges for any part submitted for replacement under this warranty unless such return is requested in writing by GREENWORKS.

# PARTS



# PARTS



# PARTS LIST

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ITEM #	PART NO.	QTY	DESCRIPTION
1	31106281-1	1	Upper handle ass'y and Switch
2	3320543	2	Pin
3	34901282	2	Felts
4	34203229-5	1	7" Wheel ass'y (right)
5	3411135	3	Cord retainer
6	3410835	4	Turn cap for switch handle
7	3220436	4	Bolt of handle shaft
8	33205281-2	1	Lower handle shaft
9	33206281-2	1	Middle handle shaft
10	34250100	2	Rubber shaft
11	32214283	4	Bolts
12	32208261	4	Nut M8
13	34101283-1	1	Housing
14	34219281	2	Rubber boss
15	36111281-1	2	Carbon brush ass'y
16	3220107	4	Bolt ST4.2*14-F
17	34102281	1	Motor housing
18	36102281	1	Field assy.
19	32211281	2	Bolt ST4*55
20	3290675	2	Spring washer
21	34105281	1	Ring
22	34213281	1	Rubber holder for bearing
23	31109281	1	Rotor ass'y
23.1	32102286	1	Bearing
23.2	36103281	1	Rotor
23.3	32104286	1	Bearing
24	33209281	1	Connector
25	3220343	4	Nut M6
26	34103281	1	Motor holder
27	3420235	70	Seal washer
28	3220107	4	Bolt ST4.2*14-F
29	3220107	2	Bolt ST4.2*14-F
30	3411435	1	Inner clip
31	3420102	1	Strain relief
32	3221498	1	Bolt M4*17
33	34106281-2	1	Regulator handle
34	32203281	4	Bolt M5*8
35	32916131	4	Washer $\Phi$ 5
36	33315281	1	Fixed board

# PARTS LIST

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ITEM #	PART NO.	QTY	DESCRIPTION
37	33904281	1	Spring
38	33211281	1	Clip
39	32216100	1	Bolt M6*22
40	3290699	4	Washer $\Phi$ 6
41	33303281	1	Shaft connector
42	33301281-1	1	Blade cover
43	3220343	4	Nut M6
44	33304281	1	Wheel shaft ass'y
45	34104281-1	1	Wheel shaft cap
46	34203229-5	1	7" Wheel ass'y (left)
47	3220898	2	Washer $\Phi$ 13*2
48	3290440	2	Washer $\Phi$ 12
49	34203229-7	2	Cover
50	33202281	1	Soft shaft
51	31101281	1	Gear box
51.1	33104281-1	1	Gear box connector
51.2	32204281	6	Bolt
51.3	32916131	6	Spring washer
51.4	32103281-1	1	Bearing
51.5	32903281	1	Washer $\Phi$ 15
51.6	32102268	1	Bearing 6202-2RS
51.7	34901281	1	Washer $\Phi$ 32.5* $\Phi$ 15*16
51.8	33105281-1	1	Gear box housing
51.9	32203281	2	Bolt M5*8
51.10	32916131	3	Spring washer $\Phi$ 5
51.11	33204281	1	Worm shaft
51.12	32104281	1	Bearing
51.13	32904281	1	Washer
51.14	3220608	3	Bolt M5*15
51.15	32916131	3	Washer $\Phi$ 5
51.16	34207281	1	Ring
51.17	33901281	2	Bearing $\Phi$ 25* $\Phi$ 18*28
51.18	33205282	1	Turbo ass'y
51.19	33312281-1	2	Ring
51.20	3290143	2	Outer tube
51.21	33306281	1	Washer $\Phi$ 32* $\Phi$ 19
51.22	32902281	1	Washer $\Phi$ 32
51.23	33103281-1	1	Gear box cover
52	32205281	4	Bolts

# PARTS LIST


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ITEM #	PART NO.	QTY	DESCRIPTION
53	31103283	1	Blade ass'y B
54	31102283	1	Blade ass'y A
55	31114283	1	Blade ass'y C
56	31115283	1	Blade ass'y D
<b>57</b>	31111281	1M	<b>Motor</b>



**TOLL-FREE HELPLINE: 1-888-90WORKS** (888.909.6757)

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