greenworks which



ΕN **MOWER OPERATOR MANUAL**

FR **TONDEUSE** MANUEL DE L'UTILISATEUR

ES CORTACÉSPED MANUAL DEL OPERADOR



MO48L2211 **LME472**

www.greenworkstools.com



THIS MACHINE MUST HAVE TWO BATTERIES TO RUN!





- Must use (2) fully charged Greenworks 24V battery packs.
- Do not use battery packs other than Greenworks 24V.
- Using only one battery pack will not start the machine.



- Ensure both batteries are charged 100%.
 - If each battery has a different charge state, the run-time of the machine is subject to the lowest powered battery (For example: one battery is charged 100%, and the other is charged 50%, the unit will only run until the 50% battery is depleted).
 - When using (2) batteries with different amp hours (Ah), the machine will run until the lower (Ah) battery is depleted.

'n

CETTE MACHINE DOIT AVOIR DEUX BATTERIES POUR FONCTIONNER!





- Doit utiliser (2) blocs-piles Greenworks 24 V entièrement chargés.
- N'utilisez pas de batteries autres que Greenworks 24 V.
- · L'utilisation d'une seule batterie ne démarrera pas la machine.



- · Assurez-vous que les deux batteries sont entièrement chargées.
- Si l'état de charge de chaque batterie est différente, l'autonomie de la machine est soumise à la batterie la moins alimentée (par ex., : une batterie est entièrement chargée et l'autre ne l'est qu'à 50 %, l'unité ne fonctionnera que jusqu'au 50 % de la batterie est épuisée).
- Lors de l'utilisation de (2) batteries ayant différents ampères-heures (Ah), la machine fonctionnera jusqu'à ce que la batterie inférieure (Ah) soit épuisée.



¡ESTA MÁQUINA DEBE TENER DOS BATERÍAS PARA FUNCIONAR!





- Deben utilizarse (2) baterías Greenworks de 24V totalmente cargadas.
- No utilice baterías que no sean de Greenworks 24V.
- La utilización de una sola batería no hará que la máquina se ponga en marcha.



- · Asegúrese de que ambas baterías estén cargadas al 100%.
- Si cada batería tiene un estado de carga diferente, el tiempo de funcionamiento de la máquina está sujeto a la batería de menor carga (Por ejemplo: una batería está cargada al 100% y la otra al 50%, la unidad solo funcionará hasta que la batería del 50% se agote).
- Cuando se utilizan (2) baterías con diferentes amperios hora (Ah), la máquina funcionará hasta que la batería inferior (Ah) se agote.

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1 PURPOSE

This machine is used for domestic lawn mowing. The cutting blade must be approximately parallel to the ground. All four wheels must touch the ground while you mow.

2 OVERVIEW



- Bail switch
- 2 Start button
- 3 Upper handle
- 4 Lower handle
- 5 Rear discharge door
- 6 Battery door
- 7 Grass catcher
- 8 Mulch plug

3 READ ALL INSTRUCTIONS

DANGER

This machine was built to be operated according to the rules for safe operation included in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating hands and feet and throwing objects. Failure to observe all safety instructions could result in serious injury or death.

▲ WARNING

When using electric lawn mowers, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury. These basic precautions include the following:

3.1 CHILDREN AND BYSTANDERS

Tragic accidents can occur if the operator is not alert to the presence of children or bystanders.

- Keep the area of operation clear of all persons, particularly small children, and pets.
- Use extreme care when approaching blind corners, doorways, shrubs, trees, or other objects that may obscure your vision of a child or bystander. Keep children, bystanders, helpers and pets at least 100 feet (30m) from the mower while it is in operation. Stop the machine if anyone enters the area.
- Never allow children under 14 years old to operate a
 power mower. Operators 14 years old and over should
 fully read and understand the operator's manual and
 safety rules. Only responsible individuals who are
 familiar with these rules of safe operation should be
 allowed to use this machine.

3.2 GENERAL OPERATION

- Read this operator's manual carefully in its entirety before assembling or operating this machine. Read, understand, and follow all instructions on the machine and in the manuals before operation. Familiarize yourself with the controls and proper use of this machine before operation. Save this manual for future and regular reference.
- Do not use the lawn mower for any job except that for which it is intended. Your lawn mower has been designed to perform only one job: cut grass.
- Never attempt to make a wheel height adjustment while the motor is running.
- Don't force the lawn mower; it will do the job better and more safely at the rate for which it was designed.
- Don't overreach, keep proper footing and balance at all times. Many injuries occur as a result of the mower being pulled over the foot during a fall caused by slipping or tripping. A slip and fall can cause serious personal injury. If you feel you are losing your footing, release the control handle immediately and the blade will stop rotating within three seconds
- Thoroughly inspect the area where the mower is to be used and remove all stones, sticks, wires, dog bones, and other foreign objects.
- Prevent unintentional starting. Ensure the switch is in the
 off position before connecting to battery pack, picking up
 or carrying the mower. Carrying the mower with your
 finger on the switch or energizing mower that has the
 switch on invites accidents.

- Never pull the mower back toward you while you are walking. If you must back the mower away from a wall or obstruction, first look down and behind you to avoid tripping, and then follow these steps:
 - Step back from the mower in order to fully extend your arms.
 - · Be sure that you are well balanced.
 - · Pull the mower back slowly.
- Remove the battery pack from the mower before making any adjustments, changing accessories, or storing appliance. Such preventive safety measures reduce the risk of starting the mower accidentally.
- Before and while moving backwards with the mower, look behind and down for small children and other people.
- Do not operate the mower while under the influence of alcohol or drugs. Stay alert and watch what you are doing at all times. Use common sense and do not operate the lawn mower when you are tired.
- Always wear safety glasses or safety goggles during operation and while performing an adjustment or repair to protect your eyes. Thrown objects that ricochet can cause serious injury to the eyes. Always use a face or dust mask if the operation is dusty.
- Keep clear of the discharge opening at all times. Do not put hands or feet near rotating parts or under the cutting deck. Contact with the blade can amputate hands and feet.
- Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. Also, avoid discharging material against walls or obstructions, which may cause discharged material to ricochet back toward the operator.
- To help avoid the blade or an injury from a thrown objects, stay in the operator zone behind the handles.
- A missing or damaged discharge cover can cause blade contact or injuries from thrown objects.
- Objects struck by the lawn mower blade can cause severe injuries to persons. The lawn should always be carefully examined and cleared of all objects prior to each mowing.
- Stop the blade when crossing gravel drives, walks or roads.
- Follow all charging instructions and do not charge the battery pack or mower outside of the temperature range specified in the instructions. Charging improperly or at temperatures outside of the specified range may damage the battery and increase the risk of fire.
- If lawn mower strikes a foreign object, follow these steps:
 - · Release the bail switch to disengage the motor.
 - · Remove the battery.
 - · Inspect for damage.
 - Repair any damaged parts before restarting and operating the lawn mower.
- Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.

- Dress properly; do not wear loose clothing or jewelry that
 can be caught in moving parts. Use of safety gloves and
 proper footwear is recommended when working outdoors.
 Wear sturdy, rough-soled work shoes and close-fitting
 slacks and shirts. Shirts and pants that cover the arms and
 legs and steel-toed shoes are recommended. Never
 operate this machine in bare feet, sandals, slippery or
 lightweight (e.g., canvas) shoes.
- Do not modify or attempt to repair the mower or the battery pack (as applicable) except as indicated in the instructions for use and care.
- · Wear protective hair covering to contain long hair.
- Avoid dangerous environments; do not use the lawn mower in damp/wet locations or if it is raining.
- Store idle lawn mower indoors. When not in use, appliances should be stored indoors in dry, and high or locked-up place – out of reach of children. Always remove the battery from the mower before storing.
- Mow only in daylight or good artificial light. Walk, never run while operating.
- If the mower should start to vibrate abnormally, immediately stop the motor, remove the battery and check for the cause. Vibration is generally a warning that the mower is not functioning properly.
- Check bag frequently for deterioration and wear, and replace worn bags. Check that replacement bags comply with the original manufacturer's recommendations or specifications.
- Before cleaning the mower, unclogging or removing the grass bag, mulching insert, or side discharge chute, turn the motor off and wait until the blade comes to a complete stop, then remove the battery pack. The cutting blade continues to rotate for a few seconds after the motor is shut off. Never perform these functions until you are sure the blade has stopped rotating.
- Keep cutting edges clean and sharp to ensure best performance.
- Periodically inspect safety devices and cords for damage.
 If damaged do not operate the unit until it has been repaired by an authorized service professional.
- Never operate the mower without the proper discharge cover, grass bag, mulching insert, side discharge chute, or other safety devices in place and working. Never operate the mower with damaged safety devices. Failure to do so can result in personal injury.
- Use only approved batteries and chargers. Non-approved batteries and chargers may cause damage to the mower or injure the operator.
- Do not dispose of the battery in a fire. The cells could catch fire or explode. Check with local codes and waste management for proper disposal instructions.
- When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.

- Do not open or destroy the battery. Electrolytes contained within the battery are corrosive and may cause damage to eyes or skin if released. It may be toxic if swallowed.
- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
- Do not expose a battery pack or appliance to fire or excessive temperature. Exposure to fire or temperature above 130°C may cause explosion.
- Exercise care in handling batteries to avoid shorting the battery with conducting materials such as rings, bracelets, keys, etc. The battery or conductor may overheat and cause burns if contact with said materials is made.
- Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.

3.3 SLOPE OPERATION

Slopes are a major factor related to slip-and-fall accidents, which can result in severe injury. Operation on slopes requires extra caution. If you feel uneasy on a slope, do not mow it.

Do:

- Mow across the face of slopes; never mow up and down. Exercise extreme caution when changing direction on slopes.
- Watch for holes, ruts, rocks, hidden objects, or bumps which can cause you to slip or trip. Tall grass can hide obstacles.

Do not:

- Mow excessively steep slopes.
- Mow near drop-offs, ditches or embankments; you could lose your footing or balance.
- · Mow slopes greater than 15 degrees.
- Mow on wet grass. Unstable footing could cause slipping.

3.4 SERVICE/MAINTENANCE

- Check the blade and the motor (machine) mounting bolts at frequent intervals for proper tightness.
- Replace the blade if it is bent or cracked. An unbalanced blade causes vibration that could damage the motor drive unit or cause personal injury.
- Keep all nuts, bolts, and screws tight in order to ensure the equipment is in safe working condition.
- Do not wash with a hose; avoid getting water in motor and electrical connections.
- Never remove or tamper with safety devices. Check their proper operation regularly. Never do anything to interfere with the intended function of a safety device or to reduce the protection provided by a safety device.

- Keep mower free of grass, leaves, or other debris build up. Allow mower to cool before storing.
- Never make any adjustments or repairs with the motor running
- Always remove battery pack from mowers before adjusting, cleaning, or repairing.
- Check grass catcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary.
- Sharpen a dull blade equally at each end to maintain the balance.
- Keep guards in place and in working order. Mower blades are sharp, and can cut. Wrap the blades or wear gloves, and use extra caution when servicing.
- Clean the blade thoroughly and check its balance by supporting it horizontally on a thin nail through its center hole. The nail should also be in a horizontal position. If either end of the blade rotates downward, remove some metal from the heavy or lower end until the blade is balanced. It is balanced when neither end drops.
- Use identical replacement blades only.
- Maintain lawn mower with care. Keep cutting edges sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
 Inspect lawn mower cord periodically and if damaged, have it repaired by an authorized service facility.
- If situations occur that are not covered in this manual, use care and good judgment or contact Customer Service for assistance.
- Never operate the mower without proper guards, plates, or other safety protective devices in place.

The recommended ambient temperature range:

Item	Temperature
Mower storage temperature range	32°F (0°C) - 113°F (45°C)
Mower operation temperature range	32°F (0°C) - 113°F (45°C)
Battery charging temperature range	39°F (4°C) - 104°F (40°C)
Charger operation temperature range	39°F (4°C) - 104°F (40°C)
Battery storage temperature range	32°F (0°C) - 113°F (45°C)
Battery discharging temperature range	32°F (0°C) - 113°F (45°C)

4 SYMBOLS ON THE PRODUCT

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

Symbol	Name	Explanation
V	Volt	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
min	Minutes	Time
/min	Per Minute	Revolutions, strokes, surface speed, orbits etc., per minute
\sim	Alternating Current	Type of current
===	Direct Current	Type or a characteristic of current
n _O	No Load Speed	Rotational speed, at no load
A	Safety Alert	Precautions that involve your safety.
	Eye Protection	Always wear eye protection with side shields marked to comply with ANSI Z87.1 when operating this equip- ment.
	WARNING Wet Con- ditions	Do not expose the product to rain or moist conditions.
	Read Opera- tor's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Maintain Safety Devi- ces	Do not open or remove safety devices while the tool is running.
₹ <u>1</u>	Looking Behind While Backing	Look down and behind first to avoid tripping when pulling back.
	DANGER Keep Hands and Feet Away	To reduce the risk of injury, keep hands and feet away from rotating parts. Do not operate unless discharge cover or grass bag is in its proper place. If damaged, replace immediately.
1 • • • • • • • • • • • • • • • • • • •	DANGER Keep By- standers Away	All visitors should be kept at a distance from work area.
	DANGER Thrown Deb- ris	Remove objects that can be thrown by the blade in any direction. Wear safety glasses.

Symbol	Name	Explanation
	Steep Slope	Use extra caution on slopes. do not mow slopes greater than 15 degrees.

5 RISK LEVELS

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

SYM- BOL	SIGNAL	MEANING
\triangle	DANGER	Indicates an imminently haz- ardous situation, which, if not avoided, will result in death or serious injury.
\triangle	WARNING	Indicates a potentially hazard- ous situation, which, if not avoided, could result in death or serious injury.
\triangle	CAUTION	Indicates a potentially hazard- ous situation, which, if not avoided, may result in minor or moderate injury.
	CAUTION	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.

6 ENVIRONMENTALLY SAFE BATTERY DISPOSAL





The toxic and corrosive materials below are in the batteries used in this machine: Lithium-Ion, a toxic material.

▲ WARNING

Discard all toxic materials in a specified manner to prevent contamination of the environment. Before discarding damaged or worn out Li-ion battery, contact your local waste disposal agency, or the local Environmental Protection Agency for information and specific instructions. Take the batteries to a local recycling and/or disposal center, certified for lithium-ion disposal.

▲ WARNING

If the battery pack cracks or breaks, with or without leaks, do not recharge it and do not use. Discard it and replace with a new battery pack. DO NOT TRY TO REPAIR IT! To prevent injury and risk of fire, explosion, or electric shock, and to avoid damage to the environment:

- Cover the terminals of the battery with heavy-duty adhesive tape.
- DO NOT try to remove or destroy any of the battery pack components.
- · DO NOT try to open the battery pack.
- If a leak develops, the released electrolytes are corrosive and toxic. DO NOT get the solution in the eyes or on skin, and do not swallow it.
- DO NOT put these batteries in your regular household trash
- DO NOT incinerate.
- DO NOT put them where they will become part of any waste landfill or municipal solid waste stream.
- · Take them to a certified recycling or disposal center.

7 PROPOSITION 65

▲ WARNING

This product contains a chemical known to the state of California to cause cancer, birth defects or other reproductive harm. 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;
- · 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.

Save these instructions.

8 INSTALLATION

A WARNING

Do not change or make accessories that are not recommended by the manufacturer.

▲ WARNING

Do not put in the safety key or the battery pack until you assemble all the parts.

8.1 UNPACK THE MACHINE

▲ WARNING

Make sure that you correctly assemble the machine before use

▲ WARNING

- If the parts are damaged, do not use the machine.
- If you do not have all the parts, do not operate the machine.
- If the parts are damaged or missing, speak to the service center.
- 1. Open the package.
- Read the documentation in the box.
- 3. Remove all the unassembled parts from the box.
- 4. Remove the machine from the box.
- Discard the box and package in compliance with local regulations.

8.2 UNFOLD AND ADJUST THE HANDLE



- 1. Pull up and back the upper handle (3) to lift the handle into operating position.
- 2. Tighten the lower handle (4) with quick-release levers (9) on the two sides.

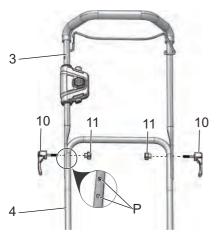
▲ ATTENTION

Make sure that the two handles are in the same position.

▲ WARNING

Do not make damage to the cables when you fold or unfold the handle.

8.3 INSTALL THE UPPER HANDLE

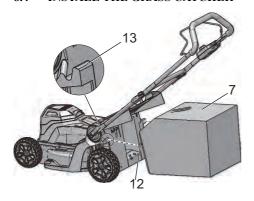


- 1. Align the holes in the upper handle (3) and the lower handle (4).
- 2. Put the cam locks (10) through the holes.
- 3. Tighten the knobs (11) onto the cam locks.
- 4. There are two positions (P) available to choose while installing the upper handle.
- 5. Do the same operation on the other side.

▲ WARNING

Use caution when installing upper handle to avoid potential finger pinches.

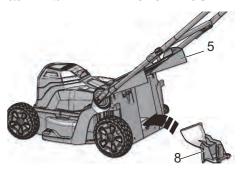
8.4 INSTALL THE GRASS CATCHER



1. Remove the mulch plug.

- 2. Open the rear discharge door (5) and hold it.
- 3. Hold the the grass catcher (7) by its handle (12) and put the hooks (12) over the slots (13).
- 4. Close the rear discharge door.

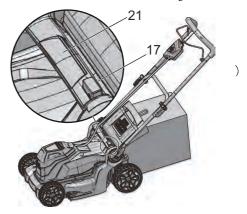
8.5 INSTALL THE MULCH PLUG



- 1. Remove the grass catcher.
- 2. Open the rear discharge door (5) and hold it.
- 3. Hold the mulch plug (8) by its handle and fit it in the discharge chute.
- 4. Close the rear discharge door.

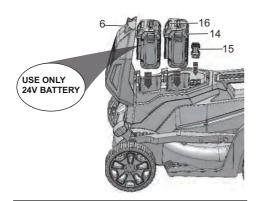
8.6 SET THE BLADE HEIGHT

The machine can be set to different blade heights.



- Push the height adjustment button (17), Ifit the height adjustment bar (21) to a higher position to increase the blade height.
- Push the height adjustment button, press the height adjustment bar to a lower position to decrease the blade height.

8.7 INSTALL THE BATTERY PACK



▲ WARNING

- If the battery pack or charger is damaged, replace the battery pack or the charger.
- Stop the machine and wait until the engine stops before you install or remove the battery pack.
- Read, know, and do the instructions in the battery and charger manual.

▲ WARNING

USE ONLY 24V BATTERY, DO NOT USE DUAL-VOLTAGE 24/48V BATTERY.

i NOTE

Both batteries should be installed into the compartments in order to start the machine.

- 1. Open the battery door (6).
- 2. Align the lift ribs on the battery pack (14) with the grooves in the battery compartment.
- 3. Push the battery pack into the battery compartment until the battery pack locks into place.
- 4. When you hear a click, the battery pack is installed.
- 5. Do the same operation with the other battery.
- 6. Close the battery door.

i NOTE

The motor starts only when you put in the safety key (15).

8.8 REMOVE THE BATTERY PACK

- 1. Open the battery door (6).
- Push and hold the battery release button (16).
- 3. Remove the battery packs (14) from the machine.

9 OPERATION

▲ WARNING

Wear eye protection during operation.

9.1 START THE MACHINE



- 1. Put in the safety key.
- Push and hold the start button (2).
- 3. While you hold the start button, pull the bail switch (1) in the direction of the handle bar.
- 4. Release the start button to start the machine.

9.2 STOP THE MACHINE

1. Release the bail switch to stop the machine.

▲ WARNING

Wait until the blades fully stop before you start the machine again. Do not quickly turn the machine off and on.

▲ WARNING

Always remove the safety key and battery pack after you complete the work.

9.3 EMPTY THE GRASS CATCHER

- 1. Stop the machine.
- Remove the safety key.
- 3. Remove the battery pack.
- 4. Open the rear discharge door and hold it.
- Hold the grass catcher by its handle and unhook it from the slots.
- 6. Close the rear discharge door.
- 7. Empty the grass catcher.

10 MAINTENANCE

▲ WARNING

Remove the safety key and battery pack from the machine before maintenance.

▲ WARNING

Keep the motor and battery pack free from grass, leaves or too much grease.

▲ CAUTION

Use only approved replacement parts.

▲ CAUTION

Do not let brake fluids, gasoline, petroleum-based materials touch the plastic parts. Chemicals can cause damage to the plastic, and make the plastic unserviceable.

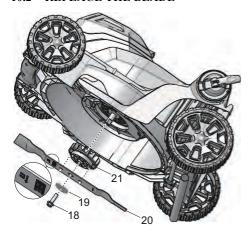
▲ CAUTION

Do not use strong solvents or detergents on the plastic housing or components.

10.1 GENERAL MAINTENANCE

- Before each use, examine the machine for damaged, missing, or loose parts such as screws, nuts, bolts and caps.
- · Tighten correctly all the fasteners and caps.
- Clean the machine with a dry cloth. Do not use water.

10.2 REPLACE THE BLADE



A WARNING

Use only approved replacement blade.

▲ WARNING

Wear heavy gloves or wind cloth around the blade when you touch the blade.

- 1. Stop the machine.
- 2. Make sure that the blade fully stops.
- 3. Remove the safety key and battery pack.
- 4. Turn the machine to its side.
- 5. Use a piece of wood to prevent the movement of the
- Remove the blade bolt (18), the spacer (19) with a wrench or socket.
- 7. Remove the blade (20) and fan (21).
- Install the new blade as shown in the figure. Make sure the arrow-shaped holes on the blade engage the posts on the fan.
- 9. Put in the spacer and tighten the balde bolt.

10.3 STORE THE MACHINE

- Clean the machine before storage.
- Make sure the motor is not hot when you put the machine into storage.
- Make sure that the machine does not have loose or damaged parts. If it is necessary, do these steps/ instructions:
 - Replace the damaged parts.
 - Tighten the bolts.
 - Speak to a person of an approved service center.
- Store the machine in a dry area.
- Make sure that children cannot come near the machine.

You may lower the handle(s) before you put the machine into the storage.

- Fully loosen the handle fasteners on the sides of the handle(s).
- 2. Fold away the handle(s).
- 3. Do not pinch or trap the cables.

11 TROUBLESHOOTING

Problem	Possible cause	Solution
The handle is not in position.	The bolts are not engaged correctly.	Adjust the height of the handle and make sure that the knobs and bolts are aligned cor- rectly.

Problem	Possible cause	Solution
The machine does not start.	The battery capacity is low.	Charge the battery pack.
	The bail switch is defective.	Replace the bail switch.
	The safety key is not put in.	Put in the safety key.
The machine cuts grass unevenly.	The lawn is rough.	Examine the mowing area.
	The blade height is not set correctly.	Adjust the blade/ cutting height to a higher position.
The machine does not mulch correctly.	Wet grass clip- pings attach to the deck.	Wait until the grass dries before mowing.
	The mulch plug is missing.	Install the mulch plug.
The machine is hard to push.	The grass is too tall, or the blade height is too low.	Increase the blade/ cutting height.
	The grass catcher and the blade drags in thick grass.	Empty the grass clippings from the grass catcher.
There is a high vibration in the machine.	The blade is unbalanced and worn.	Replace the blade.
	The motor shaft is bent.	Stop the motor. Remove the safety key and battery pack. Inspect for damage. Repair the machine before you start it again.
The machine stops during mowing.	The blade height is too low.	Increase the blade/ cutting height.
	The battery pack is out of power.	Charge the battery pack.
	The grass clip- pings attach to the deck or the blade.	Remove the bat- tery pack and check the deck.
	Operation temperature of the machine is too high.	Cool the machine.

^{*} If you cannot find the solution to these problems, go to the service center.

12 TECHNICAL DATA

Voltage	(2 X 24V) 48 V
No load speed	3600 RPM
Deck size	17"
Height adjust- ments	1 3/8 - 3 3/8" (3.5 - 8.5 cm)
Functions	2-in-1 Mulch & Rear Bag
Weight (with- out battery pack)	34.2 lbs (15.5 kg)
Battery model	BAG709/BAG710 and other BAG series
Charger model	CAG812/CAG817 and other CAG series
Double-insula- ted construction	

13 LIMITED WARRANTY



Greenworks hereby warranties this product, to the original purchaser with proof of purchase, for a period of three (3) 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 purchased or rented for industrial/commercial use, and that have been maintained in accordance with the instructions in the owners' manual supplied with the product when new.

ITEMS NOT COVERED BY WARRANTY:

- 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;
- Routine maintenance items such as lubricants, blade sharpening;
- Normal deterioration of the exterior finish due to use or exposure.

HELPLINE:

Warranty service is available by calling our toll-free helpline at 1-888-909-6757.

TRANSPORTATION CHARGES:

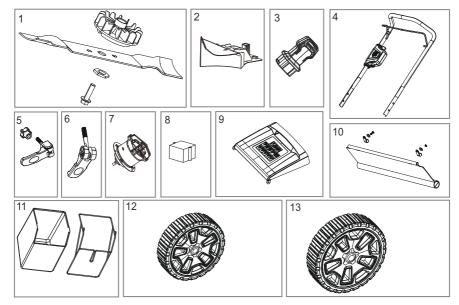
Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. It is the purchaser's responsibility to pay transportation charges for any part submitted for replacement under this warranty unless such return is requested in writing by Greenworks.

USA address: Canadian address:

Greenworks Tools Greenworks Tools Canada, Inc.
P.O. Box 1238 P.O. Box 93095, Newmarket,
Ontario

Mooresville, NC 28115 L3Y 8K3

14 EXPLODED VIEW



No.	Part No.	Qty.	Description
1	R0202426-00	1	Blade assembly kit
2	RB341041559	1	Mulch plug
3	R0200075-00	1	Safety key
4	R0202427-00	1	Upper control assembly
5	R0201858-00	2	Upper handle cam lock/knob
6	R0202428-00	2	Lower handle quick-release lever

No.	Part No.	Qty.	Description
7	R0202429-00	1	Motor
8	R0202430-00	1	PCB
9	R0202431-00	1	Rear discharge flap
10	R0202432-00	1	Rear shield
11	R0202433-00	1	Grass catcher
12	R0200928-00	2	Front wheel assembly
13	R0200929-00	2	Rear wheel assembly

greenworks

EN DRILL DRIVER OPERATOR MANUAL

FR PERCEUSE-VISSEUSE MANUEL D'OPÉRATEUR

ES TALADRO ATORNILLADOR MANUAL DEL OPERADOR



24V 1/2" Brushless Drill / Driver (35 Nm)

DD24L00

DDG401

www.greenworkstools.com

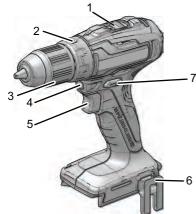
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1 DESCRIPTION

1.1 PURPOSE

This machine is used to drill in all types of wood materials (lumber, plywood, paneling, composition board, and hard board), ceramics, plastics, fiberglass, laminates and metals.

1.2 OVERVIEW



- 1 High Speed / Low Speed
- 2 Torque Adjustment
- 3 1/2" Keyless Chuck
- 4 LED Light

- ...
- 6 Belt Clip
- 7 Forward / Reverse

2 GENERAL POWER TOOL SAFETY WARNINGS

▲ WARNING

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your batteryoperated (cordless) power tool.

2.1 WORK AREA SAFETY

- Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

2.2 ELECTRICAL SAFETY

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions.
 Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges and moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

2.3 PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A lapse of attention while operating power tools may result in serious personal injury.
- Use personal protection. Always wear eye protection.
 Protective products such as dust mask, non-skid safety shoes, hard hat or hearing protection used appropriately will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off position before connecting to power source and/or battery pack and when picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not over-reach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust related hazards.

2.4 POWER TOOL USE AND CARE

- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean. Properly
 maintained cutting tools with sharp cutting edges are less
 likely to bind and are easier to control.
- Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.
- Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

2.5 BATTERY TOOL USE AND CARE

- Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or fire.

- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with plenty of soap and water. If liquid contacts eyes, immediately seek medical help. Liquid ejected from the battery may cause irritation or burns.
- Do not use a battery pack or tool that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 130 °C may cause explosion.
- Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

2.6 SERVICE

- Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.
- Never service damaged battery packs. Service of battery packs should only be performed by the manufacturer or authorized service providers.

3 DRILL SAFETY WARNINGS

- Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring. Cutting accessory or fasteners contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- Never operate at higher speed than the maximum speed rating of the drill bit. At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
- Wear ear protectors when impact drilling. Exposure to noise can cause hearing loss.
- Apply pressure only in direct line with the bit and do not apply excessive pressure. Bits can bend causing breakage or loss of control, resulting in personal injury.
- Always start drilling at low speed and with the bit tip in contact with the workpiece. At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
- Know your power tool. Read operator manual carefully. Learn its applications and limitations, as well as the specific potential hazards related to this power tool. Obey this instruction will reduce shock, fire or serious injury.
- Always wear safety glasses with side shields marked to comply with ANSI Z87.1. Obey this instruction will reduce the risk of serious injury.
- Protect your lungs. Wear a face or dust mask if the operation is dusty. Obey this instruction will reduce the risk of serious injury.
- Protect your hearing. Wear hearing protection during extended periods of operation. Obey this instruction will reduce the risk of serious injury.

4 SYMBOLS ON THE PRODUCT

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

Symbol	Explanation	
V	Voltage	
===	Direct current	
&	Read all safety warnings and all instructions.	
A	Safety alert	
	Wear eye protection	

Symbol	Explanation
	Wear ear protection
†	Low speed
=3	High speed
	Do not touch rotating part.

5 RISK LEVELS

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

SYM- BOL	SIGNAL	MEANING
\triangle	DANGER	Indicates an imminently haz- ardous situation, which, if not avoided, will result in death or serious injury.
\triangle	WARNING	Indicates a potentially hazard- ous situation, which, if not avoided, could result in death or serious injury.
\triangle	CAUTION	Indicates a potentially hazard- ous situation, which, if not avoided, may result in minor or moderate injury.
	CAUTION	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.

6 PROPOSITION 65

▲ WARNING

This product contains a chemical known to the state of California to cause cancer, birth defects or other reproductive harm. 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;
- · 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.

Save these instructions.

7 INSTALLATION

7.1 UNPACK THE MACHINE

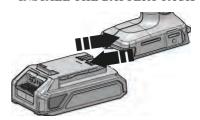
▲ WARNING

Make sure that you correctly assemble the machine before

▲ WARNING

- If the parts are damaged, do not use the machine.
- If you do not have all the parts, do not operate the machine
- If the parts are damaged or missing, speak to the service center.
- 1. Open the package.
- 2. Read the documentation in the box.
- 3. Remove all the unassembled parts from the box.
- 4. Remove the machine from the box.
- Discard the box and package in compliance with local regulations.

7.2 INSTALL THE BATTERY PACK



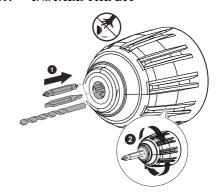
▲ WARNING

- If the battery pack or charger is damaged, replace the battery pack or the charger.
- Stop the machine and wait until the motor stops before you install or remove the battery pack.
- Read, know, and do the instructions in the battery and charger manual.
- 1. Align the lift ribs on the battery pack with the grooves in the battery compartment.
- Push the battery pack into the battery compartment until the battery pack locks into place.
- 3. When you hear a click, the battery pack is installed.

7.3 REMOVE THE BATTERY PACK

- 1. Push and hold the battery release button.
- 2. Remove the battery pack from the machine.

7.4 INSTALL THE BIT



- 1. Push forward / reverse switch in "neutral" position to lock the trigger.
- 2. Turn the chuck counter-clockwise to open.
- 3. Tilt the machine upwards to keep the bit from falling out
- 4. Put the bit into the opening of the chuck.
- Make sure that the bit is centered, then turn the chuck clock-wise to tighten.

i NOTE

Do not use a wrench to tighten or loosen the chuck.

▲ WARNING

Put the bit straight into the chuck jaws. Do not put the bit into the chuck jaws at an angle then tighten.

7.5 REMOVE THE BIT

- Push forward / reverse switch in "neutral" position to lock the trigger.
- 2. Turn the chuck counter-clockwise to open.
- 3. Remove the bit.

▲ WARNING

Be prepared for binding at bit breakthrough. When these situations occur, drill has a tendency to grab and kick opposite to the direction of rotation and could cause loss of control when breaking through material. If not prepared, this loss of control can result in possible serious injury.

8 OPERATION

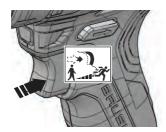
▲ WARNING

Always wear eye protection.

▲ WARNING

Do not use any attachments or accessories not recommended by the manufacturer of this product.

8.1 START THE MACHINE



i NOTE

The machine can not work until the forward / reverse switch is pushed fully to the left or right. Do not operate the machine at low speeds for extended periods of time.

1. Pull the trigger to turn the drill ON.

Variable speed

The machine has a variable speed switch that delivers higher speed with increased trigger pressure and lower speed with decreased trigger pressure.

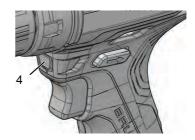
8.2 STOP THE MACHINE

1. Release the trigger to turn the machine OFF.

▲ WARNING

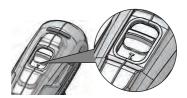
Release the trigger and allow the machine to come to a complete stop.

8.3 LED LIGHT



The LED light illuminates when the trigger is depressed. It provides extra light for increased visibility.

8.4 TWO-SPEED SWITCH



The machine has a two-speed switch designed for drilling or driving at LO (1) or HI (2) speeds. A slide switch is on top of the machine

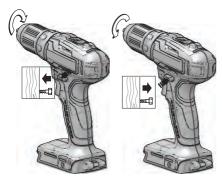
- When you use the machine in the LO (1) speed, the speed decreases and the machine has more power and torque.
- 2. When you use the machine in the HI (2) speed, the speed increases and the machine has less power and torque.

▲ WARNING

Use LO (1) speed for high power and torque applications and HI (2) speed for fast drilling or driving applications.

8.5 FORWARD / REVERSE SWITCH

The machine has the switch (forward / reverse) above the trigger to change rotation.



- When the switch is on the left side of the trigger, the bit direction is forward (tightening).
- 2. When the switch is on the right side of the trigger, the bit direction is reversed (loosening).
- Put the switch in the OFF (center lock) position to help decrease the possibility of accidental starting when not operating.

▲ WARNING

Release the trigger and let the chuck come to a complete stop.

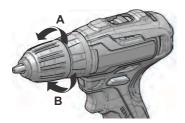
▲ WARNING

Let the chuck to come to a complete stop before changing the direction of rotation.

i NOTE

The machine does not operate until the forward / reverse switch is pushed fully to the left or right.

8.6 CLUTCH SETTINGS



- 1. A. The direction to decrease torque.
- 2. B. The direction to increase torque.

8.7 DRILL MATERIALS

 When drilling hard, smooth surfaces, use a center punch to mark the desired hole location. This can prevent the drill bit from slipping off-center as the hole is started.

- When drilling metals, use a light oil on the drill bit to keep it from overheating. The oil can prolong the life of the bit and increase the drilling action.
- If the bit jams in the workpiece or if the drill falls, stop to use the machine immediately. Remove the bit from the workpiece and analyze the cause of the jam.

i NOTE

This drill has an electric brake. When the switch trigger is released, the chuck stops turning. When the brake is functioning properly, sparks can be visible through the vent slots on the housing. This is normal and is the action of the brake.

WOOD DRILLING

For maximum performance, use high speed steel bits for wood drilling.

- Operate the machine at a very low speed to prevent the bit from slipping off the starting point. Increase the speed as the drill bit bites into the material.
- When drilling through holes, put a piece of wood behind the workpiece to prevent ragged or splintered edges on the back side of the hole.

METAL DRILLING

For maximum performance, use high speed steel bits for metal or steel drilling.

- Operate the machine at a very low speed to prevent the bit from slipping off the starting point.
- Hold consistent speed and pressure to avoid overheating the bit. Applying too much pressure can: Overheat the drill; Wear the bearings; Bend or burn bits; and Produce off-center or irregular-shaped holes.
- When drilling large holes in metal, start with a small bit, then finish with a large bit. Also, lubricate the bit with oil to improve drilling action and increase bit life.

9 MAINTENANCE

▲ CAUTION

Do not let brake fluids, gasoline, petroleum-based materials touch the plastic parts. Chemicals can cause damage to the plastic, and make the plastic unserviceable.

▲ CAUTION

Do not use strong solvents or detergents on the plastic housing or components.

WARNING

Remove the battery pack from the machine before maintenance

9.1 CLEAN THE MACHINE

A CAUTION

The machine must be dry. Humidity can cause risks of electrical shocks.

- Clear the unwanted material out of the air vent with a vacuum cleaner.
- Do not spray the air vent or put the air vent in solvents.
- Clean the housing and the plastic components with a moist and soft cloth.

10 TECHNICAL DATA

Voltage	24 V
Motor	Brushless
No Load Speed	0-380 / 0-1450 RPM
Clutch Settings	18 Positions + Drill
Torque	310 In-lbs. / 35 N.m.
Weight Without Battery	2.27 lbs (1.03 kg)
Battery Model	BAG708, BAG709, BAG710 and other BAG series
Charger Model	29862, 29972, CAG817 and other CAG series

The recommended ambient temperature range:

Item	Temperature	
Appliance storage temperature range	32°F (0°C) - 158°F (70°C)	
Appliance operation temperature range	32°F (0°C) - 104°F (40°C)	
Battery charging temperature range	39°F (4°C) - 104°F (40°C)	
Charger operation temperature range	39°F (4°C) - 104°F (40°C)	
Battery storage temperature range	32°F (0°C) - 73°F (23°C)	
Battery discharging temperature range	32°F (0°C) - 113°F (45°C)	

11 LIMITED WARRANTY



Greenworks hereby warranties this product, to the original purchaser with proof of purchase, for a period of three (3) 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.

ITEMS NOT COVERED BY WARRANTY:

- Any part that has become inoperative due to misuse, commercial use, abuse, neglect, accident, improper maintenance, or alteration; or
- 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;
- Normal deterioration of the exterior finish due to use or exposure.

HELPLINE:

Warranty service is available by calling our toll-free helpline, at 1-888-909-6757.

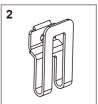
TRANSPORTATION CHARGES:

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.

USA address:	Canadian address:	
Greenworks Tools	Greenworks Tools Canada Inc.	
P.O. Box 1238	P.O. Box 93095, Newmarket, Ontario	
Mooresville, NC 28115	L3Y 8K3	

12 EXPLODED VIEW





English E

No.	QTY	Description
1	1	Double Sided Bit
2.	1	Belt Clip