### **WARNING:**

## 36 VOLT MAKITA SELF PROPELLED CORDLESS LAWN MOWER

Any piece of equipment can be dangerous if not operated properly. <u>YOU</u> are responsible for the safe operation of this equipment. The operator must carefully read and follow any warnings, safety signs and instructions provided with or located on the equipment. Do not remove, defeat, deface or render inoperable any of the safety devices or warnings on this equipment. If any safety devices or warnings have been removed, defeated, defaced or rendered inoperable, <u>DO NOT USE THIS EQUIPMENT!!!</u>

▲ WARNING: Lithium-ion Batteries and/or products that contain Lithium-ion Batteries can expose you to chemicals including cobalt lithium nickel oxide, and nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65warnings.ca.gov

WARNING: Use of this product can create dust containing chemicals which may cause respiratory or other illnesses. Some examples of these chemicals are compounds found in pesticides, insecticides, fertilizers & herbicides. Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well-ventilated area, & work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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

**Read, understand, and follow all instructions** on the mower & in the instruction manuals. Be thoroughly familiar with the controls & the proper use of the mower before starting.

#### **WARNING!**

- 1. Avoid Dangerous Environment Never operate the mower in damp or wet locations. Always be sure of your footing: keep a firm hold on the handle & walk; **never run**.
- 2. Do not Use in Rain.
- 3. Keep Children Away All visitors should be kept a safe distance from work area. Be alert & turn mower off if a child enters the area. Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.
- 4. Dress Properly Do not wear loose clothing or jewelry. They can be caught in moving parts. Use of rubber gloves & substantial footwear is recommended when working outdoors. Do not operate the mower when barefoot or wearing open sandals.
- 5. Use Safety Glasses- Always use face or dust mask if operation is dusty.
- 6. Use the Right Tool for the job Do not use lawn mower for any job except that for which it is intended.
- 7. Do not Force Lawn Mower It will do the job better & safer at the rate for which it was designed.
- 8. Do not Overreach Keep proper footing & balance at all times. Do not mow near drop offs, ditches, or embankments. You could lose your footing or balance.
- 9. Stay Alert Watch what you are doing. Use common sense. Do not operate lawn mower when you are tired. Do not operate machine while under the influence of alcohol or drugs. A moment of inattention while operating the mower may result in serious personal injury.

- 10.Disconnect Lawn Mower Remove the batteries when not in use, before servicing, cleaning, removing material from the lawn mower, or changing accessories such as blades, and the like.
- 11. Store Idle Lawn Mower Indoors When not in use, lawn mower should be stored in an indoor dry and locked-up place out of reach of children.
- 12. Maintain Lawn Mower with Care Keep handles dry, clean, & free from oil & grease.
- 13. Keep machine free of grass, leaves, or other debris build up. Keep guards in place & in working order.
- 14. Keep blades sharp.
- 15. Keep hands & feet away from cutting area. Keep clear of discharge opening at all times.
- 16. Objects struck by the lawn mower blade can cause severe injuries to persons. The lawn should always be carefully examined & cleared of all objects prior to each mowing. Stay behind the handle when the blade is in motion.
- 17. If the mower strikes a foreign object, follow these steps: Stop the mower. Release the switch. Wait until the blade comes to a complete stop. Remove the battery cartridges.
  - Inspect the mower for any damage. Repair any damage before restarting & operating the mower. Replace the blade if it is damaged in any way.
- 18. This cutting machine is capable of amputating hands & feet & throwing objects. *Failure to observe the following safety instructions could result in serious injury or death.*
- 19. Only allow responsible adults, who are familiar with the instruction, to operate the mower.
- 20. Be sure the area is clear of people before moving. Stop mover if anyone enters the area.
- 21. Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop the blade when crossing gravel or paved surfaces.
- 22.Do not pull the mower backwards unless absolutely necessary. When you are compelled to back the mower from a fence or other similar obstruction, look down & behind before & while moving backwards.
- 23. Release switch lever & wait for blade rotation to stop before crossing driveways, walks, roads & any gravel-covered areas. Also remove batteries if you leave it, reach to pick up or remove something out of your way, or for any other reason that may distract you from what you are doing.
- 24. Do not operate machine without the entire grass catcher, rear guard, or other safety protective devices in place & working.
- 25. Stop the motor & remove the batteries whenever you leave the equipment, before cleaning the mower or unclogging the chute & making any repairs or inspections.
- 26. Shut the motor off & wait until the blade comes to a complete stop before removing the grass catcher. Beware that the blade coasts after turning off.
- 27. Mow only in daylight or good artificial light.
- 28. If the equipment should start to vibrate unusually, stop the motor & check immediately for the cause. Vibration is generally a warning of trouble.
- 29.Do not insert batteries into mower until it is ready to be used.
- 30.Do not grasp the exposed cutting blades or cutting edges when picking up or holding the mower.
- 31. Check the blades carefully for cracks or damage before operation. Replace cracked or damaged blades immediately.

- 32. Never attempt to make wheel height adjustments while mower is running.
- 33. Check the grass basket frequently for wear or deterioration.
- 34. Check grass basket components & the discharge guard frequently & replace with manufacturer's recommended parts, when necessary.
- 35. Mow across the face of slopes, never up & down. Exercise extreme caution when changing direction on slopes. Do not mow excessively steep slopes.
- 36. Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could cause a slip and fall accident. Tall grass can hide obstacles.
- 37.Do not mow on wet grass or excessively steep slopes. Poor footing could cause a slip & fall accident.
- 38.Do not wash with a hose; avoid getting water in motor & electrical connections.
- 39. Check the blade mounting bolt at frequent intervals for proper tightness.
- 40. Keep all nuts, bolts, & screws tight to be sure the equipment is in safe working condition.
- 41. 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.
- 42. Maintain or replace safety & instruction labels, as necessary.
- 43. **Battery tool use & care •** Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery cartridge may create a risk of fire when used with another battery cartridge. Do not charge lawn mower in rain, or in wet locations. When replacing batteries, all batteries should be replaced at the same time. Mixing fresh & discharged batteries could increase internal cell pressure & rupture the discharged battery.
- •Use power tools only with specifically designated battery cartridges. Use of any other battery cartridges may create a risk of injury & fire.
- •When battery cartridge 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 water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

If the person receiving this handout will not be the user of the equipment, forward these instructions to the operator. If there is any doubt as to the operation or safety of the equipment, **DO NOT USE!! CALL A TOOL SHED IMMEDIATELY!!! FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN INJURY OR DEATH.** 

## **Symbols**

The followings show the symbols used for tool.

V	volts	
	direct current	
n <sub>°</sub>	no load speed	
/min r/min		

# Important safety instructions for battery cartridge

- 1. Before using battery cartridge, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
- 2. Do not disassemble battery cartridge.
- 3. If operating time has become excessively shorter, stop operating immediately. It may result in a risk of overheating, possible burns and even an explosion.
- 4. If electrolyte gets into your eyes, rinse them out with clear water and seek medical attention right away. It may result in loss of your eyesight.
- 5. Do not short the battery cartridge:
  - (1) Do not touch the terminals with any conductive material.
  - (2) Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.
  - Do not expose battery cartridge to water or rain.

A battery short can cause a large current flow, overheating, possible burns and even a breakdown.

Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 122°F.

Do not incinerate the battery cartridge even if it is severely damaged or is completely worn out. The battery cartridge can explode in a fire.

Be careful not to drop or strike battery.

Do not use a damaged battery.

The contained lithium-ion batteries are subject to the Dangerous Goods Legislation requirements.

For commercial transports e.g. by third parties, forwarding agents, special requirement on packaging and labeling must be observed.

For preparation of the item being shipped, consulting an expert for hazardous material is required. Please also observe possibly more detailed national regulations.

Tape or mask off open contacts and pack up the battery in such a manner that it cannot move around in the packaging.

When disposing the battery cartridge, remove it from the tool and dispose of it in a safe place. Follow your local regulations relating to disposal of battery.

- 12. Use the batteries only with the products specified by Makita. Installing the batteries to non-compliant products may result in a fire, excessive heat, explosion, or leak of electrolyte.
- 13. If the tool is not used for a long period of time, the battery must be removed from the tool.

#### SAVE THESE INSTRUCTIONS.

ACAUTION: Only use genuine Makita batteries. Use of non-genuine Makita batteries, or batteries that have been altered, may result in the battery bursting causing fires, personal injury and damage. It will also void the Makita warranty for the Makita tool and charger.

# Tips for maintaining maximum battery life

Charge the battery cartridge before completely discharged. Always stop tool operation and charge the battery cartridge when you notice less tool power.

Never recharge a fully charged battery cartridge. Overcharging shortens the battery service life.

Charge the battery cartridge with room temperature at 50 °F - 104 °F. Let a hot battery cartridge cool down before charging it.

Charge the battery cartridge if you do not use it for a long period (more than six months).

# FUNCTIONAL DESCRIPTION

## Installing or removing battery cartridge

**ACAUTION:** Always switch off the machine before installing or removing of the battery cartridge.

ACAUTION: Hold the machine and the battery cartridge firmly when installing or removing battery cartridge. Failure to hold the machine and the battery cartridge firmly may cause them to slip off your hands and result in damage to the machine and battery cartridge and a personal injury.

**CAUTION:** Make sure that you lock the battery cover before use. Otherwise, mud, dirt, or water may cause damage to the product or the battery cartridge.

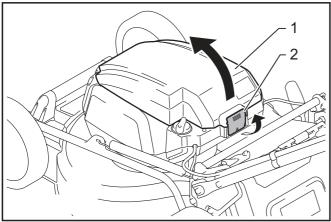
**CAUTION:** Always install the battery cartridge fully until the red indicator cannot be seen. If not, it may accidentally fall out of the machine, causing injury to you or someone around you.

**ACAUTION:** Do not install the battery cartridge forcibly. If the cartridge does not slide in easily, it is not being inserted correctly.

**NOTE:** The machine does not work with only one battery cartridge.

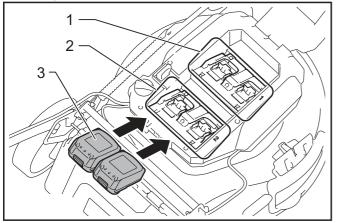
#### To install the battery cartridge;

**1.** Pull up the locking lever, and then open the battery cover.



1. Battery cover 2. Locking lever

**2.** Align the tongue on the battery cartridge with the slot on the machine, and then slide the cartridge until it locks in place with a little click.



(1) Battery port 1 (2) Battery port 2 (3) Battery cartridge

**NOTE:** Install at least 2 battery cartridges to battery port 1 or battery port 2.

**3.** Close the battery cover and push it until it is latched with the locking lever.

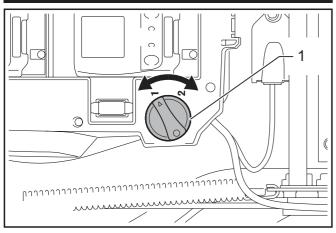
#### To remove the battery cartridge;

Pull up the locking lever and open the battery cover.

Pull out the battery cartridge from the machine while sliding the button on the front of the cartridge.

3 Close the battery cover.

# Switching the battery cartridges



1. Battery selection switch

The machine uses 2 battery cartridges for operation at a time. Up to 4 battery cartridges can be installed to the machine. Before operating the machine, select the battery port 1 or battery port 2 by turning the battery selection switch.

**NOTE:** If only 2 battery cartridges are installed to the machine, be sure to select the battery port to which the battery cartridges are installed using the battery selection switch.

## Machine / battery protection system

The machine is equipped with a machine/battery protection system. This system automatically cuts off power to the motor to extend machine and battery life. The machine will automatically stop during operation if the machine or battery is placed under one of the following conditions:

#### Overload protection

When the battery is operated in a manner that causes it to draw an abnormally high current, the machine automatically stops and the main power lamp blinks in green. In this situation, turn the machine off and stop the application that caused the machine to become overloaded. Then turn the machine on to restart.

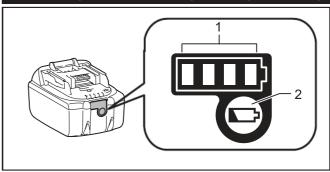
#### Overheat protection

When the machine or battery is overheated, the machine stops automatically and the main power lamp lights up in red. In this case, let the machine and battery cool before turning the machine on again.

#### Over discharge protection

When the battery capacity is not enough, the machine stops automatically and the main power lamp blinks in red. In this case, remove the battery from the machine and charge the battery cartridges or change the battery cartridges to fully charged ones.

## Indicating the remaining battery capacity



▶ 1. Indicator lamps 2. Check button

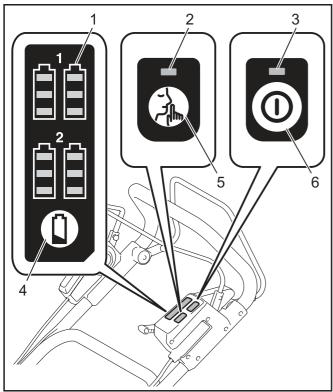
Press the check button on the battery cartridge to indicat the remaining battery capacity. The indicator lamps light up for a few seconds.

Indicator lamps			Remaining
Lighted	Off	Blinking	capacity
			75% to 100%
			50% to 75%
			25% to 50%
			0% to 25%
			Charge the battery.
	† ↓		The battery may have malfunctioned.

**NOTE:** Depending on the conditions of use and the ambient temperature, the indication may differ slightly from the actual capacity.

## Control panel

The control panel has the main power switch, the mode switching button, and the indicator of remaining battery capacity.



▶ 1. Battery indicator 2. Mode switching lamp 3. Main power lamp 4. Check button 5. Mode switching button 6. Main power switch

## Main power switch

**AWARNING:** Always turn off the main power switch when not in use.

To turn on the machine, press the main power switch. The main power lamp lights up in green. To turn off the machine, press the main power switch again.

**NOTE:** If the main power lamp lights up in red or blinks in red or green, refer to the instructions for machine/battery protection system.

**NOTE:** This machine employs the auto power-off function. To avoid unintentional start up, the main power switch will automatically shut down when the switch lever and drive lever (if equipped) are not pulled for a certain period after the main power switch is turned on.

# Mode switching button

You can switch the operating mode by pressing the mode switching button. When the machine is turned on, the machine starts up in the normal mode. When you press the mode switching button, the machine shifts to the noise reduction mode and the mode switching lamp lights up in green. In the noise reduction mode, you can decrease the noise at mowing. When you press the mode switching button again, the machine returns to the normal mode.

# Indicating the remaining battery capacity

Press the check button to indicate the remaining battery capacities. The battery indicators correspond to each battery.

Battery indicator status					
On	Off	Remaining battery capacity			
1111		50% - 100%			
-[	20% - 50%				
	0% - 20%				

**NOTE:** The indicator lamps for remaining battery capacity is just for a reference. The actual ca acity may differ depending on the usage conditions.

**NOTE:** Before you press the check button to indicate the remaining battery capacities, stop the machine.

### **Switch action**

AWARNING: Before installing the battery cartridge, always check to see that the switch lever actuates properly and returns to the original position when released. Operating the machine with a switch that does not actuate properly can lead to loss of control and serious personal injury.

NOTE: The mower does not start without pressing the switch button even the switch lever is pulled.

NOTE: Mower may not start due to the overload when you try to mow long or dense grass at a time. Increase the mowing height in this case.

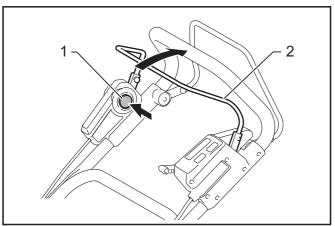
This mower is equipped with the lock key and handle switch. If you notice anything unusual with either the lock key or switch, stop the operation immediately and

Install the battery cartridges and then close the battery cover.

Select the battery cartridges used for operation by turning the battery selection switch.

3 Press the main power switch.

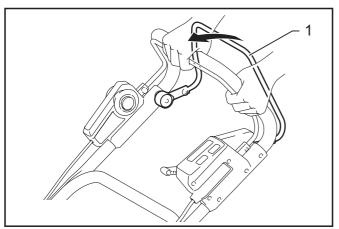
Pull the switch lever toward you while holding down the switch button. Release the switch button as soon as the motor starts running.



▶ 1. Switch button 2. Switch lever

**NOTE:** If the lock key is not inserted, the power lamp blinks in green when you pull the switch lever.

**5.** While holding the switch lever, push the drive lever forward and hold it to drive the rear wheels.



1. Drive lever

**NOTE:** You can drive the rear wheels by pushing the drive lever forward and hold it without pulling the switch lever.

**6.** Release the drive lever and the switch lever to stop the machine.

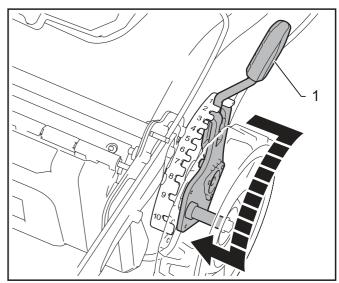
## Adjusting the mowing height

**AWARNING:** Never put your hand or leg under the mower body when adjusting the mowing height.

**AWARNING:** Always make sure that the lever fits in the groove properly before operation.

The mowing height can be adjusted in the range of between 13/16" and 3-15/16".

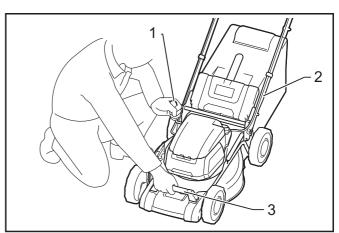
Remove the , and then pull the mowing height adjusting lever outward of the mower body and move it to your desired mowing height.



▶ 1. Mowing height adjusting lever

The table below shows the relationship between the number on the mower body and the approximate mowing height.

Number	Mowing height
1	13/16"
2	1"
3	1-1/4"
4	1-9/16"
5	1-7/8"
6	2-3/16"
7	2-1/2"
8	2-15/16"
9	3-3/8"
10	3-15/16"



1. Mowing height adjusting lever 2. Lower handle3. Front grip

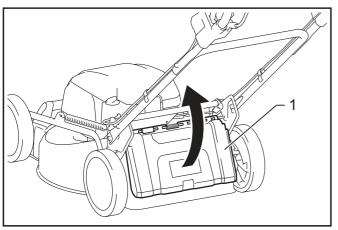
**NOTE:** The mowing height figures should be used just as a guideline. Depending on the conditions of the lawn or the ground, the actual lawn height may become slightly different from the set height.

**NOTE:** Try a test mowing of grass in a less conspicuous place to get your desired height.

# Installing or removing the grass basket

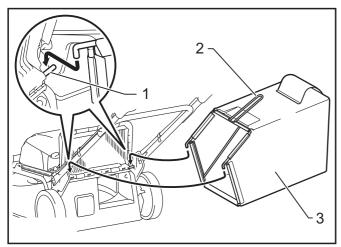
To install the grass basket, follow the steps below.

1. Open the rear cover.



▶ 1. Rear cover

**2.** Hold the handle of the grass basket, and then hook the grass basket on the rod of the mower body as shown in the figure.

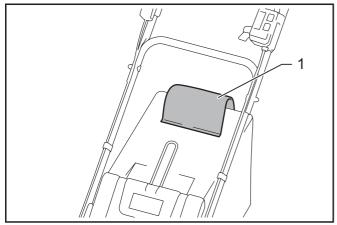


1. Rod 2. Handle 3. Grass basket

To remove the grass basket, open the rear cover, and then remove the grass basket by holding the handle.

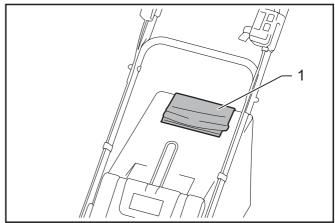
#### **Grass level indicator**

Grass level indicator shows the volume of mowed grass. When the grass basket is not full, the indicator floats while the blades are running.



Grass level indicator

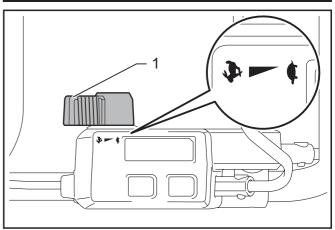
When the grass basket is almost full, the indicator does not float while the blades are running. In this case, stop the operation immediately and empty the basket.



1. Grass level indicator

**NOTE:** This indicator is a rough guide. Depending on the conditions of inside of the basket, this indicator may not work properly.

## Adjusting the traveling speed



▶ 1. Speed lever

The traveling speed can be adjusted with the speed lever. To decrease the speed, pull the lever toward you, and to increase the speed, turn the lever forward.

#### **Electronic function**

The machine is equipped with the electronic functions for easy operation.

- Constant speed control of blade rotation
   Electronic speed control for obtaining constant
   speed. Possible to get fine finish, because the
   rotating speed is kept constant even under load
   condition.
- Soft start at driving
   The soft-start function minimizes start-up shock, and makes the machine start smoothly.
  - Electric brake
    This machine is equipped with an electric brake.
    If the machine consistently fails to quickly stop
    the mower blades after releasing the switch lever,
    the machine
    .

# **OPERATION**

## **Mowing**

**AWARNING:** Before mowing, clear away sticks and stones from mowing area. Furthermore, clear away any weeds from mowing area in advance.

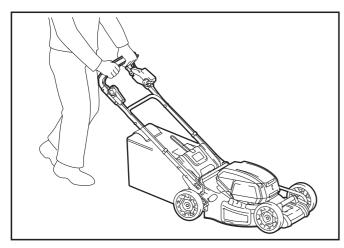
**AWARNING:** Always wear the safety goggles or safety glasses with side shields when operating the mower.

ACAUTION: If the cut grass or foreign object blocks up inside of the mower body, be sure to remove the lock key and battery cartridge and wear gloves before removing the grass or foreign object.

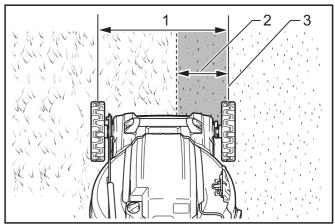
**NOTICE:** Use this machine for mowing lawn only. Do not mow weeds with this machine.



Firmly hold the handle with both hands when mowing. The mowing speed guideline is approximately 23 - 46 ft. per 10 seconds.

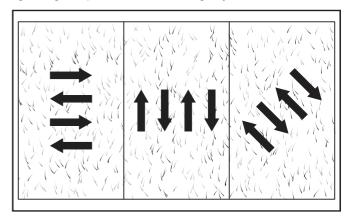


The center lines of the front wheels are guidelines to mowing width. Using the center lines as guidelines, mow in strips. Overlap by one half to one third the previous strip to mow the lawn evenly.



▶ 1. Mowing width 2. Overlapping area 3. Center line

Change the mowing direction each time to prevent the grass grain pattern from forming in just one direction.

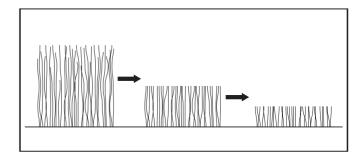


Periodically check the grass basket for mowed grass. Empty the grass before it becomes full. Before every periodical check, be sure to stop the mower then remove the lock key and the battery cartridge.

**NOTICE:** Using the mower with the grass basket full prevents smooth blade rotation and places an extra load on the motor, which may cause breakdown.

## Mowing a long-grass lawn

Do not try to cut long grass all at once. Instead, mow the lawn in steps. Leave a day or two between mowings until the lawn becomes evenly short.



**NOTE:** Mowing long grass to a short length all at once may cause the grass to die. The cut grass may also block up inside of the mower body.

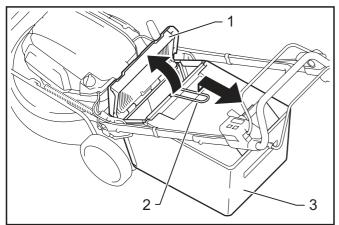
# **Emptying the grass basket**

**AWARNING:** To reduce a risk of accident, regularly check the grass basket for any damage or weakened strength.

Release the switch lever and drive lever.

Remove the

**3** Open the rear cover and take out the grass basket by holding the handle.

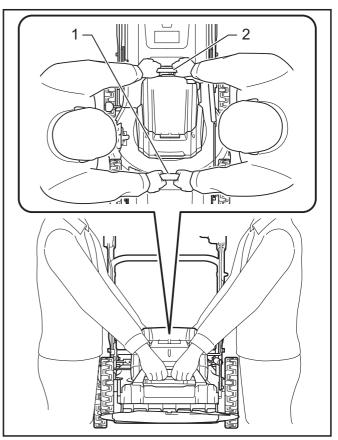


▶ 1. Rear cover 2. Handle 3. Grass basket

4. Empty the grass basket.

# **Carrying the mower**

When carrying the mower, hold the front grip and rear grip with two people as shown in the figure.



▶ 1. Front grip 2. Rear grip