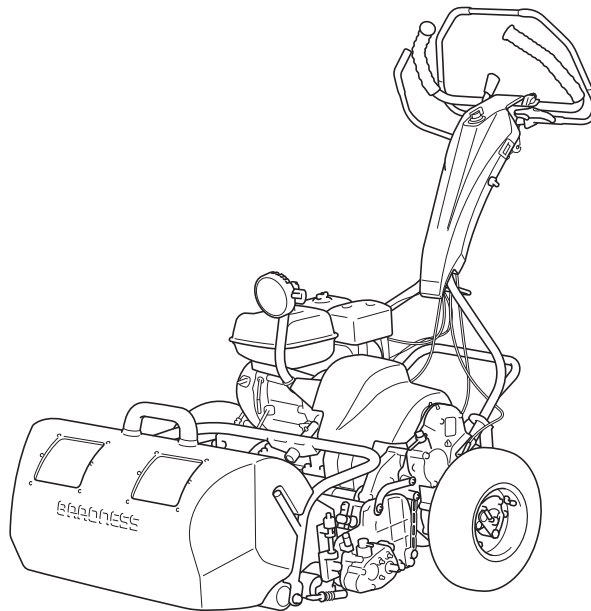


# ***LM101***

Floating Head Greens Mower

## Owner's Operating Manual



Serial No. LM101 : 10470-

"Required reading"  
Read this manual before using the machine.

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**BARONNESS**<sup>®</sup>  
Quality on Demand

Original Instructions Ver.2.3

# Regulations

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## California Proposition65

(For California, USA)

**⚠ WARNING:**

This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

318yi8-006E

California Proposition65\_001

## California Spark Arrester

(For California, USA)

**⚠ Warning**

Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrester may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.

The engine of this machine is equipped with a spark arrester. In some areas there are local, state, or federal regulations requiring that a spark arrester be used on the engine of this machine.

Thank you for purchasing the Baroness product.  
This manual describes the proper handling,  
adjustment, and inspection of your product.  
We hope you will use the product safely, and take  
advantage of its best performance.

# Introduction

---

Read this manual carefully to ensure that you thoroughly understand how to properly operate and maintain the product, and to avoid causing injury to yourself or others.

The operator is responsible for operating the product properly and safely.

Maintenance should only be performed by a certified specialist.

If you have any questions concerning maintenance or genuine parts, please contact a Baroness dealer or Kyoisha.

When making inquiries about the product, please specify the product's model designation and serial number.

When loaning or transferring the product, please also provide this manual together with the product.

Kyoisha Co., Ltd.

## Warning Symbols

This manual uses the following warning symbols for handling precautions that are important for your safety.



696cq5-001

Warning symbol

This symbol indicates the articles regarding “Danger,” “Warning,” or “Caution.”

Those articles describe important safety precautions and so read them carefully to understand completely before operating the machine.

Failure to adequately follow these safety precautions may cause an accident.

### **Danger**

This symbol indicates that serious injury or death will occur if the warning is ignored.

### **Warning**

This symbol indicates that serious injury or death may occur if the warning is ignored.

### **Caution**

This symbol indicates that injury or damage to property may occur if the warning is ignored.

### **Important**

This symbol indicates precautions on the mechanism of the machine.

## Precautionary Statement

 Caution

The information described in this manual is subject to change for improvement without prior notice.

When replacing parts, be sure to use genuine Baroness parts or parts designated by Kyoisha.

Note that the Baroness product warranty may not apply to defects caused by the use of parts from other companies.

Prior to use, carefully read the following manuals to thoroughly understand the contents for safe and correct operation.

- Baroness Owner's Operating Manual
- The Engine's Owner's Manual

## Purpose

This machine is intended for cutting turf grass at golf courses.

Do not use this machine in any way other than its intended purpose, and do not modify the machine.

Operating this machine for other purposes and modifying it may be very dangerous and may cause damage to the machine.

LM101

# Introduction

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LM101

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# Safety

Failure to adequately follow these safety precautions may cause an accident resulting in injury or death.

## Danger

This product is designed to ensure safe operation and has been tested and inspected thoroughly before shipment from the factory. The product is equipped with safety devices to prevent accidents.

However, whether the product demonstrates its original performance level depends on the manner in which it is operated and handled, as well as the manner in which it is managed on a daily basis.

Inappropriate use or management of the product may result in injury or death.

Observe the following safety instructions to ensure safe operation.

## Safe Operating Practices

### Training

1. Read this manual and other training material carefully.  
Be familiar with the controls, safety signs, and the proper use of the equipment.
2. If the operator or mechanic can not read English it is the owner's responsibility to explain this manual to them.
3. All operators and mechanics should seek and obtain professional and practical instruction.  
The owner is responsible for training the users.
4. Never allow people unfamiliar with these instructions to use or service the machine. Local regulations may restrict the age of the operator.
5. The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people, or property.
6. Keep in mind that the owner, operator, and mechanic are responsible for accidents or hazards occurring to other people or their property.
7. You can find additional safety information where needed throughout this manual.
8. Determine the left and right sides of the machine from the normal operating position.

### Preparation

1. Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job.  
Only use accessories and attachments approved by the manufacturer.
2. While operating, always wear substantial footwear, long trousers, hard hat, safety glasses, and ear protection. Long hair, loose clothing, or jewelry may get tangled in moving parts.  
Do not operate the equipment when barefoot or wearing open sandals.
3. Inspect the area where the equipment is to be used and remove all objects such as rocks, toys and wire which can be thrown by the machine.
4. Keep children out of the operating area and under the watchful care of a responsible adult other than the operator.
5. Exercise care in the handling of fuel.

## Warning

Warning-Fuel is highly flammable.  
Take the following precautions.

- [1] Store fuel in containers specifically designed for this purpose.
- [2] Add fuel before starting the engine.  
Never remove the cap of the fuel tank or add fuel while the engine is running or when the engine is hot.
- [3] Refuel outdoors only and do not smoke while refueling.
- [4] If fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapours have dissipated.
- [5] Replace all fuel tanks and container caps securely.
6. Check that operator's presence controls, safety switches and shields are attached and functioning properly.  
Do not operate unless they are functioning properly.
7. If the brake operation is faulty or the parking brake lever has noticeable play, be sure to adjust or repair them before operating the machine.
8. Replace faulty mufflers.

## Operation

1. Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
2. Only operate in good light, keeping away from holes and hidden hazards.
3. Before attempting to start the engine, disengage all attachments, shift into neutral, and engage the parking brake.
4. Start the engine or switch on the motor carefully according to this manual and with feet well away from the blade(s).
5. Avoid operating the equipment in wet grass, where feasible.
6. Always be sure of your footing on slopes.
7. Walk, never run.
8. Remember there is no such thing as a safe slope.  
Travel on grass slopes requires particular care.  
To guard against overturning:
  - [1] Do not mow excessively steep slopes.
  - [2] Do not stop or start suddenly when going up or downhill.
  - [3] Engage clutch slowly, always keep machine in gear, especially when traveling downhill.
  - [4] Machine speeds should be kept low on slopes and during tight turns.
9. Use extra care while operating machine with a grass catcher or other attachments. They can affect the stability of the machine.
10. Never operate the machine with damaged guards, shields, or without safety protective devices in place.  
Be sure all interlocks are attached, adjusted and functioning properly.
11. Do not change the engine governor settings or overspeed the engine.  
Operating the engine at excessive speed may increase the hazard of personal injury.
12. Pay attention not to touch hot parts.
13. Do the following before leaving the operator's position.
  - [1] Stop on level ground.
  - [2] Disengage the cutting unit and traction drive;
  - [3] Set the parking brake;
  - [4] Stop the engine.
14. Stop the engine in the following conditions.
  - [1] Before refueling.
  - [2] Before removing the grass catcher/catchers.
  - [3] Before making height adjustment unless adjustment can be made from the operator's position.
  - [4] Before cleaning blockages.
  - [5] Before checking, cleaning, or working the machine.
  - [6] Whenever you leave the machine.
  - [7] After striking a foreign object or if an abnormal vibration occurs.  
Inspect the machine for damage and make repairs before restarting and operating the equipment.
15. Keep hands and feet away from the cutting units and the rotating parts.
16. Never pick up or carry a lawnmower while the engine is running.
17. Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
18. Never operate while people, especially children, or pets are nearby.
19. Slow down and use caution when making turns and crossing roads and sidewalks.
20. Stop the blades rotating before crossing surfaces other than grass.
21. Disengage drive to attachments when transporting or not in use.
22. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the machine while in operation.
23. Do not operate the machine under the influence of alcohol or drugs.
24. Take care when loading or unloading the machine into a trailer or a truck.  
Load or unload the machine in a flat and safe place.  
Before loading or unloading, set the parking brake on the truck or trailer, stop the engine, and chock the wheels.

# Safety

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When transporting the machine on a truck or a trailer, set the parking brake, stop the engine, and fasten the machine to the truck with a rope or other suitable restraining device that has sufficient strength.

When using a running board, select one with sufficient strength, length, and width and that will not cause the machine to slip.

25. Close the fuel valve before transporting the machine.
26. Use care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
27. Do not take your eyes off the road ahead. Do not operate the machine with no hands.
28. Reduce the throttle setting during engine run-out and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of operation.
29. Do not operate the machine when there is the risk of lightning.

## Maintenance and Storage

1. Disengage drives on level ground, disengage the cutting unit, set parking brake, stop engine and disconnect spark plug wire. Wait for all movement to stop before adjusting, cleaning or repairing.
2. To reduce the fire hazard, keep the engine, silencer/muffler, compartment fuel storage area, cutting unit and drives free of grass, leaves, or excessive grease. Clean up oil or fuel spillage.
3. Allow the engine to cool before storing in any enclosure.
4. Only cover the machine with a sheet after hot parts have sufficiently cooled down.
5. Never store the equipment with fuel in the tank inside a building where fumes may reach an open flame or spark.
6. If the engine is provided with a shut-off valve, shut off valve while storing or transporting.
7. Do not store fuel near flames.
8. Never allow untrained personnel to service machine.
9. Allow the engine/muffler to cool before checking/maintenance.
10. Appropriately manage and correctly use the tools necessary for servicing or adjusting the machine.

11. Use jack stands to support components when required.
12. Carefully release pressure from components with stored energy.
13. Make sure that parts such as wires are not touching each other and that their covers have not come off.
14. Use care when checking the cylinders/reels and bed knives.
  - [1] Wear gloves and use caution when servicing them.
  - [2] Be careful during adjustment of the machine to prevent entrapment of the fingers between moving blades and fixed parts of the machine.
15. Keep hands and feet away from moving parts.  
If possible, do not make adjustments with the engine running.
16. Keep all parts in good working condition and all hardware tightened.  
Replace all worn or damaged decals.
17. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
18. Check the grass catcher frequently for wear or deterioration.
19. If the fuel tank has to be drained, do this outdoors.

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About Waste Disposal ..... Page 2-2



# Disposal

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## Recycle and Waste Disposal

### About Recycle

Recycling battery etc. is recommended for environmental conservation and economical use of resources.

It may be required by local laws.

### About Waste Disposal

Make sure that waste generated when servicing or repairing the machine is disposed of in accordance with local regulations. (e.g. waste oil, antifreeze, rubber products, and wires etc.)

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# Product Overview

## Specifications

### Specifications

Model		LM101	
Dimensions	Total length	with grass catcher	61.02 in 155 cm
	Total width	without traveling wheel	37.01 in 94 cm
	Total height	Steering handle	45.67 in 116 cm
Weight	Machine (empty fuel tank)		251.32 lb 114 kg
	Grass catcher* <sup>1</sup>		7.28 lb 3.3 kg
	Groomer* <sup>1</sup>		7.94 lb 3.6 kg
	Traveling wheel (for one machine)* <sup>1</sup>		15.21 lb 6.9 kg
Minimum turning radius		-	
Engine	Model		HONDA GX120
	Type		Gasoline air-cooled engine (OHV) four-stroke single-cylinder
	Total displacement		7.20 cu.in. 118 cm <sup>3</sup> (0.118 L)
	Maximum output		2.6 kW (3.5 PS)/3,600 rpm
Fuel tank capacity		Gasoline 0.53 U.S.gals	Gasoline 2.0 dm <sup>3</sup> (2.0 L)
Fuel consumption		237.57 g/PS · h (rated output)	323 g/kW · h (rated output)
Engine oil capacity		0.15 U.S.gals	0.56 dm <sup>3</sup> (0.56 L)
Coolant volume		-	
Hydraulic tank capacity		-	
Operating width (Mowing width)		22.92 in	55.7 cm
Operating height (Mowing height)		0.118 - 0.551 in [0.118 - 0.492 in] <sup>*2</sup>	3.0 - 14.0 mm [3.0 - 12.5 mm] <sup>*2</sup>
Blades		9 · 11	
Drive	Traveling		Mechanical
	Mowing		Mechanical
Speed (HST)		-	
Speed (Mechanical)		2.92 mph (@3,000 rpm)	4.7 km/h (@3,000 rpm)
Efficiency		0.52 acres/hour (2.92 mph x mowing width x 0.8)	2,094 m <sup>2</sup> /h (4.7 km/h x mowing width x 0.8)
Maximum inclination for operation		-	
Tire size		4.10/3.50-6	
Tire pneumatic pressure		17.40 psi	120 kPa (1.2 kgf/cm <sup>2</sup> )
Battery		-	
Engine plug		NGK BPR4ES	

The factory default maximum engine rpm is 3,100 rpm.

\*1: Total weight includes \*1 parts.

\*2: The indicated lowest mowing height is for general application. It may be adjusted according to the state of green and the bed knife to be installed.

The value in the brackets [ ] is the mowing height of the machine equipped with a groomer.



## Sound Pressure Level

### Sound Pressure Level

This machine was confirmed to have a continuous A-weighted sound pressure level of 84 dB by measuring identical machines in accordance with the procedure specified in ISO5395-1:2013.

## Sound Power Level

### Sound Power Level

This machine was confirmed to have a sound power level of 98 dB by measuring identical machines in accordance with the procedure specified in ISO5395-1:2013.

## Vibration Level

### Hand-Arm Vibration

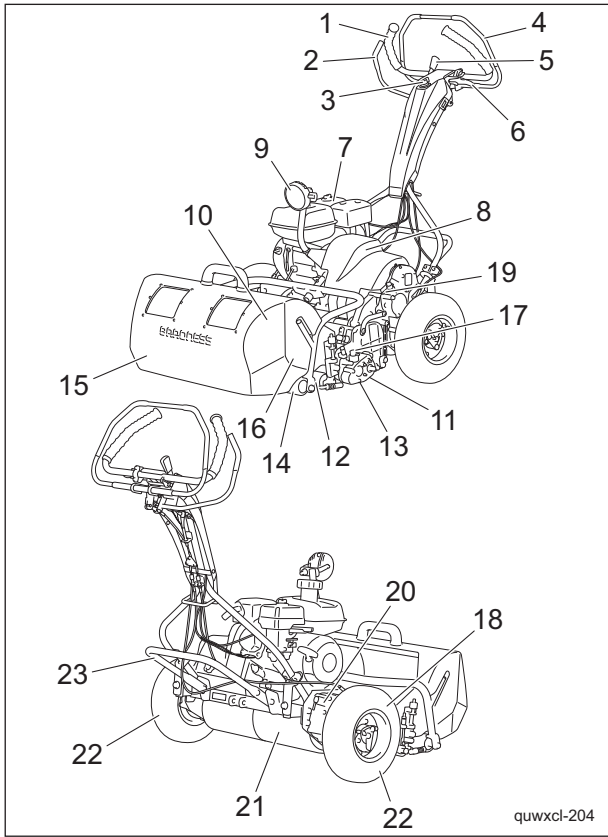
This machine was confirmed not to exceed a vibration level of 2.5 m/s<sup>2</sup> to hands and arms by measuring identical machines in accordance with the procedure specified in ISO 5395-1:2013.

## Carbon Dioxide (CO<sub>2</sub>) Emissions Measurement

For CO<sub>2</sub> emissions measurement on Honda engine, refer to the following website.  
<http://www.honda-engines-eu.com/co2-engines>  
This CO<sub>2</sub> measurement results from testing over a fixed test cycle under laboratory conditions of a(an) (parent) engine representative of the engine type (engine family) and shall not imply or express any guarantee of the performance of a particular engine.

# Product Overview

## Names of Each Section

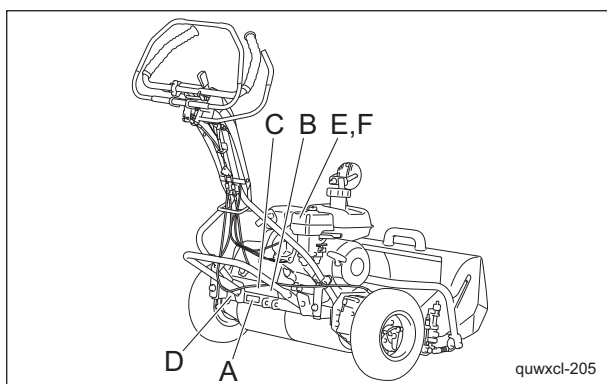


Names of Each Section\_001

1	Handle
2	Throttle lever
3	Engine switch
4	Main clutch lever
5	Clutch lock lever
6	Brake lever
7	Engine
8	Engine clutch cover
9	Light
10	Reel cutter
11	Bed knife
12	Front roller
13	Rear roller
14	Grass catcher roller
15	Grass catcher
16	Groomer
17	Groomer clutch lever
18	FOC (High/Low Clip) selector lever
19	Unit clutch cover
20	Drum clutch cover
21	Drum
22	Traveling tires
23	Stand

## Regulation Decals

### Positions of Regulation Decals



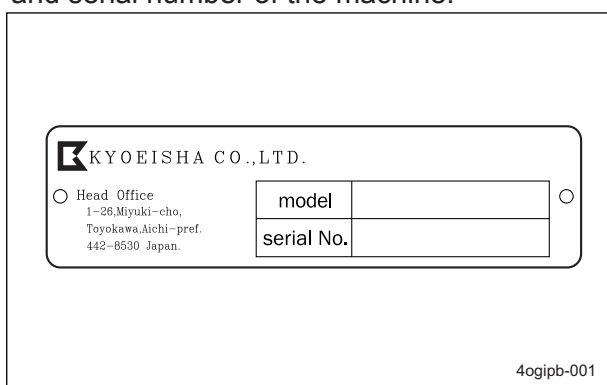
Positions of Regulation Decals\_001

A	Serial number plate
B	Specification Decal
C	Noise Emission Decal
D	Year of Manufacture Decal
E	Warning Spark Arrester Decal
F	California Proposition 65 Decal (walk behind type)

### Description of Regulation Decals

#### Serial Number Plate

The serial number plate indicates the model and serial number of the machine.



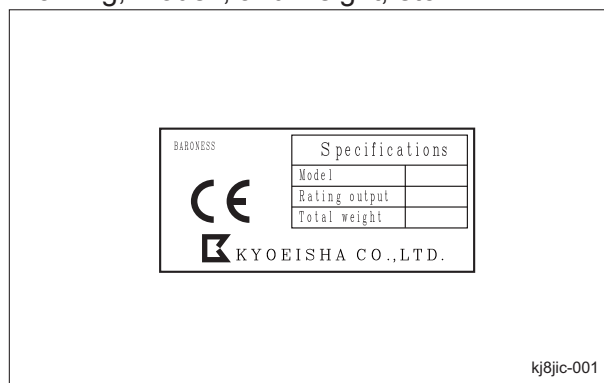
Serial Number Plate\_001

#### Specification Decal

(For Europe)

CE mark indicates that the machine sold in the EU nations complies with the EU requirements.

The Specification decal indicates the CE marking, model, and weight, etc.

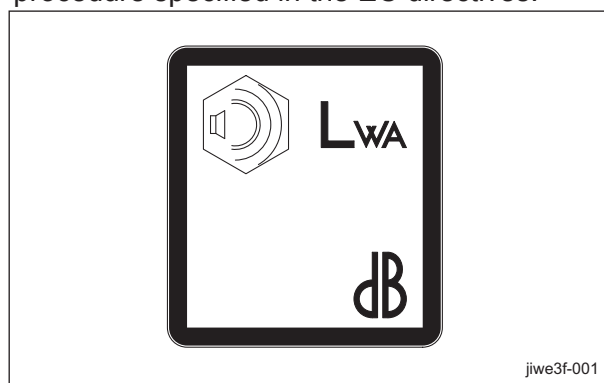


Specification Decal\_001

#### Noise Emission Decal

(For Europe)

The noise emission decal indicates the sound power level determined by measuring identical machines in accordance with the procedure specified in the EC directives.



Noise Emission Decal\_001

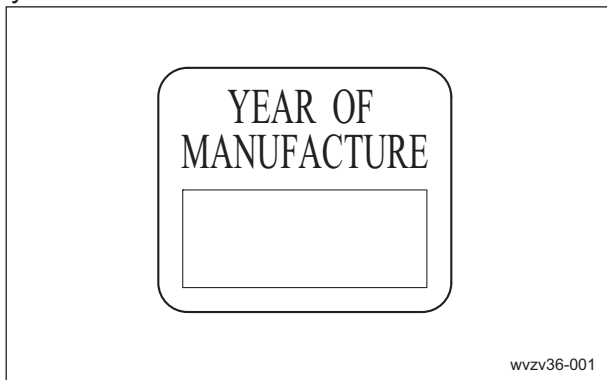
# Product Overview

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## Year of Manufacture Decal

(For Europe)

The year of manufacture decal indicates the year when this machine was manufactured.

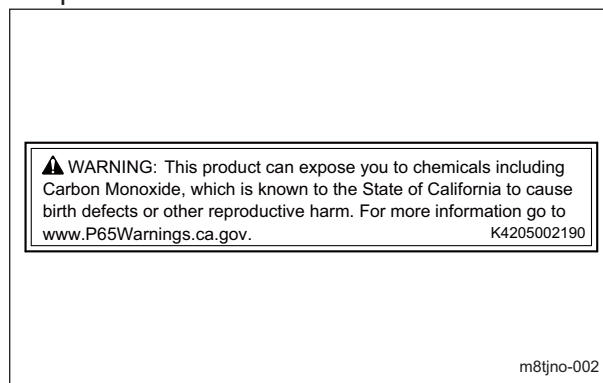


Year of Manufacture Decal\_001

## California Proposition 65 Decal (Walk Behind Type)

(For the State of California, USA)

California Proposition 65 Decal describes the warning messages as required by California Proposition 65.

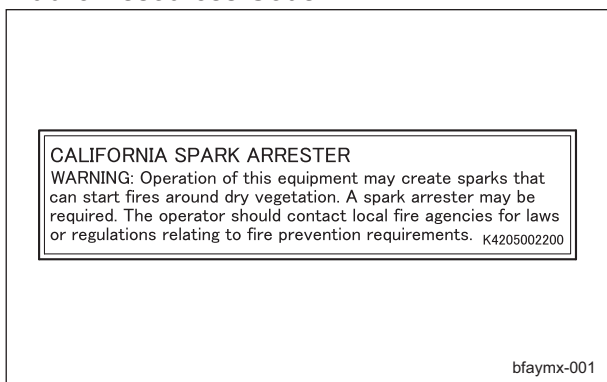


California Proposition 65 Decal (Walk Behind Type)\_001

## Spark Arrester Warning Decal

(For the State of California, USA)

Spark arrester warning decal describes the warning messages as required by California Public Resources Code.



Spark Arrester Warning Decal\_001

## Safety Signs and Instruction Signs

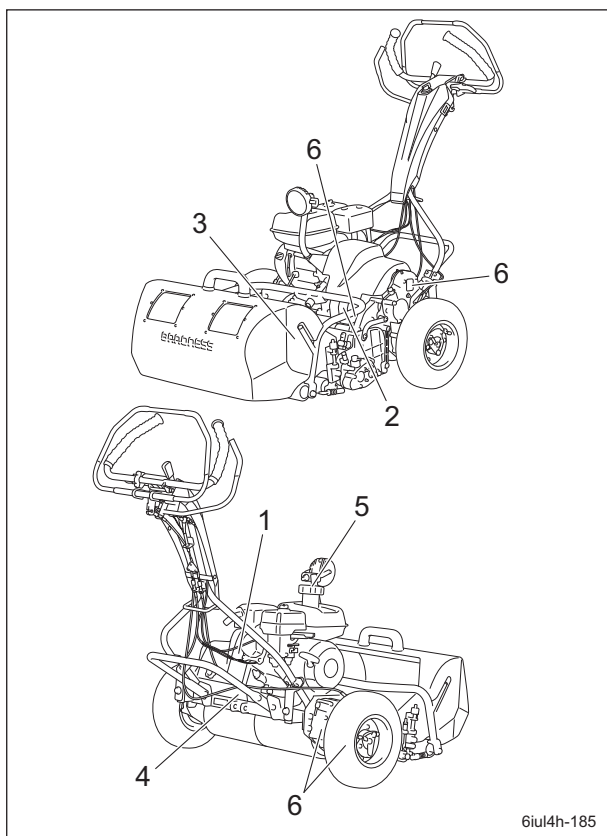
### About Safety Signs and Instruction Signs

**Important**

Safety decals and instruction decals are attached to this product. Make sure that they are preserved in their entirety. If they are damaged, become dirty, or peel off, replace them with new ones.

Part numbers for decals that need to be replaced are listed in the parts catalog. Order them from a Baroness dealer or Kyoeisha.

### Positions of Safety Decals and Instruction Decals



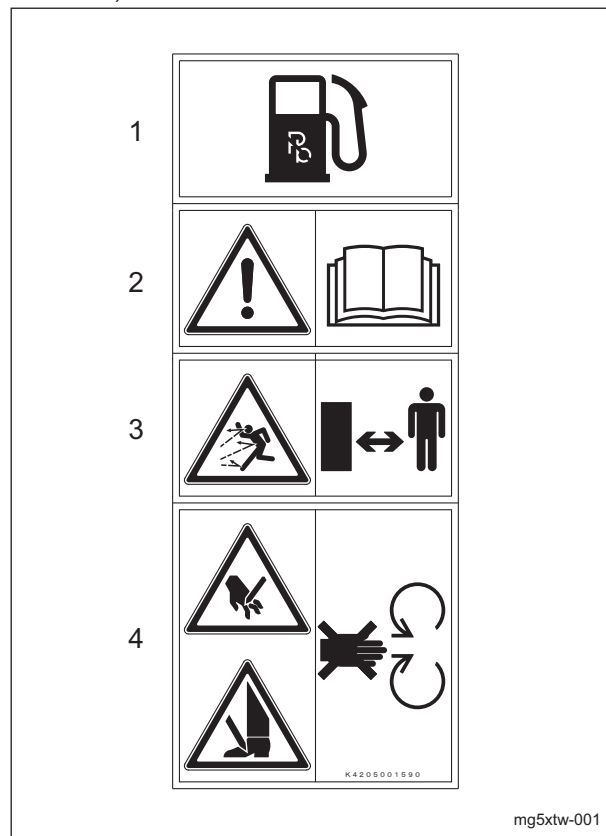
Positions of Safety Decals and Instruction Decals\_001

1	DECAL, CAUTION HANDLING
2	DECAL, CAUTION PTO
3	DECAL, CAUTION TO MUTILATION
4	DECAL, CAUTION TO NOISE
5	DECAL, WARNING ENGINE OIL
6	DECAL, GREASING EACH 10-HOURS

### Description of Safety Decals and Instruction Decals

#### Handling Caution Decal

K4205002150  
DECAL, CAUTION HANDLING



Handling Caution Decal\_001

1. Use lead-free gasoline.
- 2.

**Warning**

Read the Owner's Operating Manual.

- 3.

**Caution**

Flying objects - Be sure that people around the machine keep a safe distance away.

- 4.

**Warning**

May cut your hand or leg - When the blades are rotating, keep hands and feet away from moving parts.

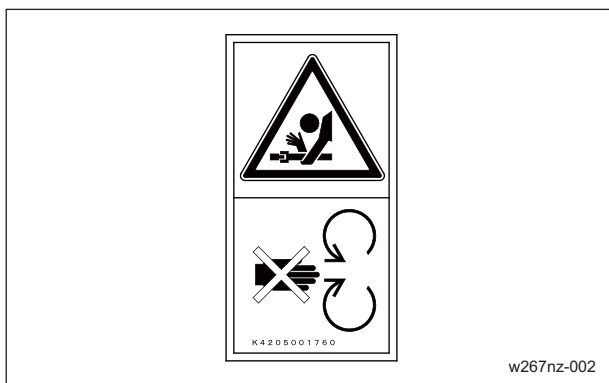
# Product Overview

## PTO Caution Decal

K4205001760  
DECAL, CAUTION PTO

**Warning**

May catch your arm - Keep away from PTO moving parts during the engine running.



PTO Caution Decal\_001

## Caution to Noise Decal

K4205001330  
DECAL, CAUTION TO NOISE



Caution to Noise Decal\_001

## Engine Oil Warning Decal

K4205001300  
DECAL, WARNING ENGINE OIL

**Important**

Check engine oil and gearbox levels before starting.



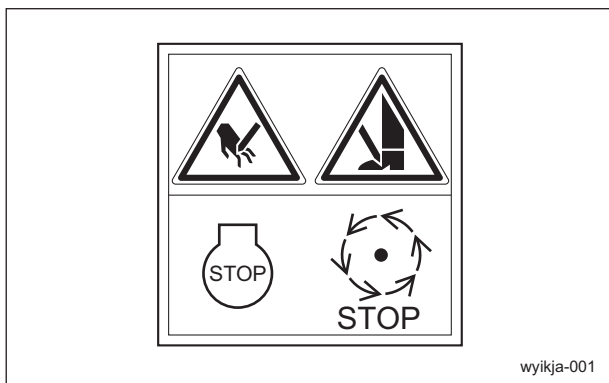
Engine Oil Warning Decal\_001

## Caution to Mutilation Decal

K4205001600  
DECAL, CAUTION TO MUTILATION

**Warning**

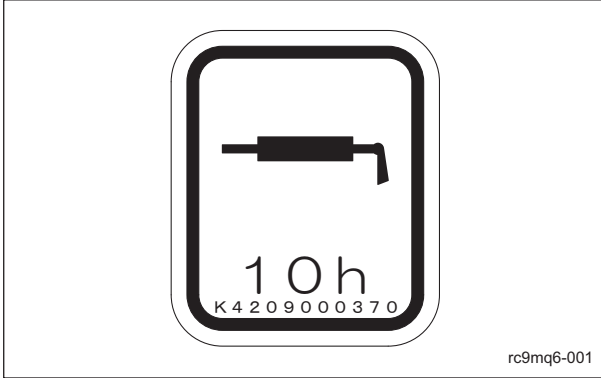
May cut your hand or leg - Stop the cutter rotation and engine. Otherwise you may get injured.



Caution to Mutilation Decal\_001

## Greasing Each 10-Hours Decal

K4209000370  
DECAL, GREASING EACH 10-HOURS  
Add grease every 10 hours.



Greasing Each 10-Hours Decal\_001

# Product Overview

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# Handling Instructions

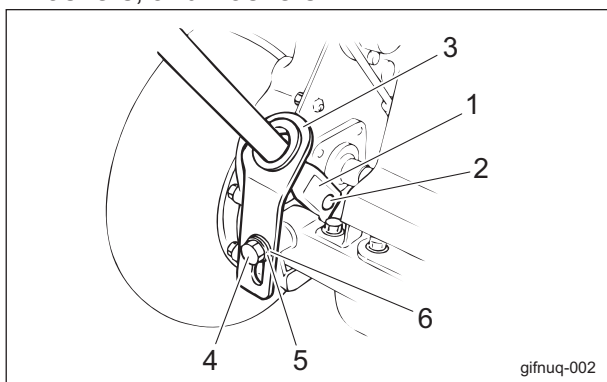
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# Handling Instructions

## Preparation for Use

### Installing the Handle

1. Put the handle pin on the left frame into the hole at the left-side lower edge of the handle.
2. While pressing the right-side lower edge of the handle inward, put the handle pin of the right frame into the hole.
3. Secure the lower edges (slotted section of the handle adjusters) of the right and left sides of the handle to the rear frame stay from the back with the bolts, conical spring washers, and washers.



Installing the Handle\_001

1	Lower edge of handle
2	Handle pin
3	Handle adjuster
4	Bolt
5	Conical spring washer
6	Washer

### Connection of Engine Switch Cord

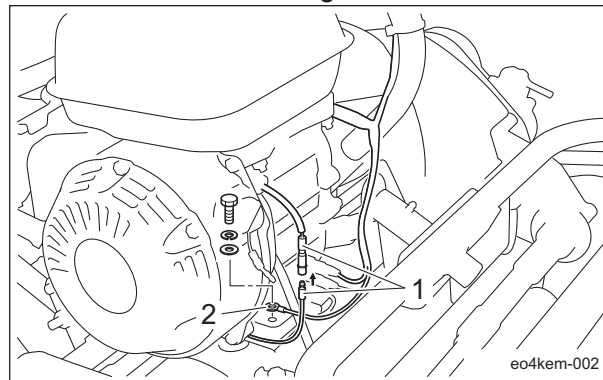
#### Important

When the connection of the engine switch cord is incomplete, the engine will not stop even if the engine switch is operated. Check that the cord is correctly connected.

When assembling the handle, check the connection of the engine switch cord. There are two connections - plug and crimp terminal.

1. The plug is connected to the plug connected to the engine.

2. The crimp terminal is secured to the engine crankcase with a hexagon bolt.

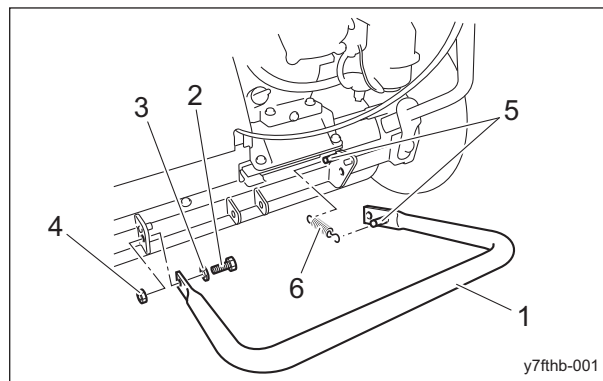


Connection of Engine Switch Cord\_001

1	Plug
2	Crimp terminal

### Installing The Stand

1. With the inside projection side set to the right, temporarily secure the left side of the stand to the frame with the bolt, washer (inside), and nut (outside).
2. Put the spring on the projection of the frame and the projection at the right edge of the stand.



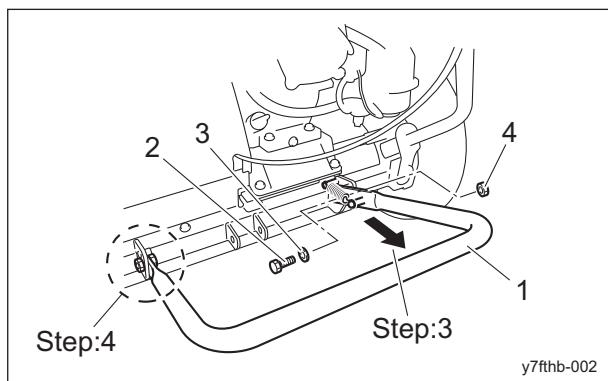
Installing The Stand\_001

1	Stand
2	Bolt
3	Washer
4	Nut
5	Projection
6	Spring

3. While pulling the right side of the stand backward, make alignment with the hole in the frame, and secure the stand with the bolt, washer (inside), and nut (outside).

# Handling Instructions

4. Tighten the bolt, washer, and nut at the left side of the stand that were temporarily secured.



Installing The Stand\_002

1	Stand
2	Bolt
3	Washer
4	Nut

## Confirmation of The Operation

1. Check that the brake operates completely.
2. Check that the engine clutch operates completely.
3. If necessary, make adjustment.

## Inspections

Inspect the machine according to the maintenance schedule so that you will be able to take advantage of its optimum performance for a long period of time.

### Reel Cutter (Cutting Cylinder) and Bed Knife (Bottom Blade)

Inspection of Reel Cutter (Cutting Cylinder) and Bed Knife (Bottom Blade)

#### ⚠ Caution

Wear gloves when touching edged tools to avoid cutting your hands.

The reel cutter (cutting cylinder) and bed knife (bottom blade) may become dull due to frequent use, objects crushed during mowing, or damage caused during transportation.

Inspect the reel cutter (cutting cylinder) and bed knife (bottom blade), and if necessary, adjust the blade engagement, perform back lapping, or sharpen or replace the reel cutter (cutting cylinder) and the bed knife (bottom blade).

1. Check to see whether or not the edge of the reel cutter (cutting cylinder) and the bed knife (bottom blade) are too blunt to cut.
2. Make sure that the reel cutter (cutting cylinder) and the bed knife (bottom blade) are not cracked.
3. Check to see how much the reel cutter (cutting cylinder) and the bed knife (bottom blade) are worn.
4. Make sure that the reel cutter (cutting cylinder) and the bed knife (bottom blade) have not changed color due to heat from grinding.
5. Check to see whether or not the second edge face (relief) remains at the point of reel cutter (cutting cylinder).
6. Make sure that the welding between the reel cutter (cutting cylinder) and the disc has not come off.

## Cover

Inspection of Covers

#### ⚠ Warning

If you have removed the covers during inspection, be sure to securely install them in their original positions.

If a cover remains removed, the operator may come into contact with rotating parts or belts and foreign objects may fly off, possibly resulting in injuries.

1. Make sure that there is no wear or deterioration of the reel cover and all other covers.
2. Make sure that there is no damage to the reel cover and all other covers.
3. Make sure that there is no interference with moving parts due to deformation of the reel cover and all other covers.
4. Make sure that the reel cover and all other covers are installed in their appropriate positions.

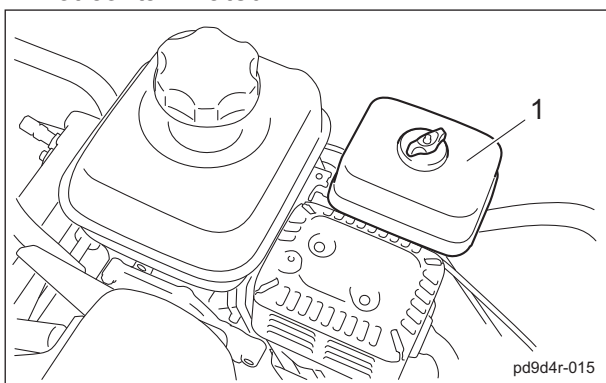
# Handling Instructions

## Air Cleaner

### Inspection of Air Cleaner

The air cleaner is a component that removes dirt from the intake air to prevent wear of the cylinder liners and piston rings so that the engine will always operate smoothly. A contaminated air cleaner element may cause malfunction of the engine.

1. Make sure that there is no damage to the air cleaner.
2. Make sure that the air cleaner element is not contaminated.



Inspection of Air Cleaner\_001

1	Air cleaner
---	-------------

### Cleaning of Air Cleaner

A contaminated air cleaner elements may cause malfunction of the engine. To maximize the life of the engine, clean the air cleaner properly.

1. Remove the wing screw, and then remove the cover.
2. Remove the screw, and then remove the air cleaner elements.
3. Remove the urethane element from the paper element.

#### Important

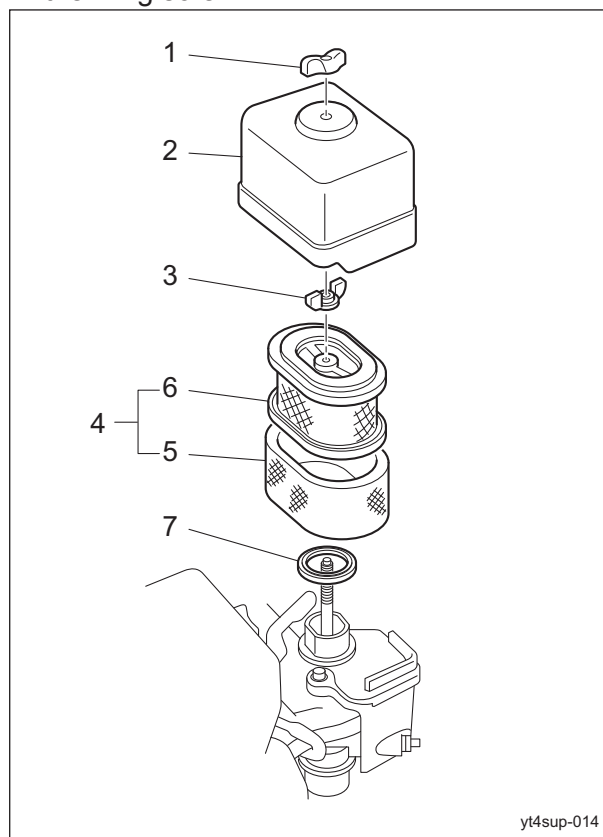
When cleaning the paper element, do not use petroleum solvents.

#### Important

Replace the air cleaner elements when it gets damaged or dirty.

4. Clean the urethane element with a solvent, such as a hardly flammable kerosene, and then soak it in the engine oil and wring out.

5. Remove dirt and dust from the paper element with blowing air or patting.
6. Assemble the paper and urethane elements.
7. Attach the air cleaner elements with the screw.
8. Set the cover, and then secure it firmly with the wing screw.



Cleaning of Air Cleaner\_001

1	Wing screw
2	Cover
3	Screw
4	Air cleaner element
5	Urethane element
6	Paper element
7	Gasket

# Handling Instructions

## Roller

### Inspection of Rollers

Bearing wear due to frequent use or bearing damage caused by water infiltration may prevent the roller from rotating smoothly. Inspect the roller and, if necessary, replace parts such as oil seals and bearings.

1. Make sure that there is no abrasion nor adhesion of the roller.
2. Make sure that there is no wear of the roller shaft.
3. Make sure that there is no wear nor damage of the oil seal.
4. Make sure that there is no wear nor rust of the bearing.
5. Make sure that there is no play in the roller shaft.

## Drum

### Inspection of Drum

1. Make sure that the drum is not cracked or damaged.
2. Make sure that there is no abrasion or adhesion of the drum.
3. Make sure that there is no play in the fit of the drum and the bearing.

## Tire

### Inspection of Tires

1. Check the pneumatic pressure of the tires.
2. Make sure that there are no cracks, damage or abnormal wear.

	Tire size	Pneumatic pressure
Tire for traveling	4.10/3.50-6	120 kPa (1.2 kgf/cm <sup>2</sup> )

## Brake

### Inspection of Brake

1. Grip the brake lever and make sure that the brake can operate completely.
2. Operate the lock lever and make sure that it can lock the brake lever.
3. Make sure that the brake is not applied even slightly after releasing the lock on the brake lever.

## Wire

### Inspection of Wire

1. Make sure that the wire is not cracked or damaged.
2. If the wire is cracked or damaged, replace it with a new one immediately.

## Around The Engine

### Inspection of Engine-Associated Parts

1. Check the fuel system parts for loosened or cracked joints and leakage. Replace the parts if necessary.
2. Blow compressed air to clean any grass or flammable materials that may be attached on or around the muffler.

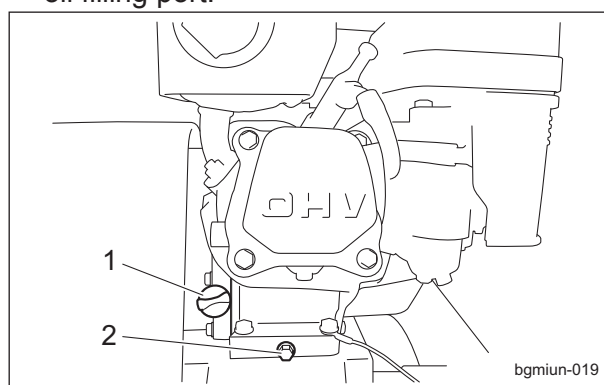
## Engine Oil

### Inspection of Engine Oil

#### Important

Screw the oil level gauge firmly.

1. Stop the engine, wait for 10 to 20 minutes for the engine to cool down, and then check the oil level.
2. Position the machine so that the engine will be level, then check the engine oil level without screwing the oil level gauge into the oil filling port.

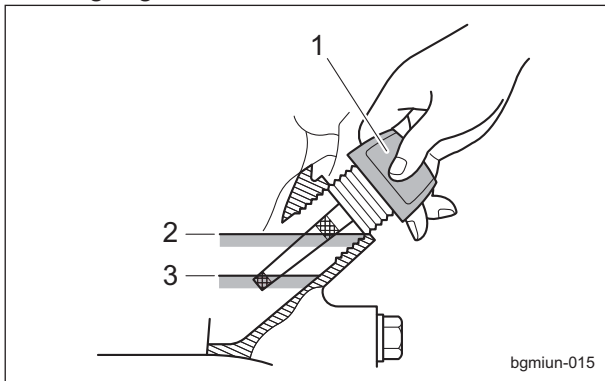


Inspection of Engine Oil\_001

1	Oil level gauge (Oil filling port)
2	Drain plug

# Handling Instructions

3. The appropriate engine oil level should be between the upper and lower limit lines on the gauge.



Inspection of Engine Oil\_002

1	Oil level gauge
2	Upper limit
3	Lower limit

4. Screw the oil level gauge firmly.

## Supply of Engine Oil

### Important

Do not supply too much engine oil. Otherwise, the engine may be damaged.

### Important

Do not mix different types of engine oil.

### Important

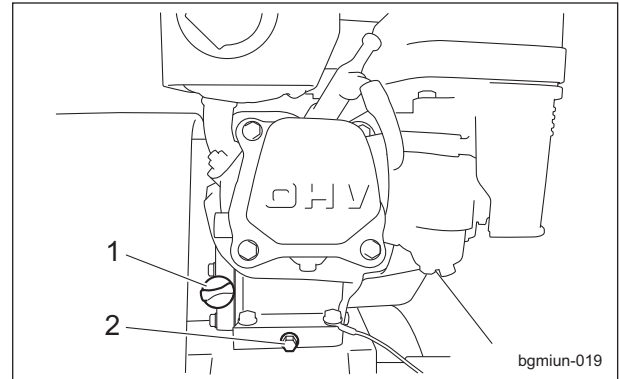
Be sure to use engine oil that is classified as API Service Grade SE or higher, with an SAE Viscosity that is appropriate for the operating environment (ambient temperature).

### Important

Screw the oil level gauge firmly.

1. Remove the oil level gauge.
2. Through the oil filling port, supply new engine oil until the engine oil reaches a level in the upper limit lines on the oil level gauge.
3. Position the machine so that the engine will be level, then check the engine oil level without screwing the oil level gauge into the oil filling port.

4. Screw the oil level gauge firmly.



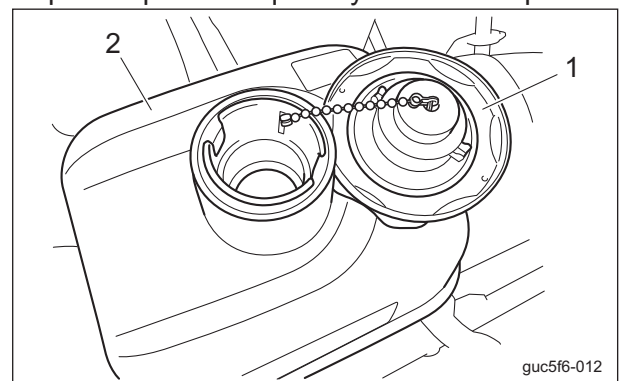
Supply of Engine Oil\_001

1	Oil level gauge (Oil filling port)
2	Drain plug

## Fuel

### Inspection of Fuel Quantity

Level the machine and then remove the tank cap to inspect fuel quantity from the fill port.



Inspection of Fuel Quantity\_001

1	Tank cap
2	Fuel tank

# Handling Instructions

## Fuel Supply

**Caution**

Do not supply fuel above FULL level of the fuel gauge.  
If you supply too much fuel, it might overflow from the fuel cap when you travel or work on a slope.

**Caution**

Keep fire away while refueling.  
Do not smoke while refueling.

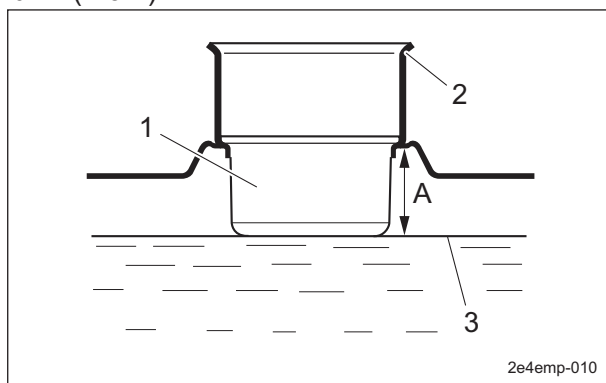
**Caution**

Supply fuel after the engine is stopped and has well cooled down.

**Caution**

Pay attention not to touch hot parts.

Inspect the fuel quantity and put fuel (gasoline) if insufficient.  
The fuel tank capacity is approximately 2.0 dm<sup>3</sup> (2.0 L).



Fuel Supply\_001

1	Fuel strainer
2	Filling opening
3	Maximum limit of fueling
A	2.5 cm (0.98 in)

## Fuel Strainer

### Inspection of Fuel Strainer

The fuel strainer is located in the piping for fuel supply system and removes contamination.

1. Make sure that there is no fuel leakage.
2. Make sure that the fuel strainer is not damaged or dirty.

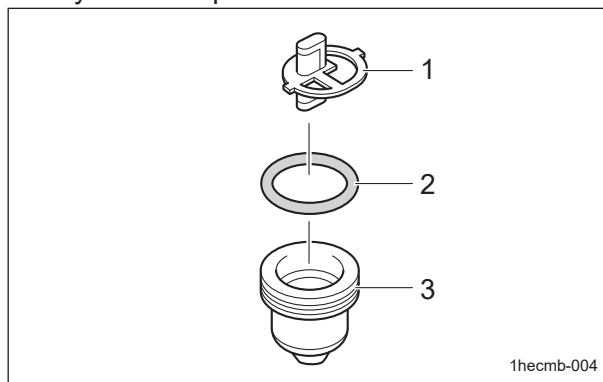
### Cleaning of Fuel Strainer

If dust or dirt accumulates in the fuel strainer, the fuel flow will become insufficient. Periodically clean it.

**Important**

Clean the fuel strainer in a clean location, free of dust and dirt.

1. Close the fuel cock of the fuel strainer.
2. Remove the strainer cup.
3. Clean the filter and the inside of the strainer cup with a solvent, such as hardly flammable kerosene.
4. Dry with compressed air.



Cleaning of Fuel Strainer\_001

1	Filter
2	O ring
3	Strainer cup

**Important**

During installation, prevent contamination with dirt or dust.  
If the fuel is contaminated with dirt, dust, etc., the fuel flow will become insufficient.

5. Correctly install all parts in their original positions.
6. Fill up the fuel tank with fuel, and then open the fuel cock.

# Handling Instructions

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7. Make sure that there is no fuel leakage.

## Oil Leakage

### Inspection of Oil Leakage

After approximately 50 hours of operation, some joints may be loosened and oil and grease may leak.

Be sure to retighten the parts.

Check the bottom of the machine for oil and grease leakage.

## Grass Catcher

### Inspection of Grass Catcher

The grass catcher may no longer correctly collect grass clippings due to its wear, damage, deformation, etc., caused by frequent use.

1. Make sure that there is no wear or deterioration of the grass catcher.
2. Make sure that there is no damage to the grass catcher.
3. Make sure that there is no interference to moving parts due to deformation of the grass catcher.



## Tightening Torques

### Important

Refer to the Tightening Torque table.  
Note that the Baroness product warranty may not apply to defects caused by incorrect or overtorque tightening, etc.

## Standard Tightening Torques

### Bolts and Nuts

### Important

A number of bolts are used in each part of this machine.  
Be sure to re-tighten the bolts and nuts, because they may be loosened at the earlier stage of the use.

As to the bolts and nuts without any special instruction, tighten them in appropriate tightening torque with proper tool.

Too much tightening may cause the looseness or damage of the screw.

The strength of tightening is determined by types of screws, strength, the friction of thread face or base face and others.

The table below is for the galvanized or parkerized bolts.

In case that the strength of internal thread is weak, it is not applied.

Do not use rusty or sand attached "screw."

Otherwise, it may cause insufficient tightening even if you apply the specified tightening torque.

The friction of the screw face becomes higher and the tightening torque is canceled out by the friction, therefore sufficient tightening cannot be applied.

If "screw" is wet by water or oil, do not tighten it with normal tightening torque.

If the screw is wet, the torque coefficient will get smaller and it may result in too much tightening.


Too much tightening may cause looseness by the screw stretched or result in damage.



Do not use a bolt experienced too much burden.

Using the impact wrench requires the skill.

Do exercise as much as possible for steady tightening.

# Handling Instructions

Nominal diameter	General bolt		
	Strength classification 4.8		
	 tib3yb-001		
	N-m	kgf-cm	lb-in
M5	3 - 5	30.59 - 50.99	26.55 - 44.26
M6	7 - 9	71.38 - 91.77	61.96 - 79.66
M8	14 - 19	142.76 - 193.74	123.91 - 168.17
M10	29 - 38	295.71 - 387.49	256.68 - 336.34
M12	52 - 67	530.24 - 683.20	460.25 - 593.02
M14	70 - 94	713.79 - 958.52	619.57 - 831.99
M16	88 - 112	897.34 - 1142.06	778.89 - 991.31
M18	116 - 144	1,182.85 - 1,468.37	1,026.72 - 1,274.54
M20	147 - 183	1,498.96 - 1,866.05	1,301.10 - 1,619.73
M22	295	3,008.12	2,611.05
M24	370	3,772.89	3,274.87
M27	550	5,608.35	4,868.05
M30	740	7,545.78	6,549.74

Nominal diameter	Heat-treated bolt					
	Strength classification 8.8			Strength classification 10.9		
	 tib3yb-002			 tib3yb-003		
	N-m	kgf-cm	lb-in	N-m	kgf-cm	lb-in
M5	5 - 7	50.99 - 71.38	44.26 - 61.96	7 - 10	71.38 - 101.97	61.96 - 88.51
M6	8 - 11	81.58 - 112.17	70.81 - 97.36	14 - 18	142.76 - 183.55	123.91 - 159.32
M8	23 - 29	234.53 - 295.71	203.57 - 256.68	28 - 38	285.52 - 387.49	247.83 - 336.34
M10	45 - 57	458.87 - 581.23	398.30 - 504.51	58 - 76	591.43 - 774.97	513.36 - 672.68
M12	67 - 85	683.20 - 866.75	593.02 - 752.34	104 - 134	1,060.49 - 1,366.40	920.50 - 1186.03
M14	106 - 134	1,080.88 - 1,366.40	938.21 - 1,186.03	140 - 188	1,427.58 - 1,917.04	1,239.14 - 1,663.99
M16	152 - 188	1,549.94 - 1,917.04	1,345.35 - 1,663.99	210 - 260	2,141.37 - 2,651.22	1,858.71 - 2,301.26
M18	200 - 240	2,039.40 - 2,447.28	1,770.20 - 2,124.24	280 - 340	2,855.16 - 3,466.98	2,478.28 - 3,009.34
M20	245 - 295	2,498.27 - 3,008.12	2,168.50 - 2,611.05	370 - 450	3,772.89 - 4,588.65	3,274.87 - 3,982.95
M22	-	-	-	530	5,404.41	4,691.03
M24	-	-	-	670	6,831.99	5,930.17
M27	-	-	-	1,000	10,197.00	8,851.00
M30	-	-	-	1,340	14,628.78	11,860.34

**Note:**

The same values are applied to "fine screw thread."

# Handling Instructions

## Principal Tightening Torques

### Tightening Torque by Model

LM101

Tighten the following bolts and nuts at the torque specified in the table.

For thread locking adhesive, apply a middle strength thread locker (ThreeBond 1322 or equivalent anaerobic sealant).

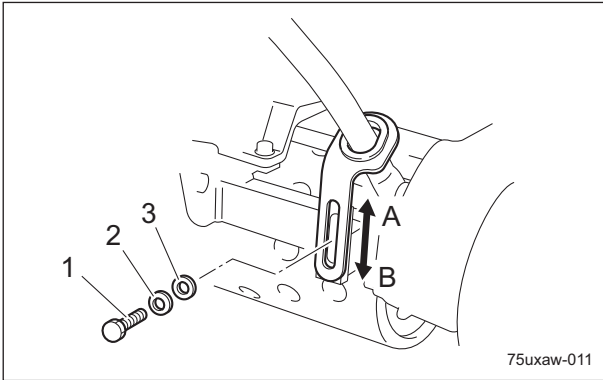
Location		Code	Part name	Tightening torque			Thread locking adhesive
				N-m	kgf-cm	lb-in	
Mower	Reel shaft	K0170000082	NUT, SMALL P1.5 M20-8	36	367.09	318.64	-
	Reel shaft (with groomer)	LM101--1205Z0	GEAR, REEL 20-TEETH A	36	367.09	318.64	-
	Front roller	LM54G--0132Z0	BOLT, SUS MOUNTING MOWER (LH)	29 - 38	295.71 - 387.49	256.68 - 336.34	-
		LM54G--0133Z0	BOLT, SUS MOUNTING MOWER (RH)	29 - 38	295.71 - 387.49	256.68 - 336.34	-
	Bed knife	K0071000222	SCREW, HT + FLAT HEAD M6-12	7 - 9	71.38 - 91.77	61.96 - 79.66	-
Wheel	K001A080201	BOLT, 13T W/HEX HOLE M8-20	14 - 19	142.76 - 193.74	123.91 - 168.17	-	
Handle	K0010100252	BOLT, HT M10-25	29 - 38	295.71 - 387.49	256.68 - 336.34	-	
Groomer	K6809000270	SCREW	18	183.55	159.32	-	
	K0160000602	NUT, SPECIAL P1 M17 W/M4	5 - 10	50.99 - 101.97	44.26 - 88.51	-	
	K6083000143	PIN, STEPPED FOR FIXING (RH) CASE	6	61.18	53.11	-	
	LM54GAS1230Z3	BOLT, CLAMPING CASE (LH)	6	61.18	53.11	-	

# Handling Instructions

## Adjustment before Work

### Adjustment of Handle

The height of the handle can be adjusted according to the operator's working position. Move the handle adjusters supporting the handle up or down and fix them with the bolts.



Adjustment of Handle\_001

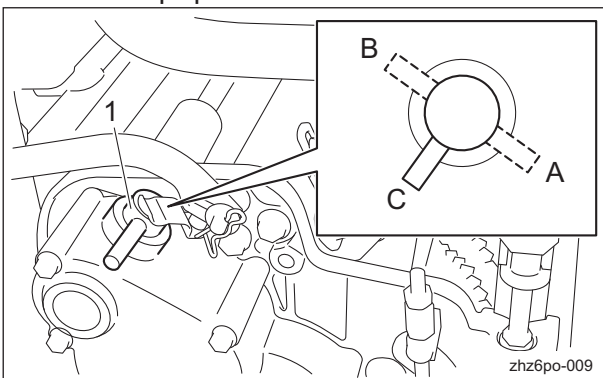
1	Bolt
2	Conical spring washer
3	Washer
A	High
B	Low

### Adjustment of Blade Engagement

#### ⚠ Caution

When checking the sharpness of the blades with newspaper, be sure to stop the engine and protect your hands with gloves etc. Pay attention not to let the reel cutter (cutting cylinder) catch your gloves. Otherwise, you may injure your hand or fingers.

1. Stop the engine.
2. Set the FOC (High/Low Clip) selector lever to the "Stop" position.



Adjustment of Blade Engagement\_001

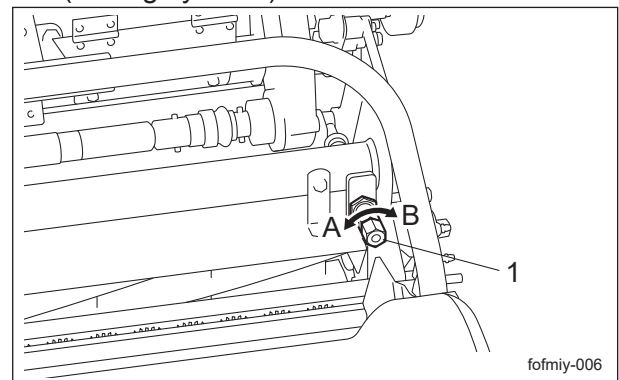
1	FOC (High/Low Clip) selector lever
A	Low clip
B	High clip
C	Stop

3. Adjust the engagement between the reel cutter (cutting cylinder) and the bed knife (bottom blade) so that newspaper (one piece) will be cut cleanly by the edge of both blades when the blades in their entirety come slightly into contact with each other via the cutter adjustment nuts.
4. Insert a strip of newspaper into the space between the reel cutter (cutting cylinder) and the bed knife (bottom blade) at an angle of 90 degrees.

Then, rotate the reel cutter (cutting cylinder) counter-clockwise (when you face the cutting section from the left) to check the sharpness of the blades.

Check the sharpness of the entire range (three or four points) of the reel cutter (cutting cylinder).

- If a gap is created between edges: Loosen (rotate counter-clockwise) the cutter adjustment nut to apply more contact pressure between the reel cutter (cutting cylinder) and the bed knife (bottom blade).
- If the reel cutter (cutting cylinder) is too tight to turn: Tighten (rotate clockwise) the cutter adjustment nut to reduce the contact pressure between the reel cutter (cutting cylinder) and the bed knife (bottom blade).
- If the sharpness is not improved by the adjustment: Perform back lapping to the reel cutter (cutting cylinder).



Adjustment of Blade Engagement\_002

1	Cutter adjustment nut
A	Loosen
B	Tighten

## Adjustment of Cutting Height

### Important

This applies the set cutting height that differs from the actual cutting height.

Adjust the cutting height to fit your cutting work.

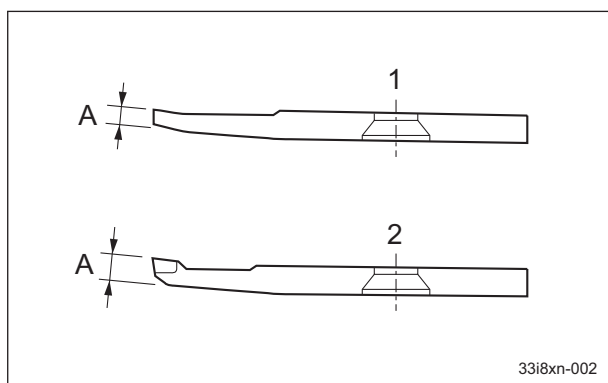
### Cutting Height and Thickness of Bed Knife (Bottom Blade)

### Important

The recommended minimum cutting heights are based on those of common greens. They may vary according to the green conditions and machine specifications. If the green undulation is hard, set it a little bit higher in order not to damage the green surface.

Minimum cutting height is recommended for each thickness of blade as follows.

Type of blade	Thickness of blade (mm/inch)	Recommended minimum cutting height (mm/inch)	Code	Part name	Remarks
Standard blade	1.5	3.0	K2511000270	1.5 Bed knife (bottom blade) 55G	Standard
	2.0	3.5	K2511000280	2 Bed knife (bottom blade) 55G	
	2.5	4.0	K2511000050	2.5 Bed knife (bottom blade) 55G	
Tipped blade	3.0	4.5	K2510000060	3 Bed knife (bottom blade) 62.5-559	
	5.0	7.0	K2510000160	5 Bed knife (bottom blade) 62.5-559	



Cutting Height and Thickness of Bed Knife (Bottom Blade)\_001

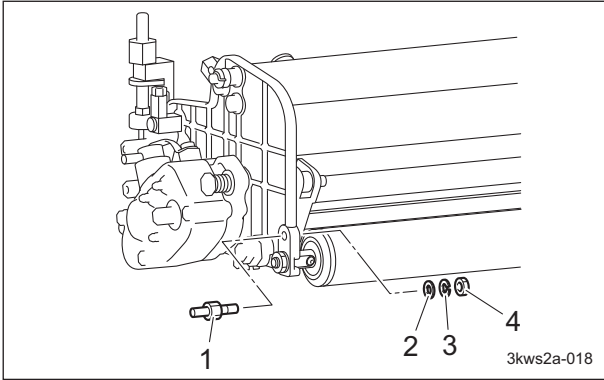
1	Standard blade
2	Tipped blade
A	Thickness of blade

# Handling Instructions

## Adjustment of Rear Roller

The rear roller can be adjusted to 3 levels.  
Adjust the rear roller to a cutting stance that suits the required work.

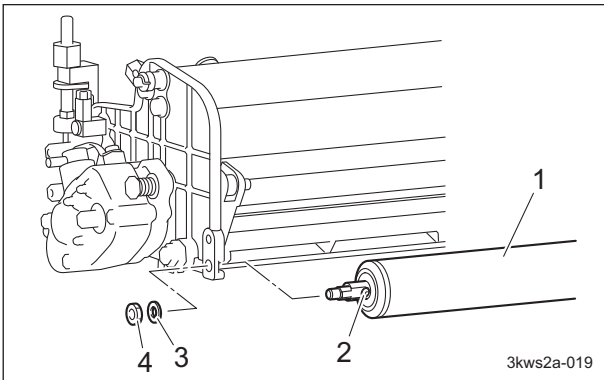
1. Remove the left and right nut A, washer A, spring washer A, and bolt A.



Adjustment of Rear Roller\_001

1	Bolt A
2	Washer A
3	Spring washer A
4	Nut A

2. Remove the left and right washer B and nut B, and remove the rear roller assy from the frame.



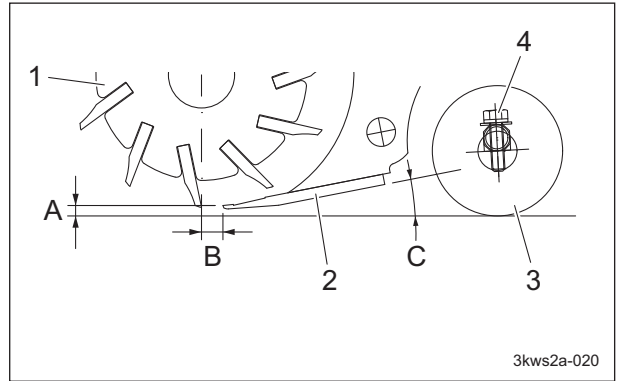
Adjustment of Rear Roller\_002

1	Rear roller assy
2	Bolt B
3	Washer B
4	Nut B

3. Decide on the orientation of bolt B to suit the desired cutting stance, and install the rear roller assy.

Cutting stance

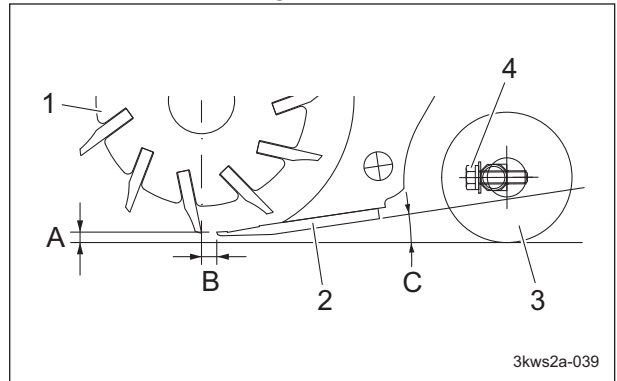
- Aggressive cutting stance  
Long offset distance and large bed knife angle.



Adjustment of Rear Roller\_003

1	Reel cutter
2	Bed knife
3	Rear roller assy
4	Bolt B
A	Cutting height
B	Offset distance
C	Bed knife angle

- Standard cutting stance

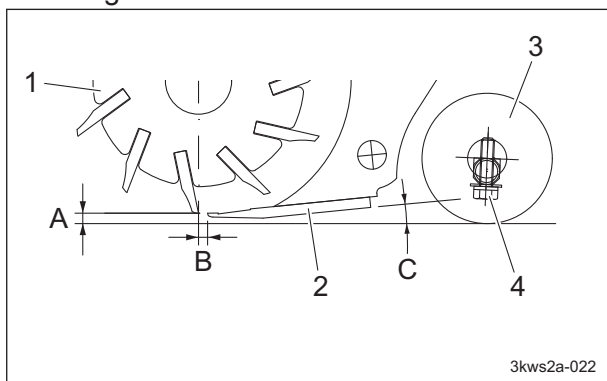


Adjustment of Rear Roller\_004

1	Reel cutter
2	Bed knife
3	Rear roller assy
4	Bolt B
A	Cutting height
B	Offset distance
C	Bed knife angle

# Handling Instructions

- Less aggressive cutting stance  
Short offset distance and small bed knife angle.

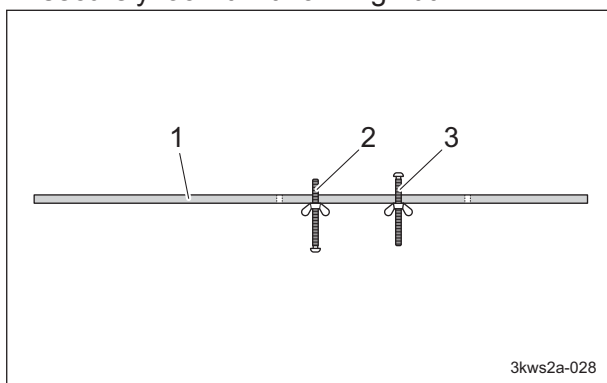


Adjustment of Rear Roller\_005

1	Reel cutter
2	Bed knife
3	Rear roller assy
4	Bolt B
A	Cutting height
B	Offset distance
C	Bed knife angle

## Adjustment of Front Roller

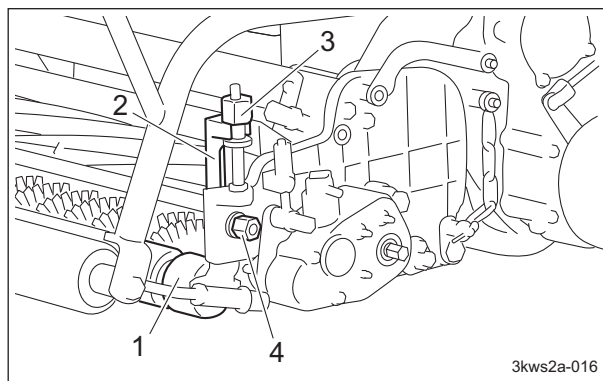
1. Set the slide caliper to the required cutting height, adjust the position of the bottom of the head of the cutting height setting screw on the cutting height gauge, and then securely lock it with a wing nut.



Adjustment of Front Roller\_001

1	Cutting height gauge
2	Groomer setting screw
3	Cutting height setting screw

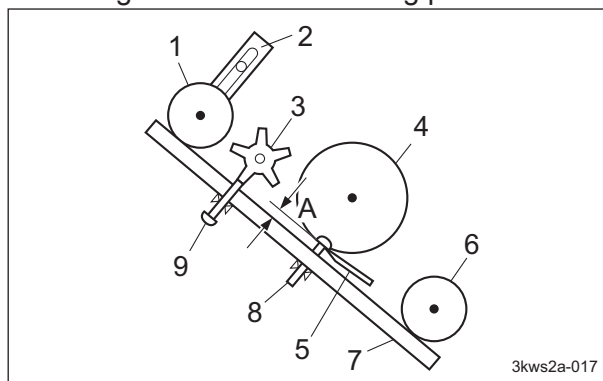
2. Loosen the left and right nuts that secure the roller bracket.



Adjustment of Front Roller\_002

1	Front roller
2	Roller bracket
3	Roller adjustment bracket
4	Nut

3. Bring the cutting height gauge into contact with the front roller and rear roller at the left and right ends of the mowing part.

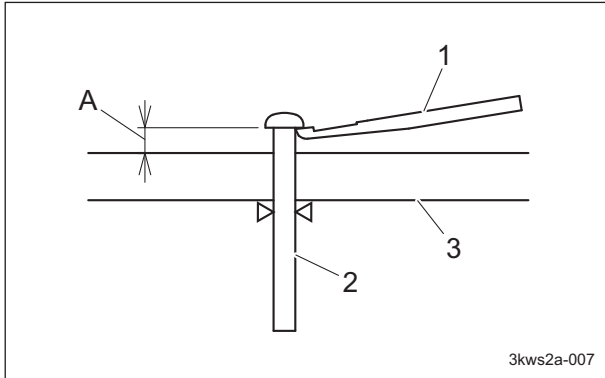


Adjustment of Front Roller\_003

1	Front roller
2	Roller bracket
3	Front groomer
4	Reel cutter
5	Bed knife
6	Rear roller
7	Cutting height gauge
8	Cutting height setting screw
9	Groomer setting screw
A	Cutting height

# Handling Instructions

4. Raise or lower the front roller with the roller adjustment bracket to set the position of the front roller so that there is no clearance with the bottom of the head of the cutting height setting screw on the cutting height gauge at the tip position of the bed knife.



Adjustment of Front Roller\_004

1	Bed knife
2	Cutting height setting screw
3	Cutting height gauge
A	Cutting height

5. Follow the same steps to adjust the cutting height on the opposite side.  
 6. Tighten the nuts securing the left and right roller brackets, and fix them securely.  
 7. Bring the cutting height gauge into contact with the front roller and rear roller at the left and right ends of the mowing part again, and check that it is at the desired cutting height.

## Adjustment of Groomer

### Note:

Depending on the specifications, this function may not be available.

### Important

When using the front groomer, adjust it to suit the conditions on the green.

### Important

Set the groomer to a height of 0.0 mm (0.0 in) or more above the ground. Setting the front groomer deeper than the ground surface may cause damage to the groomer shaft.

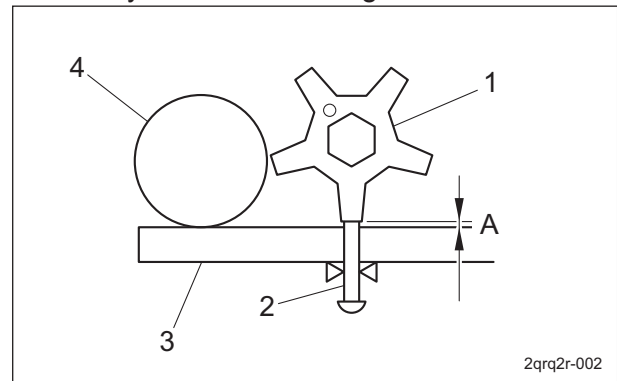
### Important

Setting the front groomer too deep applies too much load to the engine and transmission parts, and may cause malfunctions or damage.

### Important

When using the grooming brush, set it to the same height as the cutting height. If the height of the grooming brush is too low the brush will wear faster.

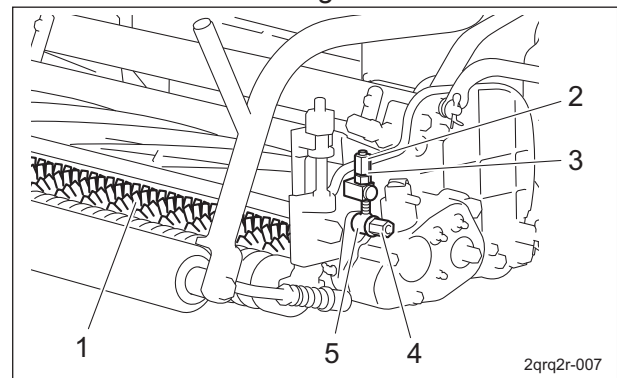
1. Set the slide caliper to the required groomer height, adjust the tip of the groomer setting screw on the cutting height gauge, and then securely lock it with a wing nut.



Adjustment of Groomer\_001

1	Vertical blade
2	Groomer setting screw
3	Cutting height gauge
4	Front roller
A	Groomer height

2. Loosen the nut B securing the left side groomer adjustment screw.  
 3. Loosen the left side high nut.



Adjustment of Groomer\_002

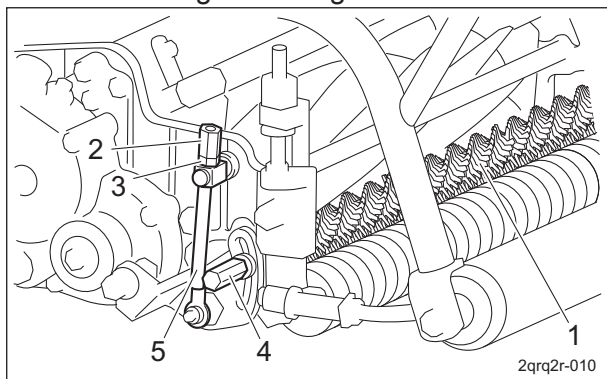


# Handling Instructions

1	Front groomer
2	High nut
3	Nut A
4	Nut B
5	Groomer adjustment screw

4. Loosen the bolt securing the right side groomer adjustment screw.

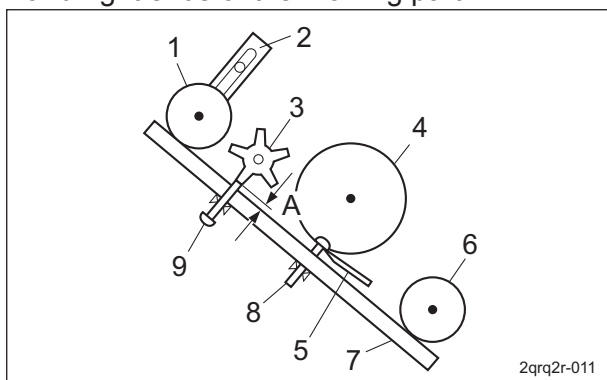
5. Loosen the right side high nut.



Adjustment of Groomer\_003

1	Front groomer
2	High nut
3	Nut A
4	Bolt
5	Groomer adjustment screw

6. Bring the cutting height gauge into contact with the front roller and rear roller at the left and right ends of the mowing part.



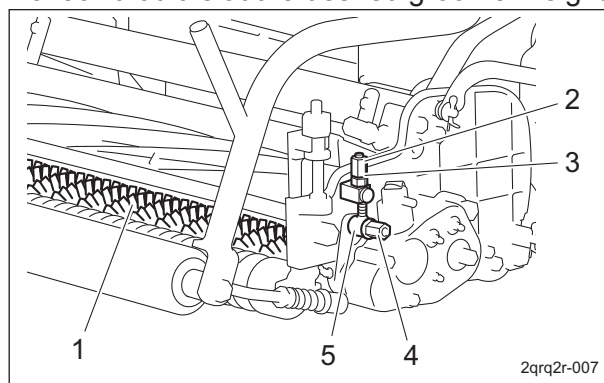
Adjustment of Groomer\_004

1	Front roller
2	Roller bracket
3	Front groomer
4	Reel cutter
5	Bed knife
6	Rear roller
7	Cutting height gauge
8	Cutting height setting screw
9	Groomer setting screw
A	Groomer height

### Important

Adjust the position so that the groomer setting screw can contact the vertical blades.

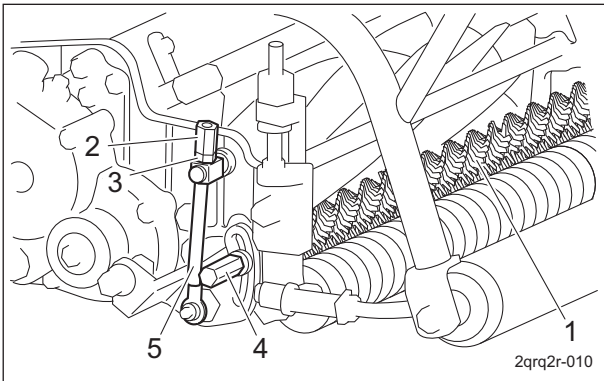
7. Adjust nut C by raising or lowering it so the left and right are parallel.
8. Firmly tighten the nut B securing the left side groomer adjustment screw.
9. Firmly tighten the bolt securing the right side groomer adjustment screw.
10. Tighten the left and right high nuts.
11. Bring the cutting height gauge into contact with the front roller and rear roller at the left and right ends of the mowing part again, and check that it is at the desired groomer height.



Adjustment of Groomer\_005

1	Front groomer
2	High nut
3	Nut A
4	Nut B
5	Groomer adjustment screw

# Handling Instructions



Adjustment of Groomer\_006

1	Front groomer
2	High nut
3	Nut A
4	Bolt
5	Groomer adjustment screw

**Note:**

When not using the front groomer, there is no need to change the set height of the groomer.

The front groomer can be raised to a height where it does not make contact with the grass, by loosening the left side nut B and right side bolt securing the groomer adjustment screw, lifting up the front groomer and tightening the left side nut B and right side bolt.

To use the groomer again, the previous height set for the groomer can be restored by loosening the left side nut B and right side bolt, lowering the groomer and tightening the left side nut B and right side bolt.

## Procedure to Start/Stop Engine

### Start/Stop of Engine

#### Procedure to Start Engine

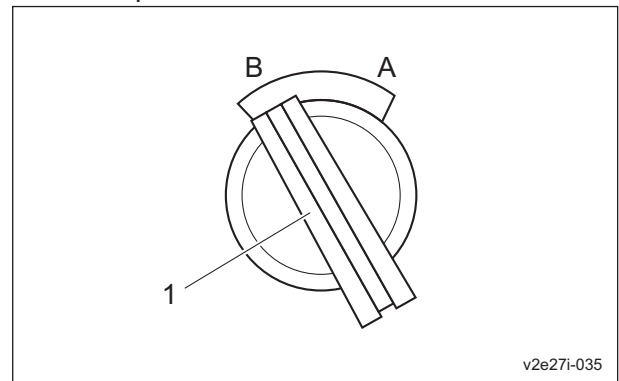
**Caution**

Before starting the engine, make sure that there are no other people or obstacles around the machine.

**Caution**

Make sure that the engine clutch cover is installed in the prescribed position.

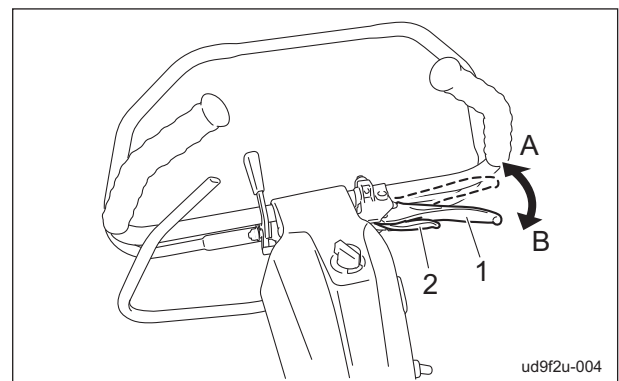
1. Make sure that the engine switch is in the "OFF" position.



Procedure to Start Engine\_001

1	Engine switch
A	ON
B	OFF

2. Make sure that the brake is locked.

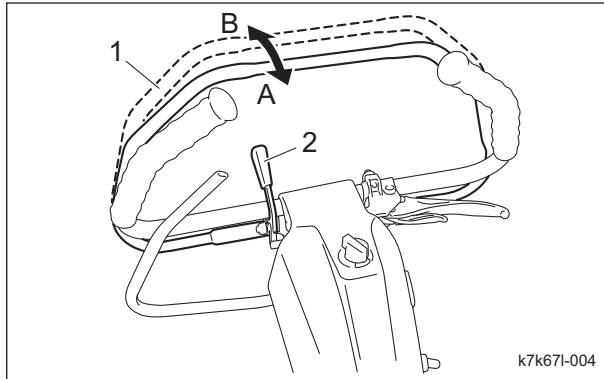


Procedure to Start Engine\_002

1	Brake lever
2	Lock lever
A	Lock
B	Unlock

# Handling Instructions

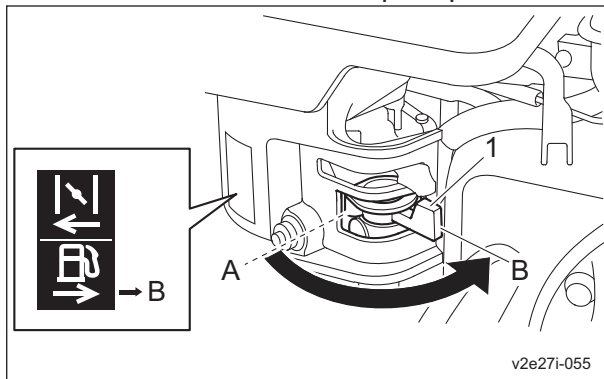
3. Don't grip the main clutch lever.



Procedure to Start Engine\_003

1	Main clutch lever
2	Clutch lock lever
A	ON
B	OFF

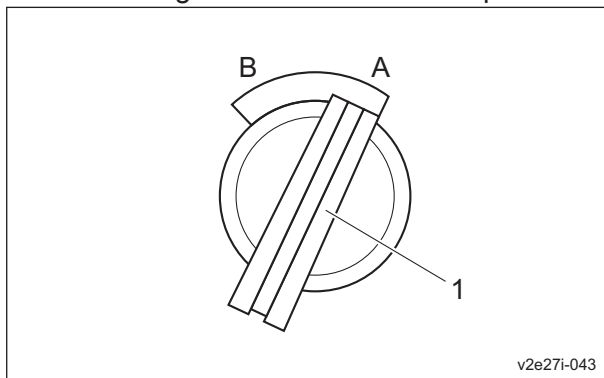
4. Set the fuel cock to the "Open" position.



Procedure to Start Engine\_004

1	Fuel cock
A	Close
B	Open

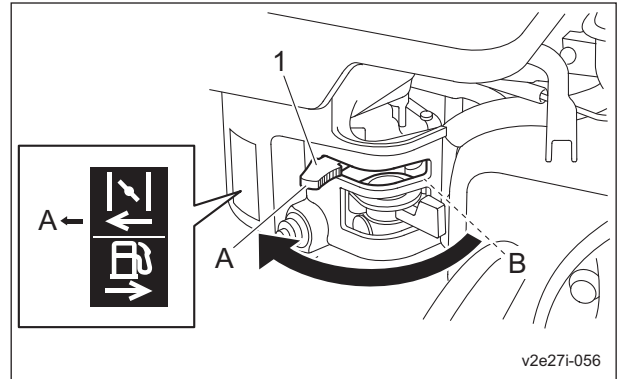
5. Set the engine switch to the "ON" position.



Procedure to Start Engine\_005

1	Engine switch
A	ON
B	OFF

6. Set the choke lever to the "Close" position.



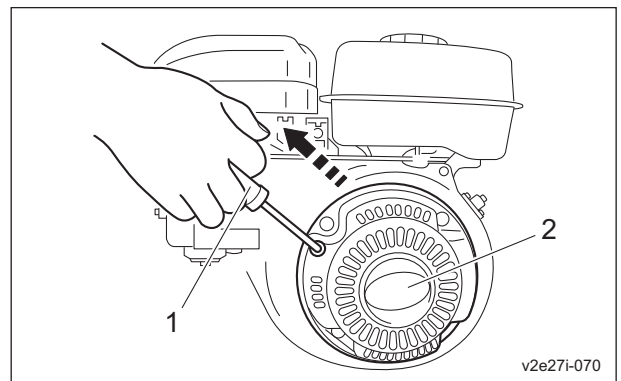
Procedure to Start Engine\_006

1	Choke lever
A	Close
B	Open

**Important**

Return the starter grip slowly to its original position after the engine starts. Do not let go of the pulled starter grip since it may cause damage to the machine.

7. Pull the starter grip swiftly, and the engine will start.

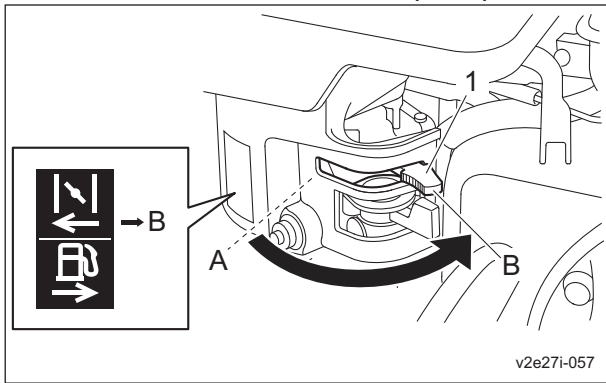


Procedure to Start Engine\_007

1	Starter grip
2	Recoil starter

# Handling Instructions

8. Set the choke lever to the "Open" position.



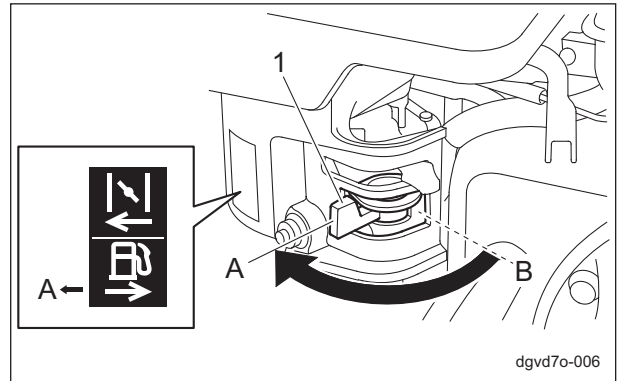
Procedure to Start Engine\_008

1	Choke lever
A	Close
B	Open

1	Engine switch
A	ON
B	OFF

3. Make sure that the brake is locked.

4. Set the fuel cock to the "Close" position.

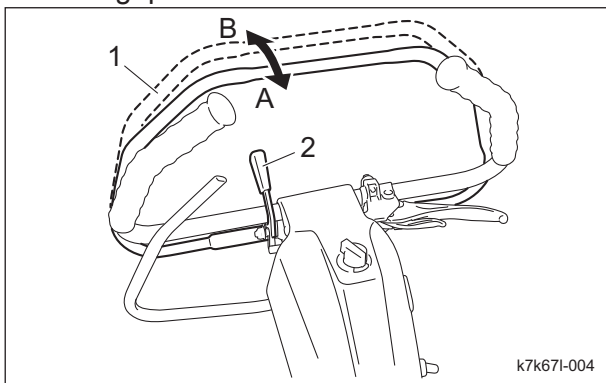


Procedure to Stop Engine\_003

1	Fuel cock
A	Close
B	Open

## Procedure to Stop Engine

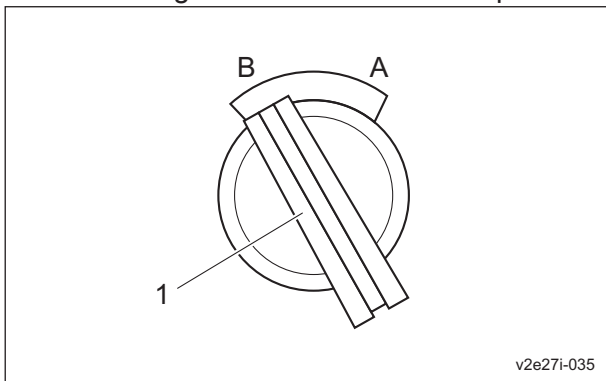
1. Don't grip the main clutch lever.



Procedure to Stop Engine\_001

1	Main clutch lever
2	Clutch lock lever
A	ON
B	OFF

2. Set the engine switch to the "OFF" position.



Procedure to Stop Engine\_002

# Handling Instructions

## Operation Method

### Cautions before Leaving The Machine

**Caution**

Park the machine on a flat place.  
Do not park the machine on a slope.

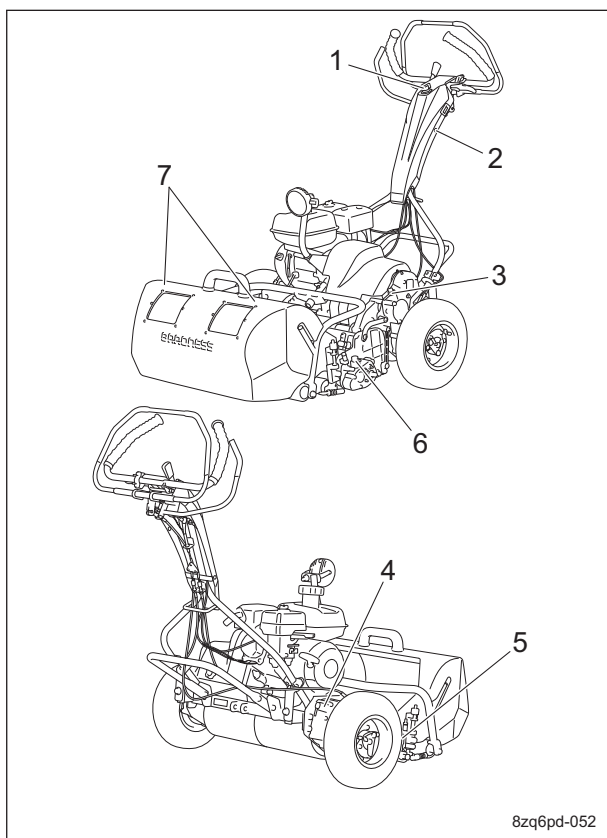
**Caution**

Check that the engine has stopped.

**Caution**

Make sure that the brake lever is locked.

### Positions of Operation Decals



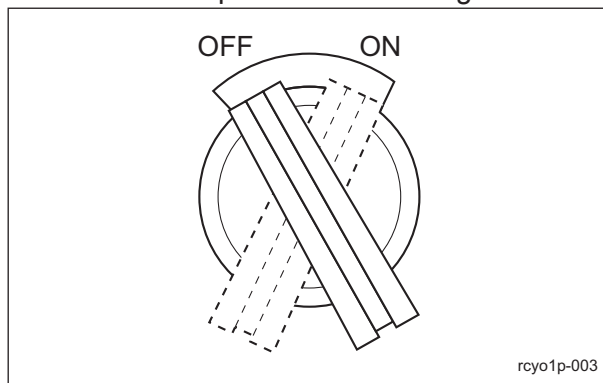
Positions of Operation Decals\_001

1	Engine switch mark
2	Decal, light switch
3	Sticker, ON/OFF A (Unit clutch)
4	Sticker, ON/OFF A (Drum clutch)
5	Sticker, reel rotation
6	Decal, groomer indication
7	Decal, alignment 10300 (Set of 2pcs)

## Description of Operation Decals

### Engine Switch Mark

**ENGINE SWITCH MARK**  
It illustrates the positions of the engine switch.

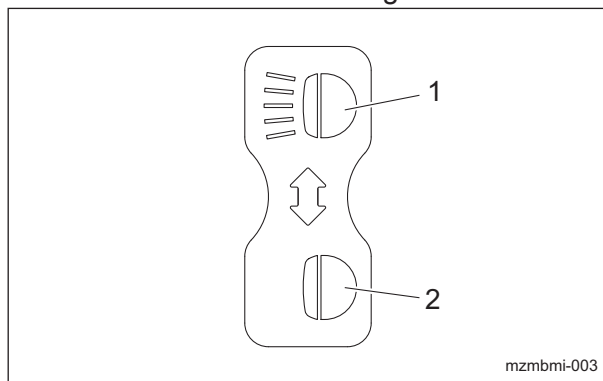


Engine Switch Mark\_001

### Light Switch Mark

**Note:**  
Depending on the specifications, this function may not be available.  
K4203001610

**DECAL, LIGHT SWITCH**  
It illustrates ON/OFF of the light.



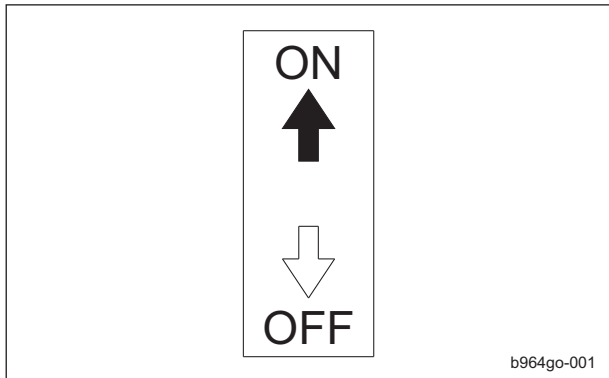
Light Switch Mark\_001

1	ON
2	OFF

# Handling Instructions

## ON/OFF Mark A (unit clutch)

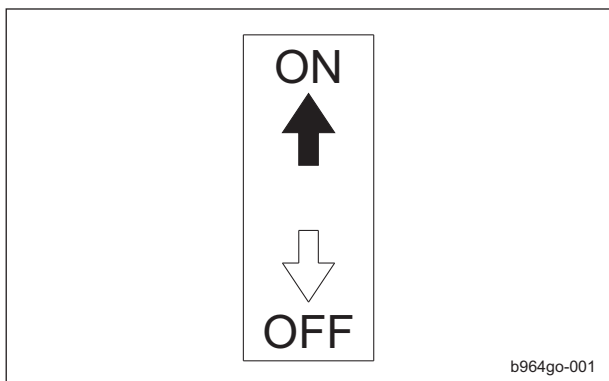
K4203001140  
 STICKER, ON/OFF A (unit clutch)  
 It shows ON/OFF of the unit clutch.



ON/OFF Mark A (unit clutch)\_001

## ON/OFF Mark A (drum clutch)

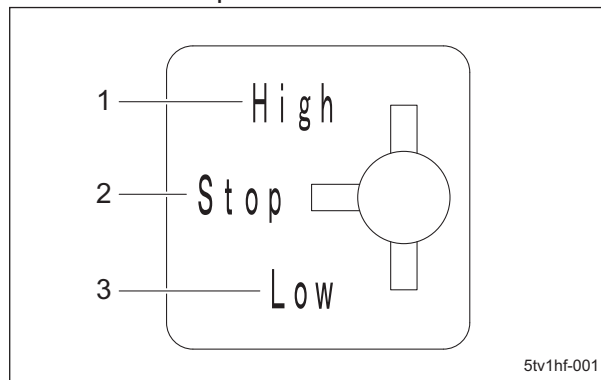
K4203001140  
 STICKER, ON/OFF A (drum clutch)  
 It shows ON/OFF of the drum clutch.



ON/OFF Mark A (drum clutch)\_001

## Reel Rotation Indication Mark

K4203001690  
 STICKER, REEL ROTATION  
 It illustrates High / Low speed of the reel cutter rotation speed.



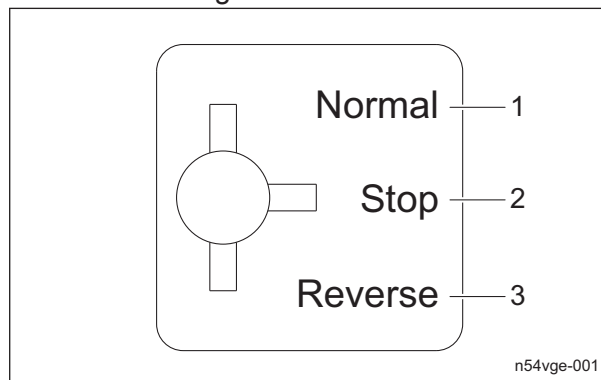
Reel Rotation Indication Mark\_001

1	High speed (High Clip)
2	Stop
3	Low speed (Low Clip)

## Groomer Indication Mark

Note:  
 Depending on the specifications, this function may not be available.

K4203001120  
 DECAL, GROOMER INDICATION  
 It illustrates the changeover of rotational direction of the groomer.



Groomer Indication Mark\_001

1	Normal rotation
2	Stop
3	Reverse rotation

# Handling Instructions

## Red Alignment Mark 10300

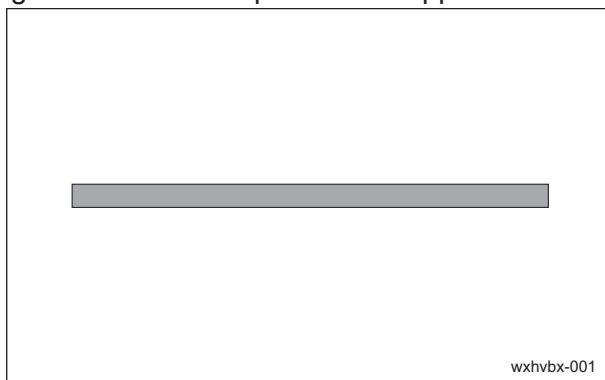
Note:

Depending on the specifications, this function may not be available.

K4209001230

DECAL, ALIGNMENT 10300 (SET OF 2PCS)

Affix the decals in indicative positions on the grass catcher for operational support.



Red Alignment Mark 10300\_001

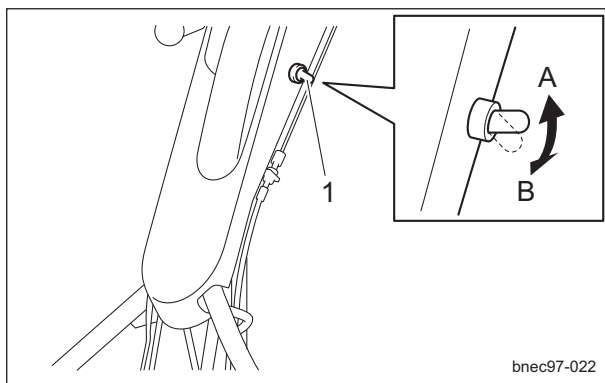
## Light Switch

Note:

Depending on the specifications, this function may not be available.

The light switch is located in the handle panel.

Flip up the switch to turn on the light, and down to turn off.



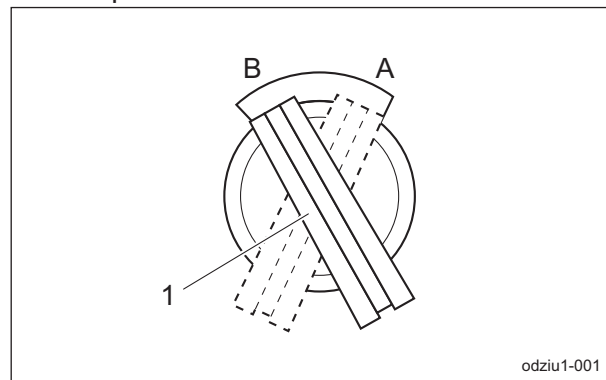
Light Switch\_001

1	Light switch
A	ON
B	OFF

## Engine Switch

The engine switch is located in the handle.

To start the engine, set the engine switch to the "ON" position, and to stop it, set to the "OFF" position.



Engine Switch\_001

1	Engine switch
A	ON
B	OFF

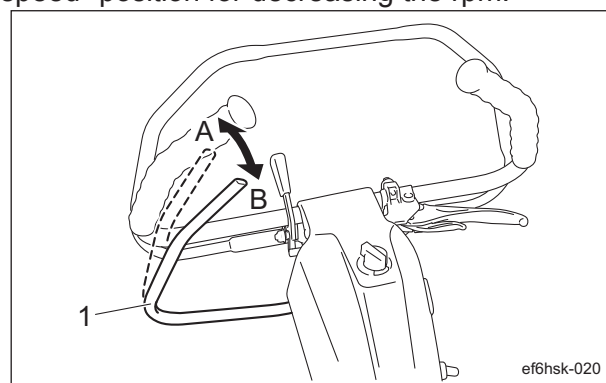
## Throttle Lever

Note:

Depending on the specifications, this function may not be available.

The throttle lever is located in the handle and enables you to adjust the engine rpm.

Grip the throttle lever tightly to move it toward "High speed" position for increasing the engine rpm, and loosen grip to move it toward "Low speed" position for decreasing the rpm.



Throttle Lever\_001

1	Throttle lever
A	High speed
B	Low speed

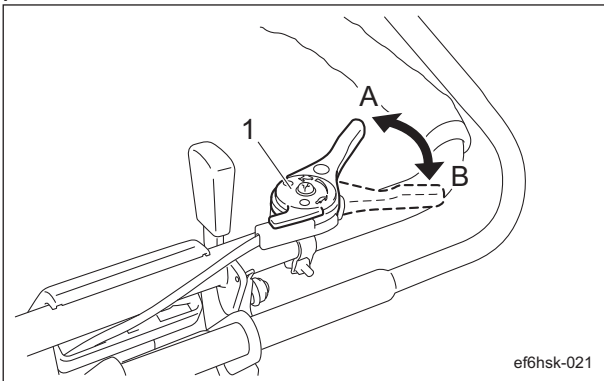
# Handling Instructions

## Throttle Lever

### Note:

Depending on the specifications, this function may not be available.

The throttle lever is located in the handle and enables you to adjust the engine rpm. Move the throttle lever toward the "High speed" position to increase the engine rpm, and toward the "Low speed" position to reduce the rpm.



Throttle Lever\_001

1	Throttle lever
A	High speed
B	Low speed

## Brake Lever

### ⚠ Caution

Avoid quick operation.  
Carefully and slowly operate the machine.

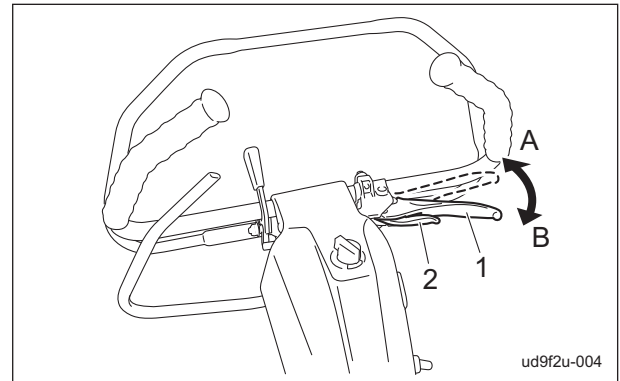
The brake lever is located in the handle. Grip the brake lever to activate braking and the travel of the machine is stopped.

Grip the lock lever while gripping the brake lever to lock the brake lever with braking applied.

Grip the locked brake lever to release locking.

### Note:

Lock the brake lever to apply Parking Brake.



Brake Lever\_001

1	Brake lever
2	Lock lever
A	Lock
B	Unlock

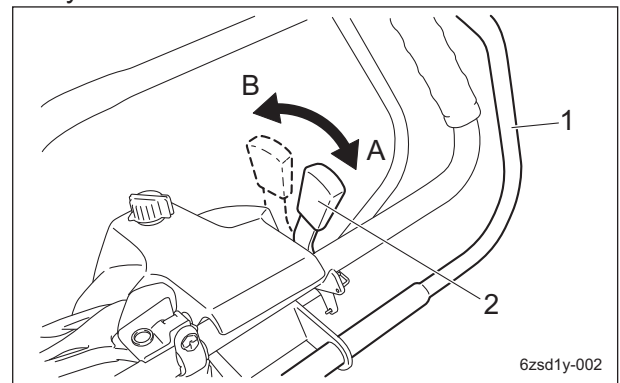
## Clutch Lock Lever

The clutch lock lever is located in the handle.

### Important

While the main clutch is in the "OFF" position, the safety lock is activated.

Grip the main clutch lever while tilting the clutch lock lever to "Unlock" side to unlock the safety lock.



Clutch Lock Lever\_001

1	Main clutch lever
2	Clutch lock lever
A	Lock
B	Unlock



# Handling Instructions

## Main Clutch Lever

### ⚠ Caution

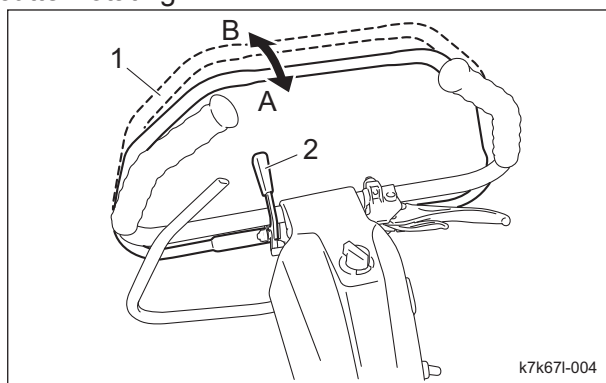
Avoid quick operation.  
Carefully and slowly operate the machine.

### Important

The main clutch is not activated unless the safety lock released.

The main clutch lever is located in the handle. Unlock the safety lock and then grip the main clutch lever to traveling forward with rotating the reel cutter.

Release the main clutch lever from the hands to stop the machine traveling and the reel cutter rotating.



Main Clutch Lever\_001

1	Main clutch lever
2	Clutch lock lever
A	ON
B	OFF

## Drum Clutch Lever

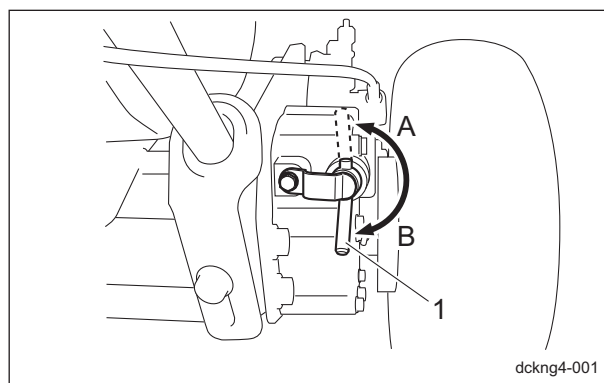
### ⚠ Caution

Operate and set the lever to the proper position in accordance with the purpose when the main clutch lever set to the OFF position.

The drum clutch lever is located at the rear of the right frame side.

Set the lever to ON to activate the drum and the traveling wheels.

Set the lever to OFF for neutral.



Drum Clutch Lever\_001

1	Drum clutch lever
A	ON
B	OFF

### Note:

The machine can be moved easily with the lever OFF when the engine stopped.

## Unit Clutch Lever

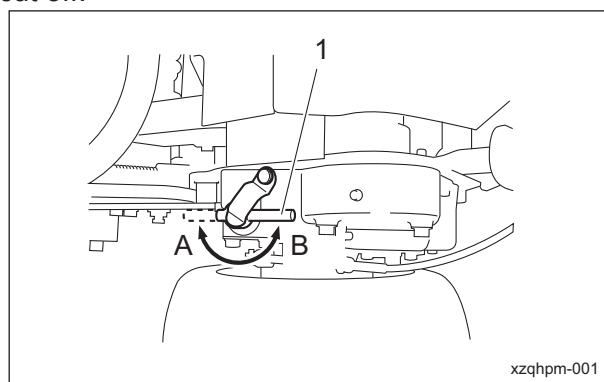
### ⚠ Caution

Operate and set the lever to the proper position in accordance with the purpose when the main clutch lever set to the OFF position.

The unit clutch lever is located above the left frame.

Set the lever to the ON position and the power is transmitted from the transmission case to the unit.

Set the lever to the OFF position and the power from the transmission case to the unit is cut off.



Unit Clutch Lever\_001

1	Unit clutch lever
A	ON
B	OFF

# Handling Instructions

**Note:**

Set the lever to the OFF position when traveling.

## FOC (High/Low Clip) Selector Lever



**Caution**

Operate and set the lever to the proper position in accordance with the purpose when the main clutch lever set to the OFF position.

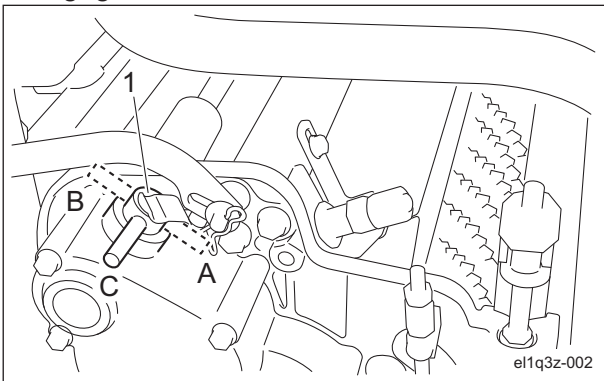
The FOC (High/Low Clip) selector lever is in the right side of the unit.

There are three changeover positions. When the lever is shifted to "High clip", the reel cutter (cutting cylinder) rotates faster, and the clip pitch (cutting interval) becomes shorter. This is suitable for the work in good turf condition.

When the lever is shifted to "Low clip", the reel cutter (cutting cylinder) rotates slower compared to "High clip" and the clip pitch becomes longer.

This is suitable for the work when the turf condition is not so good.

When the lever is shifted to "Stop", the drive transmission for the reel rotation gear is disengaged.



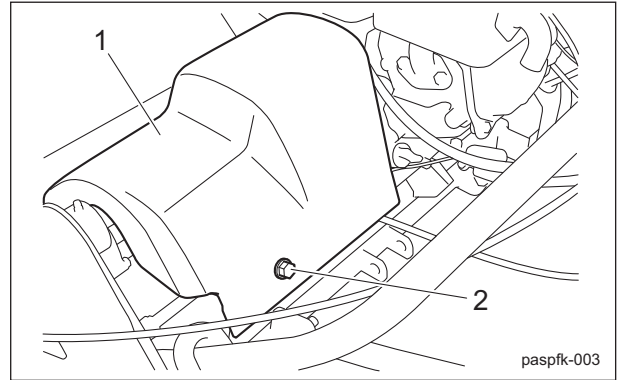
FOC (High/Low Clip) Selector Lever\_001

1	FOC (High/Low clip) Selector Lever
A	Low clip
B	High clip
C	Stop

## Engine Clutch Cover

The engine clutch cover is on the left side of the engine, covering the engine clutch.

The engine clutch cover can be opened and closed with the fastening bolt taken off and put on.



Engine Clutch Cover\_001

1	Engine Clutch Cover
2	Fastening bolt

# Handling Instructions

## Groomer Clutch Lever

Note:  
Depending on the specifications, this function may not be available.

**⚠ Caution**

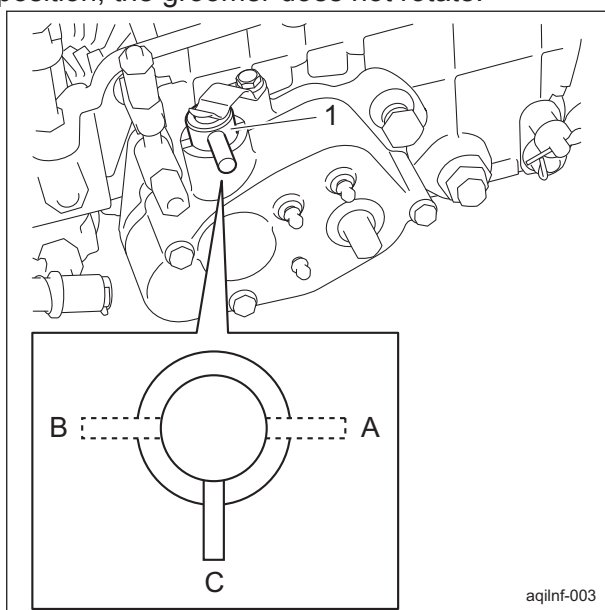
Operate and set the lever to the proper position in accordance with the purpose when the main clutch lever set to the OFF position.

The groomer clutch lever is in the left side of the unit.

There are three changeover positions. When the lever is in the "Normal rotation" position, the groomer rotates in the same direction as the blade reel cylinder.

When the lever is in the "Reverse rotation" position, the groomer rotates in the opposite direction of the blade reel cylinder.

When the lever is in the "Rotation stop" position, the groomer does not rotate.



Groomer Clutch Lever\_001

1	Groomer clutch lever
A	Normal rotation
B	Reverse rotation
C	Rotation stop

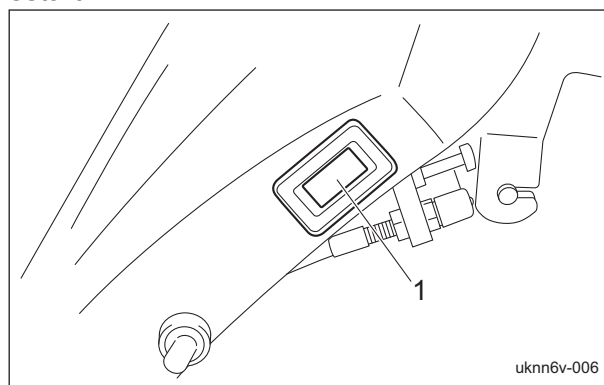
## Instruments

### Hour Meter

**Important**

The battery of this hour meter can not be replaced. If the battery power is burned out, replace the hour meter with a new one.

The hour meter indicates the accumulated operation time of the engine. The accumulated time can not be manually reset. When the accumulated time exceeds 99999 hours, the display automatically shows zero for restart.



Hour Meter\_001

1	Hour meter
---	------------

## Move

### Traveling Procedure

**⚠ Caution**

Under any circumstances drive the machine at such a speed that you can stop it immediately for emergencies.

**⚠ Caution**

Do not start to move or stop the machine abruptly.

1. Install traveling tires.
2. Flip up the stand.
3. Set the drum clutch lever to "ON" position.
4. Set the unit clutch lever to "OFF" position.
5. Start the engine.
6. Release the brake.


# Handling Instructions

---


7. Release the safety lock and grip the main clutch lever slowly.
8. The machine starts traveling.
9. Release the main clutch lever to stop the machine.

## Cutting Work

### Cutting Work

 **Warning**

Do not operate on a steep slope.

 **Caution**

Do not start to move or stop the machine abruptly.

 **Caution**

Be sure to operate at an appropriate speed for the mowing site.  
For mowing on an undulated surface, mow with lowered cutting speed.

**Important**

Be sure to attach the grass catcher.  
Discharge the clippings at the right time during operation.

1. Remove the traveling tires.
2. Flip up the stand.
3. Install the grass catcher.
4. Move the FOC (High/Low Clip) selector lever to the desired position.
5. Move the drum clutch lever to the "ON" position.
6. Move the groomer clutch lever to the desired position.
7. Move the Unit clutch lever to the "ON" position.
8. Start the engine.
9. Release the brake.
10. Release the safety lock and grip the main clutch lever slowly to start mowing.

Note:

Operate at about 3,000 rpm.

# Handling Instructions

## Removing/Installing Traveling Tires

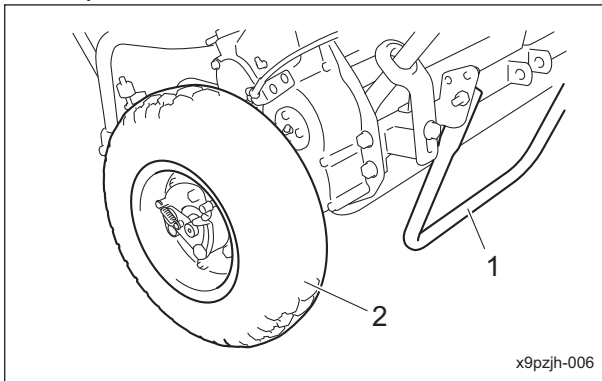
**Important**

Remove the traveling tires before cutting work.

Traveling tires are used to travel.

Removing Traveling Tires:

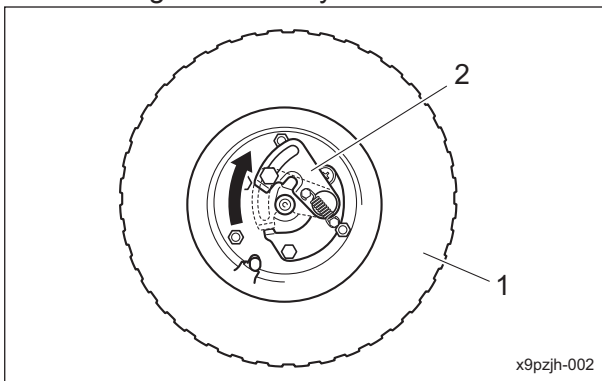
1. Stop the engine.
2. Flip down the stand.



Removing/Installing Traveling Tires\_001

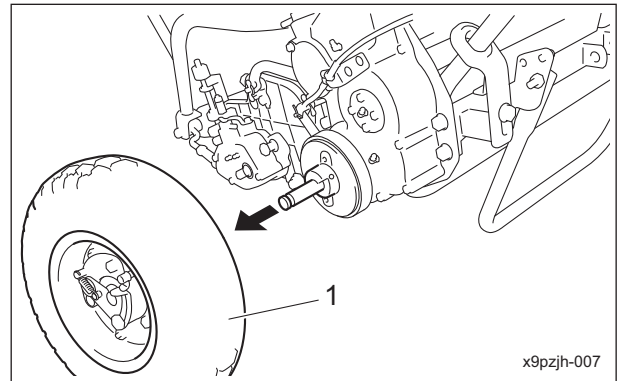
1	Stand
2	Traveling tire

3. While holding the lever of the wheel mount plate to the release position, pull the traveling tire toward you to remove it.



Removing/Installing Traveling Tires\_002

1	Traveling tire
2	Wheel mount plate



Removing/Installing Traveling Tires\_003

1	Traveling tire
---	----------------

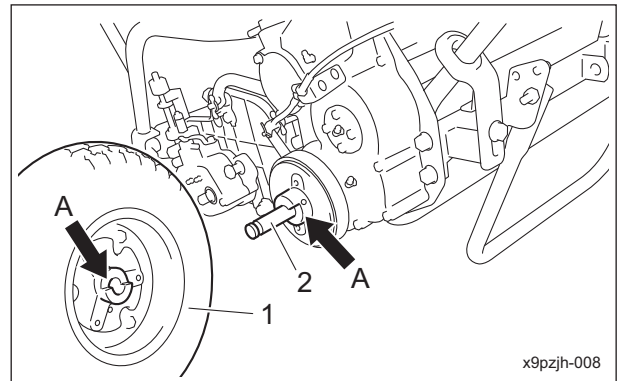
4. Repeat the same process for removing the opposite traveling tire.

Installing Traveling Tires:

1. Stop the engine.
2. Flip down the stand.

**Important**

The drum shaft and the traveling tires have mating parts each other. Make sure of their shapes to install the traveling tires.



Removing/Installing Traveling Tires\_004

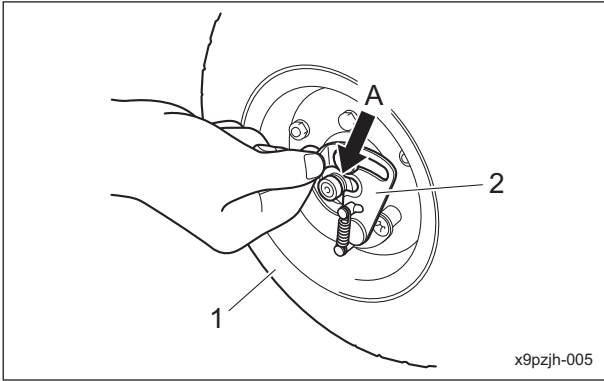
1	Traveling tire
2	Drum shaft
A	Mating parts

# Handling Instructions

3. Install the traveling tire to the drum shaft.

**Important**

Make sure that the wheel mount plate is grooved on the drum shaft. Otherwise the tires may come off.



Removing/Installing Traveling Tires\_005

1	Traveling tire
2	Wheel mount plate
A	Groove

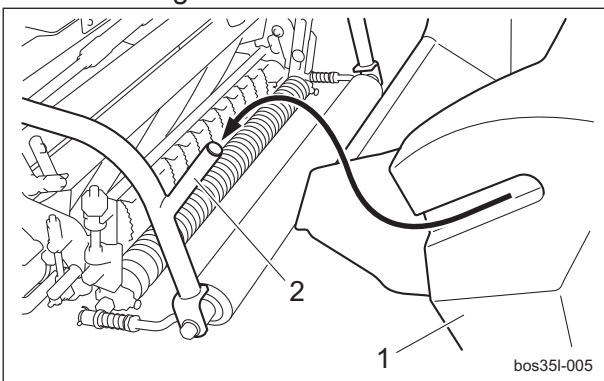
## Removing/Installing Grass Catcher

**Caution**

Stop the engine before removing/installing the grass catcher.

**Removing Grass Catcher:**  
Lift up the grass catcher and remove it from the grass catcher fitting bars.

**Installing Grass Catcher:**  
Insert the grass catcher fitting bars into the slots of the grass catcher.



Removing/Installing Grass Catcher\_001

1	Grass catcher
2	Grass catcher fitting bar

## Transporting

### Transporting Procedure

**Caution**

When loading and unloading the machine, wear non-slip shoes and travel slowly.

**Important**

When securing the machine with a rope, do not tie the rope to the engine.

**Important**

When securing the machine with a rope, be careful not to bend any wires.

Be extremely careful when loading the machine into a truck or a trailer. Before loading or unloading, stop the truck or trailer on a level surface in a safe location, apply the parking brake, stop the engine, and then chock the wheels. Before loading into a truck or a trailer for transportation, apply the parking brake of the machine, stop its engine, and then secure the machine with rope or any other sufficiently strong restraining device. When using a loading ramp, select one of sufficient length, width and strength, and that will not allow the machine to slip off.

## Storage

### Before Long-Term Storage

- Remove any dirt, grass, debris, or oil stains completely.
- Supply oil and apply grease to appropriate parts.

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<b>Position of Mower during Maintenance .....</b>	<b>Page 5-2</b>
<b>Maintenance Schedule .....</b>	<b>Page 5-4</b>
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Greasing Points .....	Page 5-7
<b>Lubrication .....</b>	<b>Page 5-11</b>
About Lubrication .....	Page 5-11
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Adjustment of Engine Clutch Section ..	Page 5-25
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Uneven Blade Engagement .....	Page 5-31

# Maintenance

## Maintenance Precautions

### Caution

First, learn well the maintenance operations you plan to perform.

### Important

Use tools appropriate for each maintenance operation.

### Important

For the safe and best performance of your machine, use Baroness genuine parts for replacement and accessories. Please note that our product warranty may be void if you use non-genuine parts for replacement or accessories.

## Position of Mower during Maintenance

### Important

If the mower handle is left leaned on the ground for a long time during maintenance engine oil will enter the engine combustion chamber and cause the engine to run improperly. Be careful not to keep this position long and ensure sufficient time for any oil to drain back by returning to upright position for ten minutes before starting.

### Important

An attitude of the machine tilting toward the handle side at a large angle may cause the engine malfunction.

### Note:

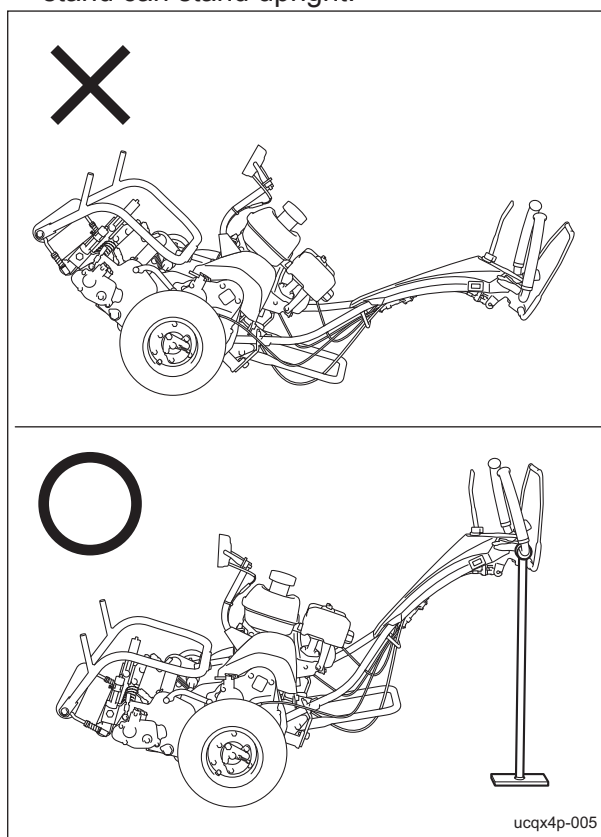
The attitude of the machine tilting toward the handle side at a large angle is a state where the engine tilts more than 30 degrees from the upright position.

- For maintenance of the machine fitted with the traveling wheels:  
Use the maintenance stand to prevent from the engine malfunction.

### Caution

Pay attention to the machine standing up with the maintenance stand lifted up when large power is added to the mower unit of the machine tilting toward the handle side.

1. Park the machine on a level place.
2. Tilt it slowly toward the handle side and pass the main clutch lever through the pipe of the maintenance stand.
3. Set the handle so that the maintenance stand can stand upright.



Position of Mower during Maintenance\_001

1 Maintenance stand

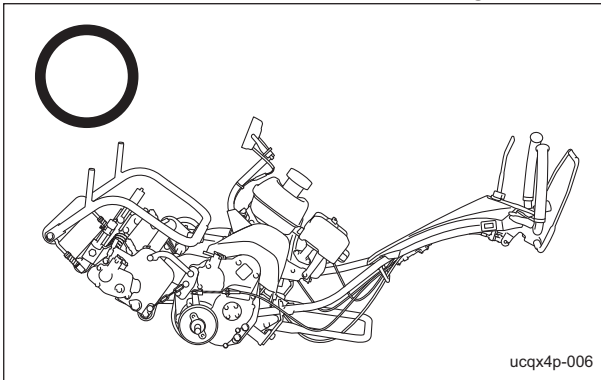


- For maintenance of the machine without the traveling wheels:

**⚠ Caution**

The engine malfunction does not occur even when the machine tilting toward the handle side with the stand touching the ground. Pay attention to the machine standing up depending on the unbalanced state owing to the adjusted position of the handle height.

1. Park the machine on a level place.
2. Tilt it slowly toward the handle side and set it so that the stand can touch the ground.



Position of Mower during Maintenance\_002

# Maintenance

## Maintenance Schedule

LM101

Follow the maintenance schedule below.

○ . . . Inspect, adjust, supply, clean

● . . . Replace (first time)

△ . . . Replace

Maintenance Item		Before Work	After Work	Every 10 hrs.	Every 20 hrs.	Every 25 hrs.	Every 50 hrs.	Every 100 hrs.	Every 300 hrs.	Every 500 hrs.	Every year	Every 2 years	When Required	Remarks
Engine	*2	Check tightening bolts and nuts	○											
	*2	Check fuel level	○											
		Check fuel and oil leaks	○											
	*2	Check engine oil level	○											
	*2	Check air cleaner		○										
		Clean engine and circumference of the muffler cover		○										
	*2	Change engine oil				●			△					20 hours first change
	*2	Check spark plug							○					
	*2	Clean spark arrester							○					
	*2	Clean sediment cup							○					
	*1	Clean fuel tank & filter							○					
	*1	Check idling speed								○		○		Check every 300 hours or every year whichever comes earlier
	*1	Check valve clearance								○		○		Check every 300 hours or every year whichever comes earlier
	*2	Replace air cleaner								△		△		Paper filter element: Replace every 300 hours or every year whichever comes earlier Foam filter element: Replace as necessary
*2	Replace spark plug								△		△		Replace every 300 hours or every year whichever comes earlier	
*1	Remove carbon in combustion chamber									○				
*1	Check fuel hoses and clamp bands											○	△	
Driving section		Check tire pressures and condition	○											
		Check damaged parts	○											
		Check tightening bolts and nuts	○											

Maintenance Item		Before Work	After Work	Every 10 hrs.	Every 20 hrs.	Every 25 hrs.	Every 50 hrs.	Every 100 hrs.	Every 300 hrs.	Every 500 hrs.	Every year	Every 2 years	When Required	Remarks	
Driving section	Check main clutch lever actuation	○													
	Check brake function	○													
	Check work lamp illumination	○													
	Adjust handle position	○													
	Check safety lock of main clutch	○													
	Check cover condition	○													
	Clean driving section		○												
	Grease and Lubricate all moving parts			○			○								Maintenance schedules differ according to greasing points
	Adjust engine clutch spring												○		
	Check brake wire								○					△	
	Check electrical wiring condition (Damage, defacement and joint looseness)										○				
	Adjust engine clutch gap												○		
	Check throttle wire												○		
	Check main clutch wire												○		
Cutting section	Check blade condition (Reel cutter and Bedknife)	○													
	Check cover condition	○													
	Check roller condition	○													
	Check groomer condition	○													
	Engage blades	○													
	Check mowing height	○													
	Adjust groomer	○													
	Check damaged parts	○													
	Check tightening bolts and nuts	○													
	Clean cutting section		○												
	Grease			○			○								Maintenance schedules differ according to greasing points
	Clean and Grease Bedknife Eccentric Bushes												○		
	Replace bearings inside gearcase											△			
	Replace front/rear roller bearings											△			
Replace grass catcher roller bearings											△				
Replace oil seals inside gearcase											△				
Replace front/rear roller oil seals											△				

# Maintenance

Maintenance Item		Before Work	After Work	Every 10 hrs.	Every 20 hrs.	Every 25 hrs.	Every 50 hrs.	Every 100 hrs.	Every 300 hrs.	Every 500 hrs.	Every year	Every 2 years	When Required	Remarks
Cutting section	Replace grass catcher roller oil seals										△			
	Replace grease inside gearcase										△			
	Adjust cutter adjustment spring												○	
	Backlap blades												○	
	Regrind blades (Reel cutter)												○	Grind/Replace blades as and when required

- \*1: Consult your local Baroness Dealer for this service.
- \*2: Refer to the Engine's Owner's Manual.
- The values for consumables are not guaranteed.

## Adjusted Values

Cutter adjustment spring	43.0 mm (1.69 in)	Total length of spring
Reel cutter shaft bearing preload spring	11.5 mm (0.453 in)	Total length of spring
Reel cutter rotation torque	0.8 - 1.0 N · m (8 - 10 kgf · cm)	
Engine clutch	0.5 - 1.0 mm (0.020 - 0.039 in)	Gap between engine clutch and clutch facing
Operation distance of clutch plate	1.0 - 2.0 mm (0.039 - 0.079 in)	
Engine clutch spring	63.0 mm (2.48 in)	Total length of spring

## Greasing

### About Greasing

Since there may be adhesion or damage due to lack of grease on moving parts, they must be greased.

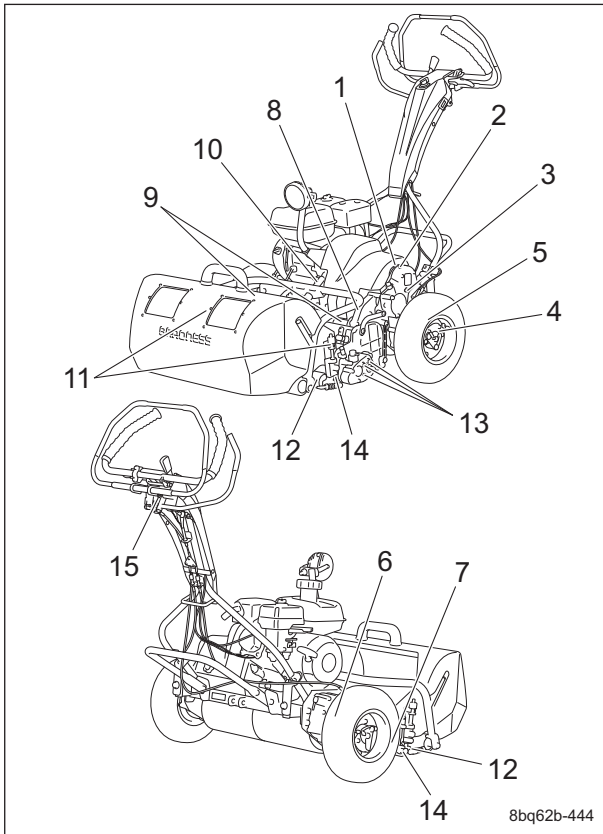
Add urea-based No. 2 grease in accordance with the Maintenance Schedule.

Other locations where the specified grease or lubricant is used are indicated in "Greasing Points".

Add grease using the specified grease or lubricant.

### Greasing Points

Grease nipples are installed in the following locations.



Greasing Points\_001

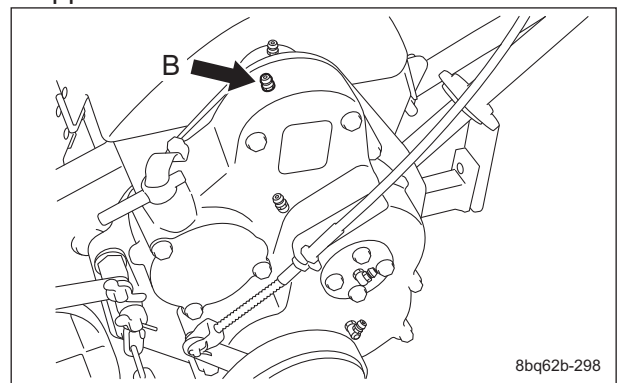
8bq62b-444

	Location	No. of greasing points	Greasing period
1	Upper side of left frame cover	1	B
2	Mower #1 shaft	1	B
3	Left frame #2 shaft	1	A
4	Left frame #4 shaft	1	A
5	Differential gear	1	A
6	Right frame #2 shaft	1	A
7	Right gear case	1	A
8	Transmission gear case	1	A
9	Transmission shaft	2	A,B
10	Arm mounting hitch fulcrum	1	B
11	Reel housing	2	A
12	Front roller	2	B
13	Groomer gear case	3	A
14	Groomer shaft	2	B
15	Handle	1	B

Maintenance

Add grease to A every 10 hours, and B every 50 hours.

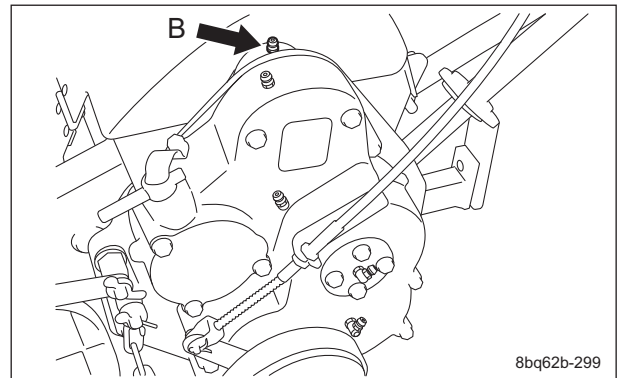
#### 1. Upper side of left frame cover



Greasing Points\_002

8bq62b-298

#### 2. Mower #1 shaft

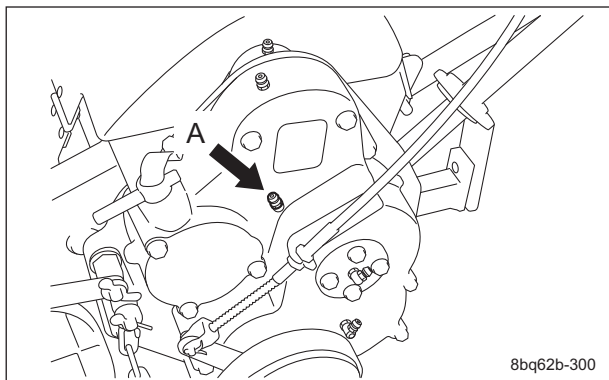


Greasing Points\_003

8bq62b-299

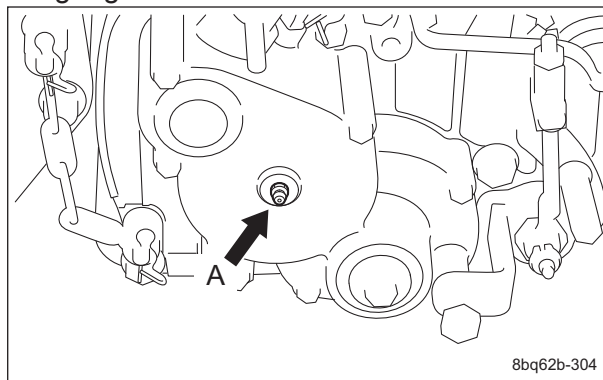
# Maintenance

### 3. Left frame #2 shaft



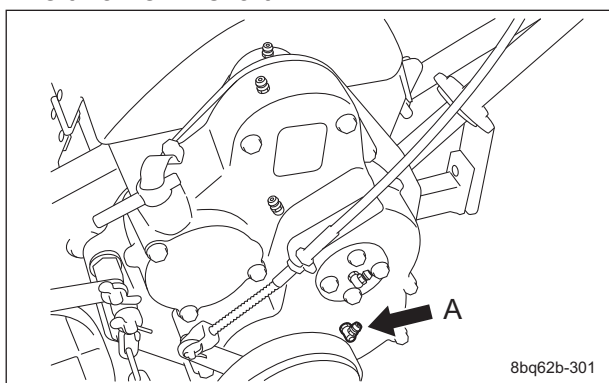
Greasing Points\_004

### 7. Right gear case



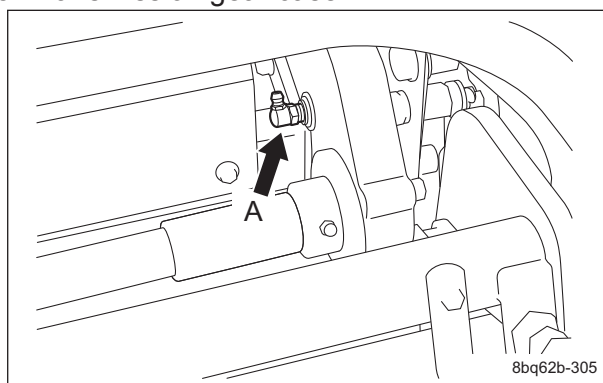
Greasing Points\_008

### 4. Left frame #4 shaft



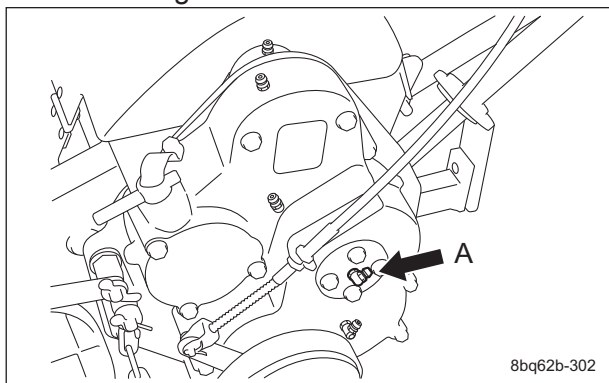
Greasing Points\_005

### 8. Transmission gear case



Greasing Points\_009

### 5. Differential gear

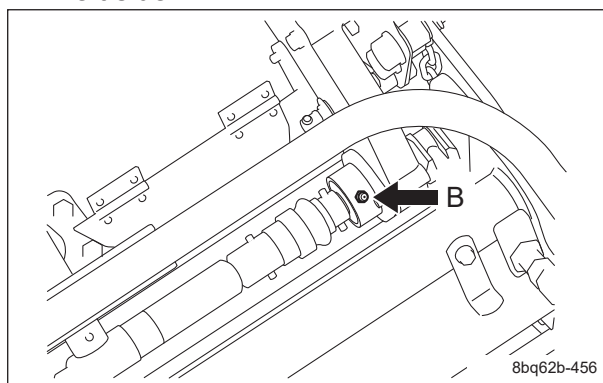


Greasing Points\_006

### 9. Transmission shaft

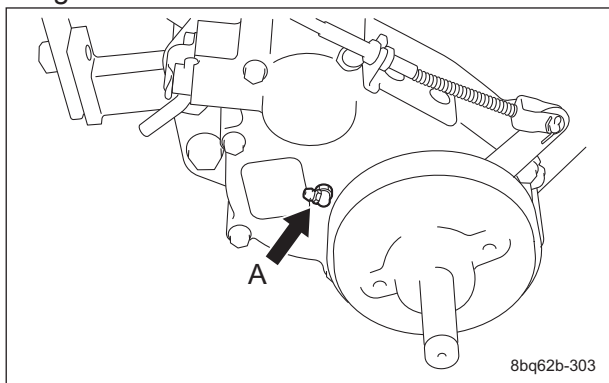
There are one location each on the right and left.

Left side



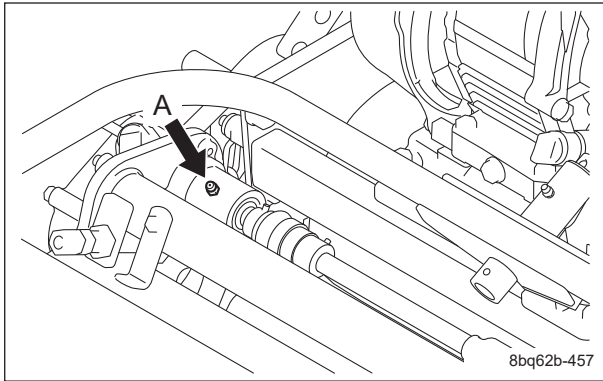
Greasing Points\_010

### 6. Right frame #2 shaft



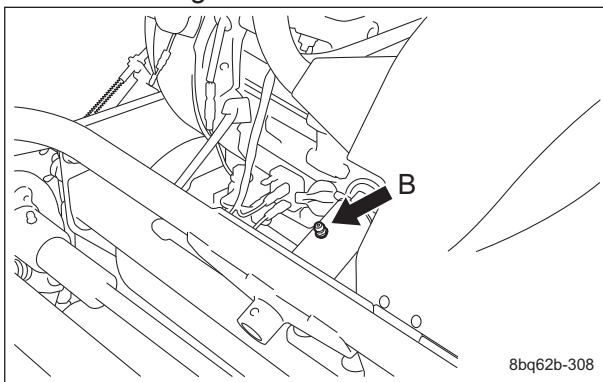
Greasing Points\_007

Right side



Greasing Points\_011

### 10. Arm mounting hitch fulcrum

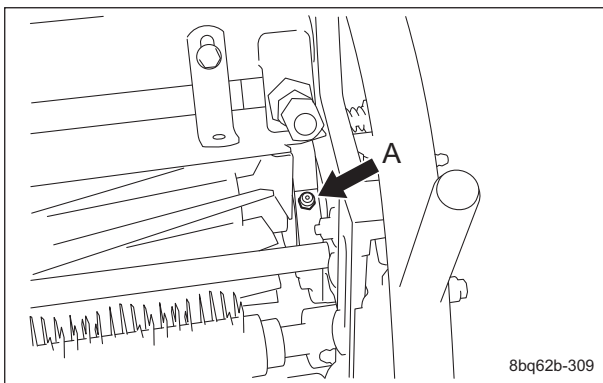


Greasing Points\_012

### 11. Reel housing

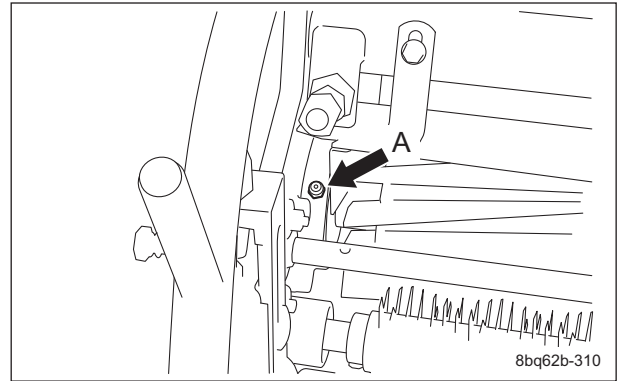
There are one location each on the right and left.

Left side



Greasing Points\_013

Right side

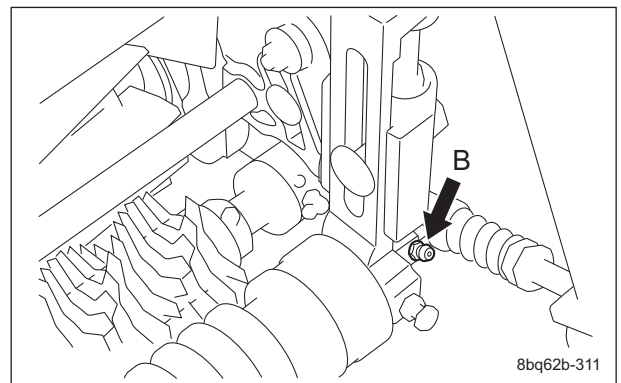


Greasing Points\_014

### 12. Front roller

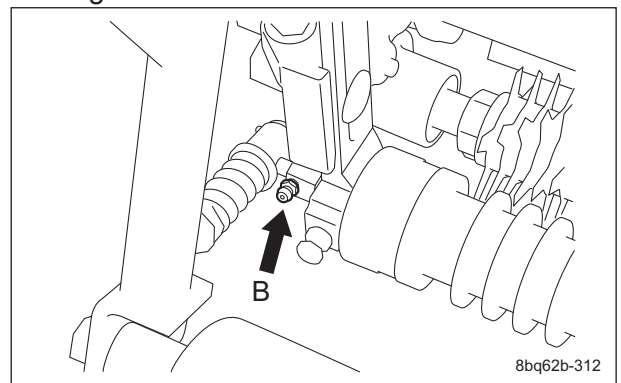
There are one location each on the right and left.

Left side



Greasing Points\_015

Right side



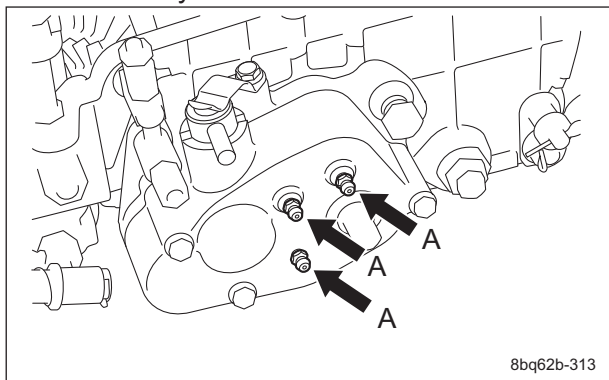
Greasing Points\_016

# Maintenance

## 13. Groomer gear case

Note:

Depending on the specifications, this function may not be available.



Greasing Points\_017

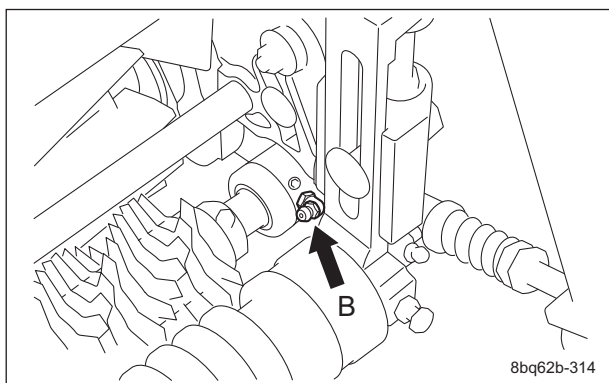
## 14. Groomer shaft

Note:

Depending on the specifications, this function may not be available.

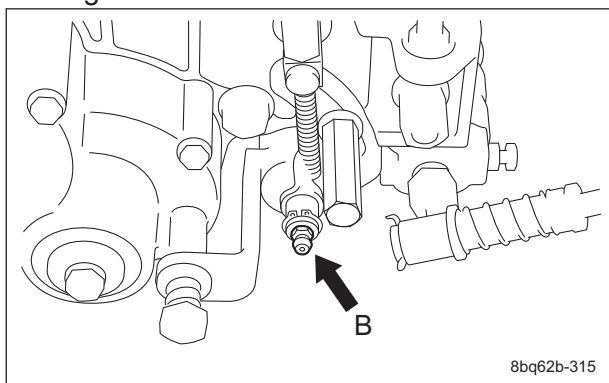
There are one location each on the right and left.

Left side



Greasing Points\_018

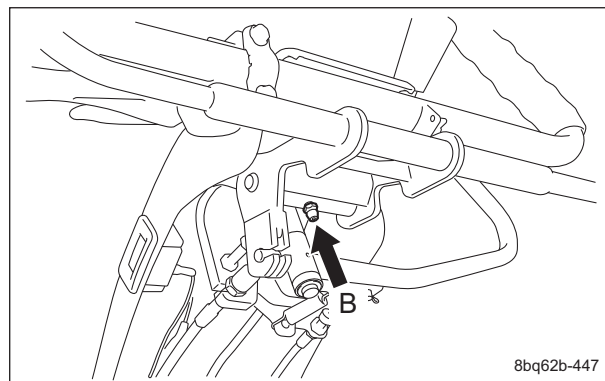
Right side



Greasing Points\_019

## 15. Handle

· Main clutch lever



Greasing Points\_020



## Lubrication

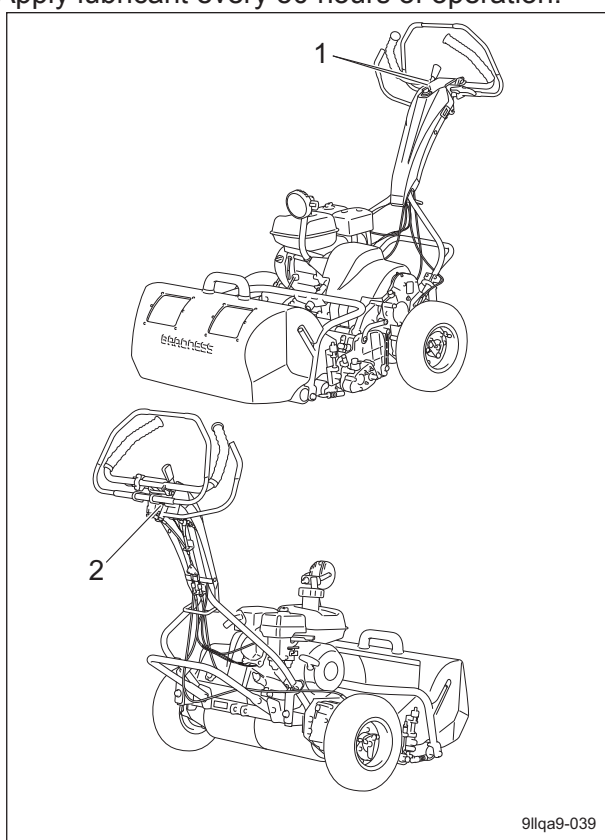
### About Lubrication

It is necessary to lubricate moving parts so that they will not become stuck or damaged. The locations where lubricant is used are indicated in "Lubricating Points". Apply the lubricant.

### Lubricating Points

There are oil filling ports at the following locations.

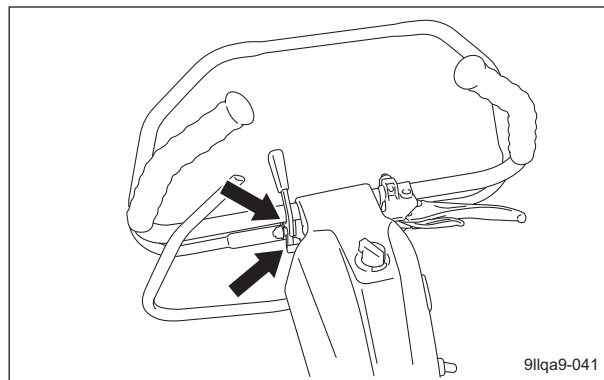
Apply lubricant every 50 hours of operation.



Lubricating Points\_001

	Location	No. of lubricating points
1	Clutch lock lever fulcrum	2
2	Throttle lever fulcrum	1

### 1. Clutch lock lever fulcrum

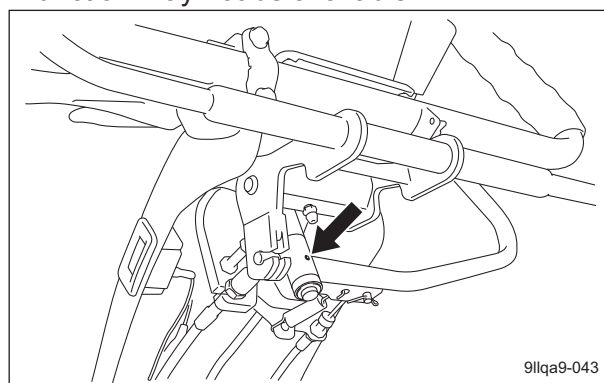


Lubricating Points\_002

### 2. Throttle lever fulcrum

Note:

Depending on the specifications, this function may not be available.



Lubricating Points\_003

## Maintenance Work

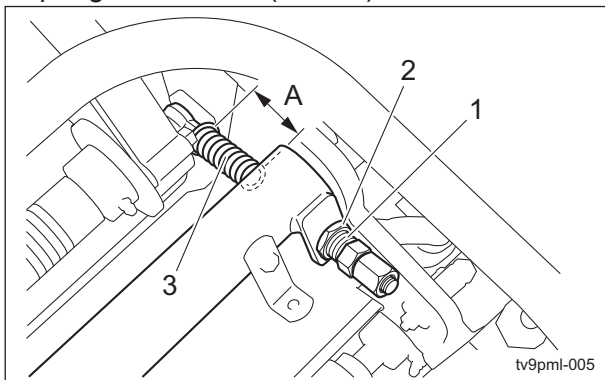
### Adjustment of Cutter Adjustment Spring

#### ⚠ Caution

When handling the reel cutter (cutting cylinder) and the bed knife (bottom blade), wear gloves to protect your hands. Pay attention not to let the reel cutter (cutting cylinder) catch your gloves. Otherwise, you may injure your hand or fingers.

If the diameter of the reel cutter (cutting cylinder) becomes smaller, adjust the cutter adjustment spring.

1. Adjust the blade engagement.
2. Loosen the spring adjusting screw and the nut, and then adjust the length of the coil spring to 43.0 mm (1.69 in).



Adjustment of Cutter Adjustment Spring\_001

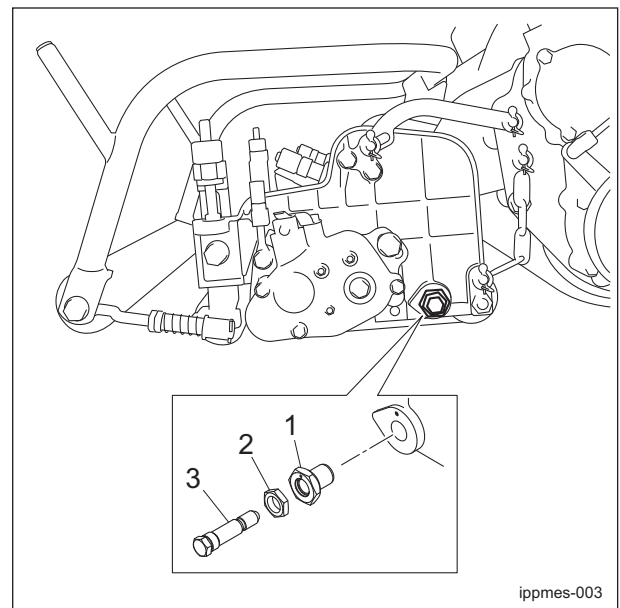
1	Spring adjusting screw
2	Nut
3	Spring
A	43.0 mm (1.69 in)

### Adjusting CAM

Turn the cam bush on both sides of the bed knife (bottom blade), and the blade can be raised and lowered respectively by maximum 0.3 mm (0.012 in).

The above method is used when the edges of the reel cutter (cutting cylinder) and the bed knife (bottom blade) are not in parallel. Check for the gap between the reel cutter (cutting cylinder) and the bed knife (bottom blade).

Loosen the locknut when adjusting the cam bush.



Adjusting CAM\_001

1	Cam bush
2	Locknut
3	Cutter pin

When the gap appears on the left side.:

1. Turn the left cam bush clockwise to eliminate only the gap distance.  
When you raise the bed knife (bottom blade) by 0.1 mm (0.004 in), turn the left cam bush clockwise 30 degrees.
2. Once the adjustment completed, tighten the locknut securely.

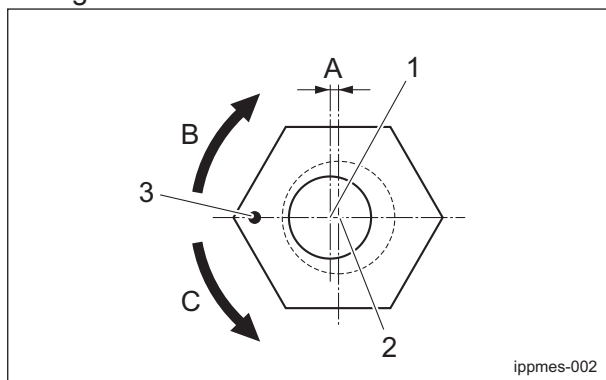
When the gap appears on the right side.:

1. Turn the right cam bush counterclockwise to eliminate only the gap distance.
2. Once the adjustment completed, tighten the locknut securely.

**Note:**

The figure below shows the situation when you see from the left side.

The right side is mirror reversed.



Adjusting CAM\_002

1	Center of cutter pin
2	Center of cam bush
3	Punch mark
A	0.3 mm (0.012 in)
B	Raising the bed knife
C	Lowering the bed knife.

**Back Lapping**

Back lapping is work similar to sharpening a cooking knife. If the edges of the reel cutter (cutting cylinder) and the bed knife (bottom blade) become blunt and make cutting difficult, both the reel cutter (cutting cylinder) and the bed knife (bottom blade) should be simultaneously sharpened by reversing the reel cutter (cutting cylinder) with an abrasive paste applied.

However, back lapping is a temporary measure and would not restore the sharpness completely.

If the edges of the reel cutter (cutting cylinder) and the bed knife (bottom blade) become blunt and make cutting difficult, follow the steps below to perform back lapping.

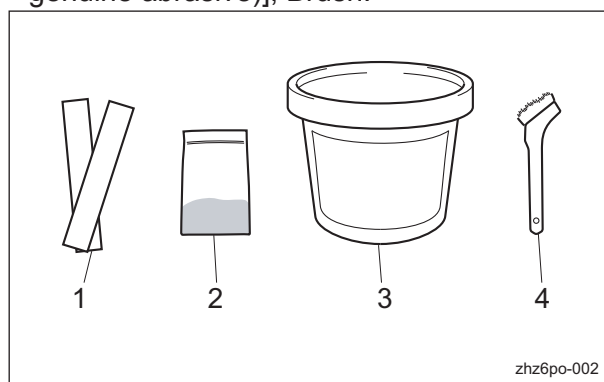
**Warning**

During back lapping, the reel cutter (cutting cylinder) rotates. Keep hands and feet away from moving parts.

**Caution**

Do not perform back lapping with any other persons.

1. Have the following items ready: Strips of newspaper, Abrasive [Back lapping powder mixed with oil; or gel compound (Baroness genuine abrasive)], Brush.



Back Lapping\_001

1	Newspaper
2	Back lapping powder
3	Gel compound
4	Brush

**Note:**

The mixing ratio for the abrasive, in volume, is one part back lapping powder (#200 - #400) to three or four parts oil.

2. Have a lapping machine or the lapping handle ready.

**Caution**

When handling the reel cutter (cutting cylinder) and the bed knife (bottom blade), wear gloves to protect your hands. Pay attention not to let the reel cutter (cutting cylinder) catch your gloves. Otherwise, you may injure your hand or fingers.

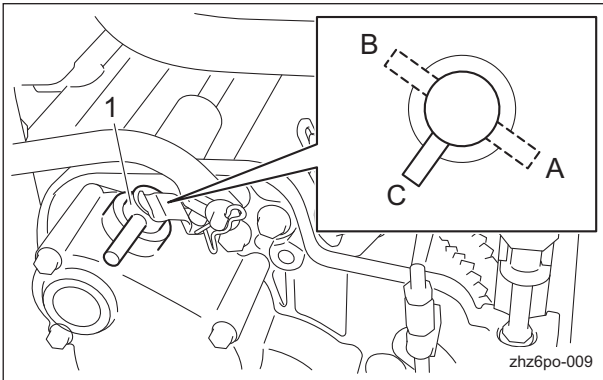
**Important**

Check the sharpness of the blade by checking the blade engagement after cutting grass.

3. Stop the engine.

# Maintenance

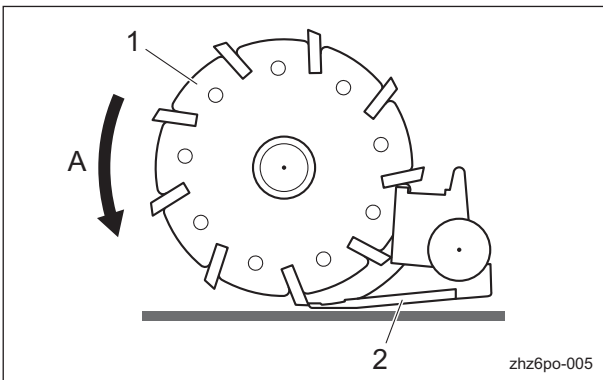
4. Shift the the FOC (High/Low Clip) selector lever to the "Stop" position.



Back Lapping\_002

1	FOC (High/Low clip) Selector Lever
A	High clip
B	Low clip
C	Stop

5. Insert one or two strips of newspaper into the space between the reel cutter (cutting cylinder) and the bed knife (bottom blade) at an angle of 90 degrees. Then, rotate the reel cutter (cutting cylinder) counter-clockwise (when you face the mower frame from the left) by hand to check the sharpness of the blades.

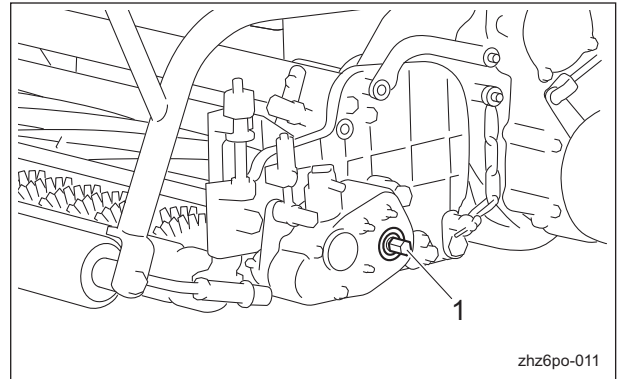


Back Lapping\_003

1	Reel cutter
2	Bed knife
A	Rotation direction

6. Check the sharpness of the entire range (three or four points) of the reel cutter (cutting cylinder).
7. Using a piece of chalk, mark locations on the blade that are sharp.

8. Check the location of the lapping bolt.

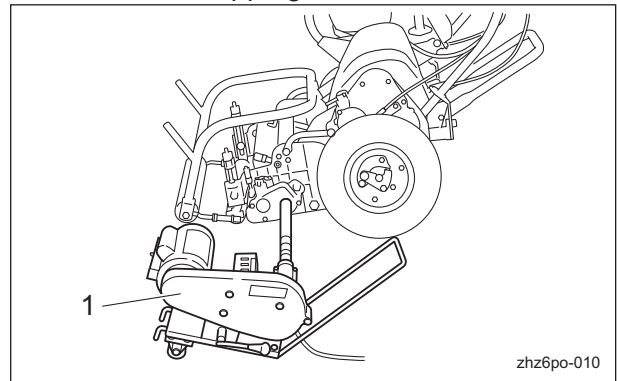


zhz6po-011

Back Lapping\_004

1	Lapping bolt
---	--------------

9. Connect the lapping machine or the lapping handle to the lapping bolt on the machine.



zhz6po-010

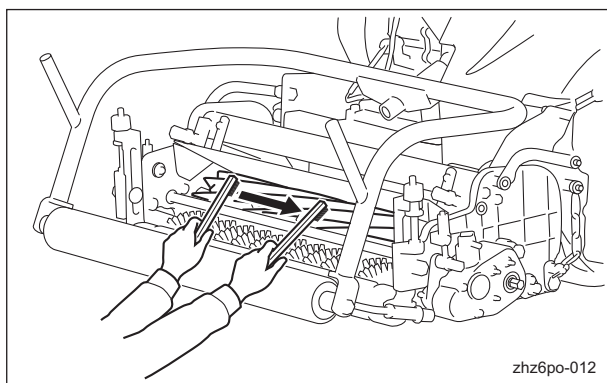
Back Lapping\_005

1	Lapping machine
---	-----------------

10. Rotate the reel cutter (cutting cylinder) clockwise (when you face the mower frame from the left).
- Turn on the lapping machine.
  - Or rotate the lapping handle.

**Important**

The right side of the reel cutter (when you face the mower unit from the front) is inclined to wear earlier than the left side. Accordingly be sure to move the brush from the left to the right to apply the abrasive.



Back Lapping\_006

11. Apply the abrasive evenly with the brush on the top side of reel cutter (cutting cylinder) where the newspaper was cut well or of chalk-marked locations. (Never apply to blunt areas.)
12. Rotate the reel cutter for a while and stop its rotation when the sound of contact is lost.
  - Turn off the lapping machine.
  - Or stop rotating the lapping handle.
13. Disconnect the lapping machine or the lapping handle (accessory tool).
14. Wash off or wipe off with a cloth, etc., the abrasive from the reel cutter (cutting cylinder), and then check it for sharpness.
15. Repeat steps 5 to 13 until the entire range (three or four points) of the reel cutter (cutting cylinder) is uniformly sharpened.
16. Finally, apply abrasive to the entire blade width of the reel cutter (cutting cylinder) and perform final back lapping.

**Important**

Pay attention not to pour water over the engine and electric components when cleaning.

17. Wash out the abrasive with a washer etc.
18. While checking the blade for sharpness, adjust blade engagement.

**Sharpening of Reel Cutter (Cutting Cylinder)**

The sharpening of the reel cutter (cutting cylinder) consists in maintaining its roundness and creating a relief (second edge face). This work should be performed if the sharpness cannot be restored, even after back lapping, or if the relief (second edge face) has worn away.

Sharpen the reel cutter (cutting cylinder) when the sharpness cannot be restored, even after back lapping, or when the relief (second edge face) has worn away, there is full contact or back lapping takes too much time.

In addition, if the reel cutter (cutting cylinder) becomes worn and its shape conical, perform cylindrical grinding to return it to a cylindrical shape.

For sharpening the reel cutter (cutting cylinder), contact your dealer or Baroness unless you have a grinding machine.

**Caution**

Both the reel cutter (cutting cylinder) and the bed knife (bottom blade) are edged tools. Handle them carefully, since they could cut your hands and feet.

**Caution**

Wear gloves when touching edged tools to avoid cutting your hands.

The criteria for sharpening the reel cutter (cutting cylinder) are described below. However, these criteria are only references and do not guarantee performance of a reel cutter (cutting cylinder).

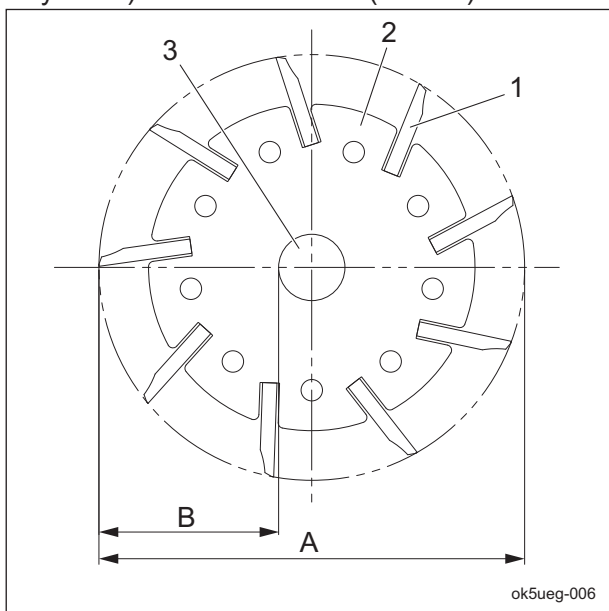
1. If the outer diameter of the reel cutter (cutting cylinder) after sharpening is more than the usage limit, the reel cutter (cutting cylinder) can be sharpened.

# Maintenance

New		Usage limit	
Dimension A (Outer diameter of reel cutter (cutting cylinder))	Dimension B (Distance from blade edge to outer edge of reel cutter (cutting cylinder) shaft)	Dimension A (Outer diameter of reel cutter (cutting cylinder))	Dimension B (Distance from blade edge to outer edge of reel cutter (cutting cylinder) shaft)
101 mm (3.98 in)	37.8 mm (1.49 in)	93 mm (3.66 in)	33.8 mm (1.33 in)

**Note:**

The outer diameter of the reel cutter (cutting cylinder) shaft is 25.4 mm (1.00 in).



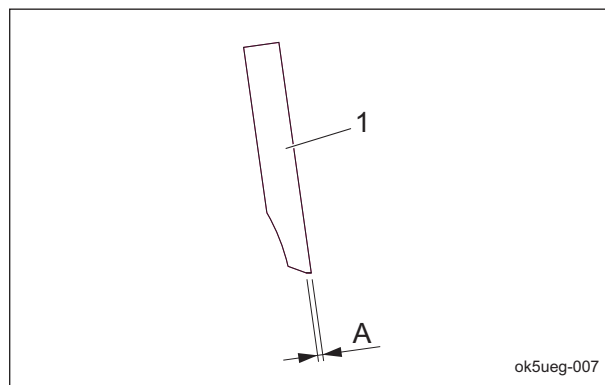
Sharpening of Reel Cutter (Cutting Cylinder)\_001

1	Reel cutter (cutting cylinder) blade
2	Reel cutter (cutting cylinder) disc
3	Reel cutter (cutting cylinder) shaft
A	Outer diameter of reel cutter (cutting cylinder)
B	Distance from blade edge to outer edge of reel cutter (cutting cylinder) shaft

2. Sharpening is necessary when the reel cutter (cutting cylinder) reaches a condition described below.

[1] When the sharpening width (length of contacting surface of bed knife (bottom blade)) for the outer diameter of the reel cutter (cutting cylinder) is greater than the usage limit.

Outer diameter of reel cutter (cutting cylinder) (new part)	Usage limit of sharpening width for outer diameter of reel cutter (cutting cylinder)
101 mm (3.98 in)	2.5 mm (0.10 in) (factory-recommended)



Sharpening of Reel Cutter (Cutting Cylinder)\_002

1	Reel cutter (cutting cylinder) blade
A	Sharpening width for outer diameter of reel cutter (cutting cylinder)

[2] When the edges become blunt or the blade edge cannot be formed with back lapping

[3] When the reel cutter (cutting cylinder) becomes worn and its shape conical, or when blade engagement adjustment cannot be performed

## Replacement of Reel Cutter (Cutting Cylinder)

### ⚠ Caution

Both the reel cutter (cutting cylinder) and the bed knife (bottom blade) are edged tools. Handle them carefully, since they could cut your hands and feet.

### ⚠ Caution

Wear gloves when touching edged tools to avoid cutting your hands.

The criteria for replacing the reel cutter (cutting cylinder) are described below.

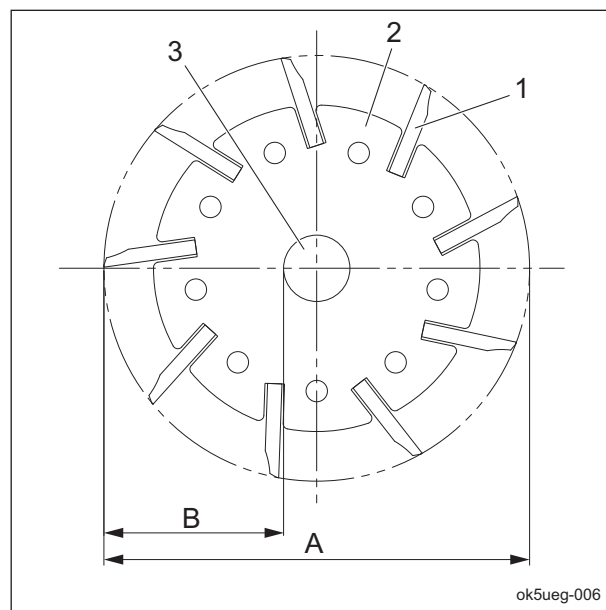
However, these criteria are only a reference and do not guarantee performance like that of a new reel cutter (cutting cylinder).

1. When the outer diameter of the reel cutter (cutting cylinder) is less than the usage limit

New		Usage limit	
Dimension A (Outer diameter of reel cutter (cutting cylinder))	Dimension B (Distance from blade edge to outer edge of reel cutter (cutting cylinder) shaft)	Dimension A (Outer diameter of reel cutter (cutting cylinder))	Dimension B (Distance from blade edge to outer edge of reel cutter (cutting cylinder) shaft)
101 mm (3.98 in)	37.8 mm (1.49 in)	93 mm (3.66 in)	33.8 mm (1.33 in)

### Note:

The outer diameter of the reel cutter (cutting cylinder) shaft is 25.4 mm (1.00 in).



Replacement of Reel Cutter (Cutting Cylinder)\_001

1	Reel cutter (cutting cylinder) blade
2	Reel cutter (cutting cylinder) disc
3	Reel cutter (cutting cylinder) shaft
A	Outer diameter of reel cutter (cutting cylinder)
B	Distance from blade edge to outer edge of reel cutter (cutting cylinder) shaft

# Maintenance

## Installing The Reel Cutter

**⚠ Caution**

Both the reel cutter (cutting cylinder) and the bed knife (bottom blade) are edged tools. Handle them carefully, since they could cut your hands and feet.

**⚠ Caution**

When handling the reel cutter (cutting cylinder) and the bed knife (bottom blade), wear gloves to protect your hands. Pay attention not to let the reel cutter (cutting cylinder) catch your gloves. Otherwise, you may injure your hand or fingers.

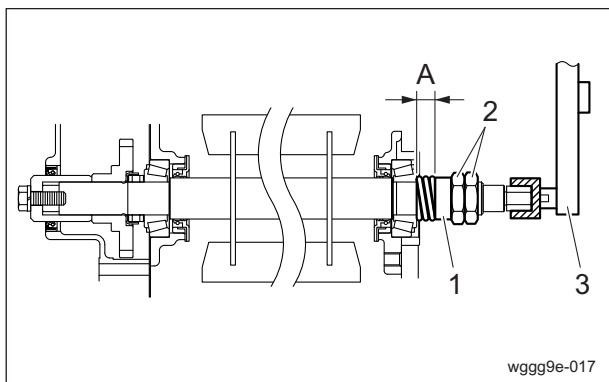
Follow the instruction below to replace the reel cutter bearing and oil seal on both sides.

**Important**

Use Bearing 30204JRP6.

1. Fill up the bearings and oil seals with grease (Excelite EP No.2).
2. Attach the reel cutter (cutting cylinder) to the frame.
3. Tighten the nut completely and temporarily, and then loosen it until the spring length reaches 11.5 mm(0.453 in)and lock it.  
Note:  
A certain preload will be applied by the spring pressure.
4. Measure the rotational torque of the blade reel cylinder with a torque wrench.  
The specified value should be 0.8 to 1.0 N m (8 to 10 kgf cm).

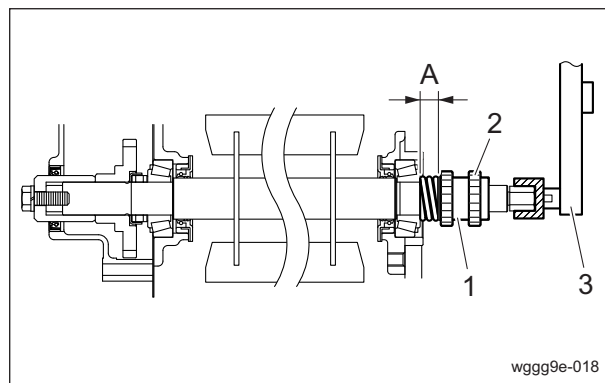
Mower without Groomer:



Installing The Reel Cutter\_001

1	Collar
2	Nut
3	Torque wrench
A	11.5 mm (0.453 in)

Mower with Groomer:



Installing The Reel Cutter\_002

1	Reel gear
2	Gear nut
3	Torque Wrench
A	11.5 mm (0.453 in)



## Replacement of Bed Knife (Bottom Blade)

**Caution**

Both the reel cutter (cutting cylinder) and the bed knife (bottom blade) are edged tools. Handle them carefully, since they could cut your hands and feet.

**Caution**

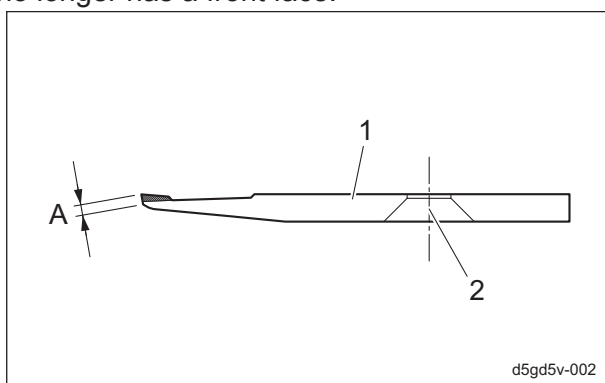
Wear gloves when touching edged tools to avoid cutting your hands.

The criteria for replacing the bed knife (bottom blade) are described below.

However, these criteria are only a reference and do not guarantee performance like that of a new bed knife (bottom blade).

1. When the reel cutter (cutting cylinder) is ground
2. When the reel cutter (cutting cylinder) is replaced
3. When the bed knife (bottom blade) is worn Standard blade

Replace the bed knife (bottom blade) before it no longer has a front face.



Replacement of Bed Knife (Bottom Blade)\_001

1	Bed knife (bottom blade)
2	Mounting hole
A	Front face

## Removing/Installing The Bed Knife Base

### Removal of Bed Knife Base

**Caution**

Both the reel cutter (cutting cylinder) and the bed knife (bottom blade) are edged tools. Handle them carefully, since they could cut your hands and feet.

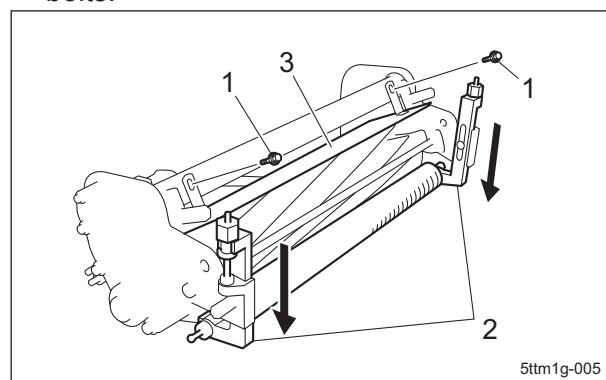
**Caution**

Wear gloves when touching edged tools to avoid cutting your hands.

**Caution**

While operations are performed with the front of the machine raised, it may fall. Securely support the machine.

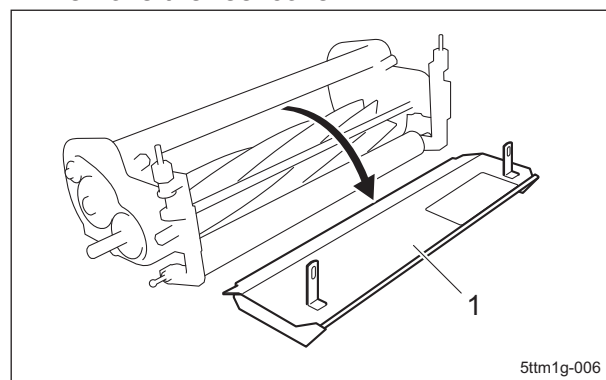
1. Lower the roller bracket so that it does not contact the reel cover, and then remove the bolts.



Removal of Bed Knife Base\_001

1	Bolt
2	Roller bracket
3	Reel cover

2. Remove the reel cover.

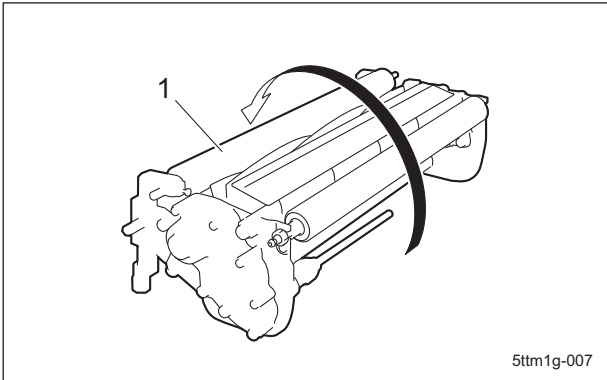


Removal of Bed Knife Base\_002

# Maintenance

1	Reel cover
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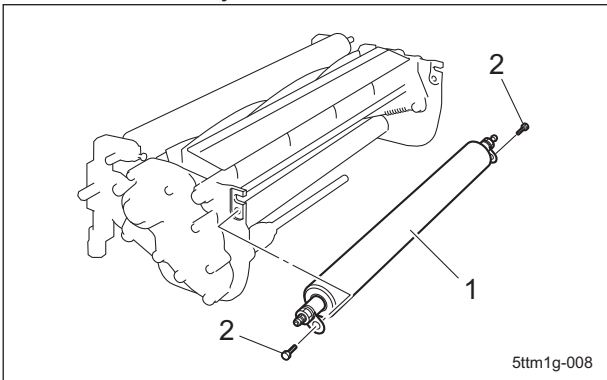
3. Turn over the cutting section.



Removal of Bed Knife Base\_003

1	Cutting section
---	-----------------

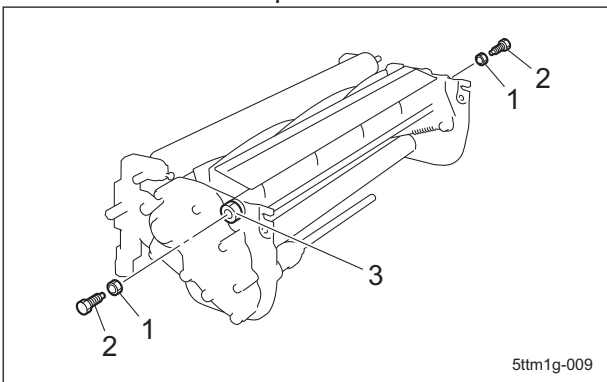
4. Remove the bolts, and then remove the rear roller Assy.



Removal of Bed Knife Base\_004

1	Rear roller Assy
2	Bolt

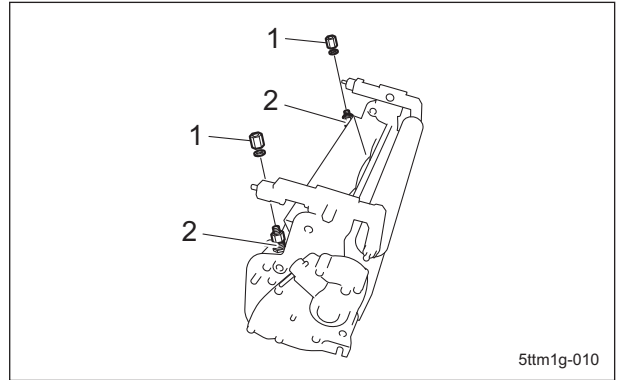
5. Loosen the left and right lock nuts, and then remove the cutter pins.



Removal of Bed Knife Base\_005

1	Lock nut
2	Cutter pin
3	Cam bush

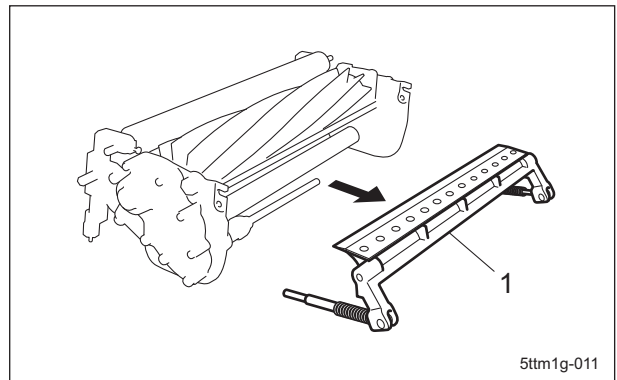
6. Stand up the cutting section so that the roller bracket is at the top, and then remove the left and right cutter adjustment nuts.



Removal of Bed Knife Base\_006

1	Cutter adjustment nut
2	Cutter adjustment bolt

7. Place down the cutting section, and then remove the bed knife base COMP.



Removal of Bed Knife Base\_007

1	Bed knife base COMP
---	---------------------

## Installation of Bed Knife Base

**Caution**

Both the reel cutter (cutting cylinder) and the bed knife (bottom blade) are edged tools. Handle them carefully, since they could cut your hands and feet.

**Caution**

When handling the reel cutter (cutting cylinder) or bed knife (bottom blade), wear gloves to protect your hands. Pay attention not to let the reel cutter (cutting cylinder) catch your gloves. Otherwise, you may injure your hand or fingers.

**Caution**

While operations are performed with the front of the machine raised, it may fall. Securely support the machine.

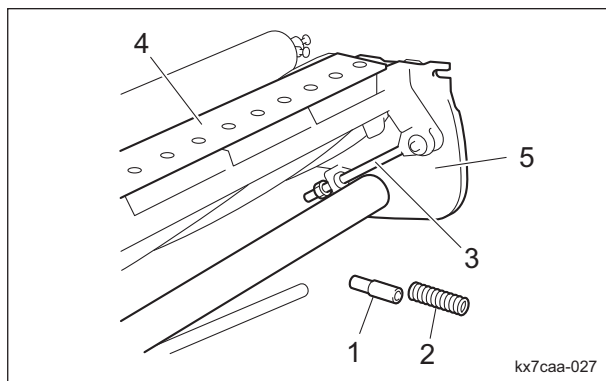
**Important**

Make sure that there is no binding at the cam bushes in the mower frame.

**Important**

Install the bed knife base COMP parallel to the mower frame. During installation, be careful not to twist both arms.

1. Remove the collar and compression spring from each (left and right) cutter adjustment bolt, and then temporarily install the bed knife base COMP onto the mower frame.



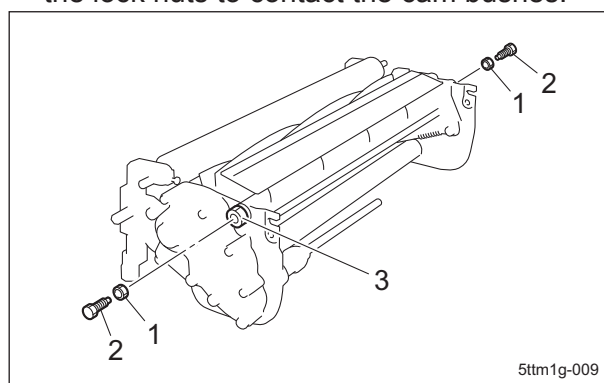
Installation of Bed Knife Base\_001

1	Collar
2	Compression spring
3	Cutter adjustment bolt
4	Bed knife base COMP
5	Mower frame

2. Temporarily install the left and right cutter pins.

**Note:**

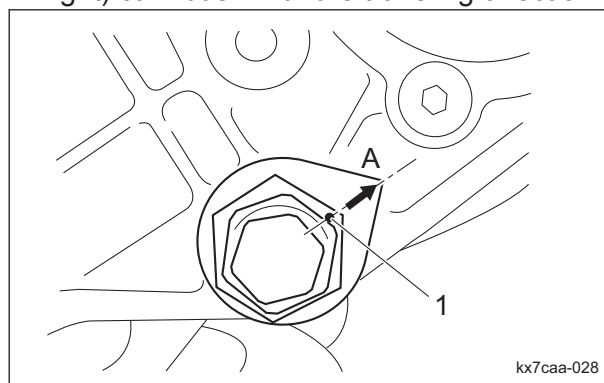
At this time, tighten the lock nuts to the heads of the cutter pins, but do not allow the lock nuts to contact the cam bushes.



Installation of Bed Knife Base\_002

1	Lock nut
2	Cutter pin
3	Cam bush

3. Align the punch mark on each (left and right) cam bush with the traveling direction.

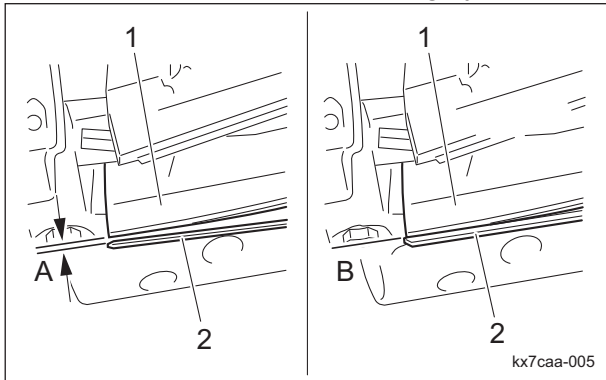


Installation of Bed Knife Base\_003

1	Punch mark
A	Traveling direction

# Maintenance

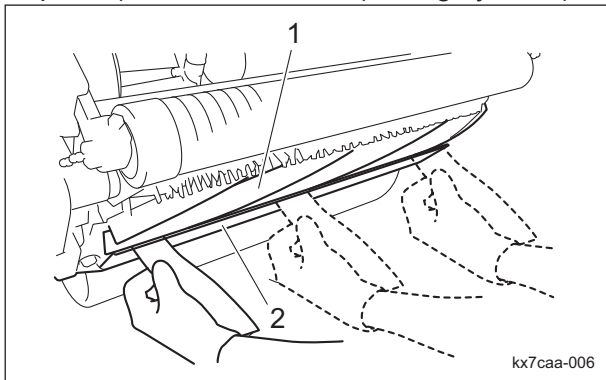
4. Make sure that the bed knife (bottom blade) contacts the reel cutter (cutting cylinder).



Installation of Bed Knife Base\_004

1	Reel cutter (cutting cylinder)
2	Bed knife (bottom blade)
3	Gap
4	No gap

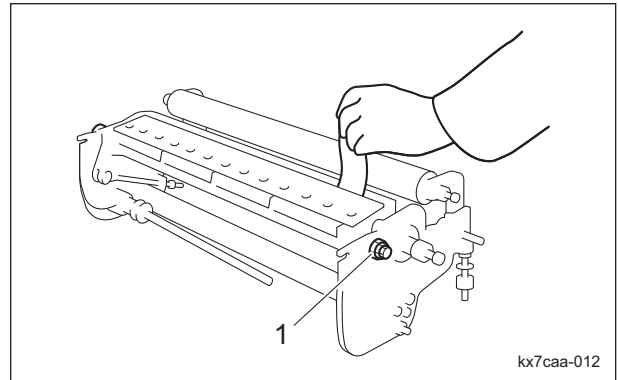
5. Insert one or two strips of newspaper into the space between the reel cutter (cutting cylinder) and the bed knife (bottom blade) at an angle of 90 degrees. Then, rotate the reel cutter (cutting cylinder) counterclockwise (as seen from the left side of the mower frame) by hand to check the sharpness of the entire range (three or four points) of the reel cutter (cutting cylinder).



Installation of Bed Knife Base\_005

1	Reel cutter (cutting cylinder)
2	Bed knife (bottom blade)

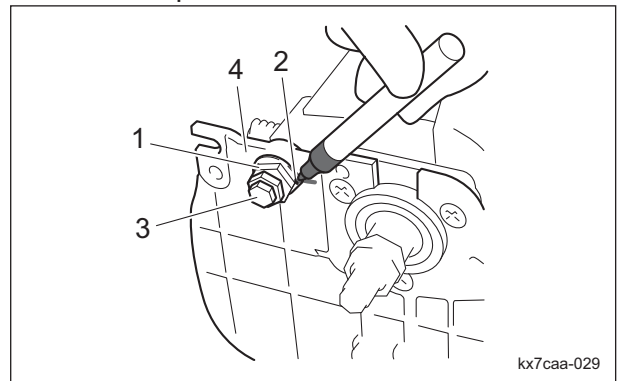
6. Adjust the positions of the cam bushes so that both sides cut.



Installation of Bed Knife Base\_006

1	Cam bush
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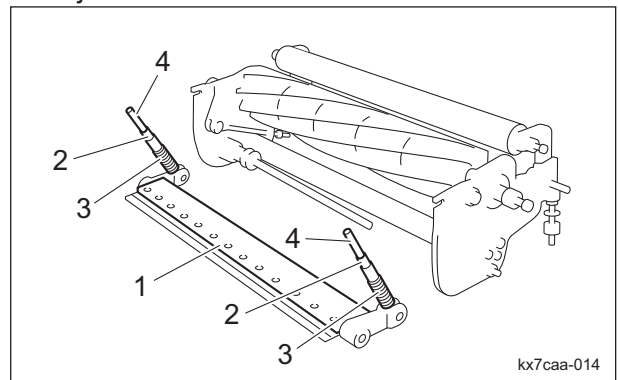
7. Use a marker, etc., to place a mark on the mower frame at the position of the punch mark on the cam bush, and then remove the cutter pin.



Installation of Bed Knife Base\_007

1	Cam bush
2	Punch mark
3	Cutter pin
4	Mower frame

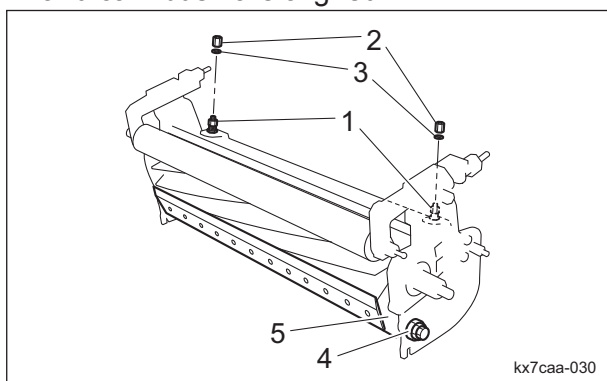
8. Remove the bed knife base COMP, and then install the compression springs and collars onto the left and right cutter adjustment bolts.



Installation of Bed Knife Base\_008

1	Bed knife base COMP
2	Collar
3	Compression spring
4	Cutter adjustment bolt

9. Install the bed knife base COMP.
10. Tighten the left and right cutter adjustment nuts evenly on both sides so that the cutter pin mounting holes of the bed knife base and cam bush are aligned.



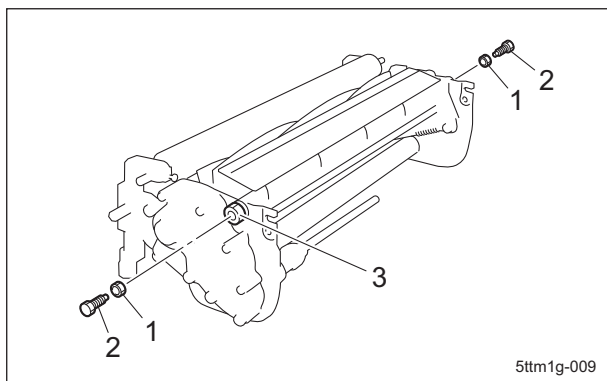
Installation of Bed Knife Base\_009

1	Cutter adjustment bolt
2	Cutter adjustment nut
3	Washer
4	Cam bush
5	Bed knife base

**Important**

Make sure that the cam bush does not move from the marked position.

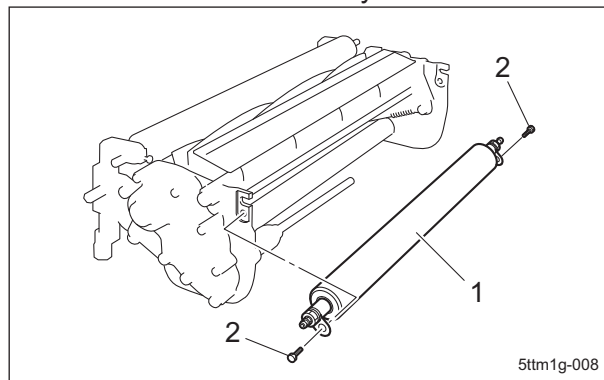
11. Install the lock nut to each (left and right) cutter pin.
12. Tighten the cutter pin into the cutter pin mounting holes of the bed knife base and cam bush, and then tighten the lock nut to fix it.



Installation of Bed Knife Base\_010

1	Lock nut
2	Cutter pin
3	Cam bush

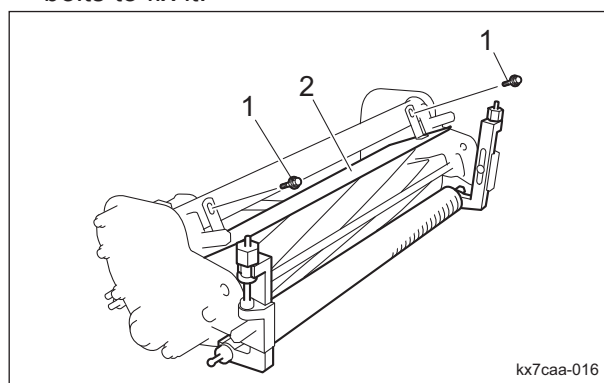
13. Install the rear roller Assy.



Installation of Bed Knife Base\_011

1	Rear roller Assy
2	Bolt

14. Install the reel cover and then tighten the bolts to fix it.



Installation of Bed Knife Base\_012

1	Bolt
2	Reel cover

15. Adjust the cutting height.

# Maintenance

## Removing/Installing The Bed Knife

### Removing The Bed Knife

**Caution**

Both the reel cutter (cutting cylinder) and the bed knife (bottom blade) are edged tools. Handle them carefully, since they could cut your hands and feet.

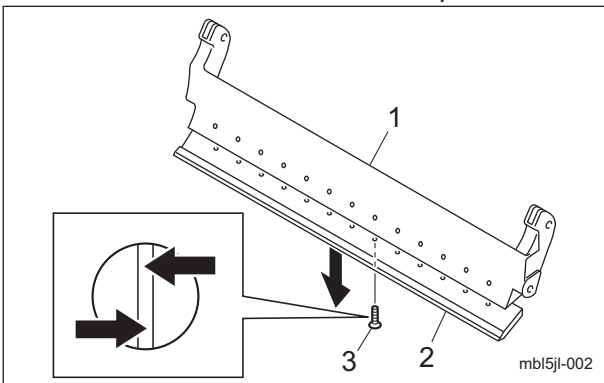
**Caution**

Wear gloves when touching edged tools to avoid cutting your hands.

**Caution**

While operations are performed with the front of the machine raised, it may fall. Securely support the machine.

1. Remove the bed knife base COMP.
2. Place the bed knife base COMP on a stable workbench.
3. Remove the bed knife by loosening the screw with a hammer driver or punch.



Removing The Bed Knife\_001

1	Bed knife base
2	Bed knife
3	Screw

### Installing The Bed Knife

**Caution**

Both the reel cutter (cutting cylinder) and the bed knife (bottom blade) are edged tools. Handle them carefully, since they could cut your hands and feet.

**Caution**

Wear gloves when touching edged tools to avoid cutting your hands.

**Caution**

While operations are performed with the front of the machine raised, it may fall. Securely support the machine.

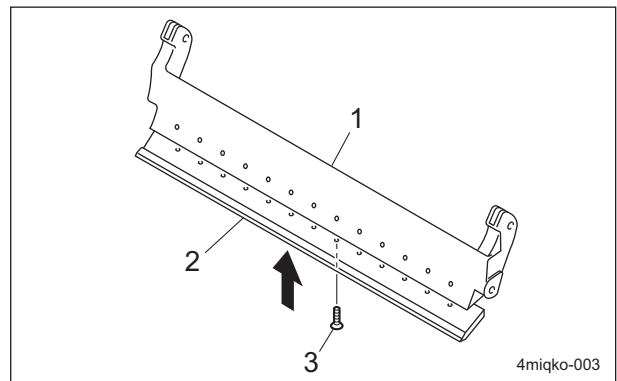
**Important**

Be sure not to scratch the bed knife base surface where the bed knife shall be mounted. Remove rust and dust.

**Important**

Replace the old screws with new ones.

1. Tighten the screws uniformly with a hammer driver.

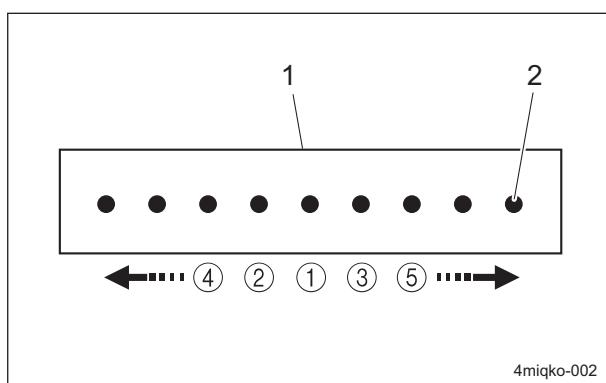


Installing The Bed Knife\_001

1	Bed knife base
2	Bed knife
3	Screw

**Note:**

When installing the bed knife, first tighten the center screw, and then tighten from center outwards, alternating between left and right sides.



Installing The Bed Knife\_002

1	Bed knife
2	Screw

## Adjustment of Brake

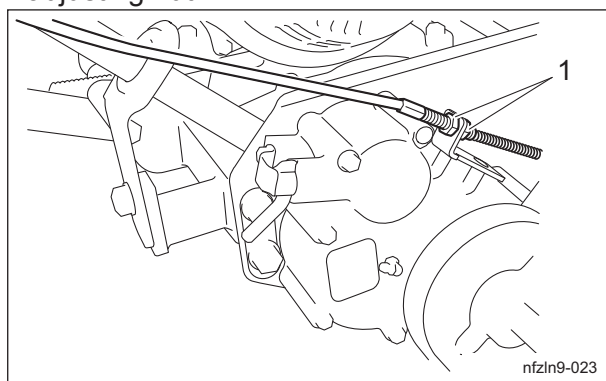
### ⚠ Caution

If the brake wire is cut, the machine will be unable to stop.  
If the brake wire is cracked or damaged, replace it with a new one immediately.

### ⚠ Caution

If the brake is not sufficiently effective when it has been applied, adjust the brake wire.

1. Adjust the brake by use of the brake wire adjusting nut.



Adjustment of Brake\_001

1	Adjusting nut
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2. Follow the same steps to adjust the belts on the brake on the opposite side.

### ⚠ Caution

It may result in an unexpected accident if the left and right brakes are not equally effective.

3. Make sure that the left and right brakes are equally effective.

4. Make sure that the brake shoe does not touch the brake drum.

Avoid the brake always being engaged.

Note:

The brake shoe may touch the brake drum if you hear a rubbing sound or the drum feels heavy when rotating the drum.

## Adjustment of Engine Clutch Section

For centering adjustment of the engine clutch :  
Centering adjustment of the engine clutch is required after replacement of the engine or clutch parts.

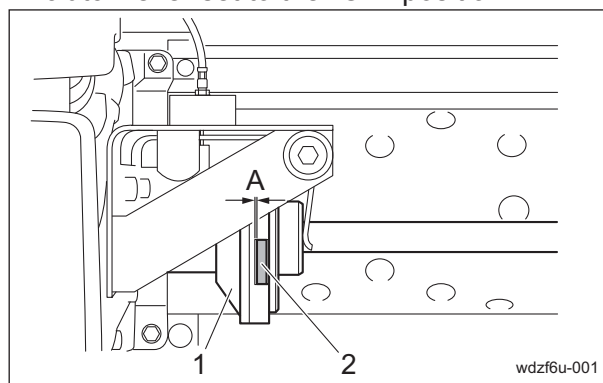
1. Adjust the engine clutch.
2. Adjust the clutch wire.
3. Adjust the clutch spring.

For clearance adjustment of the engine clutch :  
Clearance adjustment of the engine clutch is required after replacement of the clutch wire or when the clutch slips.

1. Adjust the clutch wire.
2. Adjust the clutch spring.

## Adjustment of Engine Clutch

Adjust the clearance between the engine clutch and clutch facing so that it will be 0.5 - 1.0 mm (0.020 - 0.039 in) when the main clutch lever set to the "ON" position.



Adjustment of Engine Clutch\_001

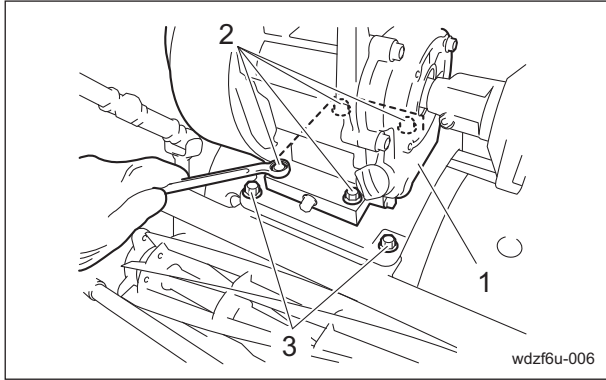
1	Engine clutch
2	Clutch facing
A	0.5 - 1.0 mm (0.020 - 0.039 in)

1. Loosen the four bolts A securing the engine.  
Be sure not to loosen the bolts B.

# Maintenance

2. Insert a thickness gauge (accessory tool) between the engine clutch and the clutch facing.

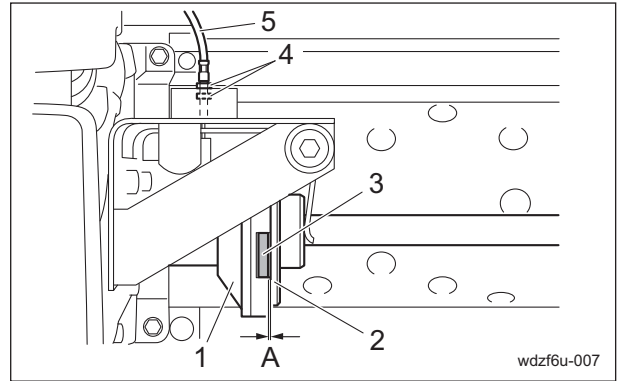
Make adjustment of the engine position so that the front and rear clearances will be the same distance, and then tighten the bolts A.



Adjustment of Engine Clutch\_002

1	Engine
2	Bolt A
3	Bolt B

3. After appropriate adjustment of the operation distance of the clutch plate completed, tighten the clutch wire adjusting nuts.



Adjustment of Clutch Wire\_001

1	Engine clutch
2	Clutch plate
3	Clutch facing
4	Clutch wire adjusting nut
5	Clutch wire
A	1.0 - 2.0 mm (0.039 - 0.079 in)

## Adjustment of Clutch Wire

### Important

Make sure that the wire is not cracked or damaged. If the wire is cracked or damaged, replace it with a new one immediately.

### Important

Due to frequent use, movement of the lever will become dull, play of the inner wire will change and the inner wire will be stretched depending on R angle of the outer wire. Inspect them and, if necessary, implement adjustment.

Make adjustment of the clutch wire so that the operation distance of the clutch plate between "ON" and "OFF" positions of the main clutch lever will be 1.0 - 2.0 mm (0.039 - 0.079 in).

1. Loosen the clutch wire adjusting nuts.
2. Adjust the operation distance of the clutch plate by changing the clutch wire position.

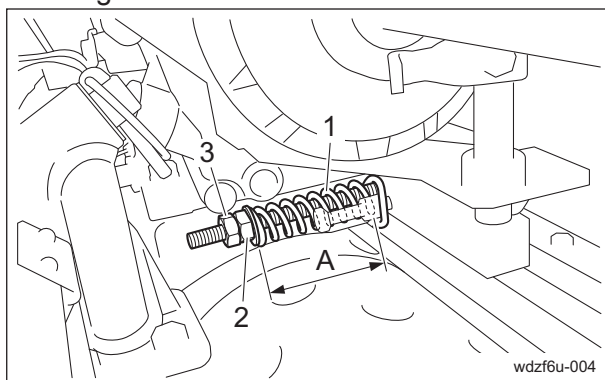
## Adjustment of Clutch Spring

The factory default setting of the clutch spring total length is 63.0 mm (2.48 in). The longer the spring is set, the lighter clutch handling is provided. The shorter, the heavier.

1. Make adjustment with the spring adjustment nut so that the total length of the clutch spring will be 63.0 mm (2.48 in) when the main clutch lever set to the "ON" position.
2. Loosen the lock nut and adjust the clutch spring total length with the spring adjustment nut.
3. Confirm that there is no engine clutch slipping when the main clutch lever set to the "ON" position.



## 4. Tighten the lock nut.



Adjustment of Clutch Spring\_001

1	Clutch spring
2	Spring adjustment nut
3	Lock nut
A	63.0 mm (2.48 in)

Change of Air Cleaner

A contaminated air cleaner element may cause malfunction of the engine.

To maximize the life of the engine, replace the air cleaner element at the appropriate times.

1. The timing for replacing the air cleaner element is described below.

[1] Replace the air cleaner element in accordance with the Maintenance Schedule.

[2] If it is significantly contaminated, replace it, even if the hours of operation do not exceed the specified time.

2. Replace the air cleaner element by following the same steps as for cleaning the air cleaner.

"Cleaning of Air Cleaner" (Page 4-4)

Replacement of Engine Oil**⚠ Caution**

Be careful with hot oil, which could cause burns if it contacts your skin.

**Important**

When you replace the engine oil, be sure to drain it into a bowl and discard it in accordance with local laws and regulations.

**Important**

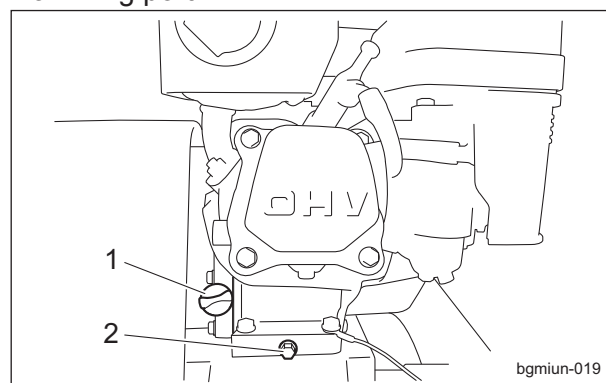
Be sure to use engine oil that is classified as API Service Grade SE or higher, with an SAE Viscosity that is appropriate for the operating environment (ambient temperature).

**Important**

Screw the oil level gauge firmly.

Replace the engine oil more frequently if the engine oil is contaminated, and especially if you use the machine in dusty areas or operate the engine at high loads or in high temperatures.

1. Move the machine onto a level surface, stop the engine.
2. Remove the drain plug while the engine oil is warm, and then drain the engine oil into a bowl.
3. Replace the drain plug in the engine.
4. Remove the oil level gauge.
5. Through the oil filling port, supply new engine oil.  
The engine oil quantity is approximately 0.56 dm<sup>3</sup> (0.56 L).
6. Position the machine so that the engine will be level, then check the engine oil level without screwing the oil level gauge into the oil filling port.



Replacement of Engine Oil\_001

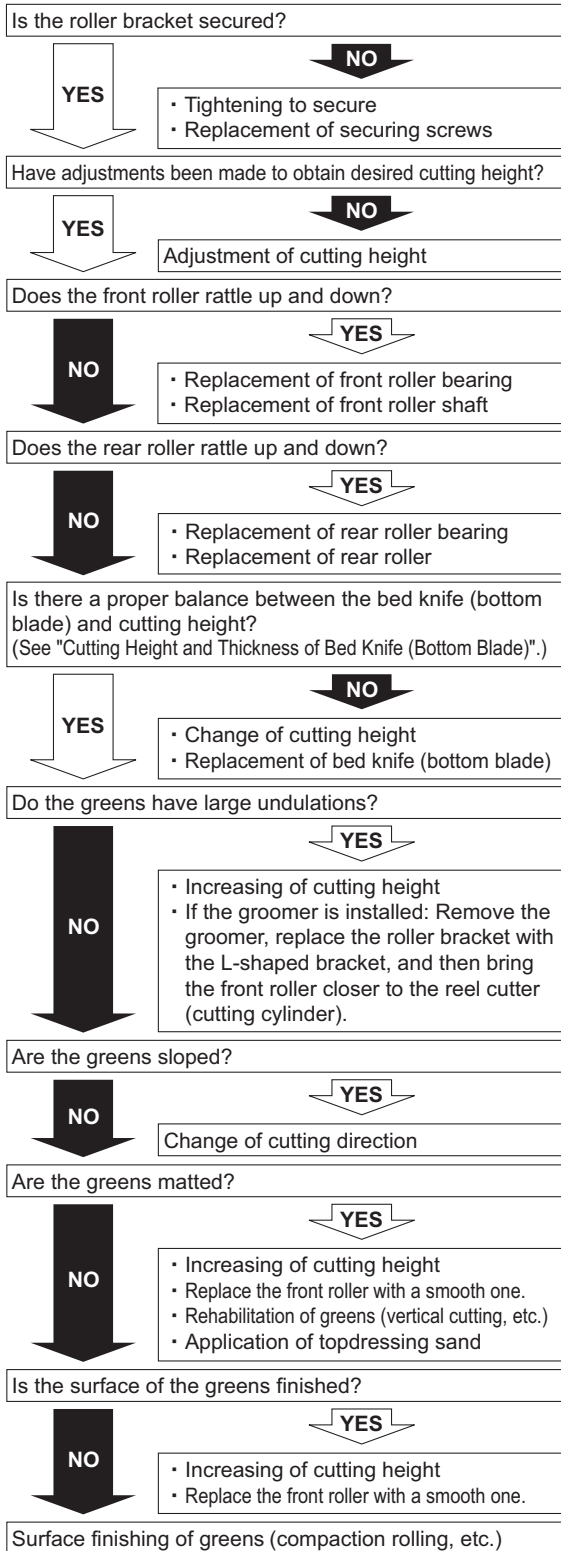
1	Oil level gauge (Oil filling port)
2	Drain plug

7. After checking the oil level with the oil level gauge, add more engine oil if it is insufficient.
8. Securely tighten the oil level gauge.
9. Check underneath the machine for oil leakage.

# Maintenance

## Troubleshooting Procedures of Aftercut Appearance

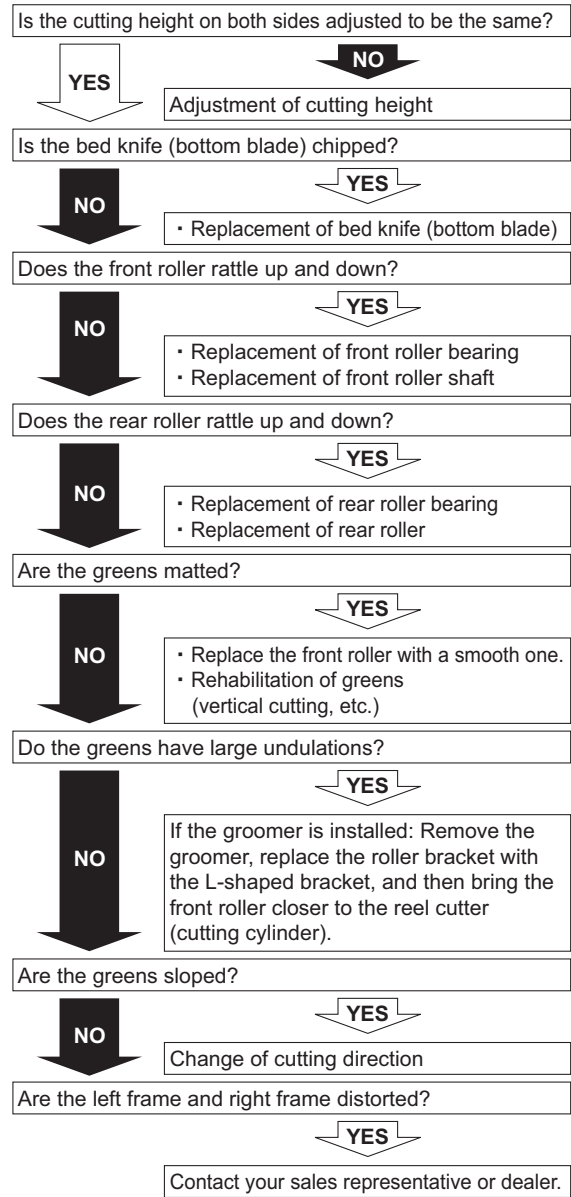
### Scalping



iuwt3m-007E

Scalping\_001

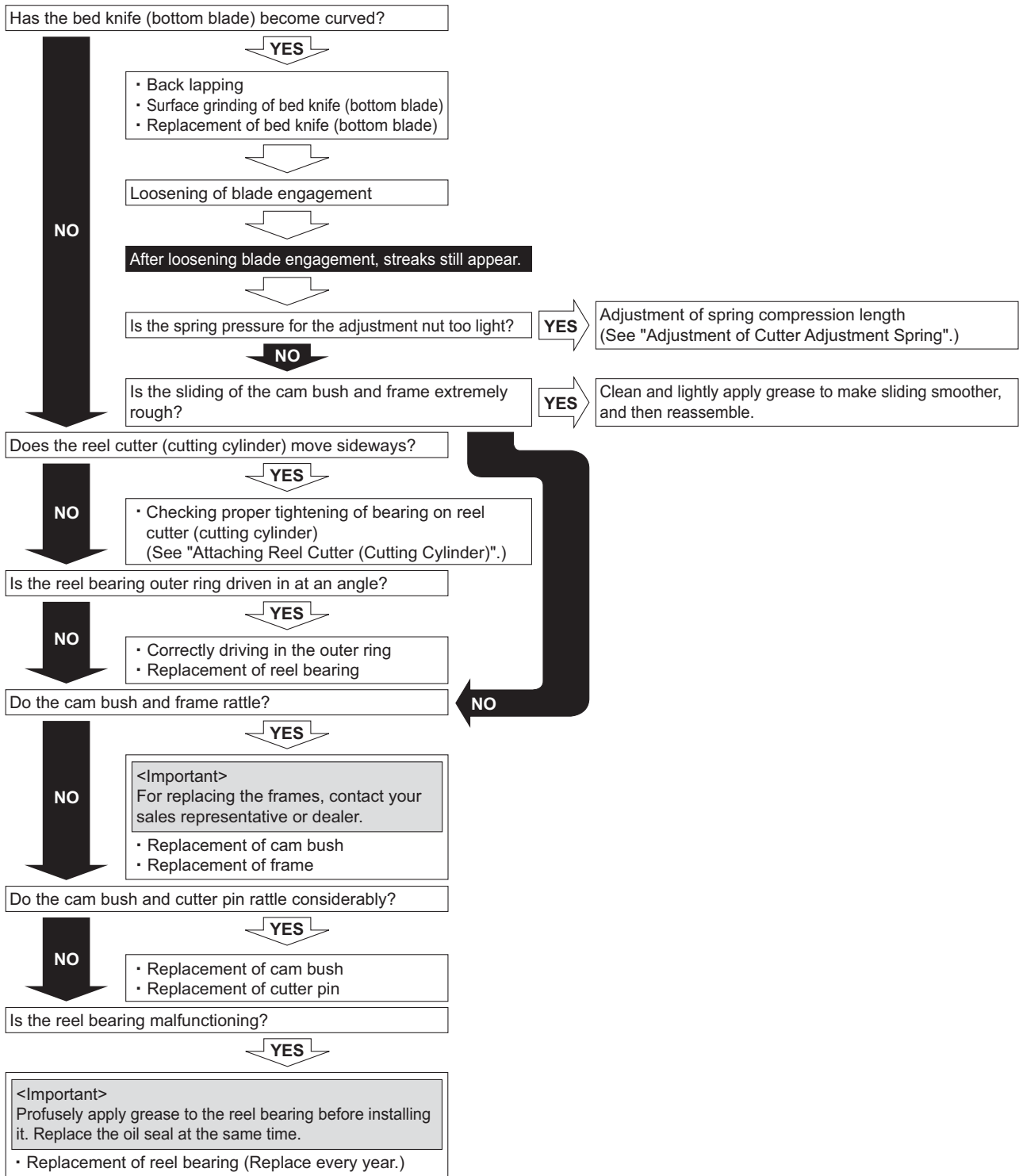
### Angled Mismatch



7x9s4e-004E

Angled Mismatch\_001

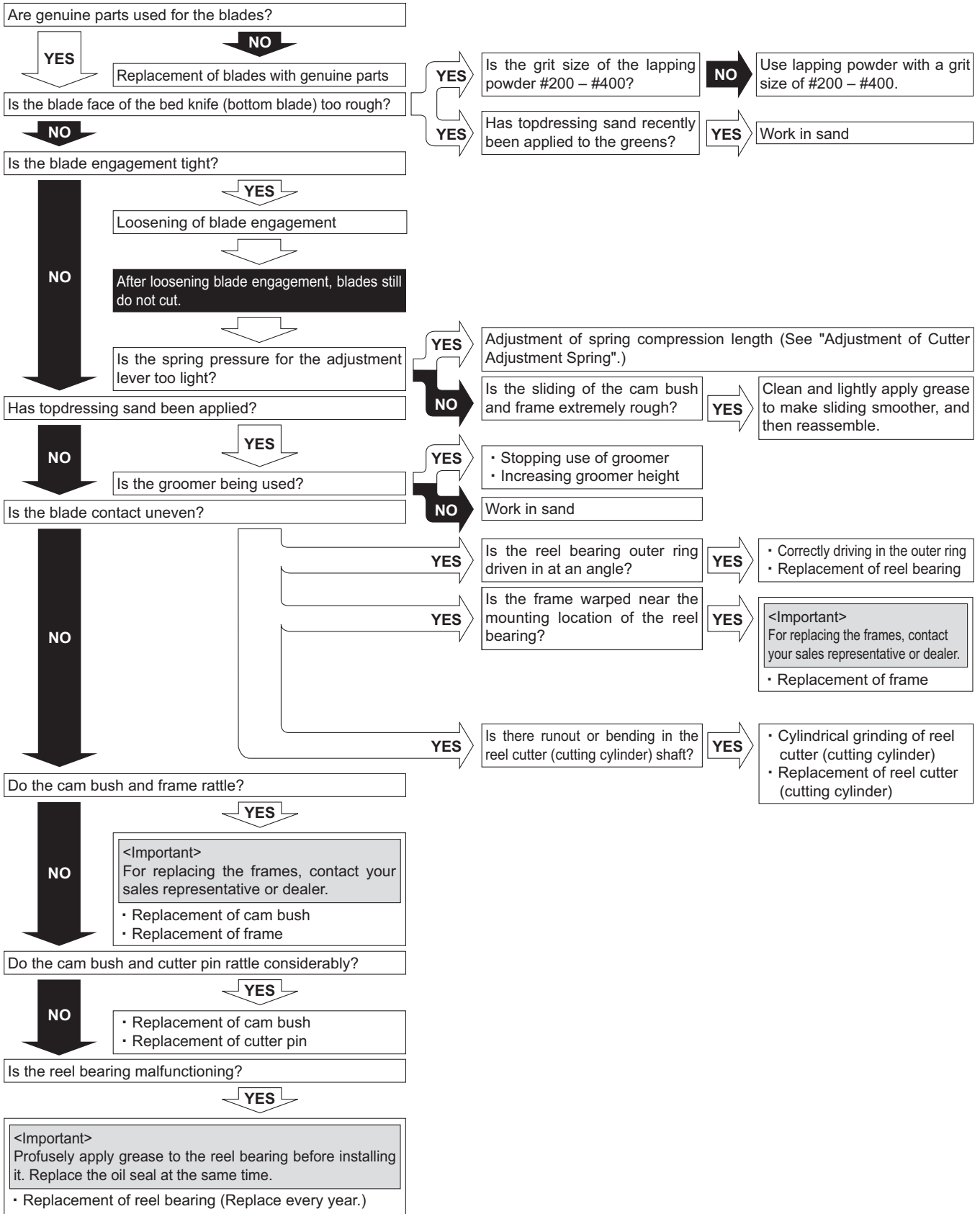
## Overlap Marks



Maintenance

# Maintenance

## Blade Does Not Cut



t3iz9v-002E

Blade Does Not Cut\_001

## Uneven Blade Engagement

The unevenness is a difference of tightening torque between the left and right cutter adjustment nuts, or blade engagement on only one side, which cannot be adjusted.

Promptly resolve the issue in order to maintain the optimum performance of the machine.

Cause of unevenness	Measure to resolve
Asymmetrical wear of reel cutter (cutting cylinder)	Cylindrical grinding of reel cutter (cutting cylinder) Replacement of reel cutter (cutting cylinder)
Asymmetrical wear of bed knife (bottom blade)	Surface grinding of bed knife (bottom blade) Replacement of bed knife (bottom blade)
Distortion of frames	Rearrange frames in parallel

### Important

Depending on the extent of the symptoms, they may not be resolved.

### Important

Performing temporary measures may cause the symptoms to progress, resulting in cutting issues.

Temporary measures:

- Adjustment with cam bushes  
"Adjusting CAM" (Page 5-12)
- Adjustment of spring pressure  
"Adjustment of Cutter Adjustment Spring" (Page 5-12)



**EU Declaration of Conformity**

## Product Identification

Product : Lawnmower  
Brand-Name : BARONESS  
Type : LM101  
Version(s) : Not Applicable  
Starting Serial No. : **10241**  
Measured Sound Power Level : LWA 97.76 dB  
Guaranteed Sound Power Level : LWA 98 dB  
Manufacturer Name : Kyoisha Co., Ltd.  
Address : 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japan

## Conforms to the following Directives

2006/42/EC Machinery (MD)  
2014/30/EU Electromagnetic compatibility (EMC)  
2000/14/EC Noise emissions from outdoor equipment

## We have been designed and manufactured under the following specifications

ISO 12100 : 2010 (2006/42/EC)  
ISO 5395-1 : 2013 (2006/42/EC)  
ISO 5395-2 : 2013 (2006/42/EC)  
ISO 14982 : 1998 (2014/30/EU)

## Keeper of Technical Documentation

Name : Kyoisha Co., Ltd.  
Address : 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japan

## Compiler of the technical file (2006/42/EC)

Name : Friedrich E. Barthels Nachf. Glockzin KG (GmbH & Co.)  
Address : Gerhard-Falk-Str. 1 21035 Hamburg Germany

## Conformity assessment procedures

Internal production control : Module A (2006/42/EC)  
EC-type examination : Module B (2014/30/EU)  
Internal control of production with assessment of technical documentation and periodical checking (2000/14/EC)

## Involved Notified Body (2000/14/EC)

Name : SNCH  
Address : 11, Route de Sandweiler 5230 Sandweiler Luxembourg  
Certificate / Technical Documentation No. : SNCH\*2000/14\*2005/88\*3238\*01/TCLM101-01

Place : Japan  
Date : 6 January 2021 (6 / 01 / 2021)

Signature :   
Name : Akio Hayashi  
Position : Quality Dept. Director

(fr)

**Déclaration de conformité UE**

## Identification du produit

Produit : Tondeuse à gazon  
Fabriquant : BARONESS  
Type : LM101  
Version(s) : Non applicable  
Numéro de série de début : **10241**  
Niveau de puissance acoustique mesuré : LwA 97.76 dB  
Niveau de puissance acoustique garanti : LwA 98 dB  
Fabricant Nom : Kyoisha Co., Ltd.  
Adresse : 1-26, Miyuki-cho, Toyokawa, préfecture d'Aichi, Japon

## Conforme aux directives suivantes :

2006/42/CE Machine (MD)  
2014/30/UE Compatibilité électromagnétique (CEM)  
2000/14/CE Émissions sonores de l'équipement de plein air

## Conception et fabrication en respect des spécifications suivantes :

ISO 12100 : 2010 (2006/42/CE)  
ISO 5395-1 : 2013 (2006/42/CE)  
ISO 5395-2 : 2013 (2006/42/CE)  
ISO 14982 : 1998 (2014/30/UE)

## Fiche technique

Marque : Kyoisha Co., Ltd.  
Adresse de la marque : 1-26, Miyuki-cho, Toyokawa, préfecture d'Aichi, Japon

## Compilateur de la fiche technique (2006/42/CE)

Nom : Friedrich E. Barthels Nachf. Glockzin KG (GmbH & Co.)  
Adresse : Gerhard-Falk-Str. 1 21035 Hambourg Allemagne

## Procédures d'évaluation de la conformité

Contrôle de production interne : module A (2006/42/CE)  
Examen de type CE : module B (2014/30/UE)  
Contrôle interne de la production avec évaluation de la fiche technique et vérification périodique (2000/14/CE)

## Organisme notifié impliqué (2000/14/CE)

Nom : SNCH  
Adresse : 11, Route de Sandweiler 5230 Sandweiler, Luxembourg  
N° de certificat/Documentation technique : SNCH\*2000/14\*2005/88\*3238\*01/TCLM101-01

## Declaración de conformidad de la UE

### Identificación del producto

Producto: Cortacésped  
 Marca: BARONESS  
 Tipo: LM101  
 Versión: No aplicable  
 N.º de serie inicial: **10241**  
 Nivel de potencia sonora medido: LWA 97.76 dB  
 Nivel de potencia sonora garantizado: LWA 98 dB  
 Fabricante Nombre: Kyoisha Co., Ltd.  
 Dirección: 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japón

### Cumple las siguientes Directivas

2006/42/CE Maquinaria (MD)  
 2014/30/UE Compatibilidad electromagnética (EMC)  
 2000/14/CE Emisiones sonoras de máquinas de uso al aire libre

### Se ha diseñado y fabricado utilizando las siguientes especificaciones

ISO 12100 : 2010 (2006/42/CE)  
 ISO 5395-1 : 2013 (2006/42/CE)  
 ISO 5395-2 : 2013 (2006/42/CE)  
 ISO 14982 : 1998 (2014/30/UE)

### Documentación técnica

Nombre del responsable: Kyoisha Co., Ltd.  
 Dirección del responsable: 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japón

### Compilador del archivo técnico (2006/42/CE)

Nombre: Friedrich E. Barthels Nachf. Glockzin KG (GmbH & Co.)  
 Dirección: Gerhard-Falk-Str. 1 21035 Hamburgo Alemania

### Procedimientos de evaluación de conformidad

Control de fabricación interno: Módulo A (2006/42/CE)  
 Examen de tipo CE: Módulo B (2014/30/UE)  
 Control interno de fabricación con evaluación de documentación técnica y comprobaciones periódicas (2000/14/CE)

### Organismo notificado implicado (2000/14/CE)

Nombre: SNCH  
 Dirección: 11, Route de Sandweiler 5230 Sandweiler Luxemburgo  
 Certificado/Documentación técnica n.º: SNCH\*2000/14\*2005/88\*3238\*01/TCLM101-01

## EU-Konformitätserklärung

### Produktbeschreibung

Produkt: Rasenmäher  
 Marke: BARONESS  
 Modell: LM101  
 Version(en): Nicht zutreffend  
 Startseriennummer: **10241**  
 Gemessener Schalleistungspegel: LWA 97.76 dB  
 Garantierter Schalleistungspegel: LWA 98 dB  
 Hersteller Name: Kyoisha Co., Ltd.  
 Adresse: 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japan

### Entspricht den folgenden Richtlinien

2006/42/EG Maschinenrichtlinie  
 2014/30/EU Elektromagnetische Verträglichkeit (EMV)  
 2000/14/EG Geräuschemission von im Freien betriebenen Geräten

### Unter Anwendung der folgenden Bestimmungen entwickelt und hergestellt

ISO 12100 : 2010 (2006/42/EG)  
 ISO 5395-1 : 2013 (2006/42/EG)  
 ISO 5395-2 : 2013 (2006/42/EG)  
 ISO 14982 : 1998 (2014/30/EU)

### Technische Dokumentation

Name des Halters: Kyoisha Co., Ltd.  
 Adresse des Halters: 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japan

### Technische Unterlagen erstellt von (2006/42/EG)

Name: Friedrich E. Barthels Nachf. Glockzin KG (GmbH & Co.)  
 Adresse: Gerhard-Falk-Str. 1 21035 Hamburg Deutschland

### Konformitätsbewertungsverfahren

Interne Produktionskontrolle : Modul A (2006/42/EG)  
 EG-Baumusterprüfung : Modul B (2014/30/EU)  
 Interne Produktionskontrolle mit Bewertung der technischen Unterlagen und regelmäßiger Überprüfung (2000/14/EG)

### Beteiligte benannte Stelle (2000/14/EG)

Name: SNCH  
 Adresse : 11, Route de Sandweiler 5230 Sandweiler Luxemburg  
 Bescheinigung/Technische Dokumentation Nr. : SNCH\*2000/14\*2005/88\*3238\*01/TCLM101-01



## EU-försäkran om överensstämmelse

### Produktidentifikation

Produkt : Gräsklippare  
 Märke: BARONESS  
 Typ: LM101  
 Version(er): Ej aktuellt  
 Serienummer startar på: **10241**  
 Uppmätt ljudeffektnivå: LwA 97.76 dB  
 Garanterad ljudeffektnivå: LwA 98 dB  
 Tillverkare Namn: Kyoisha Co., Ltd.  
 Adress: 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japan

### Uppfyller följande direktiv

2006/42/EG Maskindirektivet  
 2014/30/EU Elektromagnetisk kompatibilitet (EMC)  
 2000/14/EG Bulleremission från utomhusutrustning

### Följande kravspecifikationer har följts vid konstruktion och tillverkning

ISO 12100 : 2010 (2006/42/EG)  
 ISO 5395-1 : 2013 (2006/42/EG)  
 ISO 5395-2 : 2013 (2006/42/EG)  
 ISO 14982 : 1998 (2014/30/EU)

### Teknisk dokumentation

Innehavarens namn: Kyoisha Co., Ltd.  
 Innehavarens adress: 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japan

### Den tekniska filen(2006/42/EG) har tagits fram av

Namn: Friedrich E. Barthels Nachf. Glockzin KG (GmbH & Co.)  
 Adress: Gerhard-Falk-Str. 1 21035 Hamburg Tyskland

### Förfarande för bedömning av överensstämmelse

Intern produktionskontroll: Modul A (2006/42/EG)  
 EG-typprovning: Modul B (2014/30/EU)  
 Intern kontroll av produktion med fastställande av teknisk dokumentation och periodiska kontroller (2000/14/EG)

### Anmält organ (2000/14/EG)

Namn: SNCH  
 Adress: 11, Route de Sandweiler 5230 Sandweiler Luxembourg  
 Certifikat/Teknisk dokumentation nummer: SNCH\*2000/14\*2005/88\*3238\*01/TCLM101-01

## EU-overensstemmelseserklæring

### Produktidentificering

Produkt : Plæneklipper  
 Mærkenavn: BARONESS  
 Type: LM101  
 Version(er): Ikke anvendelig  
 Startende serienr.: **10241**  
 Målt lydeffektniveau: LWA 97.76 dB  
 Garanteret lydeffektniveau: LWA 98 dB  
 Producent Navn: Kyoisha Co., Ltd.  
 Adresse: 1-26 Miyuki-cho, Toyokawa, Aichi-præf., Japan

### Er i overensstemmelse med følgende direktiver

2006/42/EF Maskineri (MD)  
 2014/30/EU Elektromagnetisk kompatibilitet (EMC)  
 2000/14/EF Støjemissioner fra udendørs udstyr

### Vi har designet og produceret under følgende specifikationer

ISO 12100 : 2010 (2006/42/EF)  
 ISO 5395-1 : 2013 (2006/42/EF)  
 ISO 5395-2 : 2013 (2006/42/EF)  
 ISO 14982 : 1998 (2014/30/EU)

### Indehaver af teknisk dokumentation

Navn: Kyoisha Co., Ltd.  
 Adresse: 1-26 Miyuki-cho, Toyokawa, Aichi-præf., Japan

### Compiler af den tekniske fil (2006/42/EF)

Navn: Friedrich E. Barthels Nachf. Glockzin KG (GmbH & Co.)  
 Adresse: Gerhard-Falk-Str. 1 21035 Hamburg Tyskland

### Procedurer for overensstemmelsesvurdering

Intern produktionskontrol : Modul A (2006/42/EF)  
 EF-typeafprøvning : Modul B (2014/30/EU)  
 Intern fabrikationskontrol med vurdering af teknisk dokumentation og periodisk kontrol (2000/14/EF)

### Berørt bemyndiget organ (2000/14/EF)

Navn: SNCH  
 Adresse: 11, Route de Sandweiler 5230 Sandweiler Luxembourg  
 Certifikat: SNCH\*2000/14\*2005/88\*3238\*01/TCLM101-01

**BARONESS**<sup>®</sup>  
Quality on Demand

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Aichi-pref, 442-8530 JAPAN Fax:+81-533-84-1220