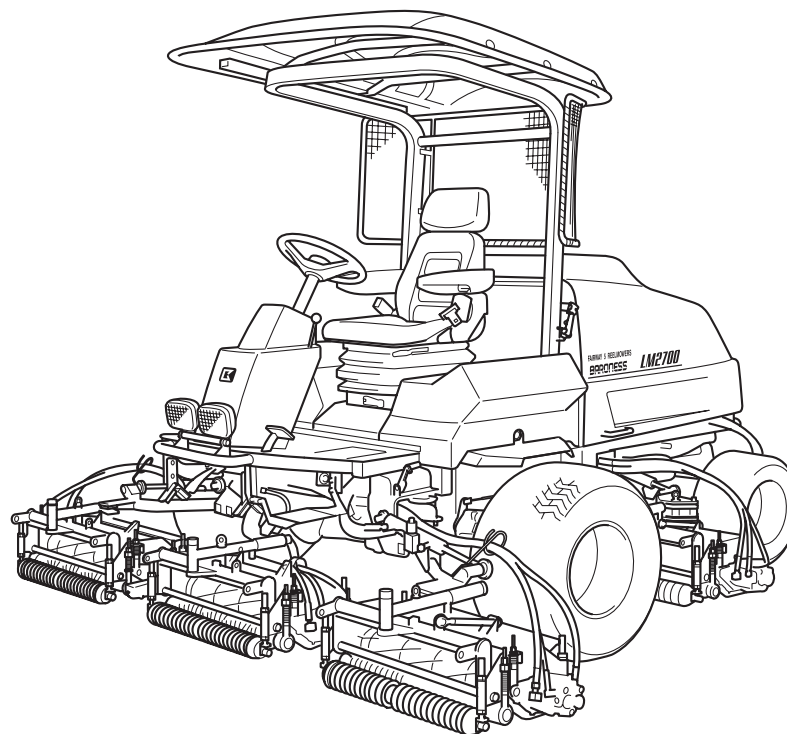


# ***LM2700***

5-Unit Reel Mower

## Owner's Operating Manual



"Required reading" Read this manual and the Owner's Manual for the engine before using the machine.







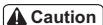


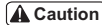












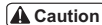







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**BARONNESS**<sup>®</sup>  
Quality on Demand

Serial No.11181-

Original Instructions Ver.3.2

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## Greeting

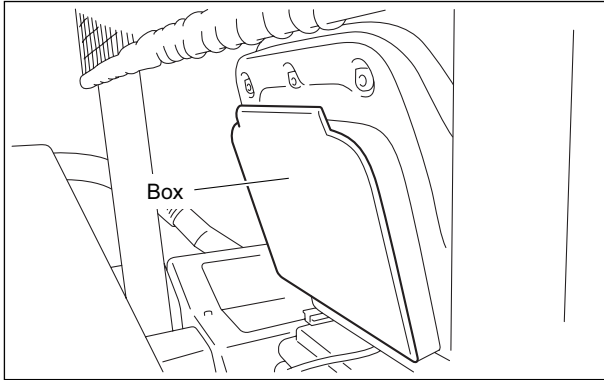
Thank you for purchasing the Baroness product.

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.

## Keeping the owner's operating manual

Keep this Manual in the box located in the rear of the seat.



## 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 your local Baroness dealer or Kyoisha.





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

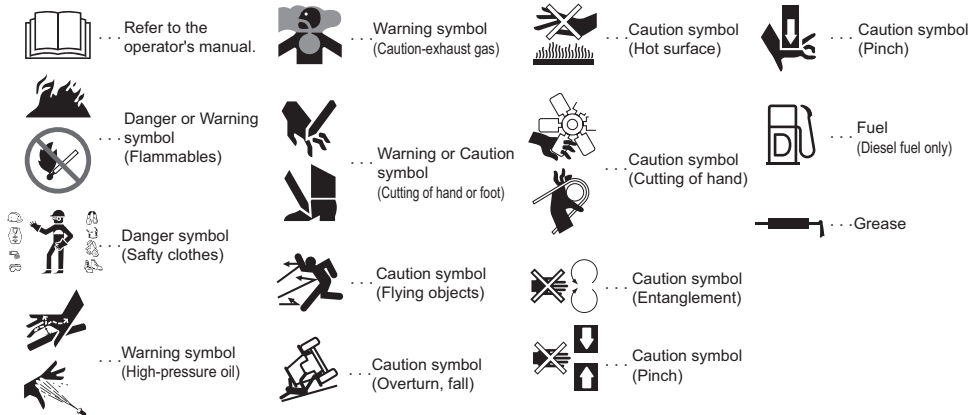
When loaning or transferring the product, please also provide this manual together with the product.

Kyoisha Co., Ltd.


# Warning symbols

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

	Warning symbol
<p>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.</p>	
<p> <b>Danger</b></p> <p>This symbol indicates that serious injury or death will occur if the warning is ignored.</p>	
<p> <b>Warning</b></p> <p>This symbol indicates that serious injury or death may occur if the warning is ignored.</p>	
<p> <b>Caution</b></p> <p>This symbol indicates that injury or damage to property may occur if the warning is ignored.</p>	
<p><b>Important</b></p> <p>This symbol indicates precautions on the mechanism of the machine.</p>	



# 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 Kyoeshia.

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
- The Battery's Owner's Manual

# Purpose

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


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

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

In addition, this product is not authorized for operation as a special motor vehicle. Do not operate it on public roads.

# 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.

## 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 material to them.
3. All operators and mechanics should seek and obtain professional and practical instruction. The owner is responsible for training the users. Such instruction should emphasize:
  - [1] The need for care and concentration when working with ride-on machines.
  - [2] Control of a ride-on machine sliding on a slope will not be regained by the application of the brake.

The main reasons for loss of control are

    - Insufficient wheel grip
    - Being driven too fast
    - Inadequate braking
    - The type of machine is unsuitable for its task
    - Lack of awareness of the effect of ground conditions, especially slopes
    - Incorrect hitching and load distribution
4. Never allow children or 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. The ROPS is an integral and effective safety device. Do not remove or alter the ROPS.
8. Replace a damaged ROPS. Do not repair or alter.
9. You can find additional safety information where needed throughout this manual.
10. 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

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.
  9. On multi-cylinder/multi-reel machines, take care as rotating one cylinder/reel can cause other cylinders/reels to rotate.

## 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.

Only start engine from the operator's position.  
(Use seat belts if provided.)
4. Remember there is no such thing as a safe slope. Travel on grass slopes requires particular care. To guard against overturning.
  - [1] Do not stop or start suddenly when going up or downhill.
  - [2] Engage clutch slowly, always keep machine in gear, especially when traveling downhill.
  - [3] Machine speeds should be kept low on slopes and during turns.
  - [4] Stay alert for humps and hollows and other hidden hazards.

- [5] Never operate across the face of the slope, unless the machine is designed for this purpose.
- [6] Never drive the machine on a slope with an angle of gradient that is greater than that specified or in a place where there is a danger of the machine slipping.
- 5. Use extra care while operating machine with a grass catcher or other attachments. They can affect the stability of the machine.
- 6. Never operate the machine with damaged guards, shields, or without safety protective devices in place.  
Be sure all interlocks are attached, adjusted properly, and functioning properly.
- 7. Do not change the engine governor settings or overspeed the engine. Operating the engine at excessive speed may increase the hazard of personal injury.
- 8. Do the following before leaving the operator's position.
  - [1] Stop on level ground.
  - [2] Disengage the power take-off and lower the attachments.
  - [3] Change into neutral and set the parking brake.
  - [4] Stop the engine and remove the key.
- 9. Disengage the drive to attachments, stop the engine, and remove the ignition key in the following conditions.
  - [1] Before refuelling.
  - [2] Before removing the grass catcher.
  - [3] Before making height adjustment unless adjustment can be made from the operator's position.
  - [4] Before clearing blockages.
  - [5] Before checking, cleaning or working on the machine.
  - [6] 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.
- 10. Keep hands and feet away from the cutting units and the rotating parts.
- 11. Do not mow in reverse unless absolutely necessary.  
Always look down and behind before and while backing.
- 12. Do not carry passengers.
- 13. Never operate while people, especially children, or pets are nearby.
- 14. Slow down and use caution when making turns and crossing roads and sidewalks.
- 15. Stop the blades rotating before crossing surfaces other than grass.
- 16. Disengage drive to attachments when transporting or not in use.
- 17. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the machine while in operation.
- 18. Do not operate the machine under the influence of alcohol or drugs.
- 19. 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.

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.

- 20. Close the fuel valve before transporting the machine.
- 21. Use care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
- 22. Do not take your eyes off the road ahead. Do not operate the machine with no hands.
- 23. 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.
- 24. Do not operate the machine when there is the risk of lightning.

## Maintenance and storage

- 1. Disengage drives on level ground, lower the attachments, set parking brake, stop engine and remove key from ignition. Wait for all movement to stop before adjusting, cleaning or repairing.
- 2. When machine is to be parked, stored, or left unattended, lower the cutting units unless a positive mechanical lock is provided.
- 3. To reduce the fire hazard, keep the engine, silencer/muffler, battery compartment fuel storage area, cutting units and drives free of grass, leaves, or excessive grease. Clean up oil or fuel spillage.
- 4. Allow the engine to cool before storing in any enclosure.
- 5. Only cover the machine with a sheet after hot parts have sufficiently cooled down.
- 6. Never store the equipment with fuel in the tank inside a building where fumes may reach an open flame or spark.
- 7. If the engine is provided with a shut-off valve, shut off valve while storing or transporting.
- 8. Do not store fuel near flames.
- 9. Never allow untrained personnel to service machine.
- 10. Allow the engine/muffler to cool before checking/maintenance.
- 11. Appropriately manage and correctly use the tools necessary for servicing or adjusting the machine.
- 12. Use jack stands to support components when required.
- 13. Carefully release pressure from components with stored energy.
- 14. Be sure to depressurize the hydraulic system before performing maintenance operations on it such as removing hydraulic equipment.
- 15. Check whether line connectors in the hydraulic system are properly tightened. Before



applying hydraulic pressure, check the connections of the hydraulic pressure lines and the condition of the hoses.

16. When checking the hydraulic circuit for pinhole leaks or oil leakage from nozzles, do not use your hands. Use items such as paper or corrugated cardboard to find leakage points. Be extremely careful with high-pressure oil as it may pierce your skin, resulting in an injury.

If fluid is injected into the skin it must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.

17. Disconnect battery before making any repairs. Disconnect the negative terminal first and the positive last. Reconnect positive first and negative last.

18. Make sure that parts such as wires are not touching each other and that their covers have not come off.

19. 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.

20. On multi-cylinder/multi-reel machines, take care as rotating one cylinder/reel can cause other cylinders/reels to rotate.

21. Keep hands and feet away from moving parts. If possible, do not make adjustments with the engine running.

22. Charge batteries in an open well ventilated area, away from spark and flames. Unplug charger before connecting or disconnecting from battery. Wear protective clothing and use insulated tools.

23. Keep all parts in good working condition and all hardware tightened. Replace all worn or damaged decals.

24. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.

25. Check the grass catcher frequently for wear or deterioration

26. If the fuel tank has to be drained, do this outdoors.

27. Swallowing engine coolant can cause injury or death; keep out of reach from children and pets.

## About Recycle

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

It may be required by local laws.

## About the 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.)

## Long-term storage

1. Clean up dirt, grass and oil spot etc.
2. Inspect and replace the engine oil and air filter element.
3. Refill oil and apply lubricating/greasing to each lubrication part.
4. Empty the fuel tank and keep the machine away from ignition sources when storing the machine indoors where sparks and open flames are used.
5. Set the air pressure in the tires slightly higher than normal.
6. Inspect all bolts, nuts and screws tightened. If loose or missing, tighten or repair them.
7. Repair or replace damaged parts and paint peelings.
8. Store the machine in the place where is dry and prevent exposure to rain.
9. Remove the battery and ignition key from the machine. If you keep the battery installed in the machine, disconnect the ground battery cable (negative side).
10. When storing the machine, lower the cutting units. In case to store the machine with raising the outermost #4 & #5 mowers, be sure to latch them.



# 1. Specifications

Model		LM2700				
Mower unit type		26in		22in		
Dimensions	Total length		118.11in	300cm	←	
	Total width	During operation	124.41in	316cm	115.35in	293cm
		During transport	89.76in	228cm	←	
	Total height	Roof	86.61in	220cm	←	
		Roof bar	80.31in	204cm	←	
Steering wheel		59.06in	150cm	←		
Weight	Machine (empty fuel tank) with ROPS	3,977.07lb	1,804kg	3,877.87lb	1,759kg	
		Minimum turning radius				110.24in
Engine	Model		Kubota V2203-M		←	
	Type		Vertical water-cooled 4-cycle diesel engine		←	
	Total displacement		134.05cu.in.	2,197cm <sup>3</sup> (2.197L)	←	
	Maximum output		33.0kW(44.9PS)/2,600rpm		←	
Fuel tank capacity		Diesel 12.42U.S.gal.	Diesel 47.0dm <sup>3</sup> (47.0L)	←		
Fuel consumption		184 g/PS · h(rated output)	250 g/kW · h(rated output)	←		
Engine oil capacity		2.56U.S.gal.	9.7dm <sup>3</sup> (9.7 L)	←		
Operating width (Mowing width)		109.06in	277cm	100.00in	254cm	
Operating height (Mowing height)		0.315-1.772in(*1)	8 - 45mm(*1)	←		
Blades		9		←		
Drive	Traveling		HST (2WD/4WD selectable)		←	
	Mowing		Hydraulic		←	
Speed(HST)	Forward	2WD:0 - 13.67mph	2WD:0 - 22.0km/h	←		
		4WD: 0 - 8.70mph	4WD: 0 - 14.0km/h	←		
	Reverse	0 - 4.97mph	0 - 8.0km/h	←		
Speed (Mechanical)		-		←		
Efficiency		7.6acres/hour (8.70 mph x mowing width x 0.8)	31,024m <sup>2</sup> /h (14.0 km/h x mowing width x 0.8)	7.0acres/hour (8.70 mph x mowing width x 0.8)	28,448m <sup>2</sup> /h (14.0 km/h x mowing width x 0.8)	
Maximum inclination for operation		15 degrees		←		
Tire size	Front wheel		26.5×14.00 - 12		←	
	Rear wheel		20×12.00 - 10		←	
Tire pneumatic pressure	Front wheel		21.75psi	150kPa(1.5 kgf/cm <sup>2</sup> )	←	
	Rear wheel		20.30psi	140kPa(1.4 kgf/cm <sup>2</sup> )	←	
Battery		105D31R		←		

Maximum engine rpm is set up 2,600 rpm before shipment.

(\*1) For 0.394 in (10 mm) or less mowing height, the optional bedknife is required

## ■ Sound Pressure Level

This machine was confirmed to have a continuous A-weighted sound pressure level of 88dB by measuring identical machines in accordance with the procedure specified in ISO 5395-1:2013.

## ■ Sound Power Level

This machine was confirmed to have a sound power level of 103dB by measuring identical machines in accordance with the procedure specified in directive 2000/14/EC.

## ■ Vibration Level

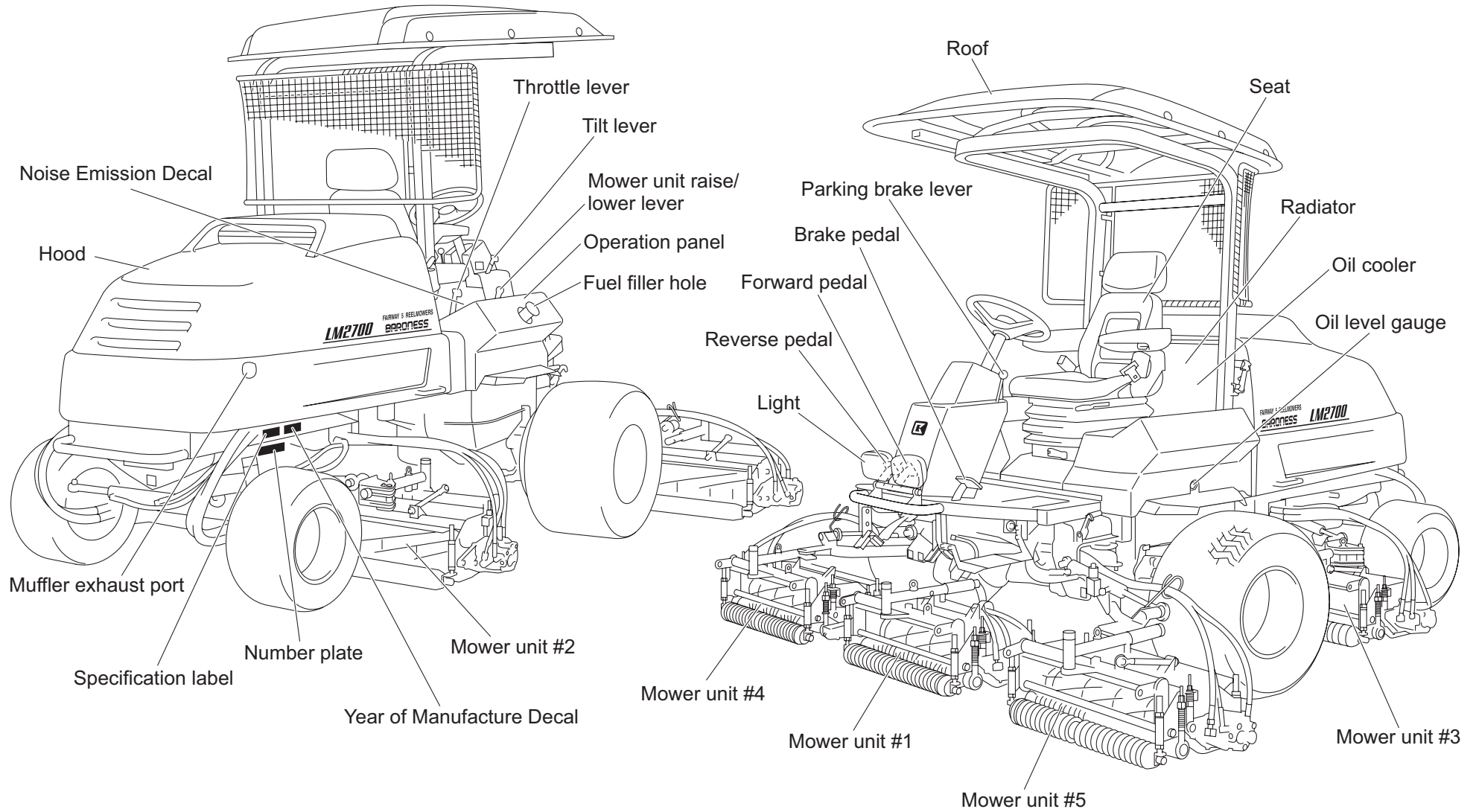
### Hand-arm vibration

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 5349-1:2001-5349-2:2001.

### Whole Body

This machine was confirmed to transmit a vibration level of 0.52 m/s<sup>2</sup> to the whole body by measuring identical machines in accordance with the procedure specified in ISO 2631-1:1997-2631:2003

## 2. Names of various sections



# 3. Warning label, operation label and regulation label

## 3-1 Attachment locations

**<Operation panel>**

② K4205001840

**<Battery>**

\*6,\*7 K4205001950

**<Inside the hood on the left side that can be seen from the rear>**

⑩ K4205001970

⑦ K4205001580

⑤ K4205001530

\* Attach on the left and right.

① LM2700-0959Z0

⑦ K4205001580

④ K4209000980

③ K4205001600

\* Attach two labels to each mower.

**<Arm lock part of both side>**

⑨ K4205001900

\* Put it on both side.

**<Front right of the frame>**

⑫ K4205001940

⑧ K4209001000

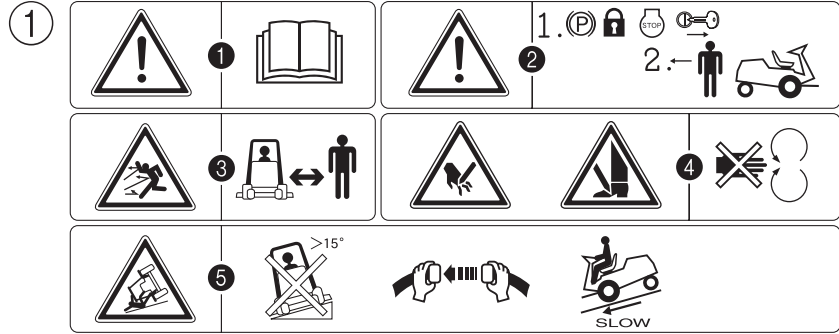
\* Low sulfur or ultra low sulfur diesel fuel only.

**<Rear right of the frame>**

⑥ K4205001540

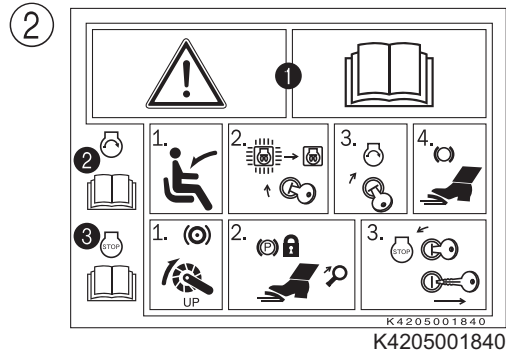
### 3-2 Description

Attach the warning labels and operation labels in the locations that are close to dangerous parts and in which the labels can be easily seen.  
If a label is damaged or peels off, attach a new label to the machine.



LM2700-0959Z0

- 1 **Warning** : Read the Operator's manual.
- 2 **Warning** : Leave the machine after setting the parking brake, turning the engine off, and removing the engine key.
- 3 **Caution** : Flying objects - Be sure that people around the machine keep a safe distance away.
- 4 **Warning** : Cutting hands or feet - Do not put near moving parts.
- 5 **Caution** : Overturning - Do not operate the machine on a slope of 15 degrees or more to avoid overturning.  
When going down a slope, fasten the seat belt and operate the machine at slow speeds.



K4205001840

- 1 **Warning** : Read the Operator's manual
- 2 **Engine starting-up procedure** (please read the Operator's manual.)
  - 1 Take a seat.
  - 2 Turn the key to the "Glow" position, and wait until the "thermo-start" lamp goes out.
  - 3 Turn to the "START" position.
  - 4 Step on the brake pedal and release the parking braking.
- 3 **Engine stop procedure**
  - 1 Turn off the reel rotation switch and raise the mower.
  - 2 Apply parking brake system.
  - 3 Turn the key to the "STOP" position and remove it.

- 3 **Warning** : Cutting hands or feet  
If you do not stop rotating the mower and the engine is not turned off, you may get injured.  
K4205001600
- 4 **Warning** : High-pressure oil symbol  
Read the Operator's manual.  
K4209000980
- 5 **Caution** : Cutting of Hand  
Placing your hand near the fan and the belt while the engine is running might result in injury.  
K4205001530
- 6 **Caution** : Hot surface  
Do not touch. It can cause burns.  
K4205001540
- 7 **Caution** : Pinch  
You can get pinched.  
K4205001580
- 8 **Caution** : Fuel filler port (diesel fuel only)  
Low sulfur or ultra low sulfur diesel fuel only.  
K4209001000
- 9 **Caution** : Mower lock lever  
When storing the machines with raising #4 & #5 mowers, engage the mower locking lever.  
K4205001900
- 10 **Caution** : Be careful about blowout of coolant water  
Do not open unless cooled down.  
K4205001970
- 11 **Warning** : Decal, caution to exhaust gas  
Caution for exhaust gas.  
K4205001950
- 12 **Warning** : Decal, keep away from fire  
Keep fire away.  
K4205001940

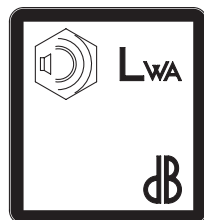
\*1 Number Plate

KYOEISHA CO.,LTD.		MADE IN JAPAN	
○ Head Office 1-26.Miyuki-cho, Toyokawa,Aichi-pref. 442-8530 Japan.	model		
	serial No.		

\*2 Specification label

BARONESS Ride-on lawnmower   KYOEISHA CO.,LTD.	Specifications	
	Model	
	Rating output	
	Total weight	

\*4 Noise Emission Decal



\*3 Year of Manufacture decal

YEAR OF MANUFACTURE  [ ]
-----------------------------------

\*5 ROPS authentication decal

BARONESS	
This 2-post ROPS passed the official testing complying with ISO 21299:2009	
FIT :	[ ]
Reference Mass :	[ ] kg
KYOEISHA CO.,LTD. 1-26 Miyuki-cho,Toyokawa-city, Aichi-pref.442-8530 JAPAN MADE IN JAPAN K4209001500	

\*6 Battery capacity decal (For Europe)

[ ]	(JIS)
20HR	[ ] Ah
CCA	[ ] A

\*7 Recycle decal (For Europe)



## 4. Inspection before use



**Caution**

Please be sure to check the following matter before putting the engine into operation.

### 4-1 Cleaning of the radiator and oil cooler

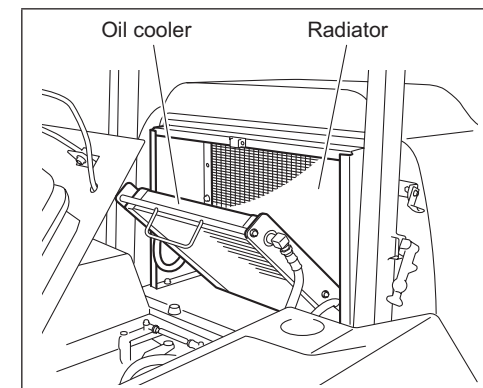
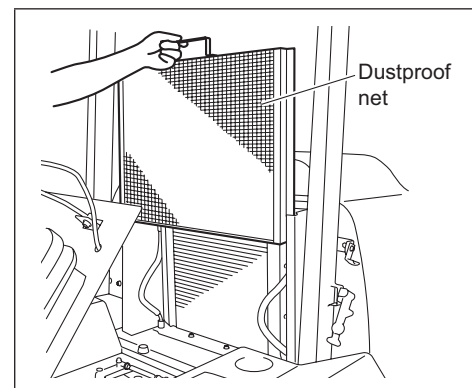


**Caution**

If it does not clean, it will become overheating of the engine and the cause of the seizure.


Moreover, it also becomes cause of the damage of the hydraulic equipment.

Be sure to clean when the dust has adhered to the radiator, oil cooler, and dustproof net. When you operate it in the dusty place, please try to clean a little early



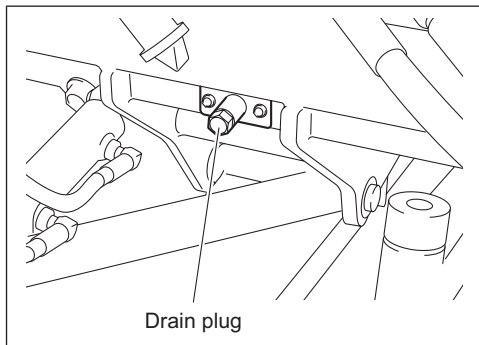
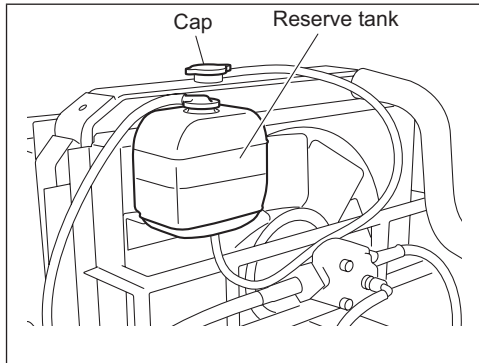
### 4-2 Inspection of the radiator and coolant level

**⚠ Caution**



Perform the inspection when the engine is cold. The radiator cap is the pressure type. If the radiator cap is removed when the engine is high temperature, the steam blows off and it may cause burns. After the water temperature and the pressure falls, apply a thick cloth etc. to the cap. Then turn to the left gradually, and loosen and remove.

- Check that the coolant level of the reserve tank is between "FULL" and "LOW".
  - When the coolant is below the line of "LOW", add the coolant from the cap part of the reserve tank to the line of "FULL".
- When there is no coolant in the reserve tank, supply it also from the cap part of the radiator to the top.
- Do not open the radiator cap in normal inspection.
  - When the coolant level decreases, supply clean water only.
  - Please drain the cooling water before winter or mix the long life coolant.
  - Perform the drainage by the drain plug in the left side of the machine.



#### Standard long life coolant (LLC) consistency and the freezing point

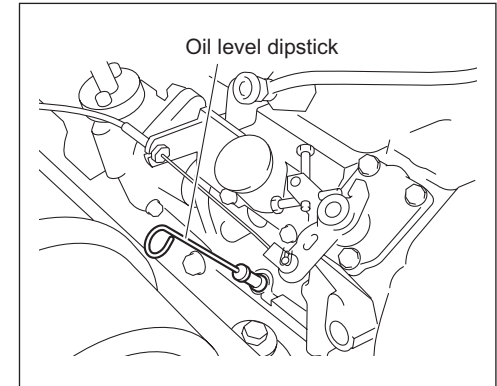
Freezing point	LLC consistency (volume %)
Up to -10 °C	20%
Up to -15 °C	30%
Up to -20 °C	35%
Up to -25 °C	40%

\* The radiator coolant capacity of this machine is about 12dm<sup>3</sup> (12L). (including the reserve tank)

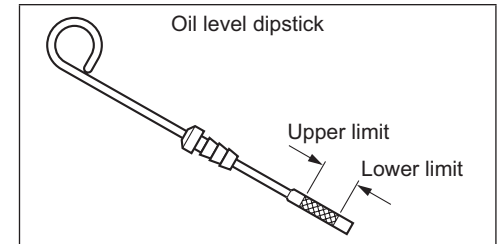
### 4-3 Inspection and refilling of engine oil



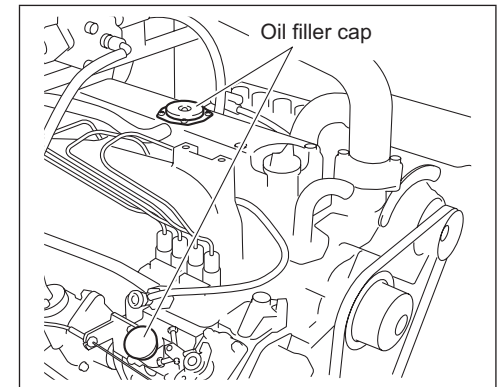
Put the engine on the level surface, and check the level of the oil by the dipstick. It will be the proper quantity, if the oil level is between the upper and lower limit when the dipstick is fully inserted. If the oil level is low, add the engine oil, and if the oil is dirty, exchange the oil. Perform the oil level inspection when the engine is suspended and after 10 to 20 minutes or more past. Please keep in mind that it becomes engine failure and cause of accident if the engine oil added too much.



Perform refilling of the engine oil from the oil filler. It takes some time for the added engine oil to fall in oil pan. Inspect the oil level again in 10 to 20 minutes after adding the engine oil.



- \* Never mix different kind of engine oil.
- \* Be sure to use engine oil that is classified as API Service Grade CF or higher, with an SAE Viscosity that is appropriate for the operating environment (ambient temperature).
- \* The engine oil capacity is approximately 9.7dm<sup>3</sup> (9.7L)

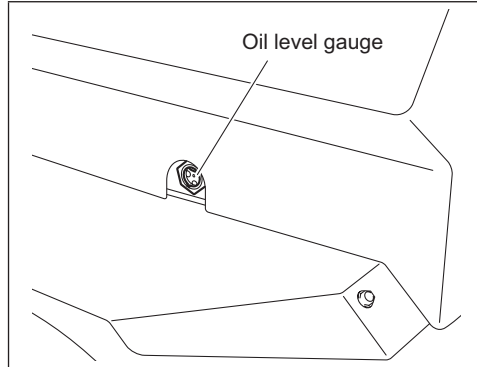




#### 4-4 Inspection of the hydraulic oil

Level the machine with the mower units lowered and always check whether the hydraulic oil is contained to the center of the oil level gauge. When refilling the hydraulic oil, use the Shell Tellus S2M46 or equivalent type.

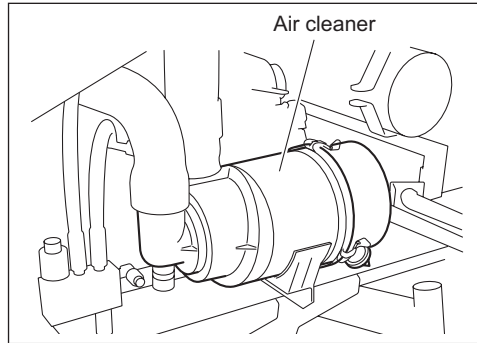
- \* Never mix different kind of the hydraulic oil.
- \* The tank capacity is approximately 43dm<sup>3</sup> (43L).



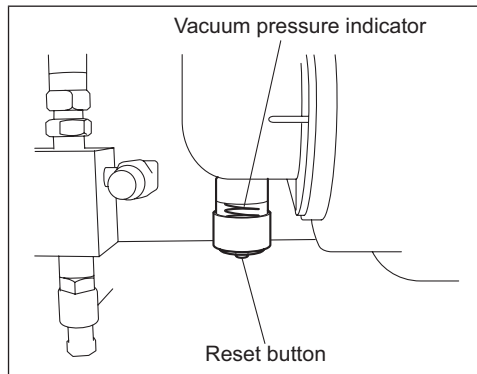
#### 4-5 Cleaning of the air cleaner

Perform the inspection with the vacuum pressure indicator. If the element of the air cleaner becomes dirty, the red ring is visible in the vacuum pressure indicator.

Remove and clean the air cleaner.



If the element of the air cleaner is dirty, it will become the cause of the engine malfunction. When it's dirty, clean it by carefully tapping the element or blowing air from inside so that the element may not be damaged. Attach the element after clean up and push the reset button. Exchange the element of the air cleaner every 200 hours.



#### 4-6 Inspection of the engine and its surroundings



- 1) The parts of the fuel system should be checked whether there is neither the crack nor the leak, and replace it with new one if necessary.
- 2) When the grass, the leaf, etc. have jammed to the muffler and its surroundings, blow out by air.

#### 4-7 Inspection of the tires

##### Important

When filling the tires with air, do not fill the tires over the specified maximum air pressure.

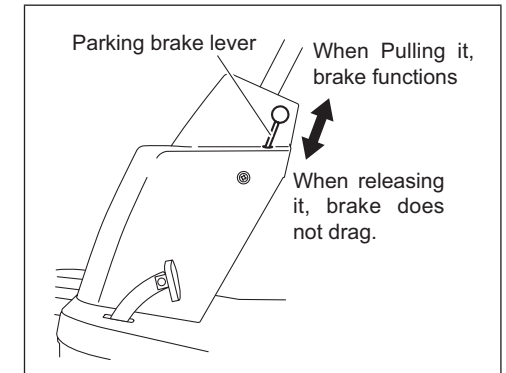
Failure to follow this precaution can cause the tires to explode and cause an injury.

Inspect the tire pressure, crack, damage, and unusual wear.

Tire pressure	
Front wheel	150kPa (1.5kgf/cm <sup>2</sup> )
Rear wheel	140kPa (1.4kgf/cm <sup>2</sup> )

#### 4-8 Inspection of brake

- 1) Foot brake
  - Press down the brake pedal to confirm it functions.
  - \* When it does not function well, adjust or repair it before operating.
- 2) Parking brake
  - Please check whether the parking brake works during pressing foot brake.
  - Please confirm brake is not dragging, when pressing foot brake and release the parking brake.





**4-9 Supply of fuel** 

**Warning**



- Be sure to keep the following precaution, because the fuel is highly flammable. (Put any naked flame and cigarette off.) Keep fire away when supplying the fuel.
- Before supplying the fuel, stop the engine and cool it down enough.
- To prevent a fire, keep the machine clean and free of dust, grease and oil.
- Clean up any spilled fuel.
- Don't oversupply the fuel. It may cause the fire, if the fuel overflow from the fuel tank.

**Important**

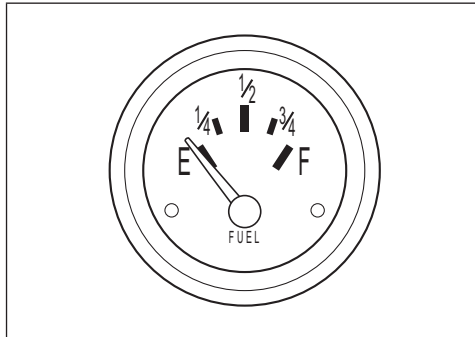
Use diesel fuel only. Don't supply gasoline.

Stay the machine on the level.

Fuel gauge approaches E (Empty), supply fuel (diesel) immediately.

Over-supply of the fuel is possible to cause the overflow of fuel from the fuel cap, when operating the machine on the slope.

- \* Use the low sulfur or ultra low sulfur diesel fuel
- \* Capacity of Fuel tank is about 47dm<sup>3</sup> (47L)



**4-10 Inspection of battery**

**Danger**



- Do not drink electrolyte and avoid contact with skin, eyes or clothing. Wear protective glasses and protective clothes.
- Charging battery, battery generate explosive hydrogen gas as battery electrolyte contains sulfuric acid which is deadly poison and causes severe burns.
- Never smoke near the battery and keep sparks and flames away from it.
- When removing the battery, remove the negative (-) cable first, and positive (+) cable last. Install the battery, assemble the positive (+) cable first and negative (-) cable last.
- When you connect the battery cables, connect the positive and negative side correctly. When you mistake, the battery and the electrical equipment may be damaged. (The red-color cable is the positive side.)
- If a dry cloth is used to clean the battery, the static electricity may occur and there is danger of fire or explosion.

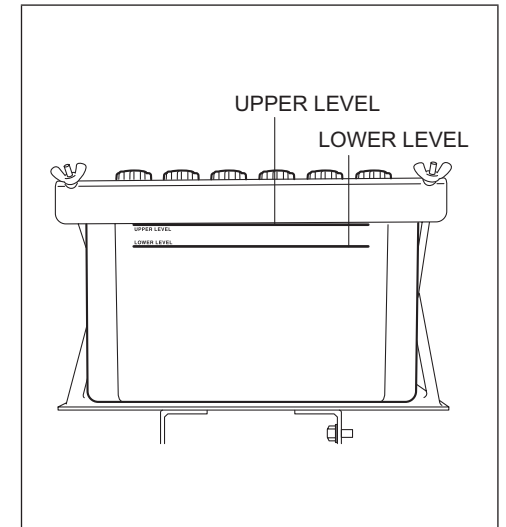
The machine exported from Japan mounts the battery of refillable type. (FX105D31R)

Inspect and maintenance the battery periodically.

Check the electrolyte level between "UPPER LEVEL" (maximum level line) and "LOWER LEVEL" (minimum level line).

When the electrolyte level is falling below to half between "UPPER LEVEL " and "LOWER LEVEL", add the refining water to "UPPER LEVEL" immediately.

The replacement battery (EXIDE 27-60), Baroness recommends to use, is maintenance-free. It may cause injury and accident to refill water in force. Be sure not to maintenance it.



## 5. Fastening of each portion

### Important

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

### 5-1 Tightening torque

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.

Nominal diameter	General bolt		
	Strength classification 4.8		
			
	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		
						
	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

**5-2 Tightening torque by model**

LM2700

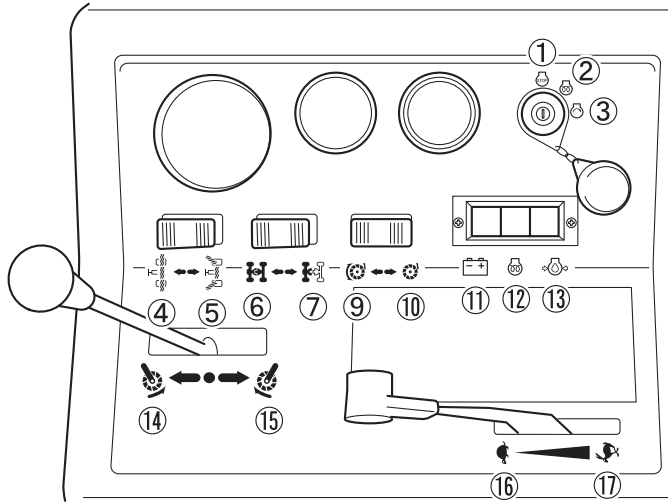
Tighten the following bolts and nuts at the torque specified in the table.

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	
Front wheel	Motor housing	K0014160402	Bolt, heat-treated M16-40P1.5	152 - 188	1549.94 - 1917.04	1345.35 - 1663.99	—
	Motor	K0013140502	Bolt, heat-treated M14-50	100	1019.7	885.1	—
	Wheel mounting base	1•1/4-18UNF	Slotted nut (Hydraulic motor)	400 - 430	4078.80 - 4384.71	3540.40 - 3805.93	—
	Disc brake	K001A080401	Bolt, 13T W/HEX. HOLE, M8-40	28 - 38	285.52 - 387.49	247.83 - 336.34	—
	Wheel	K0014120652	Bolt, heat-treated M12-65P1.5	67 - 85	683.20 - 833.75	593.02 - 752.34	—
	Front axle	K0015200702	Bolt, heat-treated M20-70P1.5	370 - 450	3772.89 - 4588.65	3274.87 - 3982.95	—
Rear wheel	Motor housing	K0138240002	24 slotted nut high P1.5	180 - 200	1835.46 - 2039.40	1593.18 - 1770.20	—
	Motor	K0014120652	Bolt, heat-treated M12-65P1.5	67 - 85	683.20 - 866.75	593.02 - 752.34	—
Brake ass'y		K1720000190 (accessories)	Bolt, heat-treated M12P1.75	150 ± 15	1529.55 ± 152.96	1327.65 ± 132.77	○
Engine area D	engine bracket	K0012120352	Bolt, heat-treated M12-35P1.25	67 - 134	683.20 - 1366.40	593.02 - 1186.03	—
		K0011100302	Bolt, heat-treated M10-30P1.25	45 - 76	458.87 - 774.97	398.30 - 672.68	—
	engine mount	K0013121102	Bolt, heat-treated M12-110	67 - 134	683.20 - 1366.40	593.02 - 1186.03	—
	Joint	K001A100401	Bolt, 13T W/HEX. HOLE, M10-40	80	815.76	708.08	—
		K0010140302	Bolt, heat-treated M14-30	106 - 188	1080.88 - 1917.04	938.21 - 1663.99	—
		K0010100402	Bolt, heat-treated M10-40	45 - 76	458.87 - 774.97	398.30 - 672.68	—
Rear wheel	Kingpin stopper	K0010120502	Bolt, heat-treated M12-50	52 - 67	530.24 - 683.20	460.25 - 593.02	—
		K1610000020	Slotted nut of tie rod end RH	45	458.87	398.3	—
		K1611000020	Slotted nut of tie rod end LH	45	458.87	398.3	—
Piston pump		K0010120502	Bolt, heat-treated M12-50	67 - 134	683.20 - 1366.40	593.02 - 1186.03	—
Bed knife (bottom blade)		K0071000092	Screw, ht flat head M10-20	29 - 38	295.71 - 387.49	256.68 - 336.34	—
Mower rotating fitting		K0011100302	Bolt, heat-treated M10-30P1.25	29 - 38	295.71 - 387.49	256.68 - 336.34	—
Pedal stopper		K0010100702	Bolt, heat-treated M10-70	29 - 38	295.71 - 387.49	256.68 - 336.34	—
Gear pump flange (Piston pump)	K001A080601		Bolt, 13T W/HEX. HOLE, M8-60	24.5	249.83	216.85	—
	K001A080251		Bolt, 13T W/HEX. HOLE, M8-25	24.5	249.83	216.85	—
Gear pump flange (Engine)		K001A080251	Bolt, 13T W/HEX. HOLE, M8-25	24.5	249.83	216.85	—
Gear motor flange		K001A060301	Bolt, 13T W/HEX. HOLE, M6-30	10.8	110.13	95.59	—
Diff-lock valve		K001A100151	Bolt, 13T W/HEX. HOLE, M10-15	29 - 38	295.71 - 387.49	256.68 - 336.34	—

# 6. Operation method of each part

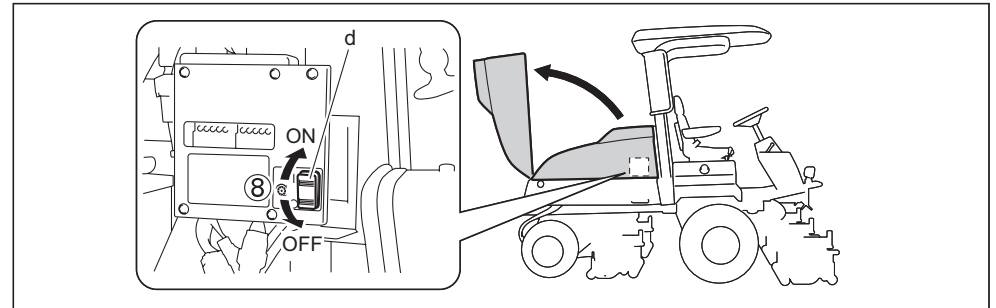
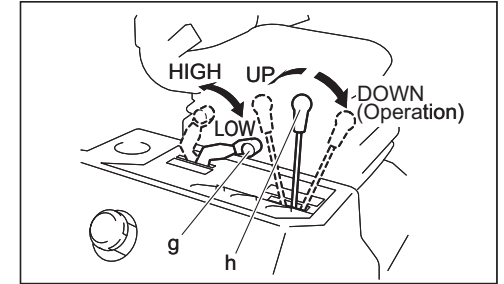
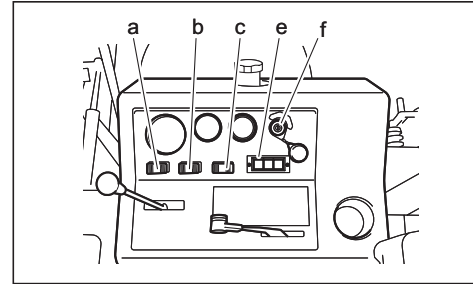
## Explanation of operation panel



No.	Decal	Description	No.	Decal	Description	No.	Decal	Description
①		Stop	⑦		2WD	⑬		HP of engine
②		Glow	⑧		Backlapping	⑭		Lowering mowers
③		Start	⑨		Reel rotating	⑮		Raising mowers
④		Mowing	⑩		Reel stop	⑯		Low speed
⑤		Travelling	⑪		Charging battery	⑰		High speed
⑥		4WD	⑫		Thermo start			

## Switch and levers on the operation panel

- a. Travelling –Mowing changeover switch
- b. 2WD-4WD changeover switch
- c. Reel rotating switch
- d. Reel reverse rotation switch
- e. Pilot lamp
- f. Key switch
- g. Throttle lever
- h Mower unit raise/lower lever



### 6-1 About the mechanical operation

#### ⚠ Caution

Check whether the operation state of each part is good, and the brake disc, tires, steering, and mower do not have abnormalities in particular before operating the engine. In any cases, operate the engine by the speed that can carry out the urgency stop. Locate and remove all debris, in the operating area before using equipment.

### 6-2 Before starting engine

#### ⚠ Warning



- Inspect the area where the equipment will be used.
- Inspect whether there are no damages and the cover/guard are securely fastened in place.
- Never operate the engine without proper ventilation.

**6-3 Starting and stopping the engine** (P) 

**Caution**



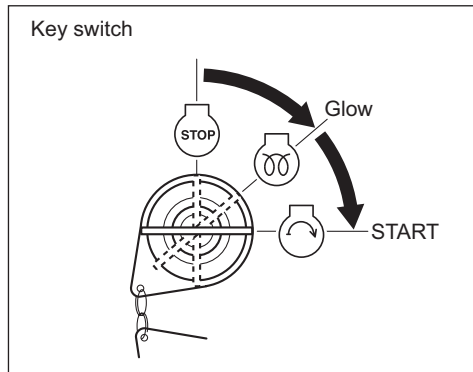
- When the engine is cold, be sure to warm it up. Failure to follow this precaution may not allow the machine to sufficiently demonstrate its performance capability.
- Set the parking brake while warming the engine up. Failure to follow this precaution can cause the machine to move spontaneously and cause an accident..
- Pay attention if you put the key switch ON position, when the engine stops and mowing units raise/lower lever is DOWN position, then the mowing units would lower.
- Do not step on the forward/reverse pedals. Safety device prevents the engine from starting.
- Do not touch the V-Belt, the Pulley, etc. during the engine rotation.

**Important**

Operation of the starter is a maximum of 15 seconds. When the engine still does not start, to prevent battery wastage restart should be made 30 to 60 seconds after.

• **Starting procedure**

- 1) Sit on the seat , and adjust seat arrangement for safety.
- 2) Hold brake pedal down, pull parking brake lever up until it engages.
- 3) Make the reel rotary switch into the "OFF" position.
- 4) Pull the throttle lever a little to the upward.
- 5) When the ignition key is turned to the "GLOW" position, the thermo-start lamp (glow lamp) will turn on.

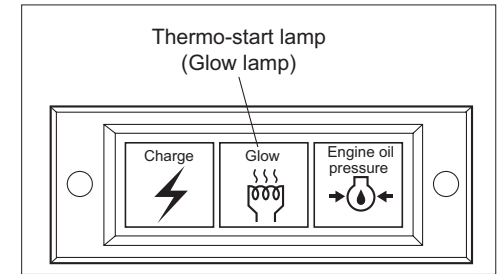


**Important**

Quickly returning the ignition key from the "START" position to the "Glow" position may result in damage to the machine.

- 6) Fully turn the ignition key to rightward promptly when the thermo-start lamp (glow lamp) turns off, the starter will operate and the engine will start. Release it as soon as engine starts.

- 7) Ensure that the charge lamp and the engine oil pressure lamp turns off. When they do not turn off, stop the engine and perform the inspection and repair.



• **Stopping procedure**

- 1) Hold the brake pedal down, pull the parking brake lever up until it engages.
- 2) Make the reel rotary switch into the "OFF" position.
- 3) Return the throttle lever to the "LOW" position.
- 4) The engine will stop, when the ignition key turns to "STOP" position.

**6-4 About the safety device**

This machine is equipped with the safety device to starting/stopping of the engine as interlock system.

**To start the Engine**

- 1) Operator sits on the seat.
- 2) Parking brake is engaged.
- 3) The reel rotation switch is "OFF" position.
- 4) The forward/backward pedals are in Neutral position.

**To drive and travel**

- 1) Operator sits on the seat.
  - 2) Travelling-Mowing changeover switch is "Travelling" position.
  - 3) Release the parking brake.
  - 4) Pedal the forward or backward pedal.
- \* Engine will stop in the following case.
- Pedal the travelling pedals, when engaging parking brake and without sitting on the seat.
  - Release the parking brake without sitting on the seat.
  - Put the reel-rotation switch on, when engaging parking brake and without sitting on the seat.

## When mowing

- 1) Operator sits on the seat.
  - 2) Travelling-Mowing changeover switch is "Mowing" position.
  - 3) Reel rotation switch is "ON" position.
- \* When operator leaves the seat, engine will stop:  
Confirm the reel rotation switch is "OFF" position.

## To leave the seat with the engine running

- 1) Engage the Parking brake.
  - 2) Reel rotation switch is "OFF" position.
  - 3) Travelling pedals are Neutral position.
- \* If the operator leaves the seat, the engine does not stop. But the interlock system will stop the engine unless all the above conditions are satisfied.


## Backlapping Maintenance (inverse rotation of reel cutter)

- 1) Travelling-Mowing changeover switch is "Mowing" position.
  - 2) Lower all the mower unit to the ground.
  - 3) Stop the engine.
  - 4) Open the hood and reel reverse rotation switch to "ON" position.
  - 5) Operator sits on the seat.
  - 6) Engage the parking brake.
  - 7) Reel rotation switch is "OFF" position.
  - 8) Travelling pedals are "Neutral" position.
  - 9) Start engine.
  - 10) Reel rotation switch is "ON" position.
- \* If the operation of reel forward-backward switch and reel rotation switch are placed in the wrong order, the engine will stop.

## Conditions and functions of the interlock system.

	Seat	Parking Brake	Reel Reverse Rotation Switch	Reel Rotating Switch	Travelling Pedals	Travelling-Mowing Changeover Switch
To start the engine	ON	ON	–	OFF	Neutral	–
To travel	ON	OFF	–	–	ON (F or R)	Travelling Position
To operate	ON	OFF	–	ON	–	Mowing Position
To leave the seat with the engine running	–	ON	–	OFF	Neutral	–
Maintenance of backlapping (The reel cutter rotates reversely)	–	ON	ON	ON	Neutral	Mowing Position

### 6-5 Cautions when leaving the machine

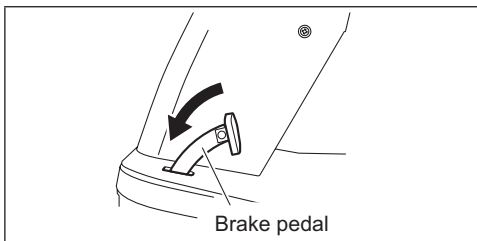
 **Caution** Do not park on the slopes.

- 1) Stop the machine in level place and engage the parking brake.
- 2) Make the reel rotary switch into the "STOP" position, and lower the mower unit to the ground.
- 3) Stop the engine.
- 4) Remove the ignition key.
- 5) If needed, park the machine using wheel stoppers.

### 6-6 Brake pedal

As you press the brake pedal, brake functions.

\* When it does not function well, adjust or repair it before operating.



### 6-7 Parking brake lever

#### Caution

Do not park the machine on the slope.

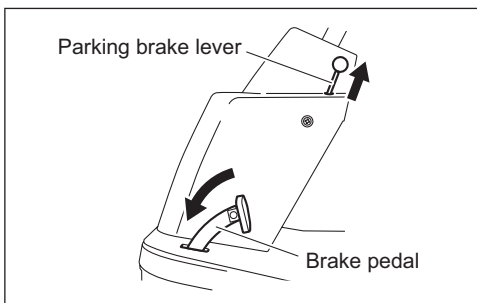
#### **Important**

Be sure to run after releasing the parking brake. Otherwise, the brake disc and the hydraulic equipment are damaged.

The parking brake lever is on the center housing left side.

Hold the brake pedal down and pull the parking brake lever up for engaging the parking brake.

Press the brake pedal down again for releasing the parking brake.

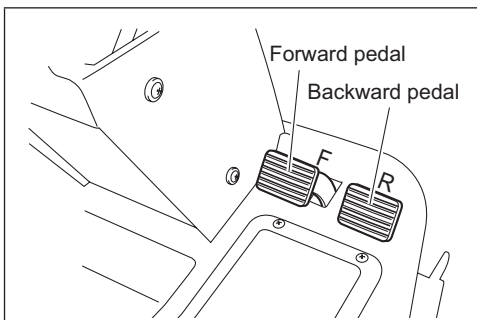


### 6-8 Forward/backward pedal

#### Caution

When the machine travels high speed, it does not stop immediately even if you release the travelling pedals. Please apply the brake pedals as necessary.

Two pedals system is adopted. To move forward, press the inside pedal down. To move backward, press the outside pedal down. If the pedal is returned, the machine will stop automatically.

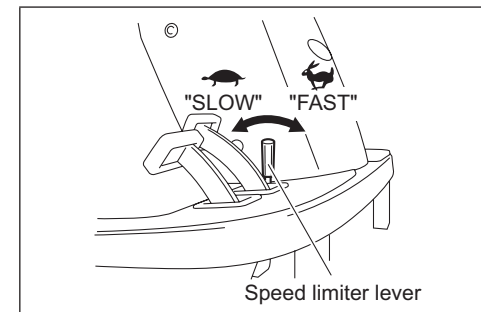


### 6-9 Speed limiter lever

#### Caution

Be sure to make set to "SLOW" position when travelling by two-wheel-drive. If making set to "FAST" position, it becomes too fast when the pedal is fully pressed in and an accident may occur..

It is a shift lever, which restricts the forward pedal step in amount. The step in amount decreases if it turns to the "SLOW" side.



### 6-10 Adjustment of seat

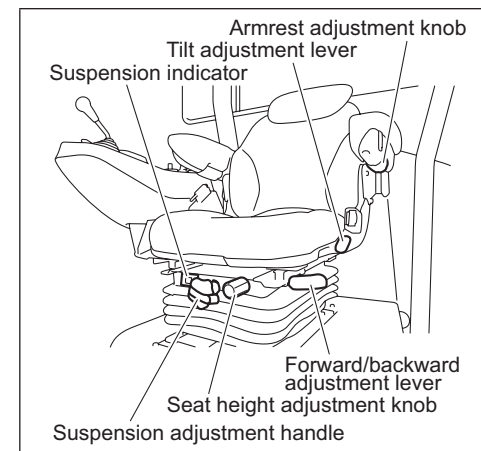
Use the adjustment levers to adjust the seat. Adjust the position to fit the operator.

- 1) Use the forward/backward adjustment lever to adjust the seat back and forth.
- 2) Use the tilt adjustment lever to adjust the angle of the backrest.
- 3) Turn the suspension adjustment handle to adjust the firmness of the seat suspension.

Refer to the suspension indicator while making adjustments. [45 to 130 kg (99.2 to 286.6 lb)]

- 4) Turn the armrest adjustment knob to adjust the angle of the armrests.
- 5) Turn the seat height adjustment knob to adjust the height of the seat steplessly. [0 to 60 kg (0 to 132.3 lb)]

Adjust the height of the seat while sitting in it.



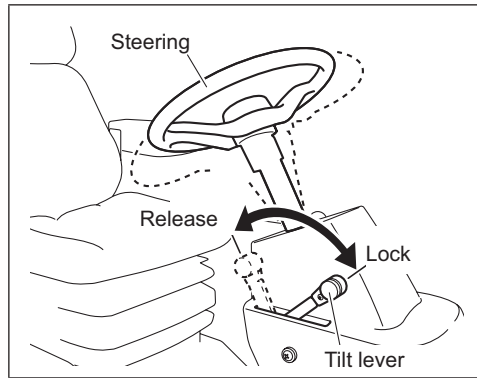


## 6-11 Tilt steering

### ⚠ Caution

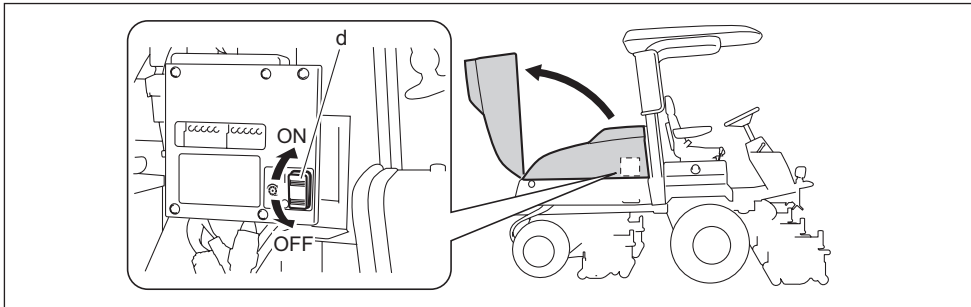
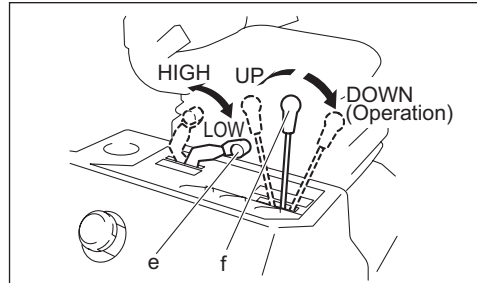
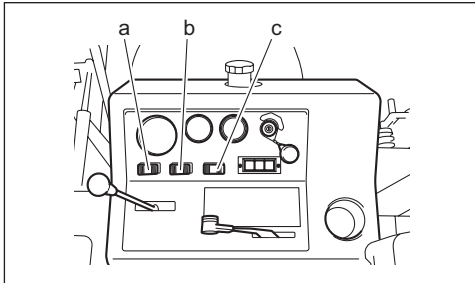
Never adjust steering while machine is moving.  
To prevent serious accidents, ensure tilt steering lever is fastened during operation.

Pull lever up to release steering column.  
Tilt column up or down to position desired. Push lever back to lock steering column in place.



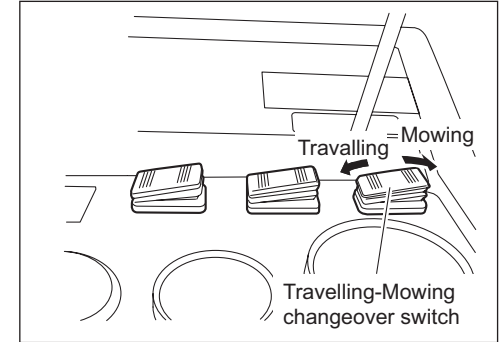
## 6-12 Switches, levers on the operation panel

- a. Travelling-Mowing changeover switch
- b. 2WD - 4WD changeover switch
- c. Reel rotary switch
- d. Reel reverse rotation switch
- e. Throttle lever
- f. Mower unit raise/lower lever



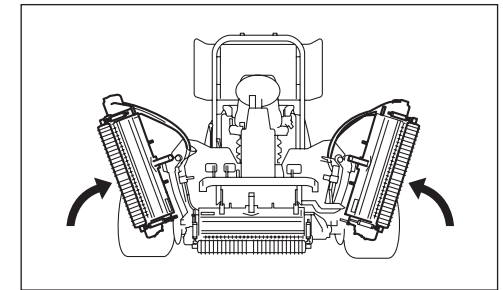
## 6-13 Travelling-mowing changeover switch

When it is set to UP, the position of mower unit #4 & #5 can be changed.

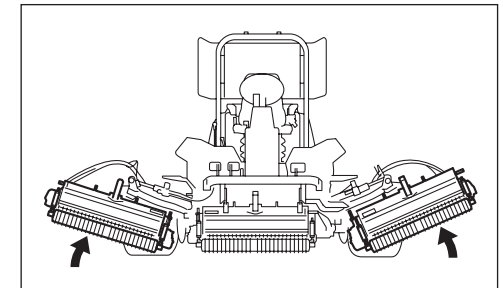


### Select "Travelling"

Press switch to the "Travelling" position, #4 & #5 mower units raise to top. Press switch to the "Operating" position, #4 & #5 mower units raise up to middle.



### Select "Mowing"



### 6-14 2WD - 4WD changeover switch

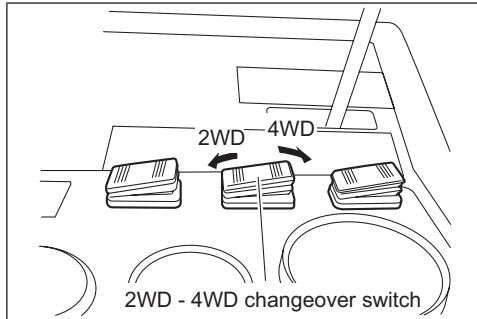
#### Caution

- When you move under the operation and by the sloping ground, be sure to choose the four-wheel drive.
- Operate the machine in consideration of the state of the roads and the ground, such as the slant and the undulation.

#### Important

To prevent the damage of hydraulic equipments, be sure to stop the machine and flip a switch

It is the switch that chooses two-wheeldrive (front wheel) travelling or four-wheel drive travelling. If it moves to the "2WD" position it will become the two-wheeldrive, and if it moves to the "4WD" position, it will become the four-wheel drive.



### 6-15 Reel rotation switch

#### Caution

Inspect the area where the machine will be used.

#### Important

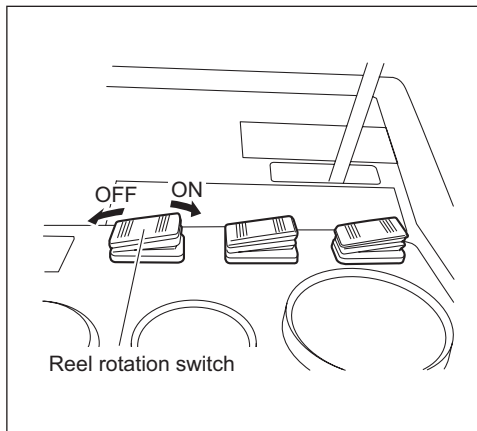
While the mower units raised, the reel will not rotate even if pressing the switch to "ON(Rotation)" position.

This is the rocker switch to rotate or stop the reel rotation. Press the switch to "ON(Rotation)" position, reel start to rotate. Press the switch to "OFF(Stop)" position, reel stop rotating.

Before operating reel rotating switch, confirm whether the reel reverse rotation switch is ON or not.

\* In case the reel reverse rotation switch is OFF, the engine will stop, when the operator leaves the seat.

In case the reel reverse rotation switch is ON, the engine won't stop, even though the operator leaves the seat.



### 6-16 Reel reverse rotation switch

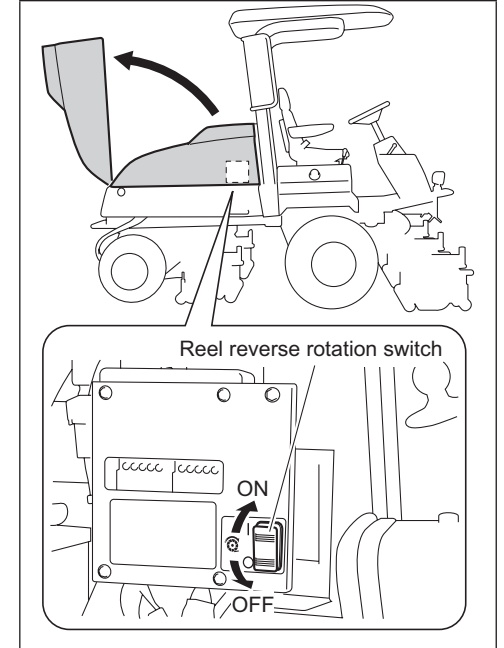
#### Important

- When not operating the reel rotation switch, the reels do not rotate.
- Never switch "ON" and "OFF" while the reel rotating, otherwise hydraulic equipment may be damaged.

Locates inside the hood.

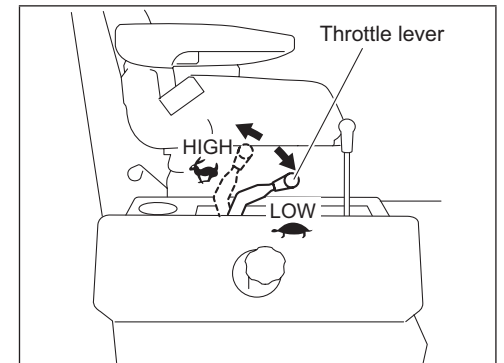
It is the rocker switch that exchange the rotation direction of the reel. To rotate the reels inverse (backlapping), press the switch to the "ON" position.

\* Engine does not stop, even though the operator leaves the seat.



### 6-17 Throttle lever

If the throttle lever is pulling up to the top (HIGH), the engine speed becomes high, and if the throttle lever is lowering to the bottom (LOW), the engine speed becomes low.



## 6-18 Mower unit raise/lower lever

### Caution

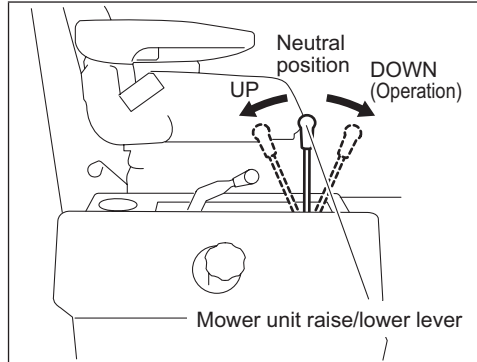


- Inspect the area where the machine will be used.
- Pay attention if you put the key switch ON position, when the engine stops and mowing units raise/lower lever is DOWN position, then the mowing units would lower.

It is the shifter lever that raises or lowers the mower unit.

If the shifter lever is moved to the "UP" position, the mower unit will go up, and if it is moved to the "DOWN" position, the mower unit will descend.

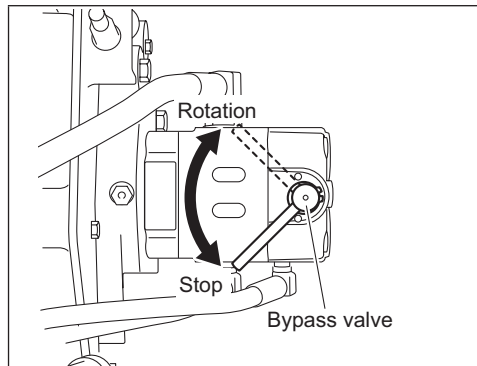
At the time of the mowing, move the shift lever to the "DOWN" position. If it is shifted to the neutral position, the cylinder is fixed and it cannot respond to the undulation.



## 6-19 Bypass valve

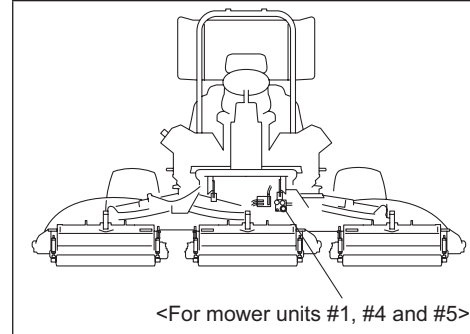
It is located on the hydraulic motor of each mower unit.

The hydraulic motor will become free if the shift lever is shifted to the stop position.



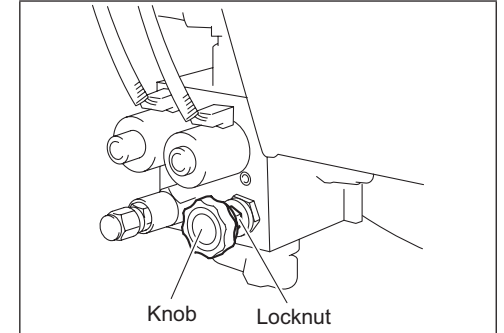
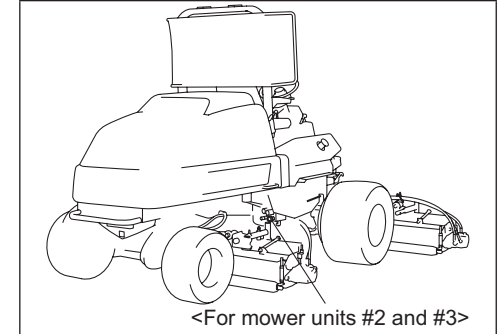
## 6-20 Reel rotation adjusting valve

<For mower units #1, #4 and #5>



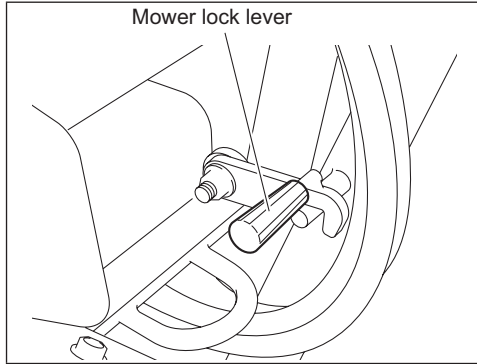
It is the valve that adjusts the rotation speed of the reel cutter. Loosen the locknut and turn in the knob, the rotation speed will become slow.

<For mower units #2 and #3>



**6-21 Mower lock lever (latch)**

Hang the mower lock lever, when you transfer the machine or store the machine with the mower unit #4 and #5 are raised.



**6-22 Groomer clutch lever**

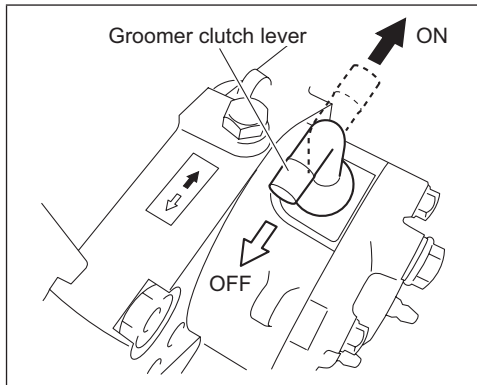
Depending on the specifications, this function may not be available.

**Important**

Do not lift up the groomer clutch lever. Otherwise the lever may be pulled up and the inner switch ball may drop inside the groomer case.

It is the operating lever that makes the groomer "ON" or "OFF".

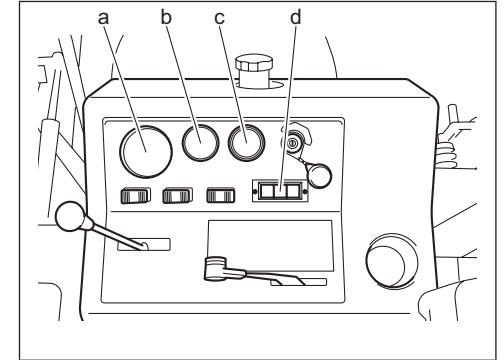
When you do not operate the groomer, be sure to shift it to "OFF" position.



# 7. Measuring instrument

**7-1 Instruments of operation panel**

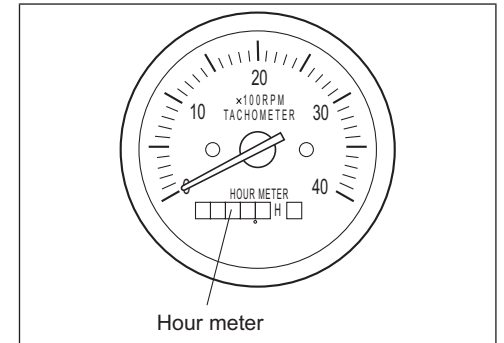
- g. Tachometer & hour meter
- h. Water temperature gauge
- i. Fuel level gauge
- j. Pilot lamp
  - Charge lamp
  - Glow lamp
  - Oil pressure lamp (Engine oil pressure lamp)



**7-2 Tachometer & hour meter**

Indicate the engine speed and total operating hour.

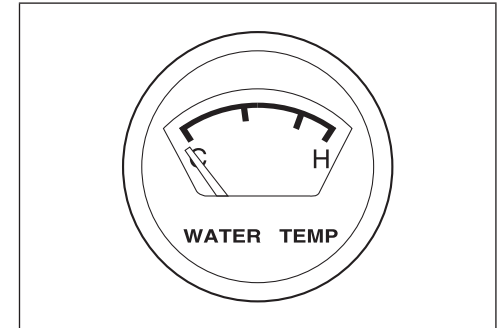
Carry out the periodic inspection and maintenance, and repair based on the operating hour.



**7-3 Water temperature gauge**


When the water temperature gauge rises to near "H" during the operation, it is in the overheating state. Stop the engine and carry out the maintenance and repair, after making the engine no-load and operating for 5 minutes in idling.

- If the water temperature raise above 115°C, the warning alarm (discontinuous sounds) will sound.



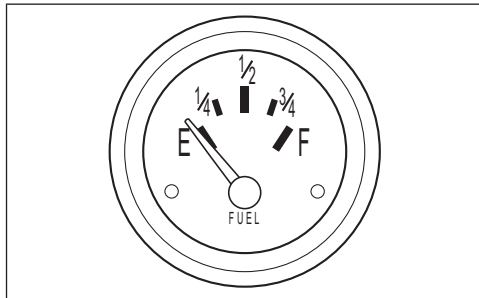
### 7-4 Fuel gauge

**Warning** Don't oversupply the fuel. It may cause the fire, if the fuel overflow from the fuel tank. Use diesel oil only. Be sure not to use gasoline.



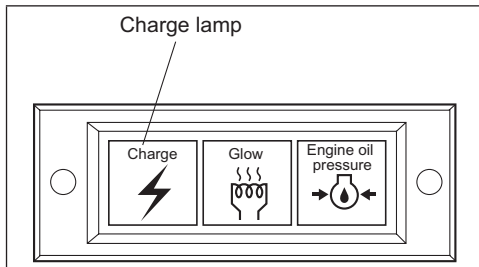
It indicates current fuel level. If the fuel gauge approaches E(Empty), supply fuel (diesel) immediately.

\* The capacity of the fuel tank is approximately 47dm<sup>3</sup> (47L).



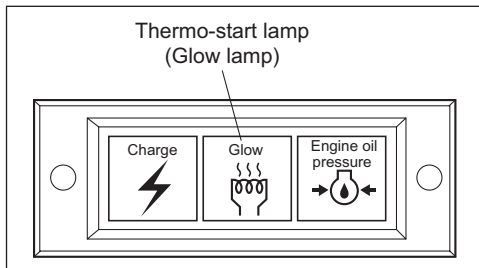
### 7-5 Charge lamp

The lamp turns on when the ignition switch is in the "ON" position. After the engine starts, and the light will turn off if it charges normal. When the lamp is turned on during operation, stop the engine immediately and inspect, do maintenance and repair.



### 7-6 Thermo-start lamp (glow lamp)

Refer to [6-3] "Starting and stopping the engine".

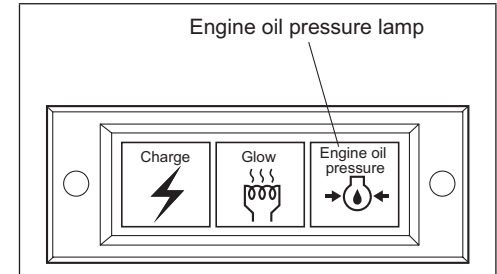


### 7-7 Oil pressure lamp (engine oil pressure lamp)

The lamp turns on when the ignition switch is in the "ON" position.

After the engine starts, the light will be turned off, if the oil begins to circulate and it becomes the normal pressure.

When the lamp is turned on during operation, stop the engine immediately and carry out the maintenance and repair.



## 8. Moving the Machine

**Caution**

- On roads with ditches or on roads where both sides are inclined, take sufficient precaution with the shoulder of the road. Failure to follow the precaution can cause the machine to fall.
- When operating at high speeds do not hit the brakes and do not turn the steering wheel. Failure to follow this precaution can cause the machine to overturn or fall.
- When traveling, be sure to stop the reel cutters and raise the mower units.

- 1) Start the engine.
- 2) Raise all mower units, and then engage the mower lock levers (latches) for mower units
- 3) Depress the brake pedal to release the parking brake.
- 4) Slowly depress the traveling pedal.
- 5) The machine will start to move.

## 9. Mowing operation

### Caution

- Be sure to operate by the speed that suited the working condition.
- The machine detects the position of the reel unit and decides to "rotate" or "stop" the reel. Keep in mind that the reel rotation may not stop if the mower unit is not fully raised by operating the mower unit raise/lower lever.

### Important

If the mower units are not fully raised, they may swing excessively, possibly resulting in damage when hydraulic hoses, cutter adjustment bolts and cutting height adjustment screws interfere with surrounding parts.

- 1) Open the hood and reel-reverse-rotation switch to "OFF".
  - 2) Start the engine.
  - 3) Pull up the throttle lever and set engine speed to MAX (2,600rpm).
  - 4) Set the Travelling-Mowing changeover switch to the "Mowing" position.
  - 5) Set the 2WD - 4WD changeover switch to the "4WD" position.
  - 6) Release the Mower lock lever.
  - 7) Move the mower unit raise/lower lever to the "DOWN" position, and ensure lower the mower unit to the ground.
  - 8) Move reel rotation switch to the "Rotation" position, and rotate the reel.
  - 9) Hold the Forward pedal down and begin the operation.
- \* Respond to the raising or lowering of the mower unit, the reel will rotate or stop automatically.

## 10. Transportation

When loading machine on the truck, travel forward and when load it off, travel backward.  
Roof should be removed from the machine before the transportation

## 11. Inspection and maintenance of each section (main unit)

### 11-1 Change of engine oil

### Caution

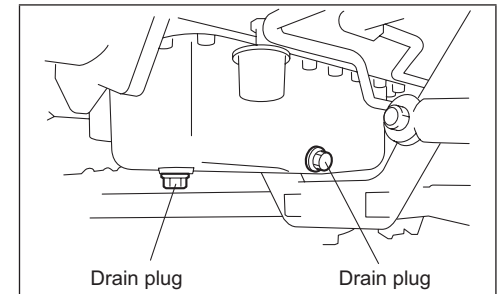


The engine oil is high temperature immediately after the operation. Change it after waiting for a while so that you may not be burned, when removing the drain plug.

### Important

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

- 1) Change the oil after the first 50 hours operation, and change it for every 100 hours operation from the next.
- 2) Remove drain plug on the oil pan. If it carries out while the engine is warm, the oil can be drained completely.



## 11-2 Change of hydraulic oil

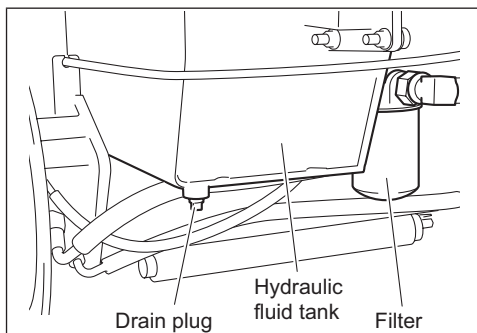
### Caution



The hydraulic oil is high temperature immediately after the operation. Change it after waiting for a while so that you may not be burned, when removing the drain plug.

\* Do not overfill

- 1) Change the hydraulic oil after the first 100-hour operation, and change it in the shorter period between the one year and 500-hours operation from the next.
- 2) Always replace the hydraulic filter when changing oil.
- 3) Remove the drain plug on the bottom of the hydraulic oil tank, and drain the hydraulic oil.



- 4) Drain and replace the hydraulic oil if you notice the presence of water or foam in the oil (emulsifying), or contamination (lack of transparency).

- 5) Use the Shell Tellus S2M46 or equivalent products for the hydraulic oil.

\* The capacity of the hydraulic oil tank is approximately 43dm<sup>3</sup> (43L).

## 11-3 Inspection of oil leak



All of fittings for hydraulic hose, pump, cylinder etc. may loose after 50 hours operation. The fittings should be securely fastened.

\* The level sensor is attached to the hydraulic fluid tank.

If the amount of hydraulic oil decreases about 2dm<sup>3</sup> (2L), the warning alarm (discontinuous sounds) will sound.

## 11-4 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".

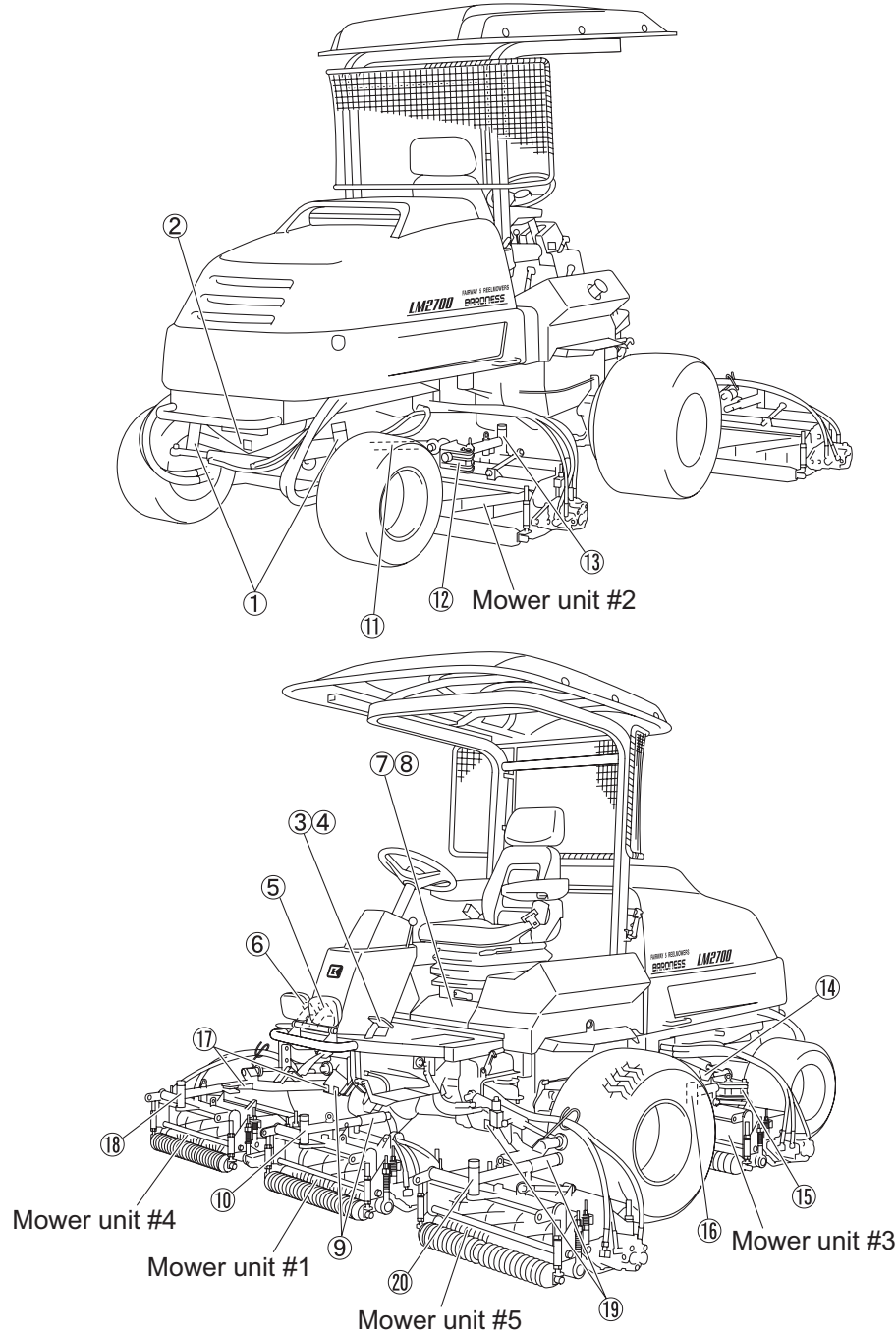
Add grease using the specified grease or lubricant.

Carry out the greasing up to the following grease nipples every 50 hours.

Rear wheel parts			⑩	#1 mower joint fitting	1 place
①	Kingpin	2 places	⑪	#2 lift arm	1 place
②	Pivot	1 place	⑫	#2 rotation fitting	1 place
Pedal parts			⑬	#2 mower joint fitting	1 place
③	Brake pedal	1 place	⑭	#3 lift arm	1 place
④	Brake fitting	1 place	⑮	#3 rotation fitting	1 place
⑤	Forward pedal	1 place	⑯	#3 mower joint fitting	1 place
⑥	Backward pedal	1 place	⑰	#4 lift arm	2 places
⑦	Pump idle lever	1 place	⑱	#4 mower joint fitting	1 place
⑧	Pump neutral lever	1 place	⑲	#5 lift arm	2 places
Lift arm parts			⑳	#5 mower joint fitting	1 place
⑨	#1 lift arm	2 places			



### Greasing Points

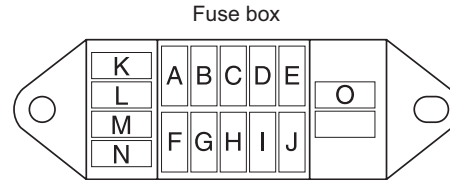
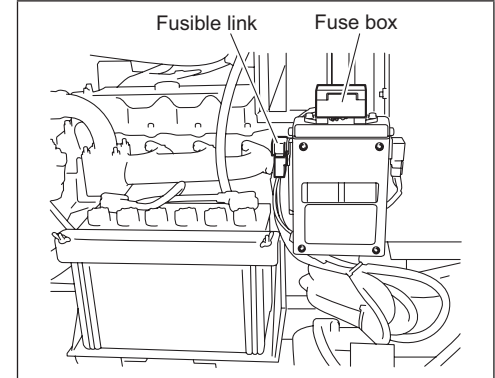


### 11-5 Replacement of fuses

**Warning** When performing maintenance on the electrical system, be sure to remove the negative battery wire.

**Important** If a fuse blows, a short may have occurred within the electrical circuit. Check for the cause, such as faulty terminal connections, damaged wiring or terminals, or incorrect wiring.

- 1) Fuse box.  
The spare fuse and the replacement tool are attached in the fuse box.  
Replace with the fuses of the requirement rated capacity.  
The fuses are mini-fuse for automobiles.
- 2) Fusible link  
The fuse rated capacity of the fusible link is 50A.



A	5A	Timer
B	5A	Glow lamp
C	5A	Tachometer, fuel gauge, water temperature gauge, charge lamp, oil pressure (engine oil pressure) lamp, Water temperature warning alarm, Hydraulic oil warning alarm
D	15A	Relay box 1
E	15A	Relay box 2, differential lock
F	-	
G	5A	Timer
H	5A	Alternator
I	5A	Fuel pump, cooling-fan valve safety relay, stop solenoid
J	5A	Relay (starter)
K	5A	Spare fuse
L	5A	
M	15A	
N	15A	
O	Fuse replacement tool	

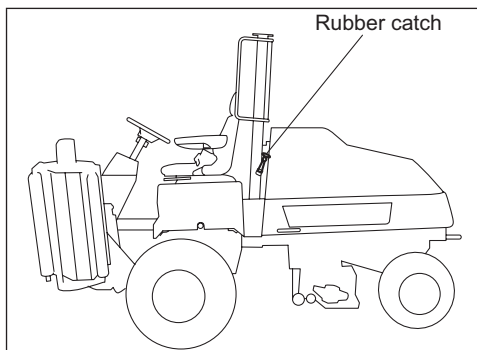
### 11-6 Opening and closing the engine hood

#### Caution



- When you close the engine hood, be careful not to pinch your hand.
- Do not open the engine hood at the windy place.

Disconnect the rubber catch in right and left, and pull up the engine hood upwards until the wire stretches to the limit. When you close the engine hood, lower it slowly.



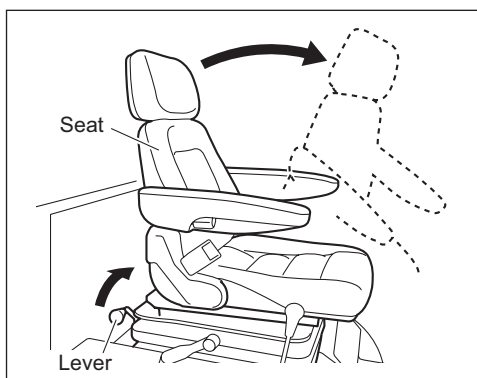
### 11-7 Opening and closing the seat undercover

#### Caution



When you close the undercover, be careful not to pinch your hand.

Raise the tilt steering column to the upper position first, and then move the seat to the rear end position. Pull up the lever behind the seat to release the lock, and then raise the seat and open the undercover. To close the undercover, lower it slowly.



### 11-8 Adjustment of brake

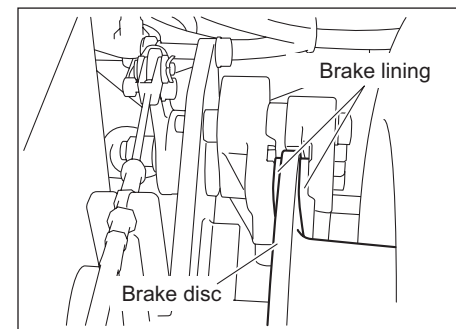
#### Caution

Make sure that the brake wire is not cracked or damaged.

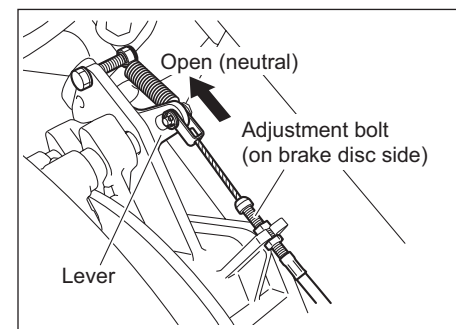
#### Important

- If the brake is not sufficiently effective due to a wider clearance gap between the brake disc and the brake lining, adjust the clearance.
- The wire is used for fine adjustments.
- Adjust the brake with the brake lining.
- Make sure that the lever is maintained in the open position (neutral).

The brake lining wear limit is 3.0 mm (0.118 in).

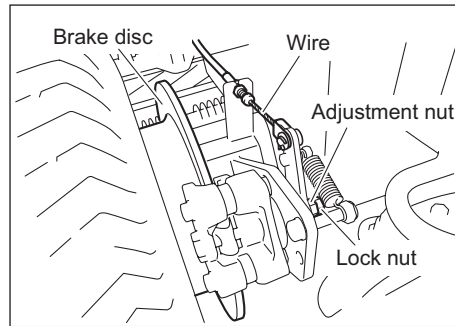


- 1) For each wheel, fully tighten the adjustment bolt on the brake disc side.



- 2) Reduce the clearance by loosening the lock nut, then tightening the adjustment nut.

Tighten the adjustment nut until the brake lining contacts the friction surface of the disc.



**Warning**

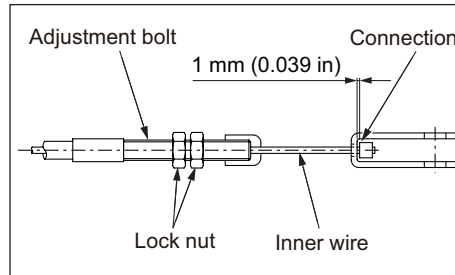
Too narrow clearance gap between the brake disc and brake lining may cause heat generation and fire.

- 3) Loosen the adjustment nut to adjust the clearance gap between the brake disc and brake lining to about 0.2 mm (0.0079 in).
- 4) Securely place the jack beneath the jack-up point of the front left/right frame area, and then raise it until both tires lift off the ground.

- 5) Check that the disc rotates freely.
- 6) Fully tighten the lock nut while holding the adjustment nut in place.
- 7) With the brake pedal released, obtain a play of 1.0 mm (0.039 in) at the connection of the pedal and inner wire.

- 8) Use a wrench to loosen the lock nut and tighten it after making the adjustment with the adjustment bolt.
- 9) Drive, and then check the following. Make sure that heat is not generated in the brake area.

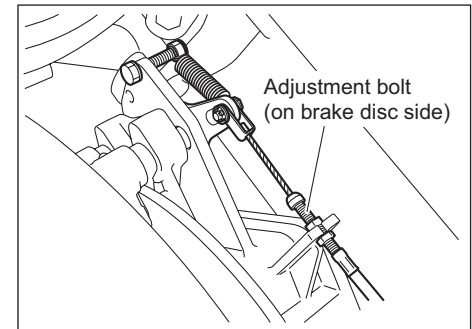
Make sure that the left and right brakes are equally effective.



**Caution**

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

- 10) If the left and right brakes are not equally effective, make fine adjustments with the adjustment bolt on the brake disc side.



**<Break-in of Brakes>**

If the brake shoes or brake pads are worn, replace them with new ones.

Immediately after replacement, drive to break in the brakes if the effectiveness of the brakes is low.

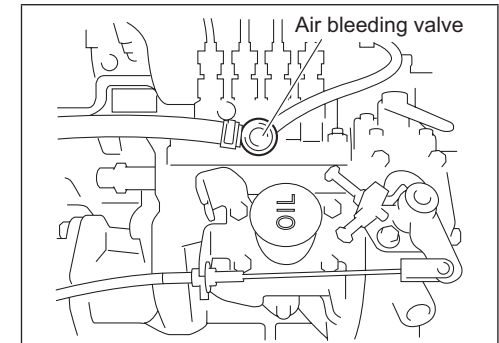
While driving, lightly operate the brakes to break in the contact areas.

**11-9 Air-bleeding from fuel**

Since this machine has equipped the automatic air bleeder, the air-bleeding operation is unnecessary.

\* Always use the air-bleeding valve with the fully open position.

If it is used in the closed position, it will become the cause of the engine stop.



## 11-10 Jacking up the machine

### **Warning**

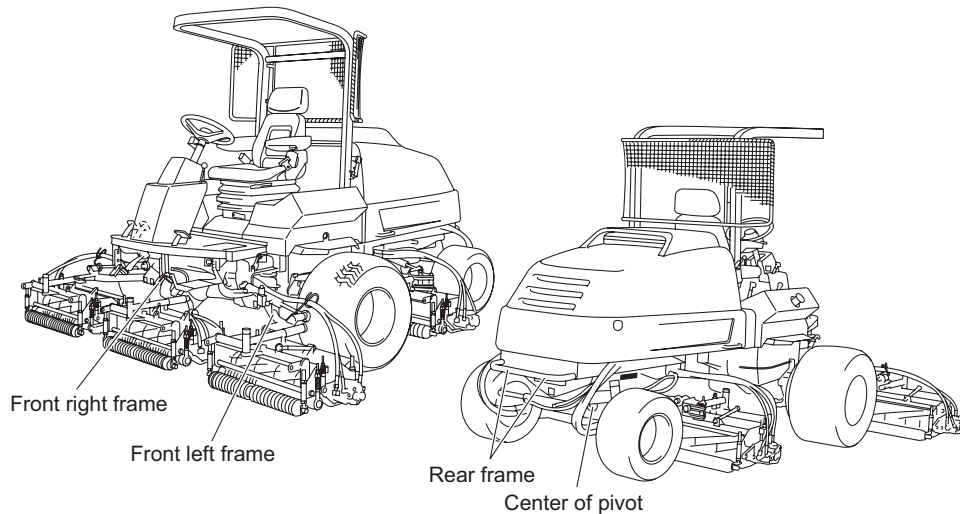
- When replacing a tire or beginning any other maintenance or repairs, be sure to chock the wheels to prevent the machine from moving.
- Before jacking up the machine, park it on a hard, flat surface such as a concrete floor and remove any obstacles that could prevent you from performing the work safely.
- When necessary, use an appropriate chain block, hoist, or jack.
- Support the machine securely with jack stands or appropriate blocks.
- Failure to do so may cause the machine to move or fall, resulting in injury or death.

Use the jack-up points identified in this manual when jacking up the machine.

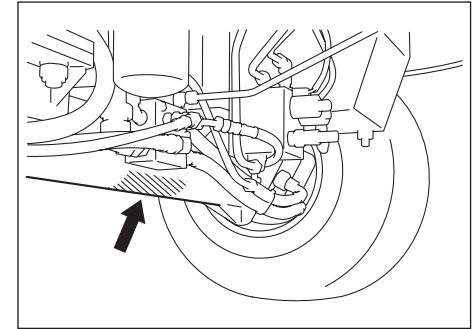
Only place a jack under the jack-up points specified.

Placing a jack at any other point could result in damage to the frame or other parts.

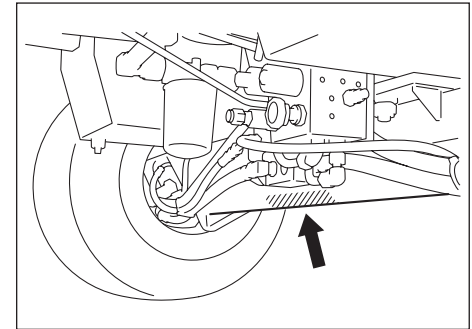
### Jack-up Points



1) Front right frame



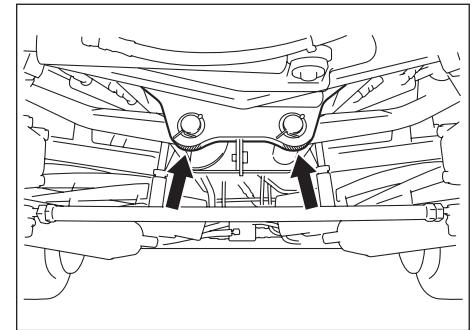
2) Front left frame



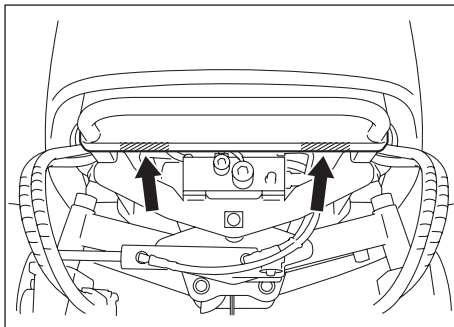
3) Center of pivot

### **Caution**

The jack-up point of the center of the pivot is not the center of the machine. Securely place the jack onto the jack-up point, and perform the operations with care.



4) Rear frame



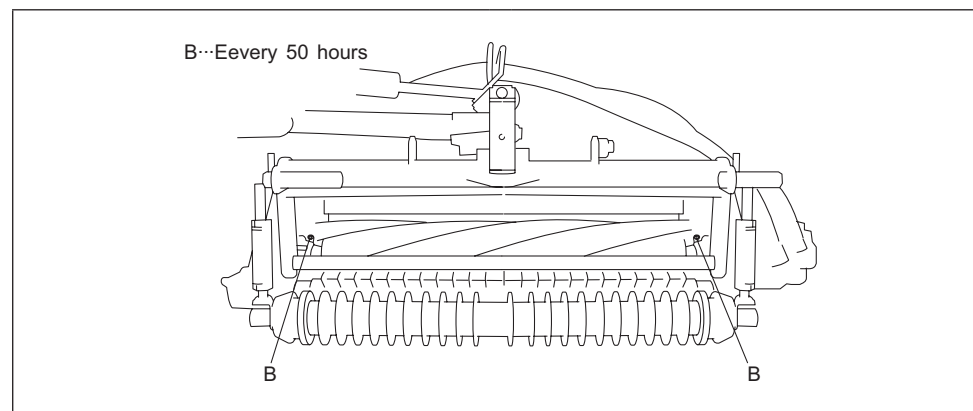
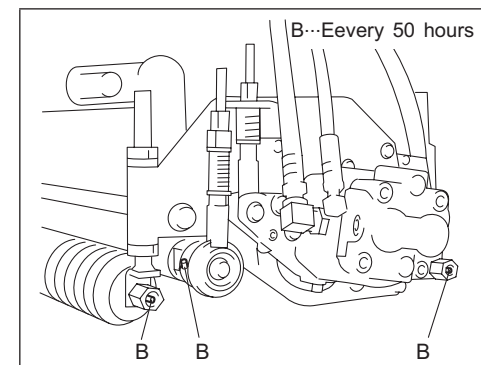
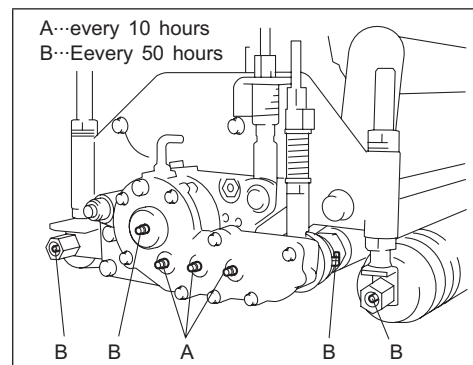
## 12. Inspection and maintenance of each section (mower)

### 12-1 Greasing

Carry out the greasing up periodically to each part grease fitting.

The parts greasing up every 10 hours is using the needle bearing. Be careful of the lubrication interval.

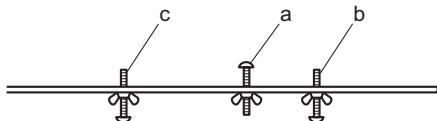
Carry out about 1g (1 to 2 times with manual-type small grease gun) grease up for each part with the grease (Excelite EP No. 2) respectively.



## 12-2 Cutting height adjustment

- To avoid personal injury and damage by the cutting edges wear grooves and handle the reel and bedknife with extreme care.

1) Set the supplied cutting height gauge bar.

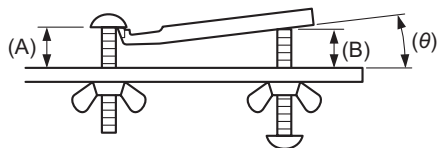


- Small adjusting screw for the cutting height setting
- Small adjusting screw for the bed knife angle adjustment
- Small adjusting screw for the Groomer adjustment

(1) Set the "a" screw to desired cutting height.

(2) Set the included angle of the bed knife with the screw of "b" by referring to the following table.

Example: When the angle of the bed knife is 5 degrees and 15mm (0.591in) of cutting height, use 12mm (0.472in).



Bed knife angle ( $\theta$ )	Value of (B)
7°	Cutting height of (A) - 0.6mm (0.024in)
6°	Cutting height of (A) - 1.8mm (0.071in)
5°	Cutting height of (A) - 3.0mm (0.118in)
4°	Cutting height of (A) - 4.2mm (0.165in)
3°	Cutting height of (A) - 5.4mm (0.213in)
2°	Cutting height of (A) - 6.6mm (0.260in)
1°	Cutting height of (A) - 7.8mm (0.307in)

\* Set the bed knife angle as the basis of 5 degrees, and change it depending on the situation.

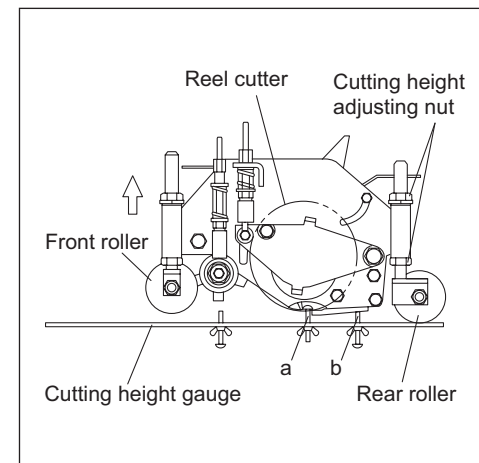
2) Adjust the height of the rear roller.

(1) As shown in the figure, apply the screw "a" and "b" on the cutting height gauge to the bed knife, and adjust the rear roller. (Decide the position of the bed knife angle.)

(2) Loosen the cutting height adjusting nut first, and then adjust the rear roller according to the cutting height gauge.

(3) At this time, to avoid incorrect adjustment, do not touch the Front Roller on cutting height gauge surface.

(4) Tighten the cutting height adjusting nut securely after completing the setting.

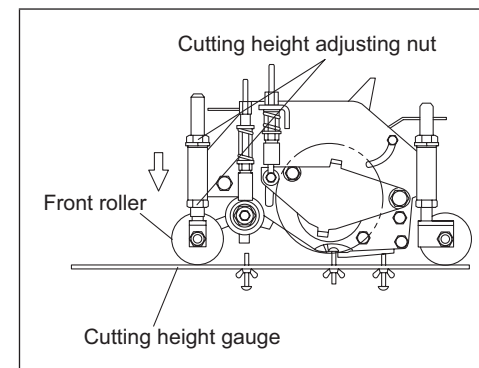


3) Adjust the height of the front roller.

(1) Loosen the cutting height adjusting nut for the front roller first, and lower the front roller down to the cutting height gauge.

(2) Tighten the cutting height adjusting nut securely after completing the setting.

4) Repeat steps 2) - (2), (3), (4) and 3) - (1), (2) on opposite end. Complete adjustment to one end before adjusting opposite end.





### 12-3 Adjusting the blades

\* Proper reel-to-bedknife adjustment is critical.

#### Caution

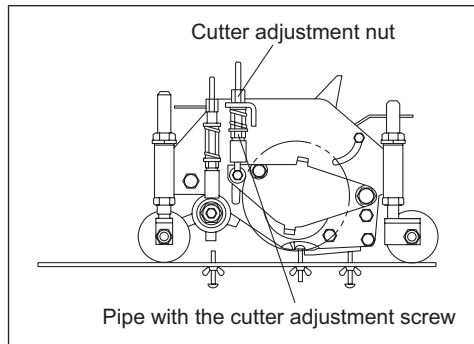


- When you adjust reel-to-bedknife, stop the engine and remove the ignition key.
- Both the reel cylinder and bed knife are the cutting tools. When you handle with them, be careful of injury.
- When you try cutting the newspaper, be careful not to pinch your fingertip, which turns the reel cutter.
- Before doing this work, be sure to apply the parking brake firmly.
- Do not carry out in two-person operation.

- 1) Set Bypass valve on hydraulic motor to "Stop" position then reel cylinder will free rotate.
- 2) Inspect the reel blade and bedknife to ensure properly engaged. When the reel blade is properly adjusted to the bedknife, the reel cylinder will spin freely and you should be able to cut two sheets of newspaper, along the full length of the reel blade.

If the cutter adjustment nut is loosened, contact between the reel and bedknife become hard, and contact will become weak if it is tightened.

- 3) If no newspaper cutting due to wear or damage is evident, the cutting edges should be corrected by the backlapping process.
- 4) If the reel cutter is worn out and the diameter becomes small, the tension of the spring will become weak. Loosen the pipe with the cutter adjustment screw, and adjust the tension of the spring.



### 12-4 Backlapping

#### Caution



- Both the reel cylinder and bed knife are the cutting tools. When you handle with them, be careful of injury.
- When you try cutting the newspaper, be careful not to pinch your fingertip, which turns the reel cutter.
- Before doing this work, be sure to apply the parking brake firmly.
- Do not carry out in two-person operation.
- When maintain it, avoid to get exhaust gas directly.
- Pay attention to the rotating part.

#### Important

When you wash the abrasive, be careful not to pour water to the electrical equipment and the switches.

If they become wet, it may cause unexpected accident.

- 1) Inspect whether the newspaper can cleanly cut across the full length of reel.
- 2) Set the bypass valve lever of the hydraulic motor into the "Rotation" position on the backlapping mower unit. Set bypass valve lever of the hydraulic motor into "Stop" position on the mower unit, which does not carry out backlapping.
- 3) Lower all the mowing unit to the ground, then stop the engine.
- 4) Open the hood and reel-reverse-rotation switch to "ON".
- 5) Sit on the seat, engage the parking brake, start the engine and then adjust rotation of engine to low speed.
- 6) Set the reel rotation switch into the " Rotation " position, and carry out the backlapping rotation of the reel blade.
- 7) Adjust reel rotation adjusting valve to the desired speed.
- 8) Apply Gel Compound (Baroness genuine abrasive) or backlapping compound with brush to the part where a newspaper was cut. (Never apply backlapping compound to the part where was not cut well.) Use backlapping compound which is a mixture of oil and emery (#150 - #200) at rate of 1:3 to 4.
- 9) Rotate the reel cutter for a while, if there is no longer contact sound, stop the rotation, and then stop the engine.
- 10) Check full length of the reel cutter whether there are the parts that cut off the newspaper well, and the parts that don't cut the newspaper. Repeat the above steps and at the same time, make a slight adjustment on the reel unit there is a uniform clearance along full length of the cutting edges.
- 11) Finally apply backlapping compound to full length on the edge of each blade of the reel cutter, and carry out final backlapping.
- 12) When finished, stop the engine and carefully and thoroughly clean off the remaining backlapping compound.



- Set the reel-reverse-rotation switch to "OFF" and return the reel rotation adjusting valve to the original position.

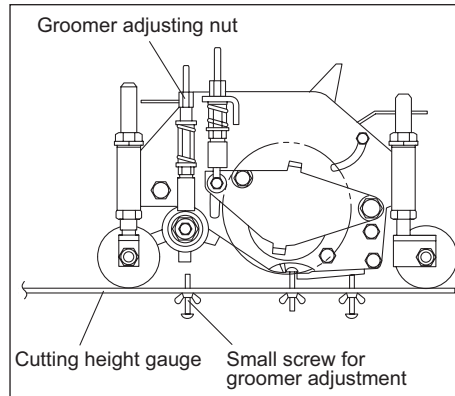
### 12-5 Adjustment of the groomer

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

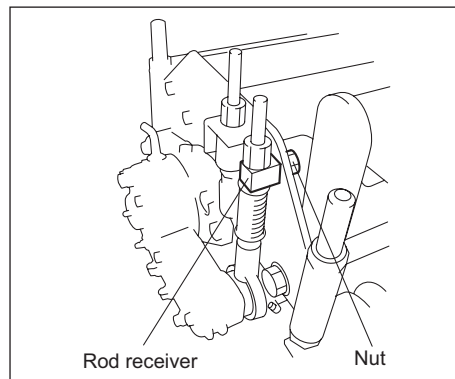
#### Important

- Always use the cutting height gauge, and adjust it so that right and left sides become parallel. The bearings may be damaged if it is not used.
- Set the groomer height more than 5mm (0.197in) from the ground. If it is used by less than it, the groomer axis, bearing, and gear, etc. may be damaged.

- Set the small adjusting screw for groomer adjustment on the cutting height gauge to the specified height.

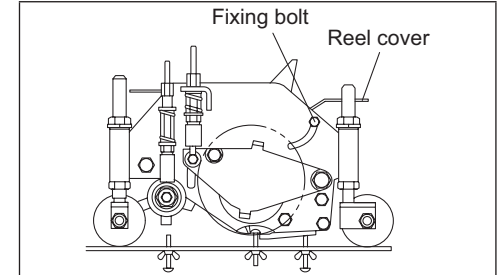


- Loosen the rod receiver nut, and lower the whole groomer unit to the bottom of the long hole.
- Tighten the rod receiver nut, and adjust the height of the groomer with the adjusting nut for the groomer.
- When you do not use the groomer, raise the whole groomer unit to the top of the long hole.



### 12-6 Adjustment of the reel cover

- Loosen the fixing bolts on the right and left sides of the reel cover, and adjust the angle of the reel cover.
- When you use the optional grass catcher, set the reel cover housing in the most closed position.



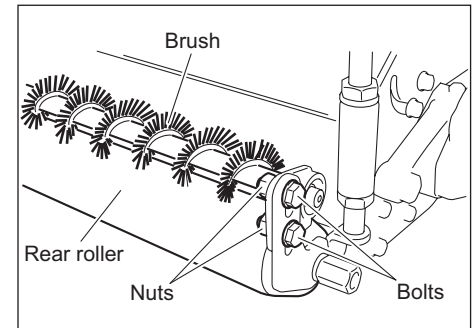
### 12-7 Adjustment of CR brush

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

#### Important

- Pressing the brush against the roller too tightly could cause the belt to slip or break.
- CR brush prevents clippings etc. from adherence to the rear roller owing to rotating brush.

- Loosen the bolts and nuts attached to the both ends of CR brush.



- Securely tighten the bolts and nuts loosened in step 1 as the gap between the brush and rear roller is adjusted to between 0 and 1 mm (0-0.039in).

### 12-8 Turning the #2 and #3 mower units

#### Caution



Both the reel cutter and bed knife are the cutting tools. When you handle with them, be careful of injury.

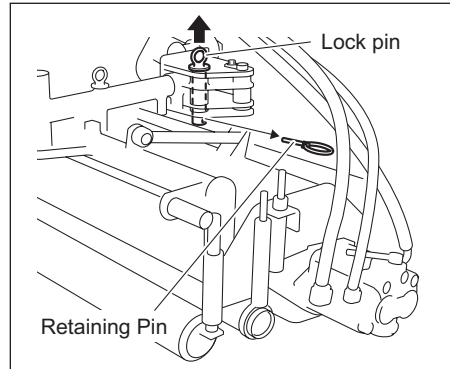
#### Important



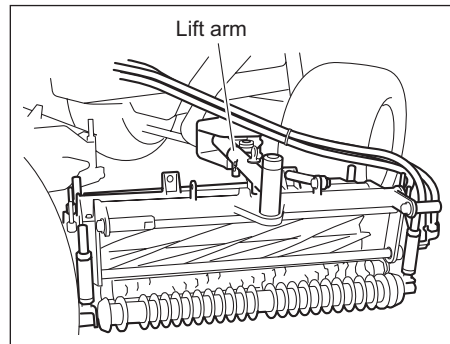
- Replace all the bearings, oil seals for mower unit every year.
- The hydraulics motor housing with the hydraulic motor is filled up with the lubricating grease (PYRONOC No. CC0). Check and supply grease every 200 hours.

It is easily maintainable, to turn the #2 and #3 mower unit turn to outside of the main body.

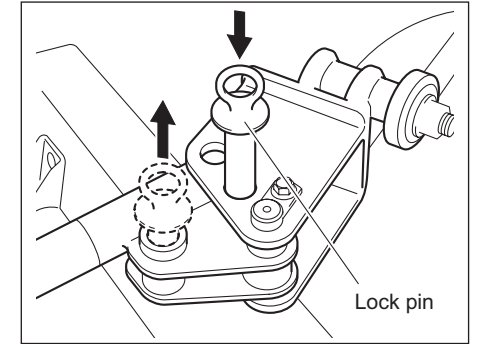
- 1) Lower the mower unit, and remove the Retaining pin, and then pull out the Lock pin.



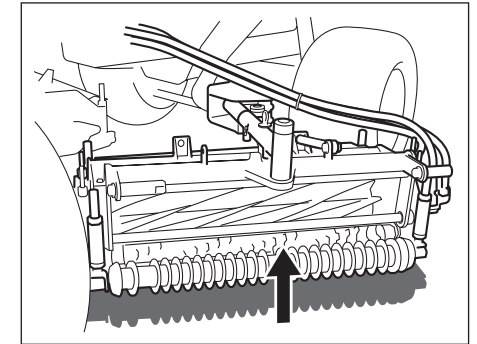
- 2) Turn the mower unit to outside of the main body.



- 3) After turning, install the lock pin over the hole to retain the mower in the maintenance position.



- 4) Raise the mower unit.



- 5) Return the mower unit to the original state in the reverse procedure after the maintenance.

# 13. Cautions for maintenance

## 13-1 Maintenance schedule

Use the required tools suitable for the purpose of the maintenance.

	Maintenance	Before use	Every 50hrs	Every 100hrs	Every 200hrs	Every 500hrs	Every year
Engine	Inspection of engine oil	○					
	Change of engine oil		○ (Initial operation)	○			
	Replacement of oil filter		○ (Initial operation)	○			
	Cleaning of radiator and oil cooler	○					
	Inspection of coolant	○					
	Inspection and cleaning of air filter	○					
	Replacement of air filter element				○		
	Inspection of fan belt	○					
Main body	Inspection of battery electrolyte	○					
	Replacement of fuel filter					○	
	Inspection of tires	○					
	Inspection of fuel	○					
	Inspection of hydraulic hose	○					
	Inspection of hydraulic oil	○					
	Replacement of hydraulic oil			○ (Initial operation)		○	
	Replacement of oil filter			○ (Initial operation)		○	
	Inspection of brake	○					
	Inspection of electrical wires						○
	Oil leakage of each part	○					
	Inspection of slack or damage on each part	○					
	Grease up (main unit and mower)		○ (partially every 10hrs)				
Inspection of grease in the hydraulic motor housing				○			
Contact condition of the blades on reel cutter	○						
Remove adhesion of cutting grass, etc.	○						

\* Replace the hydraulic hoses for steering every 2 years.

## <Specifications for periodic maintenance>

Engine oil capacity	MAX: 9.7dm <sup>3</sup> (9.7L ) MIN: 7dm <sup>3</sup> (7 L )	Higher than the API service classification CD class
Coolant capacity	Total capacity 12 dm <sup>3</sup> (12 L )	Including 1dm <sup>3</sup> (1 L ) in reserve tank
Tire pressure (standard tire)	Front tire 150 kPa (1.5kgf/cm <sup>2</sup> )	
	Rear tire 140 kPa (1.4kgf/cm <sup>2</sup> )	
Fuel tank capacity	Approximately 47dm <sup>3</sup> (47 L )	Diesel fuel
Oil tank capacity	Approximately 43dm <sup>3</sup> (43 L )	Use the Shell Tellus S2M46 equivalent

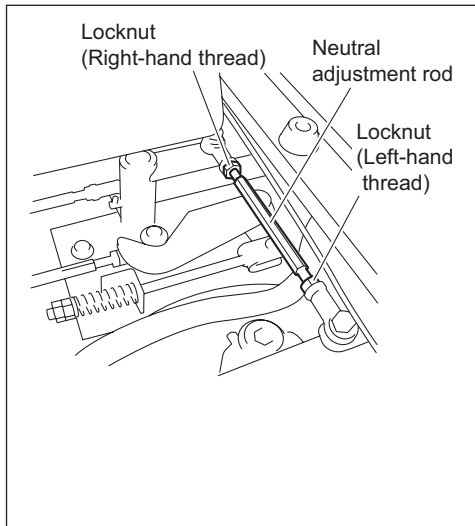
# 14. Adjustment of the other functions

## 14-1 Adjustment of the neutral position of piston pump

### Caution

Be care not to touch the rotating tires.

- 1) Jack up the machine and put on a stable stand, and float the front and rear wheels.
- 2) Raise the seat upwards.
- 3) Start the engine and run at high speed, and put the 2WD-4WD changeover switch into "2WD".
- 4) When the front wheel rotates in the forward direction, loosen the locknut and turn in the direction that reduces the length of the neutral adjustment rod. When rotating in the backward direction, turn in the direction that extends the length of the neutral adjustment rod. Find the position at which the front wheel stops and tighten the locknut.



## 14-2 Traction when the machine is unable to travel

If the machine does not travel due to engine trouble, etc., you can move it by towing it.

### Caution

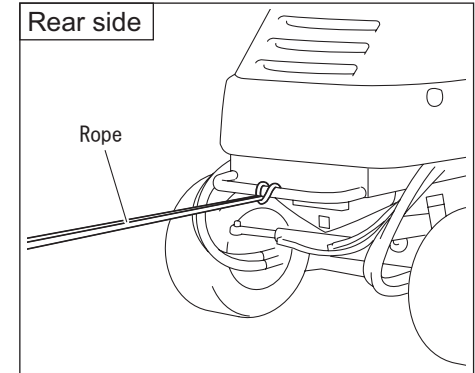
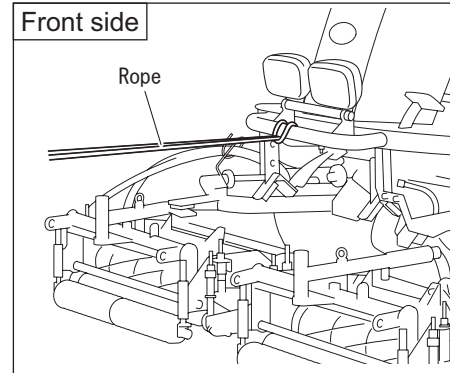
- Tow the machine at a low speed while paying close attention.
- Do not touch the unload valve except when towing the machine.

### Important

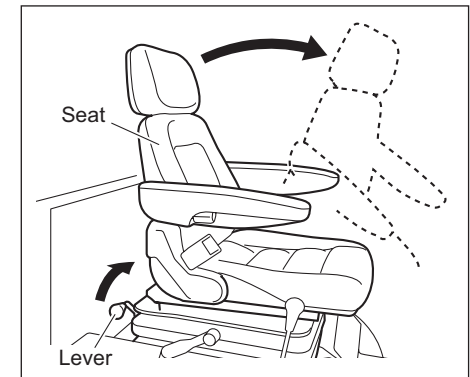
Before restarting the engine, be sure to close the unload valve.

- 1) Stop the engine.
- 2) Apply the parking brake.
- 3) Chock the wheels.

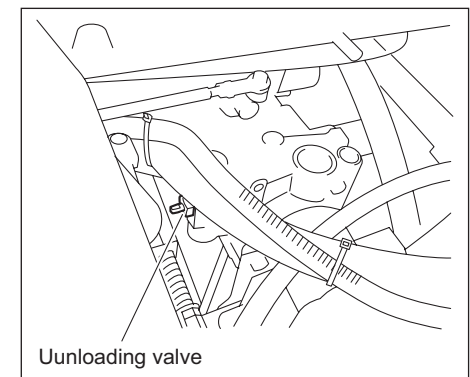
- 4) Secure the machine with ropes.



- 5) Set the 2WD/4WD selector switch to the "2WD" position.
- 6) Make sure that the steering wheel is raised completely.
- 7) Pull up the forward/backward adjustment lever, and then slide the seat backward completely.
- 8) While pulling up the lever behind the seat, tilt the seat forward.



- 9) Turn the unload valve, located beside the hydraulic pump, 90 degrees (so that it is vertical) to open it.



- 10) Put the seat back into place.
- 11) Remove the wheel stopper.
- 12) Release the parking brake.



**Warning**

While towing, always keep your foot on the brake pedal and depress the brake pedal at any time to stop.

- 13) Tow the machine slowly.

**EU Declaration of Conformity****Product Identification**

Product : Lawnmower  
Make : BARONNESS  
Type : LM2700  
Version(s) : Not Applicable  
Starting Serial No. : 11108  
Measured Sound Power Level : 100.52 dB  
Guaranteed Sound Power Level : LWA 103 dB  
Manufacturer : Kyoeshia 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 has been designed and manufactured using the following specifications  
ISO 12100 : 2010 (2006/42/EC)  
ISO 5395-1 : 2013 (2006/42/EC)  
ISO 5395-3 : 2013 (2006/42/EC)  
ISO 14982 : 1998 (2014/30/EU)

**Technical Documentation**

Keeper's Name : Kyoeshia Co., Ltd.  
Keeper's Address : 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japan  
Compiler of the technical file (2006/42/EC) : Kyoeshia U.K.Ltd.  
Name : Unit 5 Hatch Industrial Park Grewell Road, Basingstoke Hampshire RG24 7NG, the United Kingdom

**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) : SNCH  
Name : 11, Route de Sandweiler 5230 Sandweiler Luxembourg  
Address : SNCH\*2000/14\*2005/88\*1355\*04/T/CLM2700-04  
Certificate / Technical Documentation No. :

Place : Japan  
Date : 27 April 2018 (27 / 4 / 2018)

Signature :  
Name : Kimiya Karako  
Position : Quality Dept. Manager



(7)

**Déclaration de conformité UE****Identification du produit**

Produit : Tondeuse à gazon  
Fabricant : BARONNESS  
Type : LM2700  
Version(s) : Non applicable  
Numéro de série de début : 11108  
Niveau de puissance acoustique mesuré : LWA 100.52 dB  
Niveau de puissance acoustique garanti : LWA 103 dB  
Fabricant : Kyoeshia 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 Emissions 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 5395-3 : 2013 (2006/42/CE)  
ISO 14982 : 1998 (2014/30/UE)

**Fiche technique**

Marque : Kyoeshia Co., Ltd.  
Adresse de la marque : 1-26, Miyuki-cho, Toyokawa, préfecture d'Aichi, Japon  
Compléteur de la fiche technique (2006/42/CE) : Kyoeshia U.K. Ltd.  
Nom : Unit 5 Hatch Industrial Park Grewell Road, Basingstoke Hampshire RG24 7NG, Royaume-Uni

**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 Imprimé (2000/14/CE) : SNCH  
Nom : 11, Route de Sandweiler 5230 Sandweiler, Luxembourg  
Adresse : SNCH\*2000/14\*2005/88\*1355\*04/T/CLM2700-04  
No de certificat/Documentation technique :

## Declaración de conformidad de la UE

**Identificación del producto**  
 Producto: Cortacésped  
 Marca: BARONESS  
 Tipo: LM2700  
 Versión: No aplicable  
 N.º de serie inicial: 11108  
 Nivel de potencia sonora medido: LWA 100,52 dB  
 Nivel de potencia sonora garantizado: LWA 103 dB  
 Fabricante: Kyoeshia 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 5395-3 : 2013 (2006/42/CE)  
 ISO 14982 : 1998 (2014/30/UE)

**Documentación técnica**  
 Nombre del responsable: Kyoeshia Co., Ltd.  
 Dirección del responsable: 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japón  
 Compilador del archivo técnico (2006/42/CE)  
 Nombre: Kyoeshia U.K. Ltd.  
 Dirección: Unit 5 Hatch Industrial Park Greywell Road, Basingstoke Hampshire RG24 7NG, Reino Unido

**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 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\*1355\*04/TCLM2700-04

## EU-Konformitätserklärung

**Produktbeschreibung**  
 Produkt: Rasenmäher  
 Marke: BARONESS  
 Modell: LM2700  
 Version(en): Nicht zutreffend  
 Startseriennummer: 11108  
 Gemessener Schallleistungspegel: LWA 100,52 dB  
 Garantierter Schalleistungspegel: LWA 103 dB  
 Hersteller: Kyoeshia Co., Ltd.  
 Adresse: 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japan

Entspricht den folgenden Richtlinien  
 2006/42/EG Maschinrichtlinie  
 2014/30/UE 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 5395-3 : 2013 (2006/42/EG)  
 ISO 14982 : 1998 (2014/30/UE)

**Technische Dokumentation**  
 Name des Halters: Kyoeshia Co., Ltd.  
 Adresse des Halters: 1-26 Miyuki-cho, Toyokawa, Aichi-pref., Japan  
 Technische Unterlagen erstellt von (2006/42/EG)  
 Name: Kyoeshia U.K.Ltd.  
 Adresse: Unit 5 Hatch Industrial Park Greywell Road, Basingstoke Hampshire RG24 7NG, Großbritannien

**Konformitätsbewertungsverfahren**  
 Interne Produktionskontrolle : Modul A (2006/42/EG)  
 EG-Baumusterprüfung : Modul B (2014/30/UE)  
 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  
 Beschreibung/Technische Dokumentation Nr. : SNCH\*2000/14\*2005/88\*1355\*04/TCLM2700-04



## EU-försäkran om överensstämmelse

Produktidentifikation

Produkt :	Gräsklippare
Mark:	BARONESS
Typ:	LM2700
Version(er):	Ej aktuellt
Serienummer startar på:	11108
Uppmätt ljudeffektnivå:	LWA 100,52 dB
Garanterad ljudeffektnivå:	LWA 103 dB
Tillverkare	Kyoisha Co., Ltd. 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 kravspekifikationer har följts vid konstruktion och tillverkning

ISO 12100 : 2010 (2006/42/EG)
ISO 5395-1 : 2013 (2006/42/EG)
ISO 5395-3 : 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	Kyoisha U.K Ltd. Unit 5 Hatch Industrial Park, Grewell Road, Basingstoke Hampshire RG24 7NG, Storbritannien
Namn:	
Adress:	
Förfarande för bedomning av överensstämmelse	
Intern produktionskontroll: Modul A (2006/42/EG)	
EG-typprovning: Modul B (2014/30/EU)	
Intern kontroll av produktion med fastställt lände av teknisk dokumentation och periodiska kontroller (2000/14/EG)	
Anmält organ (2000/14/EG)	SNCH 11, Route de Sandweiler 5230 Sandweiler Luxembourg SNCH*2000/14*2005/88*1355*04/TCLM2700-04
Namn:	
Adress:	
Certifikat/Teknisk dokumentation nummer:	

# MEMO

**BARONESS**<sup>®</sup>

Quality on Demand

 **KYOEISHA CO., LTD.**

Head Office 1-26, Miyuki-cho, Toyokawa, Tel : (0533)84-1390  
Aichi-Pref. 442-8530 Japan. Fax : (0533)89-3623