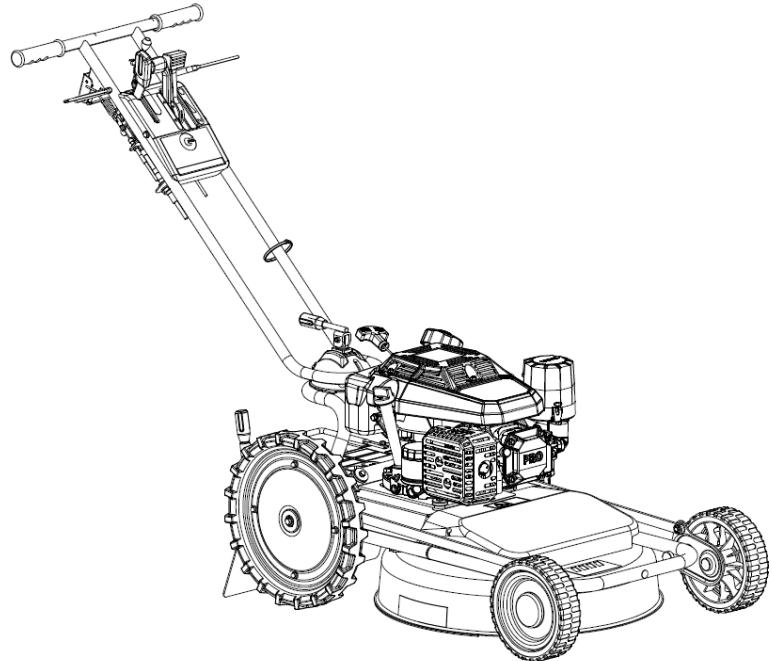


EN



Grassland walk behind mower

**MG530**



**Read this instruction manual carefully before any use of the machine, keep it as a reference. For any question about this manual, please report to your OREC dealer or to the distributor of your country or to :<https://www.orec-jp.com>.**

Update : November 2024

Only the English version of this manual can be used as a reference

# INTRODUCTION

## About manual

- Read this manual before the use of the machine.
- If you are lending or transferring this machine, be sure to give this manual along with the machine.
- If this manual is lost or damaged, please order directly from the dealer.

## Getting started

- ✓ Thank you for purchasing this product.
- ✓ This instruction manual explains the correct handling methods and simple maintenance methods to keep this product in the best condition and to work safely.
- ✓ Be sure to read this instruction manual carefully before use, fully understand the safe operation and correct handling methods, and use it for safe and efficient work.
- ✓ After reading, take it out and keep it in a safe place so that you can refer to it at any time. If it is lost or damaged, purchase it from the retailer or download it from the website.

## Definitions and Symbols

Symbol	Definition
 <b>DANGER</b>	Indicates danger that causes serious injury or death if the right precaution is not taken.
 <b>WARNING</b>	Indicates risk that is likely to cause serious injury or death if the right precaution is not taken.
 <b>CAUTION</b>	Indicates risk that might cause injury if the right precaution is not taken or that might cause damage on the product.
<b>TIP</b>	Indicates useful hint for operation and maintenance of the product, and to avoid faulty operation.

All along this manual, the words DANGER, WARNING, and CAUTION are used with the "safety/warning" pictogram (triangle with an exclamation mark) in order to indicate a hazard for your safety.

## Machine regulations

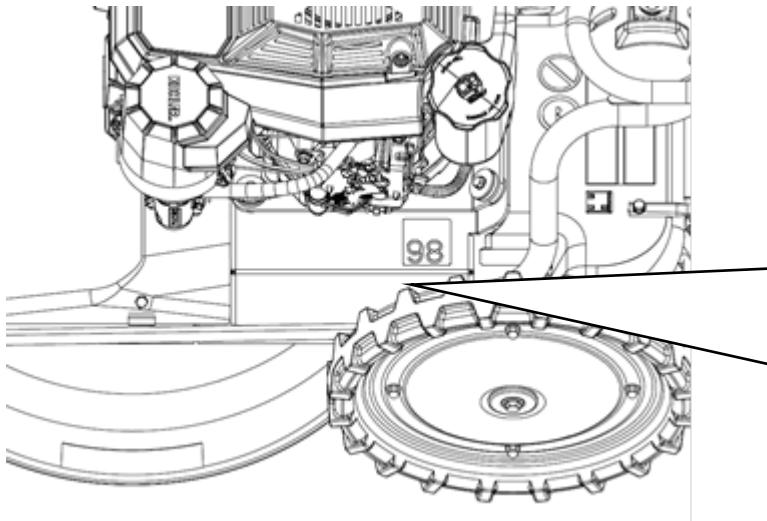
- 1) This product has been developed as a special machine exclusively for agricultural workers, so please do not use it for any other purpose (rental, etc. where the operator cannot be identified). It may not be covered by the warranty.
- 2) It may not be possible to cut grass such as ivy and vines that grow on the ground.
- 3) This machine has a seating capacity of 1 person. Also, you cannot drive on roads or places used for general traffic (farm roads, forest roads, public squares, etc.).
- 4) Even if you obtain a vehicle number, you cannot drive on public roads.

## Important notice

- 1) Please note that due to changes in parts, etc. due to performance/durability improvements and other specification changes, the product specifications you have and the contents of this document may not match in part.
- 2) Please note that copying part or all of the contents of this book without permission is a copyright violation, except in cases stipulated by law.
- 3) This book uses photographs and illustrations to help you understand the explained parts, but parts other than the explained parts may be omitted from the display.
- 4) Only the English version of this manual can be used as a reference, and other languages are the translations.

## Warranty/Contract/Disclaimer

- 1) Certificate of conformity and warranty information is mentioned at the end of this manual book. Please be sure to carefully read and understand the warranty terms and conditions.
- 2) If you do not understand even after reading this manual, do not operate the product without permission, but be sure to consult the dealer where you purchased the product (hereinafter referred to as dealer).
- 3) Regular inspections and maintenance are essential to continue using the product safely and efficiently.
- 4) Be sure to request regular inspection and maintenance from your dealer (charges apply) at least once a year as listed in the "MAINTENANCE CHART".
- 5) Breakdowns and accidents caused by failure to perform these inspections and maintenance, use beyond specifications, modification, or failure to follow this manual are not covered by the warranty.
- 6) The supply period of repair parts for this product is 9 years after discontinuation of production. However, even within the supply period, we may consult with you regarding delivery dates, etc. for special parts.
- 7) If you have any questions or concerns regarding services, please contact your dealer. In that case, please refer to the section below to check the product model, serial number, and model name of the installed engine (engraved or affixed to the engine body) and contact the dealer.



OREC CO.,LTD. MADE IN JAPAN  
548-22 HIYOSHI HIROKAWA-MACHI  
YAME-GUN FUKUOKA JAPAN

YEAR

TYPE

SERIAL No.

POWER KW

WEIGHT KG

GRASSLAND MOWER

CE  
UK  
CA

### Instructions to the dealer

The assembly, the installation and the first application of the machine is under the OREC dealer's responsibility. Read the instruction manual as well as the safety measures. Check that all the before delivery and at delivery check points specified in the following lists have been verified and possibly modified before delivering the machine to its owner.

## CONTENTS

INTRODUCTION .....	1
CONTENTS .....	2
1. INSPECTION BEFORE USE .....	2
2. MACHINE DESCRIPTION .....	7
3. INSPECTION BEFORE USE .....	9
4. OPERATION .....	11
5. OIL INSPECTION, REPLACEMENT AND LUBRICATION .....	18
6. CHART .....	25
7. INSPECTION CHART .....	26
8. LIMITED WARRANTY .....	31
9. NOTES .....	31
10. EC CONFORMITY DECLARATION .....	32
11. MEASUREMENT OF VIBRATIONS .....	32

## 1. INSPECTION BEFORE USE

### 1.1 Working conditions

#### **⚠ WARNING**

- 1) Do not operate this machine without fully understanding this manual. Also, this product is for one person only. Do not allow people other than the worker or animals to ride on the vehicle.
- 2) As a general rule, it should not be used by anyone other than the owner. If you have no choice but to lend the machine to someone else, explain how to use it, carefully read the instruction manuals for the machine and the engine (relevant products), and fully understand the handling methods and safety points before starting work.
- 3) Do not work if you are unable to operate normally due to overwork, illness, drugs, or other influences.
- 4) Individuals who are pregnant, too young to understand instructions, or untrained, should never operate this machine.
- 5) Always wear appropriate clothing; no loose or hanging clothes. Non-slip boots and protective gear are always recommended to prevent injury from rotating parts.
- 6) Use proper protection gear such as non-slip shoes, helmet or winter hat, shin guards, safety glasses, gloves and safety jacket depending on the product.
- 7) This product is not certified for the use in public roads, so please do not drive it on public roads.

### 1.2 Condition before use

#### Cautions before use

#### **⚠ DANGER**

Exhaust gas may cause gas poisoning. Do not operate or work in areas with insufficient ventilation such as indoors.

## **WARNING**

- 1) Never modify this machine in a way that will impede safe work(cutting covers, installing non-genuine parts, using unspecified belts and oil, removing safety devices, etc.). We cannot be held responsible for any accidents or malfunctions caused by these modifications.
- 2) Please make sure that there are no people, animals, vehicles, equipment, buildings, or other tangible assets nearby. Also, be sure to check the safety of your surroundings, and do not approach dangerous areas such as obstacles in the field, side ditches, and weak road shoulders, or places that require caution.
- 3) Remove stones and other foreign objects in advance. If there are obstacles that cannot be removed, please set up caution signs or safety fences indicating areas where work is prohibited before starting work. Also, in such fields, for safety reasons, mow higher than usual in order to avoid the danger as the blade may chip or foreign objects such as stones may fly off.
- 4) Please remove any rocks, metals, or other objects that could generate sparks when the blade comes into contact with them beforehand. If you cannot remove it, please set up a conspicuous mark so that people do not approach it.
- 5) When mowing dry grass, check and clean the areas around the engine and exhaust pipe, which are subject to high temperatures, once every hour to ensure that no grass debris has accumulated.
- 6) Dry grass can catch fire due to natural combustion or external fire. When mowing dry grass, please appoint a work supervisor other than the worker to constantly monitor the work.
- 7) Please be especially careful when mowing when a dry weather advisory has been issued, and in some cases, avoid mowing.
- 8) To prevent falls, when driving over rivers, cliffs, or steps (road shoulders), please consider the risk of road shoulders collapsing and falling, and drive on sufficiently safe flat ground.
- 9) It is dangerous to use machine when it is dark or when visibility is poor. Do not use it when you cannot fully understand the surrounding situation.

## **CAUTION**

- 1) Avoid using the machine in conditions where it will be exposed to large amounts of water, such as during rainy weather or in puddles.
- 2) Please be aware of other weather conditions, etc., and give due consideration to work decisions and equipment selection.

### Inspection/checks before operation

## **WARNING**

- 1) Before starting work, be sure to confirm that any repairs found after the previous work have been completed and never begin work until the repairs are complete.
- 2) It is extremely dangerous to operate the machine without safety covers, as well as standard safety devices and related parts. To prevent accidents, be sure to use these parts with them attached. If there is an abnormality, repair it and make sure it is in normal condition before starting work.
- 3) When the work clutch (knife clutch, etc.) is in the "off" position, check to see if the V-belt is firmly stopped. If it is moving at all, stop the engine and adjust the belt holder and wire.
- 4) A falling blade is dangerous. Tighten the knife set bolt and nut firmly. Also, replace the old one with a new one.
- 5) If there is a cover for blade replacement, it is dangerous to use machine with it open. Be sure to use machine with the cover closed.
- 6) Be sure to check the effectiveness of the parking brake every time. Improper brake adjustment can lead to serious accidents. Please check one or more of the following
  - (1) With Sub change lever in N position, the parking brake does not move even if two adults push the machine.
  - (2) The parking brake is applied on slope not more than 16.7 degree and it does not move.
- 7) Carefully remove any grass that is clogged around the cooling air inlet, the cylinder, or the area around the exhaust pipe, which gets particularly hot. This may cause engine seizure or fire. Also, be sure to clean not only the outside but also the inside. Also, please clean the inside of the air cleaner and any grass debris accumulated on the HST fan cover (applicable product) at the same time.

### No open flames / Refueling

## **DANGER**

- 1) Fires are strictly prohibited around the machine, including during work and refueling. There is a risk of ignition or burns. Never smoke, bonfire, or use open flames near the machine.
- 2) Please refuel after the engine has stopped and the muffler temperature has cooled down sufficiently.
- 3) If the fuel level is marked with an upper limit mark, please refuel below the mark (even less if using on a slope). If you have added too much fuel, remove it until it is below the mark. Also, be sure to wipe up any spilled fuel.
- 4) Do not perform this operation while your body is charged with static electricity. Vaporized gasoline may ignite, leading to burns and fire.

### During operation

## **WARNING**

- 1) For your safety, please drive with plenty of time and avoid sudden starts, stops, or sudden turns.
- 2) Please do not work in an awkward position and take a break every 1 to 2 hours depending on your physical condition.
- 3) To prevent people (especially children) and pets from entering the work area (within a 15m radius), please place signs indicating that grass mowing work is in progress, guard ropes, and netting to prevent scattering, and do not allow people (especially children) or pets to come within a 15m radius. If people or pets approach, immediately stop work and stop the engine.
- 4) Do not leave flammable or dangerous objects around while driving. Also, the exhaust muffler becomes hot. If you touch the machine while operating it or immediately after finishing work, you may get burned.
- 5) When working on a slope, please use it when the slope is 20 degree or less(refer to "SLOPE GUIDE"). Try to work horizontally (contour line direction) rather than vertically. When working in the vertical direction, there is a risk of the machine slipping down or the worker's feet slipping and getting caught in the machine.
- 6) Even if you take sufficient precautions to prevent slipping, do not work in slippery areas.

#### Operational notes

##### **WARNING**

- 1) When starting, set the blade clutch to the "off" position, set the gear shift lever to the "neutral(=N)" position, and apply the parking brake before starting.
- 2) Be very careful when turning on slopes, etc. You may lose your balance and fall, causing injury.
- 3) For your safety, do not make any unnecessary operations on the speed lever or clutch lever while on a slope. There is a risk of slipping or falling.
- 4) When driving reverse, make sure there are no people(especially children), animals, or obstacles, and be careful of ground to avoid getting caught between machines or falling off cliffs or steps.
- 5) When working around trees or against walls, be careful not to get your body or hands caught between the machine and the support of a greenhouse, tree branches, iron wire, etc., or to be bruised or pinched by the branches.
- 6) When turning, be especially careful where you step and avoid getting caught in the working parts (blades) and running parts (crawlers).
- 7) When switching the mowing direction, check the safety in the front and back directions before doing so.
- 8) Before operating the blade clutch, make sure that there are no people(including children) or animals, and be careful about safety.
- 9) Foreign objects may fly around during work. The front of the machine is particularly dangerous, so do not point the front of the machine at people, animals, equipment, etc.

#### Inspection, stopping and cleaning during work

##### **WARNING**

- 1) If you collide with (get caught in) a foreign object while working, immediately stop mowing and stop the engine. Also, be sure to check the blade, blade bracket, and covers for looseness, chips, or bends, and tighten, correct, or replace them as necessary.
- 2) Carefully remove any grass that is clogged around the cooling air inlet, the cylinder, or the area around the exhaust pipe, which gets particularly hot. This may cause engine seizure or fire. Also, be sure to clean not only the outside but also the inside. Also, clean the inside of the air cleaner and the grass debris that has accumulated on the HST fan cover at the same time.

##### **CAUTION**

- 1) When inspecting during work, be sure to stop the engine, wait until all parts have cooled down, and wear durable gloves such as leather gloves to protect your hands and safety goggles.
- 2) When leaving the machine, be sure to stop the engine. Also, be sure to stop on stable, flat ground.
- 3) When stopping the engine, please do the following for the applicable product:
  - (1) Apply the brakes.
  - (2) Remove the key.
  - (3) Close the fuel cock
- 4) Abnormal noises, odors, or heat generation during operation may cause a fire, so stop the engine immediately and have it inspected and repaired.
- 5) If you notice any abnormalities during other work, be sure to stop the engine before performing inspection.

#### Warning labels

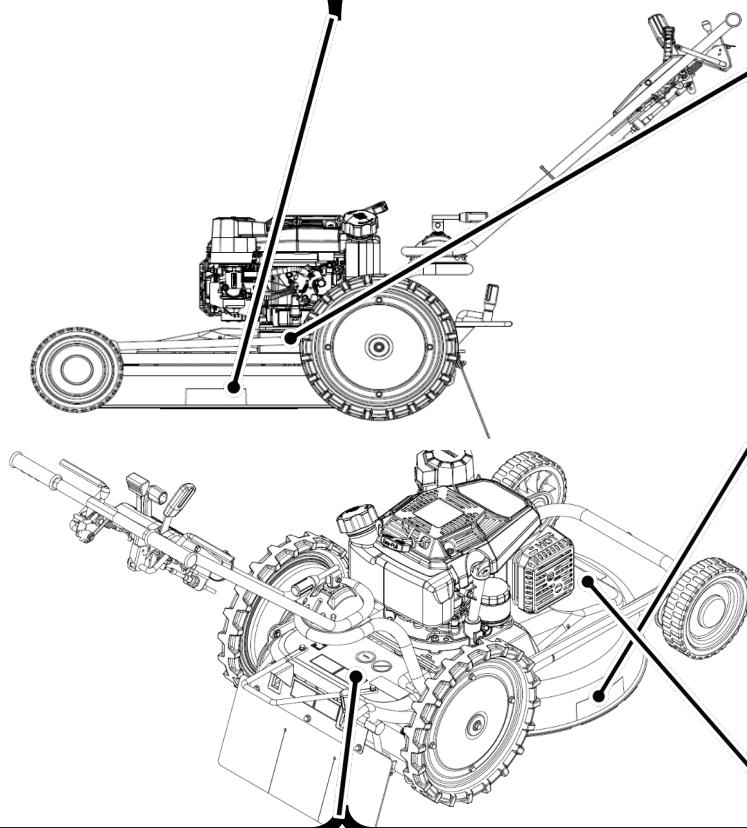
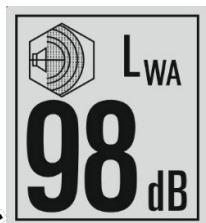
##### **WARNING**

- 1) Warning labels are carefully selected from among the important danger items listed in this section as being particularly important, and are affixed to the product. Please be sure to read, fully understand, and follow the instructions before use.
- 2) If the warning label becomes difficult to see, be sure to purchase the same one at the dealer and replace it so that it can be clearly identified at all times.

Label description of warning labels :

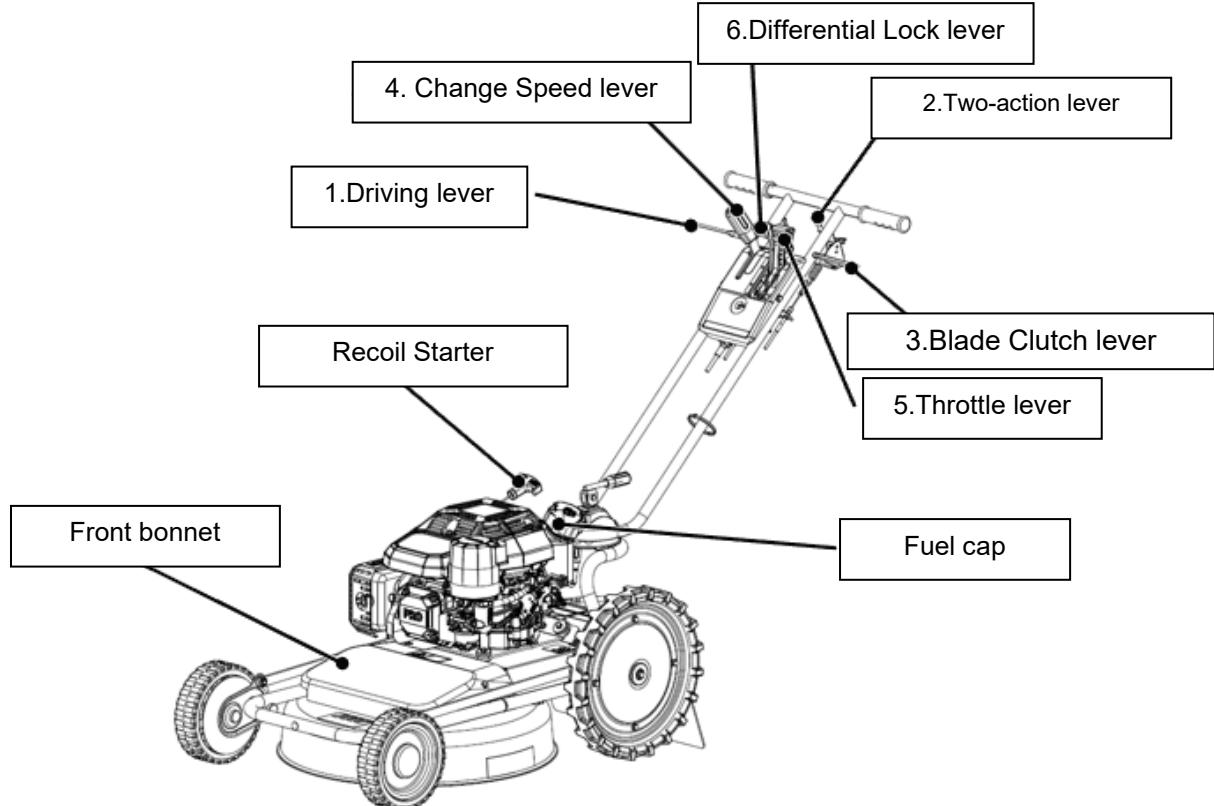
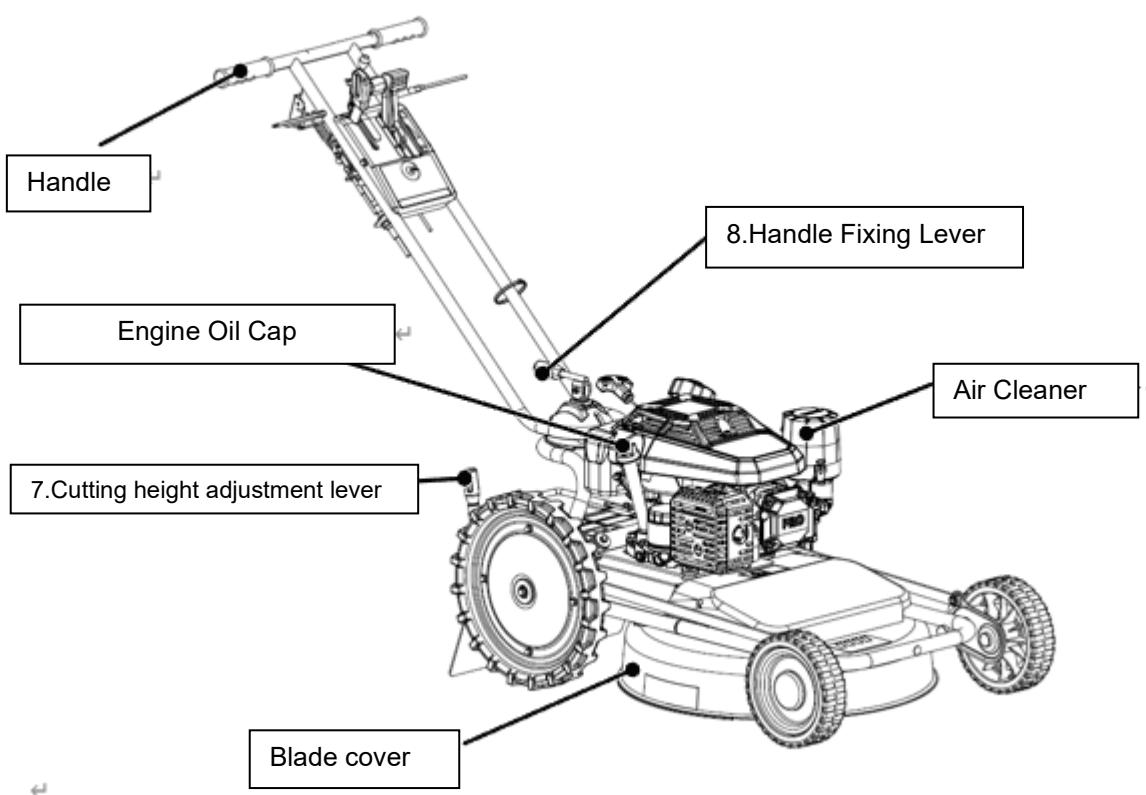
Note their location and replace them immediately in case of damage or when missing

 Remove the spark plug wire before maintenance	 Beware of thrown objects	 Stay away from the machine	 Read owner's manual
 No hands and foot under the mowing deck	 Beware of rotating parts under the shields	 Do not exceed 15° slope	 Always wear protective equipment against noise, dust



## 2. MACHINE DESCRIPTION

### 2.1 MACHINE DESCRIPTION



## 2.2 FUNCTION OF EACH PARTS

### 2.2.1 DRIVING LEVER

Interrupts the power from the engine to the transmission. Pulling the lever backward in the "on" position, and releasing the lever in the "off" position.

### 2.2.2 TWO-ACTION LEVER

Lock the blade lever in the "OFF" position in the normal position. Before operating the blade lever, move the Two-Action lever forward. When the blade lever is returned to the "OFF" position from the "ON" position, the Two-Action lever returns to its normal position and the blade lever is locked.

### 2.2.3 BLADE CLUTCH LEVER

Interrupts the power from the engine to the blade. The Two-Action lever can be moved forward and the lever pulled back to the "on" position, or released to the "off" position.

In the "OFF" position, the brake is on and the blade stops briefly.

### ⚠ CAUTION

For safety reasons, always put the blade clutch in the "OFF" position when starting the engine or moving backward.

### 2.2.4 CHANGE SPEED LEVER

This is used to select the traveling speed. The gearshift has three forward gears (1, 2, and 3) and one backward gear (R).

### ⚠ CAUTION

Operate the change speed lever with the driving lever in the "OFF" position. Operating the change speed lever while holding the traveling lever may damage the gears inside the transmission.

### 2.2.5 THROTTLE LEVER

Adjusts engine start, stop, and RPM increase/decrease.

The levers are (STOP -  -  -  - from the back.

### 2.2.6 DIFFERENTIAL LOCK LEVER

Switches between differential and direct connection of left and right rear wheel rotation. This lever should normally be used in the "OFF" position. Pulling the lever backward will put it in the "off" position, and moving it forward will put it in the "on" position. When working on a slope or soft ground where only one rear wheel turns and it is difficult to drive, or when loading/unloading a truck, the left and right rear wheels are directly connected when the differential lock lever is in the "in" position.

### 2.2.7 CUTTING HEIGHT ADJUST LEVER

Operates when adjusting the mowing height of the grass.

Turning the lever to the right lowers the mowing height (LOW) and turning it to the left raises it (HI).

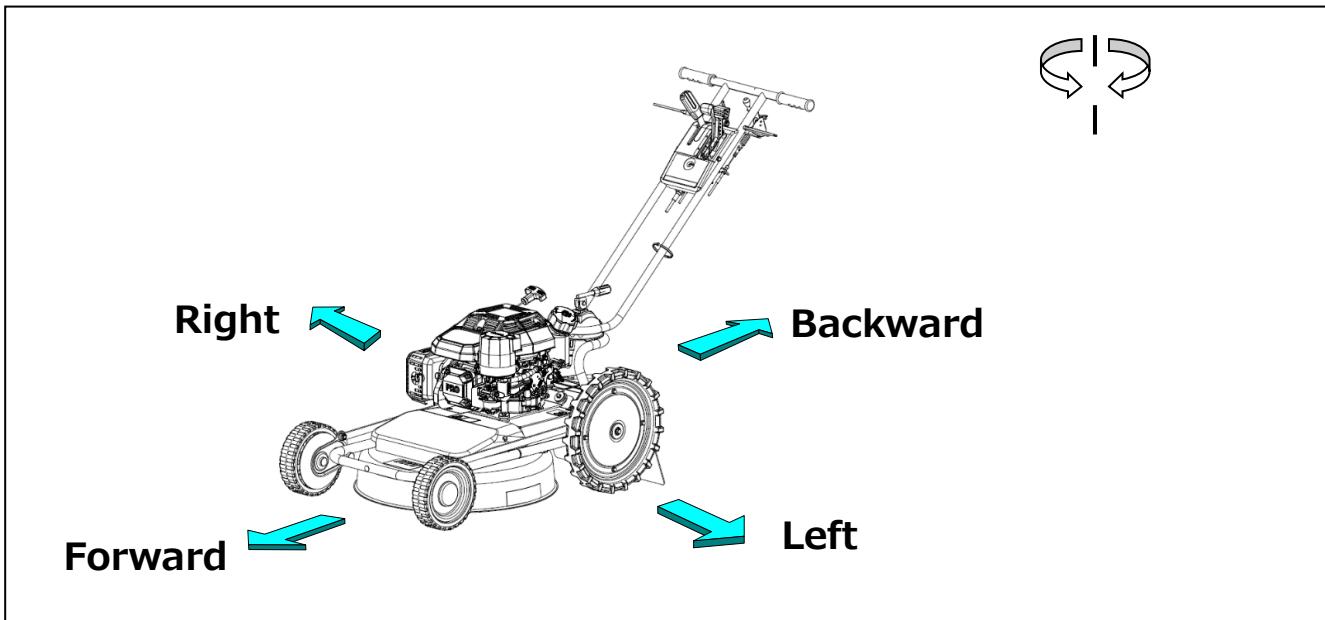
### 2.2.8 HANDLE FIXING LEVER

Adjust the height and direction of the handle and fix it.

## 2.3 MACHINE DIRECTION

The front, back, left, and right of the machine are indicated by the direction viewed from the operator as shown in the figure below.

"Forward" and "Backward" in the text are also expressed in terms of the direction viewed from the operator.



### 3.INSPECTION BEFORE USE

Before starting work, check "1.2 Before starting work" and be sure to perform a pre-start inspection in accordance with the "Pre-start Inspection Chart" and "7.1 Periodic Inspection Chart" below.

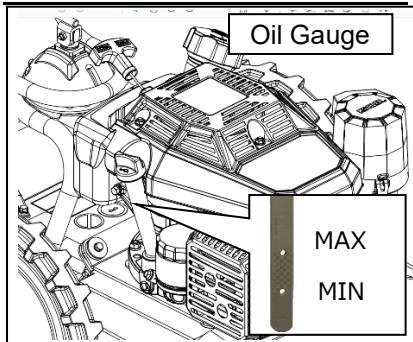
※If you have any questions or find anything unusual, be sure to consult the dealer where you purchased the product.

Pre-opening inspection sheet (summary from periodic inspection sheet)		
	Entry	Inspection details
ENGINE	(1) Engine Oil	Check "oil quantity and contamination" (see 3.1).
	(2) Air cleaner	Check and clean "Dirt" (see 5.2.1)
	(3) Main Engine	Check for "looseness" and "cracks
	(4) Muffler	Check for and clean up "blockages".
	(5) Fuel tubes, fuel filters	Check for fuel leaks, deterioration, deformation, clogging, and cleaning.
MACHINE	(1) Blade	Inspection and maintenance
	(2) Brake	〔1〕 Loose or missing bolt or nut
	(3) Tire	〔2〕 Deformation, wear, interference
	(4) Function lever	〔3〕 Smooth operation or sticking
	(5) Cover	〔4〕 Remove foreign objects such as garbage, grass
	(6) HSToil	Check "oil quantity and contamination"

#### **⚠ WARNING**

- 1) Always stop the engine before performing any inspection, lubrication, adjustment, or maintenance.
- 2) When starting the engine and checking the operation of the driving lever and other levers, make sure to check the position of each lever and the safety of the surroundings before starting the engine.
- 3) Please also carefully read the warning symbols affixed to the machine.

#### 3.1 ENGINE OIL INSPECTION

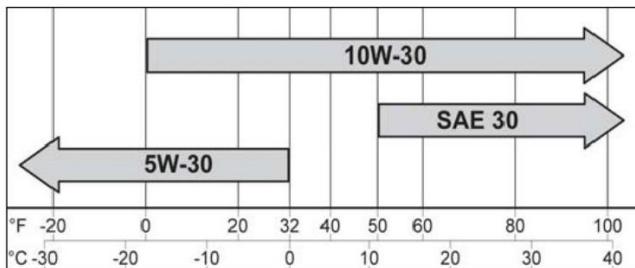


- 1) Level the machine and remove the oil gauge.
- 2) Insert it into the oil supply port and turn it 1/4 turn to confirm that there is oil between the upper and lower limits of the oil gauge.  
(The oil supply plug also serves as the oil gauge.)
- 3) If the amount is low, replenish the oil so that it comes close to the upper limit. Refer to the gauge for the amount of oil to be lubricated.

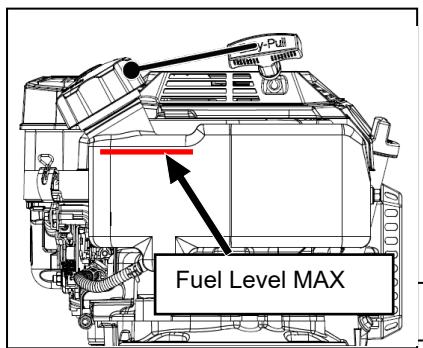
#### **⚠ CAUTION**

- 1) When checking the engine oil after the engine is running, wait "at least 5 minutes" after the engine is stopped to fully check the cooling condition of the muffler and engine itself.
- 2) A small amount of engine oil remains in the unit at the time of shipment.  
\*Be sure to check the amount of engine oil before starting the machine.
- 3) Use good quality, fresh engine oil of SE grade or higher, and use different types depending on the temperature.
- 4) After refilling, tighten the oil gauge securely. Loose tightening may cause engine oil to leak out.

## 〔Recommended oil〕



## 3.2 FUEL INSPECTION AND REFUELING



- 1) Level the unit, remove the fuel cap, and inspect the amount of fuel from the fuel supply port.
- 2) If the fuel level is low, refer to the figure on the left and fill the tank below the upper limit of the specified oil level.  
    〈Fuel used: Regular unleaded gasoline.〉  
    〈Fuel tank capacity: See 6.1 Specifications〉
- 3) After refueling, tighten the fueling cap securely.  
    ※For use on sloping ground, use even less than (2) (to an amount that will not spill).

### **⚠ DANGER**

- 1) **Fires are strictly prohibited while working and refueling.**

There is a risk of ignition or burns. Never use naked flames such as cigarettes, bonfires, etc. near the machine.

- 2) Refuel after the engine is stopped and the muffler temperature has cooled sufficiently.
- 3) If the oil level is marked with an upper limit, fill the oil level below the mark (even less if the oil level is on a slope). If you have overfilled the tank, remove the fuel until the level is below the mark. Be sure to wipe up any spilled fuel.
- 4) Do not perform the operation when your body is charged with static electricity. Vaporized gasoline may ignite and cause burns or fire.

### **⚠ WARNING**

Fueling should be performed on a flat, stable, well-ventilated surface.

### **⚠ CAUTION**

- 1) When refueling, do not allow dust, grass, rain, snow, or other foreign matter to enter the fuel tank. Failure to do so may cause engine malfunction.
- 2) Do not use anything other than regular unleaded gasoline. It may cause damage to the engine.
- 3) Gasoline deteriorates naturally. If gasoline is not used for a month or more, replace it with new gasoline. Do not use gasoline stored in polyethylene tanks. It may cause malfunction.

## 4.OPERATION

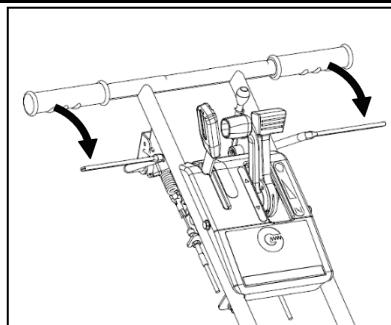
### ⚠ WARNING

\* 1. Please read "1. Precautions for use" before operation.

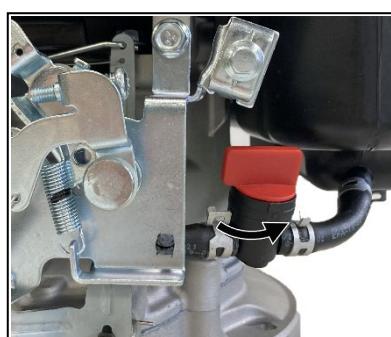
In particular, please read and understand "1.1 Working Conditions", "1.2 Before Operating" and "1.3 During Operation" carefully before operating and working on the equipment.

### 4.1 STARTING & STOPPING THE ENGINE

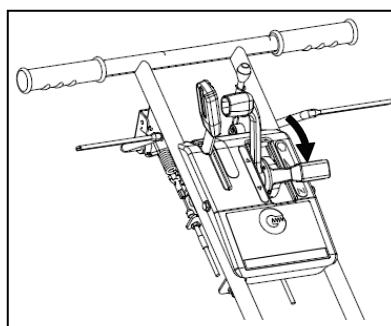
#### 4.1.1 STARTING THE ENGINE



- 1) Both the driving clutch lever and blade clutch lever should be in the "OFF" position.



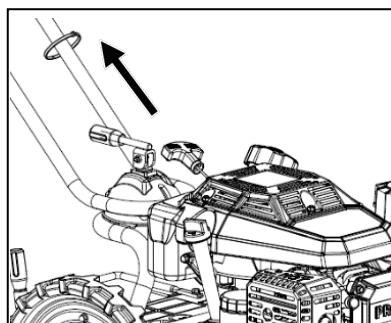
- 2) Turn the fuel cock to the "open (ON)" position.



- 3) Turn the throttle lever to the "run" position.

#### Note

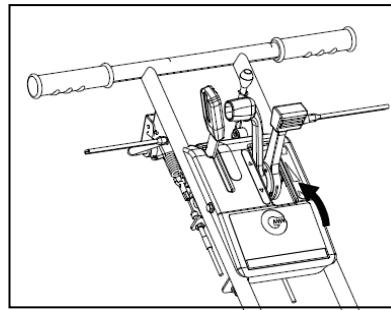
When the engine is warm, it can be started in the "idle" position.



- 4) Hold the machine firmly so that it will not move, grasp the starter knob, pull it slowly and once back from the position where compression is felt, pull it vigorously. After starting the engine, slowly return the starter knob to its original position.

#### ⚠ CAUTION

Make sure that there are no persons, protrusions or obstacles in the direction from which the recoil starter is pulled before starting it. Failure to do so may result in injury.

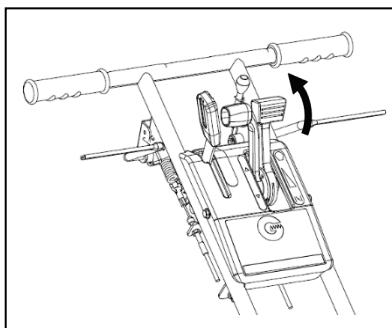


- 5) After starting the engine, allow the engine to warm up for a while (about 3 minutes) with the throttle lever in the "idle" position. Warming up the engine will ensure that the oil is well distributed to all parts of the engine, thereby extending the life of the engine.

## ⚠ CAUTION

- 1) During the first week (3-4 hours) after the purchase of a new product, please operate the machine moderately to avoid overloading the machine as a break-in period.
- 2) Please note that using the throttle lever in the " " position will adversely affect various engine parts and shorten the life of the engine.

### 4.1.2 STOPPING THE ENGINE



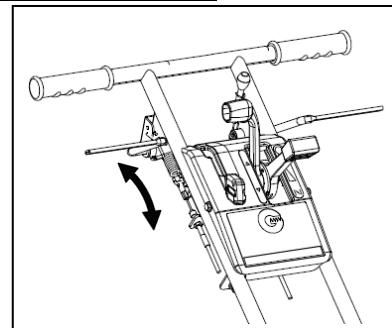
- 1) Turn the throttle lever to the "STOP" position to stop the engine.



- 2) Finally, turn the fuel cock to the "closed (OFF)" position.

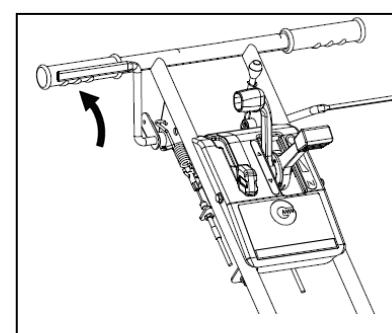
### 4.2 DRIVING

#### 4.2.1 DRIVING



- 1) Start the engine.  
(See 4.1.1 How to start the engine.)

- 2) Check that the change speed lever is securely in place.  
(See 4.2.2 How to change speed)

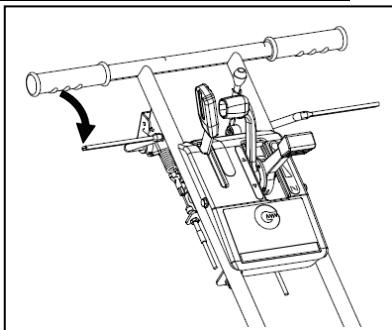


- 3) Set the throttle lever to the " " or " " position and pull the driving lever backward to travel.

## ⚠ WARNING

- 1) For safety, set the mowing height adjustment lever to the highest position when driving and be careful not to allow the blade to come in contact with stones or other obstacles.
- 2) Do not put the blade lever in the "on" position when transport or turning. It can be dangerous.

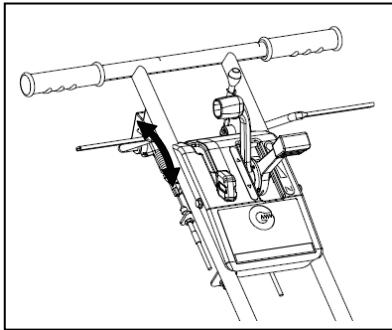
#### 4.2.2 CHANGING SPEED



- 1) Remove your hand from the driving lever and put it in the "OFF" position to stop the machine.

**!CAUTION**

Repeatedly operating the change speed lever with the driving lever in the "ON" position may cause a malfunction.

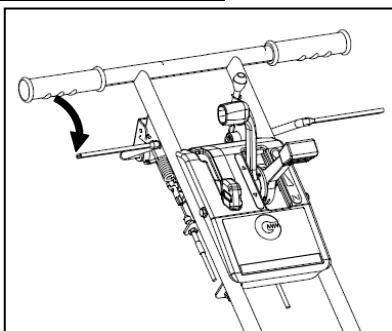


- 2) Operate the changing speed lever to ensure that it is in the required gearshift position of "①", "②", "③", and "R".

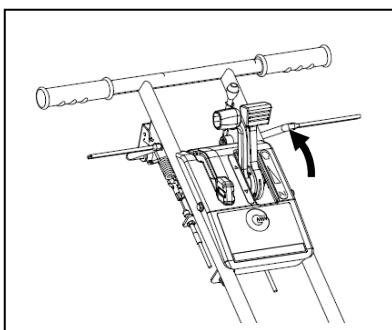
#### 4.2.3 TURNING DIRECTION

To change direction, put the blade lever, driving lever, and differential lock lever in the "OFF" position, push down on the handlebars to float the front wheels, and turn with the rear wheels only.

#### 4.2.4 STOPPING



- 1) Remove your hand from the travel lever and put it in the "OFF" position to stop the machine.



- 2) Turn the throttle lever to the "STOP" position to stop the engine.

**! CAUTION**

- 1) Park the machine on a flat, spacious area with no obstructions in the vicinity.
- 2) Always stop the engine before leaving the machine.
- 3) When the change speed lever is set to the "N" position, the machine can be moved by pushing it lightly while the engine is stopped. (driving lever "OFF" position)

## 4.3 HOW TO MOW WELL

### **⚠️ WARNING**

- 1) For safety reasons, always work with the standard covers and flappers installed. It is very dangerous to work with the covers and flappers removed. Foreign objects such as stones may scatter around the deck of the mowing, causing damage to the operator and others around him/her.
- 2) Always stop the engine before removing grass, wire, or other foreign matter that has become entangled in the Blade.
- 3) The covers attached to the machine are designed to minimize the scattering of foreign objects from the mowing section, but they do not completely prevent it. It is the operator's responsibility to remove any foreign objects (stumps, stones, wires, empty cans, and cuttings) from the field prior to operation.

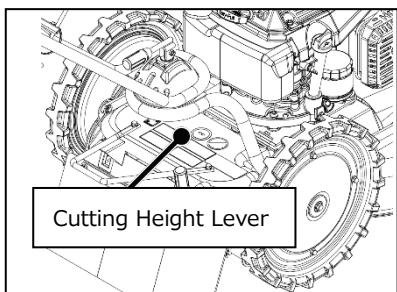
### **⚠️ CAUTION**

- 1) Wear long-sleeved jacket and long pants with hemmed sleeves, safety shoes, hat, helmet, shin guards, protective goggles (supplied with the product), etc. always.
- 2) Remove as much foreign matter as possible prior to work, such as stumps, rocks, wire, empty cans, and broken sticks.
- 3) When working in fields where there are many stones and other foreign matter, please take extra care for safety by mowing high to prevent damage caused by scattering of these materials.
- 4) Stones and other foreign objects may scatter around the entire circumference of the mowing area. Please work with caution and keep away from people, vehicles, and buildings.
- 5) The engine muffler becomes hot during operation of the unit and may cause burns if accidentally touched. Never touch the muffler during operation or for approximately 10 minutes after operation is stopped.
- 6) Always work in a forward direction. Working backward is dangerous.

**Note :**

- 1) When using the machine for the first time, select a flat area free of stones and other foreign objects, fix the angle adjustment lever in the horizontal position, and slowly mow straight so that the mowing marks overlap slightly.
- 2) When mowing under trees, beside hedges, etc., only the Blade lever can be set to the "ON" position for smooth operation when mowing by hand. However, be careful of the machine's behaviour.

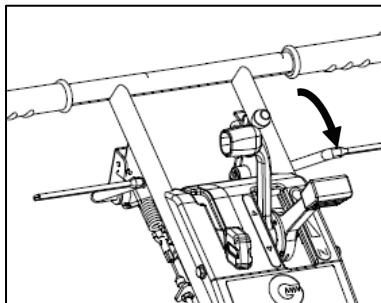
## 4.3.1 TECHNIQUE FOR MOWING



- 1) Adjust the mowing height by turning the mowing height adjustment lever according to the working conditions.

### **⚠️ WARNING**

Always stop the engine before adjusting the mowing height. The mowing height should be adjusted to the uneven areas in the field. If it is too low, not only will the knife wear out or break prematurely due to friction with foreign matter and soil, but also accidents due to breakage may occur.

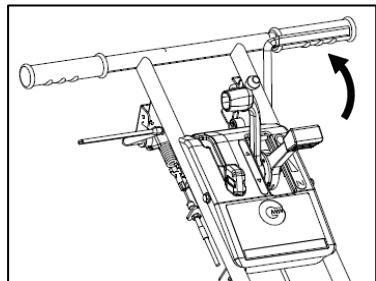


2)Start the engine. (See Section 4.1.1 "How to Start the Engine.)

3)Operate the change speed lever and shift the gear securely to the required gearshift position.

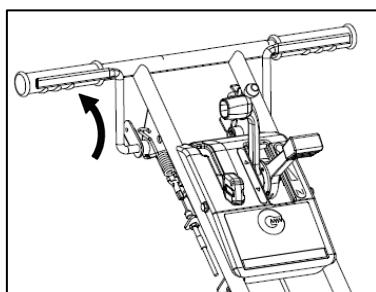
4)Turn the throttle lever to the high speed "  " position.

5)Tilt the lock lever forward.



6)Pull the Blade lever back to the "ON" position.

**The Blade rotates at a high speed, so please be very careful!**



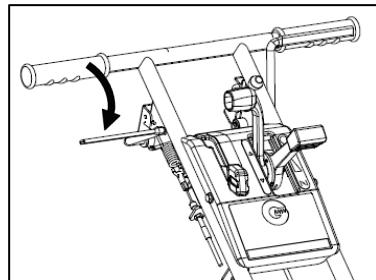
7)Pull the driving lever backward to start the machine. (See Section 4.2.1 "How to Drive.")

8)To finish the work, first remove your hand from the driving lever, turn it to the "OFF" position, and stop the machine.

9) Remove your hand from the blade lever and place it in the "OFF" position to stop knife rotation.

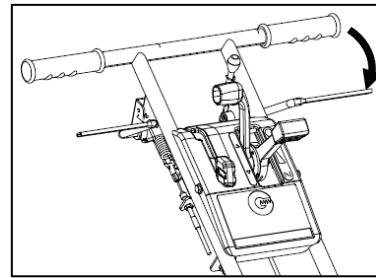
10)Stop the engine.

(See Section 4.2.4 "How to stop the engine.



#### Reference

When the blade lever is set to the "OFF" position, the brake is on, and blade rotation stops in a few seconds (within 5 seconds).



#### 4.3.2 MOWING ON SLOPES

•When working on a slope, work along the contour line from the valley side of the slope to the mountain side, moving sequentially to the mountain side. When turning, work at both ends of the slope at the slowest angle possible, turning toward the mountain side and drawing the figure of  $\infty$ .

#### **WARNING**

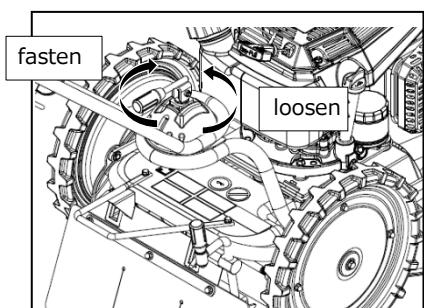
- 1) For safety reasons, do not work on slopes with a slope of 15° or more.
- 2) Always operate gear shifting on level ground. Shifting gears while working on an incline may cause the gear to slip out of gear when turning, which may result in a fall accident.

- 3) Do not allow grass, leaves, or other debris to accumulate on the engine. If these items accumulate around the engine, they may cause overheating resulting in burning or fire. It may also cause reduced mowing performance and increased fuel consumption. Clean the machine frequently.
- 4) For safety reasons, start at the "①" position first, and after checking the safety of the surroundings, adjust the working speed to suit the working conditions.
- 5) Never kick grass or other objects into the rotary cover with your foot, as the blade will come all the way inside the rotary cover during blade rotation.
- 6) If an obstacle is hit during operation, stop the engine immediately, remove the ignition cap from the spark plug to prevent it from starting, and inspect it for damage. Repair any abnormality immediately. Unrepaired restarting may result in an unexpected accident.

**Reference :**

If there is a large amount of grass and the engine frequently stops, reduce the working speed, increase the mowing height, or mow twice.

#### 4.4 HANDLE POSITION



- The handle position can be adjusted up or down according to the operator's physique and working conditions. After adjusting, tilt the handle fixing lever down to fix it securely in place.

#### 4.5 LOADING/UNLOADING/TRANSPORTING

**⚠ DANGER**

- 1) Always stop the engine and turn the fuel cock to the "closed" position when transporting the machine. Fuel leaks may cause spilled fuel to ignite.
- 2) Also, do not tilt the unit more than necessary. Fuel may leak out.

**⚠ WARNING**

- 1) Use a vehicle appropriate for the product for transportation. (loading weight, cargo bed size, and interference)
- 2) Select a flat and safe place for the transport vehicle, stop the engine, pull the side brake, and fasten the wheels so that the vehicle will not start moving when it is loaded.
- 3) Adjust the height to a position where the knife/pawl does not contact the bridge. Also, do the following for applicable models. (1) Set the work clutch to the "OFF" position. (2) Set the differential lock to the "ON" position.
- 4) Ensure that a strong bridge that meets the standards is applied at a loose gradient (15 degrees or less), engine speed is lowered, loading is done "forward" and unloading is done "backward" at low speed and slowly..

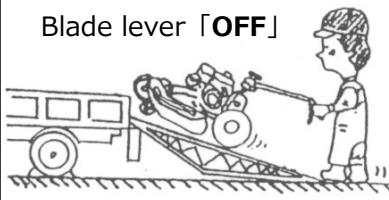
⟨Do not disengage the driving (main) clutch on the bridge. Also, do not operate levers such as the side clutch (applicable product) or gearshift.⟩

- 5) Be very careful when the machine crosses the border between the bridge and the truck bed, as the position of the center of gravity suddenly changes.
- 6) When transporting the product, secure it securely with a sturdy rope or other means. Also, be sure to drive safely.

#### 4.5.1 HOW TO LOAD

Differential 「ON」

Blade lever 「OFF」



- 1)Choose a flat area with no hazardous materials around.
- 2)Ensure that the bridge that meets the standard is applied at a loose slope (15 degrees or less) and at a width that matches the product.
- 3)Ensure that the wheels of the machine are positioned in the center of the bridge.
- 4)Lower the engine speed and put the work clutch in the "OFF" position.
- 5)For loading, use forward "①" and for unloading, use "R" at low speed and slowly.

#### CAUTION

Be careful not to deform the gearshift wire when loading it on the back of a truck. If the gearshift wire bends, it may cause the wire to break, resulting in loss of gearshift.

When loading the machine, fix the front of the machine to prevent deformation of the gearshift wire.。

#### Reference; Bridge Standards

Bridges must meet the standards and be of sufficient strength.

- Length: At least 3.5 times the height of the truck bed.
- Width ... The width must match the wheel width of the machine.
- Strength: Sufficient to support the total weight of the machine and the operator's body weight.
- Surface treated to prevent slipping.

## 5.OIL INSPECTION,REPLACEMENT AND LUBRICATION

### 5.1 OIL INSPECTION

#### **⚠ CAUTION**

- 1) The machine is not lubricated with oil at the time of shipment. Before using the machine for the first time, be sure to lubricate the specified parts with the specified amount of oil.
- 2) Periodic oil changes are highly recommended to ensure that the machine is always used in the best possible condition.
- 3) Lubrication should be done gradually. If you try to lubricate the machine all at once, the oil will overflow from the lubrication port immediately without releasing the air. Make sure that the oil level is up to the lubrication port.
- 4) When checking, replacing, or lubricating the oil in each part, be sure to stop the machine in a flat, wide-open area after running the engine warm, and wait "about 5 minutes or more" for each part of the machine to cool down to the point where it is not hot to the touch before performing the work.

... If you work immediately after the engine is stopped ...

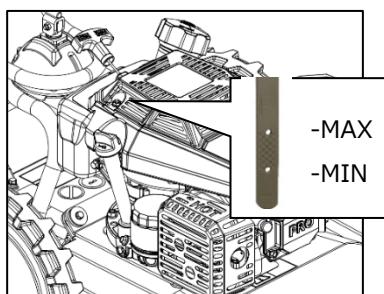
\* **The engine itself is quite hot and there is a risk of burns.**

\* **Immediately after the engine is stopped, there is still oil in various parts and the exact amount of oil is not indicated.**

**■Please dispose of waste oil properly after replacement in accordance with your local government's regulations■**

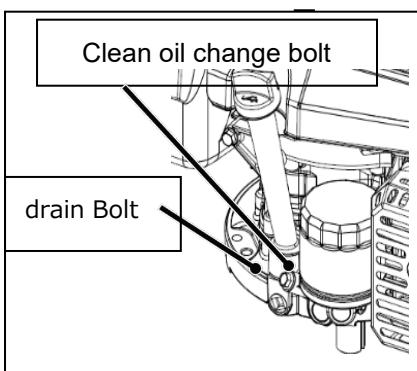
#### 5.1.1 INSPECTION AND REFILLING

- 1) Before each operation, visually inspect the quantity and contamination of the engine oil with reference to <Refer to 3.1 Engine Oil Inspection>, and if the quantity is not the specified amount or if the oil is contaminated, replenish or replace the entire amount (see below).  
[For the quality and quantity of oil to be used, refer to Section 3.1 "Engine Oil Inspection.]



\* **A small amount of engine oil is left in the engine at the time of shipment.**

#### Replacement...



- 1) Prepare a suitable container to receive the oil.
- 2) Remove the drain bolt (oil drain bolt) and clean oil change bolt, and drain the oil from the crankcase.  
*(Reference ; Remove the oil supply plug at the same time to make it easier to drain the oil.)*
- 3) After draining the oil, apply sealant for the threads to the drain bolt. Tighten to a torque of 13.6 N · m
- 4) Tighten the clean oil change bolt to a torque of 14.7 N·m

- 5) Lubricate the engine with the specified engine oil referring to [3.1 Engine Oil Inspection].

#### **Replacement guideline**

**First time: every 5th hour; every 25 hours thereafter**

## Reference ;

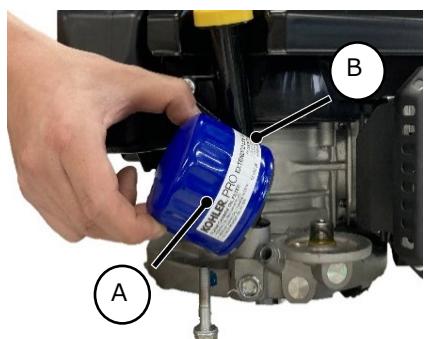
- 1) After oil change, securely install the removed cover, tire, drain bolt, and oil supply plug.
- 2) If the product is used continuously under high load or high temperature for a long period of time, replace it earlier than the above guideline (about half of the time).

### 5.1.2 AIR FILTER CLEANING

#### **⚠ CAUTION**

When installing the oil filter, do not use tools, but do it by hand.

Oil filters should be changed once every two engine oil changes or every season.



After draining the engine oil, replace the oil filter according to the following procedure.

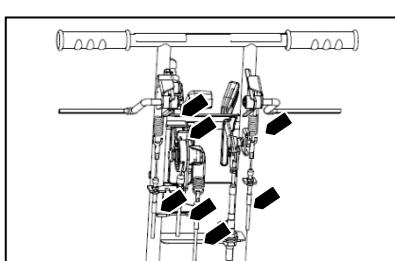
- 1) Turn filter A counterclockwise to remove it.
- 2) Apply thread sealant to the drain plug and tighten to a torque of 13.6 Nm. Tighten to a torque of 13.6 Nm.
- 3) Install the clean oil change bolt with a torque of 14.7 N · m.
- 4) Apply a thin layer of new engine oil to the gasket portion of the new filter with a fingertip.
- 5) Turn the filter clockwise and screw it in until the gasket first begins to contact the mounting surface B. Screw it in 3/4 of a turn further.
- 6) Fill the oil tank with new regulation oil.
- 7) After checking the amount of oil with the oil gauge, tighten the oil supply plug securely.  
(See Section 5.1.1 "Engine Oil Inspection and Replacement.")
- 8) After running the engine at low speed for approximately 2 minutes, check for oil spills on the filter mounting surface.
- 9) Stop the engine, check the amount of oil again, and replenish it if it is insufficient.

### 5.1.3 LUBRICATION MOVING PARTS

#### **⚠ CAUTION**

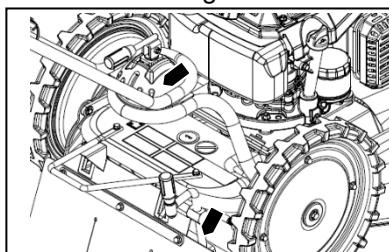
Lubricate grease nipples with grease and other parts with engine oil (#30) as needed about every 30 hours. Failure to lubricate the grease may cause damage due to poor lubrication.

Wires and lever shaft part

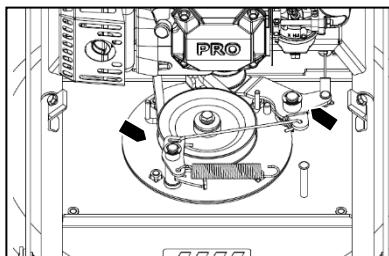
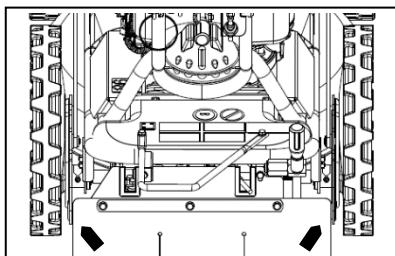


Drive Shaft

Height adjustment lever shaft,  
handle fixing lever shaft



Tension arm shaft, Blade brake shaft



## 5.2 ENGINE MAINTENANCE

### 5.2.1 AIR FILTER CLEANING

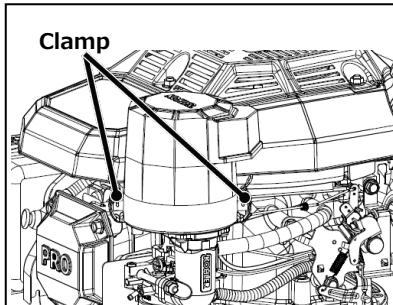
#### **⚠ WARNING**

- Continued operation with air cleaner/recoil starter clogged with grass debris, etc., not only causes lack of power and high fuel consumption, but also increases exhaust gas temperature, which may cause fuel to ignite and cause a fire, which is very dangerous. Be sure to inspect and clean the equipment on a regular basis.

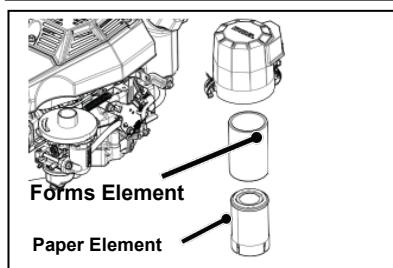
...Do not start the engine with the air cleaner removed. ...

Dust and dirt are sucked into the engine, causing engine trouble and unusual wear.

## ■Dry Process



- 1) Release the clamps on the air cleaner cover and remove the cover.
- 2) Foam elements should be washed with neutral detergent, wrung out well, and dried.
- 3) The paper element is cleaned by blowing compressed air from the inside or by lightly tapping it.
- 4) Wipe off any dirt inside the case with a rag, etc., and assemble the case as before.

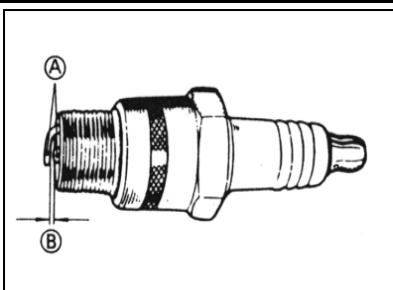


Air cleaner cleaning and replacement next period		
	Cleaning	Replacement
Form Element	Before every operation	Every 100Hours
Paper Element	Before every operation	Every 100Hours

### Reference;

- 1) Do not pull or struggle the foam element strongly when cleaning. The element will tear and become unusable.
- 2) Keep in mind that the product should be cleaned frequently when used in a dusty or dusty work environment.

### 5.2.2 SPARK PLUG INAPECTION



- 1) Remove the spark plug with a plug wrench. If there is carbon on the electrode part **A**, remove it with a wire brush and wipe off any moisture. If there is any moisture, wipe it off.
- 2) If the central ceramic part is cracked or the electrode part is worn out, replace the spark plug with a new one. Replace the spark plug with a new one.
- 3) Adjust the spark plug electrode gap **B** to 0.7-0.8 mm.

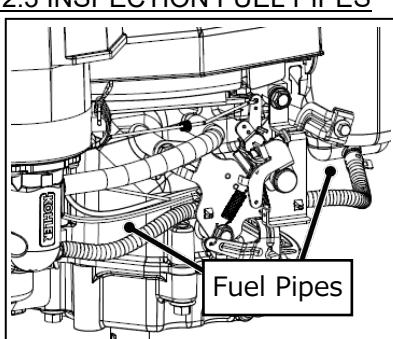
### Reference ;

When tightening, screw in lightly by hand at first (until the gasket touches the seating surface) and then use a plug wrench.

- Be careful not to use a plug wrench to tighten the threads from the beginning, as this may crush the threads.

<Refer to Spark Plug Standards...6.1 Specifications>

### 5.2.3 INSPECTION FUEL PIPES



### ! DANGER

**Do not work with cigarettes or naked flames.**

- 1) Rubber products such as fuel lines deteriorate even when not in use. Along with the tightening band, replace it with a new one every three years or when damaged.
- 2) Always watch for loose or damaged pipes and tightening bands.

### Reference ;

**When replacing pipes, take care to prevent dust and dirt from entering the pipes.**

### 5.3 INSPECTION AND ADJUSTMENT OF MACHINE

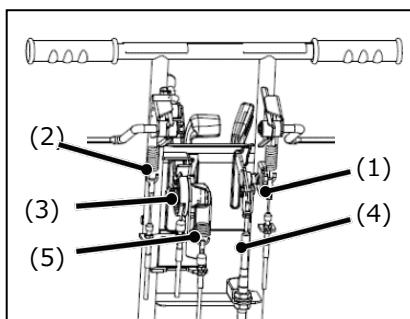
### ! CAUTION

- 1) Always perform inspections and adjustments on a large, flat area with the engine stopped.
- 2) Make sure that each control lever operates properly. (at the beginning of each work).
- 3) The wire belt will initially stretch, so readjust it after 2 to 3 hours of operation.
- 4) Wires and belts are consumables. If there is any abnormality, replace it with a new one. (For size, see 6.1 Specifications.)
- 5) Work the unit slightly to check for abnormal noise or abnormal heat generation.
- 6) After adjustment, be sure to check the operation of both clutch levers "on" and "off".
- 7) Check each part's bolts and nuts for looseness and dropouts and tighten them securely.

- 8) Be sure to install all covers removed for adjustment as they were originally.
- 9) Avoid overwork for the first 2 to 3 hours to allow each part to fully acclimate.
- 10) Do not forget to take care of the equipment after work and inspect it periodically. (Refer to 7.1 Periodic Inspection Table 7.1)
- 11) Look around the entire machine and inspect each part for oil leaks.
  - If oil leakage is found, please consult your dealer.
  - Continued use of the unit with oil leakage is not only dangerous but also leads to damage to the unit.

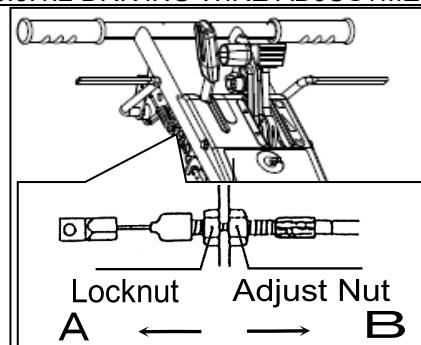
### 5.3.1 BELT&WIRE ADJUSTMENT

#### 5.3.1.1 WIRE ADJUSTMENT



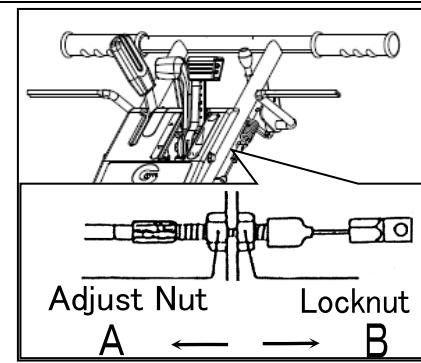
- (1) Driving wire
- (2) Blade Wire
- (3) Throttle Wire
- (4) Changing Speed wire
- (5) Differential lock wire

#### 5.3.1.2 DRIVING WIRE ADJUSTMENT



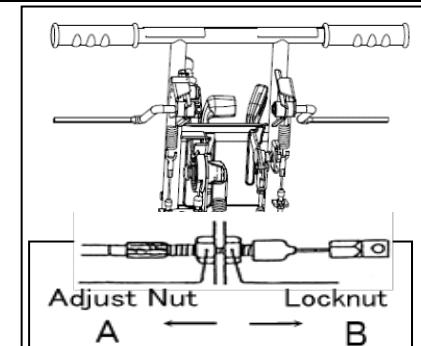
- Adjust with the adjusting nut on the Driving wire referring to the figure on the left.
- If the machine stops when the running clutch is turned on and a load is applied.
  - ...Turn the adjusting nut toward A....
- When it is difficult to stop the machine by disengaging the traveling clutch.
  - ...Adjusting nut toward B...

#### 5.3.1.3 BLADE CLUTCH WIRE ADJUSTMENT

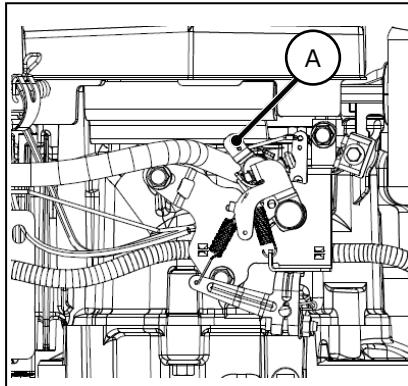


- Adjust the knife wire with the Blade wire adjusting nut, referring to the figure on the left.
- If the Blade lever is cut and the knife does not stop rotating.
  - ...Turn the adjusting nut toward A....
- If the Blade rotation stops when the knife lever is inserted, and a load is applied.
  - ...Adjusting nut toward B...

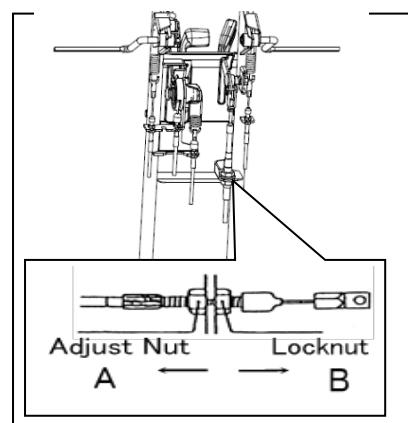
#### 5.3.1.4 THROTTLE WIRE ADJUSTMENT



- Adjust the throttle wire with the throttle wire adjusting nut, referring to the figure on the left
- If the engine does not stop with the throttle lever in the "STOP" position.
  - ...Turn the adjusting nut toward A....
- When the throttle lever is in the " " position and the throttle wire is not pulling lever A fully.
  - ...Adjusting nut toward B...

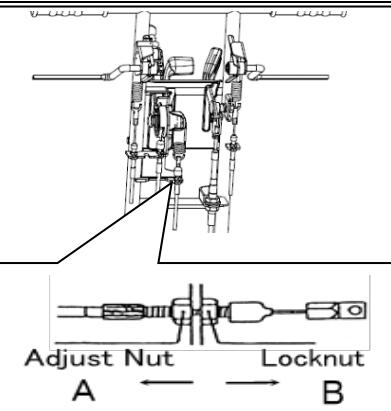


### 5.3.1.5 CHANGE SPEED WIRE ADJUSTMENT



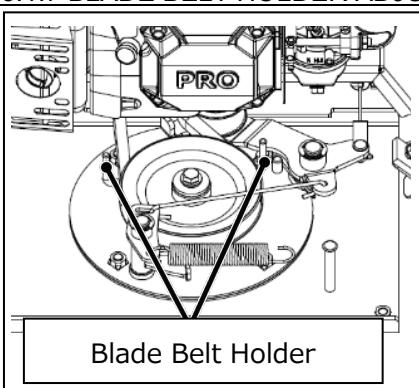
- Adjust with the adjusting nut on the gearshift wire referring to the figure on the left.
- When moving backward with the gearshift lever in the "N" position.
  - ...Turn the adjusting nut toward **A**....
- When moving forward with the gearshift lever in the "N" position.
  - ...Adjusting nut toward **B**...

### 5.3.1.6 DEFFRENCIAL LOCK WIRE ADJUSTMENT



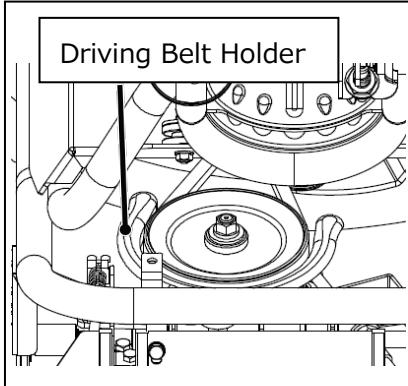
- Adjust the differential lock wire with adjusting nut, referring to the figure on the left.
- When the differential lock is not released with the differential lock lever in the "OFF" position.
  - ...Turn the adjusting nut toward **A**....
- When the differential is not locked with the differential lock lever in the "ON" position.
  - ...Adjusting nut toward **B**...

### 5.3.1.7 BLADE BELT HOLDER ADJUSTMENT



- 1)The blade belt holder is welded to the machine.
- 2)When making adjustments, set the blade lever to the " ON " position so that the gap between the belt and the belt holder is approximately 4 to 6 mm.
- 3)After adjustment, turn the blade lever to the "OFF" position, and check that the belt is lightly held by the belt holder, that the belt lifts off the pulley groove, and that the belt does not move by turning the pulley by hand.

### 5.3.1.8 DRIVING BELT HOLDER ADJUSTMENT



- 1) Do not move the belt holder on the engine side unless necessary.
- 2) When making adjustments, set the driving lever to the "ON" position so that the gap between the belt and the belt holder is approximately 3 to 5 mm.
- 3) After adjustment, turn the driving lever to the "OFF" position, and check that the belt is lightly held by the belt pushers, that the belt lifts off the pulley grooves, and that the belt does not move by turning the pulleys by hand.

### 5.4 INSPECTION AND REPLACEMENT OF BLADE

■ For safety reasons, please perform a pre-operational inspection of the blade. ■

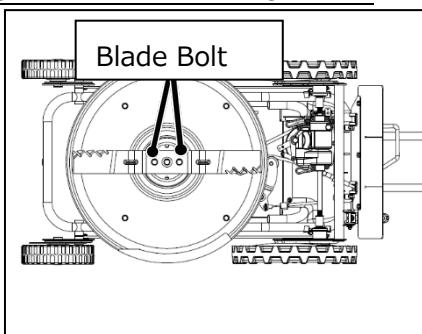
#### ⚠ WARNING

- 1) This machine uses sharp blades. When removing and installing blades for inspection or replacement, wrap a rag around the blade edge and use sturdy gloves (leather gloves, etc.) and never touch the blades directly with bare hands. Failure to do so may result in injury.
- 2) When replacing blades, be sure to specify that the blades are genuine manufacturer's items. The use of an external blade is not only dangerous, but also will not be covered by warranty in the event of a malfunction or accident due to its use.
- 3) Inspect the blade before starting work to see if the blade or blade disc is bent or missing due to the blade hitting a curb, tree root, etc. during the previous operation, or if the blade or blade disc is worn out.
- 4) Continuing to work with a worn, cracked, bent, or missing knife may cause the blade to break off and eject during operation, resulting in serious personal injury or damage to the unit.

#### ⚠ CAUTION

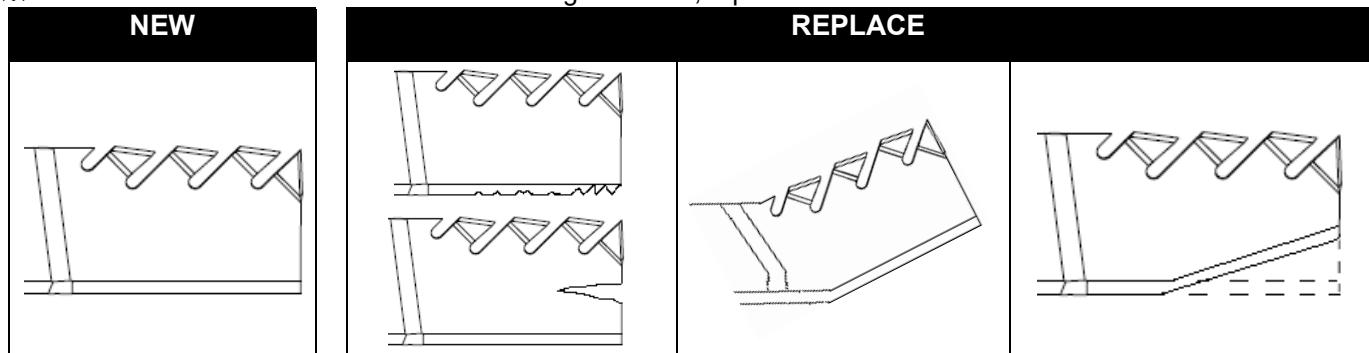
- 1) Replacement of blades should only be performed by persons with correct tools and maintenance skills.
- 2) Blade mounting bolts are also worn. When replacing blades, replace the blade mounting bolts at the same time, and never substitute them with other bolts.
- 3) When tilting the machine, the right side of the machine must face down when viewed from the handlebar side, or the front side must face up, and the carburetor side must face up. If the machine is tilted the other way, oil will flow into the carburetor and the machine will not start.

#### 5.4.1 BLADE REPLACEMENT



- 1) Stop the engine and remove the spark plug caps just to be sure.
- 2) Tilt the unit down on the right side or up on the front side when viewed from the handle side.
- 3) Inspect blades for cracks, bends, and wear.
- 4) Inspect the condition of the blade mounting bolts.  
※ Tightening torque 40 N·m (408 kgf·cm)

※ If it is in abnormal condition as shown in the figure below, replace it.



## REFERENCE ;

- Use of the blade in dry soil or sand will cause rapid wear of the blade, so please inspect the blade frequently.
- It is recommended that you purchase spare knives in advance and keep them on hand.

## 5.5 LONG-TERM STORAGE

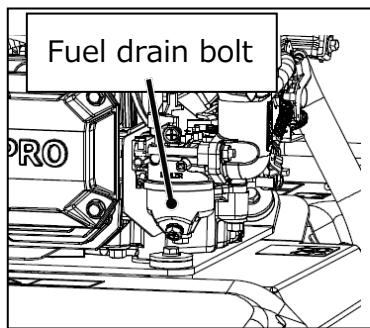
### 5.5.1 BEFORE LONG-TERM STORAGE

- If fuel is left in the fuel tank or carburetor for a long period of time, This can cause problems such as poor starting and loss of power.□

#### **⚠ DANGER**

- 1) When draining fuel, do so in a well-ventilated area, being careful to avoid open flames such as cigarettes and naked flames, and handle drained fuel with care.**
- 2) Make sure that the engine and muffler are sufficiently cool before draining gasoline from the fuel tank or covering the machine.**

1) When the machine is not used for more than 30 days, drain the fuel from the fuel tank and carburetor to avoid starting failure or operation malfunction due to fuel deterioration.



#### 1)Fuel in fuel tank

Please remove it from the fuel supply with a pump, etc.

#### 2)Fuel in carburetor

Remove the fuel drain bolt at the bottom of the carburetor and pull it out.

3)Always close the fuel cock for safety.

- 2) Clean each part carefully. In particular, clean off any mud or dust that has accumulated near the recoil starter, air cleaner, muffler, carburetor, and inside the belt cover with an air blower, etc. Rust should be removed from any rusted areas and anti-rust paint should be applied.
- 3) lubricate all parts and repair any defective parts.
- 4) Store the unit horizontally in a well-ventilated and dry place with a roof.
- 5) Cover the machine with a cover to keep it free from dust. (\*This machine cover is not included in the package.

### 5.5.2 NOTES FOR NEXT USE

#### **⚠ CAUTION**

- 1) Use fresh fuel.**
- 2) Perform a pre-work inspection.**
- 3) Make sure that each control lever operates properly. (at the beginning of each work).**
- 4) Check all bolts and nuts for looseness and dropouts.**
- 5) Move the unit slightly to check for abnormal noise or abnormal heat generation.**
- 6) Avoid overwork for the first 2 to 3 hours to allow each part to fully adjust.**

## 6.CHART

MODEL		MG530
Length x Width x Height(mm)		1,550×580×1,010
Cutting Width (mm)		530
Weight (kg)		71
Cutting Height (mm)		20~65
Blade		Mulching Blade ×1
Belt	Driving	SA26(W600) × 1
	Blade	SB30(W800) × 1
Tire Size		Front : Plastic(Φ200) Rear : Special large-diameter tires (Φ350)
Differential Lock		Equipped
SPEED (km/h) clutch	Forward	1) 1.9    2) 3.1    3) 5.0
	Backward	1)2.3
Grease (g)		100(#00)
E N G I N E	Brand	KOHLER
	Model	CV224-3011
	Output	224
	Engine Oil volume(L)	0.7
	Starting system	Recoil starter
	Spark Plugs	KOHLER 1413214-S
	Fuel Tank Capacity	1.2 L

※Specifications are for technical improvement and are subject to change without notice.

## 7. INSPECTION CHART

### 7.1 REGULAR INSPECTION SHEET

Lack of inspection or maintenance leads to accident or trouble of machine. In order to ensure the good performance and safe condition of machine, make inspection referring the table below.

About the frequency of maintenance, refer the indication D(daily), M(monthly), and Y(early).

Reference	Where to check	Check point	Parts	D	M	Y
Brakes	Brake	Effect of parking brake	Scratch or weakness	Brake shoe	O	O
		Brake rod joint	Deformation or rattle	Rod	O	O
		U nut W nut	Looseness or loss	Joint	O	O
		Split pin	Loss or damage	U nut	O	O
Cutting part	Cover	Condition of cover	Bend, clack or corrosion. Setting of flapper rubber.	W nut	O	O
				Split pin	O	O
	Rotating part	Blade, blade stay and setting	Curve or wear	Cover	O	O
				Flapper	O	O
		Offset deck	Looseness, wear, and loss of bolt and nut	Blade	O	O
			Wear or crack	Blade stay	O	O
			Open/close movement problem	Bolt / nut	O	O
		Blade brake	Deformation or breakage	Offset tire	O	O
			Performance of brake (to stop in 5 seconds)	Offset pedal	O	O
				Return spring	O	O
Engine	Engine body	Accelaration, exhaust, choke	Smoothness of accelataion, color of exhaust gas, smell, smoothness of clogging	Brake	O	O
					O	O
		Muffler, battery	Setting looseness, corrosion, charging status of battery		O	O
				Muffler	O	O
	Engine body	Engine body	Engine setting looseness or clack	Battery	O	O
		Air cleaner	Dirt, choke, damage	Setting	O	O
	Oil	Engine oil Oil filter	Quantity, quality, leak or mixing of obstacle, replacing period	Air cleaner	O	O
			Engine oil : First 8h, later at every 100h, Filter : at every 100h	Oil	O	O
	Fuel	Fuel hose, filter	Leak, deformation, and clogging	Filter	O	O
Ignition	Spark plug	High voltage cord, plug cap	Clack on insulator, carbon between terminal	Fuel route	O	O
			Degradation, clack and split on cap	Plug	O	O
	Cooling	Engine housing	Grass remain inside the housing or not	Cord	O	O
Wire	Harness	Looseness or damage	Inside cover		O	O
				Harness		O
Trans-mission	Belt	Driving belt Blade belt	Tension, clack, damage or dirt		O	O
				Driving	O	O
	Trans-mission, HST	Transmission oil	Quantity, quality, leak mixing of obstacle(water, air)	Blade	O	O
			Transmission oil : first 20h and later each 100h	Transmission oil	O	O
		HST oil	Quantity, quality, leak mixing of obstacle(water, air)	HST oil	O	O
			HST oil(VG46) : First 20h and later each 200h including replacement of oil filter.			O
Moving part	Movement of lever and wire	Movement is smooth or not.	Diff-lock	O	O	O
			Blade	O	O	O
			Sub change	O	O	O
Speed change	Speed lever	Proper movement, N position, and looseness	Lever	O	O	O
Driving part	Tire	Proper air pressure, damage or wear	Tire	O	O	O
	Setting	Looseness, wear, and loss of bolt and nut	Setting	O	O	O
Handle	Setting	Looseness, wear, and loss of bolt and nut	Handle	O	O	O
Meter	Hour meter	Indication of correct hour, proper displaying	Hour meter			O
Label	Warning label/plate	Attachment of label, damage or dirt	Label			O

## 7.2 ENGINE FAILURE AND HOW TO HANDLE

In case of engine trouble, refer to table below and take proper countermeasure.

Problem	Cause	Solution
Starter does not work	Parking brake is not pressed.	Press parking brake pedal and lock it.
	Height of cut lever is not in transport position.	Move the lever to transport position.
	Operator is not seated.	Stay on the seat.
	Safety switch is not adjusted properly	Adjst the switch within 3-5mm allowance.
	Battey is empty.	Charge the battery.
	Battery cord is not connected.	Connect the battery.
	Coupler wiring is not connected.	Connet the wiring.
	Fuse is not good.	Replace the slow blow fuse(30A).
	Harness is cut or damaged	Replace the harness.
Battery is not charged	Charge coil is not good.	Repalce the charge coil.
	Fuse is broken.	Replace the fuse(charge : 20A)
	Regulator is not good.	Replace the regulator.
	Battery is out of life.	Replace the battery.
Engine cannot be started	Throttle lever is not in MINI position.	Move the throttle lever in MINI position.
	Choke lever is not in "start" or "close" position.	Tighten the choke lever when engine is cooled.
	Fuel does not run.	Check the fuel tank and remove the sinking stuff and water.
	Fuel filter is clogged.	Place the fuel cock to "open".
	Air or water is mixed in fuel running system.	Replace the fuel filter.
	Oil is stickly in cold weather and engine rotation is not smooth.	Remove the stuff, check the hose band, and replace if necessary.
	Ingintion coil or unit is not good.	Select proper oil depending on weather.
	Spark plug is not good.	Replace ignition coil or unit.
	Battery is empty.	Check the gap between terminal and adjust.
	Fuel quality is bad.	Replace the spark plug.
	Fuel is not enoguh.	Disconnect the battery when machine is not in use. Keep battery fully charged and put it on machine before use.
		Replace to good quality fuel.
Power is poor	Fuel is not enough.	Add the fuel.
	Air cleaner is clogged.	Clean the element.
	Fuel quality is bad.	Replace the fuel to new.
	Choke is not fully open.	Push down the choke lever completely to open it.
	Cooling system is clogged.	Clearn around th screen guard.
Engine stops	Fuel is not enough.	Add the fuel.
	Fuel cock is closed.	Open the fuel cock.
Exhaust gas is too black	Fuel quality is bad.	Replace to good quality fuel.
	Air cleaner is clogged.	Clean the element.
Black smoke comes out and power is lost	Air cleaner element is clogged.	Clean the element.
	Choke is not fully open.	Push down the choke lever completely to open it.
Blue-white smoke comes out from muffler	Engine oil is too much.	Reduce the engine oil to required level.
	Cylinder and piston ring is are worn	Replace the ring.
Engine rpm is not stable	Choke is not fully open.	Push down the choke lever completely to open it.
	Fuel quality is bad.	Replace to good quality fuel.
Engine stops later	Ignition coil is not good.	Replace the ignition coil.
	Fuel filter is clogged.	Replace the fuel filter.
Exhast gas badly smells	Fuel quality is bad.	Replace to good quality fuel.

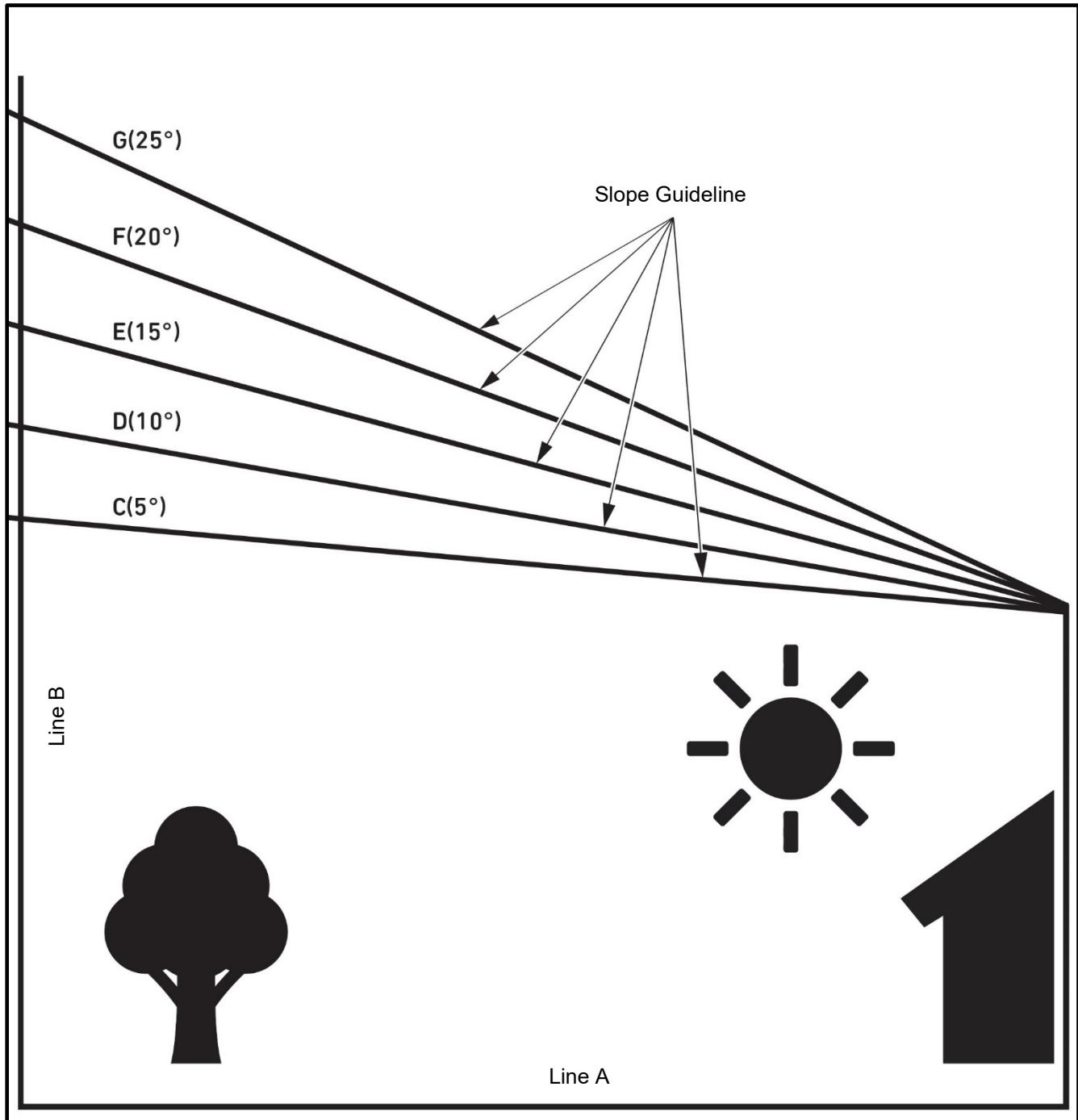
### 7.3 SELF-DIAGNOSIS TABLE

Problem	Cause	Solution
Cut grass is not discharged well.	Grass is wet.	Wait until grass get dry.
	Grass is tall.	Mow higher and cut twice.
	Cutting height is too low.	Raise the cutting height.
	Engine power is too low.	Increase the power to the max.
	Mowing speed is too fast.	Decrease the speed.
Grass is not fully cut	Mowing speed is too fast.	Decrease the speed.
	Engine power is too low.	Increase the power to the max.
	Blade is worn out or broken.	Replace the blade with a new one.
	Some grass is stuck inside of rotary cover.	Clean up and take out grass inside of the cover.
	Grass is tall.	Mow with higher cutting height first.
Cut into the ground	Cutting height is too low.	Raise the cutting height.
	Turning speed is too fast.	Turn slowly.
	The ground is wavy-shaped.	Change the direction of mowing.
	The ground is bumpy and has many ups and downs.	Raise the cutting height.
	Blade stay is bent or deformed.	Replace the blade to new one.
Blade slips	Belt tension is not enough.	Adjust the belt tension.
	Obstacle remains inside blade cover	Clean inside the blade cover.
	Grass remains on pulley	Clean the pulley.
	Belt is worn.	Replace the belt.
Blade does not stop in 5 seconds	Blade brake shoe is worn.	Replace the brake shoe.
	Blade brake is poorly adjusted.	Adjust the blade brake.
There is big vibration	Blades are poorly balanced.	Replace all blades.
	Blade is damaged.	Replace the blade to new one.
	Grass remains around knife neck guard	Clean around the knife neck guard.
	Blade shaft is bent.	Replace the blade shaft.
	Blade belt is broken.	Replace the belt to new one.
	Blade stay is bent.	Replace the blade stay.
	Engine power is too low.	Increase the power to the max.
Mowing workload is heavy	Mowing speed is too fast.	Decrease the speed.
	Some grass is stuck on/around blade shaft.	Clean up the blade.
	Grass is tall.	Mow with higher cutting height first.
	Cutting height is too low.	Raise cutting height.
	Differential lock is OFF.	Move the differential lock lever to ON.
Tires are slipping.	Ground is soft.	Wait until the ground get dry.
Machine does not stop with speed lever in N position	N position is not properly adjusted.	Adjust the turn buckle to modify N position.
Poor power to drive the slope	Driving belt is not well tensioned.	Give more tension on the driving belt or replace the belt.
	HST oil is in short, degraded or air/water is mixed.	Add or replace the HST oil or remove the air.
Offset return action is slow	Return spring is deformed or broken	Replace the return spring
	Bearing is damaged	Replace the bearing
Machine does not move by change pedal operation	HST oil is not enough.	Add HST oil.
	HST hose is getting off or broken	Set the HST hose or replace it if it is damaged
	Parking brake is still locked	Unlock the parking brake
	Driving clutch lever is in OFF position.	Move the driving clutch lever to ON position.
Parking brake does not work well	Brake shoe is worn.	Replace the brake shoe.
	Oil is coming into brake drum.	Remove the oil and replace the oil seal.
	Water is coming into brake drum.	Press and release the brake and dry inside.
	Tire is worn.	Replace the tire.

If you have any questions or do not understand any points, please contact your dealer.

## 7.4 SLOPE GUIDE

The maximum slope angle you can safely operate the machine on is 10 degrees. Use this slope guide to determine the degree of slope before operating. Do not operate the machine on a slope greater than 10 degrees. Copy or cut this page and always bring it with machine.



- 1) Hold this paper in front of you. Make sure line A is horizontal.
- 2) Align line B to a vertical surface such as a pole, tree, building, etc.
- 3) Fold the paper along the slanted guideline (C, D, E, F or G).
- 4) Align the nearest slope guideline to the slope of the ground. This allows you to accurately estimate the slope of the ground to be mown.



## **8. LIMITED WARRANTY**

Each new product manufactured by OREC is guaranteed under the cope of the following terms. The warranty applies to defective parts due to defect in assembling and construction or/and in material imputable to us. It is valid for following period for normal use of the machine :

Professional use : 1 year  
Private use : 2 years

It does not apply to engines manufactured by other companies that also guarantee their materials and whose guarantee is supplied with the machine.

Warranty does not apply to consumable parts, such as blade(including blade bolt), belt, flapper, tire, oil filter and brake pad. In case of professional use to submit warranty, it is mandatory to attach the invoice from the dealer.

1. This guarantee is limited to the sole replacement of the defective parts for one year(in professional use) or for two years(in private use) commencing with the purchasing date of the machine. The guarantee is limited to the parts that are previously shown to and acknowledged by OREC.
2. User is requested to claim his dealer within 30 days from the date of trouble.
3. Each part concerned by a guarantee claim must be returned to OREC's in order to be inspected, repaired or replaced. The part(s) must be returned with freight prepaid and must be accompanied with a proof of the purchase(i.e. dealer's invoice). The part(s) must be packed with the greatest of care to ensure their protection.
- 3° The machine must not have been worn out, repaired or maintained by anyone without OREC's previous authorization. The machine must not have been damaged in a road accident, roughly handled or improperly used.

This guarantee does not compel OREC or its dealer to reimburse the labour costs or the carriage costs to the repairer.

NO OTHER GUARANTEE SHALL BE APPLIED TO THIS MACHINE EXCEPT THE LEGAL GUARANTEE. OREC SHALL NOT BE LIABLE FOR ANY DAMAGE OR COST INVOLVED BY THE MACHINE, FOR EXAMPLE:

1. HIRING COSTS
2. TURNOVER LOSSES
3. WORK DONE BY A REPLACING MACHINE

OREC DOES NOT TAKE ON ANY OTHER OBLIGATION AND DOES NOT AUTHORIZE ANYBODY TO TAKE ON ANY OTHER OBLIGATION THAN THOSE MENTIONED IN THE 3 PARAGRAPHS ABOVE.

To know the name of your dealer, contact our importer in following web site.

To know the name of your dealer, contact our importers:

## 9. NOTES

## **10. EC CONFORMITY DECLARATION**

Business name and address of manufacturer: OREC CO LTD  
548-22 HIYOSHI HIROKAWA-MACHI  
YAME-GUN FUKUOKA JAPAN

owner of the technical documents  
S.A.T. sarl  
88, route d'Evrieu 38110 La Batie Montgascon  
walk behind rotary mower

Designation :  
Mark : OREC  
Type : MG530

Serial Identification :  
Engine :  
- Manufacturer : KOHLER  
- type : CV224  
- Power : 4,4 kW

Width of cut : 530 mm

Conforms to directives: 2000/14/EC, 2006/42/EC, 2004/108/EC

Conformity assessment : 2006/42/EC Annex VIII

Measured acoustic power level : 97.3 dB(A)

Granted acoustic power level : 98 dB(A)

Conformity assessment : 2000/14/EC Annex VI part 1

Notified body n°0088 : Lloyd's Register Quality Assurance  
71 Fenchurch Street London EC3S 4BS UK

Acoustic pressure level at operator's ears : 83.5 dB(A)

Harmonized standards used : EN ISO 5395-2:2013+A2:2017, EN ISO 14982-2009,  
EN ISO 3744-2010, EN ISO 3746-2010,  
EN1032-2003+A1-2008, EN ISO 20643- 2008+A1:2012

made at : Fukuoka, January 1, 2024

  
Signed : Haruhiko Imamura  
Function : Managing director

## **11. MEASUREMENT OF VIBRATIONS**

Mark : OREC  
Engine : CV224

Type : MG530

Accelerometer Position	
100mm from external side of handlebar(Left side)	6,40 m/s <sup>2</sup>
100mm from external side of handlebar(Right side)	6,34 m/s <sup>2</sup>

**SERIAL NO.**  
**MODEL**