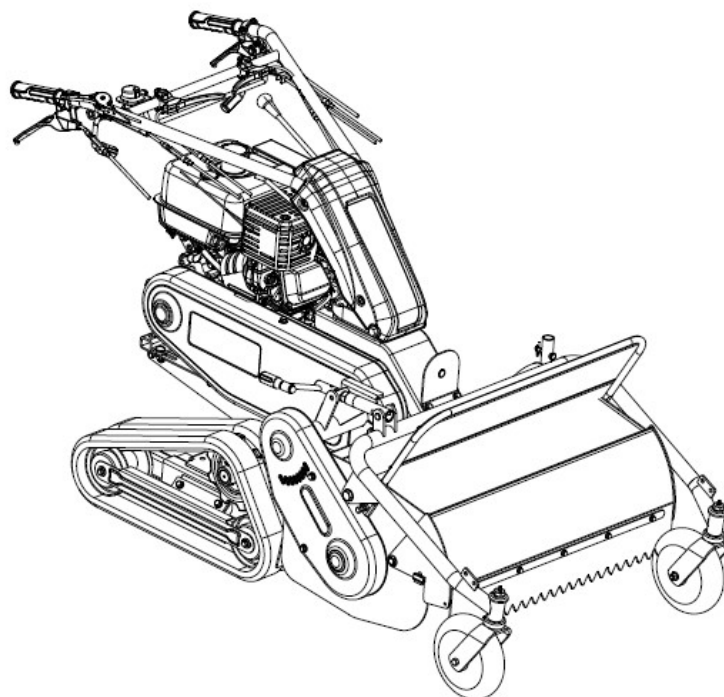


Instruction manual

Self-Propelled Lawn Mower: Bull Mower

HRC665 HRC805



0334-84400



- Before using the product, carefully read and fully understand the important danger parts appearing in the text of the instruction manual.
- When purchasing this product, consult the retailer for safe usage.
- Keep the instruction manual in a safe place so that you can refer to it anytime.
- To maintain safety, please undergo an annual inspection. (Charged)
- When accepting various services, please be sure to specify genuine parts from the Manufacturer.

//// OREC

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■ About This Instruction Manual

- Please read this user manual carefully before using this product.
- If you lend or transfer this product to someone else, be sure to provide them with this manual as well.
- If this manual is lost or damaged, please order a replacement directly from the Dealer shop.

《Introduction》

- ✓ Thank you very much for purchasing this product.
- ✓ This instruction manual explains the correct handling methods and simple maintenance procedures to help you keep this product in optimal condition at all times and ensure safe operation.
- ✓ Be sure to read this instruction manual carefully before use to fully understand safe operation and proper handling methods, and use this information to ensure safe and efficient operation.
- ✓ Please keep this manual in a safe place so you can refer to it at any time. If it is lost or damaged, please purchase a replacement from your dealer or download it from the manufacturer's website.

《Definitions and Symbols》

This manual uses the following definitions and symbols based on the level of danger (or severity of an accident). Please fully understand the meaning of the symbols below and follow the instructions accordingly.

Symbol	Definition
 Danger	Indicates that failure to follow the warning may result in death or serious injury.
 Warning	Indicates a situation where failure to follow the warning may result in death or serious injury.
 Caution	Indicates a situation where failure to follow the warning may result in injury. It also indicates situations where failure to comply or take corrective action may damage the product itself.
REFERENCE	Indicates product performance information that is useful to know for operation and maintenance, as well as matters related to operations that are prone to error.

《Regulations Regarding This Product》

- 1) This product has been developed as specialized machinery for agricultural workers; therefore, do not use it for any other purposes (such as rental use where the operator cannot be identified). Doing so may void the warranty.
- 2) This product may not be able to cut vines, creepers, and other ground-hugging vegetation.
- 3) This product was developed and manufactured for use within Japan.
Please note that as it does not comply with overseas laws, regulations, rules, or safety standards, we cannot provide any services, including quality or performance guarantees, or repair consultations.

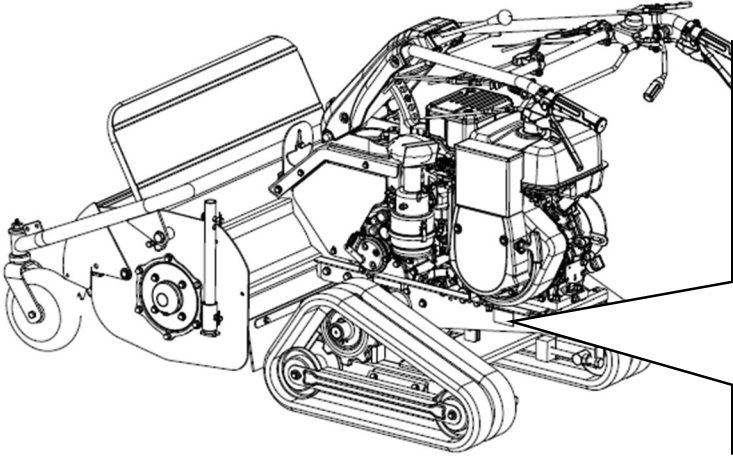
《Important Notice》

- 1) Please note that due to changes in parts resulting from improvements in performance and durability, as well as other specification changes, there may be some discrepancies between the specifications of the product you own and the contents of this manual.
- 2) Please note that unauthorized copying or reproduction of any part or all of this manual constitutes copyright infringement, except as permitted by law.
- 3) Photographs and illustrations are used in this manual to help you clearly understand the parts being described; however, parts not relevant to the explanation may be omitted.

《Warranty, Agreement, and Disclaimer》

- 1) The warranty period for this product is one year from the date of purchase as a new item, or 50 cumulative hours of use (for contract work, six months or 50 cumulative hours of use), whichever comes first.
- 2) It is impossible to anticipate every possible precaution. Users must also exercise caution regarding safety when using the product.
- 3) If you have any questions after reading this manual, do not attempt to operate the product on your own; be sure to consult the retailer where you purchased the product (hereinafter referred to as the “retailer”).
- 4) Regular inspections and maintenance are essential for the safe and efficient continued use of this product. Please be sure to have the dealer perform the regular inspections and maintenance listed in the “Periodic Inspection Checklist” and “Annual Inspection Checklist” at least once a year (for a fee). Failures or accidents resulting from failure to perform these inspections and maintenance, or from use exceeding specifications, modifications, or other non-compliance with this manual, are not covered by the warranty.
- 5) The supply period for replacement parts for this product is nine years after **production** has been discontinued. However, even within this supply period, we may need to discuss delivery times and other details regarding special parts.

6) If you have any questions or concerns regarding service, please consult your dealer. When doing so, please refer to the section below to confirm **the "product model and serial number,** as well as **the engine model name** (stamped or affixed to the engine itself)," and provide this information when contacting us.



Type Description	Lawn Mower (Walk-Behind)
Model Name Model	HRC0000
Serial No. Serial No	J0000000000
Distributor	O-Reck Co., Ltd.
Orec Co., Ltd. MADE IN JAPAN Orec Co., Ltd. FABRIQUE AU JAPON	

Location of the "Serial Number" Label on This Unit

1. Before Using Your : 〈Please Read This Carefully for Safe Use〉

1.1 Operating Conditions



Warning

- 1) Do not use this machine if you do not understand the contents of this manual.
- 2) As a general rule, only the owner should use this machine. If you must lend the machine to someone else, explain how to operate it and instruct them to carefully read the "Operating Instructions" for both this machine and the engine (applicable product) to fully understand the operating procedures and safety points before operating the machine.
- 3) Do not operate the machine if you are unable to perform normal operating procedures due to fatigue, illness, medication, or other factors.
- 4) Do not allow persons under the influence of alcohol, pregnant women, children (junior high school students and younger), or untrained persons to operate the machine.
- 5) To prevent getting caught in the rotating parts of the machine, wear appropriate clothing, such as a long-sleeved jacket and long pants with a cinched hem. Smoking while operating the machine and wearing a towel around the waist are strictly prohibited.
- 6) Depending on the product, use appropriate equipment such as safety shoes (or boots) with non-slip soles (spikes), a helmet (or hat), safety goggles, gloves, and shin guards.
- 7) Do not use the machine on steep slopes, uneven ground, muddy areas, or other locations where there is a risk of falling or slipping, or where the machine could become buried.

1.2 Before Starting Work

1.2.1 Precautions Before Operation



Danger

Exhaust fumes may cause carbon monoxide poisoning. Do not operate or work in areas with poor ventilation, such as indoors.



Warning

- 1) Never modify this machine in any way that could interfere with safe operation.
(Cutting off covers, installing non-standard parts, using non-specified belts or oil, removing safety devices, etc.)
〈We assume no responsibility whatsoever for accidents or malfunctions resulting from such modifications.〉
- 2) Ensure that there are no people, animals, vehicles, equipment, buildings, or other tangible assets in the vicinity. Also, check the safety of the surrounding area and place markers at dangerous locations or areas requiring caution—such as obstacles in the

**Warning**

field, ditches, or soft road shoulders—and do not approach them.

- 3) Remove stones and other foreign objects in advance. If there are obstacles that cannot be removed, install warning signs or safety barriers to indicate restricted areas before beginning work. Additionally, for safety reasons, operate the machine at a higher cutting height than usual in such fields. Chipping of the blade or the scattering of foreign objects such as stones poses a danger.
- 4) Remove any rocks, metal, or other objects that could produce sparks upon contact with the blade beforehand. If they cannot be removed, place a conspicuous marker to indicate the area and ensure you do not approach it.
- 5) When mowing dry grass, periodically check the area around the engine and exhaust pipe—which can become very hot—for accumulated grass clippings and clean them as needed.
- 6) Dry grass can catch fire spontaneously or from external sources. When mowing dry grass, designate a supervisor in addition to the operator and ensure that the area is constantly monitored.
- 7) Do not mow grass when a dry weather advisory, high wind advisory, or forest fire advisory is in effect.
- 8) To prevent falls, when driving near rivers, cliffs, or uneven terrain (road shoulders), be aware of the risk of landslides or falls and drive only on safe, level ground.
- 9) It is dangerous to use the machine in the dark or when visibility is poor. Do not use the machine when you cannot fully assess the surrounding conditions.

**Caution**

- 1) Avoid using the machine in rainy weather or in conditions where it may be exposed to large amounts of water, such as in puddles.
- 2) Pay attention to other weather conditions and give careful consideration to your decision to perform work and your choice of equipment.

1.2.2 Pre-Operation Inspection and Confirmation

**Warning**

- 1) Before starting work, always confirm that any repairs identified after the previous work session have been completed, and never start work until repairs are finished.
- 2) Operating the machine with safety covers, standard safety devices, or related parts removed is extremely dangerous. To prevent accidents, always use the machine with these parts installed. If any abnormalities are found, repair them and confirm that the machine is in normal working order before operating it.

- 3) When the work clutch (knife clutch, etc.) is in the "OFF" position, check that the V-belt has come to a complete stop. If it is moving even slightly, stop the engine and adjust the belt tensioner and wire.
- 4) Knife detachment is dangerous. Tighten the knife set bolts and nuts securely. Also, replace old parts with new ones.
- 5) If the machine has a cover that opens for blade replacement, it is dangerous to use it while the cover is open. Always use the machine with the cover closed.
- 6) Be sure to remove any grass clippings from the engine cooling air intake, the area around the cylinder, and especially around the exhaust pipe (which becomes very hot) and any accumulated debris on the machine before starting work. Failure to do so may cause engine seizure or a fire.

Also, be sure to clean not only the exterior but also the interior, including the air cleaner and the HST fan cover (on applicable models), to remove any accumulated grass clippings.

1.2.3 No Open Flames / Refueling



Danger

- 1) **Open flames are strictly prohibited in the vicinity of the machine, not only during operation and refueling.** There is a risk of ignition and burns. Never smoke, light a fire, or use any other open flame near the machine.
- 2) Refuel only after the engine has stopped and the muffler has cooled sufficiently.
- 3) For machines with a maximum fuel level mark, keep the fuel level below the mark (use even less when operating on slopes). If you have added too much fuel, drain it until the level 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, posing a risk of burns or fire.

1.3 During Operation

1.3.1 Precautions During Operation



Warning

- 1) For safety, drive with plenty of room to spare, and avoid sudden starts, stops, and sharp turns.
- 2) Do not work in an uncomfortable position, and take breaks of about 1 to 2 hours depending on your physical condition.
- 3) To prevent people (especially children) and pets from entering the work area (within a 15-meter radius), set up signs indicating that mowing is in progress or install guard ropes, and ensure that no one comes within 15 meters. If people or pets approach, stop work immediately and turn off the engine.

- 4) Do not place flammable or hazardous materials near the machine while it is in operation. Also, the exhaust muffler becomes very hot. Touching it while the machine is in operation or immediately after work is completed may result in burns.
- 5) When working on slopes, use the machine only on slopes with a gradient of 10° or less. Work in a lateral direction (along the contour lines) rather than up or down the slope. Working up or down the slope carries the risk of the machine sliding down or the operator slipping and becoming entangled in the machine.
- 6) Take sufficient precautions, such as using anti-slip measures, and do not operate the machine in areas where slipping is likely even with these measures.

1.3.2 Operating Precautions



Warning

- 1) When starting the machine, set the travel (main) clutch and work (knife/rotary) clutch to the "OFF" position. If the machine has a neutral gear, set the gear lever to "neutral," and if it has brakes, apply the brakes before starting.
- 2) Exercise extreme caution when turning on slopes. There is a risk of losing your balance, falling, and sustaining injuries.
- 3) For safety reasons, do not operate the shift lever or clutch levers unnecessarily on slopes. There is a risk of slipping, falling, or sliding.
- 4) When reversing, confirm that there are no people (especially children), animals, or obstacles in the way, and pay attention to your footing to avoid being caught between the machine and an obstacle or falling off a cliff or step. (Applicable Products)
- 5) When working near trees or walls, be extremely careful not to get your body or hands caught between the machine and greenhouse supports, tree branches, or wire fences, and be aware of the risk of being struck or caught by branches.
- 6) Pay particular attention to your footing when turning, and take care not to get caught in the working parts (knives, claws, etc.) or the running gear (tires, tracks, etc.).
- 7) When changing the cutting direction, do so only after confirming safety in the forward and backward directions.
- 8) Operate the work (knife/rotary) clutch only after confirming that there are no people (including children) or animals in the area and taking all necessary safety precautions.

1.3.3 Inspection, Stopping, and Cleaning During Operation



Warning

- 1) If the machine collides with or becomes entangled with a foreign object during operation, immediately stop the operation (mowing, tilling, etc.) and shut off the engine. Then, be sure to check the blades, blade brackets, tines (for applicable models), and covers for looseness, chips, or bending, and tighten, repair ·

or replace them as necessary.

- 2) Clean the machine immediately if you notice grass clippings or debris accumulating in the cooling air intake, near the cylinder, or around the exhaust pipe (which becomes particularly hot). Failure to do so may cause engine seizure or a fire.

In addition to the exterior, please clean the interior regularly as well. Please also clean the inside of the air cleaner and remove any grass clippings that have accumulated on the HST fan cover (applicable models) at the same time.



Caution

- 1) When performing inspections during operation, be sure to stop the engine and wait until all parts have cooled down. Wear sturdy gloves, such as leather gloves, to protect your hands.
- 2) Always stop the engine when leaving the machine. Also, be sure to park on stable, level ground.
- 3) When stopping the engine, please follow these steps for the applicable product:
(1) Apply the brakes. (2) Remove the key. (3) Close the fuel valve.



Caution

- 4) Abnormal noises, odors, or overheating during operation may cause a fire, so stop the engine immediately and inspect and repair the machine.
- 5) If you notice any abnormalities during operation, be sure to stop the engine before performing an inspection.

1.4 Precautions for Loading, Unloading, and Transport



Danger

- 1) When transporting this machine, be sure to stop the engine and set the fuel valve to the "Closed" position. Spilled fuel from a leak could ignite.
- 2) Do not tilt the machine more than necessary. Fuel may leak out.



Warning

- 1) Use a vehicle suitable for the product when transporting it. (Loading capacity, bed size, potential for interference)
- 2) Select a flat, safe location for the transport vehicle. When loading, turn off the engine, apply the parking brake, and use wheel chocks to prevent the vehicle from moving.
- 3) Adjust the height so that the knives and tines do not come into contact with the bridge. Additionally, for applicable models, perform the following: ① Set the working clutch to the "OFF" position. ② Set the differential lock to the "ON" position.

- 4) Securely position a sturdy bridge that meets the standards on a gentle slope (15 degrees or less), reduce engine speed, and perform loading in "Forward" and unloading in "Reverse," both at low speed and slowly.
Do not put the (main) clutch in the "off" position while driving on the ramp. Also, do not operate the side clutch (for applicable models) or shift gears.
- 5) Please exercise extreme caution when the machine crosses the boundary between the ramp and the truck bed, as the center of gravity will shift suddenly.
- 6) Secure the machine firmly with a sturdy rope or similar during transport. Also, please drive safely.

1.5 Inspection and Maintenance

◎ **Regular inspections are essential to maintain quality and performance.**

Please perform pre-operation and monthly inspections yourself, and request annual inspections from a dealer (for a fee).

⚠ Please note that we cannot be held responsible for accidents or malfunctions resulting from failure to perform regular inspections.



Warning

Failure to follow the instructions below may result in burns, personal injury, or mechanical failure.

- 1) In addition to performing daily inspections and maintenance before and after use, please conduct regular inspections and maintenance to keep the product in a safe and comfortable condition at all times.
- 2) When performing inspections, adjustments, or maintenance, stop the engine and wait until the muffler and other overheated parts of the transmission case have cooled completely. Then, wear sturdy gloves (such as leather gloves) and use the appropriate tools correctly.
- 3) Perform inspections, adjustments, and maintenance on a flat, hard, spacious, and well-lit surface. Always be mindful of the machine's balance and take great care to prevent it from tipping over.
- 4) When lifting the machine for inspection, be sure to take measures to prevent it from falling.
- 5) When replacing or removing working parts (knives, tines) or running gear (tires, tracks), check to ensure they are securely attached to the designated locations and tightly fastened.
- 6) For safety reasons, when replacing working parts (knives, tines) or running gear (tires, tracks) with new ones, be sure to replace the mounting bolts with new genuine manufacturer parts as well.

- 7) Damage to the safety covers on the belt and knife sections, as well as the splash guards, is dangerous. If you notice any abnormalities during operation, do not continue working; stop immediately to inspect the machine. Be sure to inspect it again after finishing work and make any necessary repairs.
- 8) Be sure to reinstall any removed covers correctly in their original positions.
- 9) Never install non-approved attachments or modify the machine.
- 10) As fuel lines age, they can cause fuel leaks, which is dangerous. Replace them with new ones every three years, or whenever they are damaged, along with the clamps.
- 11) All moving parts may become less responsive over time. Applying excessive force can cause damage or result in injury due to unexpected movement, which is extremely dangerous. Please perform maintenance with safety in mind.

**Caution**

Failure to follow the instructions below may cause mechanical failure.

- 1) When washing this machine, do not spray water on the engine area (electrical components, air cleaner area, fuel cap, etc.) or on warning labels.
- 2) Be sure to thoroughly inspect and adjust the clutch, throttle, gear shift, and other components.
- 3) When covering the seat, to prevent burns or fire, do so only after the engine has been shut off and you have confirmed that high-temperature areas such as the muffler and engine body have completely cooled down.

1.6 Storage

**Warning**

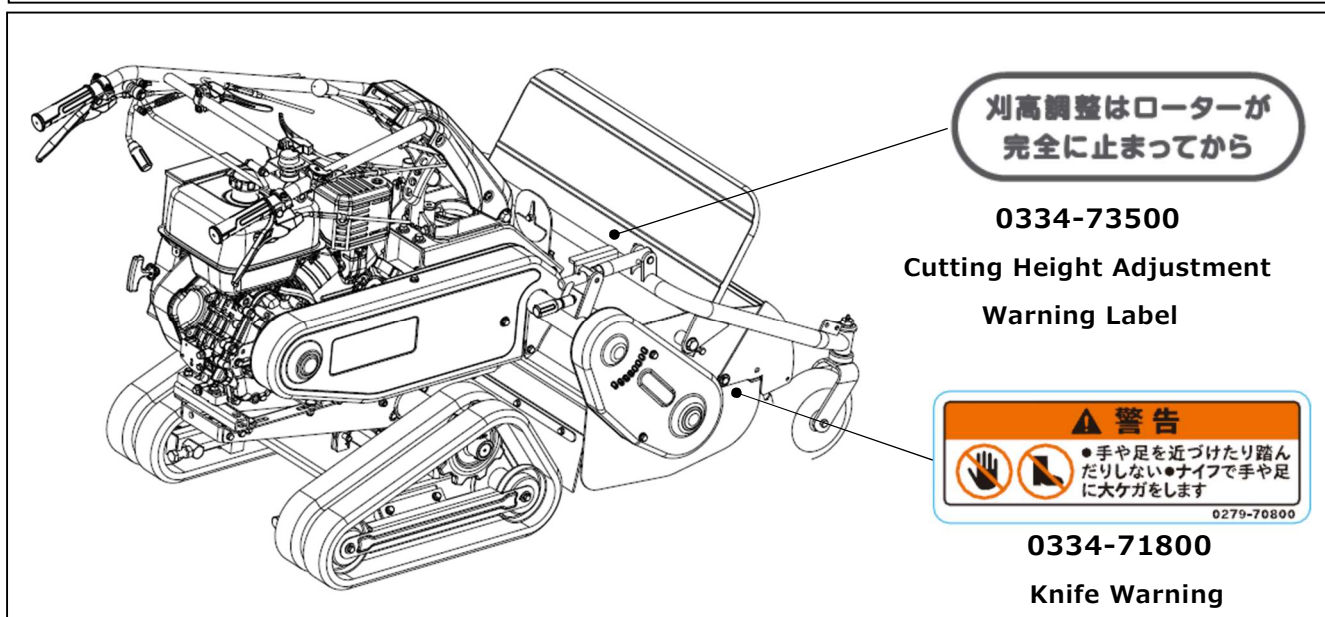
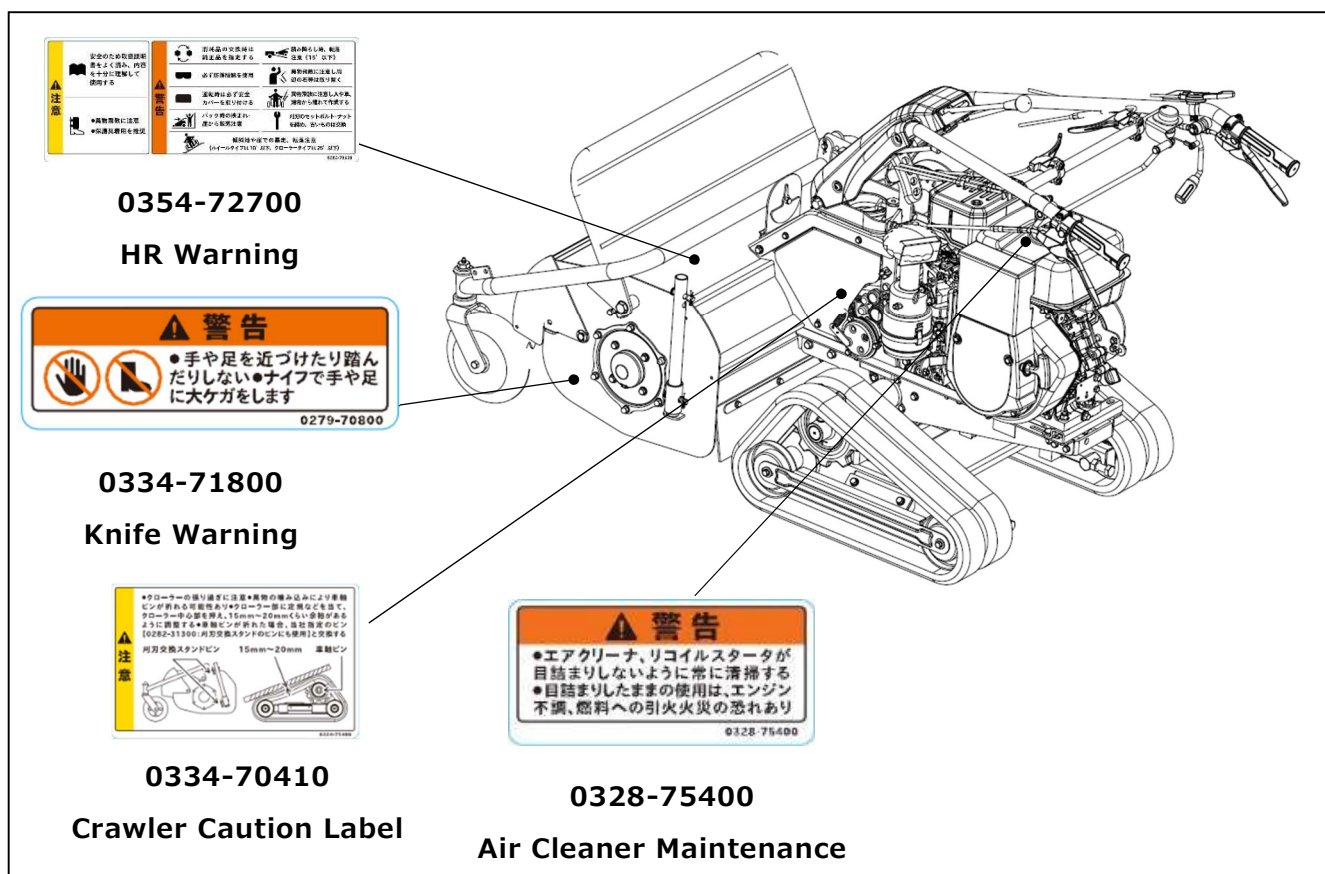
- 1) For safety, be sure to close the fuel cock.
- 2) If storing this machine for an extended period, store it indoors. (See 5.5 "How to Store for Extended Periods")
- 3) Remove any dirt, deposits, or foreign objects from the main unit and working parts.

1.7 Warning Labels

**Warning**

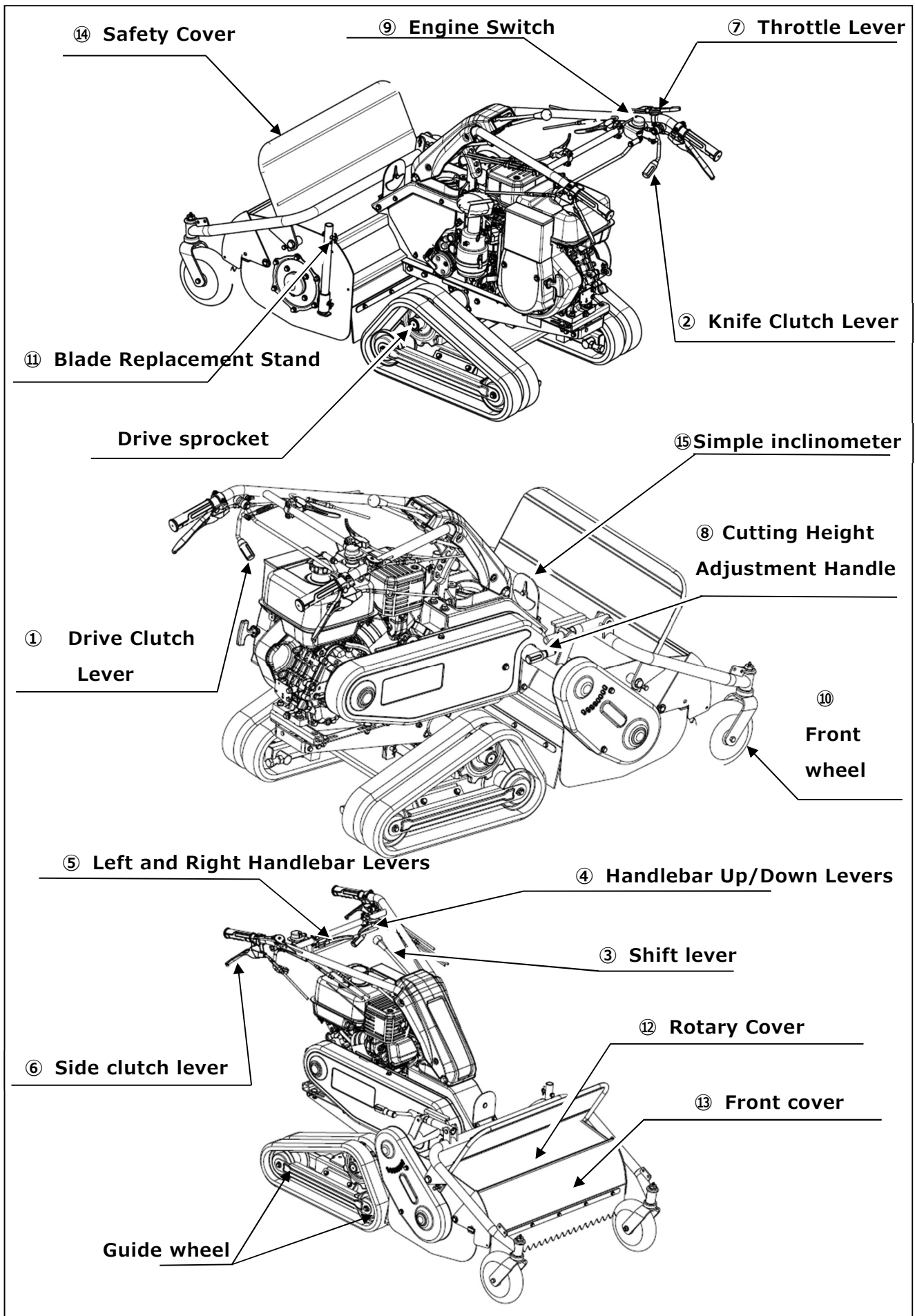
- Warning labels have been carefully selected from the important safety precautions listed in this section as being of particular importance and are affixed to the main unit. Be sure to read them before use, fully understand them, and strictly follow them.
- *If a warning label becomes difficult to see, be sure to purchase an identical replacement from a dealer and affix it so that it is always clearly visible. (See Section 6.3: List of Consumables)

Warning Label Location



2. Names and Functions of Components

2.1 Names of Parts



2.2 Function of Each Component

① Drive Clutch Lever

Engage **or** disengage the drive. Pulling the lever **up** engages **the drive**; pushing it down disengages it.

The drive clutch lever is connected to the parking brake. Moving the lever to the "Off" position automatically engages the parking brake.

② Knife Clutch Lever

Engages and disengages the knife rotation. Similar to the drive clutch lever, pulling it **up** engages **the knife**, **and** pushing it down disengages **it**.

The knife clutch lever is linked to the knife brake. When the lever is moved to the "Off" position, the knife brakes engage, and the knife stops rotating within approximately 5 seconds.



Caution

Regardless of the drive clutch position, if the knife clutch lever is set to the **"On"** position while the engine is running, the knife will rotate at high speed. Please exercise extreme caution when operating the lever.

③ Shift Lever

This lever is used to select the driving speed. There are 3 forward gears, 1 reverse gear, and a neutral "N" position located between reverse and 1st gear.

The positions of each lever and the corresponding speeds are shown in the table below.

	Engine	Reverse 1	1st	2nd	3rd gear
Travel Speed	Willbe (Meiki Power)	0.91km/h	0.91km/h	1.93km/h	3.30km/h
	HONDA	0.80km/h	0.80km/h	1.69km/h	2.94km/h



Caution

Be sure to set the drive clutch lever to the "OFF" position and stop the machine before shifting gears.

④ Handlebar Up/Down Lever

Adjust the handlebar height according to the operator's physique or the work conditions.

Adjust the handlebar position so that it is around the operator's hip level.

2. Names and Functions of Each Part

⑤ Handlebar Left/Right Levers

Depending on the work conditions, the handlebar can be locked in place at two positions on each side and one position in the center, for a total of five positions.

⑥ Side Clutch Lever

Use this to change the direction of travel. This machine turns in the direction you pull the lever. (Grip right to turn right, Grip left to turn left.)

⑦ Throttle Lever

Adjusts the engine speed.

⑧ Cutting Height Adjustment Lever

Adjusts the cutting height.

Turning it to the right lowers the cutting height, and turning it to the left raises it.

If there are ridges in the field, adjust the cutting height to match the higher side to prevent mud or stones from getting caught in the blade.



Warning

Setting the cutting height too low may cause the following problems. If you observe any of the following symptoms, the cutting height is too low; please raise it.

- (1) Increased scattering of foreign objects such as stones.
- (2) Mud is scraped off and scattered, adhering to the inside of the knife cover, which impairs the discharge of cut grass and causes unnecessary loss of horsepower.
- (3) Premature wear or breakage of the blade, loosening of mounting bolts and nuts, etc.

⑨ Engine Switch

Turns the engine "ON" or "OFF".

⑩ Front Wheel

The front wheel is free-spinning, allowing for smooth turning on flat ground.

⑪ Blade Replacement Stand

Use this to secure the rotary cover in the raised position when inspecting or replacing the blades. 〈See 5.4.1 Inspection and Replacement of Knives〉

⑫ Rotary Cover

The blade rotates at high speed inside the cover, minimizing the scattering of grass and debris.

⑬ Front Cover

Opens and closes automatically depending on the amount of grass. This minimizes the scattering of grass and debris forward.

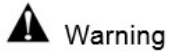
Can be secured during knife replacement or cleaning inside the cover.

(See 5.4.1 Inspection and Replacement of Knives)

2. Names and Functions of Each Part

⑭ Safety Cover

Prevents flying debris such as grass and foreign objects from reaching the operator.



Warning

Covers are essential components for preventing the scattering of foreign objects and ensuring safety.

Using the machine in an abnormal condition is extremely dangerous due to the risk of debris scattering. Be sure to follow the instructions below.

- 1) If the rotary cover, front cover, or safety cover is damaged or deformed, be sure to repair or replace it.
- 2) Do not perform work with the front cover or safety cover removed.
- 3) Always use the front cover in a free state. Secure the front cover only when replacing the knife or cleaning the inside of the cover.

⑮ Simple Inclinometer

When working on sloped terrain, the needle on the simple inclinometer will tilt, providing a rough indication of the angle. For more accurate angle measurements, please use a handheld protractor or similar device.



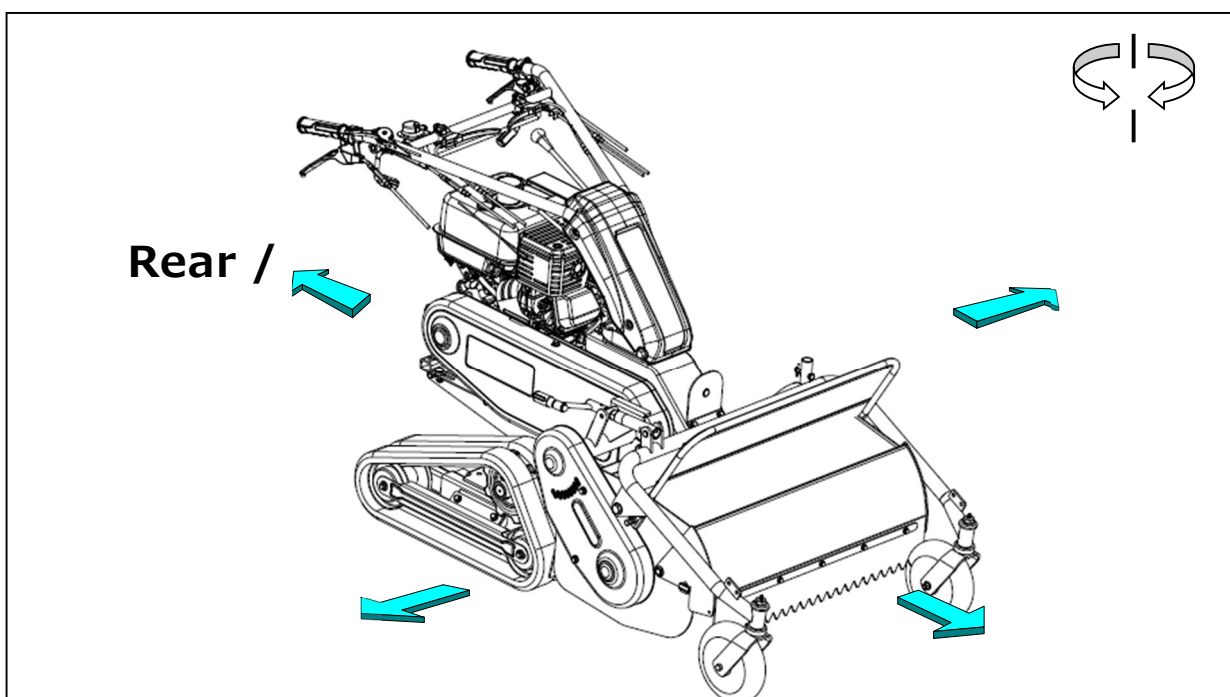
Warning

Working on slopes steeper than 25° is dangerous; please work on slopes of 25° or less.

2.3 Directions

The front, rear, left, and right of this machine are indicated from the operator's perspective, as shown in the figure below.

The terms "forward" and "reverse" used in this manual also refer to the direction as seen from the operator's perspective.



3. Pre-Operation Inspection

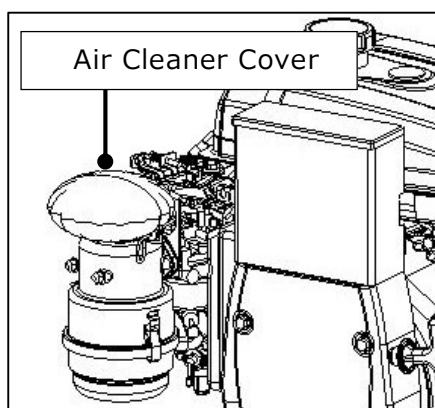
- Before starting work, review "1.2 Before Starting Work" and the "7.1 Periodic Inspection Checklist" below.

*If you have any questions or notice any abnormalities, be sure to consult the dealer from whom you purchased the product.

Pre-Operation Inspection Checklist (Summary from the Periodic Inspection Checklist)		
	Item	Inspection Details
Engine	① Engine Oil	Check "oil level and condition" (see 3.1)
	② Air Filter	Check for "contamination" and clean (see 5.2.1)
	③ Engine	Check for "looseness" and "cracks"
	④ Exhaust System	Check for clogs caused by debris, etc., and clean
	⑤ Fuel Tubing and Fuel Filter	Check for "fuel leaks," "deterioration," "deformation," and "clogging," and clean
This unit	① Knife (claw)	〈See 5. Inspection and Maintenance〉
	② Brakes (Applicable Products)	"1" Check for loose or missing bolts and nuts "2" Deformation, wear, or interference
	③ Tires (Crawler)	"3" Does it move smoothly, or is it seized?
	④ Levers	"4" Remove foreign objects such as dirt, grass, and straw
	⑤ Covers	
	⑥ HST oil (applicable products)	Check "Oil Level and Contamination"

Warning

- 1) Always perform inspections, oil refills, adjustments, and maintenance with the machine parked on a flat, open area and the engine turned off.
- 2) When starting the engine and checking the operation of the drive clutch lever, etc., first confirm the position of each lever and ensure the surrounding area is safe.
- 3) Please read the warning labels affixed to this machine carefully.

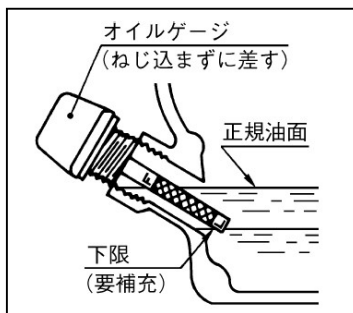


Caution

Always check the air cleaner cover for tears or other damage before starting work.

Please note that using the machine with a torn cover will adversely affect various parts of the engine and shorten its service life.

3.1 Checking the Engine Oil



Place the engine on a level surface and check the engine oil.

◎ Willbe (Meiki Power) Engine

- ① Remove the oil dipstick.
- ② Insert the oil dipstick into the filler neck without screwing it in, and check that there is oil between the upper and lower marks.
(The filler cap doubles as the oil dipstick.)
- ③ If the level is low, top it off so that the oil reaches near the upper limit.

“Refer to the dipstick for the correct amount of oil to add”



Caution

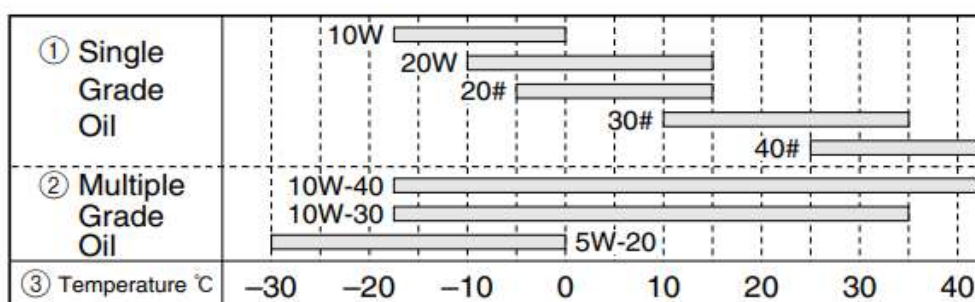
If checking the engine oil after running the engine, wait at least 5 minutes after turning off the engine and ensure the muffler and engine block have cooled sufficiently before proceeding.

- 2) This unit contains a small amount of engine oil at the time of shipment.

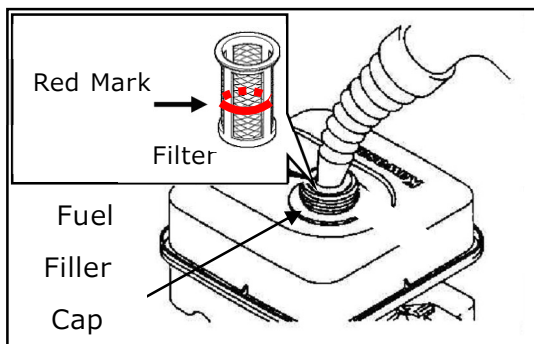
*Be sure to check the engine oil level before starting the engine.

- 3) Use high-quality, fresh engine oil rated SE or higher, and select the appropriate type based on the ambient temperature.
- 4) After refilling, be sure to tighten the oil dipstick securely. If it is not tightened properly, engine oil may leak.

"Recommended Oil"



3.2 Fuel Inspection and Refueling



① Place the unit on a level surface, remove the fuel cap, and check the fuel level through the fuel filler neck.

② Use the red mark on the filter as a guide for the maximum fill level, and refuel through the filler neck, taking care not to spill any fuel.

<Fuel Type: Unleaded Regular Gasoline>

<Fuel Tank Capacity: 6.1 L (See Specifications)>

③ After refueling, be sure to tighten the fuel cap securely.

*When using on a slope, fill to a level even lower than ② (to prevent spillage).



Danger

1) **Open flames are strictly prohibited during operation and refueling.** There is a risk of fire or burns.

Never smoke, light a fire, or use any open flame near the machine.

2) Refuel only after the engine has stopped and the muffler has cooled sufficiently.

3) Do not fill the tank beyond the maximum level (use even less fuel when operating on a slope). If you overfill the tank, remove excess fuel until the level is below the maximum. 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 or a fire.



Warning

Perform refueling in a flat, stable, and well-ventilated area.



Caution

1) When refueling, ensure that no foreign objects such as dust, grass, rain, or snow enter the fuel tank. This could cause engine malfunction.

2) Do not use anything other than unleaded regular gasoline. Doing so may cause engine damage.

3) Gasoline degrades over time. If you do not plan to use the vehicle for more than a month, replace the gasoline with fresh gasoline. Also, do not use gasoline stored in plastic containers. This may cause engine malfunction.

4. Operating and Work Procedures



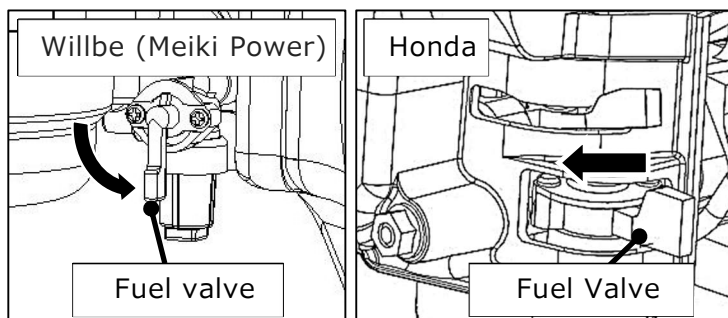
Warning

* Be sure to read 〈1. Precautions for Use〉 before operating the machine.

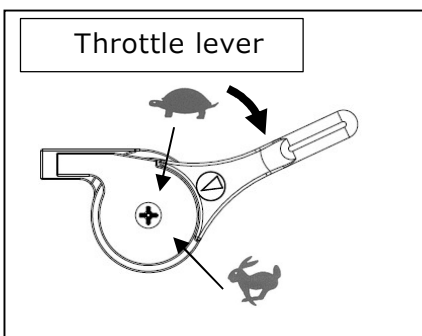
In particular, please read and fully understand "1.1 Operating Conditions," "1.2 Before Starting Work," and "1.3 During Operation" before operating or performing any work.

4.1 Starting and Stopping the Engine

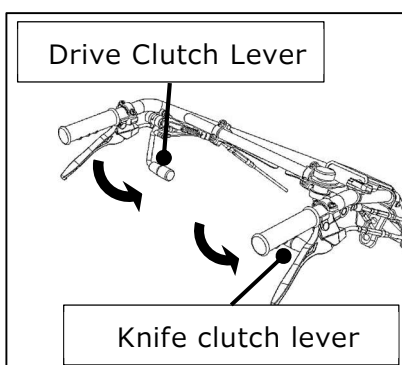
4.1.1 How to Start the Engine



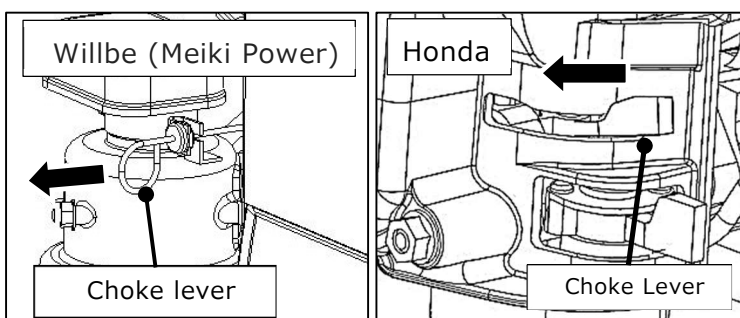
- ① Set the fuel cock to the "ON" position.



- ② Set the throttle lever to the middle position between "🦌" and "🐢".



- ③ Set the drive clutch lever and the knife clutch lever to the "OFF" position.

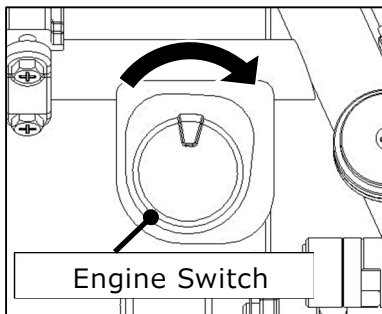


- ④ Set the choke lever to the "closed" position.

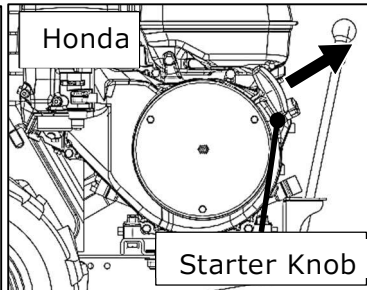
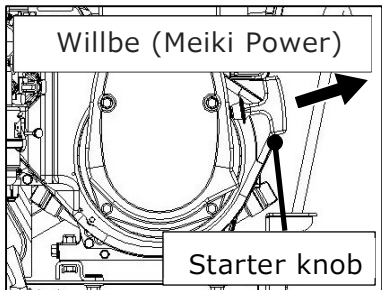
Note:

When the engine is warm, there is no need to operate the choke lever.

4. Driving and Operating Instructions



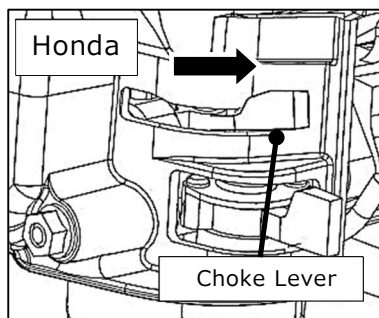
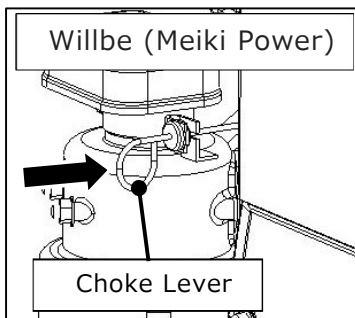
- ⑤ Turn the engine switch to the right to the **"ON"** position.



- ⑥ Grip the starter handle, pull it slowly until you feel resistance, release it slightly, and then pull it forcefully. After the engine starts, slowly return the starter handle to its original position.

Warning

Before starting the engine, make sure no one is in the path of the recoil starter and that there are no protrusions or obstacles in the way. Failure to do so may result in injury.



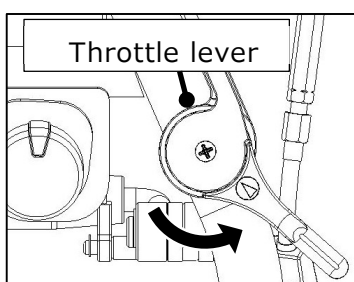
- ⑦ After starting the engine, return the choke lever to the **"Open"**  position and let the engine idle for about 5 minutes.

Warming up the engine allows oil to circulate throughout the engine, extending its service life.

Caution

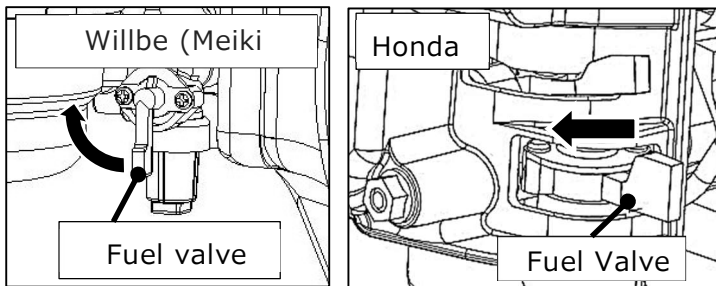
- 1) For the first week (3–4 hours) after purchasing a new product, please drive gently to avoid overloading the engine during the break-in period.
- 2) Using the choke lever in the "fully closed"  position can adversely affect various parts of the engine and shortening the engine's lifespan.

4.1.2 How to Stop the Engine



- ① Set the throttle lever to the low-speed "  " position, then press the engine switch to the "OFF" position to shut off the engine.

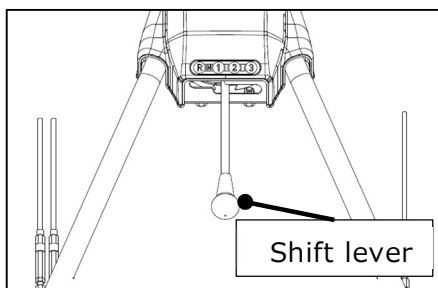
4. Driving and Operating Instructions



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

4.2 How to Drive, Shift Gears, Turn, and Stop

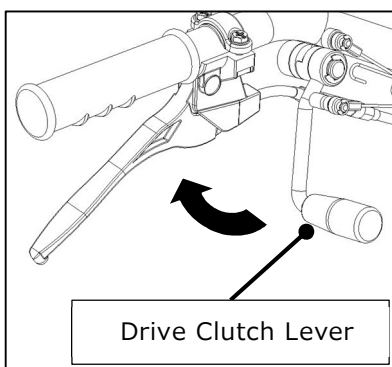
4.2.1 How to Drive



- ① Start the engine.
(See 4.1.1 How to Start the Engine)
- ② Make sure to shift the gear lever to the desired gear position.
(See 4.2.2 How to Shift Gears)

Caution

Inadequate shifting may cause the gear to slip out, which is extremely dangerous.
If the gear is difficult to engage, do not force it; instead, move the drive clutch lever slightly toward **the "Engage" position** and try shifting again.
Forward 3rd gear is for travel only. Do not use it for work due to its high speed.

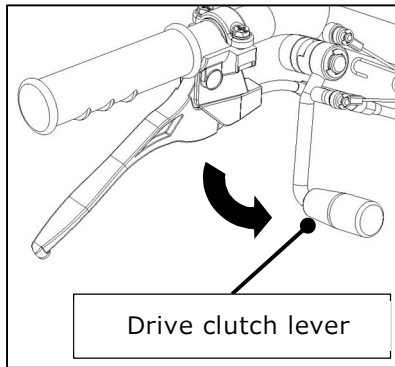


- ③ Set the throttle lever to the position between "  " and "  ", and set the drive clutch lever to the "Engage" position to drive.

Warning

- 1) For safety, set the cutting height to the highest position when driving, and be careful not to let the blade come into contact with stones or other obstacles.
- 2) Do not set the blade clutch lever to the "**Engaged**" position while driving or turning. It is dangerous to be caught in the high-speed rotating blade.

4.2.2 How to Shift Gears



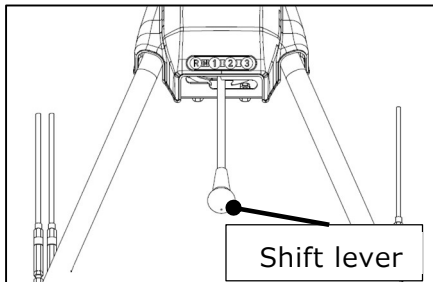
- ① Lower the drive clutch lever to the **"Off"** position.



Caution

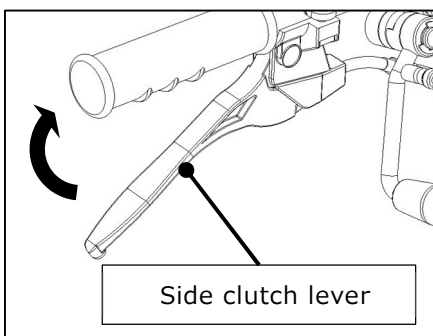
Do not shift gears while the drive clutch lever is in the **"Engaged"** position.

Not only is this dangerous, but it will also damage the machine.



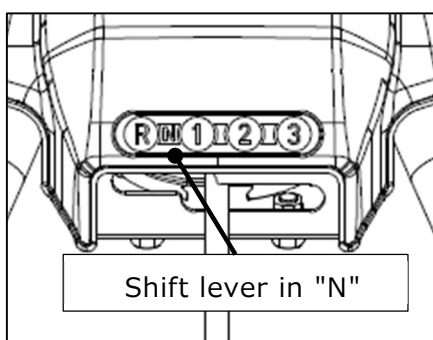
- ② Operate the shift lever and shift securely to the desired gear position.
- ③ Set the drive clutch lever to the **"ON"** position and start moving again.

4.2.3 How to Turn



- ① Grip the side clutch on the side you wish to turn to turn.
(Pulling the right lever turns to the right; pulling the left lever turns to the left)

4.2.4 How to Stop



- ① Stop the vehicle by moving the drive clutch lever to the **"OFF"** position. This will simultaneously engage the parking brake.
- ② Stop the engine. (See 4.1.2 How to Stop the Engine)
- ③ When parking, set the shift lever to the neutral **"N"** position.



Caution

- 1) Park this machine on a flat, open area with no obstacles nearby.
- 2) Be sure to turn off the engine whenever you leave the machine.
- 3) When the drive clutch lever is in the **"OFF"** position, the parking brake is engaged regardless of the position of the shift lever. If the brake is not working, adjust the drive brake cable or replace the parts immediately.

4.3 Proper Work Procedures

**Warning**

- 1) For safety, always keep the standard covers and flaps installed while working. Working with them removed is extremely dangerous. If you work while the safety covers are deformed or damaged, there is a risk that wires and other parts may fly toward the operator.
- 2) Do not perform work with the front cover secured in place. Flying stones or other foreign objects from the cutting unit pose a risk of injury, particularly in the direction of travel.
- 3) When removing grass, wire, or other foreign objects entangled in the blades, be sure to stop the engine first.
- 4) The covers fitted to this machine are designed to minimize the scattering of foreign objects from the cutting unit, but they do not completely prevent it. It is the operator's responsibility to thoroughly remove any foreign objects (stumps, stones, wire, empty cans, broken branches, etc.) from the field before starting work.
- 5) If the blade is scraping up mud or there is excessive scattering of stones, etc., adjust the cutting height to a position where these symptoms do not occur. There is a risk of premature wear, chipping, or breakage of the blade, loosening of mounting bolts and nuts, or the blade falling off.

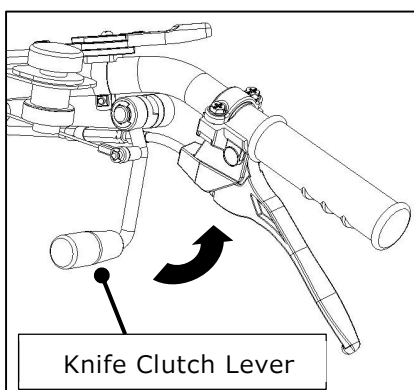
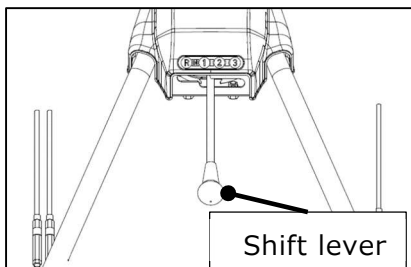
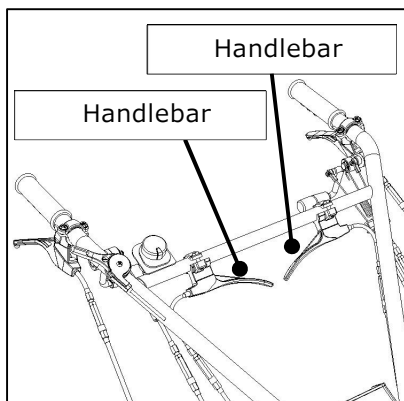
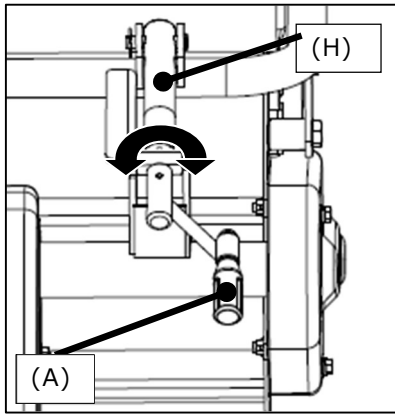
**Caution**

- 1) Wear long-sleeved work clothing and long pants with cuffs, and always wear spiked boots, a hat or helmet, shin guards, and safety goggles (included with the product).
- 2) Be sure to remove all foreign objects, such as stumps, stones, wire, empty cans, and sticks, before starting work.
- 3) When working in fields with many stones or other foreign objects, take sufficient safety precautions, such as cutting at a higher height, to prevent damage caused by flying debris.
- 4) Foreign objects such as stones may scatter in all directions around the cutting area. Please work with extreme caution, keeping a safe distance from people, vehicles, and buildings.
- 5) The engine muffler becomes very hot while the machine is running, and there is a risk of burns if touched accidentally. Never touch the muffler while the machine is running or for at least 5 minutes after it has stopped, until you are certain it has cooled down.

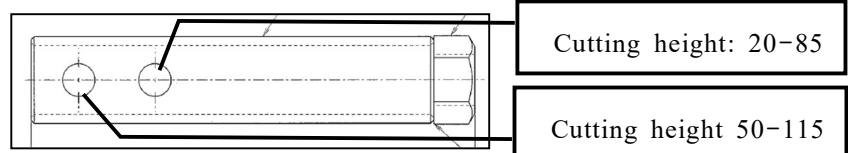
Note:

When using this machine for the first time, choose a flat area free of stones and other foreign objects, and mow slowly in a straight line, slightly overlapping the cut.

4.3.1 How to Mow



- ① Adjust the cutting height using the cutting height adjustment handle(A) according to the working conditions.
*The cutting height range varies depending on the mounting position of the Cutting height adjustment bolt holder (H).



Note:

Start by setting the cutting height to a higher setting, then adjust it to suit the conditions as you work.

- ② Start the engine. (See Section 4.1.1, "How to Start the Engine")
- ③ Use the handlebar up/down and left/right levers to adjust the handlebar position according to the task and the operator's physique.

〈4.4 Adjusting the Handle Position to Suit the Task and Operator's Build〉



Warning

Always stop the machine before adjusting the handlebar height or lateral position.

- ④ Be sure to set the shift lever to the desired position.

〈See 4.2.2 How to Shift Gears〉

Note:

If the gear shift lever is difficult to engage, do not force it. Instead, move the running clutch lever slightly toward the **"Engaged"** position, then try engaging it again.

- ⑤ Set the throttle lever to the high-speed position and slowly pull the knife clutch lever up to the **"Engage"** position.



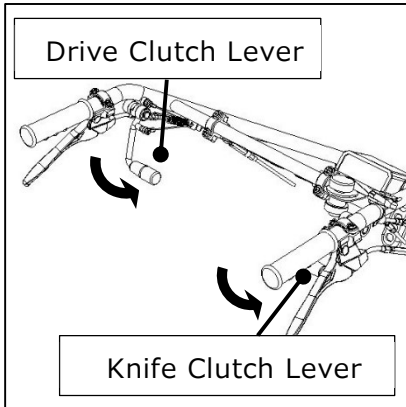
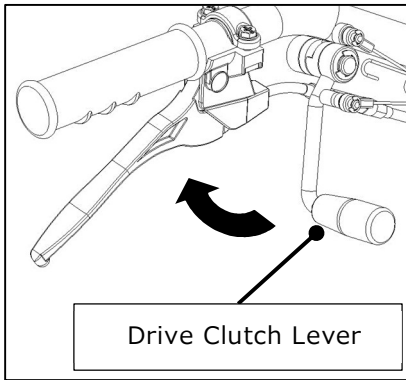
Warning

The blade will begin rotating at high speed. Please be careful.

Note:

If you pull the knife clutch lever all the way up to the **"Engage"** position in one quick motion, the engine may stall.

4. Driving and Operating Instructions



⑥ Slowly pull the drive clutch lever up to the **"Engage"** position.

⑦ To stop operation, first move the Drive clutch lever to the **"OFF"** position to stop the machine. This will engage the parking brake at the same time.

⑧ Next, move the knife clutch lever to the **"OFF"** position. The knife brake will engage at the same time and the knife will stop rotating within a short time (approximately 5 seconds).

⑨ Perform the procedures for stopping the machine and the engine. (See 4.2.4 "How to Stop")



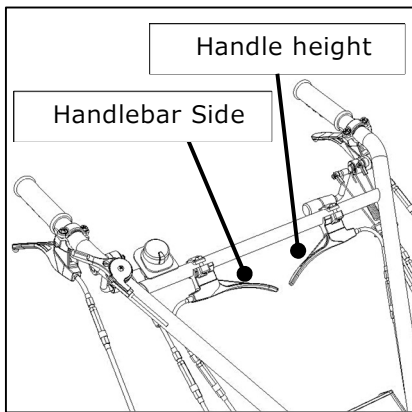
Warning

- 1) For safety, start from position "①" and, after confirming the safety of the surrounding area, adjust the operating speed to suit the working conditions.
- 2) Always perform work while moving forward; never operate the machine in reverse ("R") position. Not only does this reduce cutting performance, but it also increases the scattering of foreign objects from the cutting area, posing risks such as falls or crushing accidents involving rear obstacles.
- 3) The interior of the blade guard is dangerous due to the high-speed rotating blades. Never kick grass or other debris into the blade guard and never stand in the direction of travel.
- 4) If the cutting unit comes into contact with an obstacle during operation, stop work, shut off the engine, inspect for damage, and repair any abnormalities immediately. Resuming work without repairs can lead to unexpected accidents.
- 5) Do not allow grass clippings, leaves, or other debris to accumulate on the engine, especially around the recoil cover, air cleaner, and muffler. This can cause overheating or a fire.
- 6) For safety, always stop the engine when leaving the machine.

Note:

- 1) Cut grass is finely shredded inside the blade guard and discharged from the rear. If you operate the machine while the grass is wet, the clippings will accumulate inside the blade guard, reducing discharge capacity. As a result, the engine may stall even when cutting short grass. Therefore, either remove accumulated clippings from the blade guard frequently, or wait until the grass is dry before starting work.
- 2) If the engine seems to be under heavy load, reduce the speed by one gear or raise the cutting height and mow twice.

4.4 Adjusting the Handle Position to Suit the Task and Operator's Build



- The handle position can be adjusted up, down, left, and right to suit the operator's physique and working conditions.

① Handle Height

Grip the up/down handle levers to adjust the handle position vertically. (4 vertical positions)

When you release the lever, the handlebar locks into that position.

② Handlebar Left/Right

Handlebar Height Gripping the levers allows you to adjust the handlebar position vertically. (2 positions each for up and down)



Warning

When you release the lever, the handle locks into that position.

Be sure to stop all operations before adjusting the handle's vertical or horizontal position.

4.5 Loading, Unloading, and Transport



Danger

- 1) When transporting this machine, be sure to stop the engine and set the fuel valve to the "Closed" position. Spilled fuel may ignite due to a fuel leak.
- 2) Do not tilt the machine more than necessary. Fuel may leak out.



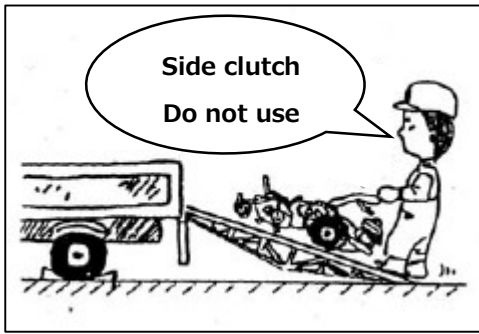
Warning

- 1) Use a vehicle suitable for the product when transporting it. (Loading capacity, bed size, potential for interference)
- 2) Select a flat, safe location for the transport vehicle. When loading, turn off the engine, apply the parking brake, and use wheel chocks to prevent the vehicle from moving.
- 3) Adjust the height so that the knife and claws do not come into contact with the bridge. Additionally, for applicable models, please do the following: (1) Set the work clutch to the "OFF" position. (2) Set the differential lock to the "ON" position.
- 4) Securely position a sturdy bridge that meets the specifications on a gentle slope (15 degrees or less), reduce engine speed, and perform loading in "Forward" gear and unloading in "Reverse" gear at a low speed.

Do not put the (main) clutch in the "off" position while driving on the ramp. Also, do not operate the side clutch (applicable models) or shift gears.

- 5) Please exercise extreme caution when the machine crosses the boundary between the ramp and the truck bed, as the center of gravity will shift suddenly.
- 6) Secure the machine firmly with a sturdy rope or similar during transport. Also, please drive safely.

4.5.1 Loading and Unloading Procedures



- ① Select a flat location free of hazardous objects.
- ② Place a standard ramp securely under the machine at a gentle slope (15 degrees or less) and at a width appropriate for the product.
- ③ Ensure that the machine's wheels are positioned in the center of the ramp.
- ④ Reduce engine speed and set the work clutch to "OFF".
- ⑤ Load the machine in "Forward" gear, and unload it slowly in "Reverse" gear at low speed.

Reference: Bridge Standards

Use a bridge that meets the standards and has sufficient strength.

- Length: At least 3.5 times the height of the truck bed.
- Width: Must match the wheel width of this machine.
- Strength: Must be able to withstand the combined weight of the machine and the operator.
- The surface must be treated to prevent slipping.

5. Inspection, Maintenance, and Adjustment

5.1 Oil Inspection, Replacement, and Lubrication



Caution

- 1) This unit is shipped without oil. Before using this unit for the first time, be sure to fill the specified locations with the specified oil in the specified amount (1.6 L).
- 2) Regular oil changes are essential to keep this machine in optimal condition.
- 3) Add oil gradually. If you try to add it all at once, air will not be able to escape, and oil will immediately overflow from the filler port. Make sure the oil level reaches the filler port.
- 4) When inspecting, changing, or adding oil to any part of the machine, be sure to place the machine on a flat, open area, warm up the engine, then stop it. Wait at least 5 minutes until all parts of the machine have cooled down to a temperature that is not hot to the touch before proceeding.

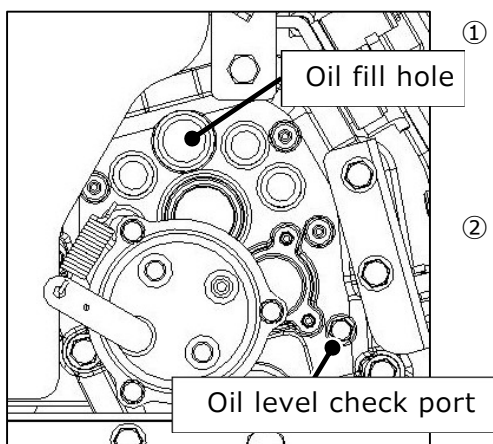
... **If you perform work immediately after stopping the engine ...**

* **The engine block is extremely hot, posing a risk of burns.**

* **Immediately after the engine is stopped, oil remains in various parts, so the accurate oil level will not be displayed.**

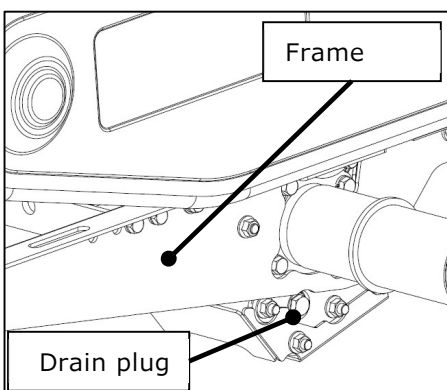
5.1.1 Transmission Oil Inspection and Replacement

◎ Inspection and Refill... Strictly adhere to the specified oil level.



- ① Remove the dipstick from the upper left side of the transmission case; if oil seeps out of the dipstick, the transmission is nearly at the specified oil level.
- ② Visually inspect the oil level and condition. If the oil is low or heavily contaminated, top it off or perform a complete oil change (see below).

◎ Replacement...



- ① Prepare a suitable container to catch the oil.
- ② Remove the drain plug at the bottom of the transmission case (lower part of the frame, right side) and drain the oil.

Note:

Removing the fill plug at the same time will make it easier to drain the oil.

5. Inspection, Maintenance, and Adjustment

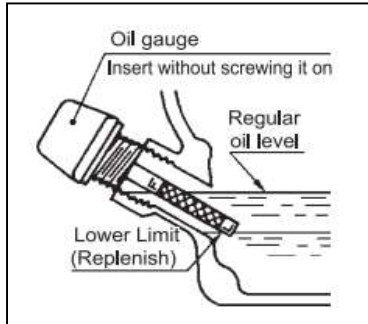
- ③ After securely reinstalling the drain plug, add **1.6 liters** of transmission fluid (**equivalent to #90**).

Recommended replacement intervals

Initial: 20 hours; Subsequent: Every 100 hours

5.1.2 Engine Oil Inspection and Replacement

◎ Inspection and Refilling...

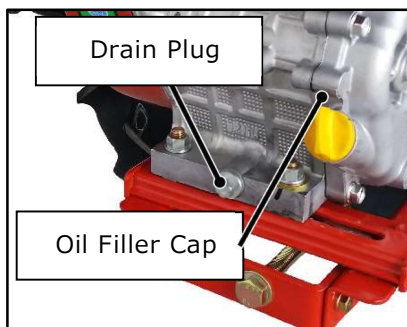


- ① Before each operation, visually inspect the engine oil level and condition for contamination, referring to 〈3.1 Engine Oil Inspection〉. If the level is below the specified amount or the oil is severely contaminated, top up the oil or perform a complete oil change (see below).

〈For oil quality and quantity, refer to 3.1 Engine Oil Inspection〉

- **A small amount of engine oil remains in the tank at the time of shipment.**

◎ Replacement...



- ① Park the machine on a level surface and adjust the cutting height so that the engine is level.
- ② Prepare a suitable container to catch the oil. After removing the oil filler cap, use a tool to remove the drain plug (oil drain plug) located at the rear of the engine.

Note:

Removing the filler cap at the same time will make it easier to drain the oil.

- ③ After draining the oil, be sure to securely reinstall the drain plug.
- ④ Refer to "3.1 Checking the Engine Oil" and fill with the specified engine oil.
- ⑤ After adding engine oil, tighten the filler cap securely to prevent oil from leaking out.

Recommended Intervals

First time: After 5 hours; Subsequent times: Every 25 hours

Note:

- 1) After changing the oil, be sure to securely reinstall the drain plug, filler cap, and other removed parts.
- 2) When using the unit continuously for long periods under high loads or high temperatures, please change the oil sooner than the above guidelines (approximately half the time).

5.1.3 Lubrication of Moving Parts

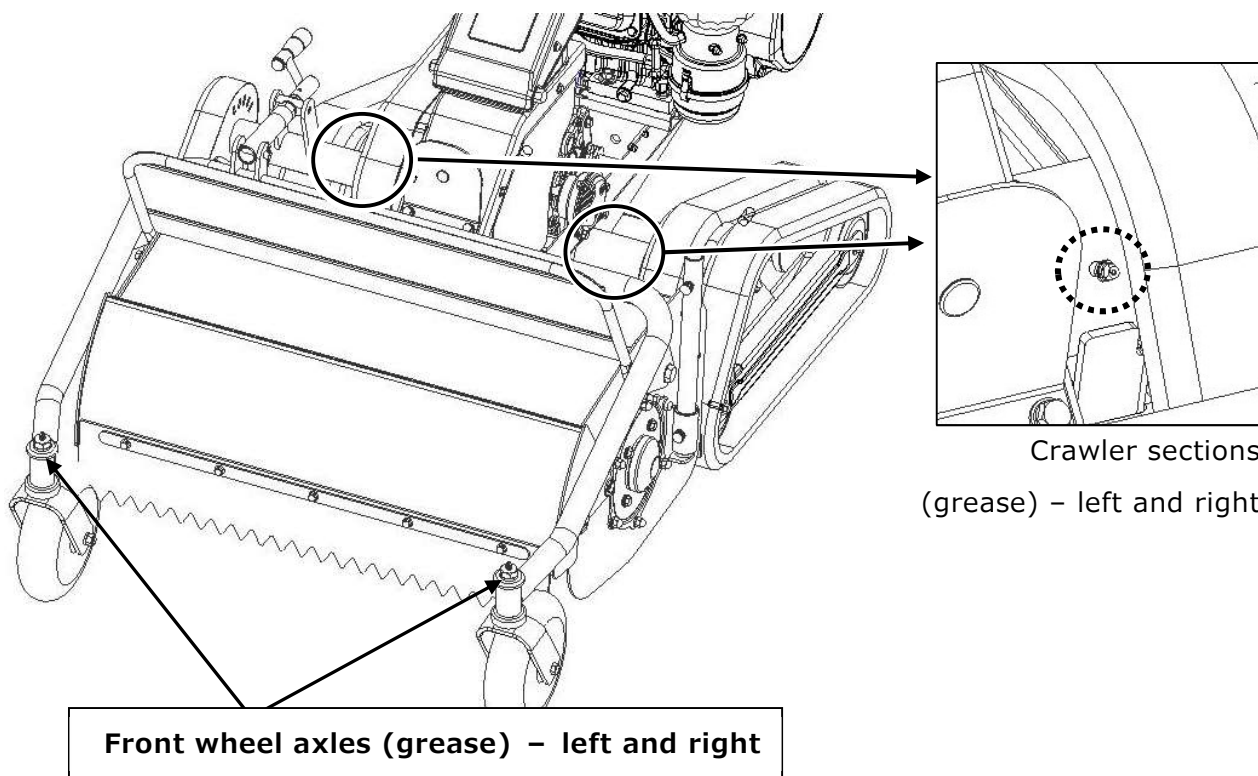


Caution

Grease about every 30 hours, lubricate engine oil (# 30) to other parts as needed. Especially, if you do not lubricate the grease, it may cause damage due to poor lubrication.

Grease

Apply grease to the front wheel axle and crawler sections.

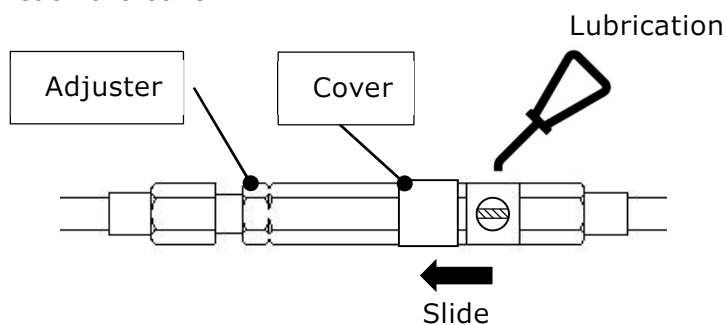


Oil

Lubricate the wires in each section.

(For wire locations, see "5.3 Inspection and Adjustment of the Machine: Wire Names")

Slide the cover on the wire adjuster and lubricate through the lubrication port located beneath the cover.



5.2 Engine Cleaning, Inspection, and Adjustment

5.2.1 Cleaning the Air Cleaner



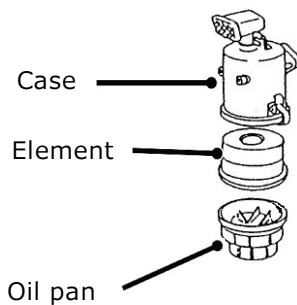
Warning

- If you continue working while the air cleaner or recoil starter is clogged with grass clippings or other debris, not only will you experience a loss of power and increased fuel consumption, but the rise in exhaust gas temperature could also cause the fuel to ignite and result in a fire, which is extremely dangerous. Be sure to inspect and clean them before starting work and on a regular basis.

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

Dirt and dust will be sucked into the engine, causing malfunction and abnormal wear.

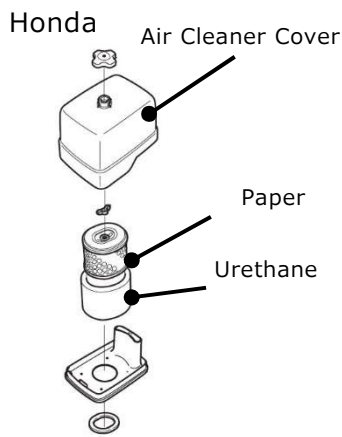
Willbe (Meiki Power)



◎ Willbe (Meiki Power) Engine

- 1) Remove the clamps and remove the oil pan.
- 2) Be sure to remove the element from its case, wash it with white mineral spirits (or a neutral detergent), wring it out thoroughly, and let it dry. Then, soak it in fresh engine oil (SAE 10W-30 or equivalent), wring it out firmly, and shake off any excess oil.
- 3) Clean any mud, grass clippings, etc. from the oil pan with kerosene, and fill it with fresh engine oil (SAE 10W-30 equivalent) up to the level line.
- 4) Wipe away any dirt inside the case with a rag or similar material, then reassemble it as it was originally.

◎ Honda Engine



- 1) Remove the air cleaner cover and check that the filter element (urethane or paper) is not dirty.
- 2) Blow compressed air into the paper filter element from the inside, or tap it lightly to remove dirt.
- 3) Wash the urethane filter element with cleaning oil, wring it out thoroughly, and let it dry. After drying, soak the filter element (urethane) in engine oil, wring it out firmly, and then install it.

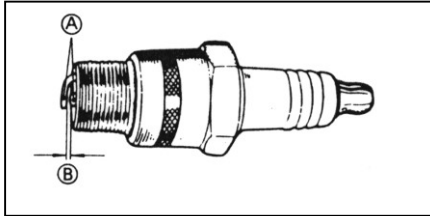
Air Cleaner Cleaning and Replacement Intervals

Inspection	Cleaning	Oil Change	Element Replacement
Before every shift	Every 25 hours	Every 50 hours	Every 300 hours

Note:

- 1) When cleaning, do not pull or squeeze the foam element forcefully. Doing so may tear the element, rendering it unusable.
- 2) If used in a dusty environment, clean the air cleaner before and after each operation, and whenever you notice dirt or clogging.

5.2.2 Spark Plug Inspection and Adjustment



- 1) Remove the spark plug with a spark plug wrench. If carbon deposits are present on the electrode (A), remove them with a wire brush, and wipe off any moisture.

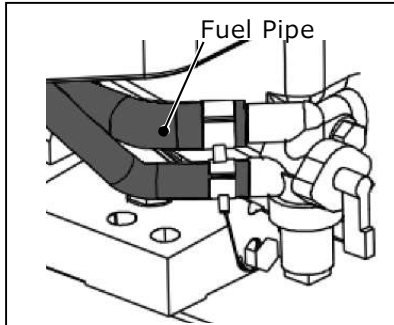
- 2) If cracks are found in the central ceramic body or wear is observed on the electrode, replace the spark plug with a new one.
- 3) Adjust the spark plug electrode gap (B) to 0.6–0.7 mm.

Note: When tightening, first screw it in lightly by hand (until the gasket touches the seating surface), then use a spark plug wrench.

*Please note that tightening with the spark plug wrench from the start may strip the threads.

<Spark Plug Standards… See Section 6.1 Specifications>

5.2.3 Inspection of Fuel Pipes



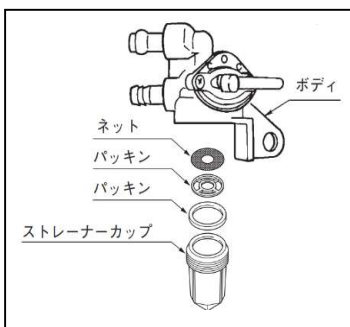
Danger

Do not work while smoking or near open flames

- 1) Rubber products such as fuel pipes deteriorate even when not in use.
Replace them with new ones every three years, along with the clamps, or whenever they show signs of damage.
- 2) Always check that the pipes and clamps are not loose or damaged.

Note: When replacing pipes, be careful to prevent dust and debris from entering the pipes.

5.2.4 Inspection and Cleaning of the Fuel Valve



- 1) Clean the inside of the fuel cock every 50 hours of use.
- 2) Perform cleaning in a clean area free of dust and debris.
 - ① Set the fuel cock to the "OFF" position.
 - ② Remove the fuel cock strainer cup, remove any sediment (dirt, water, etc.) accumulated at the bottom, and clean the mesh.



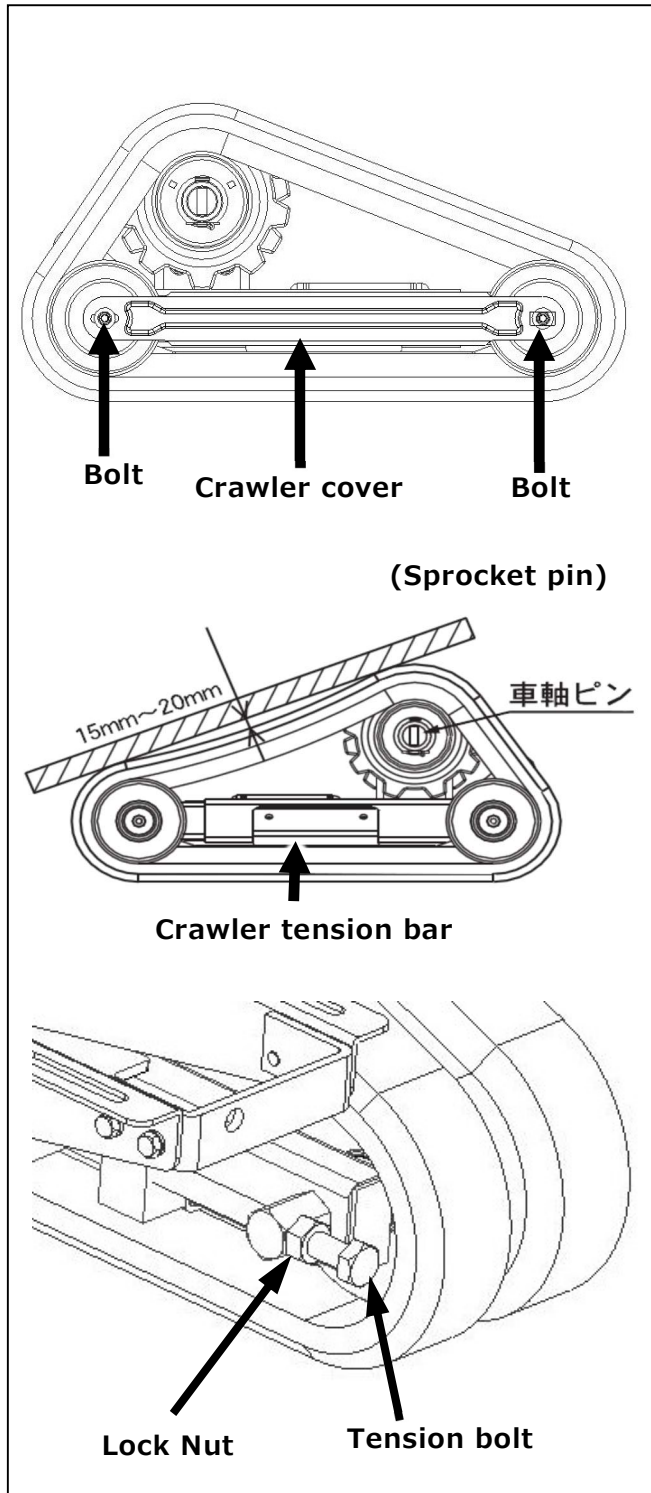
Warning

Do not use highly flammable cleaning agents such as gasoline or thinner, as they are dangerous.

5.2.5 Adjusting the Crawler Tension

**Caution**

When new, the track will experience initial stretching, and over time, it will loosen as it settles into the sprocket.



If the track tension is not adjusted correctly, the track may come off the sprocket or the track's service life will be significantly shortened; therefore, adjust the track tension according to the following procedure.

- 1) Remove the bolts and remove the track cover.
- 2) Loosen the lock nut on the track tensioning bolt at the rear of the vehicle.
- 3) Turn the track tensioning bolt to adjust the track tension.
- 4) Place a straight ruler or similar object on top of the track as shown in the figure on the left, hold down the center of the track with your hand, and adjust so that there is about 15 mm to 20 mm of clearance.
- 5) Adjust the tension so that the left and right tracks are evenly tensioned.
- 6) After adjustment, securely tighten the lock nut and reinstall the track cover.

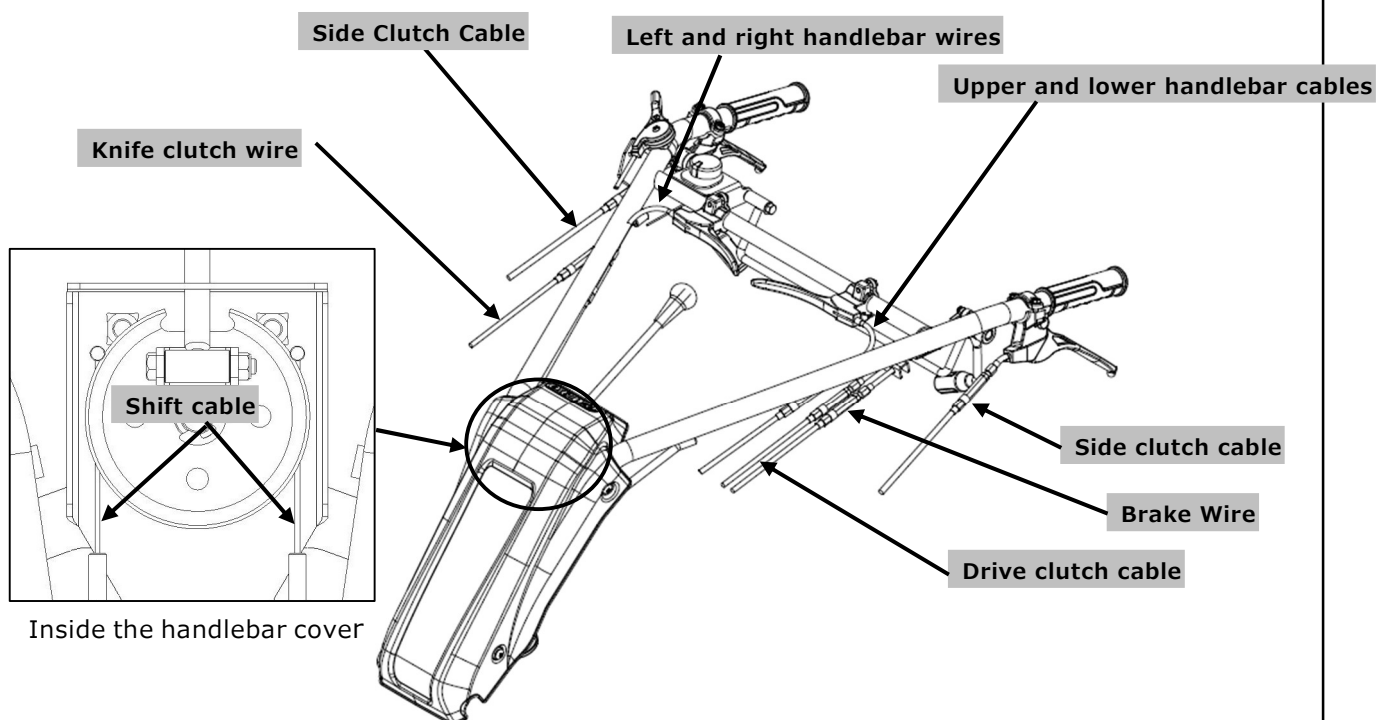
*If the track is too tight, the axle pin (sprocket pin) may break due to foreign objects becoming lodged in it.

5.3 Inspection and Adjustment of the Machine

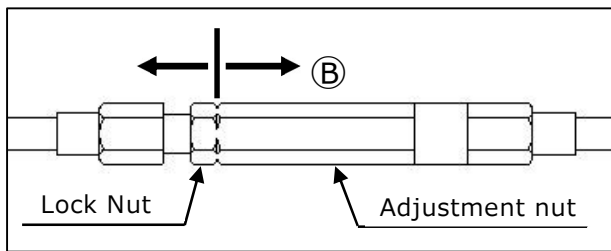
Caution

- 1) Be sure to place the machine on a flat, open area and stop the engine.
- 2) Check that all control levers are operating correctly. (Before starting work each time)
- 3) Since the wire and belt will experience initial stretch, readjust them after 2-3 hours of operation.
- 4) Wires and belts are consumable parts. If any abnormalities are found, replace them with new ones. (See Specifications for Size 6.1)
- 5) Move the machine slightly to check for any abnormal noise or excessive heat.
- 6) After adjustment, be sure to check the "Engage" and "Disengage" operations of both clutch levers.
- 7) Check all bolts and nuts for looseness or missing parts and tighten them securely.
- 8) Be sure to reinstall all covers removed for adjustment exactly as they were originally.
- 9) To allow all parts to bed in properly, avoid strenuous operation for the first 2 to 3 hours.
- 10) Please be sure to perform post-operation maintenance and regular inspections.
(See Section 7.1, "Regular Inspection Checklist")
- 11) Inspect the entire machine to check for oil leaks in all parts.
 - If you find any oil leaks, please contact the dealer where you purchased the machine.
 - Continuing to use the machine while it is leaking oil is not only dangerous but can also lead to damage to the machine.

Wire



5.3.1 Adjusting the Wires



Refer to the diagram on the left to adjust the tension of each wire using the adjustment nut. The adjustment guidelines are as follows.



Caution

After adjusting the cable, be sure to secure the adjustment nut with the lock nut.

① Drive Clutch Cable Adjustment

- ☐ If the machine stops when a load is applied even after engaging the Driving clutch.

...Turn the adjustment nut toward the "B" direction...

- ☐ If the machine does not stop easily even when the Driving clutch lever is released.

...Turn the adjustment nut toward the "A" direction...

② Knife Clutch Cable Adjustment

- ☐ The knife stops rotating under load even after engaging the clutch lever.

...Turn the adjustment nut toward B ...

- ☐ The knife does not stop rotating even when the clutch lever is released.

...Turn the adjustment nut toward A ...



Caution

The knife brake is linked to the knife clutch lever. After adjusting the knife clutch cable, please check the effectiveness of the knife brake. If the knife stops rotating within about 5 seconds after releasing the knife clutch, it is functioning properly.

③ Side Clutch Cable Adjustment

- ☐ If power is not engaged even after returning the side clutch lever.

...Turn the adjustment nut toward A ...

- ☐ If the drive does not disengage when you squeeze the side clutch lever.

...Turn the adjustment nut toward B ...

④ Handlebar Up/Down and Left/Right Cable Adjustment

- ☐ If the handlebar does not move up/down (left/right) when operating the lever.

...Turn the adjustment nut toward B ...

- ☐ If the handlebar moves up and down (or side to side) when a load is applied, even without operating the lever.

...Turn the adjustment nut toward A ...

⑤ Parking Brake Cable Adjustment

- If the parking brake does not engage even when the drive clutch lever is disengaged.

...Turn the adjustment nut toward **B** ...

- The parking brake remains engaged while driving. (The parking brake cannot be released.)

...Turn the adjustment nut toward **A** ...



Caution

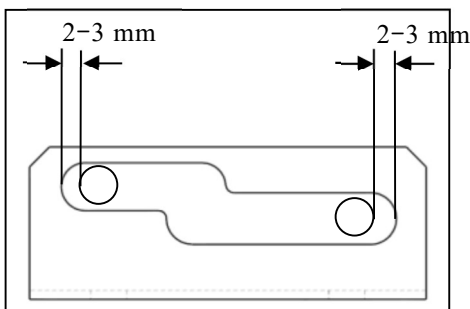
Failure to adjust the parking brake can be dangerous, as it may drag while driving or cause the vehicle to roll when parked on a slope.

⑥ Shift Cable Adjustment



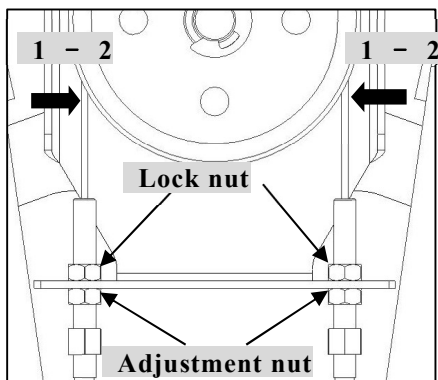
Caution

This product uses a cable-operated shifting system. Due to initial cable stretch, the gear position may shift during operation. Therefore, please adjust the cable tension with the engine turned off, following the instructions below. If you continue working in this condition, in the worst-case scenario, the gear could come off while you are working, potentially causing a serious accident.



- ① Adjust the shift cable using the adjustment nut so that there is 2-3 mm of play at both ends when the shift lever is in the forward "3" or reverse "R" position.

(See Figure 6)



*Adjust the left and right wires so that they flex about 1-2 mm when you press the area indicated by the arrow with your finger; do not over-tighten them.

- ② Make sure the gear engages properly at each shift position on the shift guide.
- ③ Be sure to tighten the lock nut securely.

Note:

Leave 3-5 mm of play in both the drive clutch lever and the knife clutch lever when they are in the "OFF" position.

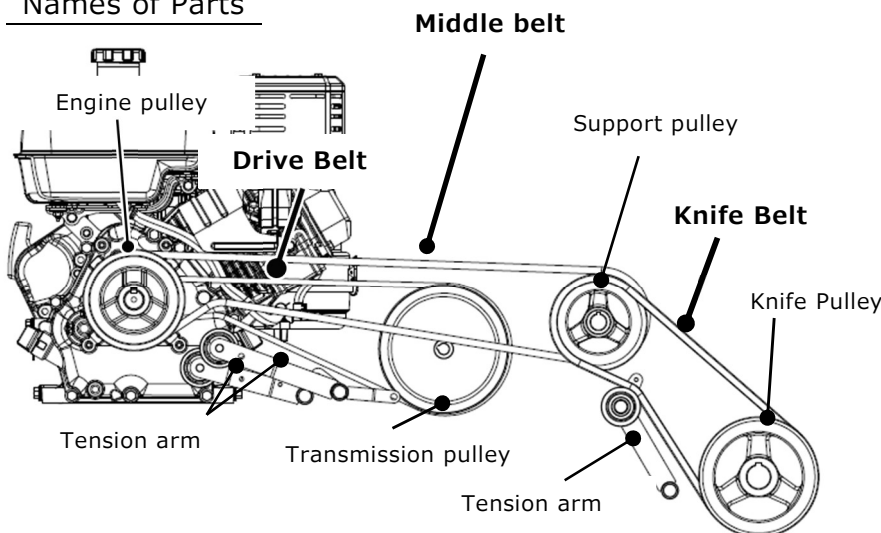
5.3.2 Adjusting the Belts



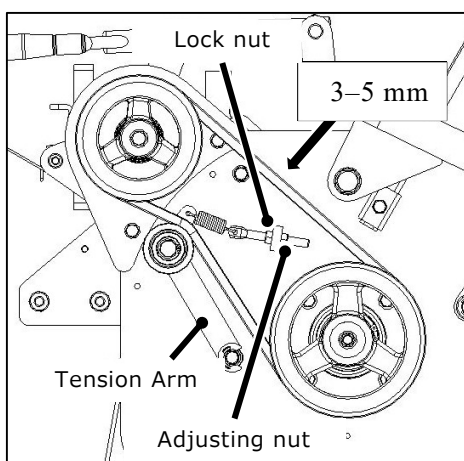
Caution

Before adjusting any belts or belt tensioners, be sure to place the machine on a flat, open surface and stop the engine.

Names of Parts



① Knife Belt Adjustment



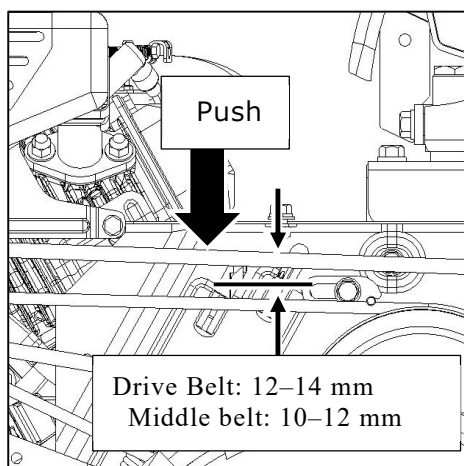
The knife belt is kept taut at all times by the Tension arm.

If the belt slips under load, or if the knife belt has been replaced, adjust the belt tension as shown in the figure on the left.

- Apply pressure of about 4–5 kg to the center of the belt and tighten the adjustment nut until the deflection is about 3–5 mm.

After adjustment, secure with the lock nut.

② Drive and Middle Belt Adjustment



If the belt has been replaced, adjust the belt tension as shown in the figure on the left.

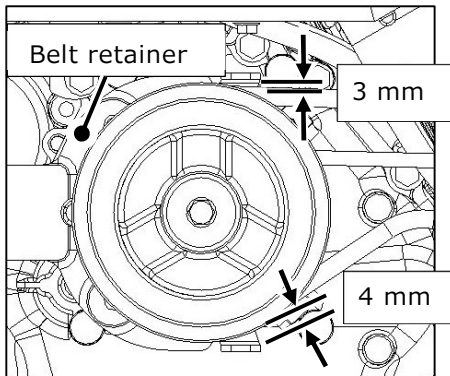
Adjust with both the drive and knife clutch levers in the "in" position.

- Adjusting belt tension
 - Adjust the wire adjustment nuts at the front and rear of the engine so that when you press the center of the belt with your finger (enough to make the tension pulley move), the drive belt deflects by approximately 12–14 mm and the intermediate belt by approximately 10–12 mm.

5. Inspection, Maintenance, and Adjustment

<See 5.3.1 Adjustment of Various Cables>

③ Belt Retainer Adjustment



If you have replaced the belt, adjust the belt retainer as shown in the figure on the left.

Adjust with both the feed and knife clutch levers in the "in" position.

☐ Belt Retainer Adjustment

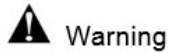
- Adjust the belt guide position using the center belt.
- With the belt tensioned, adjust the gap between the belt and the belt retainer so that it is approximately 3 mm at the top and 4 mm at the bottom.
- Be sure to reinstall all covers removed for adjustment exactly as they were originally.



Caution

- 1) After adjustment, be sure to tighten the lock nut securely.
- 2) Be sure to reinstall all covers removed for adjustment exactly as they were originally.
- 3) After adjustment, be sure to check the "engage" and "disengage" operations of each clutch lever.
- 4) The belt will stretch slightly initially, so please readjust it after operating the machine for 2 to 3 hours.
- 5) The belt is a consumable part. If any abnormalities are found, replace it with a new one. Adjust after the first 20 hours of operation, and every 100 hours thereafter.
<Refer to Belt Size... 6.1 Specifications>
- 6) Remove any foreign objects (such as grass clippings) that have entered the belt cover.

5.4 Knife Inspection, Replacement, and Installation



Warning

■ For safety, please inspect the knives before operation. ■

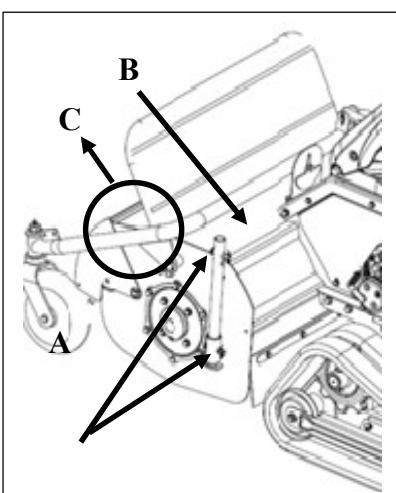
- 1) When replacing the knife, be sure to specify the manufacturer's genuine parts. The use of aftermarket knives is not only dangerous but also avoids the warranty for any resulting malfunctions or accidents.
- 2) Before starting work, check to see if the blade has been bent, chipped, or if the mounting bolts have become loose due to contact with curbs, tree roots, or other obstacles during previous operations, and also check for any wear on the blade.
- 3) Continuing to operate the machine while ignoring knife wear, cracks, bending, damage, or loose mounting bolts may cause the knife to break, detach, and fly out during operation, potentially resulting in serious personal injury or damage to the machine.
- 4) The blades rotate at high speed. If even a single blade is chipped or broken, it can cause vibration. Continuing to operate the machine while it is vibrating is not only dangerous but can also cause cracks or fractures in various parts of the machine due to the vibration, significantly shortening its service life. Furthermore, vibration may cause a fire to start in the engine.
- 5) Always replace all blades at the same time. Replacing only some of the blades will throw the balance off, causing vibration and other problems.
- 6) To avoid injury, wear sturdy gloves or wrap the tips of the blades with a cloth when performing inspections or replacements.



Caution

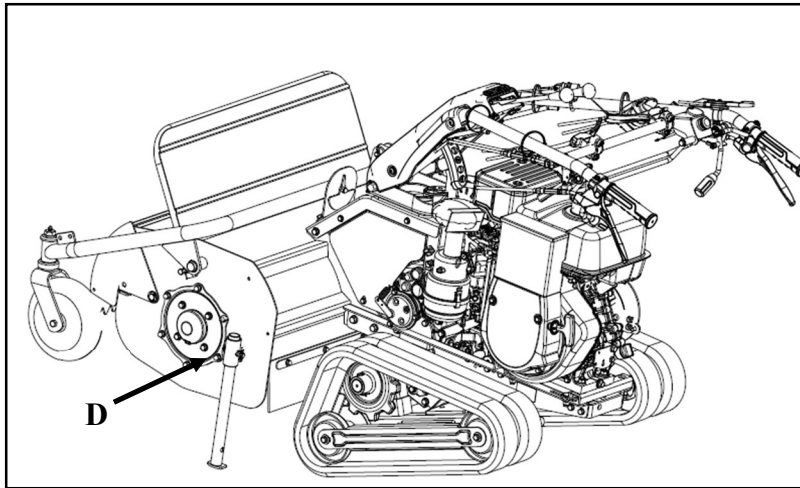
- 1) Knife replacement should be performed by a person with the appropriate tools and maintenance skills.
- 2) The knife clamping bolts and nuts also wear out. For safety, be sure to replace the knife clamping bolts and nuts at the same time as the knives, and never substitute them with other bolts or nuts; always use genuine parts.
- 3) When working, take great care to prevent your hands from slipping.
- 4) Using a mix of old and new knives will result in abnormal vibration.

5.4.1 Knife Inspection and Replacement

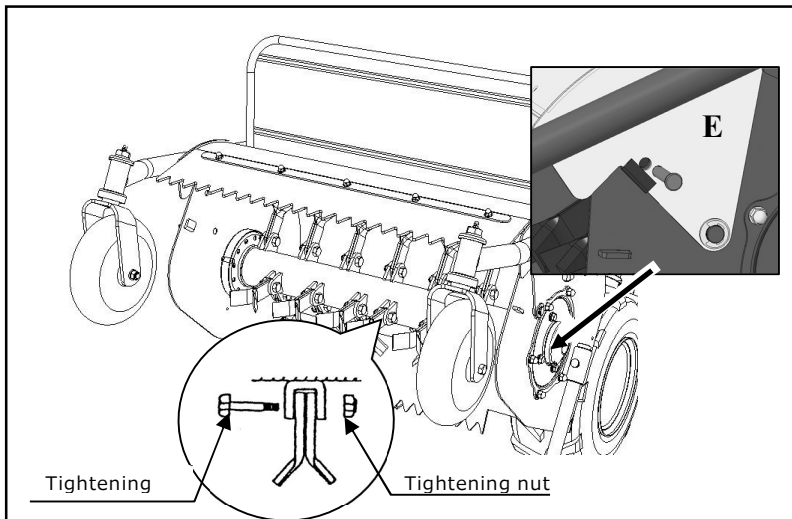


- ① Stop the engine and, as a precaution, remove the spark plug caps.
(See 4.1.2 How to Stop the Engine)
- ② Remove the two pins at A, and lower the blade replacement stand at B.
Hold part C and lift the rotary cover upward.

5. Inspection, Maintenance, and Adjustment



- ③ Insert the pin at position D to secure the rotary cover in the raised position.



- ④ Open the front cover and secure it using the pin removed in step ② to prevent it from falling out (E).

- ⑤ Check the condition of the knife and its mounting. Check the knife for cracks, bends, or wear.

- ⑥ If the blade is in an abnormal condition as shown in the figure below, reverse the blade or replace it.

Usable		Replacement required		
New	Worn (reverse)	Chip	Bent	Wear limit

Note:

- 1) Use in areas containing dry soil or sand causes the knife to wear out quickly, so please inspect it frequently.
- 2) We recommend purchasing spare knives in advance and keeping them on hand.
- 3) Runout in the knife drum can also cause vibration. Since the knife drum cannot be repaired, it must be replaced as a complete assembly.
- 4) Since the knives are double-edged, if the working edge wears down, you can flip it to use the other side; however, when replacing them, please replace all knives at once.

5.5 Long-Term Storage

5.5.1 Preparing for Long-Term Storage

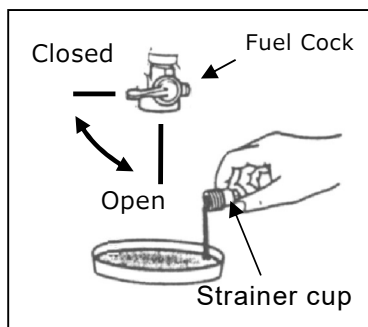
- Storing the machine for an extended period with fuel remaining in the fuel tank or carburetor → this can cause problems such as difficulty starting or reduced power.



Danger

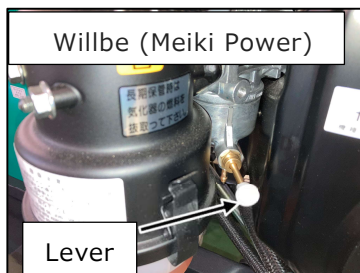
- 1) When draining fuel, do so in a well-ventilated area, take great care to avoid open flames such as cigarettes or naked flames, and handle the drained fuel with extreme caution.
- 2) Before draining gasoline from the fuel tank or covering the machine, make sure the engine and muffler have cooled down completely.

- 1) If the machine is not used for more than 30 days, drain the fuel from the fuel tank and carburetor to prevent starting problems or poor performance due to fuel deterioration.



① Fuel in the fuel tank

Remove the strainer cup, place a drip pan or similar container underneath, then turn the fuel cock to the "Open" position and remove it.

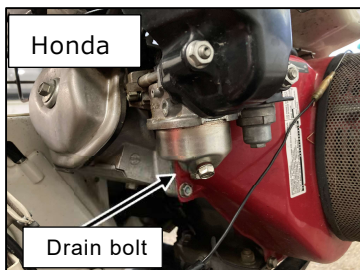


② Fuel in the carburetor

◎ Willbe (Meiki Power) Engine

Pull the lever shown in the diagram to drain the fuel.

Be sure to close the fuel valve after draining the fuel.



◎ Honda Engine

Remove the drain bolt shown in the diagram and drain the fuel.

Be sure to close the fuel valve after draining the fuel.

- 2) Thoroughly clean all parts. In particular, use compressed air or similar to remove any mud or dust accumulated around the recoil starter, air cleaner, muffler, carburetor, and inside the belt cover. Remove any rust and apply rust-preventive paint.

5. Inspection, Maintenance, and Adjustment



Continuing to operate the machine with accumulated grass and dust can cause the engine to overheat due to clogging from grass clippings, which may lead to engine seizure or fire.

Note:

Mud and grass clippings adhering to the knife cover can be washed off relatively easily by using pressurized water from a hose or similar tool before they dry.

When doing so, take care to cover the engine's electrical components, carburetor, air cleaner, and muffler exhaust port to prevent water from getting on them.

- 3) Lubricate all moving parts and repair any defects.
- 4) Store this unit horizontally in a covered, well-ventilated, low-humidity location.
- 5) Cover the machine to prevent dust from accumulating. (*A cover is not included.)

5.5.2 Precautions for Next Use



- 1) Use fresh fuel.
- 2) Perform a pre-operation inspection.
- 3) Check that all control levers operate correctly. (Before starting work each time)
- 4) Check all bolts and nuts for looseness or missing parts.
- 5) Move the machine slightly to check for abnormal noises or excessive heat.
- 6) To allow all parts to break in properly, avoid heavy-duty work for the first 2 to 3 hours.

6. Appendix

6.1 Specifications (Reference Values)

Name		Bullmore			
Model		HRC665	HRC805		
Overall Length ×		1,670 × 810 × 950	1,670 × 960 × 950		
Cutting Width (mm)		650	800		
Weight (kg)		200	220		
Cutting Height (mm)		20–85 (Pin position for high cutting: 50–115)			
Blades (number)		Free knives × 38	Free knives × 46		
			Willbe (Meiki Power)	Honda	
Belts (pieces)	Driving	LA46 × 1	SA46-W800 × 1	SAR47-W800 × 1	
		LB62 × 1	SB62-W800 × 1	SB63-W800 × 1	
	Knife	LB39 × 1	SB39-W800 × 1	SB39-W800 × 1	
Crawler Size		Width 160 mm, Pitch 60 mm, 24 links × 2			
Steering		Adjustable up/down (4 positions), left/right (2 positions each at center)			
Brakes		Equipped with parking brake and knife brake			
Speed (km/h)	Willbe (Meiki)	Forward	① 0.91, ② 1.93, ③ 3.30		
		Reverse	① 0.91		
	HONDA	Forward	① 0.80, ② 1.69, ③ 2.94		
		Reverse	① 0.80		
ENGINE	Name		Willbe (Meiki Power)	Willbe (Meiki Power)	HONDA
	Model		GB290PN-406	GB300PN-406	GX340T2 SHB2
	Displacement		296	296	389
	Engine Oil		1.0	1.0	1.1
	Starting Method		Recoil starter		
	Spark plug		BP5ES	BP5ES	BPR6ES
	Tank Capacity (L)		6.0	6.0	5.3

*These specifications are subject to change without notice due to product improvements.

6.2 Tool Bag and Included Items

No.	Part Name	Part Number		Remarks
1.	Instruction Manual		1	
2.	Power Tools		1	Included with Engine
3.	Safety Goggles	0328-76100	1	Anti-fog type
4.	Engine Manual		1	Applicable Products

6.3 List of Consumables

《Consumables List》

No.	Part Name	Part Number	Quantity per Unit		Remarks
			HRC665	HRC805	
1	Free Knife	80-1610-821-00	38	46	
2	Mounting Bolt Set	83-1610-835-00	19	23	
3	Drive Belt (V-Belt)	89-6122-004601	1		LA-46
		89-6122-004602		1	SA-46 W800 *1
		89-6122-004702		1	SAR-47 W800
4	Intermediate Belt (V-Belt)	89-6123-006200	1		LB-62
		89-6123-006202		1	SB-62 W800 *1
		89-6123-006302		1	SB-63 W800 *2
5	Knife Belt (V-Belt)	89-6123-003900	1		LB-39
		89-6123-003902		1	SB-39 W800
6	Throttle Cable	0286-72600	1	1	
7	Running/Knife Wire	0285-78800	1	1	
8	Brake cable	0285-78600	1	1	
9	Side Clutch Cable	0913-71210	2	2	
10	Handlebar Up/Down and Left/Right	0285-72110	2	2	
11	Shift Cable	0334-70100	2	2	
12	Parking Brake Shoe Set	85-1711-318-00	1	1	Set of 2 Brake
13	Knife Brake	0231-37100	1	1	
14	Air Cleaner Cover	0285-78100	1	1	
14	Sprocket Pin	0282-31310	2	2	
15	Crawler Tension Bar	0334-31100	2	2	
16	Crawler	0282-70200	2	2	
17	HR Warning Label	0354-72700	1	1	When
18	Air Filter Maintenance Warning Label	0328-75400	1	1	Air Cleaner, ...
19	Crawler Warning Label	0334-71410	1	1	Too many
20	Knife Warning Label	0334-71800	2	2	Do not bring
21	Cutting Height Adjustment	0334-73500	1	1	When adjusting
22	Engine Warning Label	0294-72910		1	Exhaust Gas... (Honda only)

*1 Willbe (Meiki Power) *2 Honda

7. Inspection Checklist

7.1 Periodic Inspection Checklist

★ Failure to perform inspections and maintenance may lead to accidents or malfunctions. Please use this “Periodic Inspection Checklist” as a guide to ensure the equipment functions properly and remains in a safe condition at all times.

★ Please perform annual inspections once a year, monthly inspections once a month, and pre-operation inspections every time before starting work.

Item		Inspection Item	Items to Check	Verification	Pre-Work	Monthly	Annual	
Braking System	(Applicable Products) Brake	Parking Brake Performance	Check for dragging or loose feel	Brake shoes	☐	☐	☐	
		Brake rod Joint	Check for deformation or play	Rod	☐	☐	☐	
				Joint	☐	☐	☐	
		U-nut W-nut	Check for loosening or detachment	U-nut	☐	☐	☐	
				W-nut	☐	☐	☐	
	Split pin	Check for any missing or damaged parts	Split pin	☐	☐	☐		
Cutting Section	Cover	Cover Condition	Check for bends, cracks, or corrosion, Is the flap rubber properly installed?	Cover	☐	☐	☐	
				Flapper	☐	☐	☐	
	Rotating Parts	Knife & Stay (Blade) and Installation Condition (Applicable Products)	Check for warping or wear	Knife	☐	☐	☐	
				Knife Ste	☐	☐	☐	
		Knife Brake	Check for looseness, wear, or missing bolts and nuts	Bolts and nuts	☐	☐	☐	
					Brake	☐	☐	☐
							☐	☐
Engine	Main Unit	Acceleration, Exhaust, and Choke Operating Conditions	Is acceleration smooth? Are the exhaust color and odor normal? Does the choke operate smoothly?	Acceleration		☐	☐	
				Exhaust		☐	☐	
				Choke	☐	☐	☐	
		Muffler, Battery	Check for any debris or grass clogging the area, Are they loose or corroded? Is the battery fully charged?	Muffler	☐	☐	☐	
				Battery		☐	☐	
		Engine Body	Check for looseness or cracks in the engine mounting	Installation	☐	☐	☐	
		Air Filter	Check for dirt, clogging, tears, or fraying	Air Filter	☐	☐	☐	
	Engine Oil	Engine Oil Oil Filter (Applicable Products)	Check for quantity, quality, leaks, and foreign matter contamination; Is the replacement schedule appropriate?	Oil	☐	☐	☐	
				Filter	☐	☐	☐	
		[Engine Oil: Change after the first 5 hours, then every 25 hours; change the filter every 100 hours]						
	Oil Supply Line	Fuel Tubing and Filter	Check for fuel leaks, deterioration, deformation, or clogging	Fuel System	☐	☐	☐	
	Ignition system	Spark Plugs	Check for cracks in the insulator and carbon buildup	Spark plug		☐	☐	

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			between the electrodes				
		High-voltage wire, spark plug cap	Check for deterioration, cracks, or cracks in the cap	Cable		○	○
	Cooling System	Engine Housing	Check the housing for any buildup of grass clippings or other debris	Inside the cover		○	○
	Wiring	Harness	Check for looseness or damage	Harness		○	○
Transmission Communication System	Belt	Conveyor and knife belts	Check for proper tension, cracks, damage, or significant dirt	Operation	○	○	○
				Knife	○	○	○
	Deceleration Hydraulic	Transmission Oil	Quantity, quality, oil leaks, and contamination (moisture, air)	M Oil		○	○
		[Transmission Oil: Initial change at 20 hours. Subsequent changes every 100 hours]					
		HST Oil (Applicable Products)	Quantity, quality, oil leaks, and contamination (moisture, air)	H Oil			
		[HST Oil (equivalent to VG46): For the first fill, “refer to the respective owner’s manual.”] Thereafter, change every 200 hours or once a year. (Replace the HST oil filter at the same time.)]					
Moving Parts	Movement of levers, cables, etc. (Applies to products with differential lock and auxiliary gear)	Does it operate smoothly? Are there any signs of seizing or rust?	Diff Lock	○	○	○	
			Harvesting	○	○	○	
			Sub-gear	○	○	○	
Gear shift	Shift Lever	Check operation; ensure the neutral (N) position is correct and there is no looseness or play	Lever	○	○	○	
Travel Mechanism	Tires (Crawlers)	Is the air pressure appropriate? Are there any damage or uneven wear?	Tires	○	○	○	
	Installation	Check for any looseness, play, or missing bolts or nuts	Installation	○	○	○	
Handle	Installation Status	Check for loose bolts or nuts, play, or missing parts	Handle	○	○	○	
Instruments	Hour Meter (Applicable Products)	Is the displayed time correct, and is the unit operating properly?	Hour Meter			○	
Label	Warning Labels and Nameplates	Are labels properly affixed (no peeling), and are there any signs of damage or dirt?	Label			○	

*If you are unsure, please contact the store where you purchased the item.

7.2 Engine Malfunctions and How to Fix Them

If the engine is not running properly, use the following table to diagnose the problem and take appropriate action.

Symptom	Cause	Remedy
Difficulty Starting (If the engine won't start)	The throttle lever is not in the "Start" position.	Move the throttle lever to the "Start" position.
	The choke lever has not been pulled.	When the engine is cold, set the choke lever to the closed position. 
	Fuel is not flowing.	Inspect the fuel tank and remove any sediment or moisture that has settled. Remove the strainer from the fuel cock, remove any sediment from the cup, and clean off any debris that has accumulated.
	Air or water has entered the fuel delivery system.	Remove any foreign objects, inspect the clamps, and replace them with new ones if damaged.
	In cold weather, the oil viscosity is high, causing the engine to run sluggishly.	Use different types of oil depending on the temperature.
	Faulty ignition coil or unit.	* Replace the ignition coil or unit.
	Spark plug malfunction.	Check and adjust the spark plug gap. Replace with a new spark plug.
In case of insufficient power	Low fuel.	Refuel.
	The air filter is clogged.	Clean the filter element.
	Poor fuel quality.	Replace with high-quality fuel.
	The choke is not fully open.	Return the choke lever to the fully open position. 
	The cooling system is clogged.	Clean the area around the recoil starter.
If the engine stops suddenly	Low fuel.	Refuel the engine.
	The fuel valve is closed.	Open the fuel valve.
The exhaust color is abnormally black	The fuel quality is poor.	Replace with high-quality fuel.
	Too much engine oil.	Adjust to the proper oil level.
If black smoke is coming from the muffler and power output drops	The air filter element is clogged.	Clean the element.
	The choke is not fully open.	Return the choke lever fully to its normal position. 
If bluish-white smoke	Too much engine oil.	Adjust to the correct oil level.
	Wear on the cylinder and piston rings.	* Replace the rings.
Engine RPM is not	The choke is not fully open.	Return the choke lever to the fully open position. 

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stable (does not increase)	The fuel quality is poor.	Replace with high-quality fuel.
After a while, the engine stalls.	Faulty ignition coil.	* Replace the ignition coil.
	Clogged fuel filter.	Clean the fuel filter.
There is a pungent odor in the exhaust.	Poor fuel quality.	Replace with high-quality fuel.

For items marked with an asterisk (), please consult your dealer. Please note that a fee will apply.

*If you are unsure, please consult the dealership where you purchased the vehicle.

7.3 Troubleshooting Checklist

If any of the following symptoms occur, please refer to the user manual and take appropriate action.

Symptom	Cause	Action
Cuttings are not being discharged properly.	The grass is wet.	Wait until the grass is dry before operating.
	The grass is too long.	Increase the cutting height and mow twice.
	The cutting height is too low.	Set the cutting height higher.
	The engine RPM is low.	Set the engine to maximum RPM.
	The operating speed is too fast.	Slow down the operating speed.
There are areas that weren't cut.	The operating speed is too fast.	Slow down the operating speed.
	Engine RPM is low.	Set to maximum RPM.
	Blade wear or damage.	Replace with a new blade.
	Grass clippings have accumulated inside the	Clean the inside of the blade guard.
	The grass is too long.	Mow a second time.
Soil is being scraped up.	The cutting height is too low.	Increase the cutting height.
	The turning speed is too fast.	Reduce the speed when turning.
	The terrain is undulating.	Change the mowing pattern (mowing
	The terrain is very uneven.	Increase the cutting height.
	The blade is bent.	Replace with a new blade.
The belt is slipping.	The belt tension is too low.	Adjust the belt tension.
	Foreign objects are clogging the knife cover.	Clean the inside of the knife cover.
	Grass buildup on the pulley.	Clean the pulley thoroughly.
	Belt wear.	Replace with a new belt.
The mission is not shifting.	The shift position is misaligned.	Adjust the derailleur guide position and derailleur cable.
	Transmission malfunction.	Repair the transmission.
Excessive vibration.	The knife is out of balance.	Replace the knife. (All knives)
	Damaged blades.	Replace with new knives.
	The knife drum is bent.	Replace the knife drum assembly.
	Belt damage.	Replace with a new belt.
	Old and new knives are mixed together.	Do not mix new and old knives.
	Grass and other debris are wrapped around	Remove any debris wrapped around the knife drum.
The mowing workload is heavy.	The engine RPM is low.	Increase the engine RPM.
	The operating speed is too fast.	Slow down the operating speed.
	Grass has accumulated or become tangled around the knife shaft.	Clean the knife thoroughly.
	The grass is too long.	Increase the cutting height and mow twice.
	The cutting height is too low.	Increase the cutting height.
The tires or tracks are slipping.	The field is soft.	Suspend work until the field dries out.
The oil filler plug popped out during operation.	Too much fluid was added. (Excessive internal pressure)	Adjust to the specified oil level.

*If you are unsure, please consult the dealer where you purchased the machine.