

Operator Manual

GSV1000



HATSUTA

2023.JUL

Greeting

Thank you very much for purchasing a HATSUTA product.

This operating manual describes the proper handling and easy care of the product in order to ensure that you get the best performance from it. Please use this booklet to ensure safe operation of the product. After reading this manual, please keep it in a safe place so that you can refer to its contents at any time.

Introduction

Please read this manual to fully understand how to use and maintain the product, and use it in a safe and proper manner with the minimum necessary preparation as an operator. It is your responsibility to use this product properly and safely.

Maintenance should be performed by personnel with expertise in machine maintenance (including knowledge of engines, hydraulics, electricity, etc.).

If you have any questions about maintenance or the genuine parts to be used, please contact the dealer where you purchased the product or our company. When making inquiries, please be sure to provide the product model and serial number.

If you are lending or transferring this product, please hand over this document together with the product.

Hatsuta Kakusanki Co., Ltd.

Contents

1. Greetings
2. Hazard warning symbols
3. Safe operation
4. Training
5. Recycling and disposal
6. Specifications
7. Warning and instruction stickers
8. Part names and operating instructions
9. Maintenance

2. Contents

In this manual, important safety precautions are indicated by the following hazard warning symbols. These are important items that may cause injury or property damage, so please read them carefully and be sure to observe them.

Hazard warning symbols

This symbol means items related to "DANGER," "WARNING," and "CAUTION." All of them indicate the following precautions to ensure safety.

Danger

Indicates an item that, if not followed, could result in death or serious injury.

Warning

Indicates a potentially hazardous situation that could result in death or serious injury if the precautions are not followed.

Caution

Indicates a potential risk of injury if the precautions are not followed.

Important

Indicates a potential risk of damage or malfunction of the machine if those precautions are not taken.

NOTE

Other useful supporting information is shown below.

Important Notes on Use

Caution

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

When replacing parts, be sure to use "HATSUTA genuine parts" or "our specified parts".

HATSUTA is not responsible for any malfunctions caused by using parts other than genuine HATSUTA parts.

1. Before using this product, be sure to read the following operating manual to fully understand its contents.

- **Hatsuta Product Operating Manuals**
- **Engine Owner's Manuals**
- **Battery Owner's Manuals**

2. Intended Use

This product is a machine intended for sand spreading and brushing in the following turfed areas

- **Golf course turf areas**
- **Soccer, baseball, and other sports fields**
- **Turf farms, etc., with maintained lawns**

 **Warning**

Do not use the machine for any purpose other than the intended use or modify the machine.

The machine cannot be driven on ordinary roads.

Even in locations suitable for the intended purpose, places where there are unevenness, ups and downs. Do not use the machine in places where hard objects such as stones or other foreign objects are lying around or buried, or where the ground surface is soft.

3. Safe operation

Be sure to read this guide to ensure safe operation.

Misuse or poor maintenance can lead to injury or death.

 **Danger**

This product is designed for safe handling and is shipped from the factory after thorough testing and inspection.

It is important to manage the machine on a daily basis, including proper operation, handling, start-up inspections, and periodic inspections.

Failure to properly use or maintain this product may result in serious injury.

4. Training

- 1 Before using this product
- 2 Safety on slopes
- 3 Before work
 - 3.1 Personal appearance while working
 - 3.2 Inspection of work equipment/precautions
 - 3.3 Safety at work site
- 4 Regarding fuel
- 5 During operation
- 6 During work
- 7 Maintenance
- 8 Storage
- 9 Long-term storage
- 10 Batteries
- 11 Polyurethane tires

1. Tips before using this product

- ◆ Before operating this product, be sure to read and fully understand the instruction manual and the hazard warning symbols on the machine, as well as the use and operation of this product.
- ◆ The operator or mechanic must always work under the responsibility of the owner or person in charge of management.
- ◆ If the operator or mechanic cannot read Japanese, it is the responsibility of the owner or person in charge to fully explain and ensure that he/she understands the contents of this manual.
- ◆ It is the responsibility of the owner or manager in charge to provide appropriate training (e.g., instruction in operating techniques) to all operators and mechanics.
- ◆ Be fully aware of and concentrate on your surroundings when operating or piloting this product.
- ◆ Do not allow children (under 18 years old) or persons without driving knowledge and skills to operate this product.
- ◆ Some areas may have age restrictions for operators. Be sure to check before use.
- ◆ Owners, supervisors, and operators are responsible for their own and others' safety, and accidents can be prevented through the care of owners, supervisors, and operators.
- ◆ The owner, superintendent, operator, and mechanic are responsible for personal injury and damage to property.
- ◆ This manual contains safety information where necessary.
- ◆ Notations in this manual regarding position are left and right when seated in the operating position.

2. Safety on Slopes

- ◆ Safe operation on slopes is the responsibility of the operator. Operate with extreme caution on any slope.
- ◆ The operator should measure the slope himself to determine if it is safe to work on.
- ◆ Never allow the operator to enter a slope that is more than 15 degrees.
- ◆ No slope is safe. Please be very careful when entering a slope. Once the vehicle starts to slide, it is very difficult to control it with the brakes.
- ◆ Do not work across slopes.

Main causes of loss of control on slopes

Insufficient tire grip

Excessive speed

Improper braking

Ground conditions (uneven, icy, muddy, rain/snow)

Poor maintenance

Improper weight distribution, such as overloading

3. Before the work

1. Personal appearance while working

- ◆ Wear appropriate clothing for the work specified. (e.g., safety shoes, long pants, helmet or hat, safety glasses, and hearing protection)
- ◆ Do not drive or operate a vehicle barefoot or in sandals.
Keep clothing neat and tidy, and do not wear long hair or accessories hanging down.

2. Inspection of work equipment / precautions

- ◆ Be sure to perform the starting inspection.
- ◆ Periodic inspections must be performed during the working hours specified in this manual or at regular intervals.
- ◆ Always perform inspections in a flat, safe area with no obstructions around.

- ♦ Make sure that there are no persons or children (hereinafter referred to as "third parties") who are not engaged in the inspection work.
- ♦ Be sure to wear safety glasses during inspection work.
- ♦ Make sure that the hopper is empty before starting work. If there is a load, remove the load by the specified method.
- ♦ If it is not necessary to start the engine, be sure to remove the key.
- ♦ Check that the operating controls (steering wheel, running pedals, brakes, etc.), safety devices, and protective covers are properly installed and functioning properly. If any part is not functioning, do not work on it until repairs are completed.
- ♦ When starting the engine or operating the power unit such as the work equipment, make sure that no other operator or third party is nearby, and call out to them as you work.

3. Safety at the work site

- ♦ Check the area where this product is to be operated or worked in advance and remove pebbles, obstructions, and any objects such as wires or tree branches that may interfere with or endanger the operation or work.
- ♦ Never allow children in the work area. Always leave them under the supervision of an adult other than the operator.
- ♦ It is the responsibility of the owner or manager to ensure that any adults who are not involved in the work are accompanied by a companion to observe the work.


4. About Fuel

Warning

The fuel is highly flammable and should be handled with care.

- ♦ Store fuel in a dedicated container in a designated area.
- ♦ Always turn off the engine while refueling.
- ♦ Always check for fuel leaks from fuel hoses, various joints, etc. before refueling. If any leakage is found, repair it immediately.
- ♦ Do not open the fuel tank lid when the engine is hot.
- ♦ Wear antistatic clothing or use an antistatic plate before refueling.
- ♦ Always refuel outdoors.
- ♦ Fires are strictly prohibited while refueling. Never smoke.
- ♦ If fuel is spilled, do not start the engine, wipe it up with a dry rag, move the area, and keep anything that could cause ignition away from the fuel until it has completely vaporized and the fuel gas has fully diffused.
- ♦ Close the lid securely after refueling!

5. Operation during driving

- ♦ Do not start the engine in an enclosed confined space without a window. Toxic carbon monoxide can build up. Only drive in well-lit areas.
- ♦ Travel on well-defined roads with good visibility. Never drive on roads where no one else will pass.
- ♦ When driving on slopes, be very careful and avoid even small bumps and uneven surfaces.
- ♦ Do not turn on slopes.  Do not park on slopes.
- ♦ When moving, travel at a speed that ensures safety and use paved roads whenever possible. If there are bumps in the road, ditches to ride over, etc., please slow down to an extremely slow speed to get over.
- ♦ If a guard is damaged, defective, or lost while driving, have it repaired immediately. If it is not installed or repaired, do not use it.
- ♦ Do not drive with more than two people in the vehicle.
- ♦ Do not change transmission gear on the way up an incline. Make the change before the incline. If you do enter the vehicle, check the safety behind you and back up slowly to a flat area.
- ♦ Do not turn the engine cell for more than 15 seconds continuously. 10~15 seconds turn, do not turn for 30~60 seconds.

- ◆ General roads and highways may not be traveled or used. If you wish to use it, please contact the respective local authorities.
- ◆ If abnormal noise or vibration is detected while moving, stop the vehicle in a flat and safe place and repair it as soon as possible. If repairs cannot be made, do not use the product.
- ◆ When moving backward, check the safety of the rear and move backward at a safe speed.
- ◆ When turning, crossing a controlled or cart path, or crossing from behind a turn, planting, or standing tree with poor visibility, always slow down to a safe speed or stop once and check left and right before crossing.
- ◆ Never allow anyone who is under the influence of alcohol or drugs (including drugs containing ingredients that induce drowsiness) to drive.
- ◆ Do not work while looking at a cell phone or listening to music while driving.
- ◆ Be sure to reduce engine speed when stopping the engine. ☒ If there is a threat of lightning strike, stop work, leave the machine, and evacuate to a safe place.
- ◆ Do not adjust the seat/shutter during operation. If adjustments are necessary, be sure to stop the machine in a safe place before doing so.
- ◆ Do not make sudden starts or stops as much as possible. It puts a heavy load on the tires and body frame and will significantly shorten the life of the product.
- ◆ If an obstacle (tree branch, large stone, wire, etc.) is found while traveling, the operator should always remove it before traveling.
- ◆ Compared to automobiles and other vehicles, this product causes greater vibration and noise, and places a greater burden on the body. Please take regular breaks and switch operators to perform the work.

6. Operation during work

- ◆ Before starting work, thoroughly check the work method and driving areas to ensure safe and efficient operation.
- ◆ When loading sand, please turn off the engine and dismount.
- ◆ Maximum loading should be based on the top surface of the hopper being scraped off.

Danger

Never overload the vehicle. It may result in poor braking, vehicle instability, and in the worst case, overturning. It will also lead to damage to the tires and body frame.

Please be very careful when traveling with a full load. Keep speed as low as possible to ensure safe movement.

- ◆ Lower the spreading lever slowly with your hand.
- ◆ Do not work on top of the hopper. ☒ Do not transport people, living creatures, or heavy objects in the hopper.
- ◆ Dust and other particles will be dispersed into the air during operation. Be sure to wear safety glasses and a dust mask when working. When working, please work at a safe speed. Use the speed adjustment mechanism to ensure safe and reliable work.
- ◆ When stopping, keep the front tires straight and stop on a flat surface.
- ◆ When adjusting the shutter, please do so after confirming a safe stop.
- ◆ Do not leave the brush/conveyor belt in a rotating position.

7. Maintenance

- ◆ Maintenance should be performed by persons who have received adequate training and instruction.
- ◆ In particular, engine, hydraulic, electrical, and welding repairs should always be performed by persons with specialized knowledge.
- ◆ Maintenance should always be performed in a safe, flat, designated area that is free from fire, etc.

- ♦ Make sure to perform daily inspections, and before work, perform a start-up inspection and a periodic inspection once a set period of time.
- ♦ When charging the battery, be sure to fully understand the battery instruction manual and the charger instruction manual.
- ♦ If the engine does not need to be started during maintenance, stop the engine and remove the key before proceeding.


Danger

If it is necessary to start the engine during maintenance, make sure no one is nearby before starting the engine.

- ♦ During maintenance, pull the parking brake, install wheel clamps on the wheels, and park the machine.
- ♦ Keep the work area clean and tidy at all times. Oil on the floor, tools, etc. can cause you to slip and injure yourself or damage the machine.
- ♦ If oil, grease or fuel is spilled during maintenance, wipe it up immediately. In particular, if fuel is spilled, wipe it up with a rag and leave it until it has completely volatilized.

Important


During operation (when working continuously and daily), avoid cleaning with water and use a blower or an air blower to remove sand, etc. If the inside of the conveyor belt gets wet, it may cause the conveyor belt to slip or meander.

- ♦ Take care to keep water off the engine and battery as much as possible.
- ♦ Avoid outdoor maintenance on windy days and work indoors.
- ♦ Do not change engine governor settings.  Always disconnect the negative terminal of the battery before performing maintenance work.
- ♦ When removing the battery, be sure to disconnect the negative terminal before removing the positive terminal.
- ♦ Please insulate the removed connector so that it does not come in contact with the battery terminals.
- ♦ Installation of the battery should be done in the reverse order of removal. Be sure to install the negative battery terminal last.
- ♦ Tools used for maintenance should be selected and maintained as appropriate for the purpose. Also, please manage tools on a daily basis.
- ♦ When jacking up, be sure to use the specified position for the work.
- ♦ When using a jack or jack stand for this product, use one with a load capacity of 2 tons or more.

8. Storage

- ♦ Store in a designated covered area with no nearby fire or ignition sources.
- ♦ Remove lawn grass, dead leaves, dirt, etc. before storing. Protect the body from rust and other deterioration.
- ♦ Do not store in a closed area with the engine hot.
- ♦ When storing with a sheet or other covering, always allow the engine and overheated parts to cool before covering with a sheet.
- ♦ Always store with the fuel cock closed. This will prevent fuel leakage.
- ♦ Be sure to remove the key.

9. Long-term storage

- ♦ While the engine is still warm, drain the oil and put in fresh oil.
- ♦ Drain the fuel from the fuel tank, and after draining, back-flow the fuel in the pipes and wash the fuel filter thoroughly. Then start the engine and use up the fuel completely.
- ♦ Clean the machine and the outside of the engine. Paint that has peeled off should be repaired or coated with rust-preventive oil.  Disconnect the negative terminal of the battery. Long-term storage will deform the urethane tires, but they will return to

normal after a while after driving. Tire deformation can also be prevented by slightly floating the tire using the specified jacking points.

10. About Batteries

- ◆ Refer to the manufacturer's manual. Also refer to the maintenance section of this manual
- ◆ Disconnect and clean the battery according to the maintenance section. Store the battery in the upright position. Batteries should be stored in a cool, dark place. Storage at temperatures above -7°C (-7°F) will greatly increase discharge. Storing discharged batteries at temperatures below -7°C will cause the electrolyte to freeze.

Important

Batteries in storage should be inspected at 60- to 90-day intervals and recharged if necessary.

11. About Urethane Tires

重要

The urethane tires used in this product are special tires that improve work performance on turf. Since urethane tires do not have cushioning properties, even the slightest bumps or bumps in the road may cause a large impact on the vehicle chassis and cause the steering wheel to be caught. In such places, please slow down extremely and drive slowly and safely.

Failure to do so may result in serious accidents, malfunctions, or unexpected damage to the chassis, front forks, covers, etc.

- ◆ Urethane tires are a material that absorbs moisture easily. Oil spills or running on oil can absorb oil and negatively affect the turf. If oil is spilled or run on oil, wipe off the surface and rinse thoroughly with a hot-water washing machine.
- ◆ Avoid abrupt braking and sudden starts. This will place a heavy burden on the urethane tires and may cause them to rupture or peel. Drive with caution, especially if there is a load on the vehicle.
- ◆ Urethane tires are subject to wear. If they become significantly worn, replace them immediately.
- ◆ They are more stressful on the operator than regular tires. We recommend replacing the operator or taking a break at least every 2 hours.

5. Recycling and disposal

1. Recycling

It is recommended that batteries and steel materials be recycled for environmental protection and efficient use of resources. Some local laws may require it.

2. Disposal

Waste from maintenance and repair work should be properly disposed of in accordance with local laws.

(e.g., copper products, waste oil, antifreeze, rubber products, etc.)

6. Specifications

Specification Document

	Model (e.g. of a vehicle)	GSV1000
Dimensions	Over-all length	2390mm
	Overall width	1540mm
	Overall height	1370mm
	Dry weight	750 kg Rear wheel urethane roller + Scrubbing brush
	Hopper capacity	0.4 m3
Driving	Tire size	Front wheels ϕ 300 x 150 urethane tires x 2 Rear wheels ϕ 350 x 300 Urethane tires x 4
	Shifting gears	3 steps forward, 1 step backward
	Driving Method	V-belt clutch type/ Accelerator pedal and engine throttle interlocked
	Wheelbase	1520mm
Engine	Manufacturer Model	BRIGGS & STRITTON VANGURD 305447
	Type	V-twin cylinder cycle OHV gasoline
	Number of cylinders	2
	Total line capacity	479cc
	Maximum output	11.8W / 16HP
	Fuel	leadless gasoline
	Starting method	Starter
Operation	Sand feeder	Conveyor belt Rough top
	Sand Conditioner	Shutter type
	Sand spreader	roll brush
	Scatter width	1150mm
	Abrasive Brush	1200mm x 2 pcs (fern brush)
Capacity	Fuel tank	24L unleaded gasoline
	Engine oil	1.6L 10W30
	Battery	42B19L 12V

7. Warning and instruction labels

1. About warning and instruction labels
2. Description of warning and instruction labels
3. Warning and instruction labels location

1.About warning and instruction labels







Important


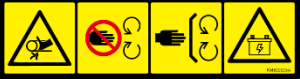

Warning and instruction labels are located on this product. Always keep labels clean and replace them immediately if they appear peeling, soiled, damaged, or deteriorated. Please order the necessary labels from our distributor using the part numbers on the parts list.

2.Explanation of warning and instruction labels



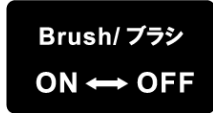
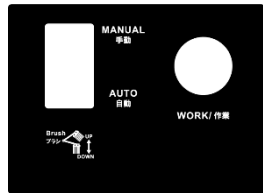
- If the label on the machine becomes damaged, lost, covered with paint, or unreadable, replace it with a new label.
- When replacing parts with labels, replace the new labels together.






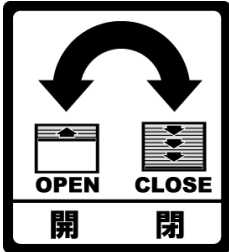
Labels should be ordered from the place of purchase of the machine.

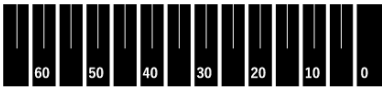


 <p>Location: 1</p>	<p>Read the Operation Manual Dangerous Driving-Prohibited -Two-Passenger Dangerous Driving-Prohibited -Person in the vicinity of the vehicle</p> <p>Dangerous Driving-Passing back and forth or crossing an incline of 15 degrees or more</p> <p>Caution When leaving the vehicle, stop the engine, park the vehicle, and remove the key.</p>
 <p>Location : 2</p>	<p>Fuel: Gasoline</p>
 <p>Location : 3</p>	<p>Never bring fire close.</p>
 <p>Location5. 10</p>	<p>Conveyor belt: Caution against roll-in</p>
 <p>Location : 15 16</p>	<p>Warning: Cover is removed. If this sticker is visible, the cover has been removed. Be sure to install the cover.</p>
 <p>Location : 7</p>	<p>Ignition Warning</p>

 <p>Location : 8</p>	<p>Muffler caution High temperature danger</p>
 <p>Location : 9</p>	<p>Caution: Belt wrapped around DANGER: Rotating objects Installation of cover recommended Battery caution</p>
 <p>Location : 11</p>	<p>Never touch the brush while it is rotating. Be careful of brushes. Be careful of flying debris to the rear</p>

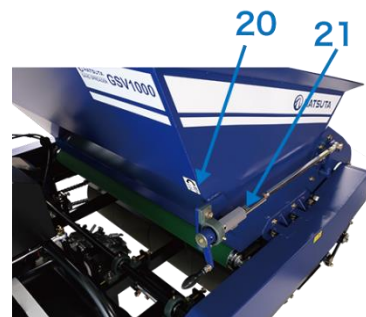
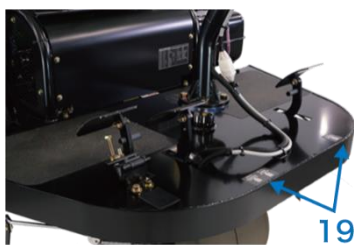
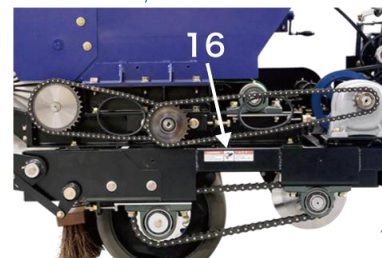
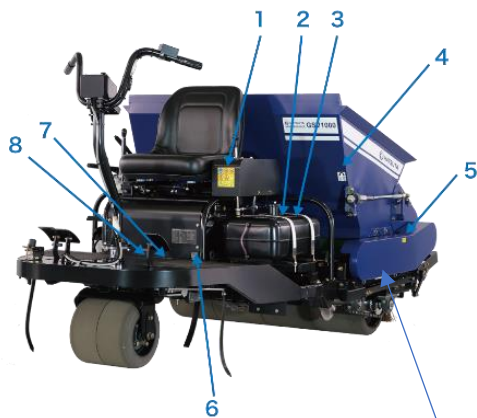
Operation and instrumentation stickers

 <p>Location : 4</p>	<p>TOPDRESSING VOLUME CHART By matching the shutter scale with the first through third gears of the gear transmission, the proper amount can be applied. However, it depends on the sand quality. Please check the actual spreading before use.</p>
 <p>Location : 6</p>	<p>Consumable parts list (for reference)</p>
 <p>Location : 12</p>	<p>On-off for manual brush</p>
 <p>Location : 13</p>	<p>Brushing, Manual layout Lamp for operation</p>

 <p>Location : 13 (スイッチ)</p>	<p>Manual-Automatic switching of the brush</p>
 <p>Location : 14</p>	<p>Tacho Meter Display</p>
 <p>Location : 17</p>	<p>Parking Lever</p>
 <p>Location : 18</p>	<p>Differential Lock Lever</p>
 <p>Location : 19</p>	<p>Clutch pedals Brake pedal Driving (Throttle) pedal</p>
 <p>Location 20</p>	<p>Opening and closing the shutter Rotate Left: Shutters open Rotate Right: Shutters close</p>

 <p>Location 21</p>	<p>Shutter scale</p>
 <p>Location 22</p>	<p>Transmission lever 1st to 3rd gear + reverse as indicated.</p> <p>CAUTION: Do not change gears while driving.</p>
 <p>Location : 23</p>	<p>Operation lever</p>

Sticker location



Names of parts and usage

1. Part Names
2. Details of each part name
3. Inspection at the start of the school day
4. Tightening torque
5. Pre-conditioning
6. Driving Method
7. Towing Method
8. Working procedure
9. Transportation method

1. Names of parts



1. Handle
2. Sheet
3. Hopper
4. Shutter adjustment handle
5. Rear wheel urethane tires
6. Spread width marker
7. Antistatic rubber
8. Front wheel urethane tire



9. Fuel tank (24L tank)
10. Clutch retaining lever



11. Roll brush
12. Drag brush
13. Grooming brushes



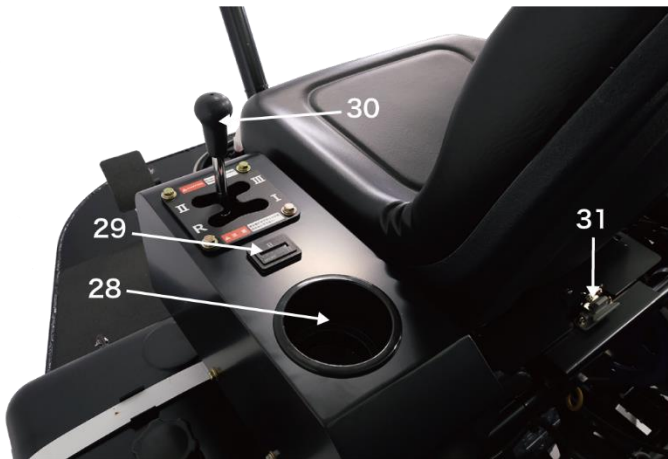
- 14. Surrounding brush Manual switch
- 15. Surrounding brush Automatic/manual changeover switch
- 16. Brush activation lamp
- 17. Speedometer
- 18. Tachometer



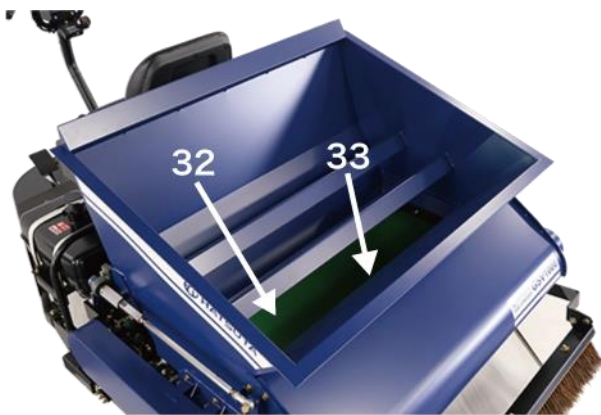
- 19. Clutch pedal
- 20. Brake pedal
- 21. Gas pedal pedal
- 22. Speed adjustment stopper



- 23. Differential lock lever
- 24. Parking lever
- 25. Operation lever
- 26. Key switch
- 27. Choke lever



- 28. Cup holder
- 29. Hour meter
- 30. Transmission lever
- 31. Seat stopper



- 32. Conveyor belt
- 33. Shutter

MODEL NAME	
PRODUCTION No.	
SERIAL No.	
 初田拡撒機株式会社 HATSUTA KAKUSANKI Co. MADE IN JAPAN	

Aircraft number plate

The aircraft number plate shows the model and aircraft number.

2. Details of each part

Hopper (Ref. No. 3)

The hopper is a container located behind the driver's seat for loading sand.

The loading capacity of the hopper is 0.4 m³.

Danger

Never, ever modify the machine to increase the loading capacity of the hopper (e.g., by adding veneer plates to the walls). The machine will be damaged. Also, loss of braking capability may lead to a serious accident.

Warning

Do not load the hopper beyond its loading capacity. Loss of braking capability may result in a serious accident.

Shutter adjustment handle (ref. no. 4)

The shutter adjustment handle is located on the side of the hopper on the left hand side in the direction of travel.

By turning the handle, the shutter (fabric belt) inside the hopper opens and closes.

Opening the shutter and widening the opening increases the spray volume; closing it narrows the opening and decreases the spray volume.

Using the spray chart attached to the hopper as a guide, adjust the spray amount by matching the scale on the adjustment handle.

NOTE

The spreading chart is only a guide. Since it varies depending on the condition, quality, size, and grain shape of the sand, please check the actual amount to be sprayed before determining the amount to be sprayed.

Front wheel urethane tires and rear wheel urethane rollers (Ref. No. 5.8)

Important

When traveling on rough road surfaces, uneven surfaces, or bumps, please slow down sufficiently.

Sudden braking, sudden acceleration, or sudden steering while driving may cause excessive load on the urethane, resulting in cracking or peeling.

Be especially careful when moving after sand loading.

Riding up on curbs or tree roots can damage the urethane.

Both front and rear wheels will be urethane tires.

Compared to rubber tires and rubber rollers, ground pressure is lower, reducing the impact on the turf.

Scatter Width Marker (Ref. No. 6)

Spread width markers are located on both sides of the front of the vehicle.

It is in a working state when it is out in front of the frame, and in a stowed state when it is folded down so that it enters the frame.

NOTE

The spread width markers are only a guide. By checking the actual spread width while spraying, you will be able to spray more neatly.

Antistatic rubber (Ref. No. 7)

Antistatic rubber is a rubber plate that hangs below the seat and against the ground from the chassis.

Conductive rubber plate prevents static electricity generated by rotating friction of conveyor belts, roll brushes, dust and dirt.

Clutch retaining lever (Ref. No. 10)

The clutch retention lever is located on the lower left side of the seat.

Depress the clutch pedal, pull up the lever, and release the pedal to lock the clutch pedal.

It is released by depressing the clutch pedal again.

Since the belt tension pulley is pulled up, the load on the belt is eliminated, preventing the V-belt from becoming kinked and not freeing the clutch during long-term storage.

Roll brush (Ref. No. 11)

The roll brush is located at the rear of the hopper.

The roll brush is rotated to ensure that the sand falls firmly onto the work surface.

While the engine is running, the roll brush rotates by lowering the operation lever.

Warning

Never touch the roll brush while it is rotating. Doing so may cause an entrapment accident.

Drag and grooming brushes (Ref. No. 12/13)

The drag and grooming brushes are located at the very rear of the vehicle.

The electric cylinder is raised and lowered by a switch mounted on the handle.

NOTE

Brush bristles are also wear parts. Replace brushes when they are worn out, unevenly worn, or depleted to one side.

Up/down switch for manual brush (Ref. No. 14)

The brush manual up/down switch is located on the left side of the handle.

When the manual/automatic brush switch is in the "M" position and the manual brush up/down switch is in the "ON" position, the grind-in brush moves down. When the switch is in the "OFF" position, the brush moves up.

Brush manual/automatic selector switch (Ref. No. 15)

The brush manual/automatic switch is located in the center of the handle.

Push the switch toward "M" for manual operation. Push it toward "A" side for automatic. If the brush is not used, put it in the "M" side.

NOTE

When the brush is in automatic "A" position, it is linked to the operation lever. When the lever is lowered, the brush is lowered. When the lever is raised, the brush is raised in conjunction with the lever.

Brush actuation lamp (Ref. No. 16)

The brush operation lamp is located in the center of the handle.

When the grind brush is lowered, the lamp lights up; when the brush is raised, the lamp goes out.

Speedometer (Ref. No. 17)

The speedometer is located on the right hand side in the center of the steering wheel.

The vehicle speed is displayed.

Engine tachometer (Ref. No. 18)

The engine tachometer is located in the center of the steering wheel.

Displays engine RPM.

Clutch pedal (Ref. No. 19)

The clutch pedal is located at the leftmost foot.

When stepped on, the belt tension pulley that connects the engine to the transmission is raised, the belt tension is released, and the engine pulley idles.

When the clutch pedal is released, the tension pulley drops, the belt tension pulley holds the belt, and the engine drive is connected to the transmission.

Brake pedal (Ref. No. 20)

The brake pedal is located to the left of the accelerator pedal.

To decelerate, depress the brake pedal.

⚠ Caution

When stopping, after slowing down, depress the clutch pedal and then the brake pedal to bring the vehicle to a stop.

If the clutch pedal is not depressed and power remains on, the car may not stop.

Accelerator pedal (Ref. No. 21)

The accelerator pedal is located at the far right foot.

When you step on it, the engine speed increases; when you step back on it, the speed decreases.

Stopper for speed adjustment (Ref. No. 22)

The speed adjustment stopper is located forward of the accelerator pedal.

Important

This is provided to ensure stable and safe speed. Due to the characteristics of the product, it is designed to prevent spraying spots caused by speed fluctuations.

Differential lock lever (Ref. No. 23)

The differential lock lever is the outside lever on the right side of the driver's seat.

Pull the differential lock lever to engage the differential lock.

Lowering the differential lock lever releases the differential lock.

The differential lock is a function that provides driving force to the wheel on the side that is not idling in case one wheel idles due to uneven road surfaces.

⚠ Warning

Do not drive with the differential lock pulled. It will make it difficult to maneuver and may result in an accident, tire damage, or transmission failure.

⚠ Caution

When engaging the differential lock, be sure to stop before pulling the lever. Pulling the lever while the car is running may result in transmission failure.

Parking lever (Ref. No. 24)

The parking lever is the inside lever on the right side of the driver's seat.

Pull the parking lever to apply the brake.

Lowering the parking lever releases the brake.

⚠ Caution

When parking, always park on a level surface and stop the engine. Apply the parking brake firmly and park with the transmission in first gear or reverse.

If the brakes are not working properly, use a wheel stopper to secure them in place.

Operation lever (Ref. No. 25)

The operation lever is a push-in lever located forward on the right side of the driver's seat.

When the operation lever is depressed, tension is applied to the V-belt in the work section, the conveyor belt and roll brush rotate, and work can begin.

Returning the operation lever releases the tension and completes the operation.

Key switch (Ref. No. 26)

The key switch is located diagonally to the right of the seat.

By turning the key, the engine can be started by turning the engine cell.

Choke lever (Ref. No. 27)

The choke helps the engine start when the engine is cold. When the engine is cold, pulling the choke lever will make it easier to start. After starting the engine, return the choke lever to its original position.

Caution

If the choke is left pulled after the engine is started, the fuel concentration will become too thick, causing combustion problems and leading to engine failure.

Hour meter (Ref. No. 29)

The hour meter is located behind the transmission lever.

With the key ON, the total operating time of the machine is measured. 6 minutes elapsed, a black number on a white background moves one scale. 1 hour elapsed, a white number on a black background moves one scale. The machine is serviced based on the operating hours. Be sure to check that the machine is in operation.

Caution

Leaving the vehicle with the key in the ON position will extend the operating time and lead to battery discharge. When storing the vehicle, be sure to remove the key.

Transmission change lever (Ref. No. 30)

The transmission change lever is located on the left side of the driver's seat.

When the clutch pedal is depressed in the indicated direction, the transmission change is changed.

The lower the number, the stronger the force, but the slower the speed; the higher the number, the weaker the force, but the faster the speed. Select the mission according to where you will be driving.

Danger

Never shift the transmission on a hill. Doing so may cause the transmission to disengage, resulting in a serious accident.

Warning

Do not shift the transmission while driving. It will result in damage to the transmission.

Seat stopper (Ref. No. 31)

The seat stopper is located directly behind the seat.

By pushing in the stopper, the seat is unfastened and bounced up as it is. To return the seat to its original position, lower it slowly.

When the seat hits the stopper, the hinge will move as it is, and when you hear the "click" sound, the seat is secured.

Caution

The seat is provided to prevent the seat from bouncing up due to forward load transfer when stopping or decelerating. If the seat is damaged or malfunctions, replace it.

Conveyor belt (Ref. No. 32)

The conveyor belt is located at the bottom of the hopper.

The conveyor belt rotates to move the sand backward, allowing the sand to be spread.

During engine startup, it rotates by lowering the operation lever.

Warning

Never touch the conveyor belt while it is rotating. Doing so may cause an entrapment accident.

Caution

If the conveyor belt idles, be sure to follow the maintenance manual. Incorrect repair will result in damage to the conveyor belt, driven

rollers, drive rollers, and other major components.

Shutter (Ref. No. 33)

The shutter is located behind the interior of the hopper.

It is made of cloth and is scratch resistant against conveyor belts.

NOTE

As the shutter wears down, the amount of spraying will change. Periodically inspect the shutter to ensure that it is installed horizontally and that there are no pieces that are worn away.

3. Start of work inspection

To ensure that the machine performs to its full potential and can be used for a long time, please be sure to perform a start-up inspection.

Caution

Inspections should be performed on a flat surface with adequate ventilation.

Please pay attention to your surroundings.

How to start the engine during inspection

When starting the engine during inspection, be sure to follow the procedure below.

1. Put wheel stops in front and behind the tires. Pull the parking brake and put the transmission in neutral position.
2. Depress the clutch pedal and foot brake to start the engine.
3. Slowly release the clutch pedal while depressing the foot brake.
4. Make sure it is not running and completely release the clutch and foot brake.

Caution

Never touch the transmission parking rake while the engine is running.

Handle

Check the handle for rattling. Check for loose bolts and condition of bosses.

If there is rattling or poor movement, replace or repair parts.

Brake

Inspection of foot brake

1. Depress the brake pedal hard and make sure the brake works.
2. Check for brake oil leakage.
3. Check the contents of the brake oil cup for black stains.
If the oil is too dirty, change the oil.

Parking brake inspection

1. With the engine stopped, pull hard on the parking brake.
2. Put the transmission in neutral.
3. Make sure that the vehicle does not move.
4. Make sure that the vehicle moves when the parking brake is released.
If the brake is not working properly or is dragging, please adjust the brake.

Wire

Inspect throttle wire, choke wire, and clutch wire

5. Push the seat stopper down and raise the seat up.
6. Move the accelerator pedal and check that the throttle is working properly.
7. Move the choke lever and check that the choke is working properly.
8. Move the clutch pedal and check that the clutch tension is working properly.
Inspect the wire or moving parts if they do not move properly.

V-belt

Danger

When adjusting the belt, be sure to do so with the engine stopped.

When starting the engine, refer to "How to start the engine during inspection" to start the engine.

Never touch rotating objects during operation check.

Caution

Be sure to return all covers removed during inspection to their original positions.

If the cover is removed, it may come in contact with the belt, causing foreign objects to fly off and cause injury.

Inspection of V-belt for clutch

1. Make sure the transmission change lever is in the neutral position and start the engine.
2. Visually check the V-belt for the clutch to see if power is transmitted to the transmission.
3. Depress the clutch pedal and make sure that the power is completely out of the transmission (V-belt is not turning).
 - If the clutch belt does not move properly, adjust the belt.

Inspection of V-belts for operation

1. Make sure the transmission change lever is in the neutral position and start the engine.
2. Lower the operation lever.
3. Confirm that the conveyor belt has moved normally.
4. Raise the operation belt.
5. Make sure that the conveyor belt has stopped normally.
 - If the movement is poor, adjust the V-belt.

Conveyor belt / Rotary brush / Scrubbing brush

Danger

When adjusting the belt, be sure to stop the engine and make sure the transmission change lever is in the neutral position.

When starting the engine, refer to "How to start the engine during inspection" to start the engine.

Never touch rotating objects during operation check.

Inspection of conveyor belt and rotating brushes

1. Make sure there is no wear on the rotating brushes.
2. Start the engine.
3. Lower the operation lever.
4. Verify that the conveyor belt and rotating brushes have moved properly.
5. Continue rotation for a while and check that there are no meanders, twists, cracks, or tears in the conveyor belt.
 - Check that there is no eccentricity in the rotating brush.
 - If the conveyor belt is snaking or twisted, make adjustments. If cracks or tears are found, replace it.
 - If there is a gap between the rotating brush and conveyor belt, adjust it. If any abnormality is found, replace it.

Drag brush

1. Check brushes for uneven wear, hair loss, damage, etc.
 - If the work is affected, replace the brushes.

Check operation of scrubbing brush (manual)

1. Turn the key switch ON.
2. Put the switch in the center of the handle in the manual side.
3. When the brush manual switch is turned ON, the brush slowly lowers.
4. When the brush manual switch is turned OFF, the brush slowly rises.
 - If the brush does not go up and down smoothly or does not move, have it serviced.

Check operation of scrubbing brush (automatic)

1. Turn the key switch ON.
2. Turn the switch in the center of the handle to the automatic side.
3. Make sure that the brush lowers slowly when the operation lever is lowered.
4. Make sure that the brush rises slowly when the operation lever is raised.
 - If the brush does not go up and down smoothly or does not move, have it serviced.

Chain

Danger

When adjusting the chain, always do so with the engine stopped.

When starting the engine, refer to "How to start the engine during inspection" to start the engine.

Never touch rotating objects during operation check.

Working chain

1. Remove the chain covers on both sides.
2. Check the chain for looseness and rust.
 - If there is any looseness, adjust the chain. If there is oil loss or rust, apply chain grease. (Adjustment method -)

Traveling chain

1. Make sure that the running chain is not loose or rusted.
 - If there is any looseness, adjust the chain. If there is oil loss or rust, apply chain grease. (Adjustment method -)

Engine

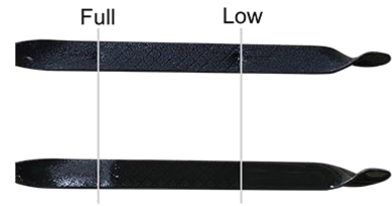
Warning

When inspecting the engine, make sure that the engine is sufficiently cool before doing so.

1. Check the area around the engine for oil seepage, leaks, cracks in the body, or loose screws.
 - If lawn grass or combustible materials are attached to the muffler or its surrounding area, clean and remove them.

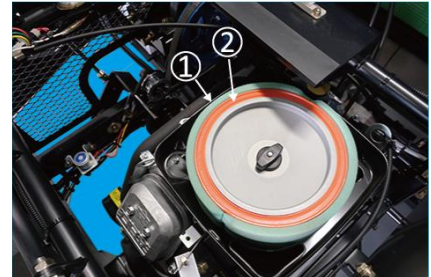
Engine oil (SAE10W30)

1. Remove the engine oil gauge and wipe off the oil with a rag.
2. Insert the oil gauge again and immediately pull it out to confirm that there is oil near F in the lower limit direction of the oil gauge.
3. If the oil is at the upper limit of F, drain the oil immediately to the normal amount.
If the oil does not adhere to the oil gauge or the gauge is less than half full, add oil.



Air cleaner

1. Raise the sheet.
2. Remove the air cleaner cover from the top of the engine.
3. Remove the pre-cleaner and air cleaner and clean dust and dirt.
 - If they are heavily soiled, replace them promptly.
 - If the cleaner case also has dirt dust, remove it with a dry rag.



Battery

⚠ Danger

Be careful not to get battery acid on your body, eyes, or clothing, or to drink it.

If battery acid gets on your body or clothing, rinse it off immediately with water.

⚠ Warning

Wear protective clothing, safety glasses, etc. when replenishing battery acid.

Battery Inspection

1. Remove the battery cover and clean around the liquid level line with a cloth dampened with water.
2. Make sure that the battery fluid is between the Upper Level and Lower Level.
If the battery fluid is less than half of the level between the Upper Level and Lower Level, replenish purified water.

Tire

Tire Inspection

1. Check urethane tires for cracks, damage, abnormal wear, or peeling.
 - If the damage is severe, it may damage the greens. Prompt replacement is recommended.

Fuel

Fuel Inspection

⚠ Warning

Do not fill the tank above the top of the fuel gauge. Overfilling may cause fuel to overflow from the cap when driving or working on an incline.

Fires are strictly prohibited during fueling. Do not smoke.

If fuel is spilled, wipe it up with a dry rag and leave it until the fuel has completely volatilized.

Check the amount of fuel using the fuel gauge on the side of the fuel tank.

The fuel tank capacity is approximately 24 liters.

Fuel strainer, hose, filter

Check the strainer, hose, and filter from the fuel tank to the engine.

Check for fuel leakage from each component and joint.

If there is a fuel leak, do not use until repairs are completed.

■ Make sure the strainer cup is clean.

If the cup is dirty, remove it and clean it.

■ Check the filter for dirt.

Replace them if they are too dirty.

Grease

Once every 50 hours of working time, grease is replenished at the grease point.

Wipe clean any grease that is sticking out.

Tightening torque

Important

Refer to the tightening torque list.

We are not responsible for malfunctions caused by abnormal or over-torqued tightening.

Standard tightening torque

Bolts and screws

Important

Many bolts are used in various parts of the product.

Please be sure to re-tighten the bolts and nuts, etc., as they may loosen during the initial period of use.

- ✓ Bolts and nuts without special instructions should be tightened with appropriate tools to the proper tightening torque.
- ✓ Over-tightening can distort or damage the "screw".
- ✓ Tightening strength is determined by screw type, strength, and friction of screw surface and seat surface.
- ✓ The list covers bolts that are zinc plated or Parker treated.
- ✓ Not applicable if the strength of the female thread is weak.
- ✓ Do not use "screws" that are rusted or covered with sand, etc. Even if the specified tightening torque is given, it will be insufficiently tightened. Also, the friction on the screw surface will increase, and most of the tightening torque will be lost in friction and not in tightening force.
- ✓ When the screw gets wet, the torque coefficient decreases, resulting in over-tightening.
- ✓ Do not use bolts that have once been heavily loaded.
- ✓ Skill is required when tightening with an impact wrench.
- ✓ Practice tightening operations as consistently as possible.

Metric Bolts					unit: N.m										
Class	Class 4.8		Class 6.8		Class 8.8		Class 10.9		Class 12.9						
M5	2.04	-	3.26	4.09	-	6.54	5.47	-	8.75	7.67	-	12.27	9.18	-	14.69
M6	3.47	-	5.55	6.97	-	11.15	9.27	-	14.83	13.0	-	20.80	15.6	-	24.96
M8	8.41	-	11.77	16.9	-	23.66	22.50	-	31.50	31.6	-	44.24	37.9	-	53.06
M10	16.7	-	23.38	33.4	-	46.76	44.50	-	62.30	62.6	-	87.64	75.2	-	105.28
M12	29.1	-	37.83	58.3	-	75.79	77.60	-	100.88	109	-	141.70	131	-	170.30
M14	46.4	-	60.32	92.7	-	120.51	124.00	-	161.20	174	-	226.20	209	-	271.70
M16	72.3	-	93.99	145	-	188.50	194.00	-	252.20	271	-	352.30	325	-	422.50
M18	100	-	120.00	199	-	238.80	266.00	-	319.20	373	-	447.60	447	-	536.40
M20	141	-	169.20	282	-	338.40	376.00	-	451.20	529	-	634.80	635	-	762.00
M22	192	-	230.40	384	-	460.80	511.00	-	613.20	720	-	864.00	865	-	1038.00
M24	244	-	292.80	488	-	585.60	650.00	-	780.00	915	-	1098.00	1100	-	1320.00
M27	358	-	393.80	713	-	784.30	951.00	-	1046.10	1340	-	1474.00	1610	-	1771.00
M30	484	-	532.40	971	-	1068.10	1290.00	-	1419.00	1820	-	2002.00	2180	-	2398.00

Pipe			unit: N.m			
Class	Iron · SUS		Brass			
1/4	25	-	30	15	-	24
3/8	34	-	54	25	-	40
1/2	64	-	90	30	-	42
3/4	132	-	185	60	-	84
1	196	-	255	80	-	104
1'1/4	225	-	293	100	-	130
1'1/2	255	-	332	120	-	156
2	100	-	120	200	-	240

5. Adjustment before use

Important

Be sure to make adjustments before use after the opening inspection is completed.

Seat Adjustment

⚠ Warning

Do not adjust while driving as it is dangerous.

The seat can be adjusted back and forth with the adjustment lever.

Adjust the seat according to the operator's body shape.

The adjustment lever is located in front of the seat.

Adjustment of shutters (amount of sand spread)

Important

When adjusting the shutter, be sure to do so with the engine stopped.

Spray chart is only a guide. Please check the actual amount of spraying to determine the best amount.

1. Stop the engine and engage the parking lever.
2. Turn the shutter adjustment handle and adjust it to the scale referring to the spreading chart.
3. Perform a spray test to confirm the proper amount.
4. Close the shutters if the amount of spraying is high; open the shutters if the amount of spraying is low.

Adjustment of grind brush

Important

When adjusting the grinder brush, be sure to do so with the engine stopped.

Always make adjustments on a flat surface.

Manual brush up/down inspection and adjustment

1. Make sure the transmission change lever is in neutral and the parking lever is pulled.
2. Turn the key switch ON.
3. Set the grind brush/manual and automatic adjustment switch to the manual side.
4. Turn the manual switch ON and lower the brush.
5. Turn the key switch OFF.
6. Make sure the brush is level with the ground and firmly down to the bottom.
If the brush is at an angle, adjust the brush so that it touches the ground firmly on all sides.
7. Turn the key switch ON and the manual switch OFF.
8. Make sure the brush is up.

Automatic up/down brush inspection

1. Make sure the transmission change lever is in neutral and the parking lever is pulled.
2. Turn the key switch ON.
3. Set the grind brush/manual and automatic adjustment switch to the automatic side.
4. Lower the operation lever.

5. Make sure the brush has been lowered.
6. Raise the operation lever.
7. Make sure the brush is up.

How to start/stop the engine

Engine starting procedure

Warning

Make sure there are no people or obstacles around the machine before starting the engine.

Do not start in buildings without proper ventilation.

Caution

Make sure that covers are in the correct position and undamaged.

Important

Starter operation is for a maximum of 15 seconds. If unable to start, deactivate the battery for 30-60 seconds.

1. Open the fuel cock.
It is located at the bottom of the fuel tank.
2. Seated in the driver's seat.
3. Make sure the parking lever is engaged and the transmission change lever is in the neutral position.
4. Pull the choke lever.
Adjust the degree of opening as necessary.
5. Step on the brake and place the engine key in the start position.
6. Confirm that the engine has started and return the choke lever.
7. Perform warm-up operation for about 2 minutes.

Engine Shutdown Procedure

1. Engage the parking lever and make sure the transmission change lever is in the neutral position.
2. Run empty for about 1 minute.
3. Turn the keyswitch to the "OFF" position and confirm that the engine has stopped.
4. Remove the engine key.
5. Get out of the driver's seat and close the fuel cock.

5. Adjustment before use

Important

Be sure to make adjustments before use after the opening inspection is completed.

Seat Adjustment

⚠ Warning

Do not adjust while driving as it is dangerous.

The seat can be adjusted back and forth with the adjustment lever.

Adjust the seat according to the operator's body shape.

The adjustment lever is located in front of the seat.

Adjustment of shutters (amount of sand spread)

Important

When adjusting the shutter, be sure to do so with the engine stopped.

Spray chart is only a guide. Please check the actual amount of spraying to determine the best amount.

6. Stop the engine and engage the parking lever.
7. Turn the shutter adjustment handle and adjust it to the scale referring to the spreading chart.
8. Perform a spray test to confirm the proper amount.
9. Close the shutters if the amount of spraying is high; open the shutters if the amount of spraying is low.

Adjustment of drag brush

Important

When adjusting the grinder brush, be sure to do so with the engine stopped.

Always make adjustments on a flat surface.

Manual brush up/down inspection and adjustment

10. Make sure the transmission change lever is in neutral and the parking lever is pulled.
11. Turn the key switch ON.
12. Set the grind brush/manual and automatic adjustment switch to the manual side.
13. Turn the manual switch ON and lower the brush.
14. Turn the key switch OFF.
15. Make sure the brush is level with the ground and firmly down to the bottom.
If the brush is at an angle, adjust the brush so that it touches the ground firmly on all sides.
16. Turn the key switch ON and the manual switch OFF.
17. Make sure the brush is up.

Automatic up/down brush inspection

18. Make sure the transmission change lever is in neutral and the parking lever is pulled.
19. Turn the key switch ON.
20. Set the grind brush/manual and automatic adjustment switch to the automatic side.
21. Lower the operation lever.

22. Make sure the brush has been lowered.
23. Raise the operation lever.
24. Make sure the brush is up.

How to start/stop the engine

Engine starting procedure

Warning

Make sure there are no people or obstacles around the machine before starting the engine.

Do not start in buildings without proper ventilation.

Caution

Make sure that covers are in the correct position and undamaged.

Important

Starter operation is for a maximum of 15 seconds. If unable to start, deactivate the battery for 30-60 seconds.

25. Open the fuel cock.
It is located at the bottom of the fuel tank.
26. Seated in the driver's seat.
27. Make sure the parking lever is engaged and the transmission change lever is in the neutral position.
28. Pull the choke lever.
Adjust the degree of opening as necessary.
29. Step on the brake and place the engine key in the start position.
30. Confirm that the engine has started and return the choke lever.
31. Perform warm-up operation for about 2 minutes.

Engine Shutdown Procedure

32. Engage the parking lever and make sure the transmission change lever is in the neutral position.
33. Run empty for about 1 minute.
34. Turn the keyswitch to the "OFF" position and confirm that the engine has stopped.
35. Remove the engine key.
36. Get out of the driver's seat and close the fuel cock.

6. Driving method

Danger

Never transport passengers on board.

Caution

Please drive at a speed at which you can stop under any circumstances.

Run the hopper as empty as possible.

Do not run with anything other than sand in the hopper.

- Before starting the engine, check the following
 1. Seated on a seat.
 2. The parking lever must be engaged.
 3. Transmission change lever must be in neutral position.
 4. Fuel cock must be open.
- Depress the clutch pedal to start the engine.
- Put the transmission gear in.
- Lower the parking lever.
- Slowly release the clutch pedal.
- As the car begins to start slowly, slowly depress the accelerator pedal.
- Starts and moves.

7. Towing method

If the vehicle is unable to run due to engine trouble or other reasons, it can be moved in the following ways

Movement by towing

Warning

The vehicle to be towed should be a vehicle weighing 1100 kg or more, or a tractor with 20 horsepower or more.

When riding in a tow vehicle, ensure adequate safety conditions and avoid routes with steep hills or cliffs.

If it is necessary to work on a slope, move the work once to a flat area.

If there is a load, empty the load before towing.

Caution

When towing, use low speed and extreme caution.

Towing should be done with the vehicle facing forward in the direction of travel.

1. Stop the engine.
2. If the parking lever is firmly engaged and the transmission is ready to be inserted, insert the transmission.
3. Ring clamping.
4. Hang the rope on the front U-shaped frame.
5. With a tow vehicle, pull it to the area to be towed with a rope.
6. Release the wheel clamps, depress the clutch pedal while stepping on the brake, and put the transmission change lever in the neutral position.
7. Keep the brake depressed and lower the parking lever.
8. Release the brake and tow slowly.

8. Working method

Sand loading operation

Warning

When loading with heavy machinery, etc., please make sure that no one is around before doing so.

Always stay away from the machine and wait in a safe place until the loading operation by heavy equipment is completed.

Do not use the product with overloading. It will result in damage to the vehicle. Loss of braking performance will result in a serious accident.

Caution

Sand loading should be done on a safe, flat surface.

Ensure that the vehicle is securely parked, and if necessary, secure the vehicle in such a way that it will never move by using wheel clamps or other means.

Never climb the hopper when loading sand from the truck into the hopper using a shovel.

If sand is overloaded (piled up), unload sand until the proper amount is reached.

37. Move to the sand loading area.
38. In a secured area, engage the parking lever and stop the engine.
39. Get out of the vehicle. (If heavy equipment is being used, please leave well enough away from the vehicle to ensure safety.)
40. Loading sand.

Spreading operation

Warning

Never make a sudden start or stop.

Caution

Sand loading operations should be performed on a safe, flat surface.

Be sure to work at a speed appropriate for the work area.

Before starting work, be sure to conduct safety control of the area where you plan to work.

NOTE

Since the engine rotation is synchronized with the conveyor belt rotation speed, the set shutter opening and transmission ensure a constant spraying rate regardless of the working speed. The machine can spray quickly on large greens and slowly at reduced speeds in hazardous areas.

Put the spread width marker out in the working position.

Before starting the engine, check the following

- Seated on a seat.
- The parking lever must be engaged.
- Transmission change lever must be in neutral position.
- Fuel cock must be open.

Depress the clutch pedal to start the engine.

Put the transmission change lever in the gear matched in the spreading chart.

Lower the parking lever.

Slowly release the clutch pedal.

When the machine begins to move forward slowly, depress the accelerator pedal slowly and move to the work surface.

After the vehicle has entered the work surface, lower the operation lever.

*Timing of spraying is optional. Please train in advance.

The accelerator pedal is depressed as it is and the spraying operation is performed.

When the work reaches the end position, raise the operation lever as it is.

Simultaneous operation of rubbing brush and spraying

Important

When using a grinder brush, be sure to check its operation before starting work.

NOTE

If the operation is carried out as usual, there will be a time lag between the speed at which the brush descends and the spraying process. When working at the same time, the brush will start falling first by slightly lowering the operation lever, and after a short pause, when the operation lever is fully depressed, the spraying operation will begin, thereby eliminating the time lag.

Put the spread width marker out in the working position.

Turn the manual/automatic switch to the automatic side.

Below - in the same order as the spraying procedure

Working with grind-only brushes

Caution

Working speed is optional, but please work at a safe speed.

Working too fast may cause brushes to bounce.

Important

When using a grinder brush, be sure to check its operation before starting work.

Turn the manual/automatic switch to the manual side.

Before starting the engine, check the following

- Seated on a seat.
- The parking lever must be engaged.
- Transmission change lever must be in neutral position.
- Fuel cock must be open.

Depress the clutch pedal to start the engine.

Put the transmission change lever in the gear matched in the spreading chart.

Lower the parking lever.

Slowly release the clutch pedal.

When the machine begins to move forward slowly, depress the accelerator pedal slowly and move to the work surface.

After the vehicle is on the work surface, turn on the brush manual switch and lower the brush.

Continue to work on the accelerator pedal.

To finish the work, turn off the brush manual switch and raise the brush.

9. Transportation

Stacking

Danger

Never transport the machine in a truck smaller than the machine.

Caution

Trucks should be loaded with a maximum loading weight of 800 kg or more and a bed length of at least 2500 mm and a width of at least 1600 mm.

Park the transport vehicle on a flat, safe area and work on it.

Loads in the hopper must be completely removed before transport.

Important

Work on a flat, wide, safe area.

When using the Ayumi board and placing it on a vehicle

When loading using a step board, use a step board with a step board angle of 10 to 15 degrees or less.

For vehicles with a cargo bed height of 1M, a step board of approximately 3.8m to 5m or more is required.

Formula: Step length = cargo bed height ÷ (tan(slope angle))

When a winch is used to get the vehicle onto the vehicle

If a winch is used, use the towing hook.

Use ropes and wires with a load capacity of 2 tons or more.

Work slowly with the transmission change lever in the neutral position and the parking lever released.

Put in the transmission change lever and engage the parking lever securely.

Insert the wheel stopper in the forward/backward direction.

Fix the chassis of the vehicle to the cargo bed at four points in the front and rear directions with ropes or other means.

Fuel cock must be closed.

Caution

When transporting, the grinder brush should be lowered. Also, please fix the brush so that it does not jump up.

Transport

Drive safely to the transportation site. If a heavy load is loaded, the braking distance will be longer. Please make sure to drive with a sufficient distance between vehicles.

Getting off

Caution

When unloading a vehicle from an Ayumi or a loaded vehicle, unload it while maintaining a safe speed while operating the brake and clutch.

If you feel it is unsafe, use a winch or other means to slowly lower the vehicle.

Important

Please work in a flat, wide and safe area for dismounting.



HATSUTA