

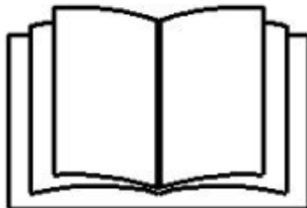
OWNER'S MANUAL



GR537Pro/GRH537Pro



Grassland walk behind mower



Read this instruction manual carefully before using the machine and keep it as a reference.

The engine manual is included as a set with the owners manual.

Please read both manuals carefully

**For any questions about this manual, please contact your OREC dealer, the
OREC distributor in your country, or go to : <http://www.orecamerica.com>**

0268-77000

Introduction

Thank you for purchasing this machine. These instructions explain the correct and easy way to always keep this machine in proper working order and how to operate it safely.

Please read these instructions fully before using this machine in order to understand the safest, most efficient way of operating it, and the correct way to maintain it.

Please keep these instructions in a safe place where they can be easily referred to at any time. We hope you will use this machine for many years to come.





Furthermore, please understand that ongoing improvements in quality and performance, and other possible parts changes may cause the actual machine to vary slightly from what is described in these instructions.

Machine Regulations

This product is designed for lawn mowing and may not provide a sufficient cut for overgrown weeds and brush

Definitions and Signs

In these instructions, the following signs and definitions are used to indicate the level of danger that exists. Please obey the following warnings and have a full understanding of the meaning of the signs.

Sign	Definition
 DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
 NOTICE	Displayed when it is important to know about points of operation and maintenance specific to this machine, or at times when misunderstanding and mistakes are common.

Contents

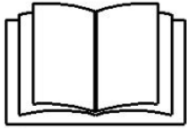





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1, For Safe Operation

Please read the safety and engine manuals carefully before operating this machine.
 Please wear protective clothing and equipment such as gloves, helmet, ear and eye protection, non-hanging shirt sleeves and pant legs.
 Please carefully inspect the machine to ensure that it works properly.

1) Warning labels

The warning signs are attached to the machine to draw attention to particularly serious dangers. Please be sure to fully understand the meaning of each warning sign before operating this machine.

	Read the safety and operating manual		Remove all objects that could be thrown by the mower blades. Beware of thrown objects.
	Always wear safety glasses or goggles, and ear protection while operating the machine.		Do not use on slopes of more than 15°
	Keep body parts away from the mower blades.		
	For the Engine Read Engine instruction manual before using. Pay attention to exhaust Gas, hot surfaces, and flammable gasoline. (Engine Parts)		

WARNING



To avoid serious injury or death:

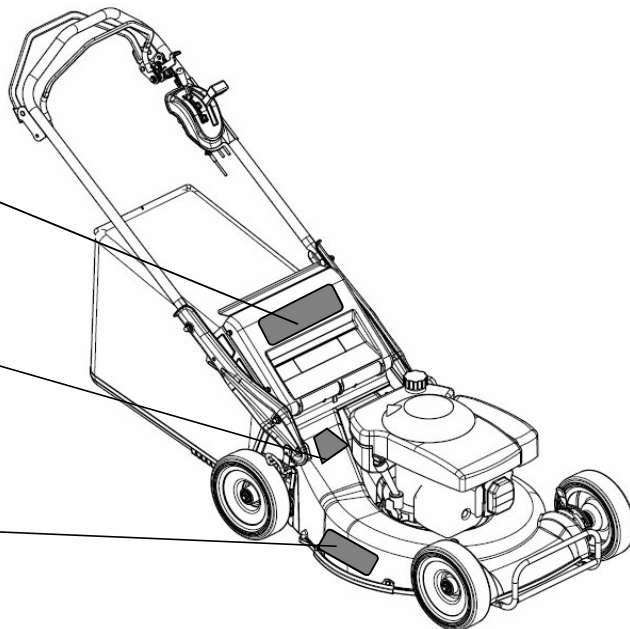
- Read and understand the operator's manual.
- Do NOT operate unless trained to safely use this machine.
- Do NOT operate without shields, guards, and safety devices in place and working.
- Do NOT operate unless discharge door, grass catcher, or rear discharge guard kit is in place.
- Pick up objects that could be thrown by the blades.
- Do NOT mow when people, especially children, or pets are in the area.
- Mow across slope - NOT up and down.
- Look behind when backing up.
- Hearing protection is recommended.

DANGER
KEEP HANDS and FEET AWAY



DANGER
Amputation and thrown objects hazard

To avoid injury from rotating blades, stay clear of deck edge and keep others away. Do not mow without discharge chute or entire grass catcher in place

NOTICE

- If these warning labels become difficult to see, please replace them so that they can be easily seen and understood.

2) Important safety points

This machine is equipped with a high-powered engine and fast moving blades. Misuse of this machine can result in serious injury or death. Before using this machine, please be sure to read these instructions and understand and obey the following warnings.

■ Notes for the operator of this machine

⚠ WARNING

- The operator of this machine should fully read these instructions. You can safely use this machine only after gaining a full understanding of its operation and safety use guidelines.
- Operate this machine only after fully reading and understanding the included engine's instructions.
- The operation and maintenance of this machine should only be performed by trained persons.
- **DO NOT** allow children, expectant mothers or any untrained person to use this machine, accident and injury can result. Furthermore, please check and observe local law which may place age limits on the operation of machinery.
- **DO NOT** operate if suffering from overwork or illness or if under the influence of alcohol or drugs. Accidents and injury can result.

■ When lending this machine to another person

⚠ WARNING

When lending this machine to another person it is the owner's responsibility that the following steps are taken:

- The owner should explain how to operate the machine and have the new operator fully read these instructions. The owner should then guide the new operator until they have a comprehensive understanding of the machine's operation and safety guidelines. Furthermore, the owner should lend these instructions to the new operator together with the machine.
- **When lending this machine to a person who can not read English, the owner should take responsibility for completely explaining its safe operation.**
- Before lending this machine to another person, the owner holds responsibility for the proper maintenance of this machine, including checking that all parts are correctly attached and that all functions are working correctly.

■ Managing gasoline safely

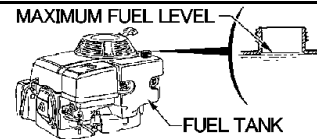
⚠ DANGER

- Under no circumstances should you smoke, operate firearms, or use any open flame near gasoline. Also, please be careful of static electricity as gasoline is extremely flammable. In addition, gasoline is highly volatile and may cause fire or an explosion
- **DO NOT** use a type of gasoline other than that described. There is a danger of fires and explosions.

⚠ WARNING

- Gasoline and oil should be stored away from fire in vented, metal non-flammable tanks. Also, please keep out of reach of children, to prevent fire or other accident
- Please refuel in a place that can be well ventilated. As gasoline is a highly volatile substance, there is a danger of illness if you operate the machine in a poorly ventilated place.
- **DO NOT** open the fuel cap while running the engine.
- When refueling, please stop the engine and wait until it has cooled. Failure to do so could cause fire or other accidents, and presents a burn hazard.

- When refueling, be sure not to fill the fuel tank over the maximum level. If you do overfill the fuel tank, remove fuel until it sits below the maximum level. Over-fueling can cause fire and other accidents.
- After refueling, tightly close the fuel tank cap, make sure there is no leakage of gas and make sure there is no open flame in the operating area, as this could start a fire.
- If gasoline is spilled, move the machine a safe distance away without starting the engine. Starting the machine in close proximity to spilled fuel could result in a fire or other accident. Use a cloth to wipe away the spilled gasoline and dispose of any such cloth in a suitable manner.
- Be sure to change your clothes immediately if they come into contact with gasoline. There is a danger that any gasoline on your clothes could ignite or cause you to feel unwell.
- **DO NOT** refuel in places such as inside a car or on a truck, as they could move unexpectedly. Refuel after placing your fuel container safely on the ground, away from vehicles. Spilt fuel can cause fire and other accidents.
- Please **DO NOT** refuel while the machine is on a vehicle or trailer, as this could cause fire or accident
- **DO NOT** remove the refueling nozzle from the fuel tank until you have finished refueling. Spilt fuel can cause fire and other accidents.



■ Caution when starting the engine

⚠ DANGER

- Please **DO NOT** modify the engine, as this could cause fire, malfunction or other accidents. Orec assumes no liability for accidents or injuries resulting from modification or addition to the machine. Any additions or modifications will also void warranty claims.
- **DO NOT** try to alter the position of the engine governor or change the set rotation speeds.
- **DO NOT** run the engine in a place that is poorly ventilated. Engine exhaust gas is odorless and contains carbon monoxide which can cause death or serious injury.

⚠ WARNING

- **DO NOT** allow highly flammable substances near to the engine or the path of the exhaust as this can cause a fire.
- **DO NOT** touch the engine or muffler as they become extremely hot during operation and can cause severe burns.
- Ensure that no material builds up in the engine or muffler as this can result in a fire.
- Ensure that the drive clutch and blade clutch are in the [OFF] position, before starting the engine. Not taking precautions when starting the engine can cause injury and accidents.

■ Caution when loading and unloading

⚠ WARNING

- When loading or unloading using a truck, proceed carefully and be certain to park on a flat and safe surface. A truck moving suddenly could cause injury and accidents.
- Attach a gently sloping ramp securely to the truck's loading platform and reduce engine power to low. The speed change lever should be put in the forward [1] position for loading, and in the reverse [R] position for unloading. Proceed with caution as injury and accidents can be caused by the machine tipping over or running out of control.

■ Before operating the machine

DANGER

- **DO NOT** remove any parts of this machine that have been fitted as standard. To prevent accidents, be sure to use all covers and parts in the same state as they have been fitted.

WARNING

- **DO NOT** try to modify this machine (including modification of the protective cover and safety cover) as this can cause injury and accidents. You will bear responsibility for any accidents or problems caused by modification. Also, trying to claim compensation in such cases will be ineffective. See bottom of page.
- **DO NOT** change or tamper with the safety apparatus. Inspection should be performed periodically to ensure the safety apparatus is working correctly.
- For reasons of safety, use the recommended accessories and attachments that are best suited to the ground you are working on and the type of work you are performing.
- This machine can not be ridden, do not try to ride it or allow children or pets to ride on it. This can cause injury to people/pets and damage to the machine.
- Wear suitable clothing when operating this machine. Please wear the following items to protect against injury and reduce the possibility of accidents.

Long sleeves, long pants	Protective glasses
Non-slip shoes	Gloves
Helmet	Ear protectors

In particular, avoid wearing items such as cuffs, hems of loose clothing, and jewelry. Such items can become entangled in the machine, causing injury and accidents. Long hair should be tied up inside a helmet.

- Ensure that no part of your body comes into contact with the moving blades of this machine. There is the possibility of serious injury such as the severing of hands and feet.
- Be sure that there are no people, animals or vehicles close by. Not taking these precautions can cause injury and accidents.
- Before mowing, remove any rocks or branches that could be thrown and cause injury to bystanders or damage to the machine.
- Use this machine during daylight or with sufficient artificial light. Do not operate this machine at night when poor visibility will not allow you to have a complete grasp of your surroundings. Not being able to see dangerous objects and bystanders is a common cause of injury and accidents.
- **DO NOT** operate this machine in places where there are dangerous drops, ditches or embankments. Accidents can be caused by the machine tipping over.
- **DO NOT** use this machine on wet grass. It is easy to slip on wet grass, causing injury and accidents.
- Altering this machine in any way will void the warranty.
Orec America Inc. will bear no responsibility for damage or injury caused by alterations or modifications.

■ Caution during operation

DANGER

- During operation, blades, chains and belts are hidden by a cover, be sure to keep hands and feet well away. Touching these parts can cause serious injury such as the severing of hands and feet.

WARNING

- During operation, the rotating blades come right to the edge of the blade cover. **DO NOT** put your hands inside the cover to try to clear grass, etc. Not taking these precautions can cause injury.
- Before removing entangled grass or other foreign objects from the blades, be sure to stop the engine and remove the spark plug cord. Check that the blades have stopped moving before carefully removing any entangled material.
- Be sure that there are no people, animals or vehicles close by. When operating this machine, always maintain a distance of 100 FEET between yourself and bystanders. If people or animals come near, release the blade clutch and switch off the engine. Not taking these precautions can cause injury and accidents.
- For safety reasons, **DO NOT** make sudden starts/stops or sharp turns.
- Take care to move and turn the machine slowly. Furthermore, stop the blades when not cutting grass. Not taking precautions can cause injury and accidents.
- The operator should always stay behind the handlebars. When this machine's engine is running, do not stand in front of the path where you are cutting grass or try to cut sideways. Not taking precautions can cause injury and accidents.
- Look out for holes in the ground and protruding tree roots. Also look out for obstructions that could be hidden in long grass. The handlebars can be taken from your control, causing injury and accidents.
- Be careful when approaching blind corners, bushes, and trees which block your line of sight. Such obstructions can hide children and animals from view.
- **DO NOT** drive this machine in the direction of rivers and drop-offs, people and buildings. Accidents can be caused by falls and collisions.
- When moving the machine backwards, check that there are no people or obstacles behind you and that you have a secure foothold. When reversing, there is a danger of being trapped between the machine and a wall or falling from drop-offs.
- Exercise caution when operating the machine alongside fences, buildings and trees. The machine's handlebars can be taken from your control if you come into contact with obstacles, possibly causing injury and accidents.
- **DO NOT** leave the machine unattended with the engine running. When leaving the machine unattended, park on a flat surface with the engine switched off. Injury and accidents can occur if the machine moves while unattended.

NOTICE

- When working near trees, shrubs, and building corners, please take care not to run unit into hard surfaces, as this could cause accident or injury. If you do hit a hard surface, please stop the engine immediately. Once you have checked that the blade has stopped rotating, please disengage the spark plug and check the blade, belts, wires, brakes.
If there are any problems with these parts, please repair or replace them before operating the unit again.
- If you notice any unusual smells, noises, or any heat coming from the unit, please stop the engine immediately, disengage the spark plug and ensure safe shutdown of the unit. Once the machine has completely stopped, being careful to avoid burns, check for any obstructions that may be interfering with the machine's operation

■ Using the machine on slopes

WARNING

When operating on slopes, serious accidents can be caused by operator slipping and the machine rolling over. Be especially careful when working in such areas and stop operating the machine immediately if you feel in any danger at all.

- **DO NOT** operate the machine on slopes of more than 15°.
- Mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
- When changing direction on a slope, do it slowly and carefully. The machine could roll over causing injury and accidents.
- **DO NOT** operate the machine on wet slopes. It is easy to slip on wet grass and suffer injury and accidents.
- Look out for holes in the ground and protruding tree roots. Also look out for obstructions that could be hidden in long grass. The handlebars can be taken from your control, causing injury and accidents.
- When operating on slopes, **DO NOT** leave the machine with its clutch off or the speed change lever in neutral. The machine could run out of control, causing injury and accidents.

■ Children

WARNING

When operating this machine, be particularly aware of children. Children are often interested in mowers and may be drawn to you. As children may not be concentrating on their surroundings, tragic accidents can occur if you take your eyes off them. Please observe the following precautions at all times:

- While operating, always keep more than 100 feet of distance between the machine and children
- **DO NOT** allow children to come into the area where you are working. Make sure that young children are securely in the care of an adult other than the operator.
- Switch off the engine immediately if children enter the area where you are working.
- **DO NOT** allow children to operate the machine. Furthermore, check and obey local law which may place age limits on the operation of machinery.
- Be careful when approaching blind corners, bushes, and trees which block your line of sight. Such obstructions can hide children from view.

■ Important message to employers

WARNING

As an employer, you have special responsibilities to the people who work for you. Before you ask anyone to operate this mower, you need to determine whether the person is old enough, large enough, and strong enough to safely handle and control the mower. If you decide he or she is, make sure the employee reads and understands all instructions and warnings in this manual and on the labels before operating the mower. Allow adequate time for hands-on training by a qualified instructor, and personally supervise practice sessions until you feel sure the employee is ready to operate the machine. Also be sure employees wear proper clothing and have eye protection and any other gear that may be required by local ordinances or your insurance company. Remember, too, that you are responsible for keeping the mower properly maintained and in safe operating condition. Your commitment to safety on the job can help prevent injuries and property damage.

■ Maintenance

DANGER

- Remove fuel when storing or transporting the machine. Accidents and damage can be caused by spilt or expired fuel.

WARNING

- Be sure to switch off the engine and remove the spark plug cord before performing any inspection, adjustment or maintenance on this machine.
- When inspecting, repairing or adjusting the machine please wear protective gear to prevent injury.
- When performing inspection, adjustment or maintenance, use tools such as a jack in order to work as safely as possible.
- Perform periodic inspection in order to work as safely as possible. If you discover any worn or damaged parts, please replace them with recommended parts only.
- This machine is equipped with extremely sharp blades. When inspecting or handling the machine, **DO NOT** directly touch the blades. Exercise caution by wearing gloves and wrapping the blades in cloth. Furthermore, if you notice any abnormalities in the blades, do not try to repair them but have them replaced. Not taking this precaution can cause injury and accidents.
- Damage to the belt cover, blade cover, or flying debris prevention cover, could cause injury or accidents. Be sure to have any damaged parts replaced before using the machine again.
- Be sure to check that the covers of rotating parts are refitted correctly in their original positions after being removed. Poorly fitted covers could open during operation and cause serious injury.
- Please make sure that all components such as nuts and bolts have been properly secured after maintenance.
- Perform comprehensive inspection and adjustment of such parts as drive clutch, blade clutch, brake, throttle, and gear change.
- Be sure to check that the bolts in the wheels and blades are tightly fastened. Make sure that the detachable cover used for changing the blades is closed before operating the machine.
- When replacing the blades, also replace the attached nuts and bolts. There is a possibility of accidents caused by worn or damaged parts. Never substitute nuts and bolts with those that are not recommended.
- When storing the unit, please do so on a level surface and in a vented place away from open flame. Failure to do so may result in injury or accident.

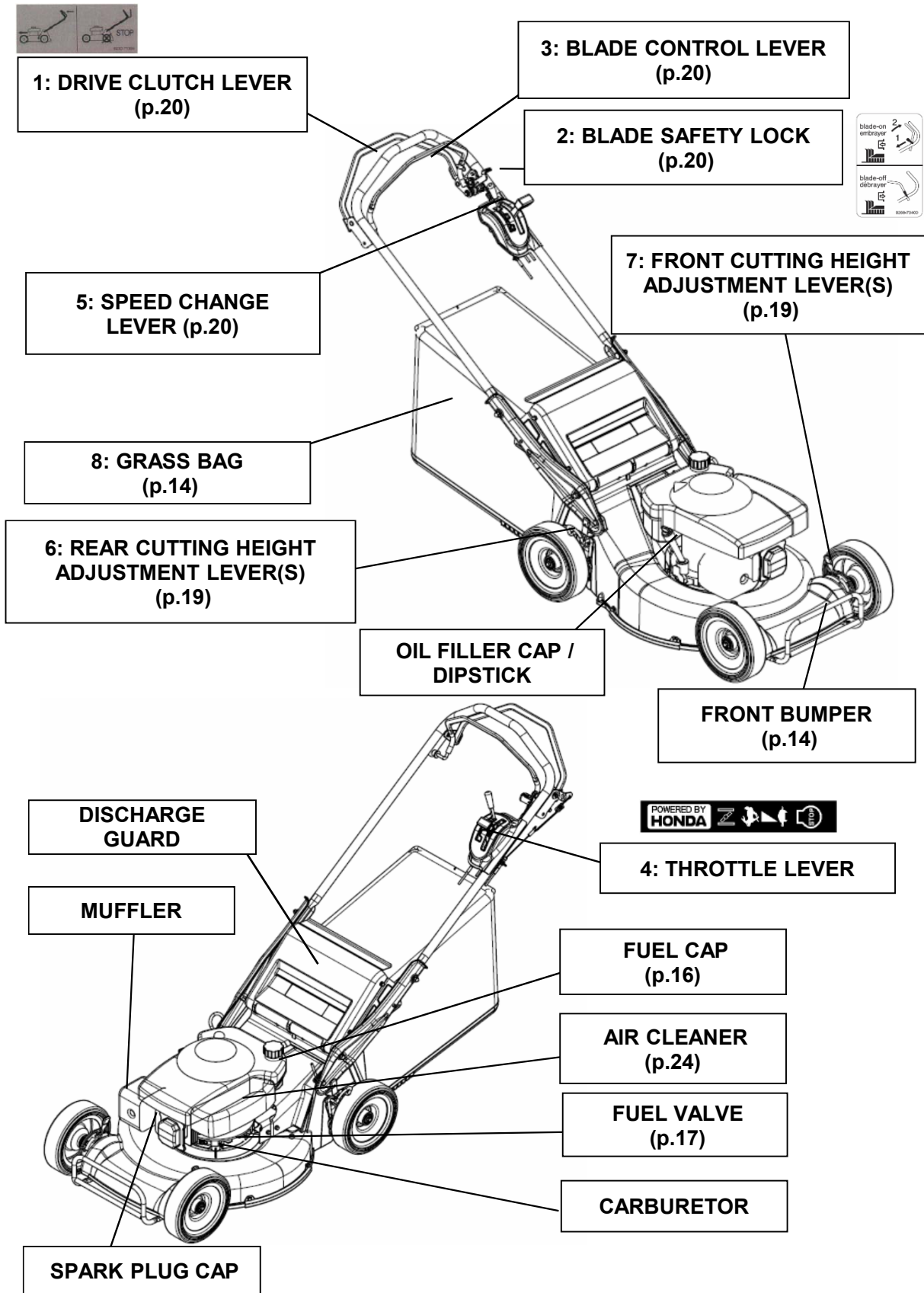
NOTICE

- When rubber fuel lines become old, they can split and dangerous fuel leaks can occur. Change rubber parts if they split or every 3 years regardless of damage. At this time, also change the fastening bands for the new parts.
- Before storing the machine, remove any material such grass and leaves. Clean away any spilt oil or fragments stained with oil.
- Make sure that the engine has completely cooled before covering the machine with a storage cover.

Depending on operating conditions, there may be occasions when incidents arise which are not covered by the warnings of this manual. The operator should use common sense and put safety first when using this machine.

2. MOWER Controls and Features

Note: The model shown in the figure below may look slightly different from your machine.



1 : Drive clutch lever [ON] / [OFF]

Turns power on and off between the engine and the drivetrain
Push this lever forward to begin driving the machine
Release your hand from the lever to stop the machine

2 : Blade safety lock, 3 : Blade control lever

Turns power on and off between the engine and blades.

To Engage the Blade:

1. Push the blade safety lock forward.
2. While pushing the Blade safety lock, pull back the Blade control lever

To Stop the Blade:

3. Release the Blade safety lock.
4. Release your hand from the Blade control lever

4 : Throttle lever

The throttle lever adjusts the rotating speed of the engine. It also acts as the choke when starting the engine and the switch for stopping the engine.

The [STOP], [LOW], [HI], and [CHOKE] settings are located along the guide.

5 : Speed change lever

GR537Pro

This lever changes the drive speed. It can operate in three forward speeds: [1] [2] [3]

To change speeds, release the drive clutch lever and move it to the desired position.

GRH537Pro

This lever changes the variable drive speed from 0 up to 4 mph.

Slide the Speed change lever forward to increase speed.

Operator may change speeds while driving

6 : Rear cutting height adjustment lever(2)

7 : Front cutting height adjustment lever(2)

This lever adjusts the height at which grass is cut.

Pull the adjustment lever toward the wheel and then lock it in the desired position

9 : Grass bag

Catches the cut grass.

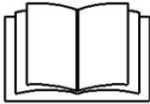











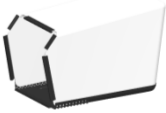
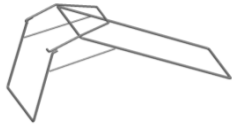

Pull the Discharge guard up then hook the Grass bag to the end of the deck.

3, How to Assemble Machine

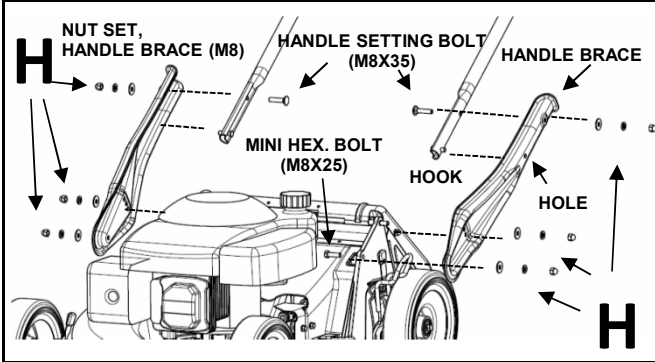
NOTICE

- Assembly should be done on a flat surface.
- This machine does NOT contain motor oil. Please fill with the proper motor oil after assembly. (pg.22)
- Dispose of the packaging materials in accordance with all federal, state, and local regulations.

■ Package contents list

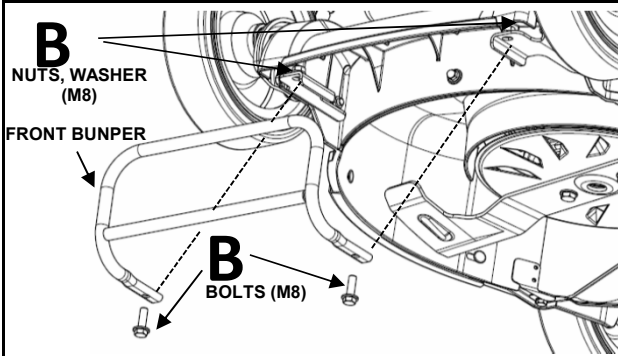
part	quantity	part	quantity
Manual 	1	Phillips-head Screw driver 	1
10/12mm Wrench 	1	Plug Wrench 	1
H Nut Set, Handle Brace(M8)  X 6 X 6 X 6	1 set	Handle Brace 	2
Handle Setting Bolt (M8X35)  X 2			
Mini Hex. Bolt (M8X25)  X 2			
B Bolt&nut set, Front Bumper(M8)  X 2 X 2 X 2	1 set	Front Bumper 	1
S Bolt & Nut set, Side Plate Attach(M6)  X 4 X 4	1 set	Side Plate(L), (R) 	1 set
Grass Bag 	1	Grass Bag Frame 	1
Cable ties 	2		

■ Install the Handle



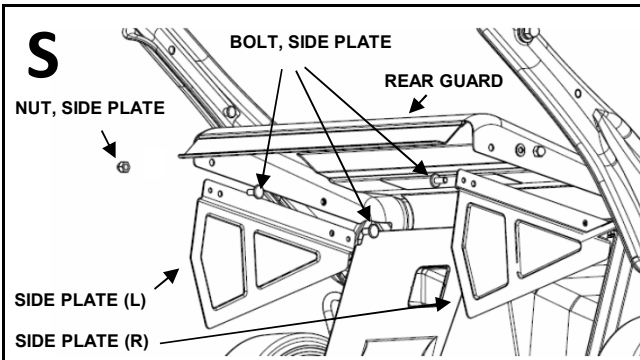
1. Insert the Hex. Bolt(M8x25) in to the deck the inside. Slide handle brace on to hex. bolt
2. Hook the Handle pin into the hole at the Handle Brace.Insert the Handle Setting Bolt(M8x35) through the Handle and Handle Brace.
3. Fix all bolts using Nut set (H) and 10/12mm wrench

■ Install the Front Bumper



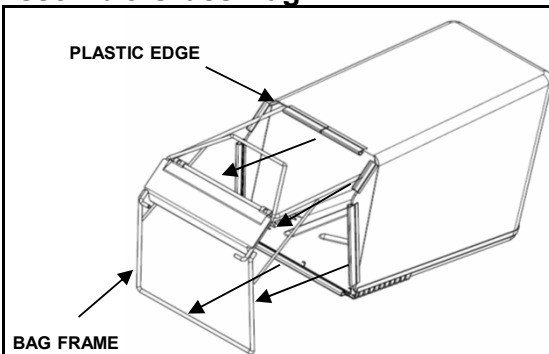
1. Insert the Bolt(B) in to the Front Bumper from the bottom. Slide bolts through the holes in attachment plate
2. Attach nuts and washers to bolts on the attachment plate.
3. Tighten the bolts and nuts.

■ Install the Side Plates



1. Place the Side Plate(L) and Side Plate(R) inside of Rear Guard
2. Insert the Bolts(S) from inside out. Attach nut(S)on the other side.
3. Tighten the bolts and nuts

■ Assemble Grass Bag



1. Insert the Bag Frame into the Grass Bag as shown at left
2. Push each point into the plastic edge of the Grass Bag

4, Before Operation

- Be sure to do a delivery inspection before operating the unit.
- Your safety is your responsibility. Correct preparation will significantly reduce your risk of injury.
- Read and understand this manual. Know what the controls do and how to operate them.
- Familiarize yourself with the lawn mower and its operation before you begin using it. Know how to shut off the lawn mower quickly in case of an emergency.
- For your safety, and to maximize the service life of your lawn mower, it is very important to take a few moments before you operate the lawn mower to check its condition. Be sure to take care of any problem you find or have your service dealer correct it before you operate the lawn mower.

WARNING

- Improperly maintaining this lawn mower or failing to correct a problem before operation could cause a malfunction in which you could be seriously injured. Always perform a pre-operation inspection before each operation and correct any problems you find.

■ Check your machine

- Look around and underneath the lawn mower for signs of oil or gasoline leaks.
- Look for signs of damage.
- Check each control for proper operation.
- Check the blades for wear. Replace as necessary. (pg. 28)
- Check that the blade bolts are tight.
- Make sure there are no tears or other damage to the grass bag
- Check that all nuts, bolt, and screws are tightened.

■ Check your mowing area

- Anything that can be picked up by the blades and thrown is a potential hazard to you and others. Look for things like stones, sticks, nails, and wire, and remove them from the work area.
- People and animals near the work area can move into your lawn mower's path or into a position where they could be struck by thrown objects. Clear the area of pets and people, especially children. Their safety is your responsibility.
- Check the condition of the grass. Adjust your lawn mower ground speed and mowing swath accordingly.

■ Check the engine

Place the machine on a flat surface and then check the engine oil, fuel and air cleaner using the procedures below.

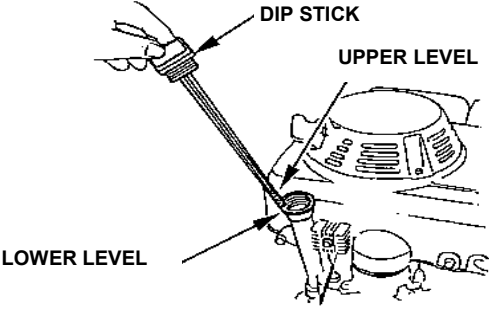
NOTICE

- This machine does **NOT** contain engine oil when shipped out. Be sure to add oil before starting the engine, even if there are traces of residual oil left over in the engine from factory testing.
- Engine oil: SAE10W-30, 0.74qt.(0.7Liter)

WARNING

- **Burn Danger:** Make sure the engine has cooled before inspecting.

• Check engine oil

 <p>DIP STICK</p> <p>UPPER LEVEL</p> <p>LOWER LEVEL</p>	<ol style="list-style-type: none">1. Use the dipstick to check the oil level. When measuring with the dipstick, do not screw it in place.2. If the oil does not lie between the upper level and lower level, replenish to bring the oil to the upper level. Take care not to overfill with oil.
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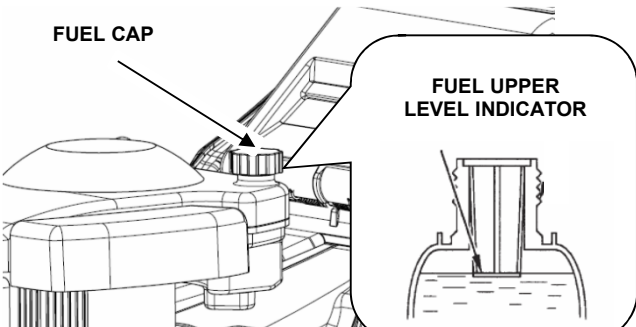
• Check fuel

⚠ DANGER

- Under no circumstances should you smoke, operate firearms, or use any open flame while using gasoline. Also, please be careful of static electricity as gasoline is extremely flammable. In addition, gasoline is highly volatile and may cause fire or an explosion.

⚠ WARNING

- Please refuel in a place that can be well ventilated. As gasoline is a highly volatile substance, there is a danger that you will feel unwell if you operate the machine in a poorly ventilated place.
- When refueling, be sure to stop the engine and allow it to cool down. There is a danger of suffering burns.
- When refueling, be sure not to fill the fuel tank over the maximum level. If you do overfill the fuel tank, remove fuel until it sits below the maximum level. Over-fueling can cause fire and other accidents.
- After refueling, securely close the fuel cap and store the machine in a safe place with no sources of flame. There is a danger of fire.
- If gasoline is spilled, move the machine a safe distance away without starting the engine. Starting the machine in close proximity to spilled fuel could result in fire or other accident. Use a cloth to wipe away waste gasoline and dispose of any such cloth in a suitable manner.

 <p>FUEL CAP</p> <p>FUEL UPPER LEVEL INDICATOR</p>	<ol style="list-style-type: none">1. Remove the fuel cap2. Refuel the fuel tank with unleaded gasoline. Take care not to overfill with gasoline. (Please refer to the engine use manual)3. After refueling, tighten the fuel tank cap until it clicks.
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5, How to Operate

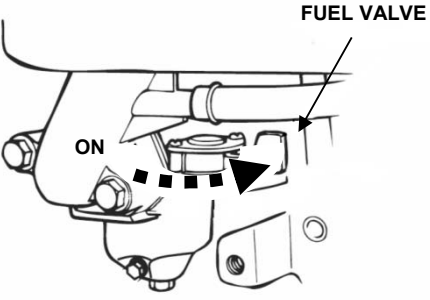
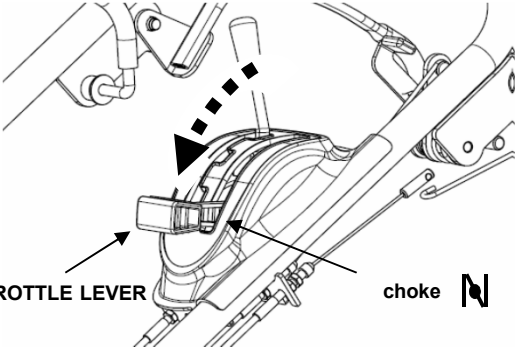
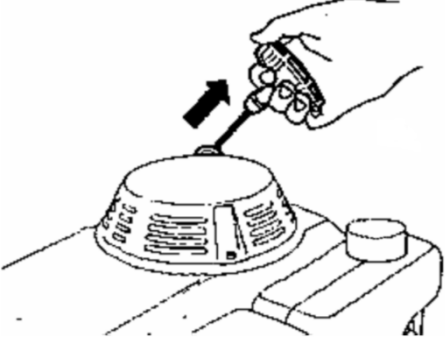
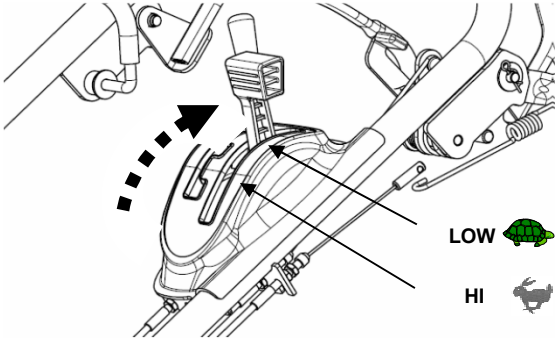


1) How to start and stop the engine (Please refer to the engine use manual)

■ How to start the engine


⚠ DANGER

- **DO NOT** start the engine in a confined space or in an area with insufficient ventilation. Engine exhaust is odorless and contains carbon monoxide which can cause death.

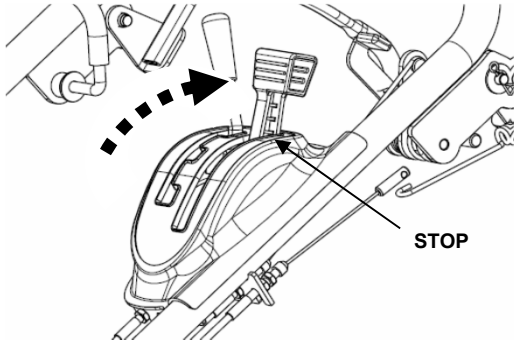
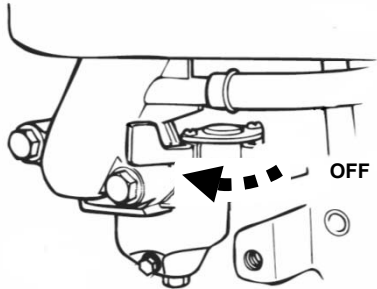
Make sure that the drive clutch lever and blade clutch lever are released [OFF].

 <p>FUEL VALVE ON</p>	 <p>THROTTLE LEVER choke</p>
<p>1. Shift the fuel valve to the [ON] position.</p>	<p>2. Push the throttle lever all the way forward to set to the choke position. When the engine has finished warming up, shift to the full throttle HI position</p>
	 <p>LOW  HI </p>
<p>3. Grip the starter knob, pull slowly until you feel tension and then pull strongly from this position. Immediately after the engine has started, slowly return the start knob to its original position.</p>	<p>4. 30 seconds after the engine starts, move the throttle lever to [HI] position when mowing, or [LOW] position when idle.</p>

NOTICE

- Please warm up the engine for approximately 2 minutes with throttle in [ (LOW)] position.

■ How to stop the engine

 <p>A line drawing of a motorcycle's throttle assembly. A dashed arrow points to the throttle lever, which is being moved to a position labeled "STOP".</p>	 <p>A line drawing of the fuel valve mechanism. A dashed arrow points to the fuel valve handle, which is being moved to a position labeled "OFF".</p>
<p>1. Shift the throttle lever to the [Stop] position to stop the engine.</p>	<p>2. Shift the fuel valve to the [OFF] position.</p>

WARNING

- **DO NOT** touch the hot engine immediately after switching off. Allow time for it to cool down as there is a burn danger

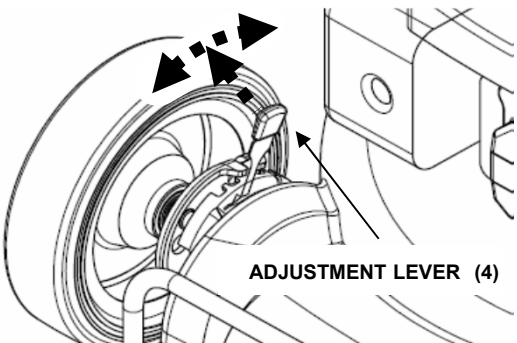
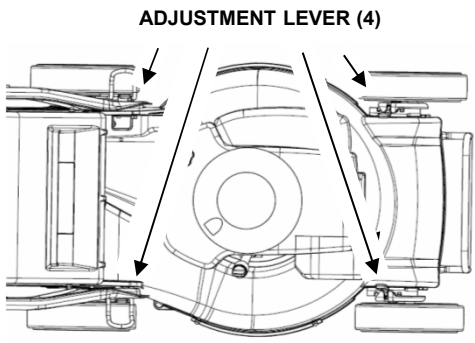
2) Operating the controls for mowing

⚠ WARNING

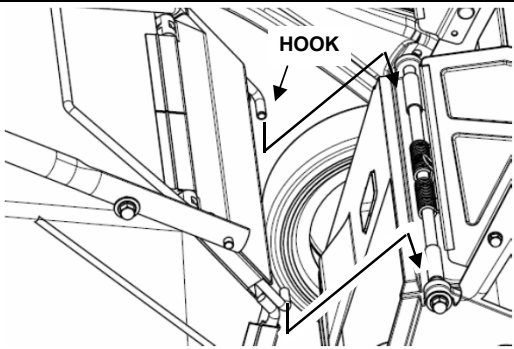
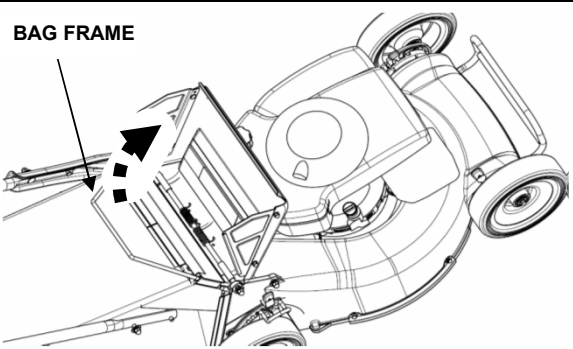
- Confirm that the area around you is safe before driving the machine.
 - Exercise sufficient caution when operating the machine on soft ground. If driving the machine alongside ditches or the edges of paths, there is a danger that the weight of the machine could cause the ground to collapse.
 - **DO NOT** operate the machine on slopes of more than 15°. There is a danger of the machine rolling over or running out of control.

■ Preparing to mow

Adjusting Cutting Height

 <p>ADJUSTMENT LEVER (4)</p>	 <p>ADJUSTMENT LEVER (4)</p>
<p>1. Pull the Adjustment Lever toward the wheel, then choose your desired position.</p>	<p>2. Set all four Adjustment Levers to the same height.</p>

Attach/Remove the Grass bag

 <p>HOOK</p>	 <p>BAG FRAME</p>
<p>1. Attach: Hang the hook of the bag frame on the edge of the deck. Make sure it is stable.</p>	<p>2. Remove: Pull up the Discharge guard. Hold the bag frame then remove it from above. Return the Discharge guard to its original position.</p>

NOTICE

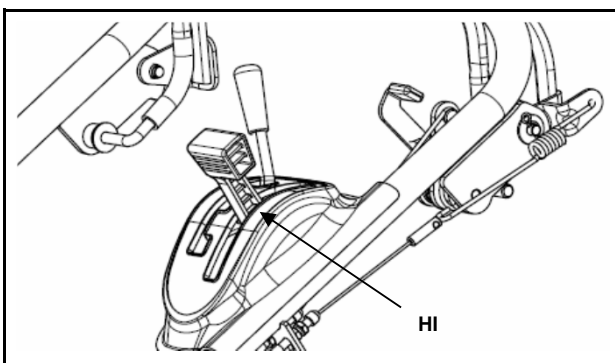
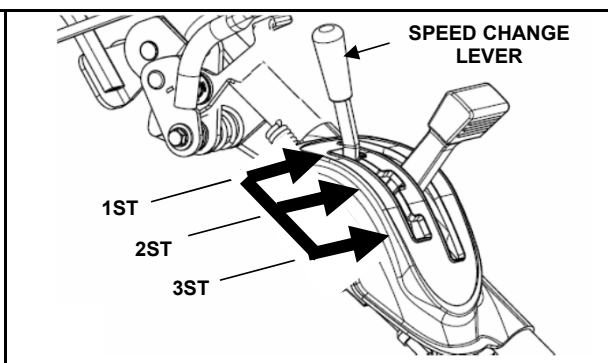
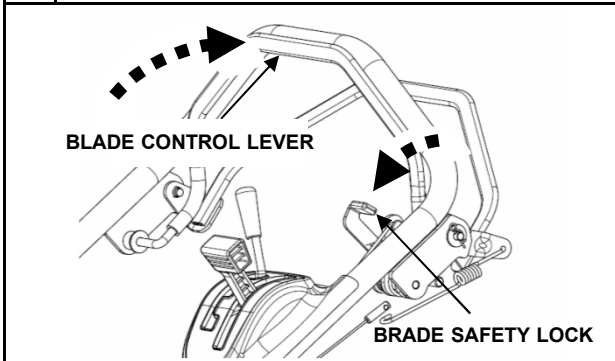
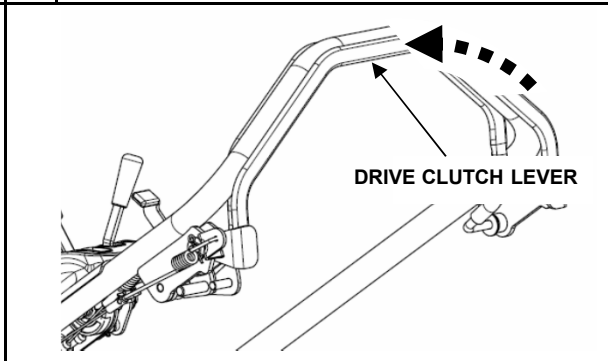
- During normal use, the grass bag material is subject to deterioration and wear.
- Frequently inspect the grass bag for tears, holes, and excessive wear.
- Check for necessary replacement. Make sure the new bag meets the original specifications.

■ Operating the controls for mowing

Please read the safety guidelines again (pps. 4-10) and check the precautions related to your work environment and safety.

NOTICE

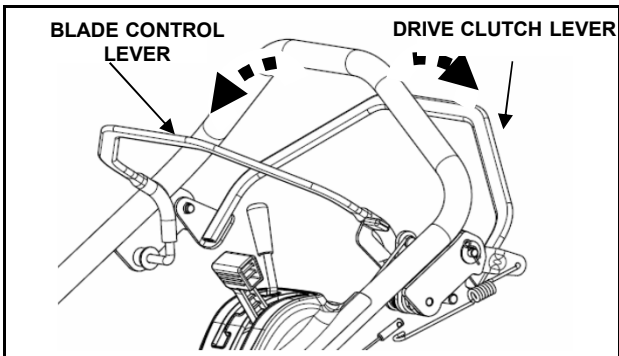
- When using the machine for the first time, choose a flat area free from rocks and foreign objects and slowly cut a path by going over the area in a straight line.
- If the engine stops due to a large quantity of grass, reduce your work speed and increase the cutting height before mowing for a second time.
- If debris is frequently thrown from the blade cover, raise cutting height.
- Start in speed 1 and then work at a speed suited for your surroundings after checking that the area around you is safe.

 <p>HI</p>	 <p>SPEED CHANGE LEVER</p> <p>1ST</p> <p>2ST</p> <p>3ST</p>
<p>1. Start the engine, then slide the throttle lever to the [HI] position.</p>	<p>2. Choose your desired speed GR537Pro: 3 speeds. GRH537Pro: Vary the speed by sliding the speed change lever forward.</p>
 <p>BLADE CONTROL LEVER</p> <p>BLADE SAFETY LOCK</p>	 <p>DRIVE CLUTCH LEVER</p>
<p>3. Press the Blade Safety Lock forward and hold, then pull back the Blade Control Lever. Caution: Blade rotation will start immediately.</p>	<p>4. Push the Drive Clutch Lever forward and then hold it to the handle. The machine will start driving.</p>

⚠ WARNING

- Always be sure to release the blade clutch [OFF] when turning. Not doing so may cause injuries or accidents.
- **DO NOT** try to change speeds with the drive clutch lever [ON] as this can cause injuries and accidents.

■ How to stop



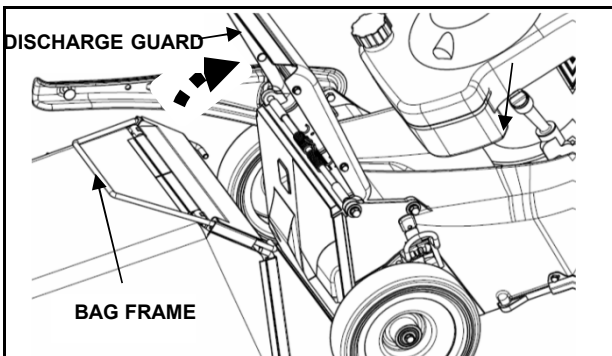
1.

Release the Blade Control Lever and the Drive Clutch Lever. The blade and drive will stop. The engine will NOT stop. Turn off the engine when you are finished.

⚠ WARNING

- When you leave the machine, bring it to a flat area and turn the engine off. If the machine moves without the operator present there is a danger of accidents or damage.

■ Removing grass clippings from grass bag



1.

Pull the Discharge guard up. Hold the bag frame and then take off the grass bag. Empty the bag and then reattach it. Make sure that it is firmly attached.

NOTICE

- Empty the bag before it reaches 90% capacity. Doing so will put less stress on the machine and the bag, reducing wear.

■ Safe mowing practices

For your safety, keep all four wheels on the ground and be careful to avoid losing your footing and your control of the mower. Keep a firm grip on the handlebar and walk, never run, with the mower. Be very careful when mowing uneven or rough ground. If stuck, do not kick or shove the mower with your foot. Use the handlebar to control the mower.

⚠ WARNING

The blades are sharp and spin at a high speed. Spinning blades can cut you severely and can amputate fingers and toes.

- Wear protective footwear.
- Keep your hands and feet away from the mower deck while the engine is running.
- Stop the engine before performing any adjustments, inspection, or maintenance.

Slopes

Mow across slopes, not up and down.

Avoid steep slopes (steeper than 15 degrees), and be careful when changing direction.

Mowing on a slope when the grass is damp or wet could cause you to slip, fall, and lose control of the mower.

Obstacles

Use the side of the mower to cut close to large obstacles, such as fences or walls. If a blade hits something or the mower starts to vibrate, stop the engine immediately, disconnect the spark plug cap, and check for damage. Striking objects may damage the blades, bend the crankshaft, and/or break the mower deck or other components. Vibration usually indicates serious trouble.

⚠ WARNING

- A worn, cracked, or damaged blade can break, and pieces of the damaged blade can become dangerous projectiles. Thrown objects can cause serious injury. Inspect the blades regularly, and do not operate the mower with a worn or damaged blade.

Gravel and Loose Objects

Gravel, loose stones, and landscaping material can be picked up by the mower and thrown many feet with enough force to cause serious personal injury and/or property damage. prevent potential injury from thrown objects by releasing the blade control lever to stop the blades before reaching areas with gravel, loose stones, or landscaping material.

6, Parts Inspection and Repair

1) Oiled Parts Inspection,change and refill

■ Engine oil inspection,change and refill

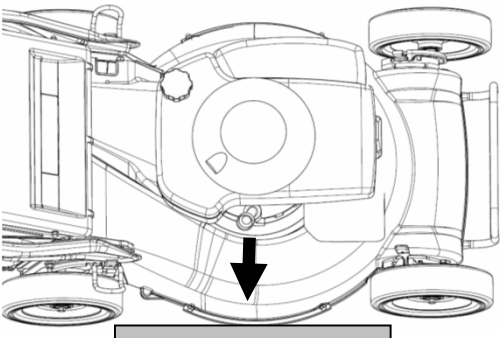
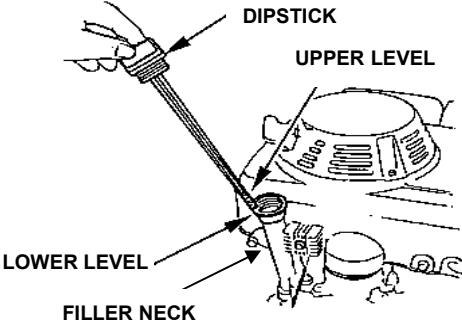
Engine oil and hydraulic oil are both pollutants to the environment. Dispose of used oil at a certified recycling center or according to your state and local regulations.

⚠ WARNING

- When performing engine oil lubrication or replacement, wait for at least 10 minutes for the engine to cool down and proceed with caution to avoid burns.

Change engine oil after 5 hours of actual use or 1 month of ownership. After initial oil change, change oil after every 50 hours of use or every 6 months of ownership.

Use 074qt. (0.7L) of SAE10W-30 engine oil (See Engine Manual)

	<p>Changing the oil:</p> <ol style="list-style-type: none">1. Close the fuel valve.2. Wipe around the oil filler, then take off the oil filler cap/dipstick3. Place the oil pan underneath. Tilt the entire machine to the right. The oil will then drain from the filler neck. Drain all engine oil.4. Refill with the proper engine oil into the Filler Neck. After lubricating with engine oil, securely tighten the oil filler cap by hand to keep it from becoming loose. <p>Maintenance:</p> <p>Use the dipstick to check the oil level and quality. If the oil does not lie between the upper level and lower level, replenish to bring the oil up to the upper level. Take care not to over fill with oil. When measuring with the dipstick, do not screw it in place.</p>
	

Note: If the oil filler cap and drain plug are only lightly inserted, oil could leak out. Be sure to fasten them securely.

⚠ WARNING

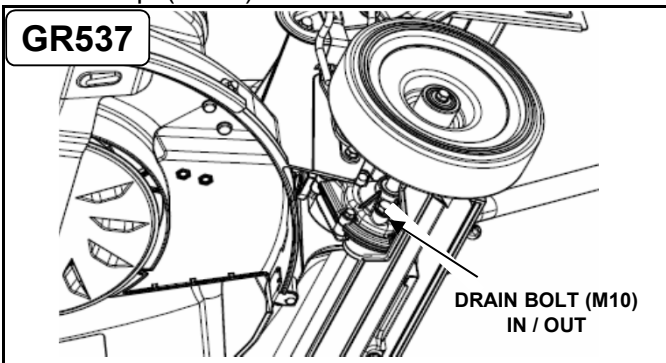
- This machine does **NOT** have the engine oil when it shipped out. Make sure proper amount of oil is in there.
- To always operate this machine in good condition, perform oil changes periodically.
- When performing inspection, replacement, or lubrication of oiled parts, place the machine on a flat, open surface. Switch on the engine and warm it up to confirm it is working properly. Then switch off the engine, allow it to cool down and remove the spark plug cord. After switching off, please wait at least 10 minutes for all parts to cool down sufficiently before you touch the machine. After the engine has stopped, the body will be very hot and can cause burns if touched. Furthermore, oil will still be in the engine and transmission so the quantity of oil remaining will not be exactly displayed.
- After changing the oil, please dispose of waste oil appropriately.

■ Transmission oil inspection, change and refill

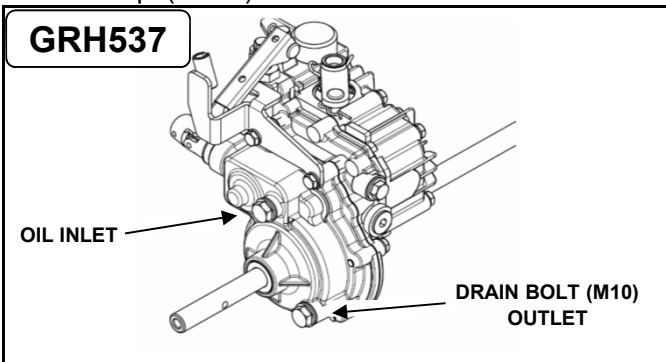
This machine contains transmission oil when shipped.

Replace transmission oil after the first 20 hours of operation and after approximately every 100 hours thereafter.

Use 0.07 qt. (0.07L) SAE 80w-90 Gear oil

	<ol style="list-style-type: none">1. Close the fuel valve.2. Place an oil pan under the transmission.3. Take off the drain bolt(M10)4. Drain all the oil.5. Push the machine on to its right side Refill the new oil in to the drain.6. Tighten the Drain bolt(M10) then place the machine upright again.
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Use 0.17 qt. (0.17L) SAE 80w-90 Gear oil

	<ol style="list-style-type: none">1. Close the fuel valve.2. Place an oil pan under the transmission3. Take off the drain bolt(M10)4. Drain all the oil.5. Tighten the Drain bolt(M10).6. Lay the machine on to its right side and then refill the new oil in to the oil inlet
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Note: Drain plug torque should be 39.2 N·m (347 lbf·in)

■ HST Oil inspection , change and refill (GRH537Pro Only)

Replace oil after the first 50 hours of operation and after approximately every 100 hours thereafter.

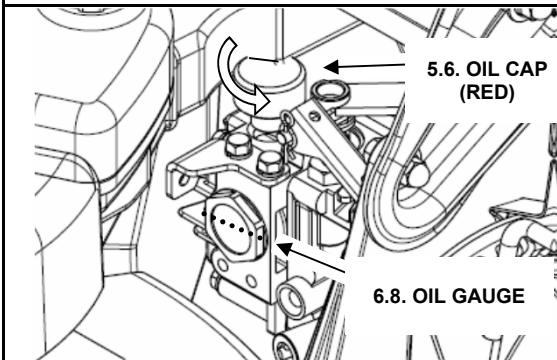
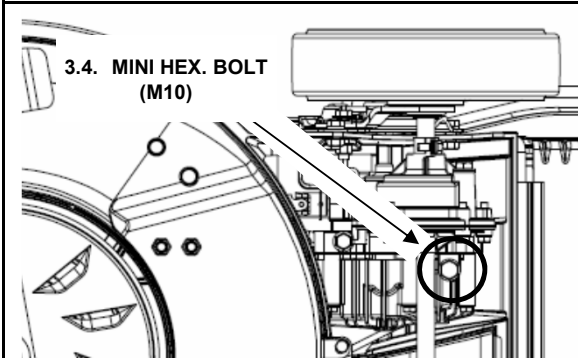
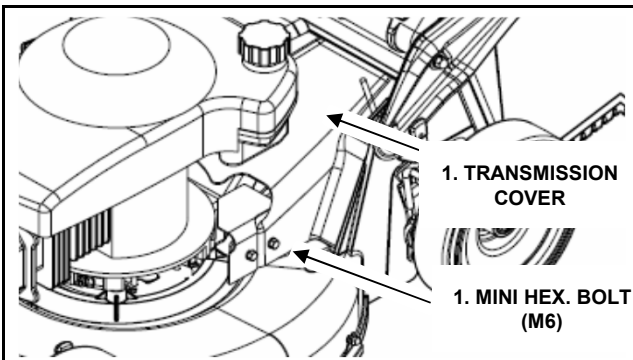
If you are unsure about how to change HST oil, please consult your purchasing dealer.

Special maintenance techniques are required. Only those with appropriate knowledge and expertise should do the following. If even a small amount of oil or dust enters in to the HST, the unit could be damaged. Please make sure the machine is in clean condition when you change the oil.

Make sure to clean around the oil filler before replacing the oil cap.

⚠ CAUTION

- HST oil, also known as hydraulic fluid, plays an important role to converting engine power to the drive. It works as a lubricant--preventing rust-- and as a coolant. However, insufficient or improper maintenance may cause driving problems. Always use proper HST oil to replenish or change the HST oil.
- The transmission and the oil will get hot after use. Maintenance is best done when machine is cool. Please be careful to avoid burns.
- DO NOT mix the different types of oil. Doing so may damage the machine.
This product is shipped from the factory pre-filled with ISO 46 hydraulic (HST) oil.



1. Take off the Mini Hex. Bolt(M6) and remove the Transmission cover.
2. Close the fuel valve. Push the machine on to its right side
3. Take off Mini Hex.Bolt(M10) with 14mm wrench.Never loosen the other bolt. As this so may cause damage to transmission.
4. Push the machine on to its right side to drain the HST oil. Re-tighten the Hex bolt.
5. clean around the oil cap, so that all dust, debris water, and oil are removed. Never allow foreign substances to get into the HST unit , as this may cause damage.
6. Loosen the red lid. Refill the hydraulic oil until the oil level is the middle of the oil gauge. (ISO 46 Hydraulic Oil) Firmly re-tighten the oil cap.
7. Raise both of the rear wheels and then drive the machine in order to remove air bubbles.
8. Check the oil level. Replenish the oil with same procedure above, if the oil is lower than the middle.

NOTICE

- Deteriorated oil and oil sludge will build up inside the HST unit. Flushing is recommended when changing the HST oil.
Flushing: After the steps 1 to 8 above, repeat the oil change once more to clean up the inside of the HST unit.

2) Cleaning the air filter

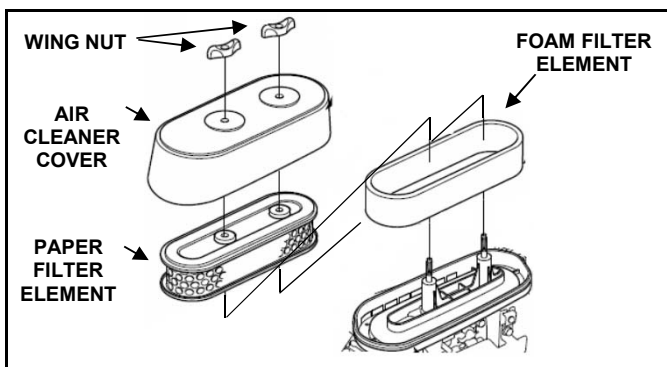
⚠ WARNING

- Be sure to clean the air filter periodically. A clogged air filter will not only cause an increase in output deficiency and fuel consumption but will also lead to an increase in exhaust gas temperature and the possibility of a fire. see below

Cleaning, replacement time (approx.)

	Cleaning	Replacement
Foam element	Every 25 hours	Every 200 hours or 1 year
Paper element	Every 50 hours	Every 200 hours or 1 year

Take care to clean the filter more frequently when operating in an environment with a lot of dust or grime.



1. Remove the wing nut and filter cover.
2. Remove the paper and foam elements and check for damage. Replace with new parts if damaged.
3. Clean each element. Refer to the instructions below.
4. Wipe any dirt from the inside of the case and reassemble to original position.

Paper: Tap the element several times on a hard surface to remove dirt, or blow compressed air not exceeding 30 psi [207 kPa] through the filter from the inside.

Never try to brush off dirt; brushing will force dirt into the fibers.

Foam: Clean in warm soapy water and rinse or clean in non-flammable solvent and allow to dry.

NOTICE

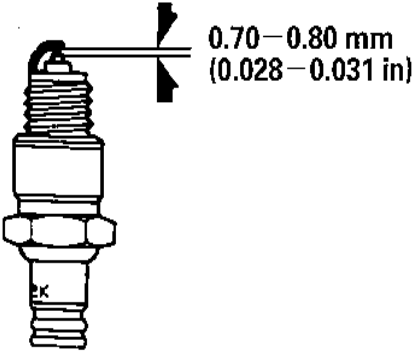
- Excess oil will restrict air flow through the foam element and may transfer to the paper element, soaking and clogging it.

Be sure to clean the air filter periodically. A clogged air filter may cause a decrease in efficiency, and increase fuel consumption. It can also raise exhaust temperature, which may cause fire.

3) Checking and adjusting the spark plug

Recommended Spark Plug:

BPR5ES(NGK) or W16EPR-U(DENSO)

	<ol style="list-style-type: none">1. Remove the spark plug with a plug wrench and clean away any carbon deposits on the electrodes with a wire brush. Wipe away any moisture if present.2. Replace the spark plug with a new one if the ceramic part has cracked or the electrodes have suffered extensive wear and tear.3. Please adjust the spark plug electrode clearance to 0.7-0.8mm (0.028-0.031in).
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NOTICE

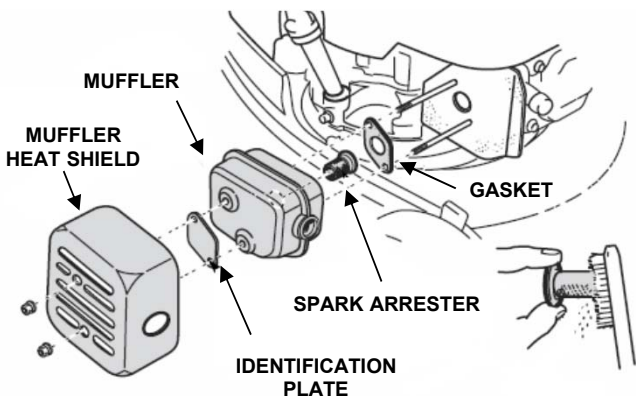
- When attaching a spark plug onto the engine, tighten by hand at first before tightening with a plug wrench. If you start by using a plug wrench to screw in the spark plug, there is a danger of cross-threading it.
- A loose spark plug can overheat and damage the engine.
Overtightening the spark plug can damage the threads in the cylinder head.

4) Spark Arrester (optional equipment)

Your lawn mower engine is not factory-equipped with a spark arrester.

In some areas, it is illegal to operate an engine without a spark arrester. Check local laws and regulations. An optional USDA approved spark arrester is available

The spark arrester must be serviced every 100 hours to keep it functioning as designed.

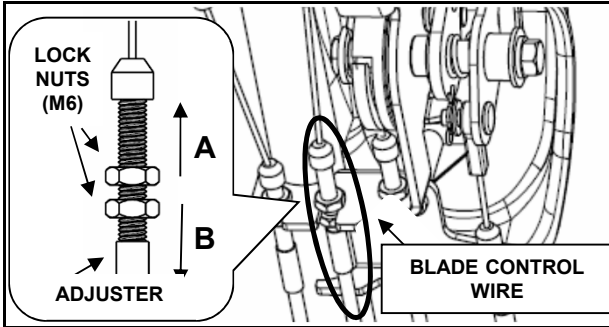
	<ol style="list-style-type: none">1. Allow the engine to cool and disconnect the spark plug cap.2. Remove the muffler heat shield, identification plate, muffler, and gasket.3. Remove the spark arrester from the muffler.4. Check for carbon deposits on the spark arrester and the exhaust port. Brush carbon deposits away. Be careful to avoid damaging the spark arrester screen.5. Installation is the reverse of removal. Tighten all hardware securely.6. Install the spark plug cap on the spark plug.
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5) Adjusting each wire

⚠ WARNING

- Check that you are taking sufficient safety precautions when adjusting each type of wire by placing the machine on a flat, open surface with the engine switched off and the spark plug cord removed.
- Please verify that the machine moves properly after the adjustment.
- If operation does not improve after adjustment, please contact the dealer where you purchased the machine.

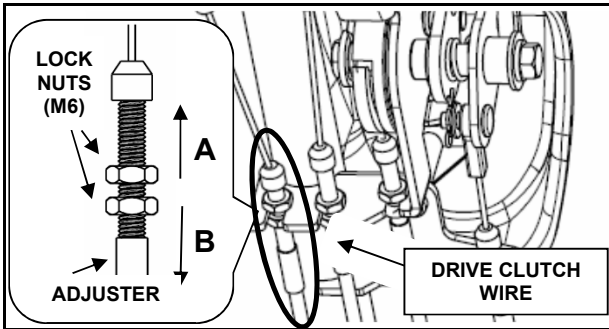
■ Blade control wire



Push the Blade safety lock and then pull back the Blade control lever (pg. 20).

1. If the spring that connects the blade control wire and the Blade control lever does not extend:
Move the Adjuster towards [B]
2. If the spring that connects the Blade control wire and the Blade control lever is not slack:
Move the Adjuster towards [A]

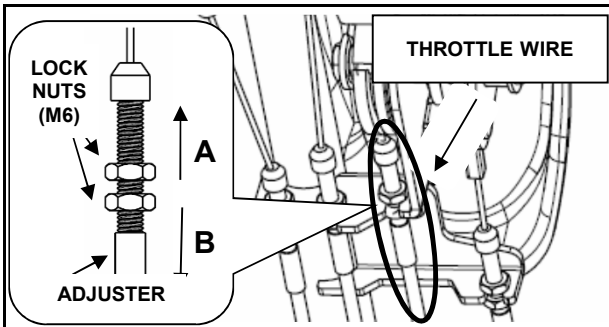
■ Drive clutch wire



Push the Driving clutch lever forward, hold with the handle and then pull the machine back. Make sure the wheels are locked.

1. If the wheels do not lock when you pull the lever, or unlock when stress is put on the machine:
Move the Adjuster towards [B]
2. If the wheels lock even when you release the drive clutch lever or the unit does not stop properly:
Move the Adjuster towards [A]

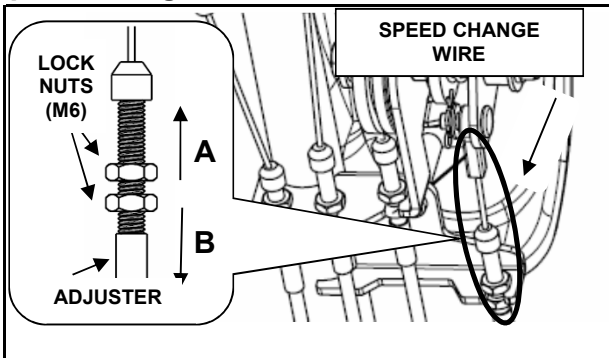
■ Throttle wire



Slide the Throttle lever up to the choke position and then back to the [HI] position.

1. If it does NOT push the choke arm enough:
Move the Adjuster towards [B]
2. If it pushes the Choke arm while in the [HI] position:
Move the Adjuster towards [A]

■ Speed change wire



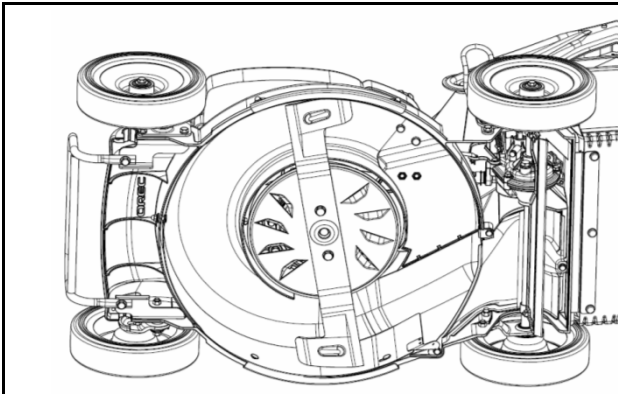
Make sure the wheels are locked when you hold the handle with Driving clutch lever at each speed position.

1. If the wheels do not lock on 3rd speed(gear) the speed is slow even at maximum speed(hst):
Move the Adjuster towards [B]
2. If the wheels do not lock on 1st speed or the change lever cannot be moved to 3rd speed(gear) you are traveling at a minimum speed(hst):
Move the Adjuster towards [A]

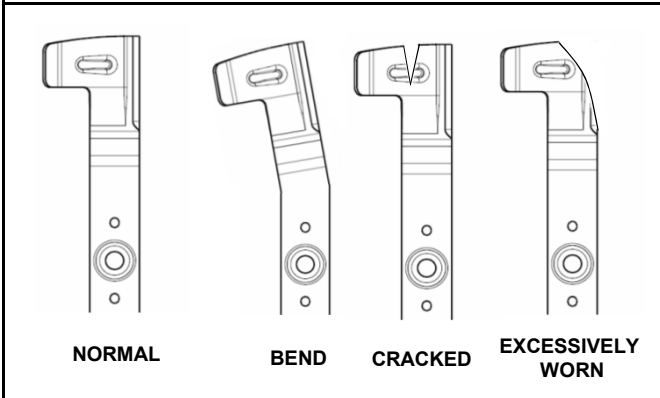
6) Inspecting and replacing blades

⚠ WARNING

- When inspecting or replacing the blade, always be sure to switch off the engine as there is a danger of injury.
- When having the blades replaced or repaired, always have any such work performed by a person with adequate tools and experience.
- The inspection or replacement of blades should be performed by 2 people. The handlebars should be held firmly to stop the front of the machine from falling down. Not taking this precaution can cause injury.
- To avoid injury, wear safety gloves when performing inspection or replacement and wrap the tips of the blades in cloth.
- Replace the blades if you detect any abnormalities. If you neglect wear and tear, cracks, and bending, there is a danger that the blades could break and fly out of the machine, severely injuring the operator or any bystanders.
- When replacing the blades, be sure to also replace the nuts and bolts which tighten the blades. This prevents accidents caused by wear and tear on the nuts and bolts. Never use nuts and bolts that are not recommended for this specified purpose.



1. Stop the engine and remove the spark plug cap.
2. Close the fuel valve and then push the machine on to its right side
3. Inspect the blades for cracks bending, and wear and tear. If the blades become damaged as shown in the diagram below, have them replaced. (The blades are attached with 2 bolts .)
4. Check that the bolts holding the blades in place are not loose.



M10 bolts tightening torque:
435 ~ 523lb·in.(49~59 N·m)

NOTICE

- **DO NOT** neglect a decline in the machine's performance, as this may cause permanent damage.
- More frequent inspection of the blades is necessary if using the machine on areas including dry earth and sand which cause faster wear and tear of the blades.
- We recommend purchasing a spare blade in advance and keeping it in a safe location.

7, Regarding Long-term Storage

If you do not use the machine for more than 30 days, please carry out the following procedures for maintenance.

If the machine is not stored properly, there is a danger of fuel spoilage, the machine failing to start, or other problems.

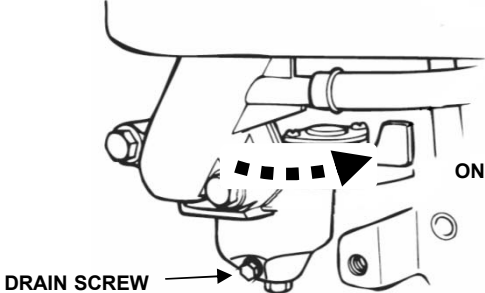
⚠ DANGER

- Please work on the machine in a place that is well ventilated. Fuel vapors can fill a room and cause death.
- Before working on the machine, switch off the engine and remove the spark plug cord.
- Store the machine on a flat surface in a place protected from the elements that is well ventilated and cool.
- When removing fuel, do not work anywhere near lit cigarettes or other sources of open flame.
- Furthermore, keep fireworks and firearms away as there is a danger of the machine catching fire.
- When removing fuel, be sure that the engine and muffler have cooled before touching the machine. There is a danger of burns. Also, take care to handle any removed fuel in a responsible manner.

■ Cleaning all parts

- Clean the recoil starter, air filter, muffler, around the carburetor, and inside the belt cover by blowing air through them to remove dirt and dust.
- To avoid getting water in the air cleaner, clean the engine by hand.
- Remove rust from affected areas and apply anti-corrosion paint.
- If you continue to operate with an accumulation of grass and dust in the machine, the engine can become clogged, causing it to overheat and possibly catch fire.
- Refuel and lubricate the necessary parts and have any defective parts repaired.

■ Draining the carburetor and fuel tank

 <p>The diagram shows a close-up of the carburetor and fuel tank area of a machine. A dashed line indicates the path of fuel from the tank through the carburetor. A solid arrow points to a small screw labeled 'DRAIN SCREW' located at the bottom of the carburetor. Another arrow points to a control lever labeled 'ON'.</p>	<ol style="list-style-type: none">1. Close the fuel valve.2. Take off the Drain Screw3. Open the fuel valve4. Drain all the gas from the carburetor and fuel tank into the proper container.5. Replace the Drain Screw and tighten firmly.6. Close the fuel valve.
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■ Other

- Please replace the engine oil. (Refer to "Oiled parts inspection, change and refill" pg 22)
- Put a cover over the machine to keep dust out.

NOTICE

- If you use a water hose and power washer, take care to keep water from entering the air cleaner, muffler, any of the control or inside the wires.
- If not dry, mud and grass debris that are attached to the knife cover can easily be washed off with water by using a hose or other low pressure water device.

8, Specifications (Reference values)

Name	Lawn Mower		
Type	GR537 Pro	GRH537 Pro	
Total length × Total width × Total height (Inch)	64.6 × 22.2 × 41.3 (1640 × 564 × 1050)	65.0 × 22.2 × 41.7 (1650 × 564 × 1060)	
Cutting width (Inch)	20.9 (530mm)		
Cutting height (Inch)	1.2---3.2 inch (30---81mm)	1.5---3.5 inch (38---89mm)	
Blade	Lifting Blade		
Weight	127.8 lb (58kg)	132.3 lb (60kg)	
Size of Tire	8 in (φ223mm)	9 in(φ240mm)	
Grass bag capacity	2.27 bushels (80L)		
Clutch system (Blade)	BBC		
Clutch system (Drive)	Dog Clutch		
Speed	Forward (MPH)	[1] 3.0 [2] 3.7 [3] 4.4	0 ---- 6.0
Engine	Model	HONDA GXV160	
	Type	UH2 SFY1 R280	
	Power (PS)	4.0 Kw (5.5Ps)	
	Oil	0.74 qt. (0.7L)	
	Fuel tank capacity	0.53 US gal(2.0L)	
	Maximum governed speed	3000rpm	

9, Consumable Parts List

No	Name of the Parts	Parts No	Qty/Unit	Remarks
1	Blade	0268-72100	1	
2	Blade set bolt	89-1254-100252	2	M10
3	Blade clutch wire	0268-71100	1	
4	Drive clutch wire	0268-71200	1	
5	Speed change wire	0268-71300	1	
6	Throttle wire	0268-71400	1	
7	Grass bag [DWO]	0278-77400	1	Fabric bag only
8	Air cleaner	17210-Z1V-003	1	Filter element, gasket,
9	Spark plug	98079-55846	1	BPR5ES(NGK)

10, Optional Equipment

No	Name of the Parts	Parts No	Qty/Unit	Remarks
1	Mulching kit	0278-52600	1	
2	Spark arrester parts	06180-ZE6-820	1	Arrester kit

11, Periodic Voluntary Inspection Table

Neglecting inspection and maintenance is a cause of accidents and damage. Perform inspection referring to [Periodic voluntary inspection table] in order to always keep the machine functioning correctly.

Perform annual inspection once a year and monthly inspection once a month, and starting checks every time you use the machine.

D: Daily M: Monthly Y: Yearly

		Inspection Content		Inspection freq.		
				D	M	Y
Engine	Engine (Main body)	Condition at startup, abnormal noise	Machine starts up easily.	✓	✓	✓
		Revolution and acceleration state	Revolution speed increases gradually and smoothly.	✓	✓	✓
		State of exhaust and gas leakage	Exhaust color, smell, and sound are normal.	✓	✓	✓
		Air filter damage, loosening, cleanliness	No damage, loosening, or noticeably dirty.		✓	✓
		Loosening of the attachment of cylinder head and manifolds *	Gas leak, cracking, noticeable corrosion. (Tightened to the correct torque, not loose)			✓
		* Valve tappet clearance	Clearance looks straight.			✓
		* Compressive pressure	Compressive pressure looks straight.			✓
		Engine base cracking or deformity, loosening of nuts and bolts	The engine base is not cracked or deformed and the nuts and bolts are not loose.	✓	✓	✓
	Engine Lubrication	Quantity, cleanliness	Oil quantity is suitable, not dirty or mixed with any water or metals.	✓	✓	✓
		Oil leakage	Oil seal and gasket are not leaking oil.	✓	✓	✓
	Engine Fuel	Fuel leakage	Fuel is not leaking.	✓	✓	✓
		Fuel filter blockage	Not noticeably dirty, deformed, or clogged.		✓	✓
		Fuel quantity/quality	There is fuel in the engine and it is of good quality.	✓	✓	✓
	Engine Electrics	Loosening, damage to electrical wire connections	Harness connections are suitable, not loose or damaged		✓	✓
		Spark Plug	There are no cracks in the ceramic, the electrodes are not worn, and there are no carbon deposits	✓	✓	✓
	Engine Purity	Dirtying of air filter element	Air filter element is not dirty.	✓	✓	✓
		Element breakage	Element is not torn or worn out.	✓	✓	✓
	Engine Cooling	Grass etc clogged in the recoil cover	Recoil cover is not clogged with grass.	✓	✓	✓
		Accumulation of grass in the muffler	There is no accumulation of grass around the muffler.	✓	✓	✓
	Trans mission	Abnormal noise, strange heat/movement	There are no abnormalities, strange noises or heat, when running the machine.		✓	✓
Oil quantity, cleanliness		There is a suitable quantity of oil and it is not dirty.			✓	
Oil leakage		Oil seal and packing parts are not leaking oil.	✓	✓	✓	

		Inspection Content		Inspection freq.		
				D	M	Y
Body	Body	Cracking or deformity, mounting nuts and bolts are loose or have fallen off	Frame is not cracked or deformed. Nuts and bolts have not fallen off.		✓	✓
	Cover	Cracking, deformity, corrosion	No cracking, deformity, corrosion.			✓
	Levers /Wires	Damage, loosening, rattling of levers and wires, loss of split pins	When moving or loading, there is noticeable damage, loosening, rattling, and nothing has fallen off.	✓	✓	✓
	Tires (Wheels)	Cracking, damage, wear and tear	No cracks, damage or wear and tear.	✓	✓	✓
		Metal, stones, etc, stuck in the tires	There is no debris in the tires.	✓	✓	✓
		Loose or missing nuts and bolts	Nuts and bolts are not loose or missing.	✓	✓	✓
		Rattling, strange noise	Mounted parts do not rattle or are missing.		✓	✓
Labels	Damage	Warning labels and nameplate are attached and not damaged.		✓	✓	

*If labels are damaged or unreadable, please contact your retailer. Charges apply.

12, Self Diagnosis Table





If any of the following effects occur, refer to the instruction manual and take the appropriate action.

Effect	Cause	Treatment
Cut grass is not discharged properly.	Grass is wet.	Operate machine when grass is dry.
	Grass is too long.	Raise the cutting height and cut twice.
	Cutting height is too low.	Raise the cutting height.
	Engine revolution speed is too low.	Increase revolution speed.
	You are moving the machine too fast.	Reduce your speed of operation.
Grass deposits come out of the machine.	You are moving the machine too fast.	Reduce your speed of operation.
	Engine revolution speed is too low.	Increase revolution speed.
	Blade is worn out, broken.	Replace with a new blade.
	Grass has accumulated inside the blade cover.	Clean inside the blade cover.
	Grass is too long.	Raise the cutting height and cut twice.
Machine starts cutting into the ground.	Cutting height is too low.	Raise the cutting height.
	Turning speed is too fast.	Reduce turning speed.
	Undulating ground.	Change the direction of your cut.
	Bumpy ground	Raise the cutting height.
	Bending of the blade.	Replace with a new blade.
Slipping blade.	Blade clutch wire tension is too loose.	Adjust Blade clutch wire tension.
	Debris is clogged inside the blade cover.	Clean inside the blade cover.
	The grass bag is full	Empty the bag
	Lawn grass is overgrown	Raise the blade height appropriately
Machine does not change gear.	Gear position is misaligned.	Adjust speed change wire.
	Mission is in poor condition.	Repair transmission.
Excessive vibration.	Blade is poorly balanced.	Repair blade.
	Blade is broken.	Replace with a new blade, or repair.
	PTO shaft is bent(engine)	Replace the PTO shaft.
	BBC Bearing is broken	Replace BBC
Cutting workload is too high.	Engine revolution speed is too low.	Increase engine revolution.
	You are moving the machine too fast.	Reduce your own speed of operation.
	Grass has accumulated or is wrapped around the blade axis.	Clean the blade.
	Grass is too long.	Raise the cutting height and cut twice.
	Cutting height is too low.	Raise the cutting height.
Tires are slipping.	Ground is too moist.	Stop working until ground is dry.
	Cutting height is too low.	Raise the cutting height
Does not drive.	Ratchet is in the wrong direction.	Install it properly
	Gear position is misaligned.	Adjust speed change wire.
Does not stop blade	BBC does not work properly.	Adjust Blade clutch wire tension.
Does not re-rotate blade	Grass is wrapped around the blade or shaft	Remove grass

If you do not understand any of these points, please consult with the retailer where you purchased this machine.

13, Troubleshooting

If the engine is defective, perform diagnosis by referring to the following table and then taking the appropriate action.

Effect	Cause	Treatment
You have trouble starting the machine, or the machine will not start at all.	Safety switch is not in the [start up] position.	Put the safety switch to the [start up] position.
	Choke lever has not been pulled out.	When cooling the engine, put the choke bar in the  position.
	Fuel is not flowing properly.	Inspect fuel tank, remove impure deposits or water. Remove the fuel valve strainer and clean out any sediment deposited inside the cap together with any other attached dirt.
	There is air or water mixed in the fuel delivery system.	Remove foreign objects, inspect fastening bands, replace damaged parts with new ones.
	In cold weather, oil becomes thick, and the engine rotation is sluggish.	Use the correct oil depending on the outside temperature.
	Ignition coil or unit is defective.	* Replace the ignition coil or unit.
	Defective spark plug.	Inspect the gap between spark plug electrodes and adjust. Replace with new spark plug.
Output shortage	Fuel shortage.	Refuel the machine.
	Clogged air filter.	Clean the element.
	Poor quality fuel.	Replace with good quality fuel.
	Choke has not been fully opened.	Return the choke bar completely. Put it in the  position.
	Cooling system is clogged.	Clean around the recoil starter.
The machine stops suddenly.	Fuel shortage.	Refuel the machine.
	Fuel valve is closed.	Open the fuel valve.
Exhaust gas is abnormally black	Poor quality fuel.	Replace with good quality fuel.
	Overfilled with engine oil.	Adjust to correct fuel level
Muffler emits black smoke and power output falls.	Air filter element is clogged.	Clean the element.
	Choke has not been fully opened.	Return the choke bar completely. Put it in the  position.
Muffler emits gray smoke.	Overfilled with engine oil.	Adjust to correct fuel level
	Cylinder or piston ring is worn out	* Replace the ring.
Engine revolution is not stable (does not increase).	Choke has not been fully opened.	Return the choke bar completely. Put it in the  position
	Poor quality fuel.	Replace with good quality fuel.
Momentary stall.	Defective ignition coil.	* Replace the ignition coil.
	Fuel filter is clogged.	Clean the fuel filter.
Exhaust has an irritating smell.	Poor quality fuel.	Replace with good quality fuel.

* Please consult with your local retailer. Charges may apply.

If you do not understand any of these points, please consult with the retailer where you purchased this machine.

14, LIMITED WARRANTY

Terms and Conditions

- Orec America, Inc. provides a limited warranty of **two (2) years** for residential users, **one** bold for commercial users, and **one (1) year** for rental companies, of its products against defects in workmanship and materials when said products are put to ordinary and normal use. The terms and conditions of the limited warranty are as set forth herein.
 - The second year of the residential warranty shall cover only parts and NOT service
 - Crawlers are guaranteed for one hundred eighty (180) days after initial purchase. This warranty covers defects in materials or workmanship only, and does not include damage to crawlers from normal use and other external factors.
 - The warranty shall commence from the date of purchase. This warranty is available only to the original purchaser, and is not transferable.
 - OREC reserves the right to inspect covered machines and parts in order to determine the validity of warranty claims
 - For the purposes of the above warranties “ordinary and normal use” does not include misuse, accidents, or damage due to inadequate maintenance.
 - Under this warranty, the responsibility of Orec America is limited to replacement or repair of defective parts at Orec America, or at an authorized Orec dealer.
 - Routine maintenance and adjustments, as defined by the manufacturer’s owners’ manuals, are the responsibility of the user and are not covered by the warranty.
 - Degradation or deterioration of the product due to everyday use are excluded from the warranty
 - Expendable components including but not limited to such as belts, blades, filters, spark plugs, bags, wheels hoses, cables, wires, brake pads and flappers, are excluded from the warranty. This warranty does NOT cover tire replacement or repair caused by punctures from outside objects, such as nails, thorns, stumps or glass.
 - During the warranty period, the warranty holder is responsible for equipment transportation charges, and transportation expenses needed to process the claim will not be reimbursed.
- **The following are excluded from the warranty:**
- Repairs necessary due to inappropriate use or abuse including, but not limited to, damage caused by towing objects or overspeeding the engine.
 - Paint peeling or rust that occur through exposure to the elements or through everyday use shall not be covered by the warranty.
 - Repairs necessary because of operator negligence, including but not limited to, electrical and mechanical damage caused by improper storage, failure to use the proper grade and amount of engine oil, failure to keep the mowing deck clear of flammable debris, or the failure to maintain the equipment according to the instructions contained in the owner’s manual.
 - Repairs necessary because of accidents.
 - Engine (fuel system) cleaning or repairs caused by fuel determined to be contaminated or oxidized (stale). In general, fuel should be used within thirty (30) days of its purchase date.
 - Claims made after expiration of the warranty.
 - Claims that are NOT specifically covered by warranty.
 - Repairs, maintenance and/or modifications performed by unauthorized persons or dealers, as well as the use of unauthorized parts or accessories will lead to the immediate forfeiture of the warranty.

- Under NO circumstances shall Orec America be liable for damages or expenses of any kind resulting from inappropriate use of its products.
- Orec America shall NOT be responsible for incidental or consequential costs or damages resulting from defects in its machinery.
Such excluded costs and damages may include : 1) Labor 2) Lost sales 3) Cost of replacement parts.
- This warranty shall apply only to models sold within the United States and purchased from authorized dealers.

Note: to request warranty service, please contact an authorized Orec dealer or refer to your owner's manual for the proper procedure

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

Warranty Registration

Register your information within 30 days of purchase at <http://www.orecamerica.com/warranty>

Warranty Claim Procedure

Should this Orec product fail due to a defect in materials and/or workmanship, the owner should use the following procedure to make a warranty claim:

- 1) The owner must take the machine to the dealer from whom they purchased the machine or to an authorized Orec America dealer.
- 2) The owner must present the warranty registration sheet or the invoice or receipt received at time of purchase.
- 3) The warranty claim will be taken and verified by the Orec Dealer or distributor service manager and submitted to an Orec distributor. The dealer or distributors service manager will make a report and submit it to Orec America for consideration of Warranty.
- 4) Orec will research the claim and may request that parts be returned for further examination. Orec will report their decision to the distributor service manager or dealer from whom the claim was received.
- 5) In the event that OREC approves the claim, parts will be exchanged free of charge and repairs performed by the dealer.
- 6) The decision by the Quality/Service department to approve or reject a warranty is final and binding

Note: to process a warranty claim, it is necessary to include the model name and serial number which are printed on the Orec Serial Plate (See owner's manual) last OREC GR537/GRH537 is produced. However, even during the supply period, it may be necessary to consult with us when seeking the purchase particular parts. If you have a request for replacement parts after this period has passed, please consult with us for availability and prices.

If you have any questions please talk to staff at the point of purchase or at our head office. At that time, please inform us of your machine's [model type, serial number, and engine type].

Engine serial number: _____

Frame serial number: _____

Date of purchase : _____

Position of identifying seal:

