

**HONDA HRB535 • HRM535**

**OWNER'S MANUAL**



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Thank you for purchasing a Honda lawn mower.

This manual covers the operation and maintenance of the Honda HRB535 and HRM535 lawn mowers.

We want to help you get the best results from your new mower and to operate it safely. This manual contains the information on how to do that; please read it carefully.

This manual should be considered a permanent part of the lawn mower and should remain with it if it is resold.

If you have a problem or questions concerning the mower, contact your supplying dealer.

We recommend that you read the guarantee policy to fully understand your rights and responsibilities. The guarantee policy is a separate document provided by your dealer.

Honda Power Equipment Mfg., Inc. reserves the right to make changes at any time without notice and without incurring any obligation.

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## **SAFETY MESSAGES**

Pay special attention to statements preceded by the following words:

### **⚠ WARNING**

You **CAN** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.

### **⚠ CAUTION**

You **CAN** be **HURT** if you don't follow instructions.

Each message tells you what the hazard is, what can happen, and what you can do to avoid or reduce injury.

## **DAMAGE PREVENTION MESSAGES**

You will also see other important messages that are preceded by the following word:

### **NOTICE**

Your lawn mower or other property can be damaged if you don't follow instructions.

The purpose of these messages is to help prevent damage to your lawn mower, other property, or the environment.

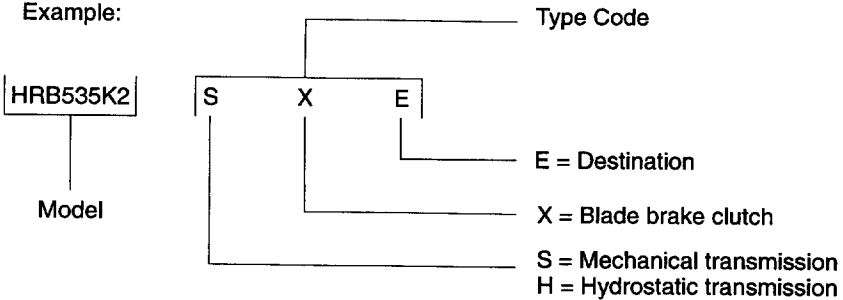
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Explanation of models and types used in this manual :

Model	Type	Grass Bag	Mulching Plug	High-Lift Blade	Mulching Blades	Mechanical Transmission	Hydrostatic Transmission
HRB535	SXE	•		•		•	
	HXE	•		•			•
HRM535	SXE		•		•	•	
	HXE		•		•		•

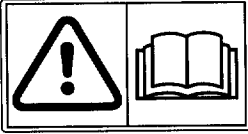
Example:



# 1. SAFETY INSTRUCTIONS

## ⚠ WARNING

– To ensure safe operation –



- **Honda lawn mowers are designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's Manual before operating the mower. Failure to do so could result in personal injury or equipment damage.**

- **Read instructions carefully, become familiar with controls and proper use of equipment.**
- **Never allow children or people unfamiliar with these instructions to use the lawn mower. Local regulations may restrict the age of the operator.**
- **Never mow while people, especially children, or pets are nearby.**
- **Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.**
- **While mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.**
- **Thoroughly inspect the area where the equipment is to be used and remove all objects which may be thrown by the machine.**
- **Gasoline is highly flammable:**
  - **Store fuel in containers specifically designed for this purpose.**
  - **Refuel outdoors only and do not smoke while refuelling.**
  - **Add fuel before starting the engine. Never remove the cap of the fuel tank or add gasoline while the engine is running or when the engine is hot.**
  - **If gasoline is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until the gasoline vapors have dissipated.**
  - **Install fuel caps securely.**

# 1. SAFETY INSTRUCTIONS

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- **Replace faulty mufflers.**
- **Before using, always visually inspect to see that the blade(s), blade bolt(s) and mower housing are not worn or damaged. Replace worn or damaged blade(s) and bolt(s) in sets to preserve balance.**
- **On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.**
- **Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.**
- **Mow only in daylight or good artificial light.**
- **Avoid operating the equipment in wet grass, where feasible.**
- **Mowing on slopes:**
  - **Always be sure of your footing on slopes.**
  - **Mow across slopes, never up and down.**
  - **Walk, never run.**
  - **Exercise extreme caution when changing direction on slopes.**
  - **Do not mow excessively steep slopes.**
- **Use extreme caution when reversing or pulling the lawn mower toward you.**
- **Stop the blade(s) if the lawn mower has to be tilted for transporting, when crossing surfaces other than grass and when transporting the lawn mower to and from the area to be mowed.**
- **Never operate the lawn mower with defective guards or shields, or without safety devices (for example, deflectors and/or grass catchers in place).**
- **Do not attempt to make wheel height adjustments while the machine is running.**
- **Do not change the engine governor setting or over-speed the engine.**
- **Disengage all blade and drive clutches before starting the machine.**
- **Start the engine carefully according to the instructions and with feet well away from the blade(s).**
- **Do not tilt the lawn mower when starting the engine.**

# 1. SAFETY INSTRUCTIONS





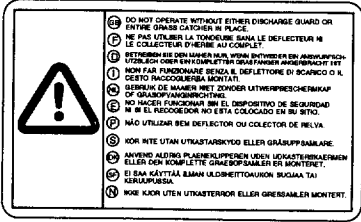

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- Do not start the engine when standing in front of the discharge chute opening.
- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- Never pick up or carry a lawn mower while the engine is running.
- Stop the engine and disconnect the spark plug wire:
  - Before clearing a blockage or unclogging the lawn mower.
  - Before checking, cleaning or working on the lawn mower.
  - After striking a foreign object. Inspect the lawn mower for damage and make repairs before restarting and operating the lawn mower.
  - If lawn mower starts to vibrate abnormally, check immediately.
- Stop the engine:
  - Whenever you leave the lawn mower.
  - Before refuelling the lawn mower.
  - Before removing the grass catcher, side discharge adapter or mulching plug.
- Reduce the throttle setting during engine shut down and turn the fuel valve off at the conclusion of mowing.
- Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark.
- Allow the engine to cool before storing in any enclosure.
- To reduce the fire hazard, keep the engine, muffler, battery compartment (if applicable) and gasoline storage area free of grass, leaves or excessive grease.
- Check the grass catcher frequently for wear or deterioration.
- Replace worn or damaged parts for safety.
- If the fuel tank has to be drained, this should be done outdoors.
- Wear eye protection.

# 1. SAFETY INSTRUCTIONS

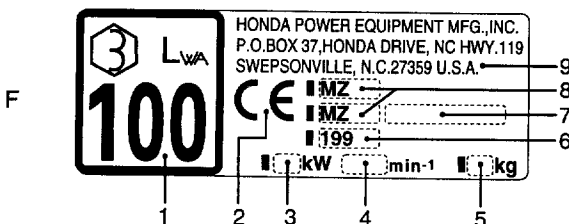
## SAFETY LABEL LOCATIONS

These labels warn you of potential hazards that can cause serious injury. Carefully read the meaning of each label. If a label comes off or becomes hard to read, contact your dealer for a replacement.

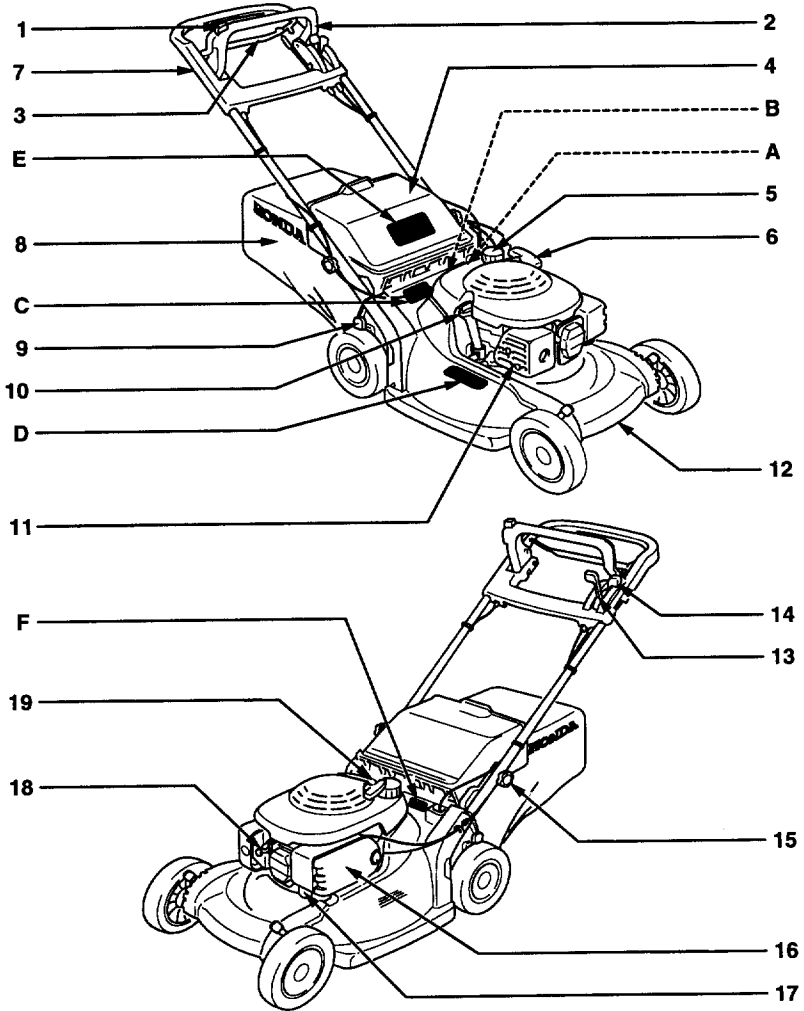
Letter	Markings	Meaning
A		Read and understand the owner's manual and the operation of all controls before using the machine.
B		Avoid mowing when people, mainly children, or pets are in the operating area.
C		Keep hands and feet away from the mower deck.
D		Pull off the spark plug cap before carrying out maintenance work.
E		

## PRODUCT IDENTIFICATION PLATE

1. Permissible sound power level according to Directive EEC/84/538.
2. Conformity mark, according to the EEC/89/392 modified Directive.
3. Nominal power in kilowatt.
4. Recommended engine speed in rpm.
5. Weight in kilograms.
6. Year of manufacture.
7. Serial number.
8. Description code.
9. Manufacturer's name and address.



## 2. COMPONENT IDENTIFICATION



- |    |                                      |    |                                    |
|----|--------------------------------------|----|------------------------------------|
| 1  | Blade control button                 | 11 | Muffler                            |
| 2  | Blade control lever                  | 12 | Mower deck                         |
| 3  | Drive clutch lever                   | 13 | Shift lever                        |
| 4  | Discharge guard                      | 14 | Throttle lever                     |
| 5  | Fuel tank cap                        | 15 | Handlebar locking knob             |
| 6  | Recoil starter                       | 16 | Air cleaner                        |
| 7  | Handlebar                            | 17 | Carburetor                         |
| 8  | Grass Bag (HRB535)                   | 18 | Spark plug cap                     |
| 9  | Cutting height adjustment levers (4) | 19 | Engine serial No. (back of engine) |
| 10 | Oil filler cap                       |    |                                    |



# 3. CONTROLS

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## Throttle Lever

The throttle lever [1] controls the following functions:



**CHOKE**  
For starting a cold engine.



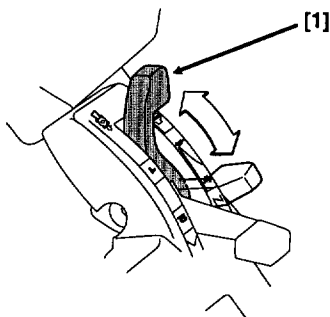
**FAST**  
For restarting a warm engine and for mowing.



**SLOW**  
For idling the engine.

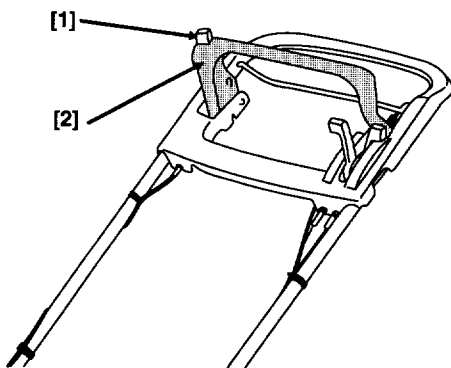


**STOP**  
For stopping the engine and closing the fuel valve.



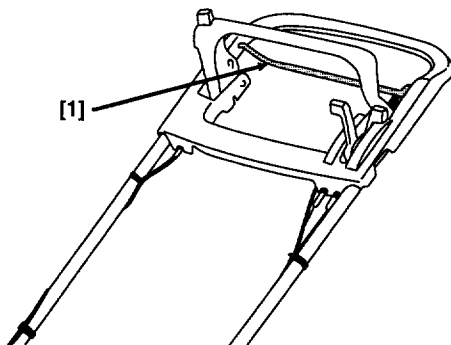
## Blade Control Lever

The button [1] and blade control lever [2] start and stop blade rotation.



## Drive Clutch Lever

The drive clutch lever [1] engages and disengages the transmission.



# 3. CONTROLS

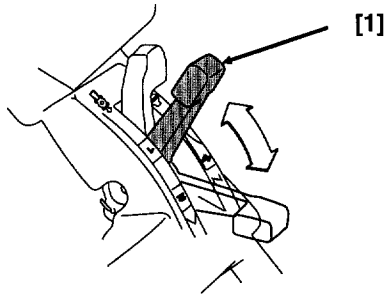
## Shift Lever

The shift lever [1] selects and controls the mower's drive speed.

### **HRM535SX & HRB535SX**

Position 1 for moving slow, mowing thick grass or maneuvering in small areas.

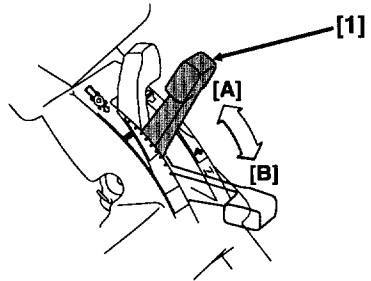
Position 2 for moving fast, maximum self-propelled speed in large, open areas, and for transport.



### **HRM535HX & HRB535HX**

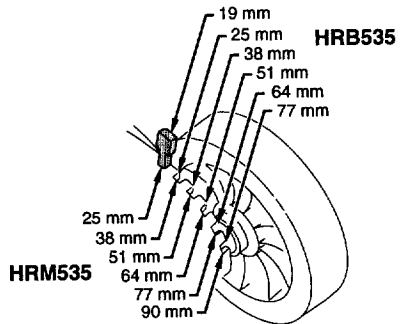
Position [A] for mulching, bagging, or maneuvering in small areas.

Position [B] for transporting at maximum self-propelled speed.

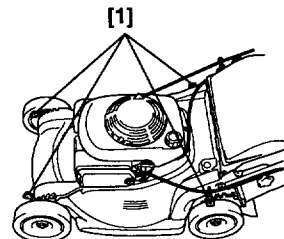


## Cutting Height Adjustment Levers

There are six adjustment settings. The cutting height figures are approximate. The actual height of cut grass will vary with lawn and soil conditions.



There is one adjustment lever [1] on each wheel.



## 4. PRE-OPERATION CHECKS

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### **CHECK YOUR LAWN**

For your safety and for the safety of others, always inspect the area before mowing.

#### **Objects**

Anything which can be picked up by the blade(s) and thrown is a potential hazard to you and others. Look for things like stones, sticks, bones, and wire. Remove them from the mowing area.

#### **People and Pets**

People and animals near the mowing area can move into your path or into a position where they could be struck by thrown objects. Clear the area of people and pets, especially children. Their safety is your responsibility.

#### **Lawn**

Check the length and condition of the grass, so you will know what cutting height and mowing speed to use.

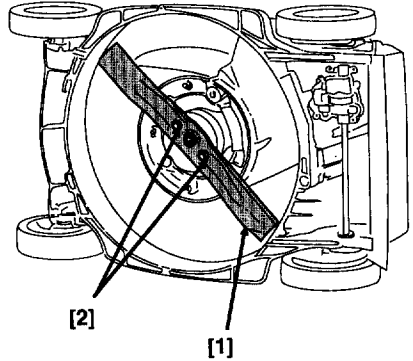
Avoid mowing wet grass. Not only will wet grass clog your mower deck and collect in clumps on the lawn, it also gives poor traction, increasing your risk of losing your footing.

# 4. PRE-OPERATION CHECKS

## CHECK YOUR MOWER

### Blade

With the throttle lever in the STOP position, and the spark plug cap disconnected, tilt the mower to the right, so the carburetor side is up. This will help to prevent fuel leakage and hard starting.



Inspect the blade(s) [1] for wear and damage.

### HRM535



**NORMAL**



**EXCESSIVELY  
WORN**

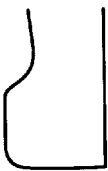


**BENT**



**CRACKED**

### HRB535



**NORMAL**



**EXCESSIVELY  
WORN**



**BENT**



**CRACKED**

A dull blade can be sharpened, but a blade that is worn out, bent, cracked, or otherwise damaged must be replaced. A worn or damaged blade can break, causing blade pieces to be thrown from the mower.

When a blade needs sharpening or replacement take the lawn mower to an authorized Honda dealer. Or, if you have a torque wrench, you can remove and install the blade(s) yourself (pages 50 - 51).

Check that the blade bolts [2] are tight (page 51).

# 4. PRE-OPERATION CHECKS

## Engine Oil Level

Check the engine oil level with the engine stopped and the mower on a level surface.

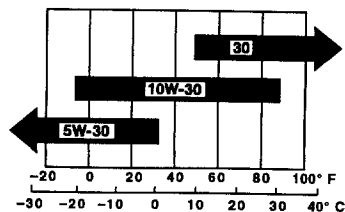
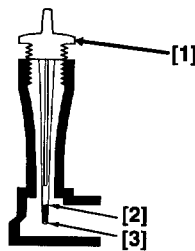
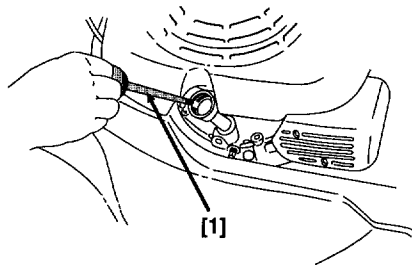
Use 4-stroke motor oil that meets or exceeds the requirements for API service classification SF, SG, or equivalent. Always check the API SERVICE label on the oil container to be sure it includes the letters SF, SG, or equivalent.

SAE 10W-30 is recommended for general use. Other viscosities shown in the chart below may be used when the average temperature in your area is within the indicated range.

### NOTICE

- Running the engine with a low oil level can cause engine damage.
- Using nondetergent oil can shorten the engine's service life, and using 2-stroke oil can damage the engine.

1. Remove the oil filler cap/dipstick [1], and wipe the dipstick clean.
2. Insert the dipstick into the filler neck. Do not screw it down. Check the oil level on the dipstick.
3. If the oil level is near the low level mark [3], add the recommended oil to bring the level up to the high limit mark [2]. Do not overfill.
4. Install and tighten the filler cap/dipstick [1] securely.



## 4. PRE-OPERATION CHECKS

### Fuel

**Fuel tank capacity: 1.0 ℓ**

Refuel in a well-ventilated area before starting the engine. If the engine has been running, allow it to cool.

Never refuel the mower inside a building where gasoline fumes may reach flames or sparks. Keep gasoline away from appliance pilot lights, barbecues, electric appliances, power tools, etc.

### **⚠ WARNING**

Gasoline is highly flammable and explosive and you can be burned or seriously injured when refueling.

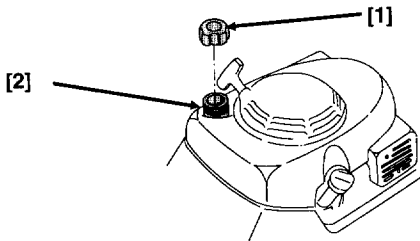
- Stop engine and keep heat, sparks, and flame away.
- Refuel only outdoors.
- Wipe up spills immediately.

Spilled fuel is not only a fire hazard, it causes environmental damage. Wipe up spills immediately.

### **NOTICE**

Fuel can damage paint and plastic. Be careful not to spill fuel when filling your fuel tank. Damage caused by spilled fuel is not covered under warranty.

Remove the tank cap [1] and check the fuel level. Refill the tank if the fuel level is low. Refuel carefully to avoid spilling fuel. Do not overfill; there should be no fuel in the filler neck [2]. After refueling, tighten the fuel tank cap securely.



## 4. PRE-OPERATION CHECKS

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### Fuel Recommendations

**Use gasoline with a octane rating of 86 or higher (unleaded preferred).**

This engine is certified to operate on unleaded gasoline. Unleaded gasoline produces fewer engine and spark plug deposits and extends exhaust system life.

Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt or water in the fuel tank.

Occasionally you may hear light "spark knock" or "pinging" (metallic rapping noise) while operating under heavy loads. This is no cause for concern.

If spark knock or pinging occurs at a steady engine speed, under normal load, change brands of gasoline. If spark knock or pinging persists, see your servicing dealer.

<b>NOTICE</b>
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Running the engine with persistent spark knock or pinging can cause engine damage.

Running the engine with persistent spark knock or pinging is misuse, and the Distributor's Limited Warranty does not cover parts damaged by misuse.

## 4. PRE-OPERATION CHECKS

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### OXYGENATED FUELS

Some conventional gasolines are being blended with alcohol or an ether compound. These gasolines are collectively referred to as oxygenated fuels. To meet clean air standards, some areas use oxygenated fuels to help reduce emissions.

If you use an oxygenated fuel, be sure it is unleaded and meets the minimum octane rating requirement.

Before using an oxygenated fuel, try to confirm the fuel's contents. Some areas require this information to be posted on the pump.

The following are the approved percentages of oxygenates:

- ETHANOL** — (ethyl or grain alcohol) 10% by volume  
You may use gasoline containing up to 10% ethanol by volume. Gasoline containing ethanol may be marketed under the name "Gasohol".
- MTBE** — (Methyl Tertiary Butyl Ether) 15% by volume  
You may use gasoline containing up to 15% MTBE by volume.
- METHANOL** — (methyl or wood alcohol) 5% by volume  
You may use gasoline containing up to 5% methanol by volume, as long as it also contains cosolvents and corrosion inhibitors to protect the fuel system. Gasoline containing more than 5% methanol by volume may cause starting and/or performance problems. It may also damage metal, rubber, and plastic parts of your fuel system.

If you notice any undesirable operating symptoms, try another service station, or switch to another brand of gasoline.

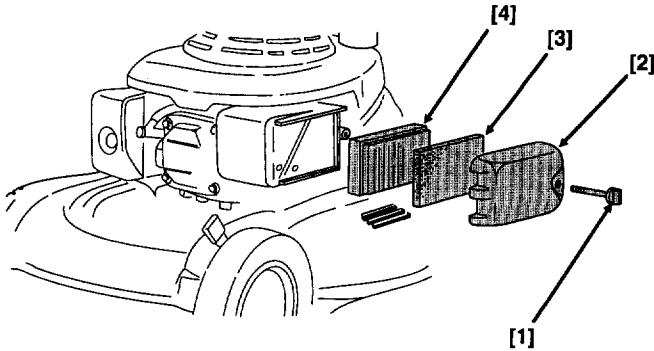
Fuel system damage or performance problems resulting from the use of an oxygenated fuel containing more than the percentages of oxygenates mentioned above are not covered under warranty.



## 4. PRE-OPERATION CHECKS

### Air Cleaner Inspection

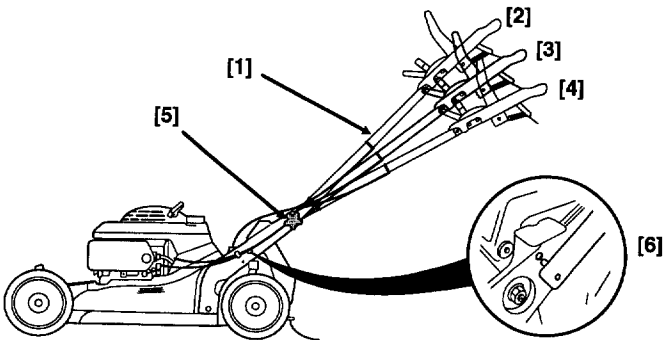
Remove cover screw [1] and cover [2]. Make sure the foam filter [3] and paper air filter [4] are clean and in good condition. Dirty air filters will restrict air flow to the carburetor, reducing engine performance. Refer to page 41 for air cleaner service.



### Handlebar Height Adjustment

Handlebar [1] height can be adjusted to three positions; high [2], middle [3], and low [4].

1. Loosen the handlebar locking knobs [5].
2. Spread the lower ends of the handlebar to release the locating pins [6].
3. Move the handlebar up or down, so the locating pins engage other holes on the handlebar mounting brackets.
4. Tighten the handlebar locking knobs securely



## 4. PRE-OPERATION CHECKS

### Grass Bag (HRB535)

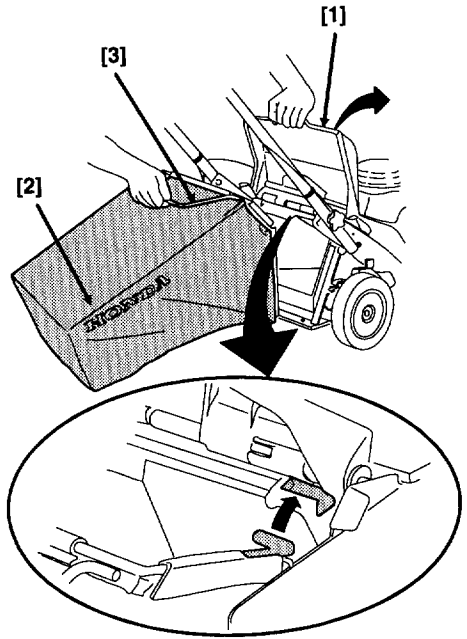
A lawn mower works like a vacuum cleaner; it blows air through the bag, which traps the grass clippings. Always empty the grass bag before it becomes filled to the limit of its capacity. Bagging performance will diminish after the bag becomes about 90% filled. Also, the bag is easier to empty when it is not packed full.

### Inspection

Inspect the grass bag for tears, holes, and excessive wear. The grass bag wears during normal use and will eventually require replacement. If the grass bag needs replacement you can remove and install a bag yourself (page 52).

### Installation

1. Raise the discharge guard [1], use the grass bag handle [3] and hook the grass bag [2] onto the mower deck as shown.
2. Release the discharge guard to secure the grass bag.



### Removal

1. Raise the discharge guard, grasp the grass bag handle and remove the grass bag.
2. Release the discharge guard.
3. When the grass bag is clear of the discharge guard, you can lift it through the handlebar opening, or you can remove it to the rear of the mower below the handlebar.

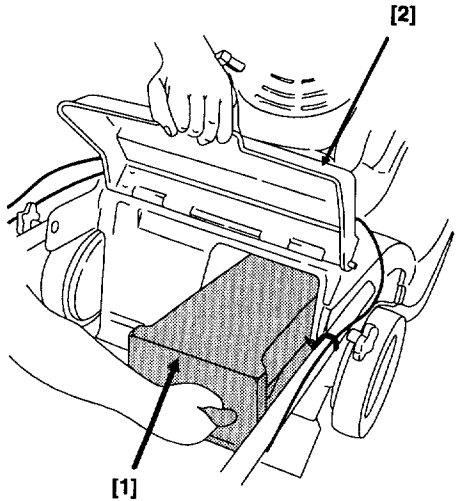
## 4. PRE-OPERATION CHECKS

### Mulching Plug (HRM535)

The mulching plug [1] contours the mower deck for efficient mulching.

You can quickly remove the plug to install a grass bag or side-discharge chute, which are available as optional equipment.

Raise the discharge guard [2] to remove or install the mulching plug. When installing, be sure the plug is fully inserted, and the discharge guard is closed.

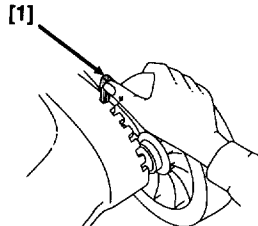
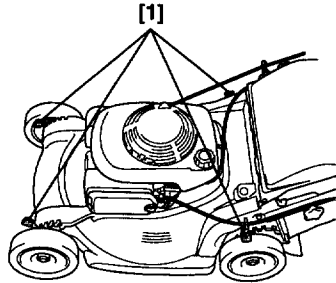


### Cutting Height

Check the mower deck cutting height settings, and be sure that all four adjustment levers [1] are set to the same cutting height position.

To adjust cutting height, pull each adjustment lever [1] toward the wheel, and move it into another notch.

If you are not sure what cutting height to select, start with a high setting and check the appearance of the lawn after mowing a small area. Then readjust cutting height if necessary.



### ARE YOU Ready to Mow?

Be sure to wear protective clothing. Long pants and eye protection can lower your risk of injury from thrown objects. Wear footwear that protects your feet and won't let you slip if you mow on slopes or uneven ground.

## MOWING PRECAUTIONS

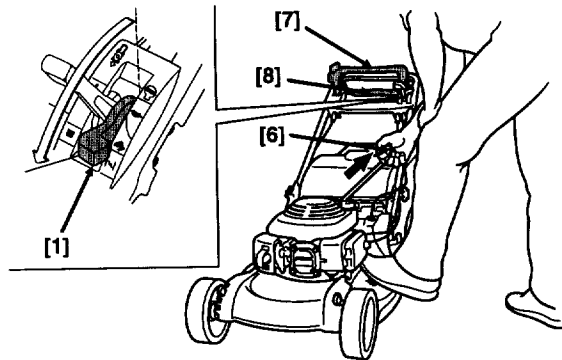
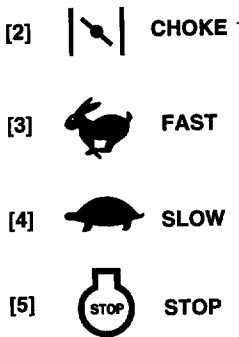
Before operating the mower for the first time, please review chapters 1 and 2.

Even if you have operated other mowers, take the time to become familiar with how this mower works and practice in a safe area until you build up your skills.

For your safety, avoid starting or operating the engine in an enclosed area such as a garage. Your mower's exhaust contains poisonous carbon monoxide gas which can collect rapidly in an enclosed area and cause illness or death.

## STARTING THE ENGINE

1. When the engine is cold put the throttle lever [1] in the choke position [2]. When the engine is hot or the ambient temperature is high put the throttle lever [1] in the fast position [3].



2. Place your foot on the mower deck step. Pull the starter grip [6] lightly until you feel resistance, then pull briskly. Return the starter grip gently.

To keep the blade(s) from turning and to prevent the mower from moving forward, always release the blade control lever [7] and drive clutch lever [8] when you operate the starter.

3. Move the throttle lever [1] away from the choke position [2] as soon as the engine warms up enough to run smoothly. Put the throttle lever [1] in the fast position [3] to mow or to the slow position [4] to idle.

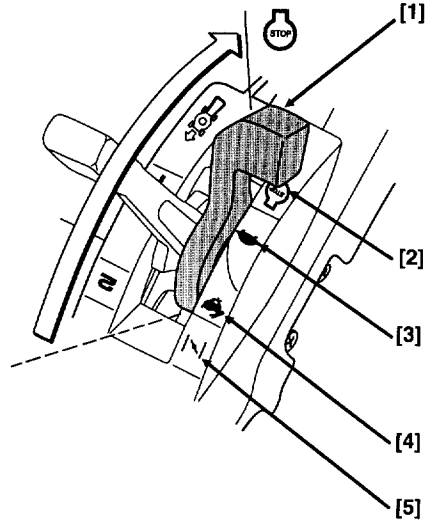
# 5. OPERATION

## Flooded Engine

If the engine still refuses to start after several pulls on the starter, the engine may be flooded.

To clear a flooded engine:

1. Place the throttle lever [1] in the STOP position [2].
2. Remove and dry the spark plug. When installing the spark plug, screw it in finger tight and correctly seated. Using the correct size plug wrench, tighten it an additional  $\frac{1}{8}$  to  $\frac{1}{4}$  turn so that the washer is correctly compressed.
3. Put the throttle lever [1] in the fast position [4] and repeat step 2 previously mentioned under the STARTING THE ENGINE.



## High Altitude Operation

At high altitude, the standard carburetor air-fuel mixture will be too rich. Performance will decrease, and fuel consumption will increase. A very rich mixture will also foul the spark plug and cause hard starting.

High altitude performance can be improved by specific modifications to the carburetor. If you always operate your mower at altitudes above 1,800 meters have a Honda dealer perform this carburetor modification.

Even with carburetor modification, engine horsepower will decrease about 3.5% for each 300 meter increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

### NOTICE

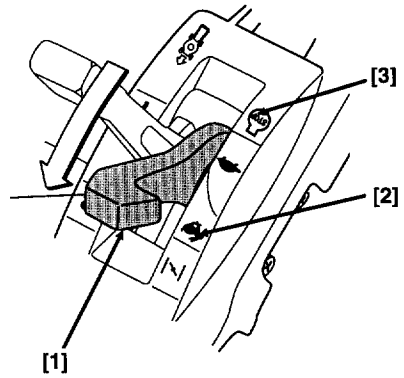
When the carburetor has been modified for high altitude operation, the air-fuel mixture will be too lean for low altitude use. Operation at altitudes below 1,800 meters with a modified carburetor may cause the engine to overheat and result in serious engine damage. For use at low altitudes, have your authorized Honda dealer return the carburetor to original factory specifications.

### OPERATING THE CONTROLS FOR MOWING

#### Throttle Lever

For best cut quality, always mow with the throttle lever [1] in the fast position [2]. When the blade rotates at the preset fast speed, it creates a strong fan action that lifts and cuts grass more efficiently. Do not try to increase the preset engine speed, the blade could fracture and come apart.

When you need to empty the grass bag or leave the mower for any reason, move the throttle lever [1] to the STOP position [3].

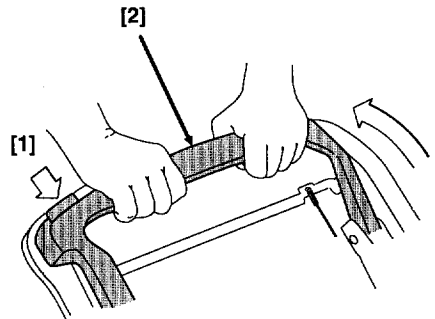


#### Blade Control Lever

To start blade rotation, press the yellow button [1] on top of the blade control lever [2], then pull the lever back quickly and hold it against the handlebar.

Release the blade control lever [2] to stop the blade.

Operate the blade control lever with a quick and complete motion, so the blade drive is always either fully engaged or stopped. This will help to prevent stalling the engine, and it will also extend the service life of the blade control mechanism.



## 5. OPERATION

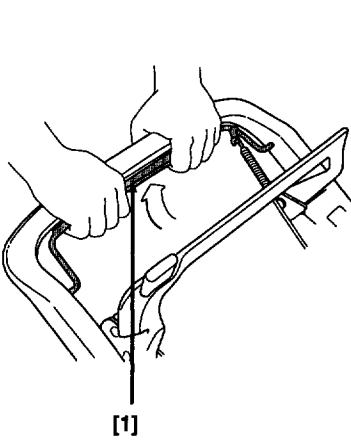
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### Drive Clutch Lever

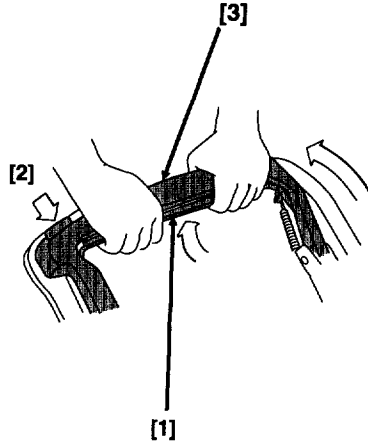
Pull the drive clutch lever [1] up to propel the mower forward.

For self-propelled mowing, press the yellow button [2] on top of the blade control lever [3], pull the blade control lever back to the handlebar, then pull the drive clutch lever up.

Release the drive clutch lever [1] to stop the mower's forward movement.



**TO MOVE MOWER WITHOUT  
BLADE ROTATION**



**FOR SELF-PROPELLED MOWING**

### ***HRM535SXE & HRB535SXE***

Operate the drive clutch lever [1] with a quick and complete motion, so the drive clutch is either fully engaged or released, and hold the drive clutch lever [1] against the handlebar while propelling the mower. This will help to extend the service life of the clutch mechanism.

### ***HRM535HXE & HRB535HXE***

You can control mower speed with the drive clutch lever [1]. The mower will move gradually faster as you pull the lever up. If you pull the lever all the way up to the handlebar, the mower will move at the speed determined by the shift lever setting.

### Shift Lever

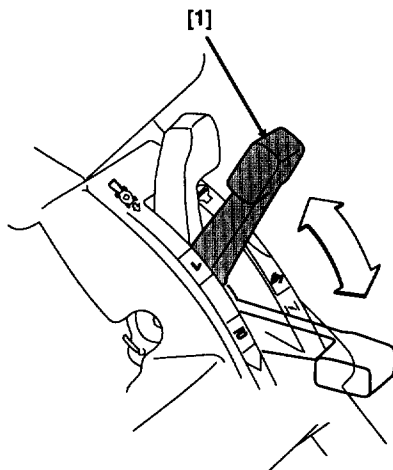
Use the shift lever [1] to select the forward speed at which you wish to mow.

Do not use the throttle lever to adjust your forward speed. The throttle lever must remain in the fast position for good mowing performance. Otherwise, cut quality suffers.

#### **HRM535SXE & HRB535SXE**

You can shift gears without releasing the drive clutch lever, but the transmission may not shift smoothly if the mower is pulling hard. For smoother operation, release the drive clutch lever before shifting gears.

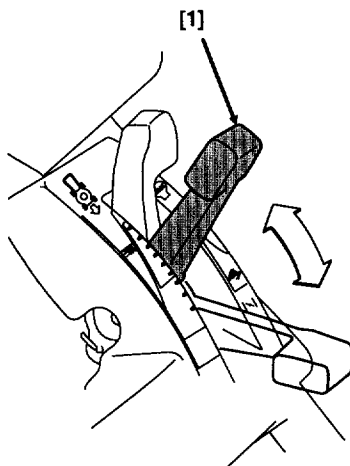
To avoid incomplete gear engagement, move the shift lever [1] all the way forward or all the way back.



#### **HRM535HXE & HRB535HXE**

Use the lower speed range for mulching and bagging the higher speed range for transporting.

With the shift lever all the way back and the drive clutch lever engaged, the mower will move slowly or not at all.



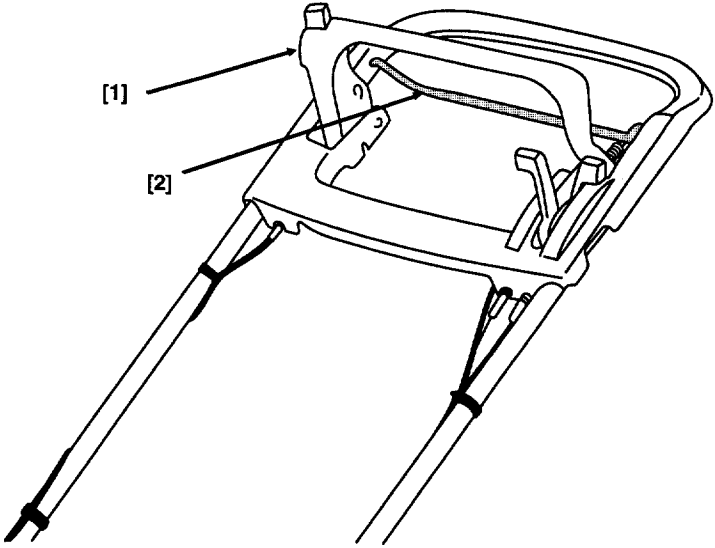


# 5. OPERATION

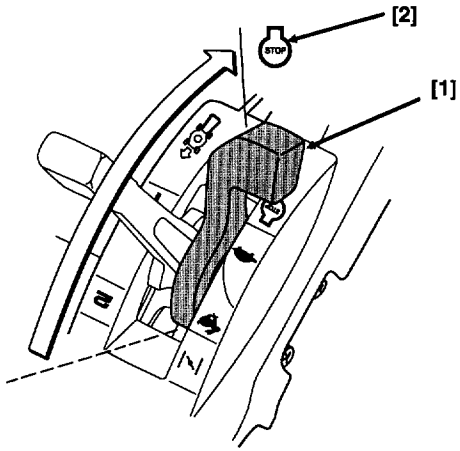
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## STOPPING THE ENGINE

1. Release the drive clutch lever [1] and blade control lever [2].



2. Move the throttle lever [1] to the STOP position [2] to stop the engine and close the fuel valve.



### 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**

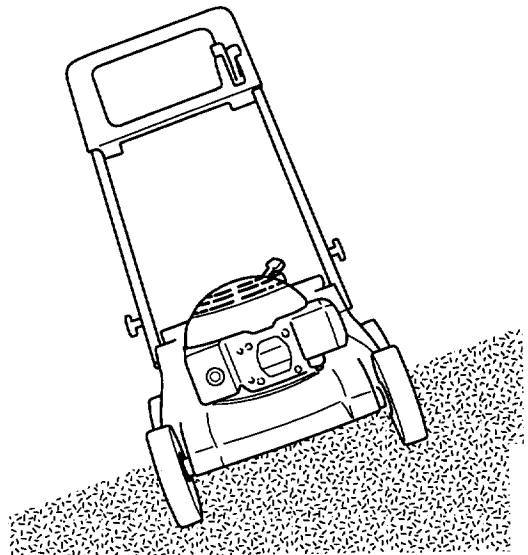
The blade is sharp and spins at high speed.

A spinning blade 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 adjustment, inspection, or maintenance.

### Slopes

Mow across slopes, not up and down. Avoid steep slopes (more than 20°), 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.



# 5. OPERATION

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## Obstacles

Use the side of the mower to cut close to large obstacles, such as fences or walls.

Release the drive clutch lever to disengage the drive when mowing around trees and other obstacles. Push the mower around obstacles for better directional control. Be careful when mowing over obstacles embedded in the lawn, such as sprinkler heads, paving, edging, etc. Avoid anything that sticks up above the surface of the lawn.

If the blade hits something, or if the mower starts to vibrate, stop the engine immediately and check for damage. Striking objects may damage the blade, 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 blade regularly, and do not operate the mower with a worn or damaged blade.

The Distributor's Limited Warranty does not cover parts damaged by accident or collision.

## 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. The best way to prevent potential injury from thrown objects is to release the blade control lever to stop the blade before reaching areas with gravel, loose stones, or landscaping material.

### MOWING TIPS

#### When to Mow

Most grasses should be mowed when they have grown  $\frac{1}{2}$  to 1 inch above their recommended height.



More frequent mowing is required for mulching than for bagging. For best results, you may need to mow the lawn twice a week during the growing season.

#### Cutting Height

Consult a local nursery or lawn and garden center for cutting height recommendations and advice about specific types of grasses and growing conditions in your area.

If you look closely, you'll see that most grass has stems and leaves. If you cut off the leaves, you'll scalp the lawn. Let the grass recover between mowings. Your mower will work better, and your lawn will look better.



LONG ENOUGH



TOO SHORT

If your grass gets too tall, cut it once at the highest cutting height setting, then mow again in 2 or 3 days. Don't take off more than one third of total grass height in any one mowing, or brown patches may develop.

Cutting height adjustment levers are explained in the CONTROLS chapter (page 9).

#### Cutting Width

For an even lawn finish, overlap each mowing swath by a few inches. If the grass is very tall or thick, use more overlap and a narrower mowing swath.

## 5. OPERATION

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### **Blade Speed**

The blade must spin very fast to cut properly. Always use the fast throttle setting, and keep the engine running at maximum rpm.

If engine speed drops, it could mean the engine is being overloaded by the blade trying to cut too much grass. Mow a narrower swath, move the mower slower, or raise the cutting height.

### **Blade Sharpness**

A sharp blade cuts cleanly. A dull blade tears the grass, leaving shredded ends that turn brown. When your blade doesn't cut cleanly anymore, have it sharpened or replaced.

### **Dry Grass**

If the ground is too dry, mowing will stir up a lot of dust. Besides being unpleasant to work in, too much dust will clog the carburetor air filter.

If dust is a problem, water your lawn the day before mowing. Mow when the grass is dry to your touch, but the soil is still moist.

### **Wet Grass**

Wet grass is slippery and can make you lose your footing. Also, wet grass clippings will clog the mower deck and collect in clumps on the lawn. Always wait for wet grass to dry before mowing.

### **Fallen Leaves**

When equipped with a grass bag, your mower can be used to pick up fallen leaves for disposal. If using the mower to bag large amounts of fallen leaves, and not for mowing, set the cutting height adjustment levers so the front of the mower deck is one or two settings higher than the rear.

If you want to mulch fallen leaves into your lawn, don't let the leaf cover get too deep before you begin. For best results, start mulching while grass still shows through the leaf cover. In places where fallen leaves completely cover the grass, remove the leaves by raking, or install a grass bag, so your mower can pick them up for disposal.

### **Clogged Mower Deck**

Before clearing a clogged mower deck, stop the engine and turn the fuel valve off by moving the throttle lever to the STOP position. With the spark plug cap disconnected, tilt the mower so the carburetor side is up.

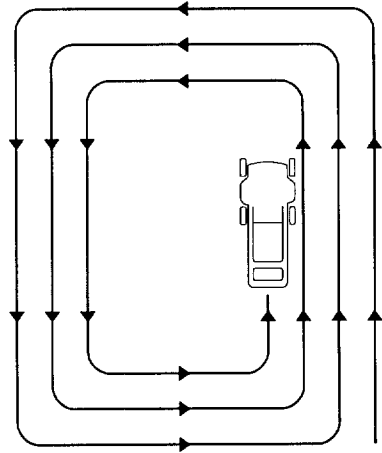
Clear a clogged deck with a stick, not your hands.

### Mowing Patterns

Your Honda mower will work most efficiently if you use the following mowing patterns as much as possible. Mower deck and equipment design, and the direction in which the blade rotates, cause these mowing patterns to give the best results.

#### **Mulching**

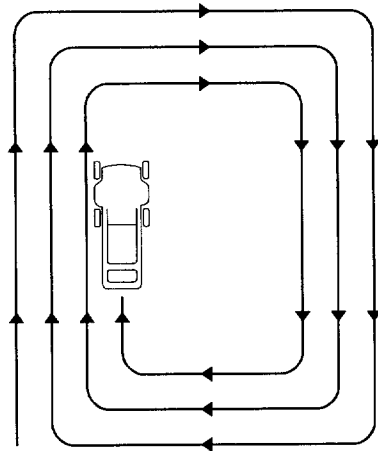
Use a counterclockwise mowing pattern. If the lawn has an irregular shape, or many obstacles, divide it into sections where you can use counterclockwise mowing patterns.



**MULCHING PATTERN**

#### **Bagging**

Use a clockwise mowing pattern. This will give the best bagging performance, leaving the least amount of clippings on the lawn.



**BAGGING & SIDE-DISCHARGE PATTERN**

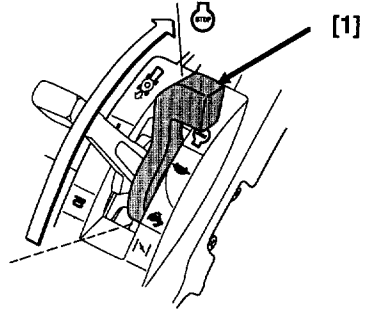
# 6. TRANSPORTING/STORAGE

## TRANSPORTING

### Before Loading

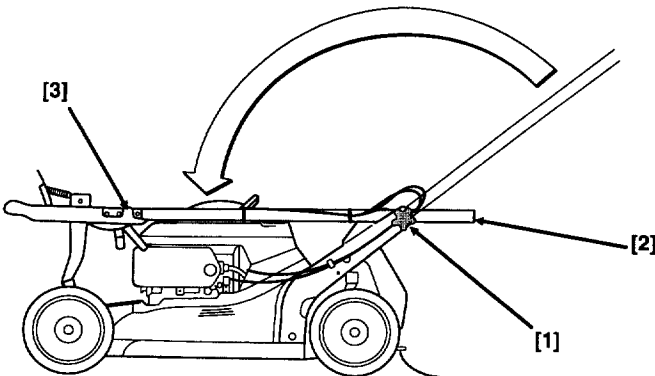
If the engine has been running, allow it to cool for at least 15 minutes before loading the mower on the transport vehicle. A hot engine and exhaust system can burn you and can ignite some materials.

Put the throttle lever [1] in the STOP position to shut off the fuel valve. This will prevent carburetor flooding and reduce the possibility of fuel leakage.



### Handlebar Folding

1. Remove the grass bag, if so equipped. You can place it on top of the engine, with the bag opening to the front.
2. Loosen the handlebar locking knobs.
3. Spread the lower ends of the handlebar struts [2] to release the locating pins.
4. Fold the handlebar [3] forward, over the top of the mower. When folding the handlebar, be careful to avoid kinking or pinching the control cables.



## 6. TRANSPORTING/STORAGE

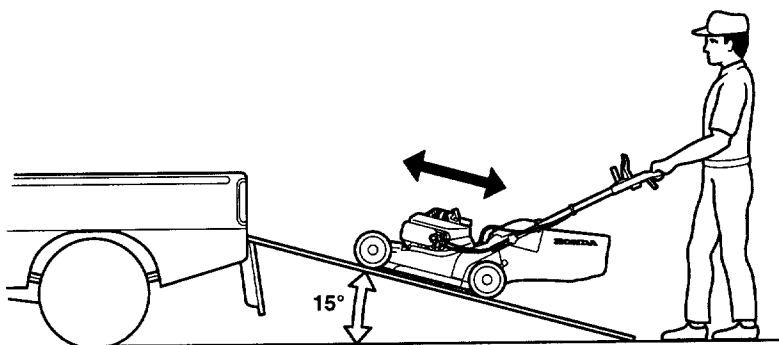
### Loading and Unloading

Position the mower so all four wheels are on the bed of the transport vehicle. Tie the mower down with rope or straps, and block the wheels. Keep the tie-down rope or straps away from the controls, adjustment levers, cables, and the carburetor.

#### NOTICE

- To prevent losing control of or damaging the mower, do not use the drive system when going up or down a loading ramp.
- To prevent damaging the drive system, do not engage the clutch when the mower is rolling backwards.

Use a suitable loading ramp. Adjust the loading ramp so that it is inclined at an angle of less than  $15^\circ$ . If a loading ramp is not available, two people should lift the mower on and off the transport vehicle keeping the mower level.



### STORAGE

Proper storage is essential for keeping your lawn mower troublefree and looking good. The following steps will help protect the mower from rust and corrosion and make the engine easier to start when you use the lawn mower again.

#### Cleaning

1. Wash the lawn mower, including the underside of the mower deck.

#### *Engine*

Wash the engine by hand, and be careful to prevent water from entering the air cleaner.



## 6. TRANSPORTING/STORAGE

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### NOTICE

- Using a garden hose or pressure washing equipment can force water into the air cleaner. Water in the air cleaner will soak the filters and can enter the carburetor or engine cylinder, causing damage.
- Water contacting a hot engine can cause damage. If the engine has been running, allow it to cool for at least half an hour before washing.

### ***Mower Deck***

If using a garden hose or pressure washing equipment to clean the mower deck, be careful to avoid getting water into controls and cables, or anywhere near the engine air cleaner or muffler opening.

Before washing the underside of the mower deck, be sure the throttle lever is in the STOP position. Rest the mower on its right side, so the carburetor side is up. This will help to prevent fuel leakage and hard starting due to carburetor flooding. Wear heavy gloves to protect your hands from the blade(s).

### ***Grass Bag (HRB535)***

Remove the bag from the mower, and wash it with a garden hose or pressure washing equipment. Allow the bag to dry completely before storage.

2. After washing the lawn mower, wipe dry all accessible surfaces.
3. With the mower in an upright position, start the engine outdoors, and let it run until it reaches normal operating temperature to evaporate any water remaining on the engine.
4. While the engine is running, operate the blade control lever 4 or 5 times to expel water from the blade control mechanism. Allow the blade(s) to spin for several minutes to ensure that no water remains.
5. Stop the engine and allow it to cool.
6. After the lawn mower is clean and dry, touch up any damaged paint, and coat other areas that may rust with a light film of oil. Lubricate the control cable cores with a silicone spray lubricant.

## 6. TRANSPORTING/STORAGE

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### Fuel

Gasoline will oxidize and deteriorate in storage. Old gasoline will cause hard starting, and it leaves gum deposits that clog the fuel system. If the gasoline in your mower deteriorates during storage, you may need to have the carburetor and other fuel system components, serviced or replaced.

The length of time that gasoline can be left in your fuel tank and carburetor without causing functional problems will vary with such factors as gasoline blend, your storage temperatures, and whether the fuel tank is partially or completely filled. The air in a partially filled fuel tank promotes fuel deterioration. Very warm storage temperatures accelerate fuel deterioration. Fuel deterioration problems may occur within a few months, or even less if the gasoline was not fresh when you filled the fuel tank.

The Distributor's Limited Warranty does not cover fuel system damage or engine performance problems resulting from neglected storage preparation.

You can extend fuel storage life by adding a gasoline stabilizer that is formulated for that purpose, or you can avoid fuel deterioration problems by draining the fuel tank and carburetor.

### ***Adding fuel stabilizer :***

When adding a fuel stabilizer, fill the fuel tank with fresh gasoline. If only partially filled, air in the tank will promote fuel deterioration during storage. If you keep a container of gasoline for refueling, be sure that it contains only fresh gasoline.

1. Add fuel stabilizer following the manufacturer's instructions.
2. After adding a fuel stabilizer, run the engine outdoors for 10 minutes to be sure that treated gasoline has replaced the untreated gasoline in the carburetor.
3. Stop the engine, and leave the throttle lever in the STOP position. This turns off the fuel valve between the fuel tank and the carburetor.

## 6. TRANSPORTING/STORAGE

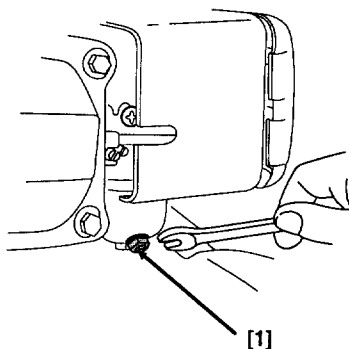
### *Draining the Fuel Tank and Carburetor:*

#### **⚠ WARNING**

Gasoline is highly flammable and explosive and you can be burned or seriously injured when handling fuel.

- Stop engine and keep heat, sparks, and flame away.
- Refuel only outdoors.
- Wipe up spills immediately.

1. Remove the carburetor drain bolt [1]. Drain the carburetor bowl into an approved container.
2. Move the throttle lever to the fast position to open the fuel valve.
3. After draining, install the drain bolt.



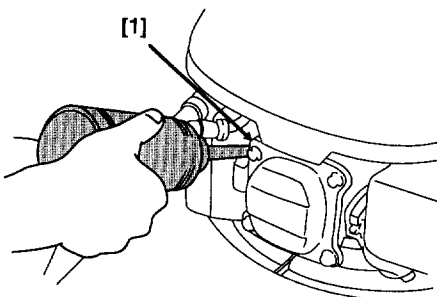
### **Engine Oil**

Change the engine oil (page 39).

### **Engine Cylinder**

If the mower is to be stored for more than 3 months; remove the spark plug (page 42). Pour 5 ~ 10 cc of clean engine oil into the cylinder [1]. Pull the starter rope several times to distribute the oil in the cylinder. Reinstall the spark plug.

Pull the starter rope slowly until resistance is felt then return the starter grip gently. This will close the valves so moisture can not enter the engine cylinder.



## 6. TRANSPORTING/STORAGE

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### PLACING IN STORAGE

If your mower will be stored with gasoline in the fuel tank and carburetor, it is important to reduce the hazard of gasoline vapor ignition. Select a well-ventilated storage area away from any appliance that operates with a flame, such as a furnace, water heater, or clothes dryer. Also avoid any area with a spark-producing electric motor, or where power tools are operated.

If possible, avoid storage areas with high humidity, because that promotes rust and corrosion.

Unless all fuel has been drained from the fuel tank, leave the throttle lever in the STOP position to close the fuel valve and reduce the possibility of fuel leakage.

Place the mower with its wheels on a level surface. Tilting can cause fuel or oil leakage.

The handlebar can be folded for compact storage (page 30).

With the engine and exhaust system cool, cover the mower to keep out dust. A hot engine and exhaust system can ignite or melt some materials. Do not use sheet plastic as a dust cover. A nonporous cover will trap moisture around the mower, promoting rust and corrosion.

### REMOVING FROM STORAGE

Check your mower as described in the PRE-OPERATION CHECKS chapter of this manual.

If the fuel was drained during storage preparation, fill the tank with fresh gasoline. If you keep a container of gasoline for refueling, be sure that it contains only fresh gasoline. Gasoline oxidizes and deteriorates over time, causing hard starting.

If the cylinder was coated with oil during storage preparation, the engine will smoke briefly at startup. This is normal.

# 7. MAINTENANCE

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## THE IMPORTANCE OF MAINTENANCE

Good maintenance is essential for safe, economical, and trouble-free operation. It will also help reduce air pollution.

To help you properly care for your mower, the following pages include a maintenance schedule, routine inspection procedures, and simple maintenance procedures using basic hand tools. Other service tasks that are more difficult, or require special tools, are best handled by professionals and are normally performed by a Honda technician or other qualified mechanic.

The maintenance schedule applies to normal operating conditions. If you operate your mower under unusual conditions, consult an authorized Honda dealer for recommendations applicable to your individual needs and use.

### **WARNING**

Improper maintenance, or failure to correct a problem before operation, can cause a malfunction in which you can be seriously hurt or killed.

Always follow the inspection and maintenance recommendations and schedules in this owner's manual.

### MAINTENANCE SAFETY

Some of the most important safety precautions follow. However, we cannot warn you of every conceivable hazard that can arise in performing maintenance. Only you can decide whether or not you should perform a given task.

#### **WARNING**

Failure to properly follow maintenance instructions and precautions can cause you to be seriously hurt or killed.

Always follow the procedures and precautions in this owner's manual.

### Safety Precautions

- Make sure the engine is off before you begin any maintenance or repairs. This will eliminate several potential hazards:
  - **Carbon monoxide poisoning from engine exhaust.**  
Be sure there is adequate ventilation whenever you operate the engine.
  - **Burns from hot parts.**  
Let the engine and exhaust system cool before touching.
  - **Injury from moving parts.**  
Do not run the engine unless instructed to do so.
- Read the instructions before you begin, and make sure you have the tools and skills required.
- To reduce the possibility of fire or explosion, be careful when working around gasoline. Use only a nonflammable solvent, not gasoline, to clean parts. Keep cigarettes, sparks, and flames away from all fuel-related parts.

Remember that your Honda dealer knows your mower best and is fully equipped to maintain and repair it.

To ensure the best quality and reliability, use only new, genuine Honda parts or their equivalents for repair and replacement.

# 7. MAINTENANCE

## MAINTENANCE SCHEDULE

REGULAR SERVICE PERIOD Perform at every indicated month or operating hour interval, whichever comes first.		Before Each Use	First month or 20 hrs	Every 3 months or 50 hrs	Every 6 months or 100 hrs	Every year or 300 hrs
Item						
Blade condition and blade bolt tightness	Check	O				
Grass bag	Check	O				
Engine oil	Check	O				
	Change		O		O	
Air Cleaner	Check	O				
	Clean-Replace			O(1)		
Spark plug	Clean-Adjust				O	
	Replace					O
Spark arrester (optional part)	Clean				O	
Idle speed	Check-Adjust					O(2)
Blade control mechanism	Check		O(2)		O(2)	
Blade control cable	Adjust		O		O	
Drive clutch cable	Adjust		O		O	
Shift cable (SXE)	Adjust		O		O	
Throttle cable	Adjust		O(2)		O(2)	
Valve clearance	Adjust					O(2)
Fuel tank	Clean					O(2)
Fuel line	Replace		Every 2 years (2)			

- (1) Service more frequently when used in dusty areas.
- (2) These items should be serviced by an authorized Honda dealer, unless you have the proper tools and are mechanically proficient. Refer to the Honda shop manual for service procedures.

## ENGINE MAINTENANCE

### Engine Oil Change

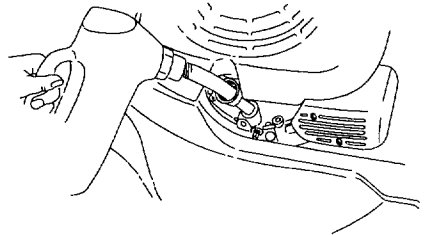
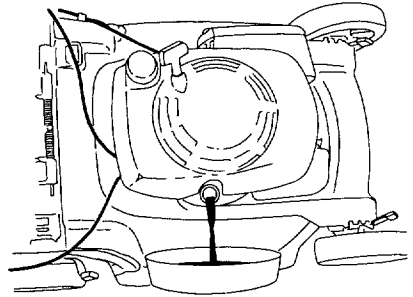
Drain the oil while the engine is warm. Warm oil drains quickly and completely.

1. Put the throttle lever in the STOP position to shut off the fuel valve. This will reduce the possibility of fuel leakage (page 8).
2. Wipe the oil filler area clean, then remove the oil filler cap/dipstick.
3. Place a suitable container next to the mower to catch the used oil, then tilt the mower on its right side. The used oil will drain through the filler neck. Allow the oil to drain completely.

Please dispose of used motor oil and the containers in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local recycling center or service station for reclamation. Do not throw it in the trash, pour it on the ground or down a drain.

4. Fill with the recommended oil (page 12). Do not overfill. Measure the oil level as shown on the following page.

Engine oil capacity:  
0.6 l





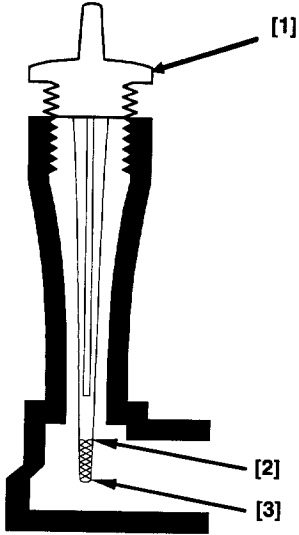
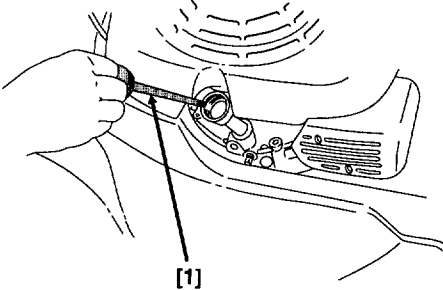
# 7. MAINTENANCE

5. After changing the engine oil, and before starting the engine, check the oil level with the mower on a level surface:
- a. Remove the fillercap/dipstick [1].
  - b. Wipe the dipstick [1] clean.
  - c. Insert and remove the dipstick [1] without screwing it into the filler neck. Check the oil level shown on the dipstick.
  - d. If the oil level is below the low level mark [3], add oil to reach the high limit mark [2] on the dipstick. Do not overfill. If the engine is overfilled, the excess oil may get transferred to the air cleaner housing and air cleaner elements.

**NOTICE**

Running the engine with a low oil level can cause engine damage.

- e. Screw in the filler cap/dipstick securely.

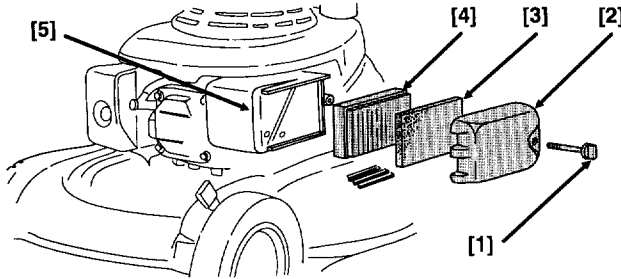


### Air Cleaner Service

Dirty air filters will restrict air flow to the carburetor, reducing engine performance. If you operate the mower in very dusty areas, clean the air filters more often than specified in the MAINTENANCE SCHEDULE.

#### NOTICE

Operating the engine without air filters, or damaged filters, will allow dirt to enter the engine, causing rapid engine wear. This type of damage is not covered by the Distributor's Limited Warranty.



1. Unscrew and remove the air cleaner cover screw [1], then remove the air cleaner cover [2].
2. Remove the paper filter [4] from the air cleaner housing [5]. Remove the foam filter [3] from the cover [2].
3. Inspect the filters, and replace them if damaged.
4. Clean the filters.

Paper filter [4]: Tap the filter several times on a hard surface to remove dirt, or blow compressed air [not exceeding 207 kPa through the filter from the inside. Never try to brush off dirt; brushing will force dirt into the fibers.

Foam filter [3]: Clean in warm soapy water, rinse, and allow to dry thoroughly. Or clean in nonflammable solvent and allow to dry.

5. Wipe dirt from the inside of the air cleaner housing and cover, using a moist rag. Be careful to prevent dirt from entering the air duct that leads to the carburetor.
6. Reinstall the filters and cover. Tighten the cover screw securely.

# 7. MAINTENANCE

## Spark Plug Service

Recommended spark plugs: NGK - BPR5ES  
NIPPON DENSO - W16EPR-U

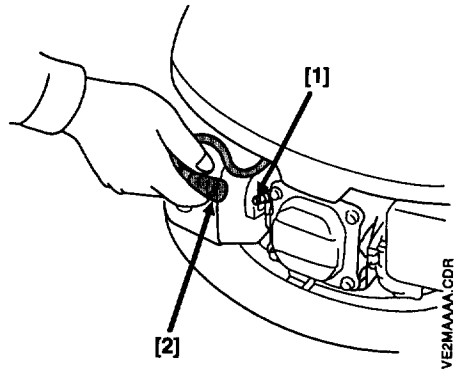
The spark plugs listed above have an internal resistor. Resistor spark plugs reduce interference with radio and TV reception.

### NOTICE

Incorrect spark plugs can cause engine damage.

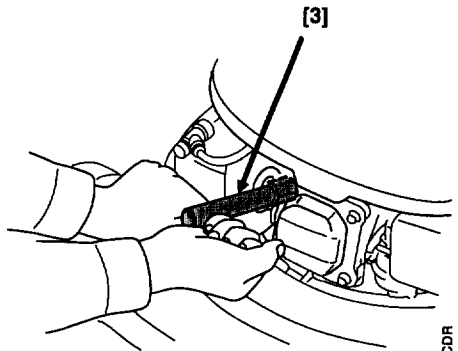
For good performance, the spark plug [1] must be properly gapped and free of deposits.

1. Disconnect the spark plug cap [2] and remove any dirt from around the spark plug area.



VE2MAAAA.CDR

2. Remove the spark plug [1] with a spark plug wrench [3].

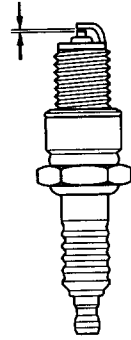


VE2MABAA.CDR

## 7. MAINTENANCE

3. Inspect the spark plug. Replace it if the electrodes are worn, or if the insulator is cracked or chipped. Clean the spark plug with a wire brush if you are going to reuse it.
4. Measure the spark plug electrode gap with a suitable gauge. The gap should be 0.7 ~ 0.8 mm. Correct the gap, if necessary, by carefully bending the side electrode.
5. Install the spark plug carefully, by hand, to avoid cross-threading.

0.7 ~ 0.8 mm



LM-AAKAA.CDR

6. After the spark plug seats, tighten with a spark plug wrench to compress the washer.

If reinstalling the old spark plug, tighten  $\frac{1}{8}$  to  $\frac{1}{4}$  turn after the spark plug seats.

If installing a new spark plug, tighten  $\frac{1}{2}$  turn after the spark plug seats to compress the washer.

### NOTICE

A loose spark plug can overheat and damage the engine. Overtightening the spark plug can damage the threads in the cylinder head.

7. Install the spark plug cap on the spark plug.

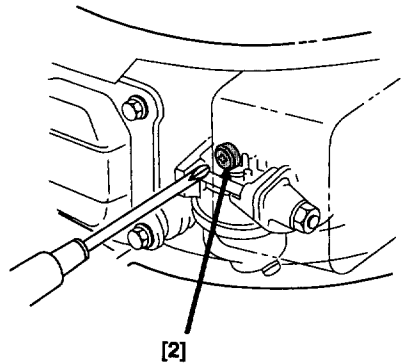
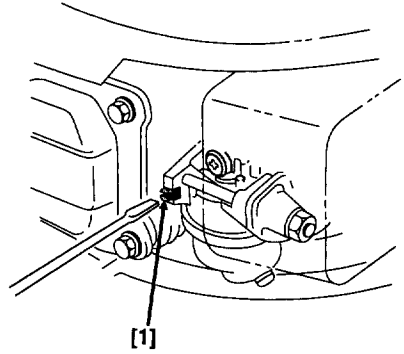
## 7. MAINTENANCE

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### Carburetor Adjustments

1. Start the engine outdoors, and allow it to warm up to normal operating temperature.
2. Set the throttle lever in the slow position.
3. Turn the pilot screw [1] in or out to the setting that produces the highest idle rpm. The correct setting will usually be approximately 2 turns out from the fully closed position.
4. After the pilot screw is correctly adjusted and the blade control is disengaged, turn the throttle stop screw [2] to obtain the standard idle speed.

Standard idle speed:  
2,100 ± 100 rpm



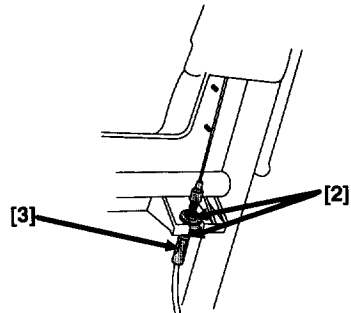
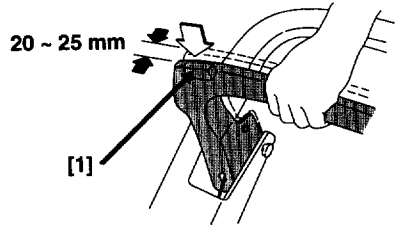
## CONTROL CABLE ADJUSTMENTS

### Blade Control Cable

Measure free play at the top of the blade control lever [1], while holding the button down. Free play should be 20 ~ 25 mm. If adjustment is necessary:

1. Loosen the locknuts [2] with a 10 mm wrench, and move the adjuster [3] up or down as required.
2. Tighten the locknuts and recheck free play.
3. Start the engine outdoors, and operate the blade control lever. Check that the blade starts when you pull back the lever and stops quickly when you release the lever.

If the blade does not start or stop as it should, with correct cable adjustment, take the mower to an authorized Honda dealer for repair.

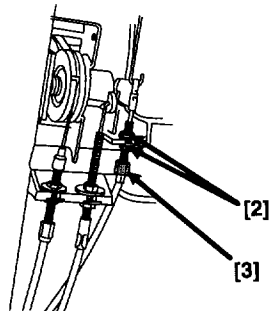
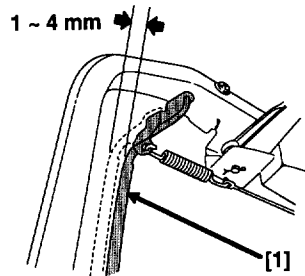


### Drive Clutch Cable (SXE)

Measure free play at the top of the drive clutch lever [1]. Free play should be 1 ~ 4 mm. If adjustment is necessary:

1. Loosen the locknuts [1] with a 10 mm wrench, and move the adjuster [3] up or down as required.
2. Tighten the locknuts [2] and recheck free play.
3. Start the engine outdoors, and operate the drive clutch lever. Check that the drive clutch engages and releases properly.

If the drive clutch does not operate as it should, with correct cable adjustment, take the mower to an authorized Honda dealer for repair.



# 7. MAINTENANCE

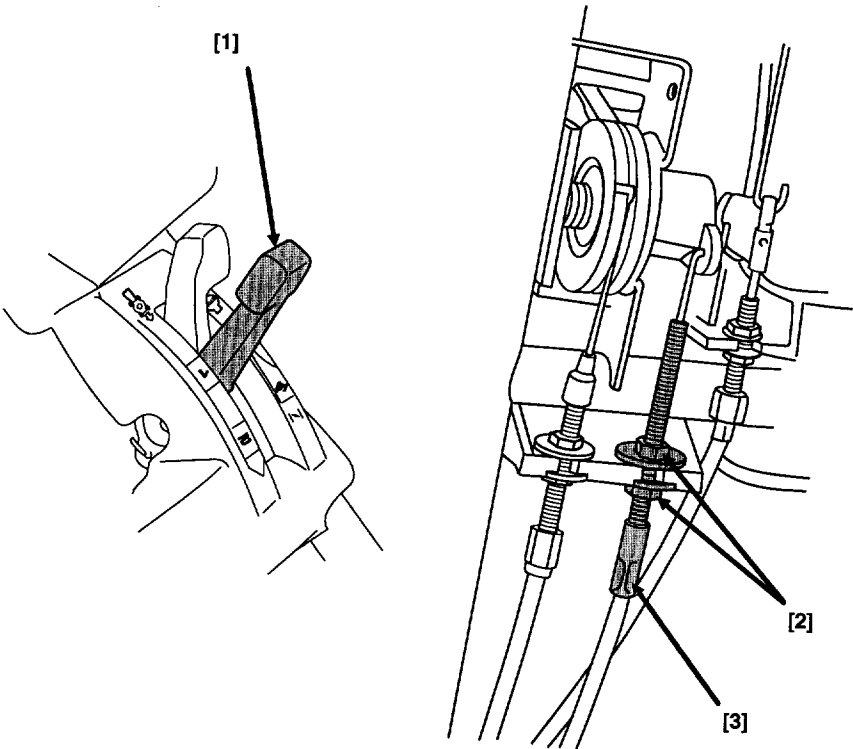
## Shift Cable Adjustment (SXE)

Shift cable adjustment is necessary if the shift lever [1] does not operate smoothly or does not shift properly into a gear.

With the transmission in 1st gear, pull the gear shift lever all the way back and release it; the lever should be approximately centered on the number "1" on the lever cover. If adjustment is necessary:

1. Loosen the locknuts [2] with a 10 mm wrench, and move the adjuster [3] up or down as required.
2. Tighten the locknuts and recheck lever alignment.
3. Start the engine outdoors, and operate the shift lever (release the drive clutch lever before moving the shift lever). Check that the transmission shifts properly, and that the lever is approximately aligned with the numbers beside it.

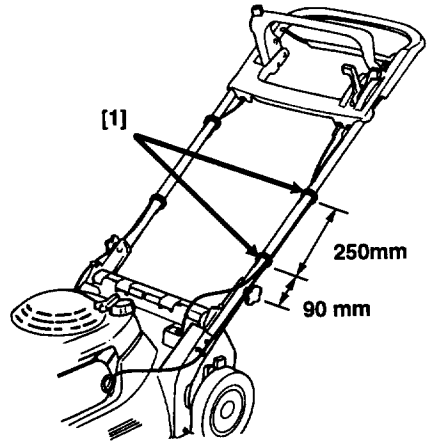
If the transmission does not shift as it should with correct cable adjustment, take the mower to an authorized Honda dealer for repair.



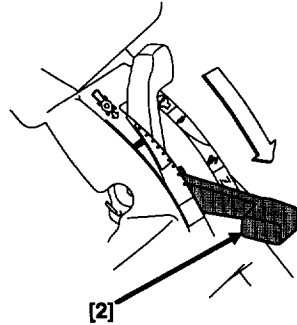
## 7. MAINTENANCE

### Drive Clutch Cable Adjustment (HXE)

1. Position the control cable bands [1] as shown.

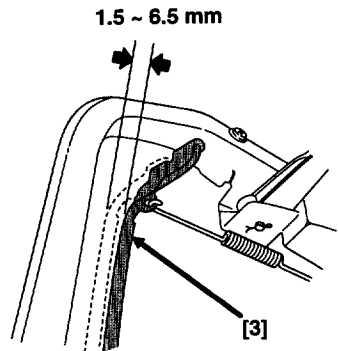


2. Move the shift lever [2] to the fastest position.



3. Measure the free play at the top of the lever.

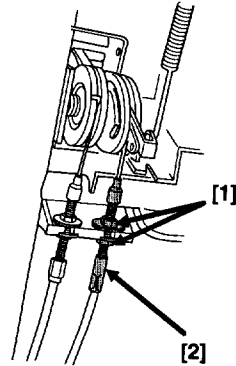
Free play:  
1.5 ~ 6.5 mm





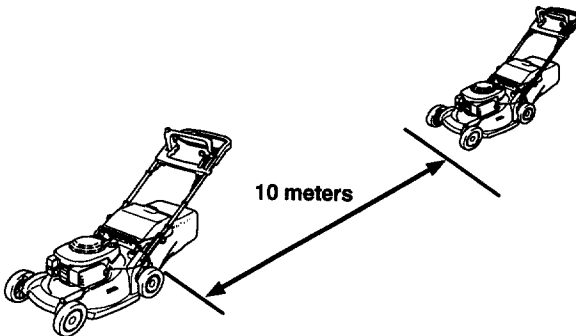
## 7. MAINTENANCE

4. If adjustment is necessary, loosen the drive clutch cable locknuts [1] with a 10 mm wrench. Move the adjuster [2] up or down to obtain the correct free play. Tighten the lock nuts.



5. After you set the free play adjustment, it is necessary to check the ground speed of the mower.
  - a. Measure 10 meters on a level, hard surface and mark this distance with tape.
  - b. Start the mower. With the shift lever in the fastest position and the throttle in the fast position, put the mower several feet behind the first line and engage the clutch lever.
  - c. Use a stop watch and begin timing as the rear wheels cross the first line.
  - d. Stop the watch as the rear wheels cross the second line.

Ground Speed elapsed time: 6.7 ~ 7.7 seconds



If the mower will not achieve maximum ground speed, recheck cable free play and ground speed. If the mower still will not achieve maximum ground speed, take the mower to an authorized Honda dealer.

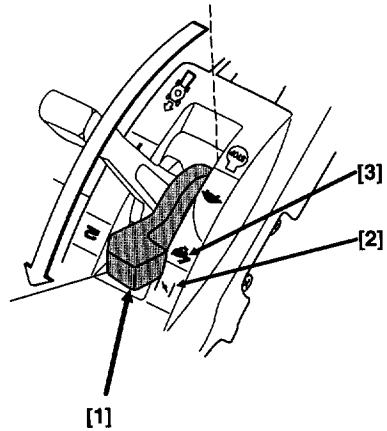
## THROTTLE CABLE INSPECTION

Throttle cable adjustment is necessary if the throttle lever does not operate the choke properly.

You can inspect choke operation by observing the movement of the choke arm, which is located on top of the carburetor.

1. Move the throttle lever [1] to the choke position [2]. The choke arm [4] should move counterclockwise, until it contacts the stop post on the carburetor.

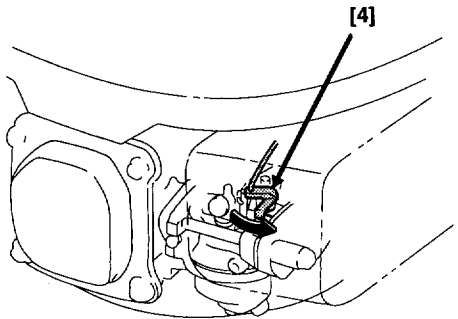
Push the choke arm [4] with your finger to verify that it has moved as far as it will go.



2. Move the throttle lever [1] to the fast position [3]. The choke arm [4] should move clockwise, until it contacts the stop post on the carburetor.

Push the choke arm [4] with your finger to verify that it has moved as far as it will go.

3. If the choke arm [4] does not move all the way to its stop, in either direction, take the mower to an authorized Honda dealer. Throttle cable adjustment involves related control plate adjustments.



# 7. MAINTENANCE

## BLADE REMOVAL AND INSTALLATION

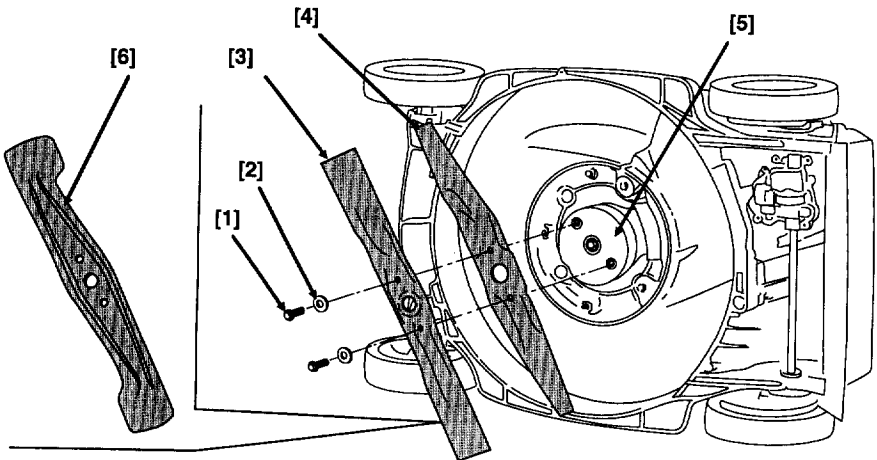
If you remove the blade(s) for sharpening or replacement, you will need a torque wrench for installation. Wear heavy gloves to protect your hands.

**BLADE SHARPENING:** To avoid weakening the blade(s), or causing imbalance or poor cutting, the blade(s) should be sharpened by trained staff at an authorized Hona dealer.

**BLADE REPLACEMENT:** Use genuine Honda replacement blades or their equivalent.

### Blade Removal

1. Put the throttle lever in the STOP position to close the fuel valve. Disconnect the spark plug cap, then tilt the mower to the right side, so the carburetor side is up. This will help to prevent fuel leakage and hard starting due to carburetor flooding.
2. Use a 14 mm socket wrench and remove the two blade bolts [1] and special washers [2] from the blade control assembly [5]. Use a wooden block to prevent the blade(s) from turning when removing the bolts.
3. Remove the HRM535 upper mulching blade [4] and lower mulching blade [3] or the HRB535 high-lift blade [6].



## Blade Installation

1. Clean dirt and grass from around the blade mounting area.
2. Install the blade(s) [1] using the two blade bolts [2] and special washers [3] as shown.

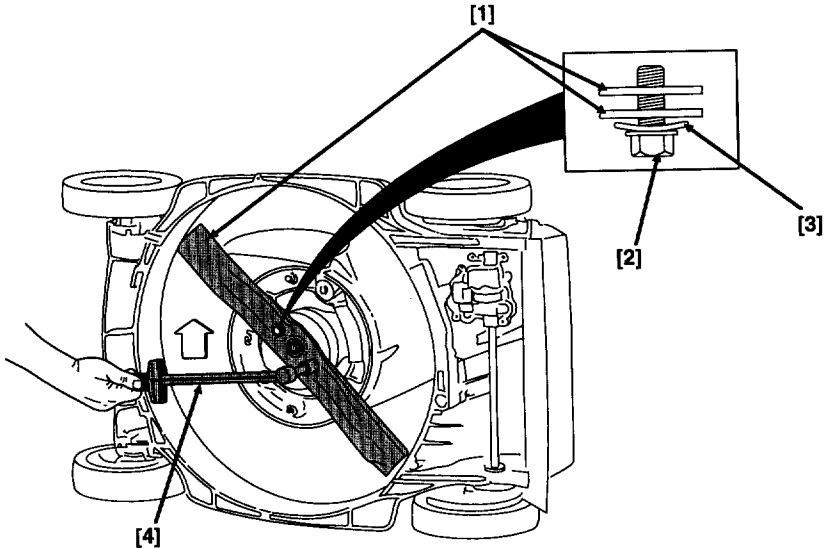
Be sure to install the special washers [3] with the concave side toward the blade(s) and the convex side toward the head of the bolts.

The blade bolts [2] are specially designed for this application and must not be replaced with other bolts.

3. Tighten the blade bolts [2] with a torque wrench [4]. Use a wooden block to prevent the blade(s) [1] from turning.

**Blade bolt torque:** 49 ~ 59 N·m

If you do not have a torque wrench, have an authorized Honda dealer tighten the blade bolts before you use the mower. If the blade bolts are overtightened, they could break. If the blade bolts are not tightened enough, they could loosen or come out. In either case, it would be possible for the blade(s) to fly off while you are operating the mower.



# 7. MAINTENANCE

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## GRASS BAG CLEANING AND REPLACEMENT (HRB535)

### Grass Bag Cleaning

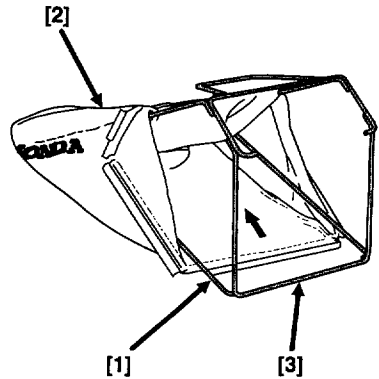
Wash the bag with a garden hose, and allow it to dry completely before use; a wet bag will clog quickly.

### Grass Bag Replacement

Replace a worn or damaged bag with a Honda replacement bag or its equivalent.

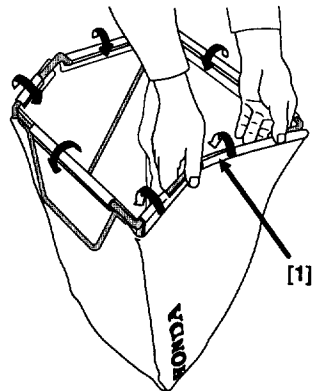
### Bag Removal

1. Unclip the plastic edges [1] of the bag [2] from the frame [3].
2. Remove the bag [2] from the frame [3].



### Bag Installation

1. Insert the bag frame [3] into the bag [2], as shown above.
2. Clip the plastic edges [1] of the bag [2] onto the frame [3].

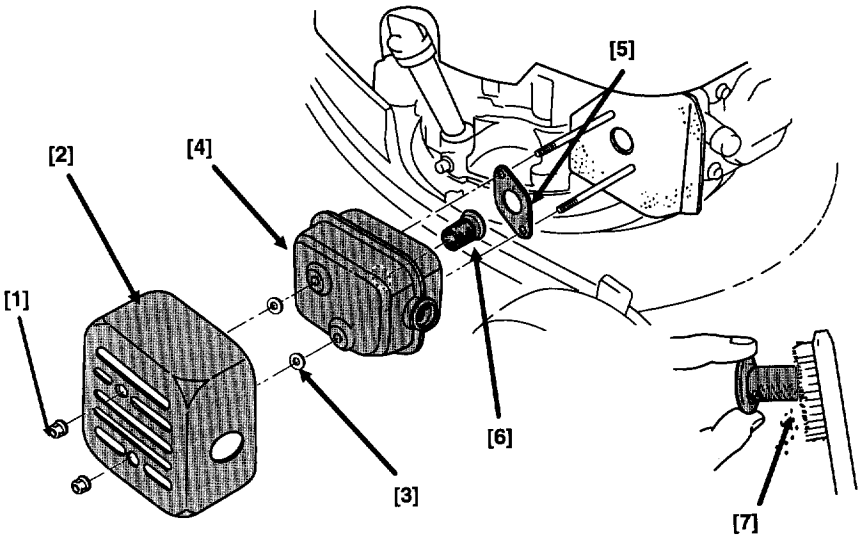


### SPARK ARRESTER SERVICE (OPTIONAL PART)

The engine in your lawn mower 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. A spark arrester is available from your servicing dealer.

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

1. Allow the engine to cool, then remove the two nuts [1] from the muffler shield [2], using a 10 mm socket wrench.
2. Remove the muffler shield [2], washers [3], muffler [4], and gasket [5].
3. Remove the spark arrester [6] from the muffler [4].
4. Check for carbon deposits on the spark arrester [6] and the exhaust port. Brush carbon deposits away. Be careful to avoid damaging the spark arrester screen [7].
5. Install the spark arrester in the muffler.
6. Install the muffler components on the engine, and tighten the two nuts securely.



## 8. TROUBLESHOOTING

### ENGINE PROBLEMS

Engine Will Not Start	Possible Cause	Correction
1. Check throttle lever position.	Throttle lever in wrong position.	Move throttle lever to choke position, unless the engine is warm (p. 19).
2. Check fuel.	Out of fuel.  Bad fuel; mower stored without treating or draining gasoline, or refueled with bad gasoline.	Refuel (p. 13).  Drain fuel tank and carburetor (p. 34). Refuel with fresh gasoline (p. 13).
3. Remove and inspect spark plug.	Spark plug faulty, fouled, or improperly gapped.  Spark plug wet with fuel (flooded engine).	Clean, gap, or replace spark plug (p. 42).  Dry and reinstall spark plug. Start engine with throttle lever in fast position. (p. 20)
4. Take mower to a Honda dealer, or refer to shop manual.	Fuel filter clogged, carburetor malfunction, ignition malfunction, valves stuck, etc.	Replace or repair faulty components as necessary.

Loss of Power	Possible Cause	Correction
1. Check throttle position.	Throttle not set to fast position.	Move throttle to fast (p. 8).
2. Check grass height.	Grass too tall to cut.	Raise cutting height (p. 18)., cut narrower swath (p. 27), or cut more frequently.
3. Check under mower deck.	Mower deck clogged.	Clean out mower deck (p. 28).
4. Check air filters.	Air filters clogged.	Clean or replace air filters (p. 41).
5. Check fuel.	Bad fuel; mower stored without treating or draining gasoline, or refueled with bad gasoline.	Drain fuel tank and carburetor (p. 34). Refuel with fresh gasoline (p. 13).
6. Take mower to a Honda dealer, or refer to shop manual.	Fuel filter clogged, carburetor malfunction, ignition malfunction, valves stuck, etc.	Replace or repair faulty components.

## 8. TROUBLESHOOTING

### VIBRATION PROBLEMS

<b>Excessive Vibration</b>	<b>Possible Cause</b>	<b>Correction</b>
1. Check mower deck and blade(s).	Grass and debris lodged under mower deck.  Blade(s) loose, bent, damaged, or unbalanced by improper sharpening.	Clean out mower deck (p. 28).  Tighten loose blade bolts. Replace damaged blade(s) (p. 50- 51).
2. Take mower to a Honda dealer.	Mechanical damage, such as a bent crankshaft.	Replace or repair faulty components.

### MOWING AND BAGGING PROBLEMS

<b>Poor Cut Quality or Poor Mowing/Bagging Performance</b>	<b>Possible Cause</b>	<b>Correction</b>
1. Check that the throttle lever is in the fast position.	Engine speed is too slow to cut well.	Move throttle lever to the fast position (p. 8).
2. Reduce forward speed.	Mower is moving too fast for lawn conditions.	Shift to slow speed (p. 23), or push slower.
3. Check cutting height adjustment levers.	Adjustment levers set at different positions.	Set all levers to the same cutting height position (p. 18).
4. Check grass bag (if equipped).	Grass bag overfilled or clogged.	Empty grass bag. Wash grass bag if clogged with dirt (p. 52).
5. Check mower deck and blade(s).	Mower deck clogged.  Blade(s) dull, worn, or damaged.  Wrong blade(s) installed.	Clean out the mower deck (p. 28).  Sharpen or replace blade(s) (p. 50 - 51).  Install correct blade(s) (p. 50 - 51).



# 9. SPECIFICATIONS

MODEL	HRB535K2	
TYPES	SXE	HXE
DESCRIPTION CODE	MZBA	
<b>GENERAL</b>		
Dimensions L x W x H	1575 x 590 x 960 mm (cut height adj. @ 19 mm)	
Handlebar height H, M, L, F	1,040 mm, 985 mm, 925 mm, 483 mm (folded)	
Dry weight	42.5 kg	43.5 kg
Tread (front/rear)	485/512 mm	
Wheel diameter	204 mm	
Cut width	530 mm	
Cut height adjustments	19 mm, 25 mm, 38 mm, 51 mm, 64 mm, 77 mm	
Grass bag capacity	83 ℓ	
Sound pressure level at operator's ears (According to EEC/81/1051 Directive)	87 dBa	
Sound power level (According to EEC/84/538 & EEC/87/252 Directives)	98 dBa	
Vibration test (According to project EN1033/1993, ENV25349/1993, ENV28041/1993, ISO5347/1987 & ISO5348/1987)	1.73 m/s <sup>2</sup>	
<b>ENGINE</b>		
Model	GXV140K1	
Type	4-stroke, single cylinder, vertical shaft, OHV	
Displacement	135 cc	
Bore and stroke	64 x 42 mm	
Cooling	Forced air	
Lubrication	Splash and spray	
Compression ratio	8:1	
Maximum horsepower	3.7 kW @ 3,600 rpm	
Maximum torque	10.3 N·m @ 2,700 rpm	
Maximum speed	3000 <sup>-∞</sup> rpm	
Idle speed	2,100 ± 150 rpm	
Ignition system	Transistorized magneto	
Spark plug	NGK: BPR5ES NIPPON DENSO: W16EPR-U	
Spark plug gap	0.7 ~ 0.8 mm	
Air cleaner	Dry, dual element type	
Recommended fuel	86 octane rating or higher (unleaded preferred)	
Fuel tank capacity	1.0 ℓ	
Fuel consumption	0.55 ℓ/h (average load)	
Full tank running time	1.8 h (average load)	
Recommended oil	SAE 10W-30, API SF, SG, or equivalent	
Engine oil capacity	0.6 ℓ	

## 9. SPECIFICATIONS

<b>MODEL</b>	HRB535K2	
<b>TYPES</b>	SXE	HXE
<b>DESCRIPTION CODE</b>	MZBA	
<b>DRIVE</b>		
Type	2 speed, manual shift	Hydrostatic
Engine to transmission	V-belt	
Main clutch	Dog type	Fluid type
Mower speed (engine @ 3,000 rpm)	1st. gear: 2.9 km/h 2nd. gear: 4.7 km/h	0 ~ 5.0 km/h
Recommended fluid	Grease	Honda hydrostatic

# 9. SPECIFICATIONS

MODEL	HRM535K2	
TYPES	SXE	HXE
DESCRIPTION CODE	MZBB	
<b>GENERAL</b>		
Dimensions L x W x H	1575 x 590 x 950 mm (cut height adj. @ 25 mm)	
Handlebar height H, M, L, F	1,040 mm, 985 mm, 925 mm, 483 mm (folded)	
Dry weight	42.5 kg	43.5 kg
Tread (front/rear)	485/512 mm	
Wheel diameter	204 mm	
Cut width	530 mm	
Cut height adjustments	25 mm, 38 mm, 51 mm, 64 mm, 77 mm, 90 mm	
Sound pressure level at operator's ears (According to EEC/81/1051 Directive)	81 dBa	
Sound power level (According to EEC/84/538 & EEC/87/252 Directives)	95 dBa	
Vibration test (According to project EN1033/1993, ENV25349/1993, ENV28041/1993, ISO5347/1987 & ISO5348/1987)	1.73 m/s <sup>2</sup>	
<b>ENGINE</b>		
Model	GXV140K1	
Type	4-stroke, single cylinder, vertical shaft, OHV	
Displacement	135 cc	
Bore and stroke	64 x 42 mm	
Cooling	Forced air	
Lubrication	Splash and spray	
Compression ratio	8:1	
Maximum horsepower	3.7 kW @ 3,600 rpm	
Maximum torque	10.3 N·m @ 2,700 rpm	
Maximum speed	3000 $\pm$ ∞ rpm	
Idle speed	2,100 ± 150 rpm	
Ignition system	Transistorized magneto	
Spark plug	NGK: BPR5ES NIPPON DENSO: W16EPR-U	
Spark plug gap	0.7 ~ 0.8 mm	
Air cleaner	Dry, dual element type	
Recommended fuel	86 octane rating or higher (unleaded preferred)	
Fuel tank capacity	1.0 ℓ	
Fuel consumption	0.55 ℓ/h (average load)	
Full tank running time	1.8 h (average load)	
Recommended oil	SAE 10W-30, API SF, SG, or equivalent	
Engine oil capacity	0.6 ℓ	

## 9. SPECIFICATIONS

<b>MODEL</b>	HRM535K2	
<b>TYPES</b>	SXE	HXE
<b>DESCRIPTION CODE</b>	MZBB	
<b>DRIVE</b>		
Type	2 speed, manual shift	Hydrostatic
Engine to transmission	V-belt	
Main clutch	Dog type	Fluid type
Mower speed (engine @ 3,000 rpm)	1st. gear: 2.9 km/h 2nd.gear: 4.7km/h	0 ~ 5.0 km/h
Recommended fluid	Grease	Honda hydrostatic

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