

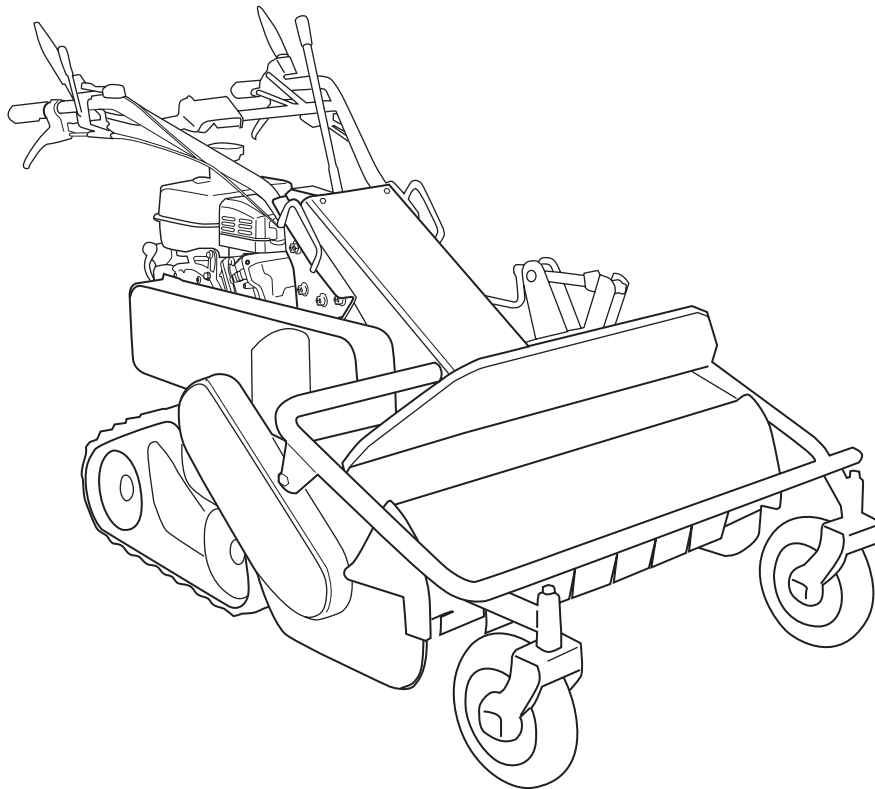
Front Flail Brushcutter

# CG 101

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## Operator's Manual

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### **⚠ WARNING!**

Read this manual completely before operating or maintaining this machine. Failure to follow safety precautions could result in serious injury or death. Keep this manual for future reference by you and by all those who operate and maintain this machine.

5509 5501 000

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Authorized Dealer

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## Notice to Users and Maintenance Personnel

Thank you for purchasing this machine.

This manual provides information needed for safe and effective use of this machine to those who operate or maintain machine. Make sure to read and understand the manual thoroughly before operating this product. Also make sure to read the separate operator's manual for engine.

### **⚠ WARNING!**

- **This machine can be very dangerous if the safety precautions in this manual and on the labels attached to this machine are not followed. Read and understand this manual and safety labels on machine thoroughly before using this machine. Always follow the instructions and safety precautions, or serious injury or death could result.**
- **This machine should only be used for its intended purpose: cutting grass and bushes. Any other use could be dangerous.**
- **This machine may not be operated on public road or what is considered to be public road. It is the sole responsibility of the operator to consult the local regulations.**
- **Do not modify this machine, or do not operate this machine with the safety covers removed or open. A serious accident could result.**

### **⚠ CAUTION!**

- **Store this manual in a safe, accessible place for easy reference.**
-

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## Notice to Owner

### CAUTION!

- Be sure that everyone who uses this machine, including those who rent or lease this machine, receives a copy of this Operator's Manual and understands the importance of reading and following the information in this manual.

## Warning Terms Used in this Manual

In this manual, the following four warning terms are used to signal the four levels of hazard (or seriousness of possible accidents). Read and understand what they mean and always follow the instructions in this manual.

Warning Term	Definition
 <b>DANGER!</b>	Indicates an imminently hazardous situation which will result in death or serious injury if the user does not follow the procedures or the instructions.
 <b>WARNING!</b>	Indicates a potentially hazardous situation which could result in death or serious injury if the user does not follow the procedures or the instructions.
 <b>CAUTION!</b>	Indicates a potentially hazardous situation which could result in minor to moderate injury or damage to the machine if the user does not follow the procedures or the instructions.
<u>NOTE</u>	Indicates important information which needs particular attention.

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# Warranty and After-Sales Service

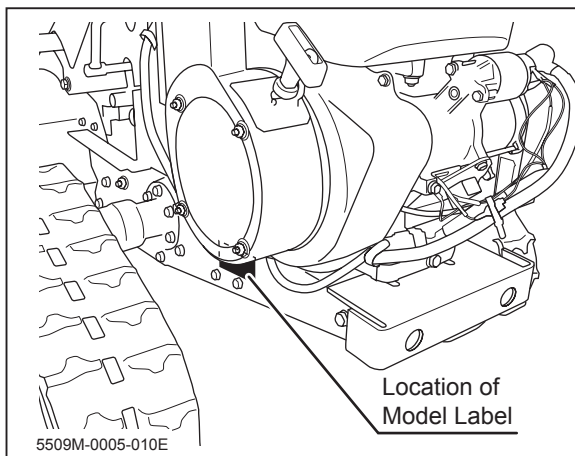
## Warranty

CHIKUSUI CANYCOM, INC. guarantees this product, based on the terms of warranty. A copy of this warranty is reproduced in the back of this manual.

## After-Sales Service

Consult your local CANYCOM dealer or our company's sales department regarding service orders or any questions or problems that may arise when using this machine. Please make sure to have the product name, serial number, and the make and type of engine handy at the time of contact. The model and serial number can be found on the model label as shown below, and the make and type of the engine can be found in Chapter 3 "**Specifications**" of this manual (Page13).

### Location of Model Label



### Model Label



## Availability of Spare Parts

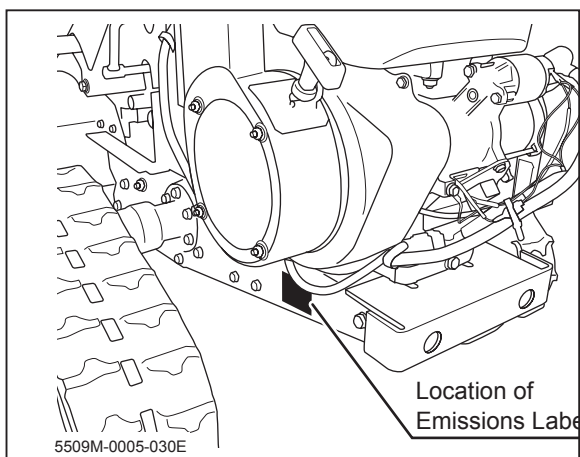
The replacement or repair parts for this product shall remain available for seven years after the production of this type of machine is discontinued.

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## Emission Control Information

This product meets the applicable emissions and evaporative regulations as required by the United States Environmental Protection Agency or the California Air Resources Board. The relevant information is provided in the label shown below.

Location of Emissions Label



Emissions Label



The following information is for the CG101 Model-Year 2012, and is subject to change every Model-year.

Equipment (Machine) Model	-----	CG101
Equipment Family Number	-----	CCKUPNHEQCG1
Equipment EPA Certification Number	-----	CCKUPNHEQCG1-003
Engine Model	-----	Subaru EX27
Engine Family Number	-----	CFJXS.2652GW (2012MY) BFJXS.2652GW (2011MY)
Engine EPA Emissions Certificate Number	-----	CFJXS.2652GW-003 (2012MY) BFJXS.2652GW-004 (2011MY)

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## **Warranty**

Warranty Certificate is attached at the end of this manual.

\* Have the warranty certificate signed after you have received and fully understood the instructions for handling this machine and received the receipt.

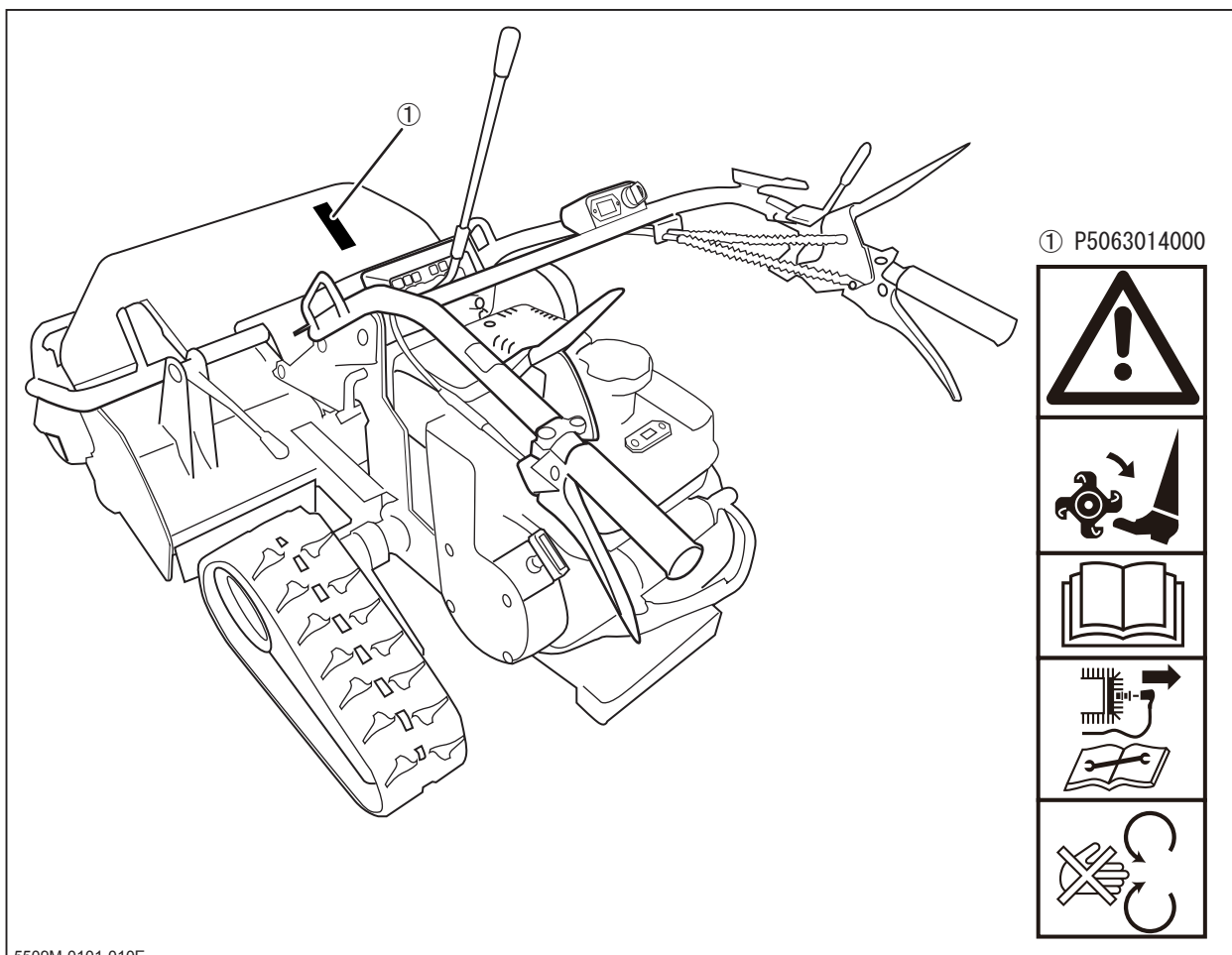
## **Appendix**

- Operator's Manual for the Engine
  - \* Be sure to read and understand it together with this manual .
-

## Safety Labels

The safety labels shown on the next page are attached to the machine. See the illustration below for the location and the illustration on the next page for the content of each label on the machine.

- **Locate all the warning labels attached to this machine. Read and follow the instructions and precautions in them. Failure to do so could result in serious injury or death to the operator or bystanders.**
- **Keep the labels clean and legible. Do not use solvents or gasoline to clean the labels.**
- **Replace these labels immediately if they have been removed, have fallen off or become illegible. Use the part number, on the label or shown in this manual, to order a replacement label from your CANYCOM representative.**
- **Do not dash high pressure water on safety labels when washing machine.**



## Safety Mechanisms

This product is equipped with the following safety mechanisms.

### Start Interlock Mechanism

Engine can be started only when drive clutch lever is in [OFF (disengaged)] position. This is to prevent unintended movement of machine or cutting blade when starting engine.

### Start Interlock Mechanism

Engine can be stopped only pressing stop switch which is interlocked with start switch.

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## Safety Precautions

This section contains safety precautions to follow when operating and maintaining the machine. Read and understand the precautions in this section as well as throughout this manual and follow them when operating or maintaining the machine. Failure to follow safety precautions could result in property damage, serious injury or death to the operator or bystanders.

## Training

All operators and mechanics should receive practical instructions from their employer or renter. Such instructions should cover the following issues:

- **It is essential to familiarize yourself with the controls, safety labels and the proper use of the machine.**
- **Never allow people unfamiliar with these instructions to operate or service the machine. Do not let anyone under 18 years of age to operate this machine. Local regulations may restrict the minimum age for operating the machine. Consult your local authority.**
- **The operator is responsible for the accidents or hazards caused to other people or their property.**
- **This machine cannot carry a person. Do not ride.**
- **Always keep in mind that care and concentration is required when working with ride-on machines.**
- **Loss of control on a slope cannot be regained by the application of the brake. The main reasons for loss of control are:**
  - **insufficient grip of tires.**
  - **excessive speed.**
  - **misjudging of the ground conditions, especially slopes.**

## Preparation

### **⚠ WARNING!**

- Fuel is highly flammable. See Checking and Filling Fuel, page 15, for important safety information on handling fuel.
- Always wear protective footwear, long trousers, hardhat, safety glasses and ear protection when operating or servicing the machine. Proper clothing will minimize the chance of injury. Do not operate the equipment if you have long hair, loose clothing, or jewelry; all of which may get tangled in moving parts. Do not operate the machine barefoot or with open sandals.
- Prepare beforehand the working rules and procedures such as signaling and traffic control for the work place. Following such rules will reduce the risk of accidents.
- Never handle fuel or grease, service the engine, or recharge the battery in the presence of fire or spark.
- Perform the daily pre-startup inspection (see Preparation, page 15) before starting the machine. Repair or replace damaged parts before starting the machine.
- Do not operate machine if any safety cover is removed or any damage found. It is extremely dangerous.

## Operation

This machine is intended for cutting grass and bushes. Any other use may pose hazard or cause damage to the machine.

The stability of the machine is affected by the speed, rate of steering, terrain and the operator's weight. Always pay close attention to these factors or a loss of control or tip over could occur, resulting in property damage, serious injury or death.

### General Driving

- **Do not operate the engine in a confined space where dangerous carbon monoxide fumes can accumulate.**
- **Do not touch the engine, muffler exhaust pipe or any moving part while the engine is running or soon after it has stopped. These areas will be very hot and can cause burns.**
- **Do not operate the machine under the influence of alcohol or drugs. Do not operate the machine when you are tired, ill, or not feeling well. Do not allow pregnant female or underskilled person such as children. It may result in unintended accident.**
- **Always check for obstacles before operating on new terrain. This includes overhead obstacles such as the branches of a tree.**
- **Before starting the engine and moving the machine, scan around your surroundings and make sure all persons and other vehicles are a safe distance away from the machine.**
- **On a slippery surface, travel slowly and exercise caution to reduce the chance of skidding or sliding out of control. Never operate on ice.**
- **Always make certain that there is no obstacle or a person behind the machine when backing up. After confirming that it is safe to back up, move slowly and avoid sharp turns.**
- **To reduce the risk of tip over, pay special attention when encountering an obstacle or a slope, or when braking on a slope or during a turn. See Driving on a Slope on page 8.**

- **Never attempt to drive over a large obstacle such as rock or fallen tree.**
- **Always travel slowly and use extra caution when operating on unfamiliar terrain. Be alert when traveling on changing terrain.**
- **Never operate on terrain that you are not comfortable with. Avoid terrain that is so rough, slippery or loose that you feel like you could tip over.**
- **Do not operate the machine near the edge of a cliff, an overhang, a river or a slide area. Pay special attention after heavy rain or earthquake.**
- **Do not make sudden maneuvers. A sudden start, stop, or turn can make the machine lose control and could cause a tip over. Be especially cautious when traveling on soft or wet ground.**
- **Drive at a safe speed, taking into account the surface gradient, surface conditions and load.**
- **This machine is only allowed to operate in agricultural fields. Never operate on a public road.**
- **Do not look aside while operating or drive with abnormal posture. Always check for travelling direction and safety of surroundings.**
- **Cautions when Crossing Ridges or Ditches. Always use the loading ramps to cross a ridge or a ditch. Bridge ramps perpendicularly to the ridge or ditch and drive machine slowly over them. Neglecting this is very dangerous as it can result in falling or tipping over.**
- **Never use this machine at night. Always drive at reduced speed in the twilight.**



## Driving on a Slope

### **⚠️ WARNING!**

- Never use on a slope steeper than 15 degrees.
  - Driving on a slope can be dangerous. It can result in a tip over and cause serious injury or death. Take the following precautions.
- Always follow proper procedures for driving on a slope as described in this manual.
  - Driving on a slope in a wrong manner can cause a loss of control or a vehicle tip over. Check the terrain carefully before attempting to drive on a slope.
  - Never drive on a slope that you are not comfortable with. Avoid a slope that is so rough, slippery, or loose that you feel like you could tip over.
  - When driving up a slope, proceed at a steady rate of speed and throttle position.
  - Never move the throttle lever or the handle lever suddenly.
  - If the engine stalls or loses traction during a climb and cannot make it to the top of the slope, do not try to turn the machine around. Carefully back down slowly, straight down the slope.
  - Drive straight up or down slopes. Avoid turning on a slope.
  - When going over the top of a slope, go slow; an obstacle, a sharp drop, or another vehicle or person could be on the other side of the crest.
  - Avoid driving the machine across a slope.
  - Before driving down a slope, stop and shift transmission to [1] position. Drive slowly. Use the engine speed to help keep the machine speed low.

## Cutting

When conducting cutting operation, take the following precautions.

- Always follow the proper procedures for cutting as described in this manual.
- Shutt off the work site. Post signs to inform of the cutting operation. Close off the site with rope if necessary to keep people, especially children, off the work site.
- Pay attention to the surrounding area. Rotating cutting blade throws stones, rocks and debris. This may cause property damage, injury, or death.
- Drive forward when cutting. This best prevents the cutting blades from throwing stones, rocks, or debris.
- Pay attention to obstacles. This includes overhead obstacles such as the branches of a tree.

## Parking

- Park the machine on a flat, level and stable surface. Never park on a slope steeper than 10 degrees. Avoid parking on a slope less than 10 degrees. If parking on a slope less than 10 degrees is absolutely unavoidable, apply the parking brake and block the tracks at the lower end of the machine.
  - Park the machine facing uphill
  - Do not park sideways on a slope.
- Never park on an instable surface. Do not park near the edge of a cliff.
- Observe all the previous precautions for driving, driving on a slope, loading and driving with a load, and dumping.
- Whenever you park the machine, disengage drive clutch lever and stop the engine. Remove the key whenever you leave the machine unattended to prevent unauthorized use or accidental starting.
- Gasoline is extremely flammable and can be explosive. When parking the machine indoors, make certain that the building is well ventilated and that the machine is not close to any source of flame or spark, including appliances with pilot lights.
- Never park on flammable material such as dried grass or straw. It may cause fire by heat from exhaust pipe or spark in the exhaust gas.

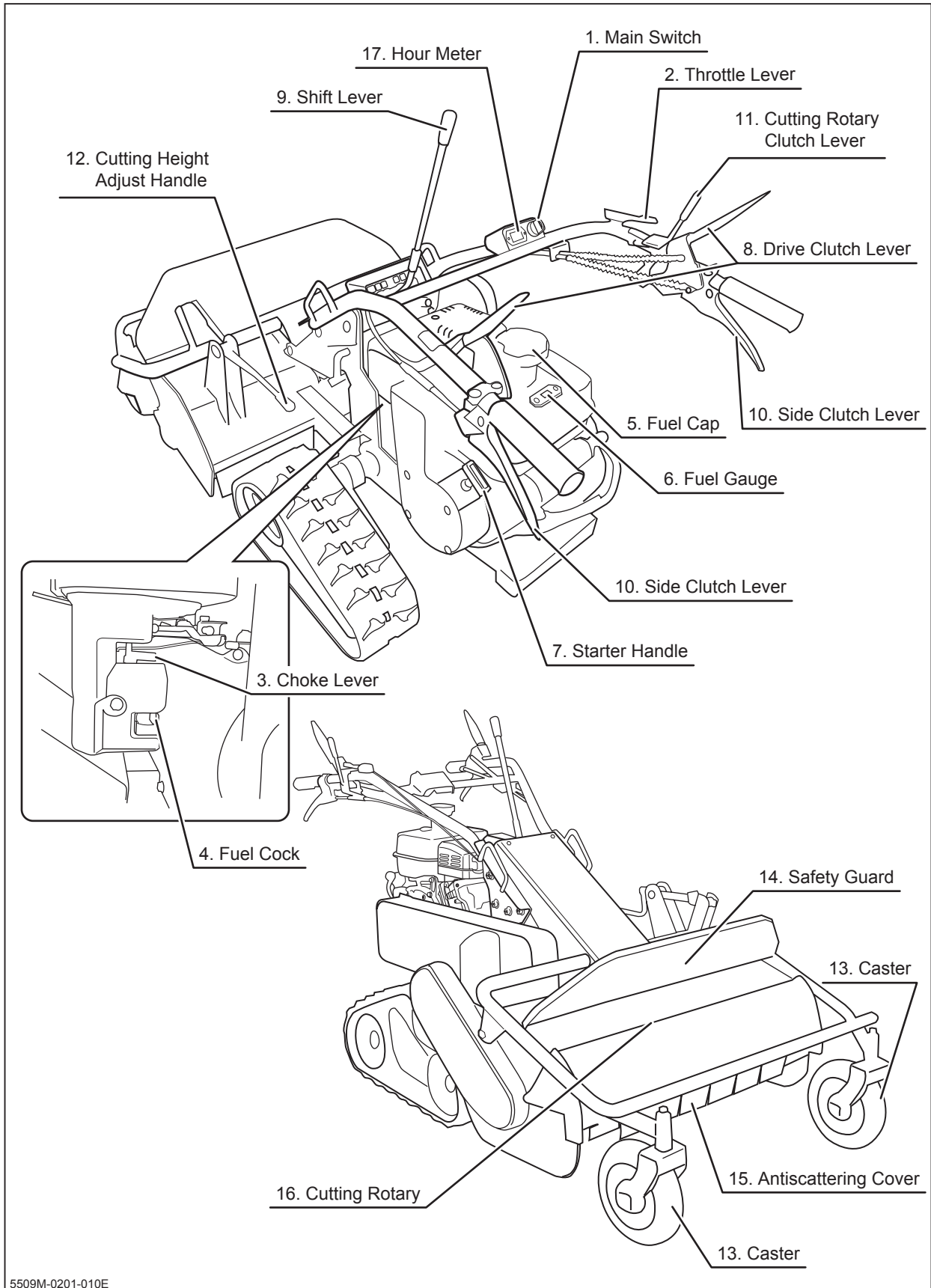
## Servicing

- Do not service the machine when the engine is running. If it is absolutely necessary to run the engine while servicing, pay attention to the moving parts.
- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can accumulate.
- Make sure all hydraulic line connectors are tight and all hydraulic hoses and lines are in good condition and leak-free.
- Check all fuel lines on a regular basis for tightness and wear. Tighten or repair them as needed.
- If the engine must be running to perform a service, keep hands, feet, clothing and any part of the body away from any moving part, especially the cooling fan and the belts at the side of the engine.
- Do not touch the engine, muffler, or exhaust pipe while the engine is running or soon after it has stopped. These areas will be very hot and can cause burns.
- The engine must be shut off before checking or adding oil.
- Keep flammables away when fuel a machine, checking or adding oil. It may cause fire hazard.
- Make sure to reinstall the safety covers that have been removed for inspection or service. Otherwise, moving or heated parts remain exposed and can cause injuries or burns. If any safety cover is damaged, contact your CANYCOM representative. Do not use machine until safety cover is exchanged.
- Make sure to stop engine, park machine on level surface and machine is not moving before cleaning or servicing machine.

# 2

# Controls and Components

## Name and Function of Controls



- 
- 1 **Main Switch** ..... Main switch is used to start or stop engine.
  - 2 **Throttle Lever** ..... Throttle lever is used to control engine speed.
  - 3 **Choke Lever** ..... Pulling choke knob closes choke valve to help start engine in cold weather. Push knob back to open choke valve once engine starts.
  - 4 **Fuel Cock** ..... Opens or cuts fuel flow to the engine.
  - 5 **Fuel Cap** .....
  - 6 **Fuel Gauge** ..... Indicates the amount of fuel in the tank.
  - 7 **Starter Handle** ..... Starter handle is used to start engine manually.
  - 8 **Drive Clutch Lever** ..... Pulling drive clutch lever front to engage (ON) and pushing down to disengage (OFF) drive clutch. Parking brake is interlocked with drive clutch lever and activated when it is in OFF (disengage) position.
  - 9 **Shift Lever** ..... Selection of 3 speed (1 to 3) for forward direction and 1 speed for backward direction. (N stand for neutral)
  - 10 **Side Clutch Lever** ..... Steer machine into desired direction by holding side clutch lever. Left side to turn left and right side to turn right. Turning radius can be adjust by force of the side clutch
  - 11 **Cutting Rotary Clutch Lever** ..... Pulling drive clutch lever front to engage (ON) and pushing down to disengage (OFF) cutting rotary clutch. Brake is interlocked with cutting rotary clutch lever and activated when it is in OFF (disengage) position.
  - 12 **Cutting Height Adjust Handle** ..... This handle is to adjust cutting height for free position. Rotating to the right to lower and the left to rise the cutting height. The range is between 0 to 80 mm. This handle cannot use except in free position.
  - 13 **Caster** ..... Guides cutting rotary.

## 2

# Controls and Components

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- 14 Safety Guard** . . . . . Safety guard is to protect operator from scattering object while grass cutting. Always check before operation.
- 15 Antiscattering Cover** . . . . . This rubber cover prevents cut grass or stones to be thrown out. Always check before operation.
- 16 Cutting Rotary** . . . . . Cutting rotary (drum) is housed in the metal safety shield.
- 17 Hour Meter** . . . . . Hour meter indicates the cumulative total operating time of the machine.

## Product Specifications

⚠ CAUTION!
· Use this product properly after understanding its specifications thoroughly.

Model and Type			CG101USA
Dimensions	Overall Length	mm (in)	1800 (70.9)
	Overall Width	mm (in)	1000 (39.4)
	Overall Height	mm (in)	1050 (41.3)
	Track Center Distance	mm (in)	650 (25.6)
	Machine Mass	kg (lbs)	260 (10.2)
Engine	Model		EX27DS
	Type		Air-cooled 4-cycle slant single cylinder OHC
	Displacement	cc (cu.in)	265 (15.9)
	Rated Output	kW(PS)/rpm	5.1(7.0)/3600
	Maximum Output	kW(PS)	6.6(9.0)
	Fuel		Unleaded automotive gasoline
	Fuel Tank Capacity	L (US Gal)	5.6 (1.5)
Starting		Electric/Recoil	
Drivetrain	Main Clutch type		Belt Tension (interlocking brake / parking brake)
	Steering Clutch Type		Dog Clutch
	Track Width	mm (in)	160 (6.3)
	Ground Pressure	kg/cm <sup>2</sup> (psi)	0.20 (0.14)
	Transmission		Forward 3 speeds, Backward 1 speed
	Speed	Forward	km/h (mph)
Backward		km/h (mph)	1.33 (0.8)
Mower	Main Clutch type		Belt Tension (interlocking brake / parking brake)
	Cutting Width	mm (in)	800 (31.5)
	Cutting Height	mm (in)	50 - 100 (2-3.9)
	Cutting Diameter of Rotary	mm (in)	300 (11.8)
	Number of Hammer Knives		46
Belts	Drive		SB51 W600 X 1
	Intermediate		SB61 W1000 X 1
	Mower		SC41 W800 X 1

# 3

## Specifications

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Model and Type			CG101USA
Mowing Rate (cutting width X Speed X 0.7)	1st gear	a/h (sq.ft/h)	6.5 (6997)
	2nd gear	a/h (sq.ft/h)	12.8 (13993)
	3rd gear	a/h	(for transporting)
Max. tipover angle		degrees	20

\*These specifications are subject to change without notice.

## Contents of Tool Bag

No.	Content	Quantity	Note
1	Operator's Manual	1	This Manual
2	Operator's Manual for the Engine	1	
3	Operator's Manual for the Battery	1	
4	Engine Service Tool	1	for Servicing Engine



## Preparation

### Pre-start up Inspection

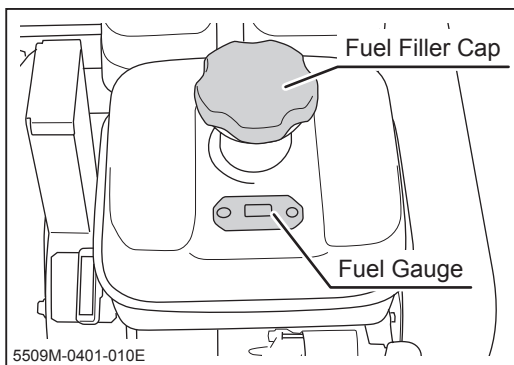
Always perform an inspection before use.

Refer to the **Maintenance Schedule** (page 32) for the inspection schedule and procedure.

### Checking and Filling Fuel

#### **⚠ WARNING!**

- Keep fire and spark away when handling fuel. Otherwise it may result in fire disaster.
- Always stop engine and park machine on level surface before refueling.
- Do not fill beyond the limit (bottom of the filler filter) so that fuel will not overflow. In case fuel is spilt, wipe out immediately.
- Always fill fuel after engine and muffler cool down.

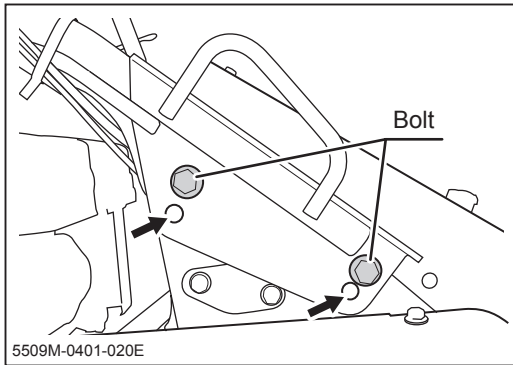


1. Check fuel gauge. If fuel level is low, fill fuel.
2. Open fuel filler cap and fill fuel.
3. Put fuel filler cap back in place and close it securely.

#### **NOTE**

- Do not overfill beyond Upper Limit. Fill fuel before fuel level gets Lower Limit.
- Fuel : Automotive Unleaded Gasoline
- Fuel Tank Capacity : 5.6L

## Adjusting Handle Position



Handle position can be adjusted to one of two available positions to operator's figure.

1. Remove 4 bolts (2 on each side).
2. Install handle bar to another position.

## Driving

### Starting

#### **⚠ WARNING!**

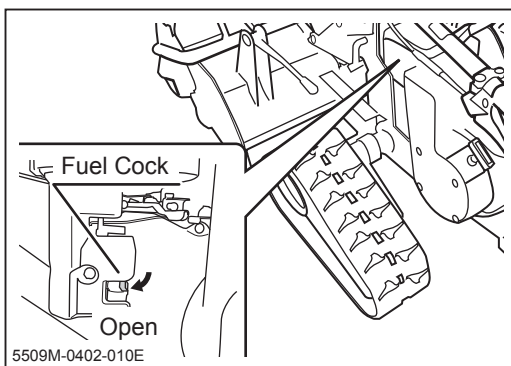
- Always start and run engine in a well ventilated place. Otherwise exhaust cause poisoning.

#### **⚠ CAUTION!**

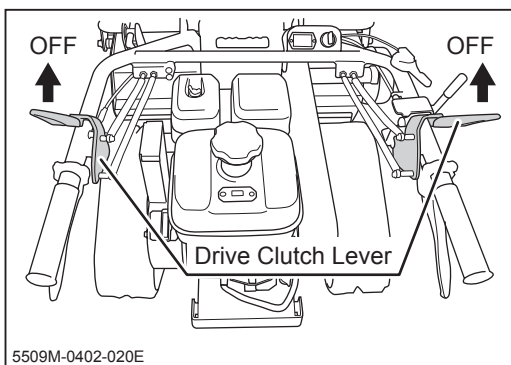
- Do not use this machine in temperatures above 40°C or below -15°C. This machine cannot perform adequately in these temperature ranges. Using this machine under such conditions may result in an accident or cause damage to machine.
- In the winter or cold climate, warm up engine thoroughly before driving machine. A cold engine delivers poor performance, which may result in an accident. It also causes excessive wear.
- Do not use this machine in dusty places such as desert. Dust may clog air cleaner or enter engine, which may result in loss of performance and an accident. It also causes excessive wear.

## ⚠ CAUTION!

- Do not use this machine in the altitude above 1500m (4920ft.) in its original configuration. This machine cannot perform adequately above that altitude. Using this machine under such conditions may result in an accident or cause damage to machine. If you need to use this machine above that altitude, contact your CANYCOM representative.
- Scan around your surroundings and confirm the position of drive clutch lever and cutting rotary clutch lever before start engine. Engine cannot start if drive clutch lever is in [ON ] position.



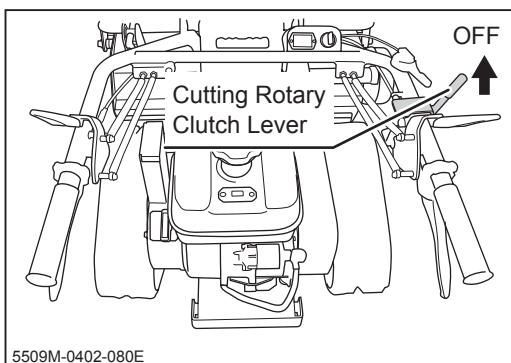
1. Check fuel amount and open fuel cock.



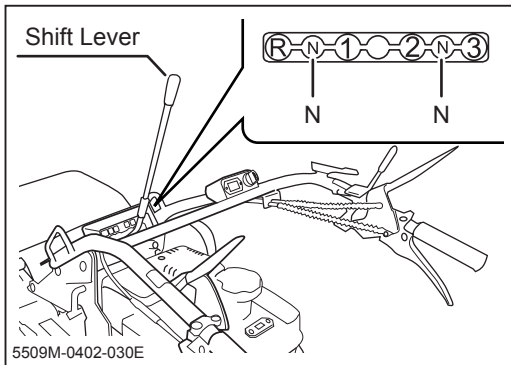
2. Make sure drive clutch lever is in [OFF] position.

### NOTE

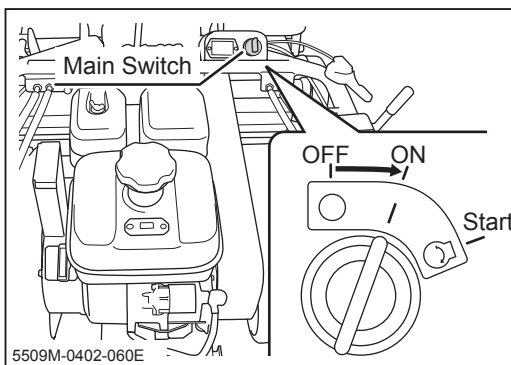
- Engine cannot be started unless drive clutch lever is in [ON] position.



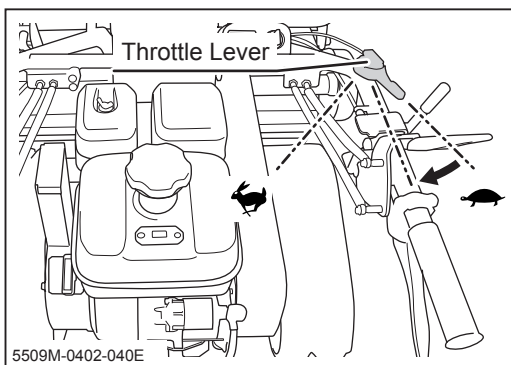
3. Make sure cutting rotary clutch lever is in [OFF] position.





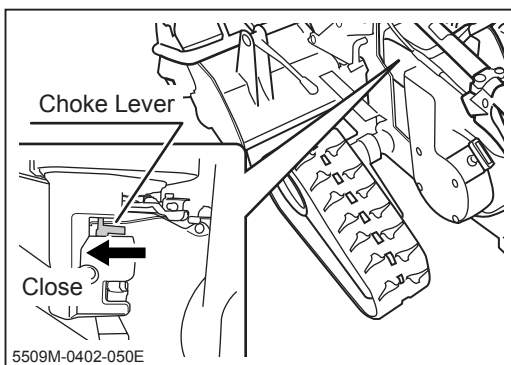
4. Make sure shift lever is in [N (neutral)] position.



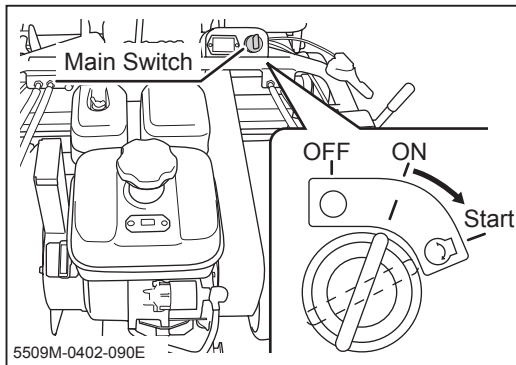
5. Turn main switch to [ON] position.



6. Move throttle lever between [  (slow)] and [  (fast)] positions.

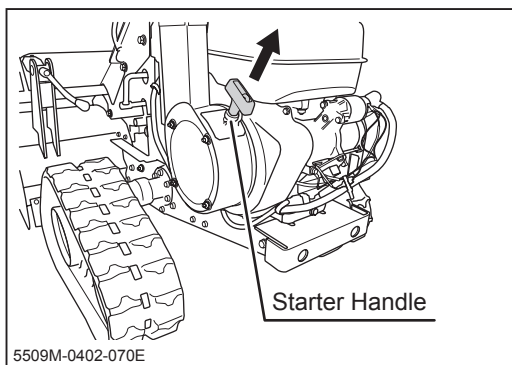


7. Pull choke lever to close position.



## Starting with Electric Starter

8. Turn main switch to [Start] position to start engine. Release key immediately after engine starts. Key automatically returns to [ON] position.



## Starting with Recoil Starter

8. Pull recoil starter knob at one stroke. Pay attention not to break the string. Let string return slowly.

9. Push choke lever back to OPEN position after starting engine. Run engine for about 5 minutes to warm up.

## NOTE

- Driving or working machine without engine warm-up may shorten engine life.

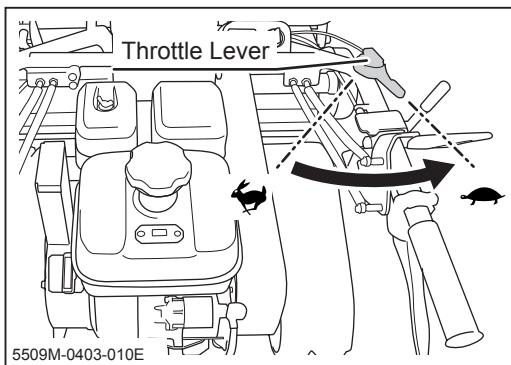
## Stopping Engine


### ⚠ WARNING!

- Do not touch engine or other hot parts right after engine stopped. It may cause burns. Wait until those parts to cool off enough if you need to touch them.

### NOTE

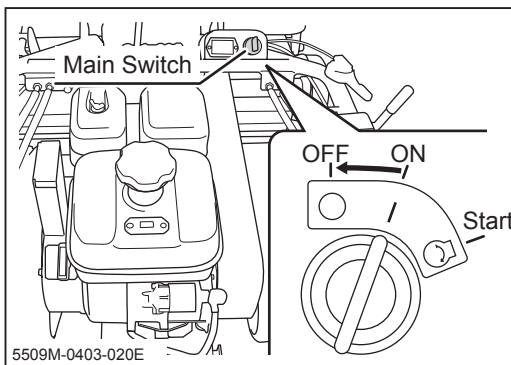
- Always stop engine with engine switch.



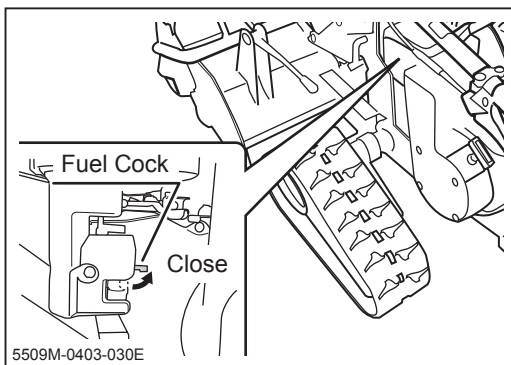
1. Move throttle lever to [  (slow)] position.

### NOTE

- Run engine at idle before stopping engine so that engine cools off. Suddenly stopping engine may cause explosive noise (after-firing).



2. Turn engine switch to [OFF] position to stop engine.



3. Close fuel cock.

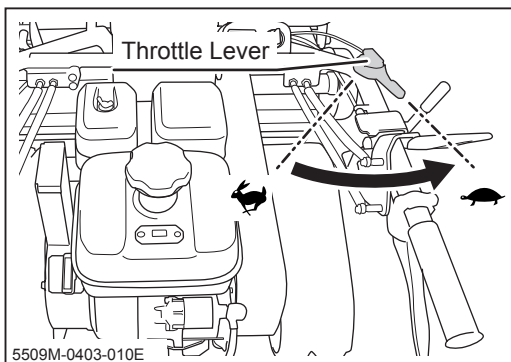
## Driving


### **⚠ WARNING!**

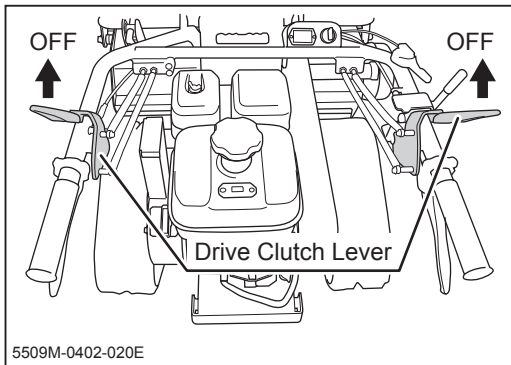
- Do not allow bystanders to come near machine when driving.
- Always make certain of the safety of your surroundings before turning.
- Do not make sudden starts, acceleration, change of speed, change of direction, or stop. Do not turn at speed. Avoid sudden maneuvers; this may cause the operator to fall or to be thrown, or machine to tip over.
- Do not turn the engine switch to [OFF] position while traveling.
- Never use this machine on a slope more than 15 degrees, it may go out of control by operational error or machine may tip over. Pay special attention when using machine near road shoulder, in a flexible soil terrain or on a slope. It may cause operator to fall or machine to tip over.

### **⚠ CAUTION!**

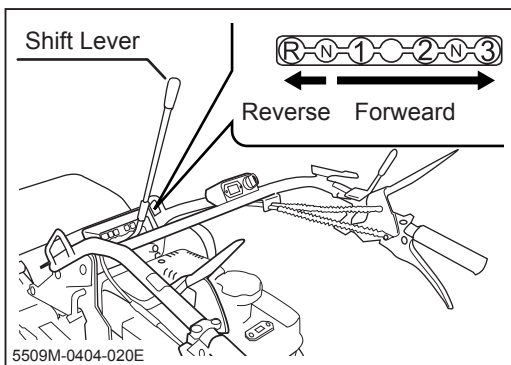
- Always make certain of the safety of your surroundings before driving; start slow.
- Do not touch any moving part while driving or operating. It may result in a injury. Avoid wearing clothing that may caught by moving part.



1. Start engine.
2. Move throttle lever to [  (slow)] position.



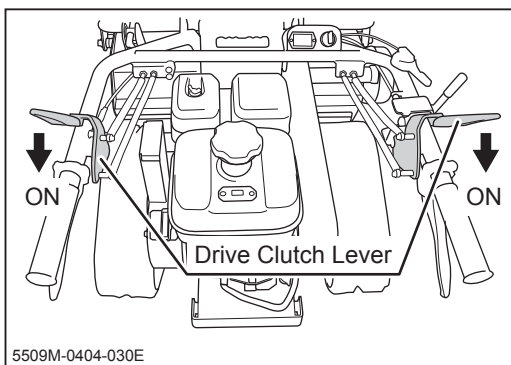
3. Make sure drive clutch levers are in [OFF] position.



4. Move shift lever firmly to a desired position.

#### NOTE

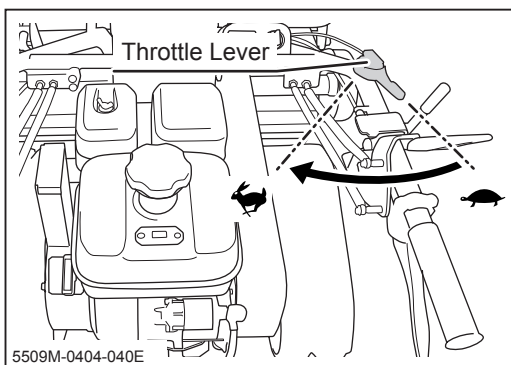
- Do not move shift lever when drive clutch lever is in [ON] position. It may cause malfunction.
- Always drive with 1st forward gear when driving on a slope or in a rough terrain.



4. Push drive clutch lever slowly to [ON] position. Machine starts moving.

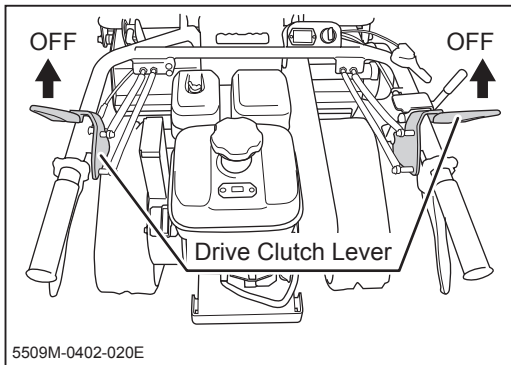
#### NOTE

- Set cutting height at [2] so that the cutter part not contact with ground or an obstacle during driving.



5. Adjust throttle lever to raise engine speed.





6. When changing gears, disengage drive clutch by releasing drive clutch lever. Move shift lever firmly to a desired position.

## NOTE

- Never move shift lever into other gear while driving. It may cause malfunction of the machine or may get out of control.

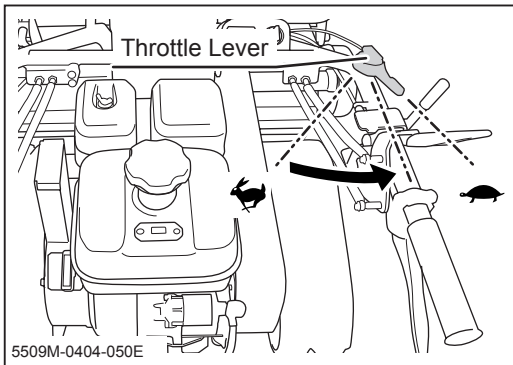
## Turning


### **⚠ WARNING!**

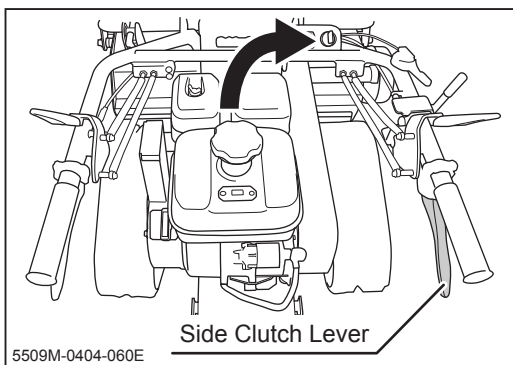
- When turning, drive slow. Turning at high speed can result in tip over or falling.

### **⚠ CAUTION!**

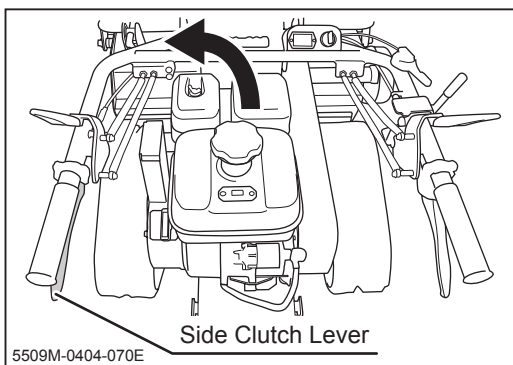
- If machine is pivot-turned on a place where there are a lot of small stones (e.g. railroad tracks), stones can go between crawler and sprocket and damage parts on undercarriage.
- Avoid sharp turns or tight meandering on a ground with many small stones. Drive straight or turn in small angles.
- After driving on damp ground such as a wet paddy, mud or similar substance, wash out with water. If mud or similar substance dries out, it sticks to sprocket and may damage.
- Always clean machine after use.



1. Adjust throttle lever toward [  (slow)] to slow down.



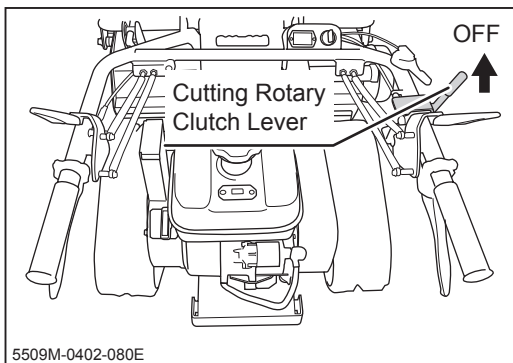
2. Grab side clutch lever on the desired side to turn machine in the same direction.



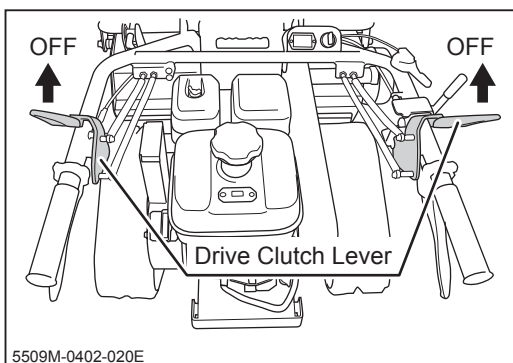
## Parking

### **⚠ WARNING!**

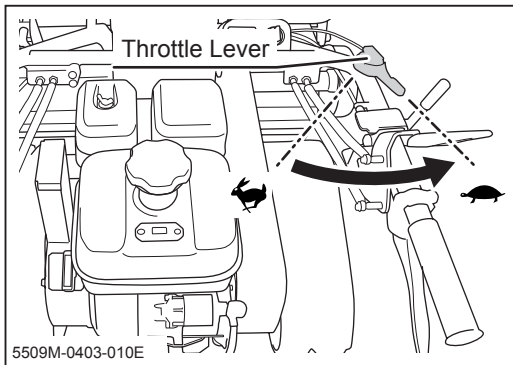
- Do not make a sudden stop. Operator may be thrown off, or machine may skid or tip over.
- Always park on a firm, level, and open place that is not surrounded by obstacles.
- Do not park in a potentially dangerous place. Do not park on an incline.
- Do not park near flammable objects.
- When leaving machine unattended, park on a level surface, disengage drive clutch lever and turn off engine.




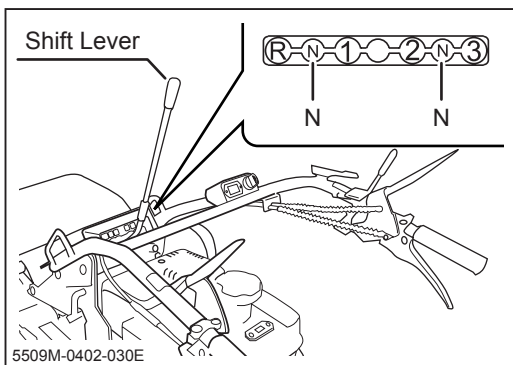
1. Make sure cutting rotary clutch lever is in [OFF] position. If it is not, move it to [OFF].



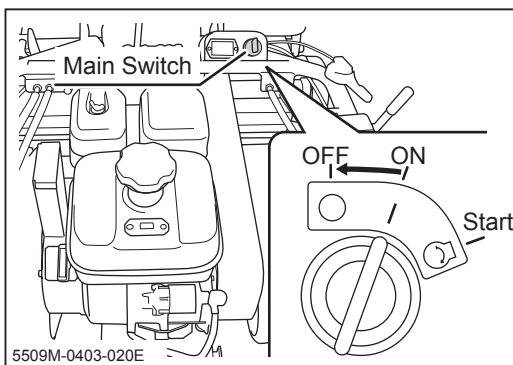
2. Make sure drive clutch lever is in [OFF] position.



3. Move throttle lever to [  (slow)] position.



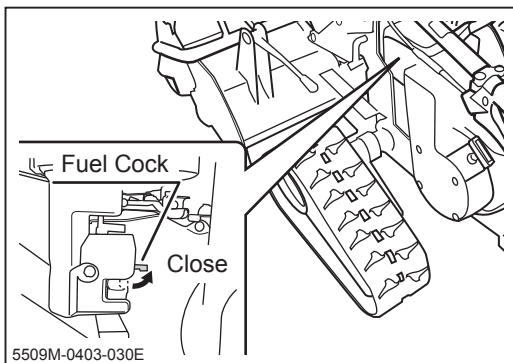
4. Move shift lever to [N (neutral)] position.



5. Turn engine switch to [OFF] position to stop engine.

**NOTE** \_\_\_\_\_

- Before stopping, run engine in low speed for a few minutes to cool down.



6. Close fuel cock.

**NOTE** \_\_\_\_\_

- Close fuel cock to avoid carburetor to overflow.

## Cutting

### **DANGER!**

- Never place any part of body near cutting rotor deck or lean on the rotor deck while engine is running. It result in serious injury if drive clutch lever engaged unexpectedly.
- Never operate this machine without installing safety covers. Do not modify covers to be opened while in operation. It may result in serious inrjury by cutting blades or throwing objects.
- Remove dry grass or flammable materials around muffler and engine to prevent fire or overheating.

### **WARNING!**

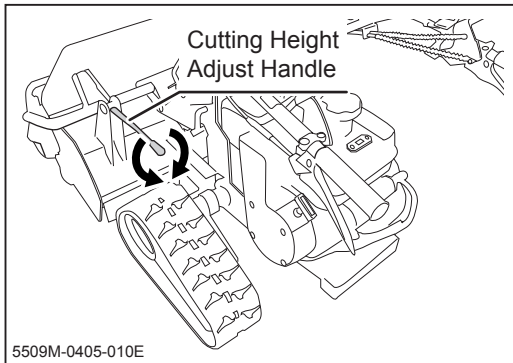
- This machine may throw objects during cutting operation. Remove rocks, stones and debris in the work area to prevent them from being thrown off.
- Scan around the areas surrounding the work site before operating this machine. Seal off the work site with rope if necessary.
- In the work area with many objects that are likely to be thrown off, set the cutting height high to minimize the chance of those objects from being thrown off.
- Prepare beforehand the working rules and procedures such as signaling and traffic control for the work place. Do not let bystanders (especially children) to come within a 10 m radius around the machine.
- Never operate machine on a slope steeper than 15 degrees. Avoid terrain that is so rough, slippery or loose that you feel like you could tip over.
- Always stop engine and check if cutting rotor is stopped when removing foreign object from cutting blades.

## **⚠ WARNING!**

- If machine crashes with an obstacle, stop engine, check machine and perform repair if necessary. Failing to do so may cause accident or malfunction of machine.
- Always cut grass in forward gears. Never use R1 gear while working. Not only does it increase the chance of objects being thrown off, but there is also a risk that the operator is caught between machine and obstacle or fall off.
- Never kick grass into cutting rotor deck or push grass into cutting rotor deck using stick. It is extremely dangerous to step into the path of machine's travel. A foot or a stick can get caught by rotor, causing severe injury.

## **⚠ CAUTION!**

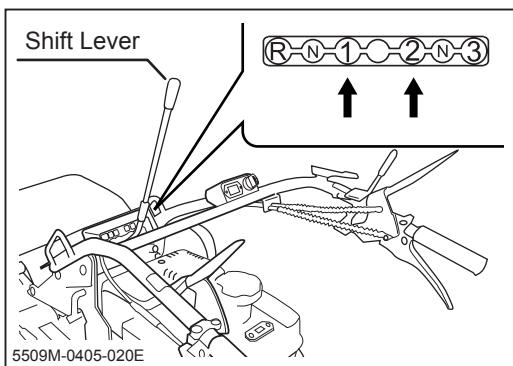
- Always wear protective footwear, long trousers, hardhat, safety glasses and ear protection when operating or servicing the machine.
- When working under the tree, work at reduced speed and pay additional attention to the branches of the tree.
- Choose level surfaced work site without foreign object such as stones when using this machine for the first time. Overlap the track a little and drive straight.
- Always stop engine when you leave the machine.



1. Perform pre-start up inspection before use. (Page 15)
2. Adjust cutting height by turning cutting height adjust handle. Turn it clock-wise to increase cutting height. Turn it counter-clockwise to decrease cutting height.

## NOTE

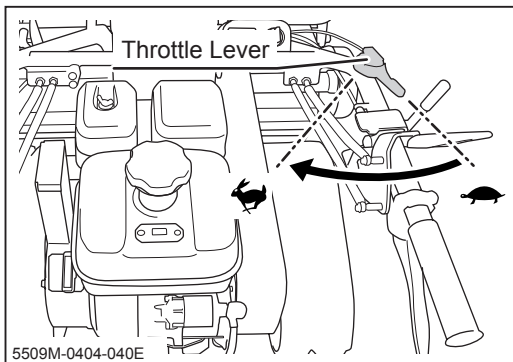
- Adjust cutting height a little higher at first and adjust cutting height depending on a condition.




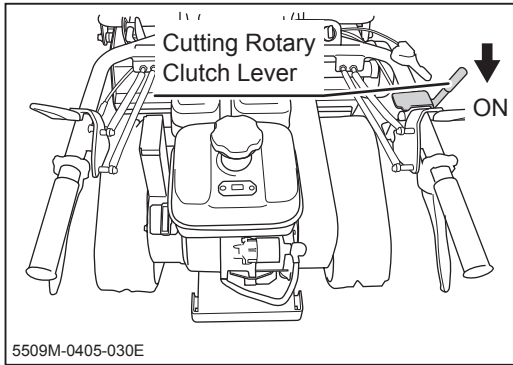
3. Start engine.
4. Move shift lever firmly into [1] or [2] position.

## NOTE

- Use first or second gear for mowing operation. Do not mow while travelling in reverse.



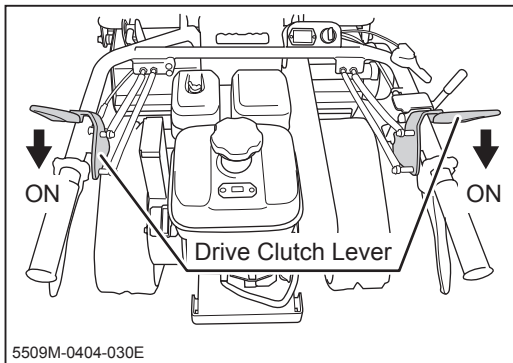
5. Move throttle lever to [  (fast)] position.



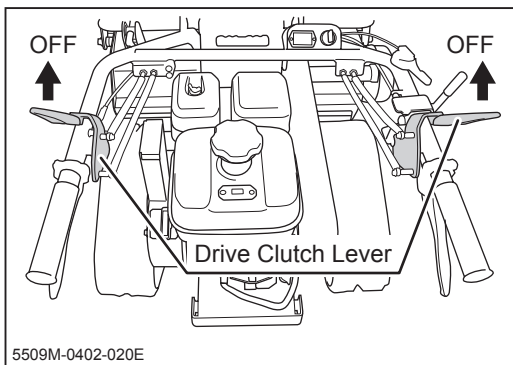
6. Move cutting rotary clutch lever to [ON] slowly. Cutting Rotor starts turning.

#### NOTE

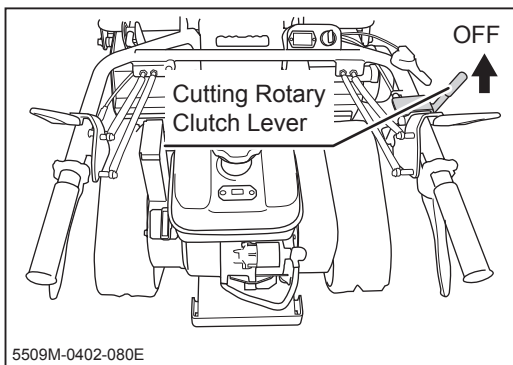
- Engine stalls if cutting rotor clutch lever pulled at one stroke.
- In case of any abnormal noise or vibration, stop engine and check if deformation or missing cutter blade and foreign object is stuck.



7. Move drive clutch lever to [ON] position to start working.



8. Move drive clutch lever to [OFF] position to stop machine. Parking brake engages at the same time.



9. Move cutting rotor clutch lever to [OFF] to stop cutting rotor.
10. Stop engine.

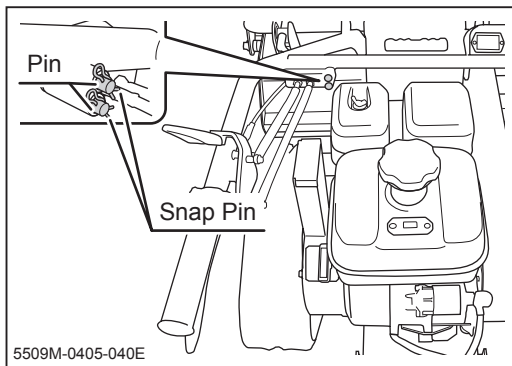
#### NOTE

- Do not touch cutting rotor or any moving part until cutting rotor stops rotation in few seconds after disconnecting cutting rotor clutch lever.

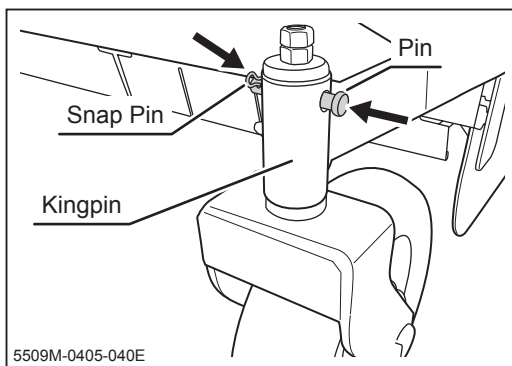


## Fixing Casters

Caster wheels can be fixed for working on the slope.



1. Remove snap pins from pins on the left side of the handlebar.



2. Turn caster straight and insert pin into the hole on the kingpin. Secure pin with snap pin. Do the same on the other side.

## Maintenance Schedule

### **⚠️ WARNING!**

- Check for safety of surroundings before filling or inspecting machine..
  1. Park machine in level and open space.
  2. Always stop engine.
  3. Scan around for bystander especially for children.

\*Neglecting these precautions can result in injury.

### **NOTE**

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- Neglecting inspection or maintenance may cause accident. Follow the scheduled maintenance as described below. Failure to do so may result in mechanical or property damage, injury or death.
- Perform a pre-startup inspection (PSI) before each use, a monthly inspection once a month, and a yearly inspection once a year.
- Some maintenance procedures described below may require special knowledge or tools and instruments. Contact your CANYCOM representative to perform such procedures.

## Chassis

- Perform a pre-startup inspection (PSI) before each use, a monthly inspection once a month, and a yearly inspection once a year.
- Some maintenance procedures described below may require special knowledge or tools and instruments. Contact your CANYCOM representative to perform such procedures.

Item	Description	Schedule			Note	
		PSI	Mon	Year		
<b>Engine / Body</b>	<b>Starting</b>	Engine shall start easily without making any irregular noise.	√	√	√	
	<b>Running</b>	Engine speed shall be set properly at idle and at full throttle without a load. Engine shall stay running smoothly.			√	Contact your CANYCOM representative for inspection.
		When accelerating engine, throttle lever shall move smoothly, and engine shall accelerate smoothly without stopping or knocking.	√	√	√	
	<b>Exhaust</b>	Warm up engine thoroughly, and observe exhaust sound and gas from idle to fast speed; exhaust sound shall be normal and no smoke shall be observed.	√	√	√	
		There shall be no leak in exhaust system or muffler.		√	√	
	<b>Air Cleaner</b>	Air cleaner case shall not be deformed or cracked. Case lid and connecting air hose shall be firmly in place.		√	√	
		Cleaner element shall be in good shape without damage or excessive dust.	√	√	√	
	<b>Fastners</b>	Bolts and nuts fastening cylinder head, intake and exhaust manifolds shall be tightly fastened. * this may be skipped if there is no gas leak found in these areas.			√	
	<b>Valve Clearance</b>	Valve clearance shall be correct. * this may be skipped if there is no noise due to incorrect valve clearance, and engine runs normally.			√	
	<b>Compression</b>	Compression shall be normal * this may be skipped if running and exhaust condition is normal at idle and under acceleration.			√	
<b>Engine Mount</b>	Engine base shall be free of cracks or deformation.	√	√	√		
	Mounting bolts and nuts shall not be loose or missing.	√	√	√		

Item	Description	Schedule			Note	
		PSI	Mon	Year		
Engine	Lubrication System	Oil shall be clean and at correct level.	√	√	√	
		No noticable oil leaks shall be found in head cover, oil pan, or pipes.	√	√	√	
	Fuel System	There shall not be any leaks in fuel tank, hoses, or pipes.	√	√	√	
		Fuel hoses shall be free of damage or deterioration.	√	√	√	
		Fuel cock shall not be dirty or deteriorated.		√	√	
Spark Plug	Electrode shall not be worn, and there shall not be excessive carbon deposit.			√	Inspecting/Cleaning: Page 40	
Drive Train	V-belt	Belt shall be free of damage or excessive wear.		√	√	
		Belt tension shall be properly adjusted.		√	√	
	Transmission	Transmission shall not jump out of the gear. Irregular noise or overheating shall not be	√	√	√	
		Oil shall be clean and filled to the proper level.		√	√	Inspecting/ Changing:Page 42
		There shall not be oil leaks in or around transmission.	√	√	√	
	Shift Lever	Shift lever shall engage with each speeds and work properly.	√	√	√	
		Lever mounting points shall be free of looseness, excessive play.	√	√	√	
	Side Clutch	Lever shall be free of play and turn into desired direction properly.	√	√	√	
	Rubber Track	There shall not be any marked cut, deterioration, or wear.	√	√	√	
	Drive Clutch	Clutch shall not slip and shall engage smoothly.	√	√	√	Adjusting: Page 45
Brake	Brake shall work properly when drive clutch is disengaged.	√	√	√	Adjusting: Page 47	
Body	Chassis Frame / Body Panel	Shall be free of cracks, deformation, or corrosion.		√	√	
		Fastening bolts or nuts shall not be loose or missing.				

Item	Description	Schedule			Note	
		PSI	Mon	Year		
<b>Safety Switch</b>	Engine switch shall work properly when starting	√	√	√		
	Engine shall stop by pressing engine switch.	√	√	√		
<b>Cutting System</b>	<b>Cutting Blade</b>	Cutting blades shall be free of crack, uneven wear and deformation.	√	√	√	Inspecting/ Changing:Page 48
		Fastening bolts and nuts shall not be loose.	√	√	√	
	<b>Cutter Spindle</b>	There shall be no deformation on cutter spindle.	√	√	√	
		Fastening bolt shall not be loose	√	√	√	
<b>Cutting Rotor Clutch</b>	Clutch shall not slip and shall engage smoothly.	√	√	√	Inspecting:Page 52	

## List of Fluids and Lubricants

Item	Schedule	Grade	Cap.	Ref.
Fuel	As needed.	Automotive Unleaded Gasoline	5.6 L	Page 15
Engine Oil	Fill Inspect daily. Fill as needed. Change Initially - After 5 hours of use. Every 50 hours afterwards.	Gasoline Engine Oil API rating: SE or better. SAE rating: 10W-30	1.0 L	Page 38
Transmission Oil	Change Initially - After 20 hours of use. Every 100 hours afterwards.	Gear Oil API rating: GL-4 or 5 SAE rating: 80	1.3 L	Page 42
Lubrication Points	Lubricate Every 6 months. *Lubricate as needed	Gasoline Engine Oil API rating: SD or better. SAE rating: 10W-30	As Needed	Page 36
Greasing Points	Lubricate Every 6 months. *Lubricate as needed	Chassis grease	As Needed	Page 36

\* Dispose of the drained oil properly.

## Lubrication and Greasing Points

### ⚠ CAUTION!

- Grease regularly. Insufficient greasing may result in seizure or rusting, affecting smooth operation of machine and shorten machine life.
- Pay attention not to let any foreign object or water enter during refueling operation.

**Points to Lubricate** (use automotive gasoline engine oil, SD or above, 10W-30):

Wires (Drive clutch, Side clutch, Cutting rotary clutch, throttle)

Drive clutch lever pivots (L and R), Cutting rotary clutch lever pivot

Shift lever shaft

Tension pulley pivots (Drive, Intermediate, Mower),

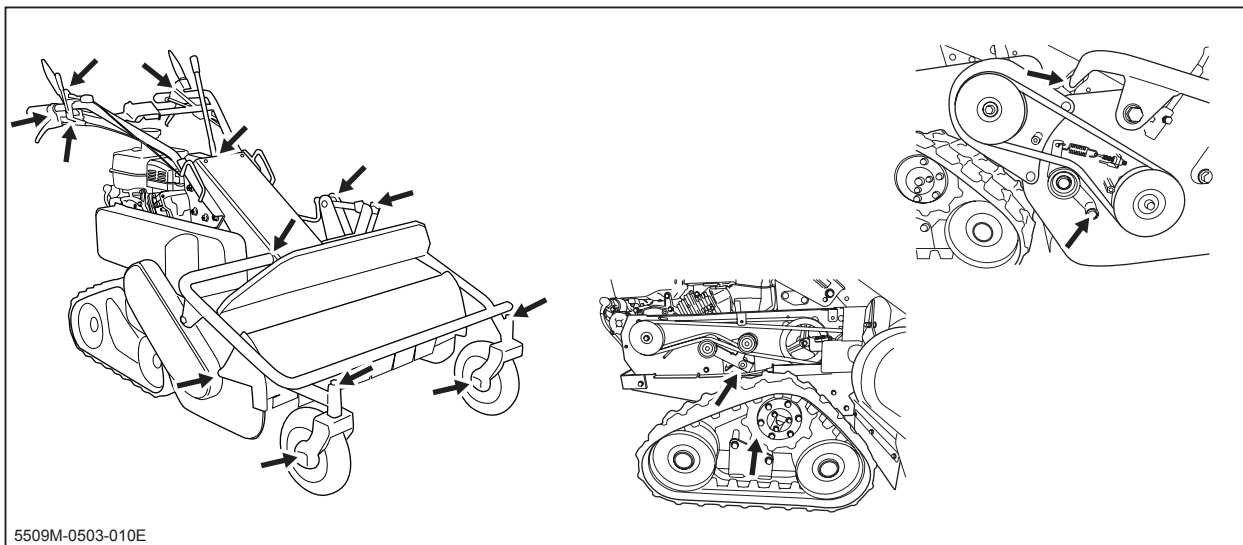
Cutting height adjuster (pivots, screw)

Front cover (mower) pivot

Caster axles, Caster Kingpins, Caster frame pivot

**Point to Grease** (use chassis grease):

Crawler frame pivots (grease)



### NOTE

- When using a manual grease pump, push handle five to six times. When handle becomes heavy, stop pushing.
- When using a pneumatic grease pump, charge for two to three seconds.

## List of Consumables and Spares

### ⚠ CAUTION!

- When replacing consumable or spare, always use CANYCOM genuine part.

Item	Part No.	Qty.	Note
<b>Cutting Rotary</b>			
Frail Set (46 knives, bolts and nuts)	1469 1335 000	1	Replace all knives at once
Bolt	CM80 3108 001	23	
Lock Nut	A353 0110 000	23	
Cover A	CM80 3316 000	4	
Cover BL	CM80 3318 000	1	
Cover BR	CM80 3317 000	1	
Cover CL	CM80 3320 000	1	
Cover CR	CM80 3319 000	1	
Rubber Plate	PM80 3307 000	2	
<b>Engine</b>			
Spark Plug (NGK BR6HS)	065-01401-50	1	NGK BR6HS
Throttle (Engine Control) Wire	PM80 2210 000	1	
Starter Rope	279-50110-08	1	
Air Cleaner Element Set	279-32619-07	1	
Battery	CM80 0606 000	1	
<b>V-Belts</b>			
Belt (W600SB51)	PM80 0205 000 01	1	Drive Belt, SB51 W600
Belt (W1000SB61)	PM80 0206 000 02	1	Intermediate Belt, SB61 W1000
Belt (W800SC41)	PM80 3210 000	1	Mower Belt, SC41 W800
<b>Drive Train</b>			
Rubber Crawler	63645-17581	2	
Crawler Guide (Skid)	CM80 1308 000	2	
Caster Wheel	PM80 3419 000	2	
Clevis Pin	0562 1108 050	2	for fixing front casters
Snap Pin	0521 0108 000	2	
Brake Assy.	1333 1701 001	1	
<b>Wire</b>			
Wire (Drive Clutch)	PM80 2111 000	1	Drive Clutch
Wire (Brake)	PM80 2121 000	1	Parking Brake
Wire (Cutting Rotary Clutch)	PM80 2156 000	1	Cutting Rotary Clutch
Wire (Cutting Rotary Brake)	PM80 2158 001	1	Cutting Rotary Brake
Wire (Side Clutch )	PM80 2205 000	2	
Cap Nut (DIA 6mm)	1924 2107 000	4	for attaching wire
Brake Assy. (Cutting Rotary)	PM80 1616 000	1	for Cutting Rotary

## Engine

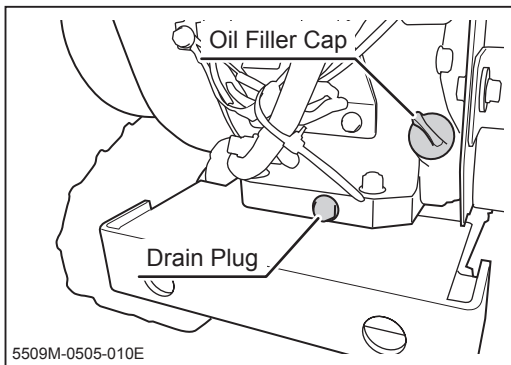
### Engine Oil

#### ⚠ CAUTION!

- Dispose of the drained oil properly.
- Make certain to fill engine with correct grade of oil to the specified level. Insufficient amount or wrong grade of oil reduces performance and may cause permanent damage to engine.

#### NOTE

- To obtain correct reading, check oil level before starting, or wait about 10 minutes after stopping engine to allow oil to drain back to oil pan.
- Always check oil level on a level surface.
- Do not screw in the oil filler cap when inspecting oil amount.
- Do not let oil level beyond Lower limit, it may cause sticking on engine.
- Change oil after 5 hours use for the first time. Change oil every 50 hours of use afterward. It is recommended that change oil earlier than 50 hours when machine is used for long time in the rugged environments such as with heavily loaded or in high temperature.

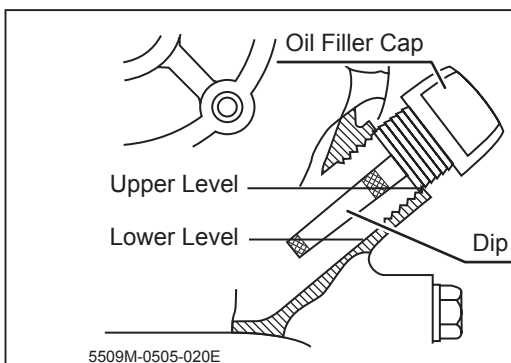


#### Inspecting

1. Park machine on a level surface.

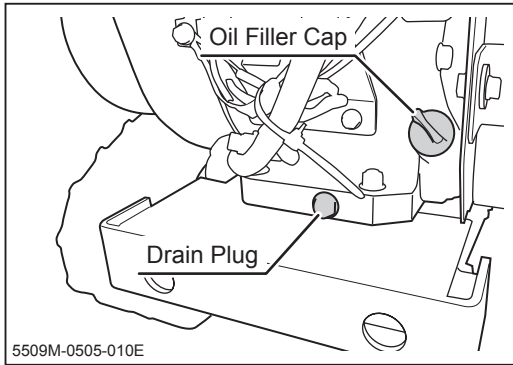
#### NOTE

- Adjust mower cutting height so that engine is level.



2. Remove oil filler cap and wipe oil level gauge.
3. Insert oil filler cap again to check the amount of oil. Make sure the oil level is between the upper and lower levels. If oil level is low, fill up to the upper limit.
4. Screw filler cap in.



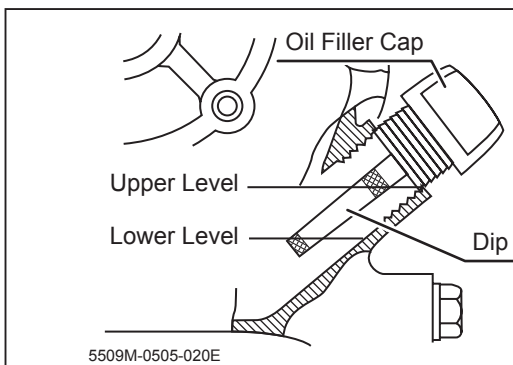


## Changing

1. Park machine on a level surface.

### NOTE

- Adjust mower cutting height so that engine is level.



2. Have an appropriate oil drain pan.
3. Remove oil filler cap and drain plug to drain oil.
4. Put drain plug back in place.
5. Fill oil up to the upper limit.
6. Screw filler cap in.

### NOTE

- Oil to use and capacity: Page 35.

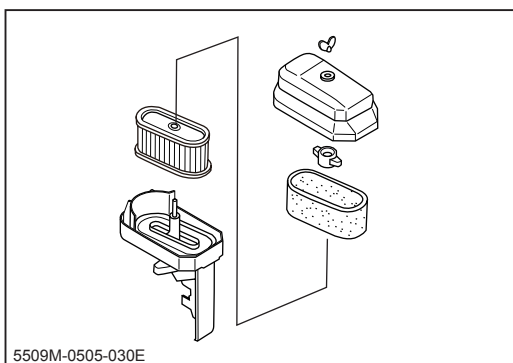
## Air Cleaner

### ⚠ CAUTION!

- Do not continue using machine if air cleaner is clogged. This causes the power to go down or excessive consumption of fuel. Clean up air cleaner regularly.

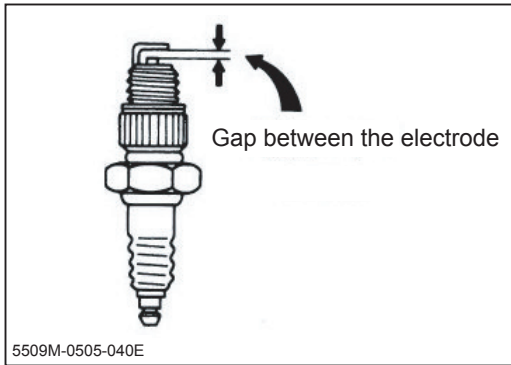
### NOTE

- Do not start engine without air cleaner. It may cause engine malfunction or abnormal wear.



1. Follow the instructions in **Operator's Manual for the engine** to inspect, clean or change air cleaner element.

## Spark Plug

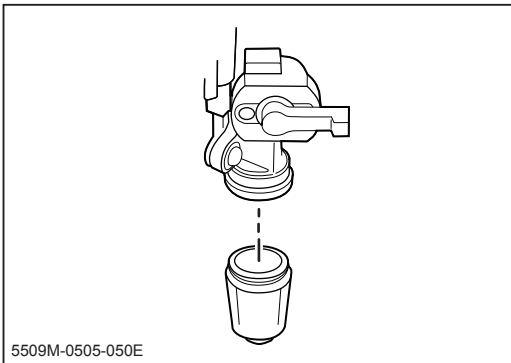


1. Follow the instructions in **Operator's Manual for the engine** to inspect, clean or change spark plug.

## Fuel Cock

### **⚠ DANGER!**

- Never smoke or use open flame when cleaning fuel cock. It may catch fire and cause explosion or fire.
- Do not use flammable solvents such as gasoline or thinner to clean. It is extremely dangerous.



1. Follow the instructions in **Operator's Manual for the engine** to inspect and clean fuel cock.

## Fuel Hose

### **⚠ DANGER!**

- Inspect fuel hose for leaks and deterioration. Leaked fuel can lead to fire and explosion.

1. Inspect fuel hose for cuts, damages and deterioration. If any cut, damage or deterioration is found, replace hose.
2. Inspect joints and hose bands. Tighten hose bands if loose.

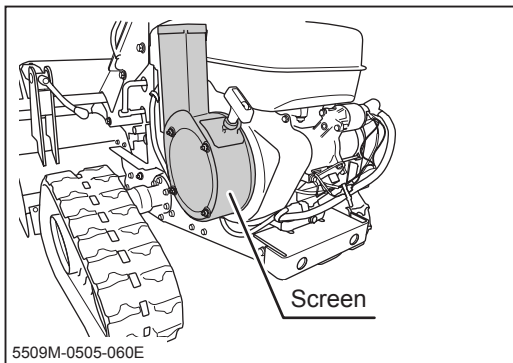
### **NOTE**

- Rubber products such as the fuel hose deteriorate over time. Replace them every 2 years.

## Recoil Starter

### **⚠ CAUTION!**

- Clean recoil starter screen regularly. Clogged screen can lead engine to overheat and catch fire.



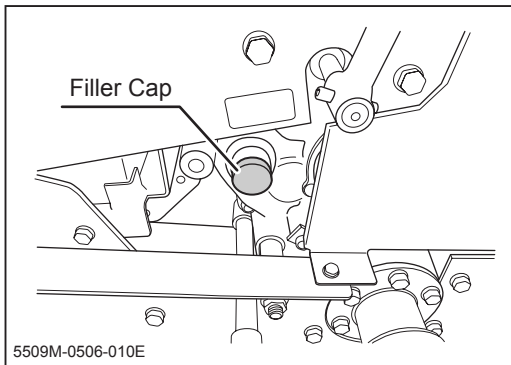
1. Remove cut grass, dirt, and any other material clogging recoil starter screen so that cooling air flows freely into engine.

## Drive Train

### Transmission Oil

#### NOTE

- Change oil after 20 hours use for the first time. Change oil every 100 hours of use afterward.
- In case of iron powder in drained oil, this is the sign of the break down of gear box by wear out of gears and need overhaul inspection. Please contact with your CANYCOM representative in this case.

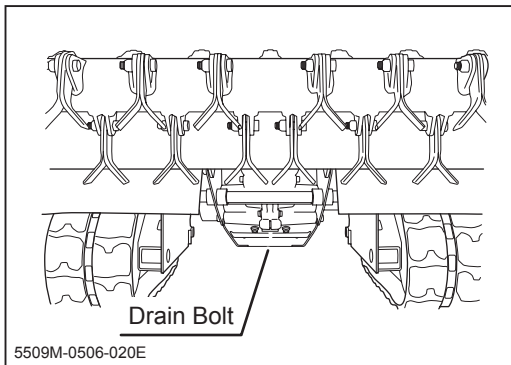


#### Inspecting

1. Park machine on a level surface.
2. Remove transmission oil filler cap to see if oil level is at the filler (oil comes out of the filler).
3. If oil level is low, fill.
4. Install oil filler cap.

#### NOTE

- Adjust mower cutting height so that transmission is level.



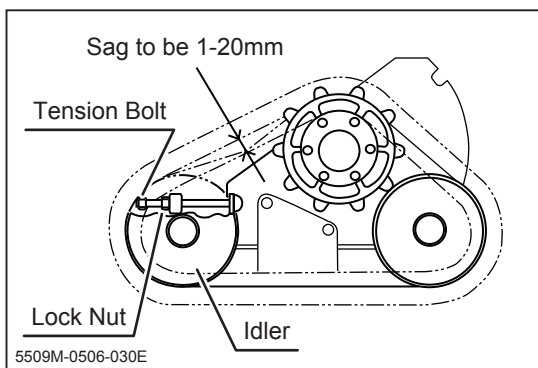
#### Changing

1. Park machine on level surface. Prepare appropriate oil pan to drain oil.
2. Remove oil filler cap and drain plug to drain oil in oil pan.
3. Wipe drain hole and drain plug and install drain plug firmly.
4. Fill oil into filler until oil comes out from filler hole.
5. Install filler cap.

## Track

### NOTE

- Always inspect the tension of track before operation. Too tight or too loose track will cause premature wear of sprocket, track to come off, or track to be cut or cracked.



### Inspecting

1. Jack up machine so that track is parallel to the ground.
2. Press track with a force of 196N (20kgf) to see if track sags between 1 and 20mm. If not, adjust. Make sure left and right tracks are at the same tension.
3. Lower machine.

### Adjusting

1. Jack up machine so that it is parallel to the ground.
2. Loosen lock nut.
3. Adjust track tension bolt so that track sags between 1 and 20mm when pushed with a force of 196N.
4. Adjust the other track so that the tension of both tracks are the same.
5. Tighten lock nut
6. Lower machine.

### NOTE

- Overtightened track can damage track and undercarriage.

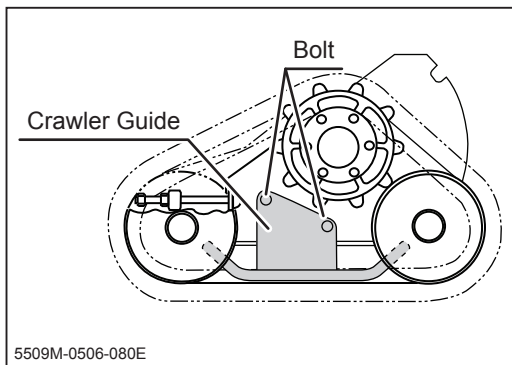
### Replacing

1. Jack up machine so that it is parallel to the ground.
2. Loosen lock nut, then loosen track tension bolt until crawler can be removed from sprocket. Remove crawler.

3. Install new crawler.
4. Adjust crawler.
5. Tighten lock nut.
6. Perform the same operation to the other side.
7. Lower machine.

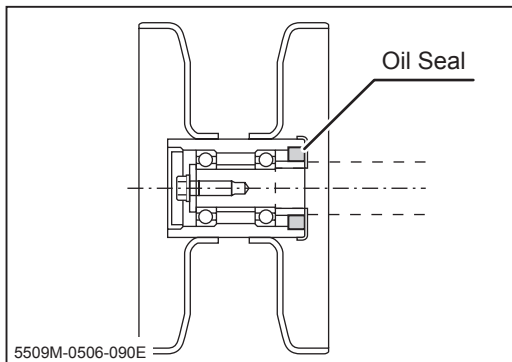
## Crawler Guide

Crawler guide wears out. Visually inspect crawler guide and if worn, replace.



1. Jack up machine so that it is parallel to the ground.
2. Loosen crawler.
3. Undo two bolts to remove crawler guide.
4. Install new crawler guide with two bolts.
5. Adjust crawler.
6. Lower machine.

## Oil Seal on Roller



Inspect oil seal on rollers every 100 hours. Replace if damaged.

## Caster

Visually inspect caster wheels for wear and damage. If worn or damaged, replace.

## Drive Clutch

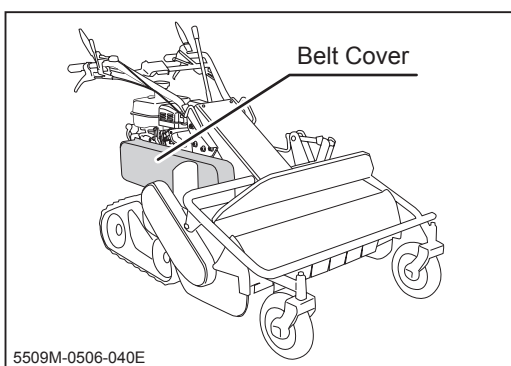
### **⚠ WARNING!**

- Stop engine and remove ignition key when servicing drive train. Allow machine to cool off before servicing. Engine and its ancillaries are very hot after operation and may pose a burn hazard.
- Test drive after adjustment. Make sure everything is in order.
- If engine needs to be run during adjustment, shift transmission to [N (neutral)] and stay away from the belts and other moving parts.
- Make sure to reinstall safety covers after adjustment.
- Do not overtighten belts. Belt can break off, causing an accident or damages to the machine.

Drive clutch is of belt-tension type.

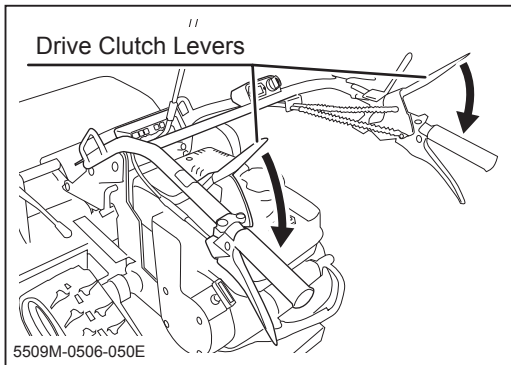
If tension is too low, belt slips, yielding less traction and wears belt.

If tension is too high, drive clutch does not disengage and machine does not stop.



### **Adjusting**

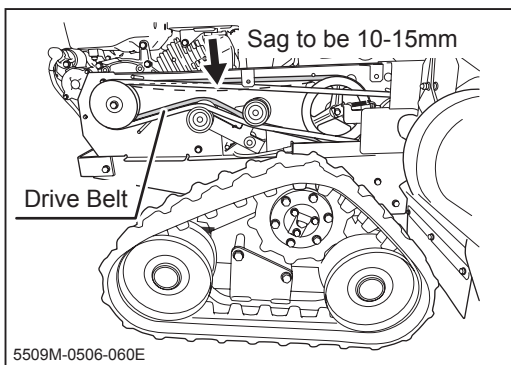
1. Park machine on level surface and stop engine.
2. Remove belt cover.



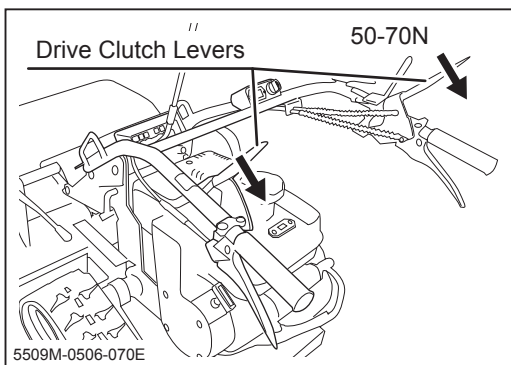
3. Move drive clutch lever to [ON] position.

#### NOTE

- Clutch levers are of deadman-control type and do not stay in engaged ([ON]) position. Tie levers with a string to keep them in [ON] position.



4. Press the top of belt with finger to see if the sag is between 10 and 15mm. If not, adjust drive clutch wire so the sag is within that range.

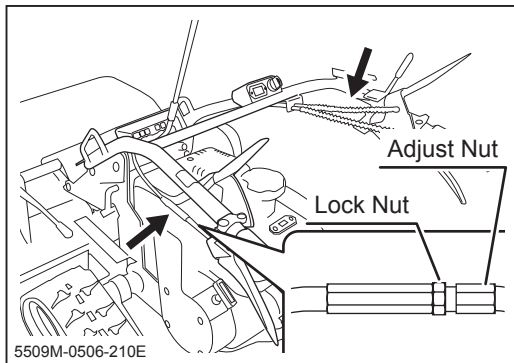


5. Alternatively, adjust drive clutch wire so that the operating force of the clutch lever is between 50 and 70N (5.0 and 7.0kgf, respectively) in the middle of the lever.
6. Shift to [N (neutral)] and start engine. Operate drive clutch lever to see if drive belt stops completely when lever is moved to [OFF] position. If not, readjust.
7. Install belt cover.



## Side Clutch

If side clutch wire is too tight, side clutch may come off when there is an excessive loading on the axle. If side clutch wire is too loose, side clutch does not disengage and machine cannot be steered.

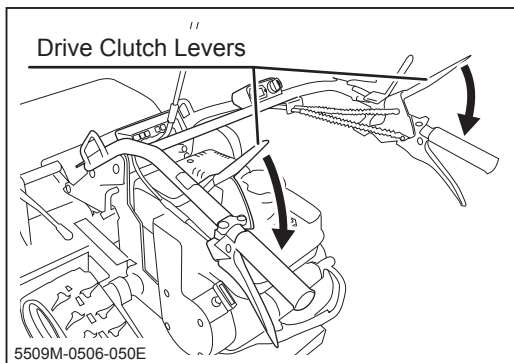


### Adjusting

1. Loosen lock nut on side clutch wire.
2. Adjust wire with adjust nut.
3. Tighten lock nut.

Side Clutch	Adjust Nut
Does not disengage	Longer
Does not return	Shorter

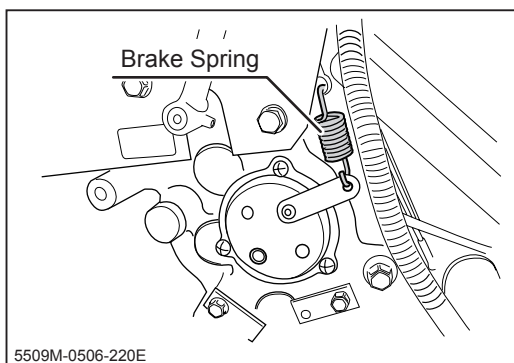
## Parking Brake



1. Move drive clutch lever to [ON] and inspect if there is enough play in brake spring.

### NOTE

- Clutch levers are of deadman-control type and do not stay in engaged ([ON]) position. Tie levers with a string to keep them in [ON] position.



2. Release drive clutch lever to [OFF] position and see if spring stretches 3-4mm. Adjust brake wire to make brake spring stretch within that range.

### NOTE

- Push and pull machine with drive clutch levers in [OFF] position to make sure brake is engaged and machine does not move.
- Push and pull machine with drive clutch levers in [ON] position to make sure brake is disengaged and machine can be moved easily.

## Cutting System

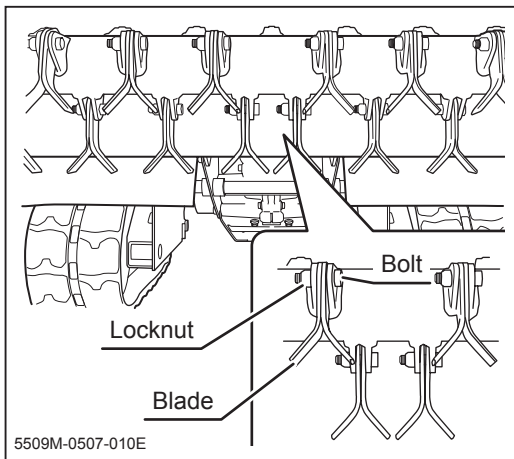
### Inspecting and Replacing Cutting Blades

#### **⚠ WARNING!**

- Always inspect cutting blade for bending, missing or wear before operation. Neglecting this may reduce working efficiency or throw broken blade out and cause accident against operator or bystander.
- Cutting blades are rotating at high speed in the cutting rotor deck. Just one missing or broken blade cause abnormal vibration. This may shorten machine life causing incorrect operation or crack on the machine body. When replacing worn blades, replace all blades at once in order to keep rotational balance.
- Always stop engine and scan the surroundings when inspecting or replacing cutting blades.
- Cutting blades are sharp. When replacing blades, wear thick gloves or wrap the blade with thick cloth and handle carefully.
- When replacing blades, always replace bolts and nut also. Using non-genuine parts may void warranty and may cause damages or an accident.
- Never modify the shape of cutting blade. It may break cutting blade or vibration on machine body. It is extremely dangerous.

#### **⚠ CAUTION!**

- The person should have appropriate tools and knowledge of maintenance for replacing or adjusting cutting blades.



1. When blades wear and do not cut well, turn them over to use the other edges of the blades.
2. There are 46 blades mounted in pairs on the 23 mounting brackets on the rotor drum.
3. Undo mounting bolt and locknut to replace or turn over blades.
4. When installing new or turned blades, face the flat end of locknut toward blades.
5. When tightening, make sure there are more than two threads of bolt protruding out of lock nut and the blade pair moves freely.

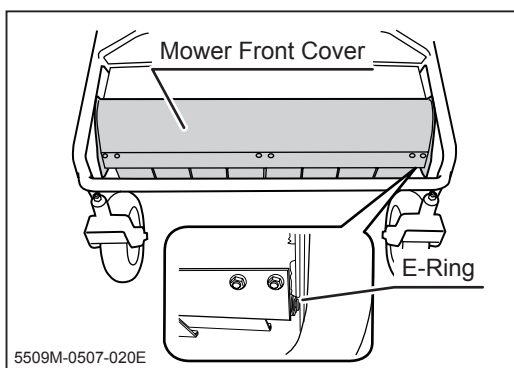
## NOTE

- Inspect cutting blades earlier than usual if machine is used in dried soil and sand. The cutting blades may wear sooner than usual.
- It is a better practice to purchase cutting blades, bolts and nuts beforehand in case anything goes wrong.

## Inspecting Mower Front Guard

### **⚠ WARNING!**

- Replace mower front guard if it is deformed, damaged or cracked. Deformed, damaged or cracked front guard cannot provide protection against rocks and stones and may cause damages to the surroundings or injuries to the operator or the bystanders.

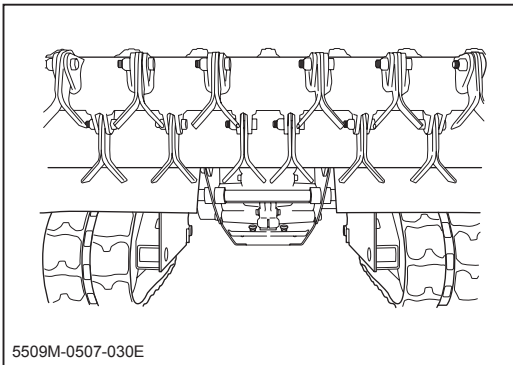


1. Remove cover bracket from rotary cover.
2. Remove E-rings and washers on the ends of the cover pivot to remove mower front cover.
3. Mount new mower front guard in the reverse order. Make sure the new cover moves freely.

## Cleaning Inside Cutting Rotary Cover

### **⚠ WARNING!**

- Stop engine and make sure cutting rotary is stopped before cleaning inside cutting rotary cover.



Cut grass, vine, mud or soil inside cutting rotary cover hinder operation of cutting rotary. Regularly inspect inside cutting rotary cover, remove grass and vine, and clean mud or soil that is accumulated inside cover.

## Adjusting Cutting Rotary Clutch Wire

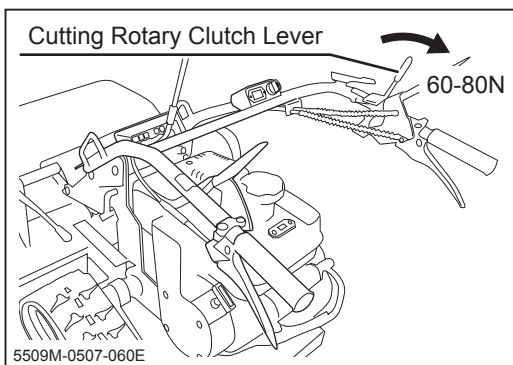
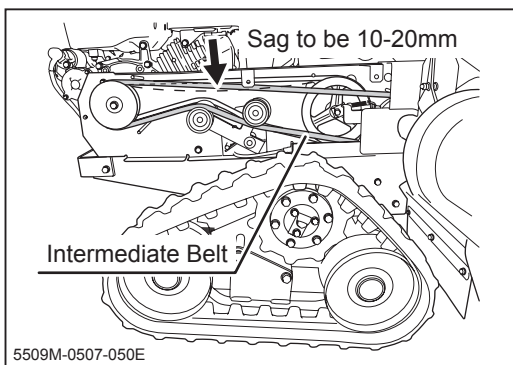
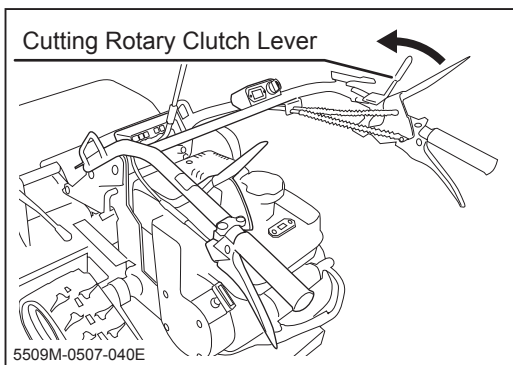
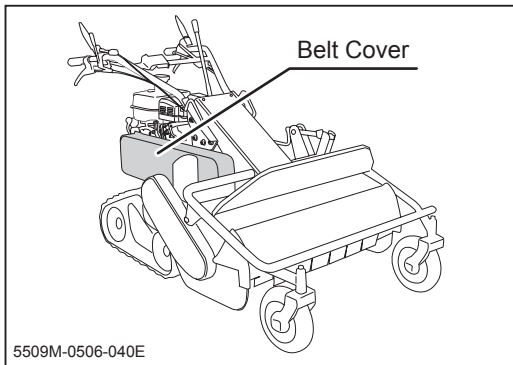
### **⚠ WARNING!**

- Stop engine and make sure cutting rotary is stopped before adjusting cutting rotary clutch wire.
- When engine and cutting rotary need to be run for checking, shift to [N (neutral)] to do so. Keep away from any moving parts. Keep off bystanders.
- Reinstall belt covers after adjustment.
- Do not overtighten belt. If belt is too tight, it hinders the operation of cutting rotary clutch and may cause an accident.

Cutting rotary clutch is of belt-tension type.

If tension is too low, belt slips, yielding less mowing power and wears belt.

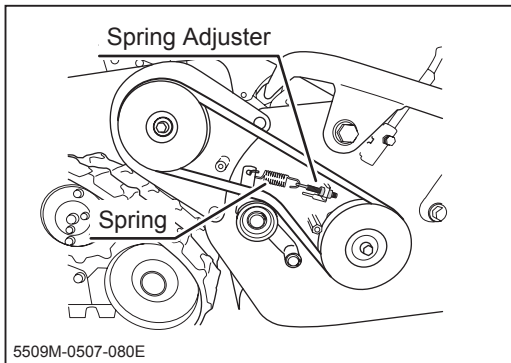
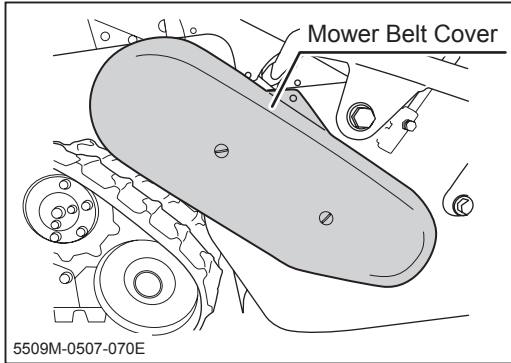
If tension is too high, drive clutch does not disengage and cutting rotary does not stop.



## Adjusting

1. Park machine on level surface and stop engine.
2. Remove belt cover.
3. Move cutting rotary clutch lever to [ON] position.
4. Press the top of belt with finger to see if the sag is between 10 and 20mm. If not, adjust drive clutch wire so the sag is within that range.
5. Alternatively, adjust cutting rotary clutch wire so that the operating force of the clutch lever is between 60 and 80N (6.0 and 8.0kgf, respectively) in the middle of the lever.
6. Shift to [N (neutral)] and start engine. Operate cutting rotary clutch lever to see if drive belt stops completely when lever is moved to [OFF] position. If not, readjust.
7. Install belt cover.

## Mower Belt



### Adjusting

1. Park machine on level surface and stop engine.
2. Remove mower belt cover.
3. Inspect if length of spring is within 68-71mm range.
4. If not, adjust the length of spring with spring adjuster.
5. Reinstall mower belt cover.

### NOTE

- If tension is too low, belt slips, yielding less cutting power and wears belt.

## Mower Brake Wire

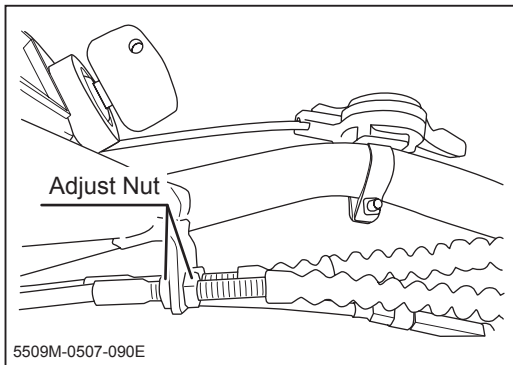
### **⚠ WARNING!**

- Park machine on a level surface and apply parking brake. Chock crawlers.
- Keep off bystanders. Make sure there is no obstacles within the vicinities of machine when makein an adjustment.


Cutting rotary brake needs to be adjusted properly.

If brake wire is too tight, it causes brake shoes to wear out prematurely and damages cutting rotary brake.

If brake wire is too loose, it takes long time for cutting rotary to stop or it does not stop at all, creating a dangerous situation when cutting rotary needs to stop.



## Adjusting

1. Shift to [N (neutral)] and start engine.
2. Turn throttle lever to [  (fast)].
3. With cutting rotary clutch lock lever pressed, move cutting rotary lever to [ON] position.
4. Let cutting rotary run until its rotation is steady.
5. Move cutting rotary clutch lever to [OFF] position. Observe if cutting rotary stops within 4 to 6 seconds.
6. If not, adjust cutting rotary brake with adjust nuts on the cutting rotary brake wire.

## Electrical System

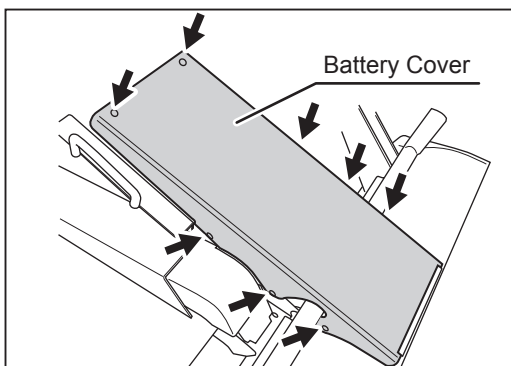
### Inspecting Battery

#### **⚠ WARNING!**

- Battery fluid (sulfic acid) is corrosive, and it causes severe burns. If battery fluid is spilt on the skin or clothes, immediately wash with running water. If it enters an eye, immediately wash with running water and seek medical help.
- Fire and explosion hazard. Battery can emit flammable fumes. Keep flame and spark away.
- When wiping battery clean, use damp cloth. Dry cloth can generate static electricity and can ignite battery fumes.
- In order to avoid short circuit, remove negative (-) cable first then remove positive (+) cable when removing battery. When installing, connect positive (+) cable first, then connect negative (-) cable.

#### **⚠ CAUTION!**

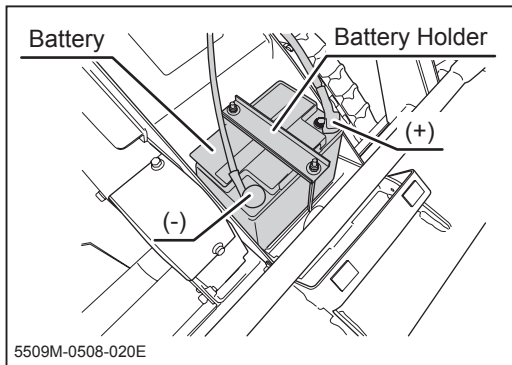
- Take off battery from machine when charging.



#### **Charging**

1. Undo 8 bolts to remove battery cover.





2. Remove negative (-) cable.
3. Remove positive (+) cable.
4. Remove battery holder to take off battery.
5. Clean battery with damp cloth. Visually inspect battery. If there is any damage, crack or leak, replace battery.
6. Charge battery according to the **Operator's Manual for Battery Charger**.
7. Install battery and battery holder. Apply small amount of grease on battery terminals to prevent corrosion.
8. Connect positive (+) cable securely and cover terminal with rubber boot.
9. Connect negative (-) cable securely and cover terminal with rubber boot.
10. Reinstall battery cover.

## NOTE

- This machine uses maintenance-free (MF) battery.  
    **Battery Type: ACT50A19L (Panasonic)**
- Do not open battery. Battery fluid does not need to be checked or added on an MF battery.
- Use battery charger specifically designed for MF battery. Read and follow charger's operator's (instruction) manual when charging.
- Battery discharges even when not in use. Regularly (once a month) charge battery.

## After Use Care

### After Normal Use

#### **⚠ DANGER!**

- Never store fuel place near fire, spark or high tempratured place. It may cause fire.

#### **⚠ WARNING!**

- Fire hazard; clean machine of cut grass and similar material after use. Cut grass that is accumulated on the machine can catch fire.
- Do not cover machine until heated parts are cool down. Covering machine soon after operation may cause fire.

#### **⚠ CAUTION!**

- Do not wash engine or control panel with running water; water may enter inside and cause rust or damage.

1. Clean machine; wash off dirt, mud, and remove grass and other foreign materials after use.
2. If machine is to be left outside, cover machine with protective, water-proof covering after it is cooled off.
3. Always turn engine switch and shift each clutch lever to [OFF] position.

## After Cold Weather Use

### **⚠ WARNING!**

- Fire hazard; clean machine of cut grass and similar material after use. Cut grass that is accumulated on the machine can catch fire.

### **⚠ CAUTION!**

- Do not wash engine or control panel with running water; water may enter inside and cause rust or damage.
- Clean machine after use; dirt or foreign objects may freeze and cause damage.
- Do not attempt to move machine when it becomes inoperable due to freezing

1. Clean machine; wash off dirt, mud, and remove grass and other foreign materials after use.
2. Park machine on a paved or firm, a dry surface, or a bed of lumber.
3. If machine is to be left outside, cover machine with protective, water-proof covering after it is cooled off.

## Storage

### **⚠ WARNING!**

- Fire hazard; do not store machine where there is a possibility of ignition.


### **⚠ CAUTION!**

- Do not wash engine or control panel with running water; water may enter inside and cause rust or damage.
- Clean machine before storage; dirt or foreign objects may freeze and cause damage.
- Do not store machine in a humid, dusty, or hot place.

## Machine

### **NOTE**

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- Rubber plates or resin covers may deteriorate by exposing under direct sunlight for a long period.
1. Follow **Maintenance Schedule** and inspect each part of the machine. Maintain faulty part. (Refer page 32)
  2. Run engine at idle for 5 minutes.
  3. Stop engine and turn throttle lever fully to [  (slow)].
  4. Park machine on a concrete or a dry surface. Do not store machine in a humid, dusty or where machine expose under direct sunlight.
  5. Make sure shift lever is in [N (neutral)] and all other levers are in their [OFF] positions.
  6. Turn fuel cock to [OFF]. If machine will not be in use for more than a month, drain fuel from carburetor and fuel.
  7. Apply oil or grease on the respective lubrication or grease points.
  8. Clean exterior surface of machine by cloth contains oil and apply rust inhibiting coating on a part where get rusty.

## Engine

### NOTE

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- Refer to Operation Manual for the engine, for detailed instructions on preparing engine for storage.
  
  - Drain fuel from carburator and fuel tank before storing machine for long time period. Deteriorated fuel cause failure on starting and engine rotation. Do not use fuel left in the fuel tank for long time.
1. Drain fuel from fuel tank.
  2. Set appropriate container under fuel cock. Remove strainer (fuel cock) cup, wash cup and net. (Refere **Engine Manual**)
  3. Drain fuel in carburator. (Refere **Engine Manual**)
  4. Maintain air cleaner. (Refere **Engine Manual**)
  5. Change engine oil. (Refer page 38)

## Troubleshooting

- If any malfunction or abnormal condition is found, immediately stop using the machine and take an appropriate measure according to the Troubleshooting chart below. If the malfunction or abnormal condition is not listed in the chart, or the suggested measure does not solve the problem, consult with your CANYCOM representative.
- Some corrective measures listed below require special knowledge and/or equipment. Please contact your CANYCOM representative in such a case.

Area	Malfunction	Possible Cause	Corrective Measure	Ref.
Engine	Engine does not start, or is difficult to start	Out of fuel.	→Fill fuel.	Page 15
		Drive clutch lever is in [ON] position	→Move to [ON] position	Page 17
		Engine switch is in [STOP] position	→Move to [ON] position	Page 17
		Excessive fuel in the engine.	→Wait a while and try starting again.	
		Insufficient or wrong oil.	→Fill or change oil.	Page 38
		Dirty or damaged spark plug.	→Clean or replace the spark plug.	Page 40
		Other (other than the above).	→Follow the instructions in "Starting" to restart. If problem persists, please contact your CANYCOM representative.	Page 16
	Engine stalls.	Out of fuel.	→Fill fuel.	Page 15
	Engine stops abruptly.	Out of fuel	→Fill fuel.	Page 15
		Other (other than the above).	→Please contact your CANYCOM representative.	
Idling is not stable.	-	→Please contact your CANYCOM representative.		

Area	Malfunction	Possible Cause	Corrective Measure	Ref.
Engine	Poor power or acceleration	Bad fuel	→Change fuel.	Page 15
		Insufficient intake air (clogged air cleaner).	→Clean or replace the air cleaner.	Page 39
		Loose drive belt.	→Adjust	Page 45
		Excessive load	→Reduce load.	
		Other (other than the above).	→Please contact your CANYCOM representative.	
	Irregular noise or vibration from or around the engine		→Please contact your CANYCOM representative.	
	Excessive oil consumption		→Please contact your CANYCOM representative.	
	Engine overheats	Insufficient amount of engine oil.	→Fill oil.	Page 38
		Rotating screen or cooling fins are clogged or blocked.	→Clean.	
	Excessive fuel consumption	Clogged air cleaner.	→Clean or replace the air cleaner.	Page 39
		Other (other than the above).	→Please contact your CANYCOM representative.	
	Black smoke comes out of exhaust	Choke is not fully open.	→Open the choke fully.	Page 19
		Clogged air cleaner.	→Clean or replace the air cleaner.	Page 39
		Bad fuel	→Change fuel.	Page 15
		Engine oil level is too high.	→Adjust the oil level.	Page 38
		Other (other than the above).	→Please contact your CANYCOM representative.	
	White or blue smoke comes out of exhaust	Bad fuel.	→Change fuel.	Page 15
		Engine oil level is too high.	→Adjust the oil level.	Page 38
		Improper engine oil.	→Change oil.	Page 38
		Other (other than the above).	→Please contact your CANYCOM representative.	

Area	Malfunction	Possible Cause	Corrective Measure	Ref.
Drive Train	Machine does not move when drive clutch lever is operated.	Shift lever is in neutral position.	→Shift to desired position firmly.	Page 22
		V- belt is wear out.	→Replcace V-belt.	
		V-belt is loose.	→Adjust V-belt.	Page 45
		Other (other than the above).	→Please contact your CANYCOM representative.	
	Machine moves when drive clutch lever is disengaged.	Drive or brake clutch is not properly adjusted.	→Adjust drive and brake clutch wires.	
	Machine does not turn smoothly.	Side clutch is not properly adjusted.	→Adjust side clutch wires.	Page 47
		Track is not properly adjusted or wear.	→Adjust track properly or replace.	Page 43
	Machine does not run straight.	Track is not properly adjusted.	→Adjust track properly.	Page 43
		Other (other than the above).	→Please contact your CANYCOM representative.	
	Brake	Brake or parking brake does not work well, or machine pulls to one side when braked.	Brake is not proerly adjusted.	→Adjust.
Brake is wet with water.			→Apply brake a few times to dry.	
Other (other than the above).			→Please contact your CANYCOM representative.	
Chassis	Machine vibrates abnormally.	Track is not properly adjusted.	→Adjust tire pressure.	Page 43
		Cut grass or vines are tangled to main axle.	→Untangle.	
		Cutting blade or main axle is deformed or damaged.	→Replace defective part.	Page 48
		Other (other than the above).	→Please contact your CANYCOM representative.	



Area	Malfunction	Possible Cause	Corrective Measure	Ref.
Cutting System	Cutting blade does not rotate	Cutting rotary drive belt is severed.	→Replace.	
	Cutting blade does not stop	Blake lining is worn.	→Replace.	
	Machine does not move forward. (Grass cannot enter into cutting rotor deck)	Grass is wet.	→Cut when grass is dry.	
		Grass is too long	→Cut in several steps at different heights.	
		Cutting height is too low.	→Raise cutting height.	
		Engine speed is too low.	→Raise engine speed.	
		Machine slips.	→Reduce speed.	
	Cutting rotary drive belt slips.	Belt is loose.	→Adjust belt tension.	Pages 50, 52
		Belt is worn.	→Replace.	Pages 50, 52
		Cut grass accumulate on pulley	→Clean.	
		Cut grass or vines accumulate in the cutting blade shield.	→Clean.	
	Abnormal vibration occurs when cutting blade is rotated.	Cutting blade is damaged or lost.	→Replace cutting blades.	Page 48
		Foreign object is caught by cutting blade and pulley.	→Remove or clean foreign object.	
		Other (other than the above).	→Please contact your CANYCOM representative.	
	Some grass is left uncut.	Grass is too long.	→Cut in several steps at different heights.	
		Engine speed is too low.	→Raise engine speed.	
		Driving speed is too high.	→Drive slow.	
		Cutting blade is damaged or worn.	→Replace.	Page 48
		Cut grass or vines accumulate in the cutting blade shield.	→Clean.	

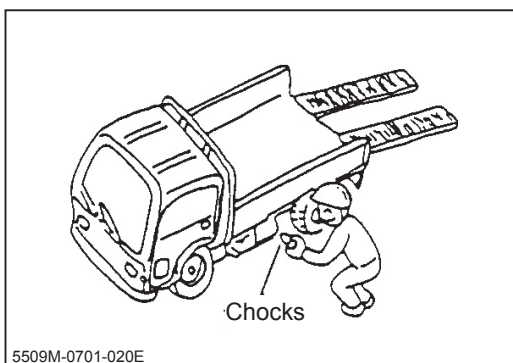
Area	Malfunction	Possible Cause	Corrective Measure	Ref.
Cutting System	Cutting blade cuts into ground.	Cutting height is too low.	→Raise cutting height.	
		Machine turns too fast.	→Turn slowly.	
		Work site has undulations.	→Raise cutting height.	
		Cutting blade (knives or stay) is bent.	→Replace.	
	Cutter load is too high.	Engine speed is too low.	→Raise engine speed.	
		Driving speed is too high.	→Drive slow.	
		Cutting blades are worn out.	→Replace.	Page 48
		Cut grass or vines are tangled to cutting blade axle.	→Untangle.	
		Handle lever height is not properly adjusted.	→Adjust height properly.	
	Nimber of scatter objects are increased	Antiscattering cover is damaged.	→Replace.	Page 49
		Cutting height is too low.	→Raise cutting height.	
		Many foreign objects, such as waste cans are exist in the work site.	→Remove foreign objects before working.	
	Cutting rotor does not move when cutting rotor clutch is operated.	V- belt is wear out.	→Replace.	Pages 50, 52
		V-belt is too loose.	→Adjust cutting rotor or V-belt for rotor properly.	Pages 50, 52
	Cutting rotor does not stop when cutting rotor clutch is disengaged.	Cutting rotor clutch wire is not adjusted properly.	→Adjust wire properly.	Page 50
Brake shoe is wear out.		→Please contact your CANYCOM representative.		

## Hauling

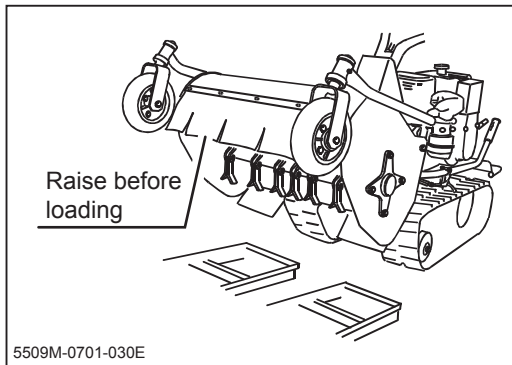
### Loading and Unloading

#### **⚠️ WARNING!**

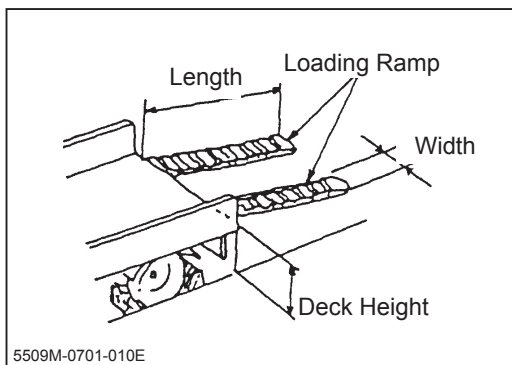
- Park transporter (truck) on a level ground. Always use chocks to secure wheels.
- Do not allow bystandars to come close to machine or transporter when loading or unloading machine.
- Use only loading ramps with sufficient strength (to withstand the combined weight of machine and operator), width (more than twice the width of tire.), and length (more than 4 times the height of loading deck of transporter), and have anti-slip ramp surfaces.
- Secure the hooks of loading ramps firmly and flush with loading deck.
- Move slowly forward when loading onto, and move slowly backward when unloading off of transporter. Pay special care when going over the joint between loading deck and ramps; machine may tip.
- Do not turn on loading ramps. Machine may fall.
- Tie down machine securely. Make sure machine does not move around.



1. Park the transporter on a level ground. Use parking brake and secure wheels with chocks. This is to prevent unintended accident when loading and unloading machine from transporter.



- Use anti-slip surfaced loading ramp that is enough with length, width and strength stated "**Guidance for the Loading Ramp**" below. Use "1" gear when loading and "R" gear when unloading at reduced engine speed with caution. Raise mower deck with cutting height adjust lever before loading.



## Guidance for the Loading Ramp

- Length..... More than 4 times the deck height of the Truck.
- Width..... More than 1.5 times the length of the crawler.
- Strength....Each ramp must tolerate more than 1.5 times the weight of machine.
- Has anti-slip surface.

## Circuit Diagram

