

Agricultural Mower

CMX2414

Operator's Manual

MASAO



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 this machine. Make sure to read and understand the manual thoroughly before operating this machine. Also make sure to read the separate engine manual.

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 the 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.**
- **Do not modify this machine, or do not operate this machine with the safety covers removed or open. A serious accident could result.**

NOTICE

- **This machine can 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.**

NOTE

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





Notice to Owner

| NOTE |
|------|
|------|

- | |
|--|
| <ul style="list-style-type: none">• 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 to avoid these hazards.

| Warning Term | Definition |
|---|--|
|  | Indicates an imminently hazardous situation which will result in death or serious injury if not avoided. |
|  | Indicates a potentially hazardous situation which could result in death or serious injury if not avoided. |
|  | Indicates a potentially hazardous situation which could result in minor to moderate injury if not avoided. |
|  | Indicates a potentially hazardous situation which could result in property damage if not avoided. |

In addition, the following term is used to indicate important information.

| | |
|---|---|
|  | Indicates important information which needs particular attention. |
|---|---|

Warranty and After-Sales Service

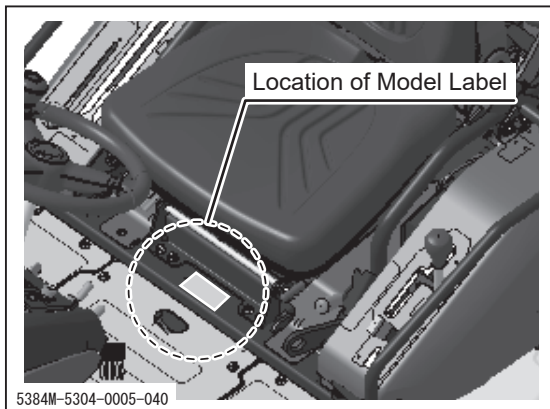
Warranty

CHIKUSUI CANYCOM, INC. guarantees this product, based on the terms of warranty.

After-Sales Service

Consult your local CANYCOM dealer or our company's sales department regarding service orders or any questions or problems that can arise when using this machine. Please make sure to have the product name, serial number, and the make and type of the engine handy at the time of contact. The model and serial numbers 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 (Page 18).

Location of Model Label



Model Label



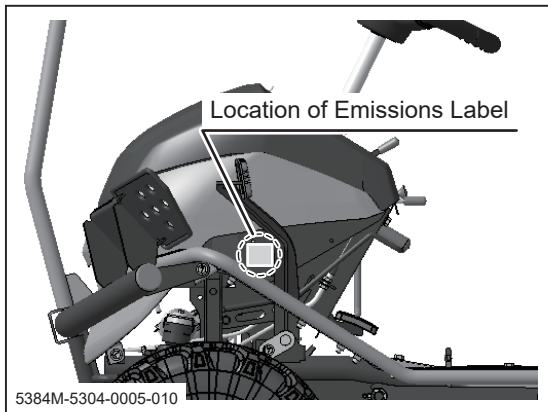
Availability of Spare Parts

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

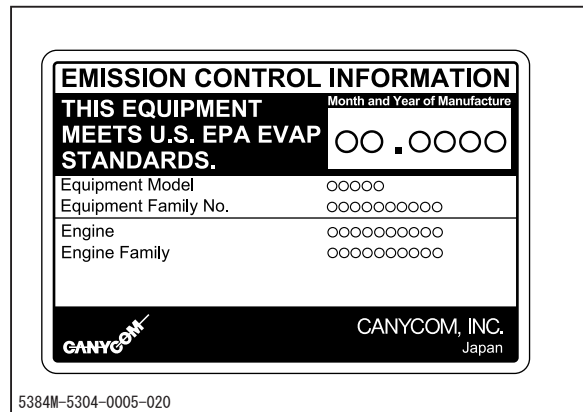
Emission Control Information

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



Sample label shown. Emission control information is subject to change each model-year. Please refer to the actual emissions label on the machine for details.

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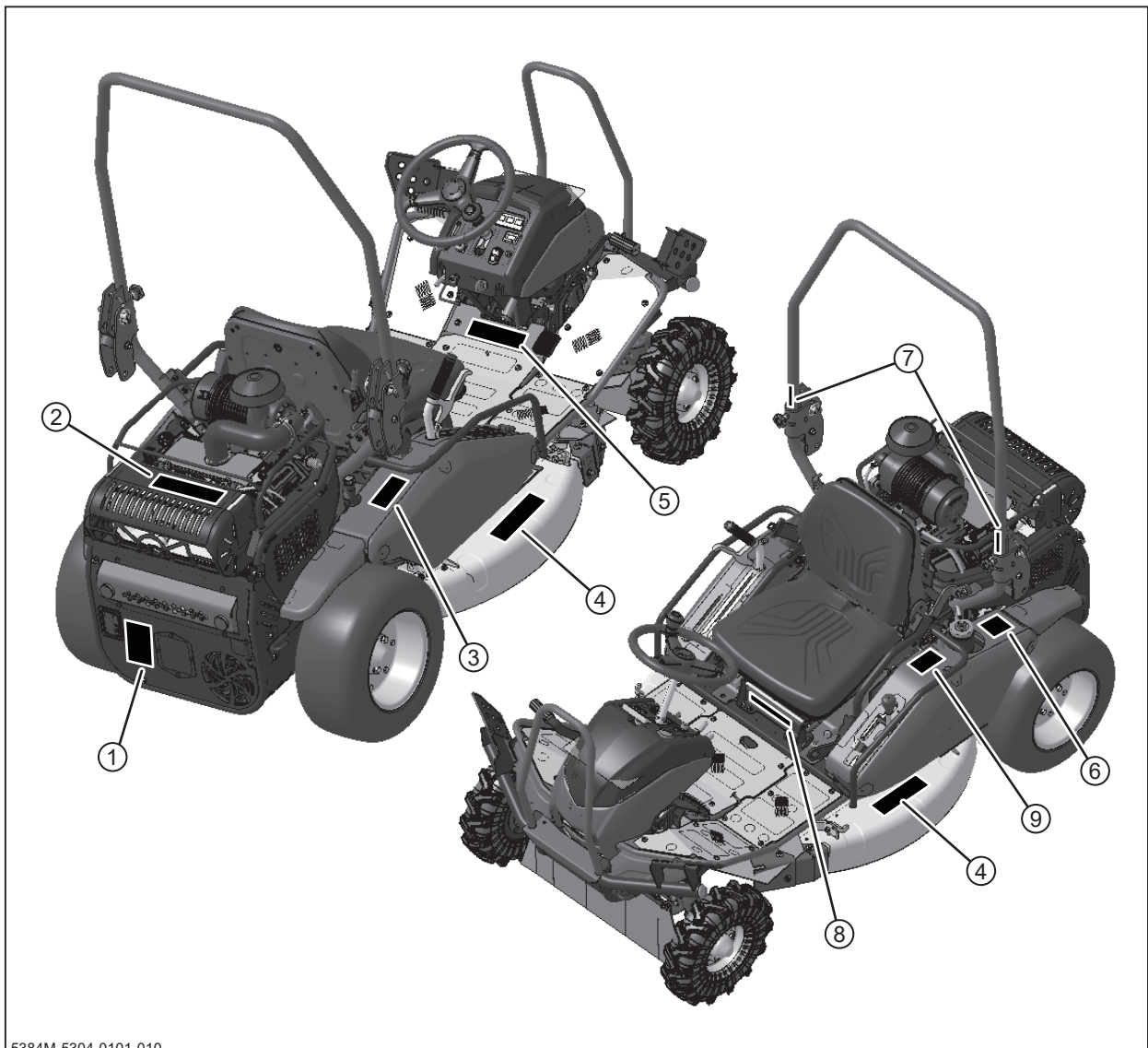
- Engine Manual
- Battery Manual

* 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.



5384M-5304-0101-010

① 5384 5105 000

CMX2414

| | | |
|------------------|----------------------------|--|
| Rated Output | 18.5kW / 3600rpm | |
| Set Engine Speed | 3300rpm | |
| Machine Mass | 430kg (948lbs) | |
| Gradeability | 25 degrees | |
| Stability Angle | Left/Right 25 / 25 degrees | |

⚠ WARNING

Moving parts hazard. Stop engine when servicing engine.

⚠ WARNING

Moving parts can crush and cut. Do NOT operate with guard removed.

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Ukiha-City,Fukuoka 839-1396,Japan
Supplier : CANYCOM USA, INC.
18630 80th Court South, Bldg. F,
Kent WA 98032

② 5377 5014 001

⚠ WARNING

a

There is a risk of fire if grass and debris accumulate on the machine.

- ① Remove any grass, dust, and debris that has collected around the muffler or engine.
- ② To prevent a fire caused by an electrical short, carefully inspect the wiring for interference, damage, and secure connections before operation.
- ③ Clean the inside of the rotating screen and the grille regularly.
- ④ When cutting dry grass, clean the machine and remove cut grass, dust, and debris at least every hour.

b

Hot surfaces. Do NOT touch.

③ 5377 5012 000

| | | | | | | | | | |
|--|----------------|--|----------------|--|----------------|---|----------------|--|----------------|
| a | WARNING | b | WARNING | c | WARNING | d | WARNING | e | WARNING |
| | | | | | | | | | |
| Read and understand operation manual before operating and maintaining machine. Do NOT operate this machine unless you are trained. | | Always start and run the engine in a well ventilated place. Poisonous exhaust gas can cause serious sickness or death. | | Avoid operating near bystanders and cars. Thrown objects can cause injury and material damage. | | Noise Hazard Wear approved ear protection during operation. | | Always stop the engine and remove the ignition key before servicing. | |

④ 5377 5013 000

| | | |
|---|--|---|
| ⚠ DANGER | ⚠ WARNING | ⚠ CAUTION |
| a | b | c |
| Keep hands and feet away from blade cover. Do NOT operate while blade cover is open. Rotating blades can cause serious injury or death. | Keep blade cover closed during operation. Thrown objects or blade contact can cause serious injury or death. | <p>d In blades and pins after every use. Make certain blades rotate freely.</p> <ul style="list-style-type: none"> - In a blade is broken, replace it immediately. - Pins replace blades in pairs. Always replace blade pins and wave washers also. Vibration may occur. - When blade stay is worn beyond limit, has a crack or is deformed, contact your CANYCOM representative to have it replaced immediately. Blade stay can break and fly off. - When something gets tangled to the blades, stop engine and untangle. Damage due to vibration may occur. - Always wear thick protective gloves and handle carefully when handling blades. Blades or blade stay may become sharp due to wear. |

⑤ 5384 5106 000

Parking Brake

⚠ WARNING

Turn the mower clutch to [ON] only when cutting. Keep it in [OFF] position all the other times.

Mower Clutch

⑥ 5377 5011 000

a **⚠ CAUTION**

- Due to the safety mechanism, the engine stops if the operator leaves the seat while the engine is running.
- Do not hold the drive lever and depress the parking brake pedal at the same time.
- Use [L] mode when cutting. Cutting in [H] mode can put excessive strain and damage the cutting mechanism.
- Always stop the machine to shift between 2WD or AWD modes.
- Use the 2WD mode under the normal condition.

UNLEADED GASOLINE ONLY

b **⚠ DANGER**

Fire hazard. Gasoline is highly flammable. Keep fire and spark away when refuelling.

⑦ 5372 5021 000

⑨ 5384 5107 000

⚠ WARNING

- Fire hazard.
- In a dusty place, clean the air cleaner element twice a day.
- Clean inside the engine cover after use. Remove dust and debris from the dust cover and cooling fins of the engine.

Warning beeper pattern indicates:

| | | |
|-------------|----------|-------------------------------------|
| once | ●●●● | Fallover warning (25 deg. or more) |
| twice | ●●●●● | Low fuel level |
| three times | ●●●●●● | Low battery voltage |
| four times | ●●●●●●● | Battery voltage circuit malfunction |
| continuous | ●●●●●●●● | Fallover warning (30 deg. or more) |

* ● indicates a beep and — indicates a pause.

⑧ 5377 5015 000

⚠ WARNING

- Inspect the machine before use.
- Before leaving the machine, apply parking brake, stop the engine, and remove the key.
- Inspect the work site for holes, ditches, obstacles, etc. before operation.
- Observe the slope; do not operate on a slope steeper than the gradeability angle (25 deg. for AWD, 15 deg. for 2WD).
- Do not make a sudden maneuvers.
- Drive forward to mow. This minimizes stones from being thrown.

1. 5384 5105 000
 - a. Entanglement hazard. Moving belts and pulleys inside. Stop the engine before opening the rear cover for service.
 - b. Cut and crush hazard. Moving fan inside. Do not operate with the guard removed. Stop the engine before servicing.

2. 5377 5014 001
 - a. Fire hazard. Mowing dust can catch fire. Regularly clean inside the engine room and the rotating screen and grill. Check the electrical harness regularly to prevent short circuit.
 - b. Burn hazard. The engine and its ancillaries can get hot during or soon after use. Do not touch right after the machine is stopped. Allow the machine to cool before opening the engine hood.

3. 5377 5012 000
 - a. Read and understand the operator's manual before use.
 - b. Always start the engine in a well-ventilated place. Exhaust gas contains poisonous substances such as carbon monoxide.
 - c. Thrown object hazard. Block out the work area and keep people away.
 - d. Wear ear protection while in use. This machine emits noise which can impair hearing.
 - e. Stop the engine and remove the key before servicing this machine. Also, read and understand the operator's manual before servicing this machine.

4. 5377 5013 000
 - a. Cut or sever hazard. Moving mower blades can cut or sever your hand. Stop the engine, disengage the mower clutch, and make sure the blade has stopped completely before inspecting or servicing the mower.
 - b. Thrown object hazard. Mower can throw stones while in use. Keep bystanders away.
 - c. When a blade is broken or missing, or the blade stay is worn beyond limit, replace it immediately. When something gets tangled to the mower, untangle it. Wear thick gloves when handling the blade and blade stay.
 - d. Clean blades and blade pins after every use. Mowing dust can prevent blades from moving freely, increasing the change of injury when replacing.

5. 5384 5106 000

Turn the mower clutch on only when mowing to minimize the chance of accidents.

6. 5377 5011 000
 - a. - This machine has a safety mechanism; if you leave the seat while the mower is running, the engine stops.
 - Holding the drive lever and operating the drive pedal can damage the linkage.
 - Use [L] mode to mow. Using [H] mode can put extra strain to the mowing mechanism and cause damages to it.
 - Use 2WD mode under normal condition.
 - b. Fire hazard. Gasoline is highly flammable. Keep fire and spark away when refueling.

7. 5372 5021 000
Pinch and crush hazard at the ROPS joint. Keep hands and other body parts away when erecting the ROPS. Read ROPS and Seat Belt (page 25).

8. 5377 5015 000
 - To avoid accidents, inspect the machine and the work site before use, and apply parking brake and remove the key from the machine after use.
 - To minimize risks, do not make sudden maneuvers and drive forward to mow.

9. 5384 5107 000
Fire hazard. Clean the machine regularly during mowing to avoid fire.

Safety Mechanisms

This product is equipped with the following safety mechanisms.

ROPS (Roll Over Protection Structure) and Seat Belt

This machine is equipped the ROPS (Roll Over Protection Structure) and the automotive-style retractable seat belt. This ROPS meets the ISO 21299: 2009 standard, and its certification is attached to the ROPS.

The ROPS protects the operator in case of overturn (rollover) accident. The ROPS must be in the normal operating position (not folded) and the operator must wear the seat belt when using this machine. The ROPS can be folded only for convenience of transporting and storing the machine.

Start Interlock Mechanism

The engine can be started only when the parking brake is in [**(P)**] (engaged) position and the mower clutch in [OFF] position. This is to prevent unintended movement of the machine or the cutting blade when starting the engine.

Automatic Blade Stopping Mechanism

Due to the safety mechanism, the engine stops if the operator leaves the seat while the engine is running.

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 the 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 can 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 has a riding capacity for one person only. Do not carry passengers other than the operator.
- Observe the weight limit of this machine: 120kg (265lbs).
- Always keep in mind that care and concentration is required when working with ride-on machines.
- Loss of control on the slope cannot be regained by an application of the brake. The main reasons for loss of control are:
 - insufficient grip of tires.
 - excessive speed.
 - misjudging of the ground conditions, especially gradient.

Preparation

WARNING

- **Fuel is highly flammable. See Checking and Filling Fuel, page 20 for important safety information on handling fuel.**

- Always wear the 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 can get tangled in the 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 20) before starting the machine. Repair or replace damaged parts before starting the machine.

Operation

This machine is intended for cutting grass and bushes. Any other use can 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 or exhaust pipe 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.
- 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.
- Do not operate this machine under adverse weather. If there is a risk of lightning, immediately leave the machine and seek cover in a safe area.
- 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 tipping 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 9.
- Never attempt to drive over a large obstacle such as rock or fallen tree.

- Always travel slowly and use extra caution when operating on an unfamiliar terrain. Be alert when traveling on a changing terrain.
- Never operate on a terrain that you are not comfortable with. Avoid the 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 or a landslide 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.

Driving on a Slope

DANGER

- **Do not use this machine on an incline steeper than 25 degrees. If the warning buzzer sounds, immediately move to level ground. There is a risk of tipping over or engine failure.**

WARNING

- **Driving on the 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 the slope as described in this manual.
- Driving on the 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 the 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, the drive lever, the drive pedal or the steering wheel 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 the 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 the slope.
- Before driving down a slope, stop and shift auxiliary transmission to [L] (low speed) 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.
- Shut 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 can 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 wheels at the lower end of the machine.
 - Park the machine facing uphill
 - Do not park sideways on the slope.

- Never park on the instable surface. Do not park near the edge of a cliff.

- Observe all the previous precautions for driving, driving on a slope.

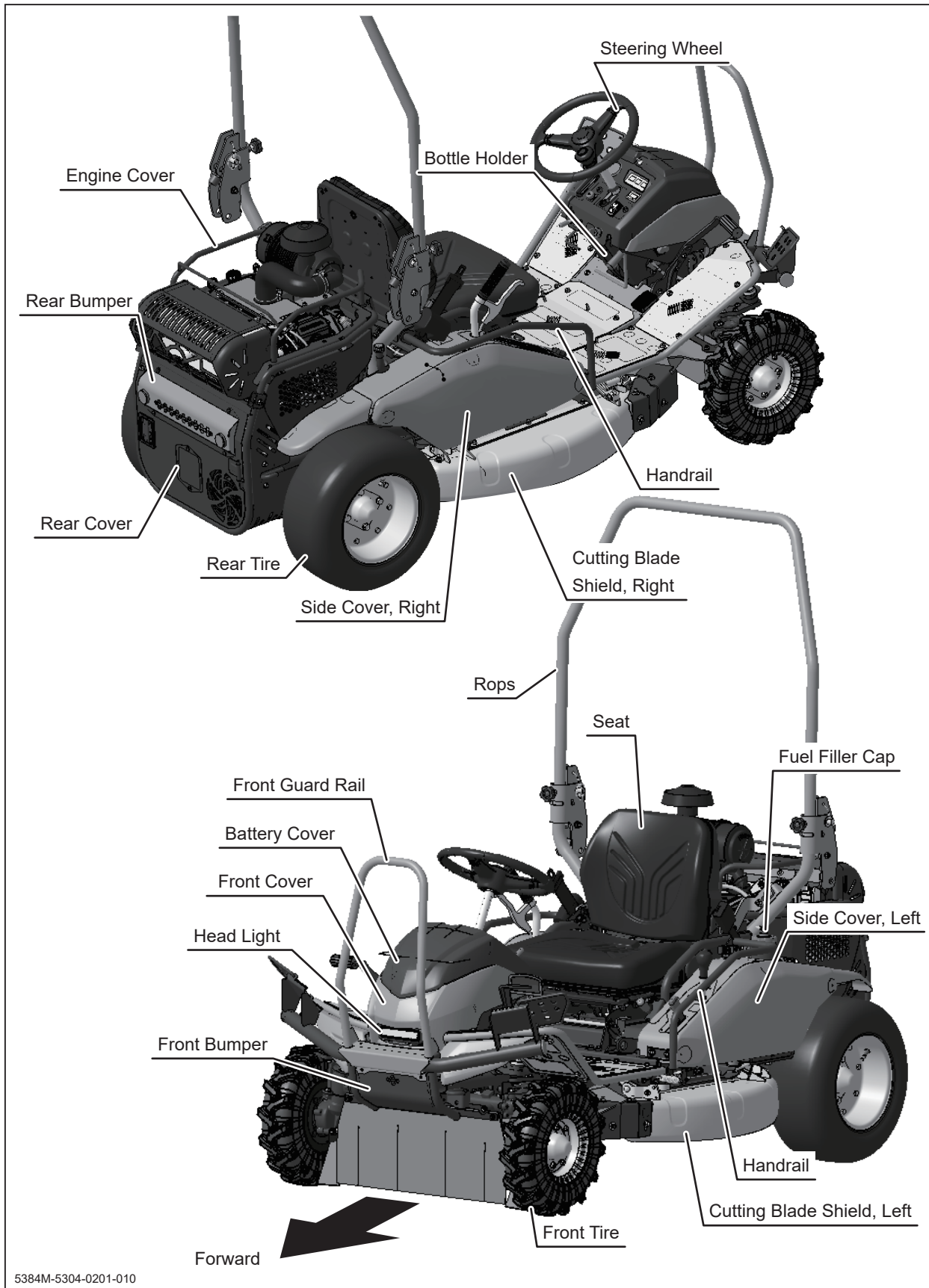
- Whenever you park the machine, apply the parking brake and stop the engine. Remove the key whenever you leave the machine unattended to prevent unauthorized use or accidental starting.

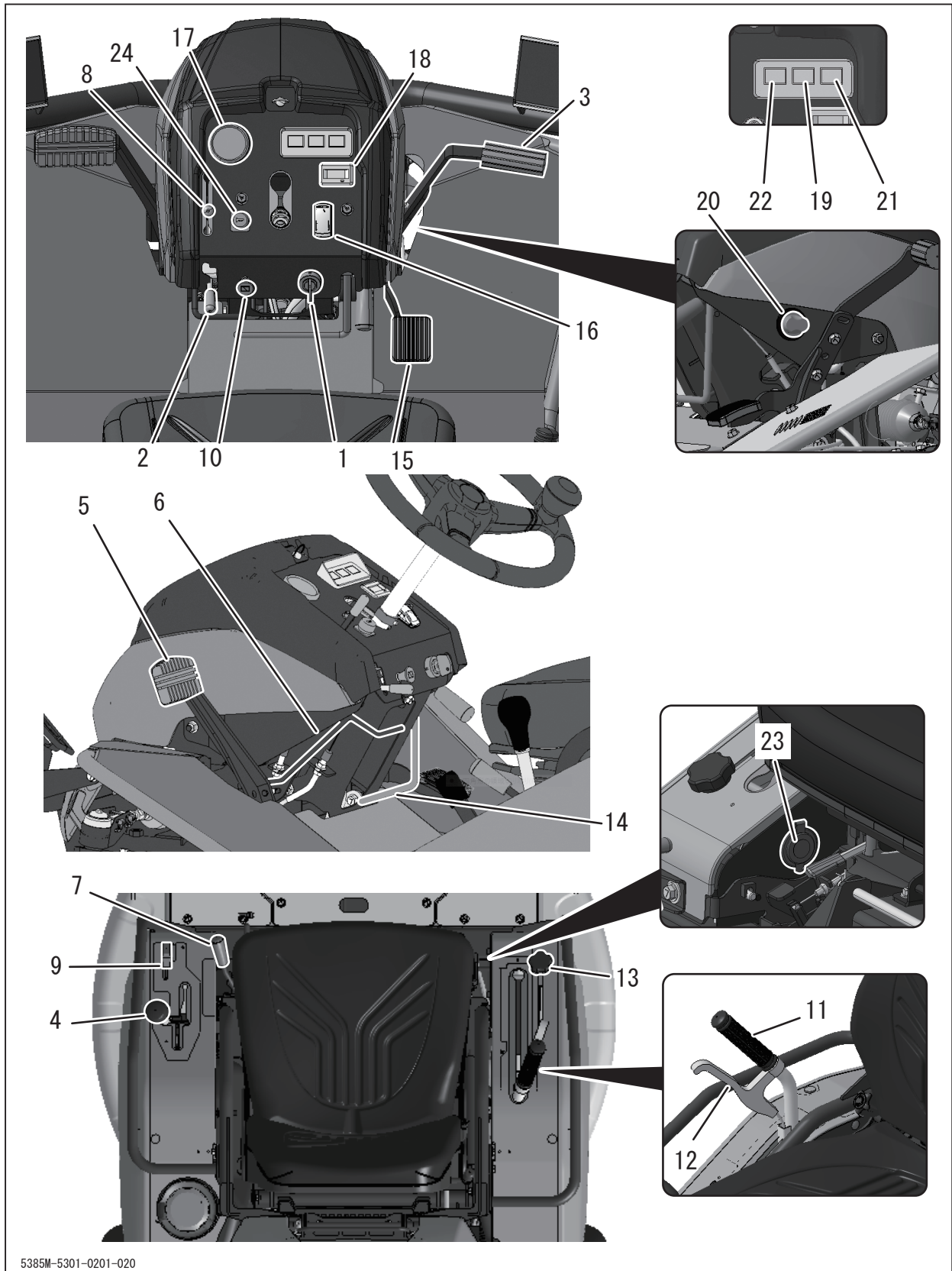
- Gasoline is extremely flammable and can be explosive. When parking the machine indoors, make certain that the building is well ventilated and that the machine is not close to any source of flame or spark, including appliances with pilot lights.

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.
- Keep your body and hands away from pinhole leaks or nozzles that eject hydraulic fluid under high pressure. Use paper or cardboard, not your hands, to search for leaks. Hydraulic fluid escaping under pressure can have sufficient force to penetrate the skin and cause serious injury.
- 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 back 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.

Name and Function of Controls





-
- 1 **Main Switch** Main switch is used to start or stop the engine.
 - 2 **Throttle Lever** Throttle lever is used to control the engine speed.
 - 3 **Drive Pedal** Drive pedal is used to control the traveling direction and speed of the machine. The machine moves forward when the front of the drive pedal is depressed and backward when the rear of the drive pedal is depressed. The angle of the drive pedal determines the speed.
 - 4 **Drive Lever** Drive lever is used to control the traveling direction and speed of the machine. The machine moves forward when the lever is tilted forward and backward when the lever is tilted backward. The angle of the drive lever determines the speed.
 - 5 **Parking Brake Pedal** Parking Brake pedal is used to keep the machine from moving. When the parking brake pedal is depressed, the drive lever returns to the neutral position and the parking brake is engaged.
 - 6 **Parking Brake Lock Lever** Parking brake lock lever is used when parking the machine securely. Pulling the parking brake lock lever while the parking brake pedal is depressed locks the parking brake pedal in the engaged position.
 - 7 **Auxiliary Transmission Shift Lever** Auxiliary transmission shift lever is used to shift the auxiliary transmission to change the speed of the machine.
 - 8 **2WD/AWD Shift Lever** 2WD/AWD shift lever is used to switch between the 2WD (rear-wheel drive) and AWD (all-wheel drive) modes.
 - 9 **Differential Lock Lever** Differential lock lever is used to lock the differential when the rear tires slip. Tilting the differential lock lever to [ON] position locks the differential.
 - 10 **Choke Knob** Choke Knob is used to help start the engine by closing the choke valve.

- 11 Cutting Height Adjust Lever** Cutting height adjust lever is used to adjust the cutting height. Grab and hold the cutting height adjust lock and
- 12 Cutting Height Adjust Lock** move the cutting height adjust lever back or forth to adjust the cutting height.
- 13 Cutting Height Lower Limit Knob** It is used to set the lower limit for the cutting height.
- 14 Mower Clutch Lever** Mower clutch lever is used to start or stop running the mower.
- 15 Tilt Lever** Tilt lever is used to adjust the angle of the steering wheel.
- 16 Head Light Switch** Head light switch is used to turn on or off the head light. When the main switch is on, the head light switch illuminates.
- 17 Fuel Gauge** Fuel gauge indicates the amount of fuel in the fuel tank. When the remaining fuel level is low, a warning beep is heard.
- 18 Hour Meter** Hour meter indicates the cumulative total operating time of the machine in 0.1 hour increments as well as the battery voltage and the maintenance schedule. (The hour meter is activated only when the engine runs.)
- 19 Oil Pressure Warning Light** Under normal condition, the oil pressure warning light goes off once the engine starts. It is illuminated when a problem with engine oil pressure is detected while the engine is running.

| NOTE |
|--|
| <ul style="list-style-type: none"> • When the oil pressure warning light turns on, the hour meter stops. Stop the engine immediately and fill oil. • When the main switch is turned on but the engine is not started, the oil pressure warning light lights up. If it does not light up, the bulb is blown; change the bulb. |

20 Battery Cutoff Switch Battery cutoff switch cuts off the battery negative circuit. It is used for vehicle maintenance and long-term storage.

21 Rollover Warning The warning light lights up and the warning buzzer beeps when the machine is leaned more than 25 degrees. When the machine reaches 30 degrees of inclination, the warning light blinks and the buzzer beeps rapidly.

DANGER

- **Do not use this machine on an incline steeper than 25 degrees. If the warning buzzer sounds, immediately move to level ground. There is a risk of tipping over or engine failure.**

22 Charge Indicator Indicates if the charge circuit works. When the main switch is turned on, it illuminates. It goes off once the engine starts, if the charge circuit works normally.

23 12V Power Socket Provides 12V (12V-10A) output.

24 Horn Switch Horn switch is used to sound the horn.

Product Specifications

NOTICE

- Use this product properly after understanding its specifications and limitations thoroughly.

| Model and Type | | CMX2414 | | |
|-----------------------------|------------------------|----------------------------|--|------------------------------|
| Operating Temperature Range | | °C (°F) | between -15 (5) and +40 (104) | |
| Operating Altitude Range | | m (yd) | below 1500 (1640) | |
| Machine Mass | | Kg (lbs) | 430 (947.9) ^{*1} | |
| Mowing Rate | | m ² /h (acre/h) | 7605 (1.88) ^{*2} | |
| Dimensions | Overall Length | | mm (in) 2050 (80.7) {2130(83.8)} ^{*8} | |
| | Overall Width | | mm (in) 1020 (40.2) | |
| | Overall Height | | mm (in) 1860 (73.2) {1040(40.9)} ^{*8} | |
| | Wheelbase | | mm (in) 1430 (56.2) | |
| | Tread | Front | mm (in) | 860 (33.9) |
| | | Rear | mm (in) | 800 (31.5) |
| | Ground Clearance | | mm (in) | 145 (5.70) |
| Engine | Model | | Honda GX690 ^{*3} | |
| | Type | | Air-cooled 4-cycle V-twin Gasoline (OHV) | |
| | Cylinder (Bore×Stroke) | | mm (in) 78×72 (3.07 X 2.83) | |
| | Displacement | | cm ³ (Cu. In) 688 (42.0) | |
| | Maximum Output | | kW(PS)/rpm 16.5(22.4)/3600 ^{*4} | |
| | Maximum Torque | | N·m(kgf·m)/rpm 48.3(4.83)/2500 ^{*4} | |
| | Set Engine Speed | | rpm 3300 | |
| | Starter System | | Electric | |
| | Fuel | | Automotive Unleaded Gasoline | |
| | Fuel Consumption | | g/kW·h (fl.oz/PS·h) | 304.5 (7.91) ^{*5*7} |
| L/h(US Gal/h) | | | 6.7 (1.77) ^{*6*7} | |
| Fuel Tank Capacity | | L (US Gal) | 14 (3.7) | |

*1 Net machine mass without fuel.

*2 Estimated at the maximum speed with the auxiliary transmission in Low position.

*3 See below URL for the latest CO2 measurement results of GX690RH.

<http://www.honda-engines-eu.com/co2-engines>

This CO2 measurement results from testing over a fixed test cycle under laboratory conditions a (n) (parent) engine representative of the engine type (engine family) and shall not imply or express any guarantee of the performance of a particular engine.

*4 The power rating of the engine indicated in this document is the net power output tested on a production engine for the engine model and measured in accordance with SAE j1349 at 3,600 rpm (net power) and at 2,500 rpm (max net torque).

*5 The figure indicated here is of the engine at the maximum output (16.5kW/3600rpm).

*6 The figure indicated here is of the engine at the rated continuous output (13.0kW/3600rpm).

*7 Those figures are measured with the engine alone, and the actual figures may vary depending on the use conditions.

*8 The figures in { } indicates when the ROPS is folded.

| Model and Type | | | CMX2414 |
|----------------|---|----------------------|---|
| Engine | Ignition | | CDI Magneto |
| | Spark Plug | | NGK ZFR5F |
| Electrical | Battery Type | | 34B17R |
| | Battery Capacity | V/Ah | 12/28 |
| Performance | Speed | High | km/h (mph) 0 to 14.0 (0 to 8.7) |
| | | Low | km/h (mph) 0 to 7.8 (0 to 4.8) |
| | Minimum Turning Radius | | m (ft) 2.0 (6.5) |
| | Gradeability | | Degrees 25 |
| | Stability* ⁹ (in accordance with the standard measuring method) | | Degrees 25 |
| Drive Train | Main Transmission | | HST (Continuously Variable) |
| | Auxiliary Transmission | | Constant Mesh |
| | Tires | Front | 4.00-7 (4PR) |
| | | Rear | 19X8.00-10 (4PR) |
| | Steering | | Rack and Pinion Round Steering Wheel |
| Brakes | | Internally Expanding | |
| Cutting System | Cutting Width | | mm (in) 975(38.4) |
| | Cutting Height | | mm (in) 0~150 (0~6.0, Stepless) |
| | Blade Type | | Free Knife & Stepped Stay |
| | Number of Blades | | 2 |
| | Blade Drive Train | | Shaft Drive |

*9 The stability angle is determined according to the method specified in ISO5395-3.

These specifications are subject to change without notice.

Contents of Tool Bag

| Check | No. | Content | Quantity | Note |
|--------------------------|-----|---------------------|----------|---------------------------|
| <input type="checkbox"/> | 1 | Operator's Manual | 1 | This Manual |
| <input type="checkbox"/> | 2 | Engine Manual | 1 | |
| <input type="checkbox"/> | 3 | Engine Service Tool | 1 | For Servicing Engine |
| <input type="checkbox"/> | 4 | Plate | 1 | For Rental Stores |
| <input type="checkbox"/> | 5 | Plate Manual | 1 | For installing the plate. |
| <input type="checkbox"/> | 6 | Battery Manual | 1 | |

Preparation

Pre-start up Inspection

⚠ WARNING

- Always perform an inspection before every use. If a problem is found, solve or repair it before use.
- Clean mowing dust and cut grass before use to avoid fire.
- Make sure the cooling air intake is not blocked or clogged. If it is blocked, the engine overheats, resulting in damages to the machine or causing fire.

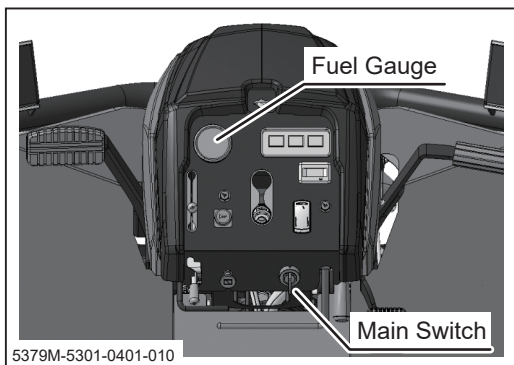
Always perform an inspection before use.

Refer to the **Maintenance Schedule** (page 50) for the inspection schedule and procedure.

Checking and Filling Fuel

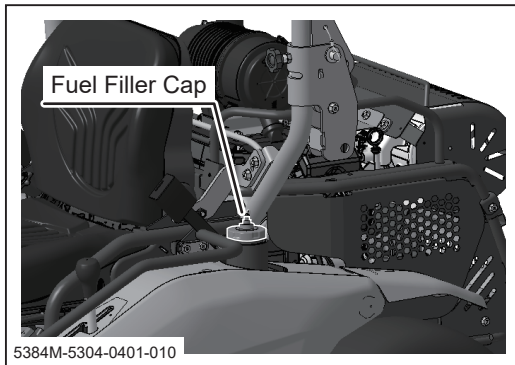
⚠ WARNING

- Fuel is highly flammable. Always stop the engine before refueling. Keep fire and spark away when handling fuel. 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.



5379M-5301-0401-010

1. Insert the key into the main switch.
2. Turn the main switch to [| (ON)] position and check the fuel gauge. If the fuel level is low, fill fuel.

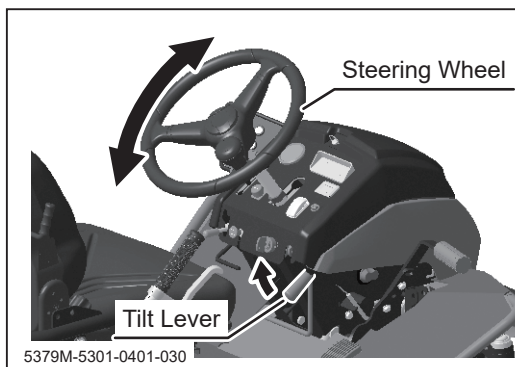


3. Turn the main switch to [○ (OFF)] position and remove the key.
4. Open the fuel filler cap and fill fuel.
5. Put the fuel filler cap back in place and close it securely.

| NOTE |
|--|
| <ul style="list-style-type: none"> • Fuel : Automotive Unleaded Gasoline • Fuel Tank Capacity : 14L (3.7 US gal) |

Adjusting Steering Wheel

| ⚠ CAUTION |
|--|
| <ul style="list-style-type: none"> • After adjusting the steering wheel, try moving the steering wheel back and forth and up and down to make sure it is securely locked in its position. |

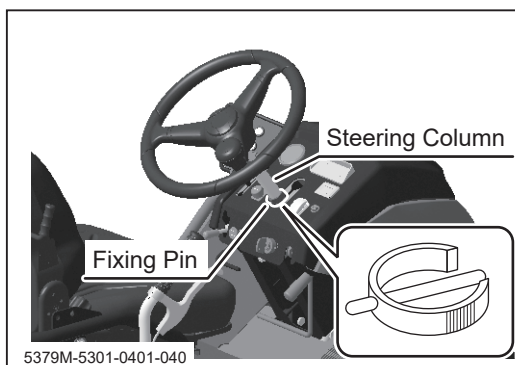


Adjusting Angle (Tilting)

1. Pull up the tilt lever to adjust the steering wheel angle.

| NOTE |
|--|
| <ul style="list-style-type: none"> • There are three available positions. |

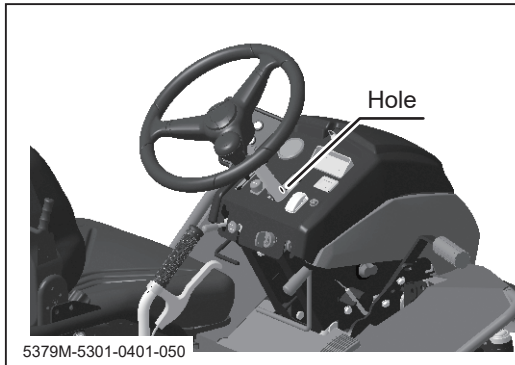
2. After adjusting angle, return the tilt lever to lock the steering wheel securely.



Adjusting Height

1. Remove the fixing pin from the steering column.

| NOTE |
|---|
| <ul style="list-style-type: none"> • There are four available positions. |



2. Adjust the steering wheel height in a preferred position. Line up the holes on the steering shafts and insert the pin.

NOTE

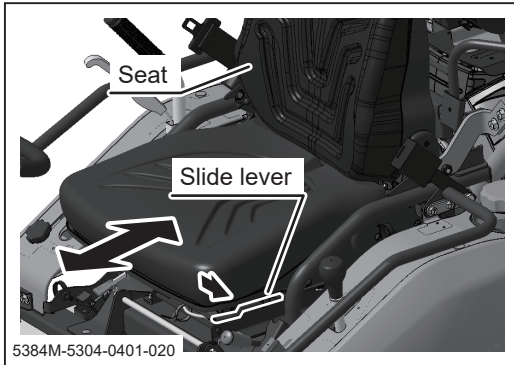
- If fixing pin is in the difficult direction to remove, steer the steering wheel to change direction of the pin so that the pin can be easily removed.
- Move the steering wheel up and down to check if the steering wheel is fixed securely.

Adjusting Seating Position**⚠ CAUTION**

- Beware of the pinch points when adjusting the seating position.
- After adjusting the seat, try moving the seat back and forth and up and down to make sure it is securely locked in its position.

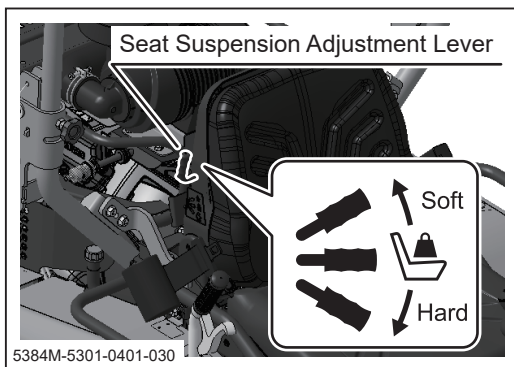
NOTICE

- When raising the seat, always slide the seat to the rearmost position. If the seat is not in the rearmost position, the slide lever can interfere with the step, preventing the seat from being raised to the holding position.
- When raising the seat, make sure to hold the seat in position with safety lock.



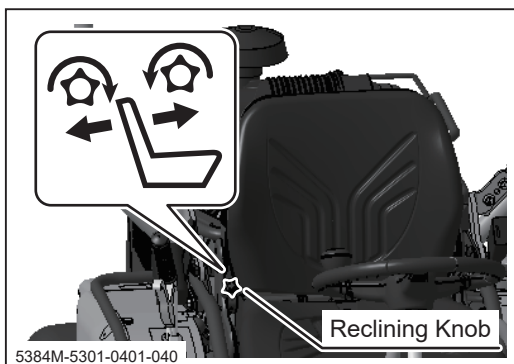
Sliding seat

1. Pull the slide lever to the left to slide the seat forward or backward.
2. When the seat is in a desired position, release the slide lever and lock the seat securely.



Adjusting Stiffness

1. Move the seat suspension adjustment lever to adjust to a desired seat stiffness.

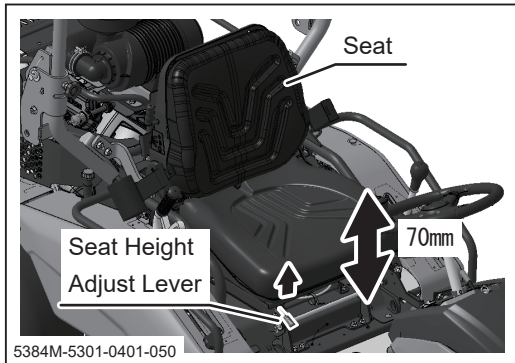


Adjusting Reclining Angle

1. Rotate the reclining knob on the right of the seat to adjust the reclining angle of the seat.

NOTE

- Do not adjust the seat to the rearmost position and recline seat. The seat can contact with the engine hood. This can activate the seat safety switch and stop the engine. Adjust the seat within the range of not contacting with the engine hood.

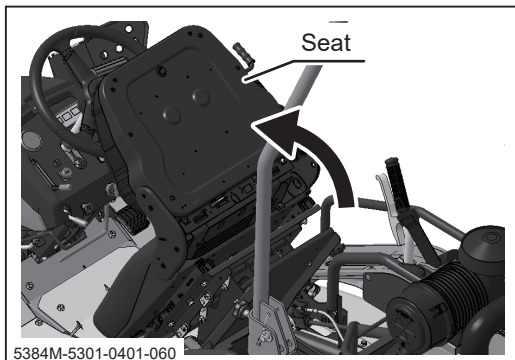


Adjusting Seat Height

1. Pull the seat height adjust lever up to adjust the seat height.
2. Release the adjust lever at the desired height.

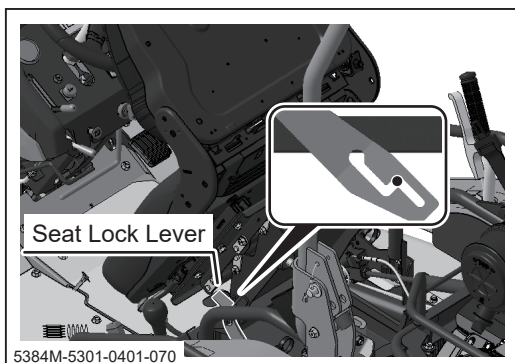
NOTE

- Push the seat and see if the seat is held in place firmly.



Raising Seat

1. Slide the seat to the rearmost position.
2. Raise the seat up.



3. Pull the seat lock lever so that the pin on the frame sits on a slot in the seat lock lever.

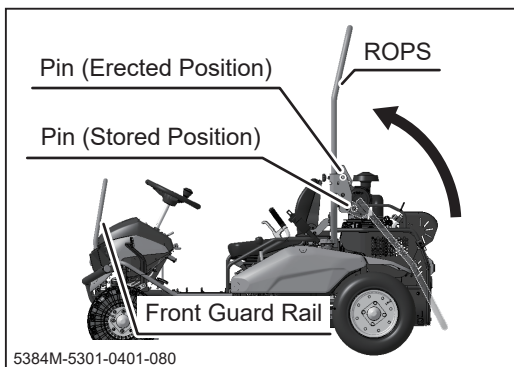
NOTE

- Move the seat and see if the seat is held in place firmly.
- When the seat is at the highest position, its front-back position (sliding) can be adjusted while you sit on it.
- When the seat is at the lowest position, its front-back position cannot be adjusted while you sit on it.

ROPS and Seat Belt

⚠ DANGER

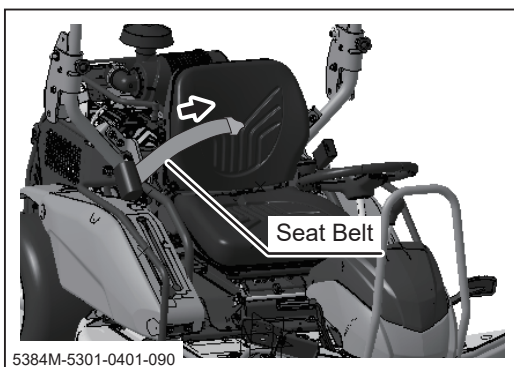
- **Overturn and crush hazard.**
 - Always keep the ROPS (Roll-Over Protection Structure) in the normal operating (erected) position. ROPS protects you from getting crushed by the machine in case of an overturn.
 - Make sure the ROPS is securely held in the operating position.
 - Always wear the seat belt when driving the machine equipped with the ROPS.
- The ROPS on this machine provides protection in combination with the front guard rail. Do not remove or modify the front guard rail.



Erecting ROPS

If the ROPS is folded for storage, erect it in the following manner.

1. Remove the lock pin to remove the pin in the stored position.
2. Erect the ROPS and insert the pin for the erected position. Secure the pin with the lock pin.
3. Fold it in the revers manner.



Buckling Seat Belt

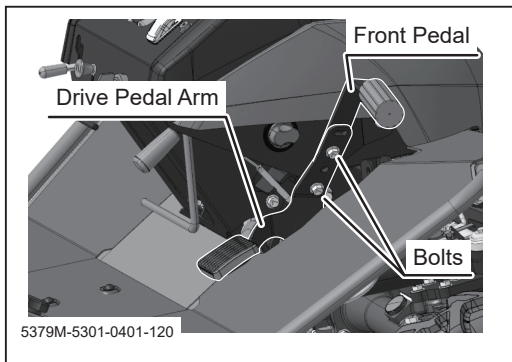
This machine is equipped with the automotive-style seat belt.

1. Pull the seat belt from its reel on the right side.
2. Buckle up the seat belt into the buckle on the left side.

Adjusting Drive Pedal

⚠ CAUTION

- Always check if the drive pedal is fixed firmly after adjusting.



1. Remove the two bolts fixing the front pedal with drive pedal arm.
2. Adjust the front pedal into a desired position and fix it with the bolts.

NOTE

- The front pedal can be adjusted in two positions and its angle can be adjusted also.

Driving

Starting




DANGER

- Always keep the ROPS extended and wear the seat belt when driving this machine. See Safety Mechanisms(page 5).

WARNING

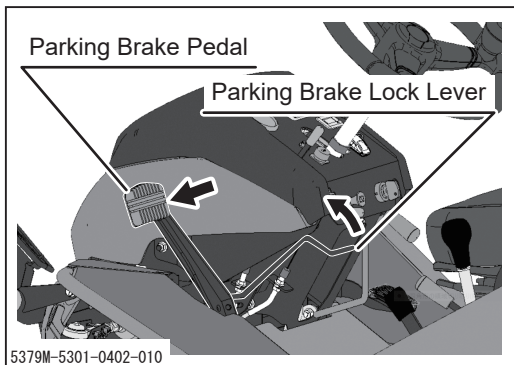
- Always start and run the engine in a well ventilated place.
- Always stay on the seat when starting the engine. Never attempt to start the engine away from the machine. Run over accident can result.

NOTICE

- Do not turn the main switch to [] (start) position when the engine is running. The starter motor and/or the engine can be damaged.
- Position the throttle lever to [] (slow) when starting.
- Do not turn the starter for more than 5 seconds. If the engine does not start, turn the main switch back to [] (off) position and wait for 10 seconds or more before attempting to start again.
- If the engine does not start after starting procedure is performed several times, turn off the main switch and wait for 5 to 10 minutes and try again.
- If the oil pressure warning light stays on after the engine starts, there can be a problem in the oil system. Stop the engine immediately. Engine failure can result.
- Do not use this machine in the temperatures above 40°C (104°F) or below -15°C (5°F). This machine cannot perform adequately in these temperature ranges. Using this machine under such conditions can cause damage to the machine.

NOTICE

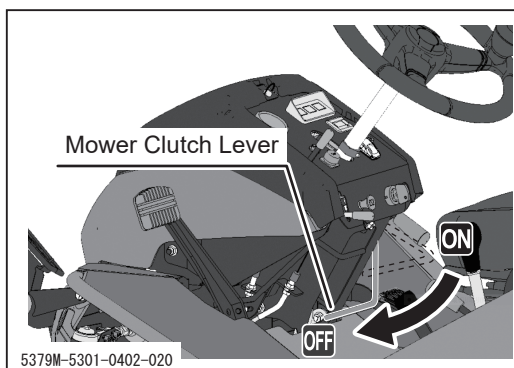
- Do not use this machine in dusty places such as desert. Dust can clog the air filter or enter the engine, which can result in loss of performance and an accident. It also causes excessive wear.
- Do not use this machine in the altitude above 1500m (4920ft.) in its original configuration. This machine cannot perform adequately above that altitude. Using this machine under such conditions can cause damage to machine. If you need to use this machine above that altitude, contact your CANYCOM representative.
- In the winter or cold climate, warm up the engine thoroughly before driving the machine. A cold engine delivers poor performance and causes excessive wear.



1. Make certain the parking brake pedal is depressed and locked. If it is not, depress the parking brake pedal and pull the parking brake lock lever to lock it.

NOTE

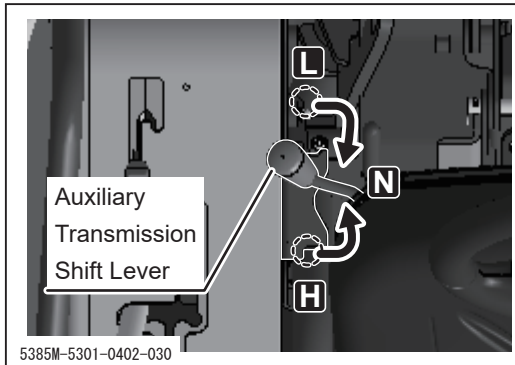
- **Safety feature: the engine cannot be started unless the parking brake pedal is depressed.**



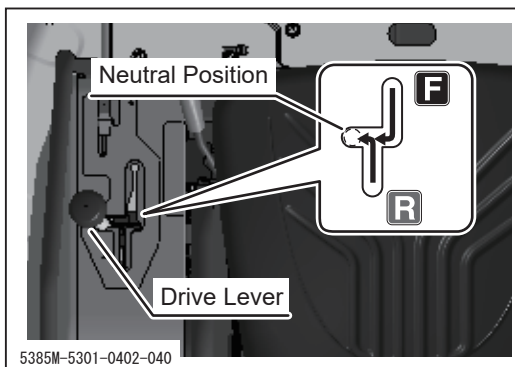
2. Make sure the mower clutch lever is in [OFF] position.

NOTE

- **Safety feature: the engine cannot be started unless the mower clutch lever is in [OFF] position.**



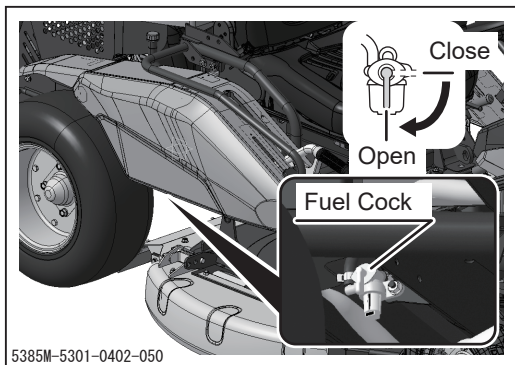
3. Make certain the auxiliary transmission shift lever is in [N] (neutral) position.



4. Make certain the drive lever is in the neutral position.

NOTE

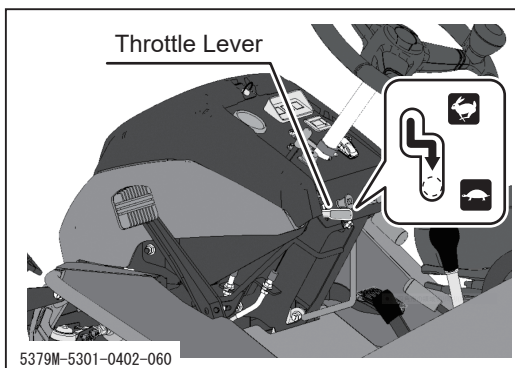
- The drive lever returns to the neutral position when the parking brake pedal is fully depressed.




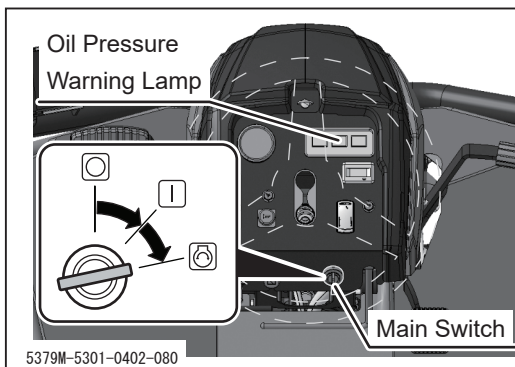
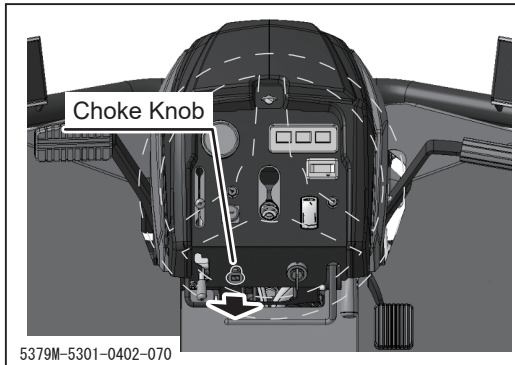
5. Lower the mower deck and reach to the fuel cock to open.

NOTE

- Raise the mower deck once the fuel cock is open.



6. Make sure the throttle lever is in the [] (slow) position.



7. Pull the choke knob to close the choke valve and insert the ignition key into the main switch.
8. Turn the main switch to [|] (ON) position and make sure the oil pressure warning light turns on.
9. Turn the main switch to [⊗] (start) position to start the engine. Release the key immediately after the engine starts. The key automatically returns to [|] (ON) position. Once the engine starts, make sure the oil pressure warning light goes off.
10. Push back the choke knob to open the choke valve.
11. Run the engine without load for about 5 minutes to warm up.

NOTE

- When the main switch is turned to [|] (ON) position while the engine is not running, the oil pressure warning light goes on. If it does not, the light bulb can be blown. Check the light bulb.
- Once the engine starts, the oil pressure warning light goes off. If it does not, there can be a problem in the oil system. Stop the engine immediately and check the engine.
- Avoid frequent restarting. Once the engine starts, run it for a while to charge the battery.
- Drive the machine gently in the first week (40 to 50 hours) of operation after purchase for breaking-in.

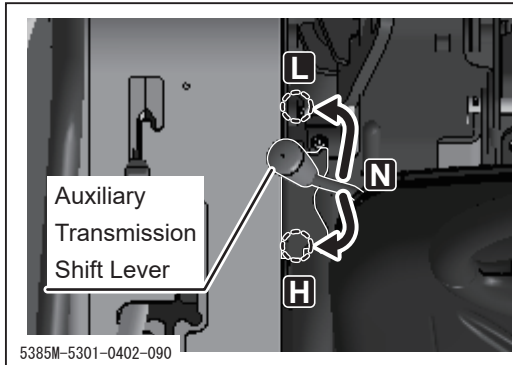
Driving

WARNING

- Always wear the protective footwear, long trousers, hard hat, 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 can get tangled in the moving parts. Do not operate the machine barefoot or with the open sandals.
- Do not allow bystanders to come near the machine when driving.
- Always make certain of the safety of your surroundings before driving; start slow. 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 can cause the operator to fall or to be thrown, or the machine to tip over.
- Use [L] (low speed) mode and drive slow on an incline to avoid the operator to fall or to be thrown, or the machine to tip over.
- Do not turn the key to [○] (off) position while traveling.

CAUTION

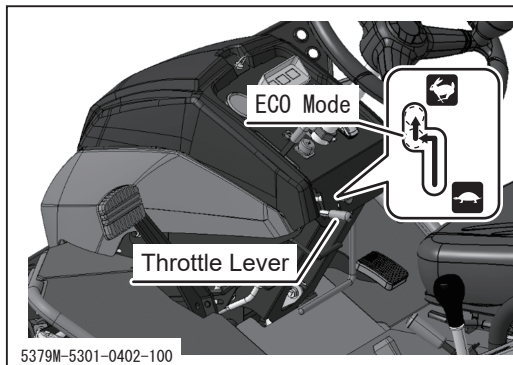
- Do not operate the drive pedal or the drive lever when the parking brake pedal is locked with the parking brake lock lever. It can wear out the parking brake.
- Do not operate the drive pedal and the drive lever simultaneously.




1. Make certain of the safety of your surroundings.
2. Move the auxiliary transmission shift lever to either [H] (high speed) or [L] (low speed) position.

NOTE

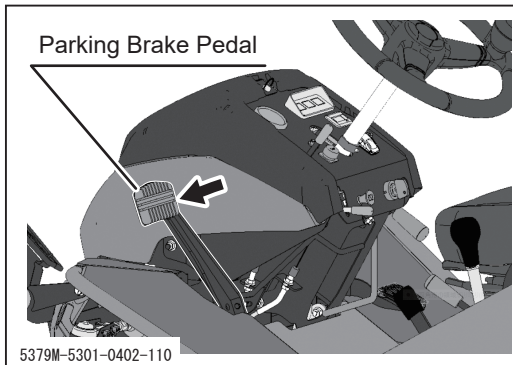
- See Specifications (page 18) for the speed range in either gear position.



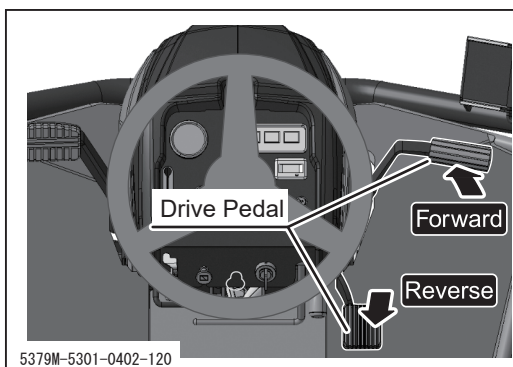
3. Move the throttle lever toward [] (fast) position to increase the engine speed.

NOTE

- Where mowing load is relatively low, you can drive in the ECO mode.



4. Depress the parking brake pedal to release the parking brake lock lever.

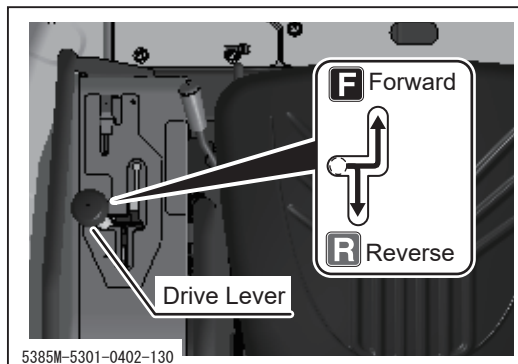


Driving with Drive Pedal

5. Depress gradually the forward or reverse side of the drive pedal to move in the corresponding direction.

NOTE

- The speed can be adjusted continuously by the position of the drive pedal.

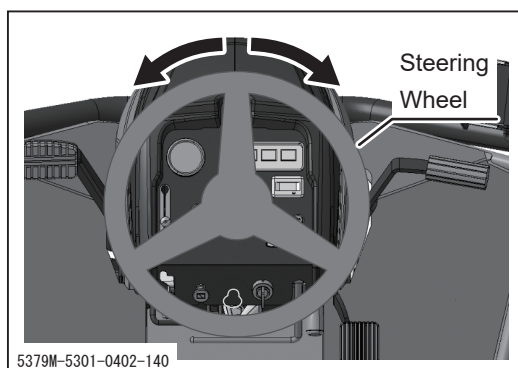


Driving with Drive Lever

5. Move the drive lever gradually forward or backward to move in the corresponding direction.

NOTE

- Speed can be adjusted continuously by the position of the drive lever.
- When being driven forward, the lever does not return to neutral automatically when released. Return it manually. When being driven backward, it returns to neutral when released.



6. Turn the steering wheel to turn.

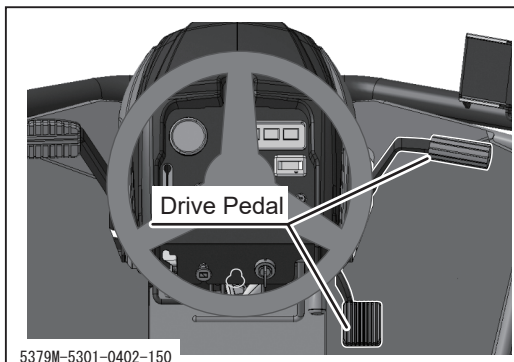
Stopping

⚠ WARNING

- Do not make a sudden stop. Operator can be thrown off, or the machine can skid or tip over.
- Always park on a firm, level place. Never park on a potentially dangerous place.
- Do not park near combustibles.

NOTICE

- Do not hold the drive lever and depress the parking brake pedal at the same time. Or, do not depress the drive and parking brake pedals at the same time. The HST can be damaged.

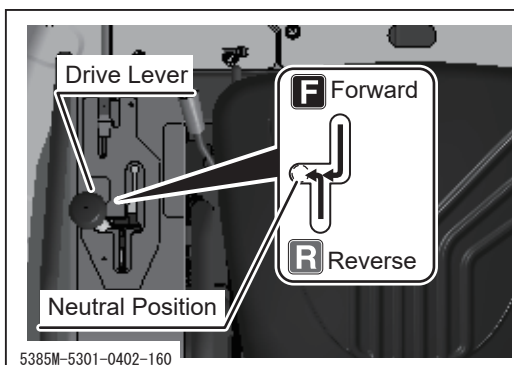


When Driving with Drive Pedal

1. Gradually return the drive pedal to slow down.
2. Take the foot off the drive pedal.

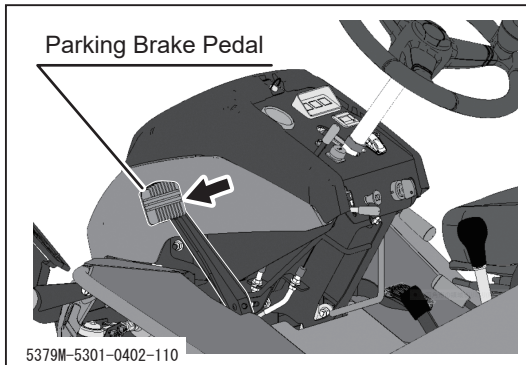
NOTE

- The drive pedal returns automatically to neutral when released.



When Driving with Drive Lever

1. Gradually return the drive lever to the neutral position to slow down.
2. Release the hand off the drive lever.



3. Depress the parking brake pedal to stop the machine completely.

NOTE

- When the parking brake pedal is depressed, the drive lever returns to the neutral position.

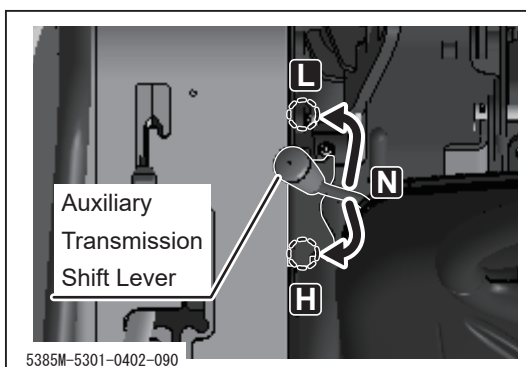
Shifting

⚠ WARNING

- Always shift gears firmly. When the transmission is not firmly shifted, it can jump out of the gear, resulting in loss of control of the machine.

NOTICE

- Always stop the machine to shift gears. Shifting gears while the machine is in motion can damage the transmission.
- Use [L] (low speed) mode when cutting (mowing). Cutting in [H] (high speed) mode can put excessive strain and damage the cutting mechanism.



1. Stop the machine.
2. Move the auxiliary transmission shift lever to [H] (high speed) or [L] (low speed) position firmly.

NOTE

- See Specifications (page 18) for the speed range in either gear position.

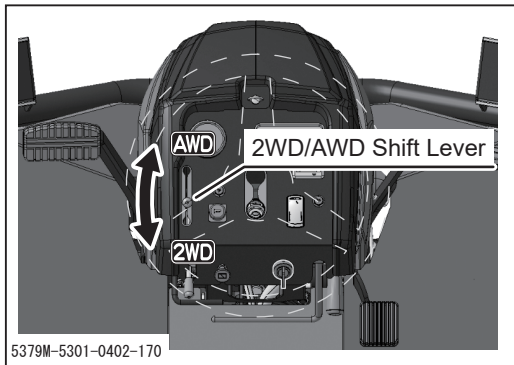
Shifting Between 2WD and AWD

NOTICE

- Always stop the machine to shift between 2WD or AWD (all-wheel-drive) modes. Shifting gears while the machine is in motion can damage the transmission.

NOTE

- Use the 2WD mode under the normal condition.
- Pay attention to the minimum turning radius in the AWD mode. In the AWD mode, minimum turning radius is greater than that in the 2WD mode.



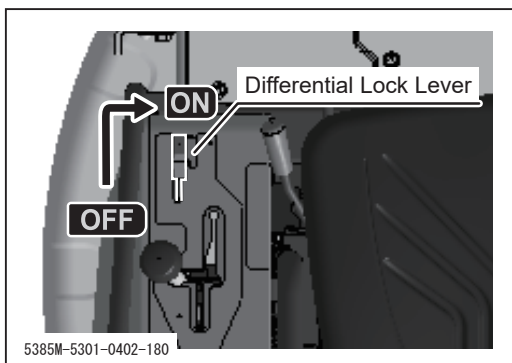
1. Stop the machine.
2. Move the 2WD / AWD shift lever to [2WD] or [AWD] position firmly.

Locking Differential

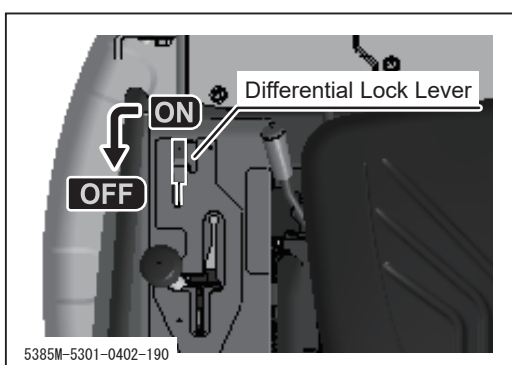
The differential can be locked to minimize slipping on the slippery surface.

NOTICE

- Always stop the machine to operate the differential lock lever. Operating the differential lock lever while the machine is in motion can damage the differential.
- Keep the differential lock lever in [OFF] position under the normal running condition. The differential can be damaged.
- Do not turn the machine when the differential lock lever is in [ON] position.



1. Move the differential lock lever to [ON] position.
2. Move the auxiliary transmission shift lever to [L] (low speed) position.
3. Drive slowly out of the slippery area.

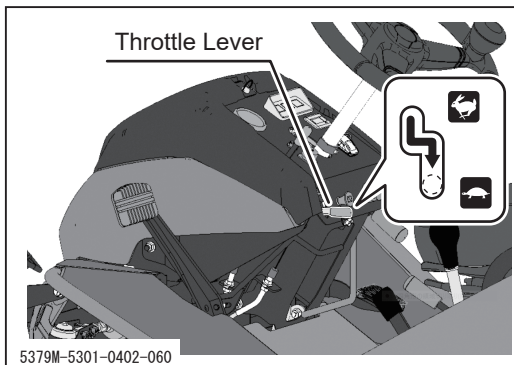



4. Once the machine is out of the slippery area, stop and move the differential lock lever to [OFF] position.

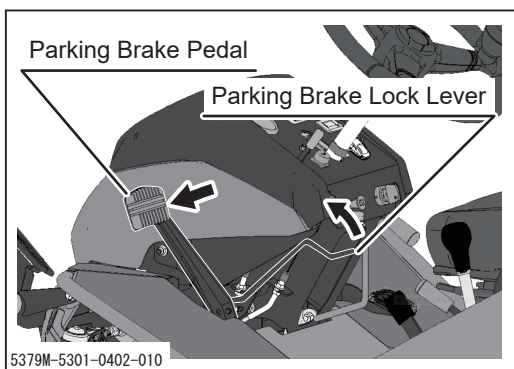
Parking

⚠ WARNING

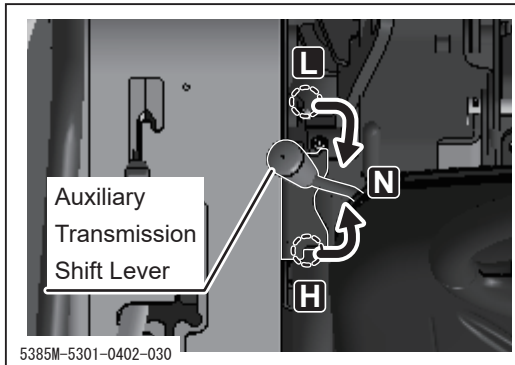
- Always park on a firm, level place. Never park on a potentially dangerous place.
- Avoid parking on a slope. Never park on a slope with an incline of 10 degrees or steeper. If it is absolutely necessary to park the machine on a slope less than 10 degrees, make certain to apply parking brake firmly and block the wheels with chocks.
- Apply parking brake and remove the key when parking.
- Do not park near combustibles.



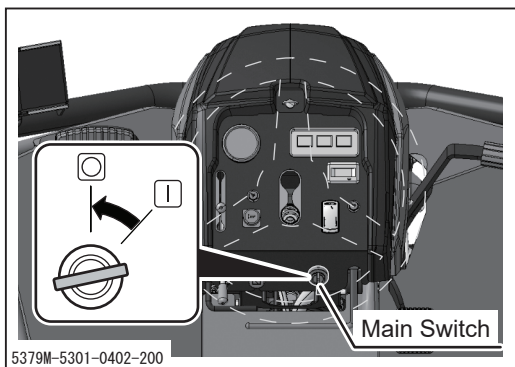
1. Stop the machine.
2. Move the throttle lever toward [] (slow) to slow the engine speed.



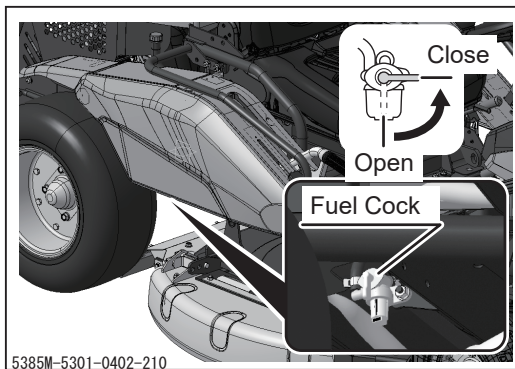
3. Depress the parking brake pedal and pull the parking brake lock lever up to lock the parking brake pedal in depressed position.



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



5. Turn the main switch to [O] (off) to stop the engine. Remove the ignition key.



6. Lower the mower deck and reach to the fuel cock to close.

NOTE

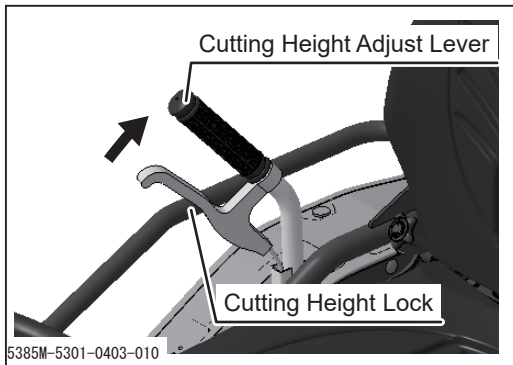
- Raise the mower deck once the fuel cock is closed.

Working

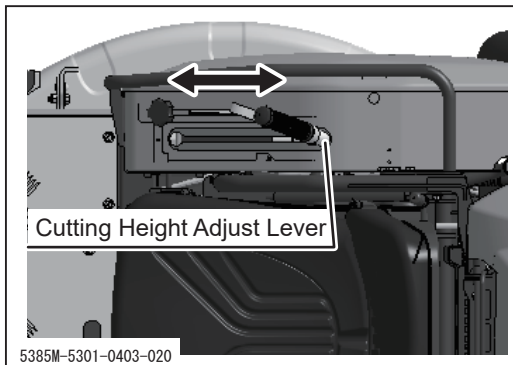
Inspecting Cutting Blade

Inspect the cutting blades before work. Refer to **Cutting Blades** (page 77) for the inspection procedure.

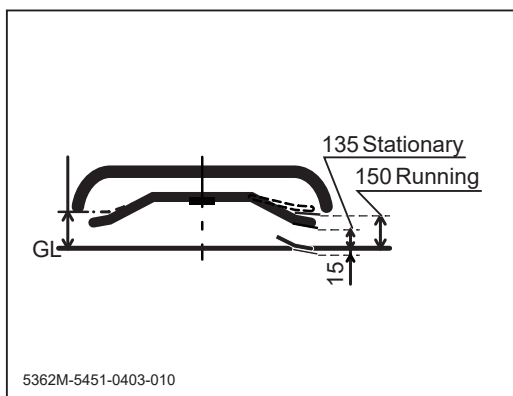
Adjusting Cutting Height



1. Grab the cutting height lock to unlock the cutting height adjust lever.



2. With the cutting height lock pulled up, move the cutting height adjust lever to a desired position.
3. Release cutting height lock to lock the cutting height adjust lever.



NOTE

- **Cutting Height Range:**
0mm - 150mm (0in - 6.0in)
- The cutting Height indicated on the side of the cutting height adjust lever is for reference purpose only; actual cutting height can vary due to the condition of the ground or brush and other factors.

Cutting

DANGER

- Never place any part of the body under the cutting blade shield.
- Do not use this machine on an incline steeper than 25 degrees. If the warning buzzer sounds, immediately move to level ground. There is a risk of tipping over or engine failure.

WARNING

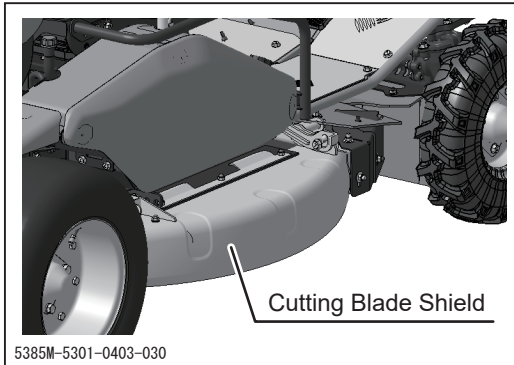
- Always wear the protective footwear, long trousers, hardhat, safety glasses and ear protection when operating or servicing the machine. Proper clothing will minimize the chance of injury. Do not operate the equipment if you have long hair, loose clothing, or jewelry; all of which can get tangled in moving parts. Do not operate the machine barefoot or with the open sandals.
- Do not allow bystanders to come near the machine when cutting (mowing).
- The rotating cutting blades can throw stones or debris and cause injuries and damages to nearby people, animals, crops, buildings, automobiles, etc. Pay attention to the safety of surroundings and plan ahead when cutting.
- Never attempt to mow with the cutting blade shield lock plate or any of the fasteners on the blade shield removed. Make sure they are properly installed so that the shield does not open up or sideways. (page 61)
- When cutting, drive forward. The machine is intended to cut brush while moving forward, and this best prevents stones and debris from being thrown.
- Turn the mower clutch to [ON] only when cutting. Keep it in [OFF] position all the other times.
- Never attempt to cut brush on the edge of a ditch or bank. Shoulder of the ditch or bank can collapse. Pay special attention after heavy rain or earthquake.

⚠ WARNING

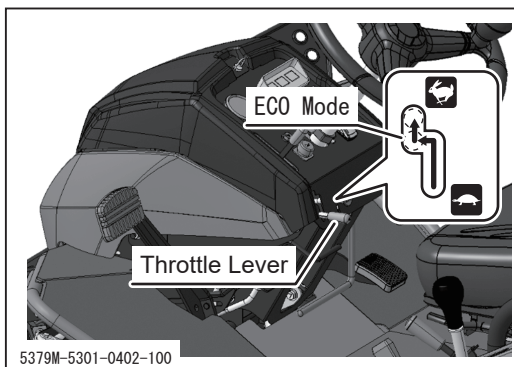
- Inspect the work site beforehand; inspect terrain and locate holes, drops, or obstacles. Also inspect overhead obstacles such as the branches of a tree. Pay special attention when working near these areas.
- Always stay on the machine when cutting.


NOTICE

- Make sure the air intake for cooling is not clogged or blocked. If it is clogged or blocked, it causes overheating, resulting in damages to the machine.
- When working in a dusty area, clean the air filter element twice a day. The dirty air filter element results in poor starting, poor performance, or short service life.
- When a cutting blade is broken, replace it and the other blade with a new pair. A broken blade causes excessive vibration, which damages the machine.
- When something is tangled to the mower, stop the engine immediately and remove the tangled object. Such object causes excessive vibration, which damages the machine.
- Always clean the cutting blades and the cutting blade stay after every use (see page 89). Foreign object on those parts can become solidified or corrode those parts and make the cutting blades hard to remove.
- In case cut grass, dust, or foreign object enters between the cutting blade pin and slot, making it difficult to remove the cutting blade, use a flathead screw driver or similar tool to remove such material or object first.
- Use [L] (low speed) mode when cutting. Cutting in [H] (high speed) mode puts excessive strain on the cutting mechanism and can damage it.
- If cutting height is set too low, the blades can hit the ground and cause damages or throw stones. Check the ground before operation and set cutting height high enough so that the blades do not hit the ground.



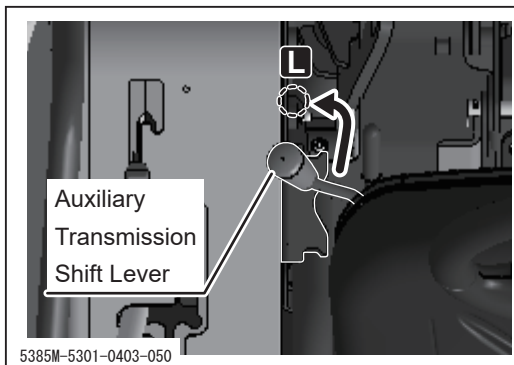
1. Make sure the cutting blade shield is closed.



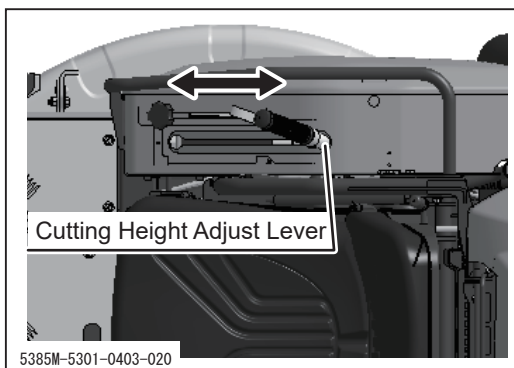
2. Turn the throttle lever to [] (fast) position to raise the engine speed.

NOTE

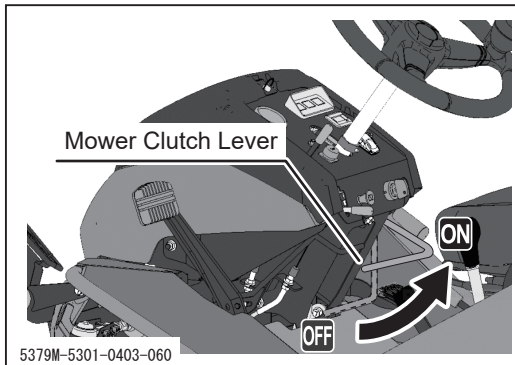
- Where mowing load is relatively low, you can drive in the ECO mode.



3. Move the auxiliary transmission shift lever to [L] (low speed).



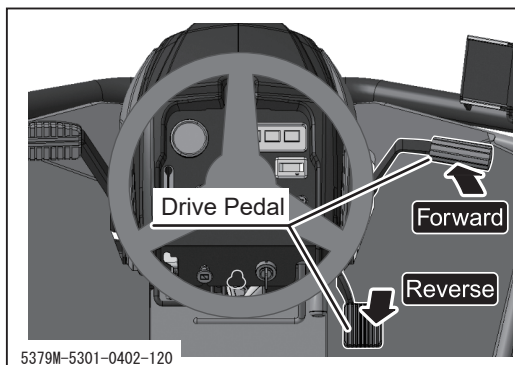
4. Move the cutting height adjust lever to a desired height.



5. Move the mower clutch lever to [ON] to start mower.

NOTE

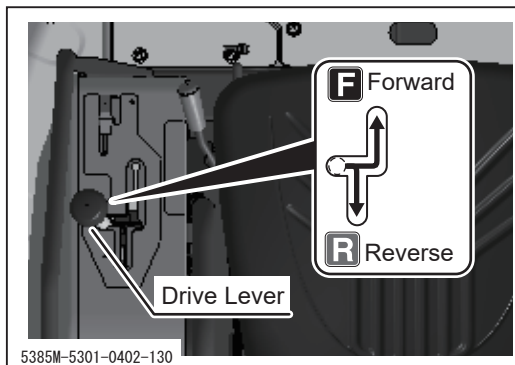
- **Safety feature: the engine stops automatically if the operator leaves the seat while the mower is running.**



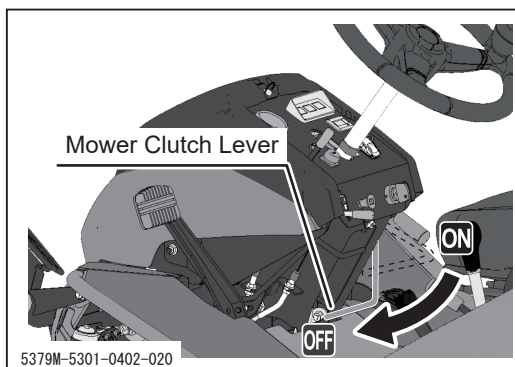
6. Drive the machine forward to cut.

NOTE

- **When cutting with this machine for the first time, start on a flat surface. Drive slowly and in an overlapping pattern.**
- **If the load to the mower is high, drive slowly, or cut in two steps.**

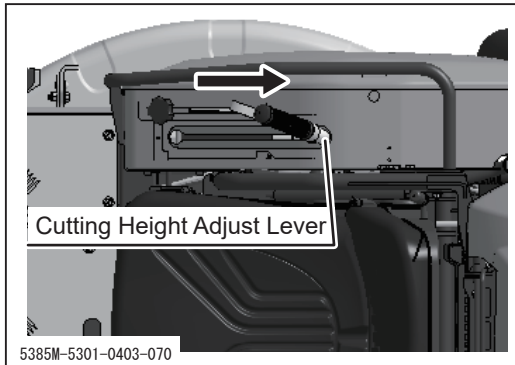


7. Move the mower clutch lever to [OFF] to stop the mower.



NOTE

- **Moving the mower clutch lever to [OFF] applies the mower brake on the mower to stop.**



8. Move the cutting height adjust lever to the highest position.

Warning Buzzer

⚠ DANGER

- Do not use this machine on an incline steeper than 25 degrees. If the warning buzzer sounds, immediately move to level ground. There is a risk of tipping over or engine failure.

The buzzer will sound under the following conditions

| Beeps | Condition | What to do |
|--|--|---|
| Beeps in cycles of one. (beep - beep - beep -) | The machine leans 25 degrees or more | Move to a level area. |
| Beeps in cycles of two. (beepbeep - beepbeep-) | Low fuel level. | Refill. |
| Beeps in cycles of three. (beepbeepbeep - beepbeepbeep-) | Low battery voltage | Fill battery fluid. Charge battery. Change battery. |
| Beeps in cycles of four. (beepbeepbeepbeep - beepbeepbeepbeep-) | Battery voltage detection circuit faulty | Contact your CANYCOM representative. |
| Beeps continuously rapidly. | The machine leans 30 degrees or more. | Move to a level area. |

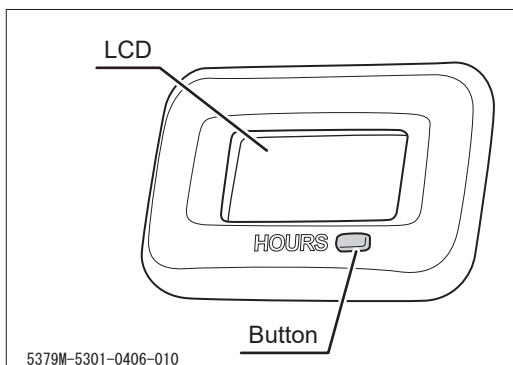
NOTE

- When driving at high speed and making a sharp turn, the warning buzzer can beep.
- The engine will automatically stop if the machine reaches a dangerous angle for a certain period (more than 5 seconds at or over 40 degrees). If the engine stops, turn the main switch [OFF] once and start the engine again. After restarting, the engine will run for 10 seconds even at such an angle. When restarted, drive to a flat area carefully.

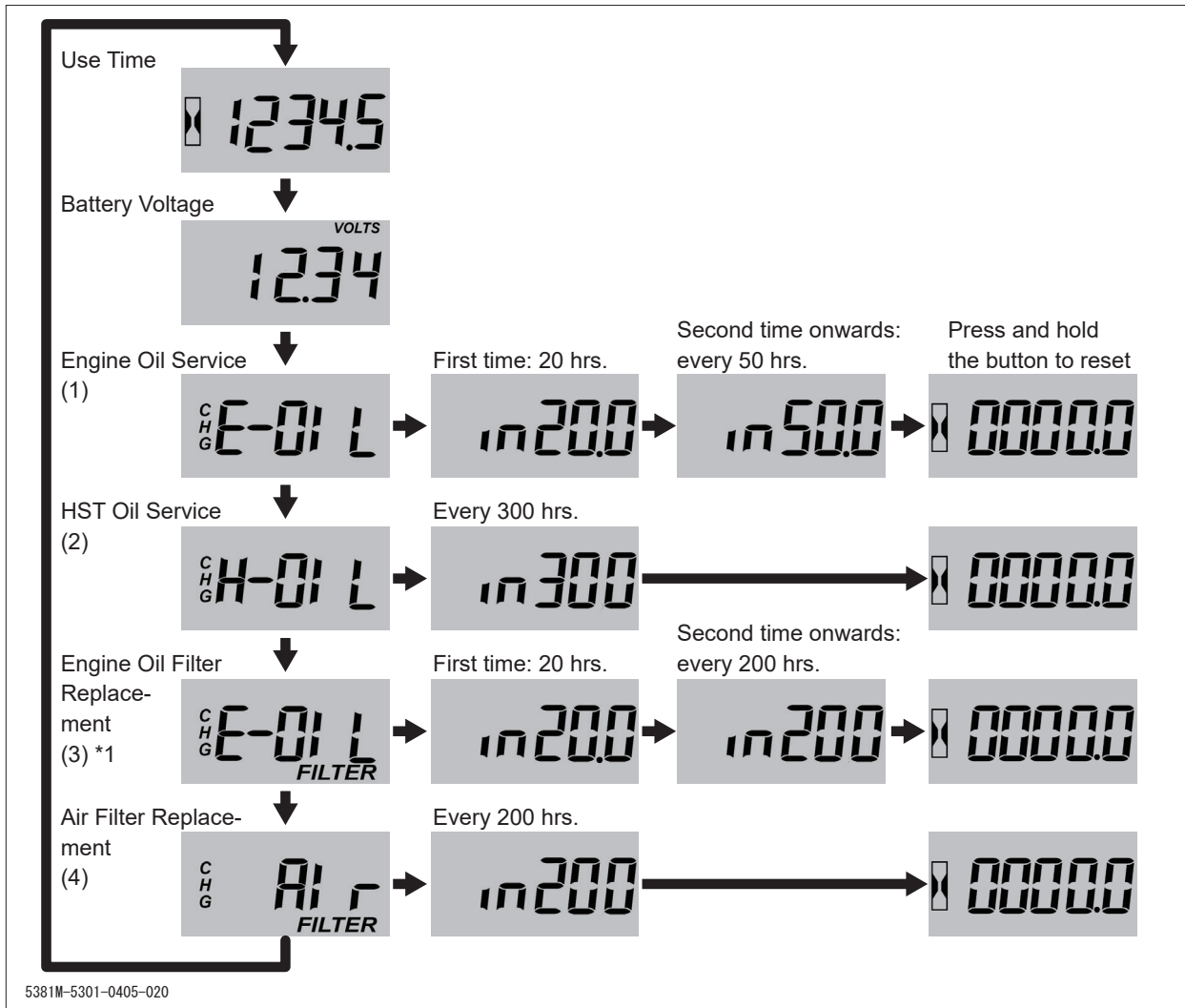
Hour Meter

The hour meter on this machine also shows battery voltage and service schedule messages.

Under Normal Use



1. By pressing the button on the hour meter, you can manually rotate the screen in the order shown below.
2. Move to the service screen and press and hold the button to reset the service period.

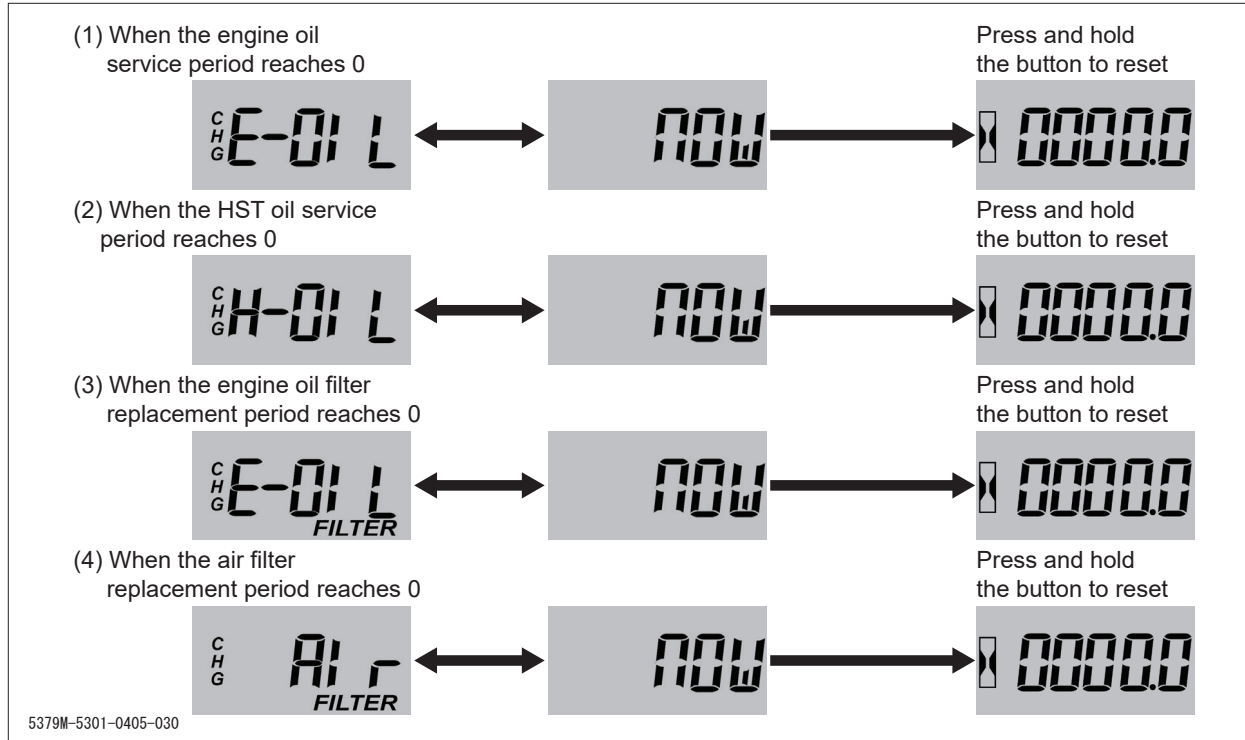


3. After manually switching to a screen other than the use time and no operation is made for 10 seconds, the display automatically returns to the use time screen.
4. Resetting the first service notification will start counting the service period for the second and subsequent services.

NOTE

- Unless the initial service period is reset, the second and subsequent service periods will not start. For example, the engine oil service period is 20 hours only for the first time, and the counting of the second and subsequent service periods (50 hours) will start once the first one is reset, regardless of whether or not notification is received.

When a Message is Shown



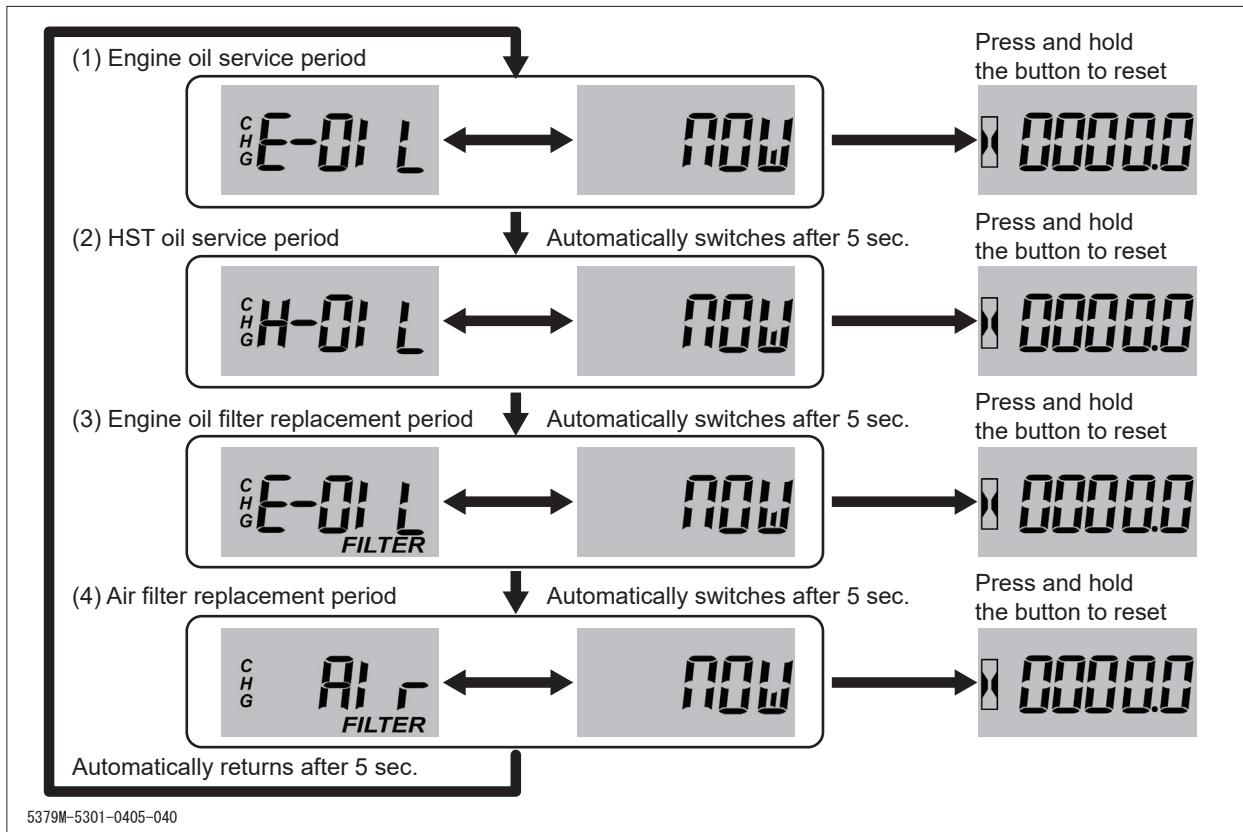
1. When the service period in any of the above (1) through (4) reaches [0 (notification made)], [NOW] is shown in the relevant maintenance screen where the notification is shown, as in the middle of the illustration above.
2. When a notification is made, the screen automatically switches to the corresponding service screen. Press and hold the button to reset the service period (clear notification) in that screen.

NOTE

- Even when a notification is shown, you can switch to another screen manually.
- When a notification is shown, the display does not automatically switch to the use time screen, even if no operation is done for 10 seconds.
- When you manually change to a screen other than the one that a notification is made, but you do not perform any operation in that screen for 10 seconds, it will automatically go back to the one that the notification is made. For example, when an HST oil change is notified, and you change to the battery voltage screen, it will change back to the HST oil change screen if no operation is done for 10 seconds in that screen.

- If a notification is made, but the main switch is turned [OFF] without resetting the service period, turning the main switch [ON] back again will automatically switch to that screen where the notification is made.

When Multiple Messages are Shown



- The items for which notifications are made are displayed for 5 seconds each. You can still switch to other screens manually.
- Press and hold the button in one of the maintenance screens where a notification is made to reset the service period.
- Manually switch to another maintenance screen where a notification is made and reset the service period there.

Maintenance Schedule

WARNING

- Follow the scheduled maintenance as described below. Failure to do so can result in mechanical or property damage, injury or death.

Engine

Daily Inspection

- Engine Oil - to be clean and at the correct level.
- Air Filter Element - to be clean and free of damage.
- Leaks - No fuel or oil leaks to be found.
- Bolts, Nuts, Fasteners - not to be loose or missing.
- Sound, Vibration - No abnormal noise or excessive vibration.

Scheduled Maintenance

| Items | | Frequency |
|--|----------------|---|
| Clean and check fastens | | Every 8 hours (daily) (clean more frequently in dusty place) |
| Engine oil | Check and fill | Every 8 hours (daily) (clean more frequently in dusty place) |
| | Change | First time:20 hours. Every 50 hours afterward |
| Air filter element | Clean | Every 8 hours (daily) (clean more frequently in dusty place) |
| | Replace | Every 200 hours or 2 years, whichever comes first (contact Canycom representative for placement) |
| Spark plug | Clean | Every 100 hours |
| | Replace | Every 300 hours |
| Replace fuel strainer | | Every 200 hours |
| Check and adjust spark plug gap | | Every 100 hours (contact Canycom representative for placement) |
| Replace oil filter | | First time:20 hours. Every 200 afterward (contact Canycom representative for placement) |
| Check and adjust tappets | | Every 300 hours (do more frequently in dusty place) |
| Remove carbon deposit from cylinder head | | Every 500 hours (do more frequently in dusty place) |
| Clean engine base (oil pan) | | Every 500 hours (clean more frequently in dusty place) |
| Clean carburetor | | Every 500 hours (clean more frequently in dusty place) |
| Perform valve lapping | | Every 500 hours (clean more frequently in dusty place) |
| Replace fuel hose | | Every two years |
| Overhaul | | 1000 hours (contact Canycom representative for overhaul) |

* The figures shown are recommended service intervals.

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 can require special knowledge or tools and instruments. Contact your CANYCOM representative to perform such procedures.

| Item | Description | Schedule | | | Note | |
|---|------------------------|---|-----|------|------|---------|
| | | PSI | Mon | Year | | |
| Drive Train | Tires | Tires shall be inflated to the specified pressure. | √ | √ | √ | page 69 |
| | | Tires and wheels shall be free of crack, damage, or uneven wear. | | √ | √ | |
| | | Wheel bolts shall not be loose or missing. | √ | √ | √ | |
| | | Wheel bearings do not exhibit excessive play, and no irregular noise or overheating shall be observed. | | √ | √ | |
| | Transmission | Irregular noise or overheating shall not be observed when moving forward or backward. | | √ | √ | |
| | | There shall not be oil leaks in or around transmission. | | √ | √ | |
| | Auxiliary Transmission | Transmission can be shifted to either position positively and performs normally. | | √ | √ | |
| | | Lever shall not be loose or have excessive play. | | √ | √ | |
| | Front Axle | Irregular noise or overheating shall not be observed when traveling. | | √ | √ | |
| | | There shall not be oil leaks in or around front differential case or knuckles. | | √ | √ | |
| | HST | HST shall perform normally. | √ | √ | √ | |
| | | HST oil (hydraulic fluid) shall be filled to a proper level and shall be clean and free of dirt or contamination. | | √ | √ | page 72 |
| Lever or pedal shall not be loose or have excessive play. | | | √ | √ | | |

| Item | Description | Schedule | | | Note | | |
|----------------|-------------------------------|---|--|------|------|---------|--|
| | | PSI | Mon | Year | | | |
| Drive Train | V-belt | Belt tension shall be properly adjusted. | | √ | √ | | |
| | | Belt shall be free of damage or excessive wear. | | √ | √ | | |
| | Parking Brake | Brake shall work properly. | √ | √ | √ | page 75 | |
| | | Parking brake shall be able to hold the machine on the 25-degree slope. | | √ | √ | | |
| | Steering | Turn steering wheel right and left; front wheels shall turn accordingly. | | √ | √ | | |
| | | Steering can be adjusted in 5 positions and locked securely. | | √ | √ | | |
| | Rods, Links, and Wires | Rods, links, and wires in linkage shall be free of deformation or damage. | | √ | √ | | |
| | | Connections shall be free of looseness, excessive play, or missing cotter pins. | | √ | √ | | |
| | Body, Chassis, Safety Devices | Chassis, Frame | Shall be free of cracks, deformation, or corrosion. | | √ | √ | |
| | | | Fastening bolts or nuts shall not be loose or missing. | √ | √ | √ | |
| Body Panels | | Shall be free of cracks, deformation, or corrosion. | | √ | √ | | |
| | | Doors and lids shall open, close, and lock properly. | | √ | √ | | |
| | | Fastening bolts or nuts shall not be loose or missing. | √ | √ | √ | | |
| Labels | | Warning labels and instruction plates shall be clean, legible, and free of damage. | √ | √ | √ | | |
| Cutting System | Cutting System | Blades shall be free of cracks or damage. | √ | √ | √ | page 77 | |
| | | Blade pins and wave washers shall be free of cracks or damage. | √ | √ | √ | page 77 | |
| | | Cutting blade shield shall be free of cracks or damage. | √ | √ | √ | | |
| | | Skirts on cutting blade shield shall be free of cracks or damage, and shall not be missing. | √ | √ | √ | | |
| | | Belt tension shall be properly adjusted. | √ | √ | √ | page 80 | |
| | | Belt shall be free of damage or excessive wear. | √ | √ | √ | page 80 | |
| | | When activated, mower brake shall stop mower. | √ | √ | √ | page 82 | |
| | | Shear pin in the propeller shaft joint is not missing. | √ | √ | √ | page 85 | |
| | | Greasing points shall be properly greased. | | √ | √ | page 55 | |

| Item | Description | Schedule | | | Note | |
|-------------------|-----------------|--|-----|------|------|---------|
| | | PSI | Mon | Year | | |
| Electrical System | Charging System | | | √ | | |
| | Battery | Battery fluid (electrolyte) shall be at the proper level. | | √ | √ | page 86 |
| | | Terminals shall be free of looseness or excessive corrosion. | | √ | √ | |
| | Head Light Unit | Head light shall work. | √ | √ | √ | |
| | | Light lens shall be free of cracks or chipping and water shall not be in the light unit. | | √ | √ | |
| | Wiring | Connections shall not be loose. | | √ | √ | |
| | | Wiring shall be free of damages. | | √ | √ | |

5

Maintenance

List of Fluids and Lubricants

| Item | Schedule | Grade | Cap. |
|---------------------|---|--|--|
| Fuel | As needed. | Automotive Unleaded Gasoline | 14 L (3.7 US gal) |
| Engine Oil | Fill Inspect daily. Fill as needed. Change Initially - After 20 hours of use. Every 50 hours afterwards. *2 | Gasoline Engine Oil API rating: SE or better. SAE rating: 10W-30 | 1.5L (1.59 US qt) 1.7L *1 (1.80 US qt) *1 |
| Transmission Oil | Change Initially - After 50 hours of use. Every 500 hours afterwards. | Gasoline Engine Oil SAE rating: 10W-30 | 0.9L (0.95 US qt) |
| Front Axle Oil | Change Initially - After 50 hours of use. Every 500 hours afterwards. | Gasoline Engine Oil SAE rating: 10W-30 | 0.7L *3 (0.74 US qt) *3 |
| HST Oil | Change 2 years or every 300 hours (whichever comes first). | Gasoline Engine Oil SAE rating: 20W-50 | 4.0L (4.23 US qt) |
| Mower Gearbox Oil | Change Initially - After 50 hours of use. Every 500 hours afterwards. | Transmission Oil SAE rating: 80W or 10W-30 | 0.15L (0.16 US qt) |
| Battery Electrolyte | Fill Inspect every 50 hours and fill when necessary. | Distilled Water | - |

*1 When replacing the oil filter cartridge.

*2 Our oil change interval is specific to this application and different from that in the Engine manual.
Follow our figure above.

*3 Axle center: 0.5L (0.53 US qt), knuckle: 0.1L (0.11 US qt) each.

Greasing Points

NOTICE

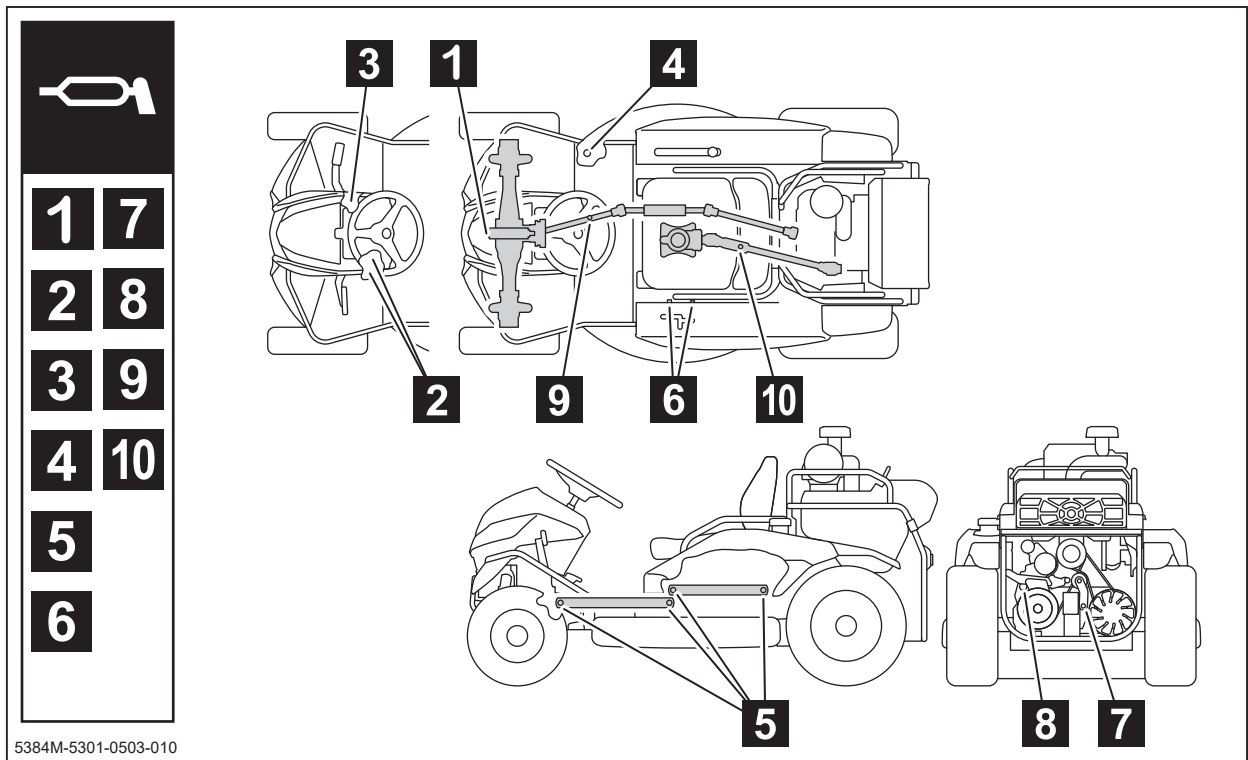
- Grease regularly. Insufficient greasing can result in seizure or rusting, affecting smooth operation of the machine.

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.
- Set the cutting height to the lowest to grease the link pivots.

Greasing Points

| Location | Schedule | Grade |
|---------------------------|----------------|----------------|
| 1 Front axle center pivot | Every 6 Months | Chassis Grease |
| 2 Brake pedal pivot | Every 6 Months | Chassis Grease |
| 3 Drive pedal pivot | Every 6 Months | Chassis Grease |
| 4 Side shield | Every 6 Months | Chassis Grease |
| 5 Mower deck link pivot | Every 6 Months | Chassis Grease |
| 6 Drive lever pivot | Every 6 Months | Chassis Grease |
| 7 Drive tension arm pivot | Every 6 Months | Chassis Grease |
| 8 Mower tension arm pivot | Every 6 Months | Chassis Grease |
| 9 Propeller shaft | Every 6 Months | Chassis Grease |
| 10 Mower propeller shaft | Every 6 Months | Chassis Grease |





Consumables and Spares

NOTICE

- Use only CANYCOM genuine parts when replacement or repair is required. CANYCOM assumes no liability whatsoever if any problem occurs as a result of using any part that is not a genuine CANYCOM part.

NOTE

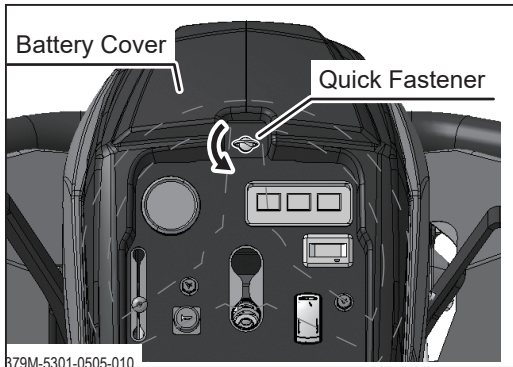
- Rubber products deteriorate over time. Replace them every 2 years.
- You can see our online parts manual at the URL or the QR code below:
<https://www.canycom.jp/eng/maintenance/parts/>
Go to the site and look up your model in the list. 
- Consumable parts are listed in a separate page for your convenience.
https://www.canycom.jp/maintenance/recomment/consumables_CMX241400.pdf (This links to a PDF file. You need Adobe Reader or similar software to read it.) This file contains a list of items such as oil filter cartridge, air cleaner element, spark plug, drive belts and mower blades. Open this file to look up your model in the list. For other parts, refer to the parts catalog above. 
- In case you cannot see the above parts manual, contact your CANYCOM representative.
- Order replacement parts through your local CANYCOM representative.

Removing and Installing Body Panels

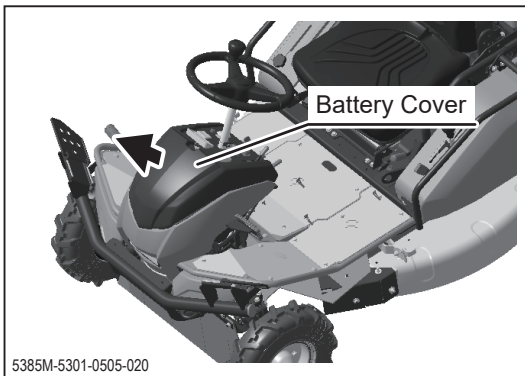
⚠ CAUTION

- Cut or pinch hazard exists when removing or installing the body panels; beware of the sharp edges and pinch points.
- Make certain to reinstall the panels after removing for repairs or inspection.

Battery Cover

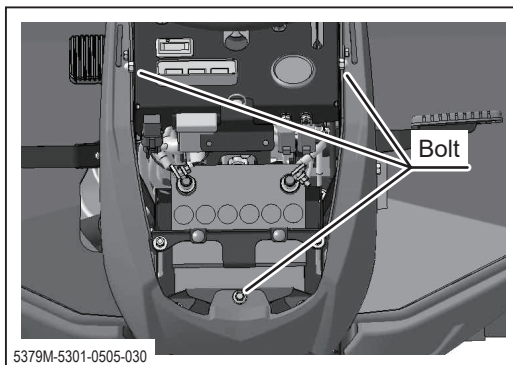


1. Turn the quick fastener counter-clockwise to unlock.



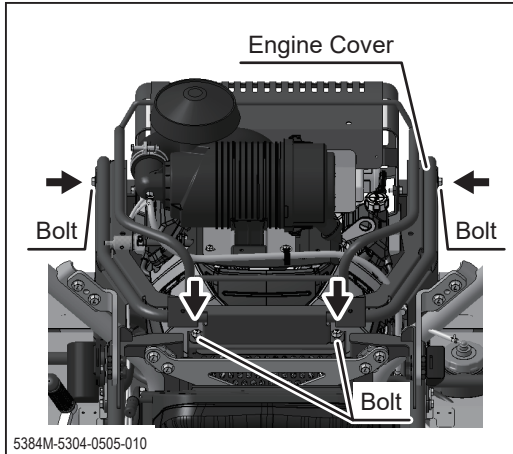
2. Pull up the battery cover to remove.

Front Cover



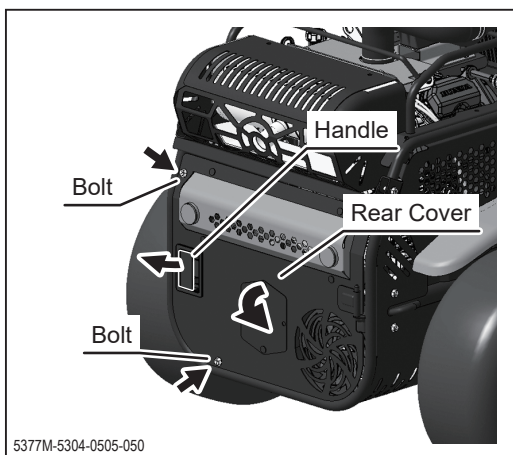
1. Remove the battery cover.
2. Undo three (3) bolts to remove the front cover.

Engine Cover



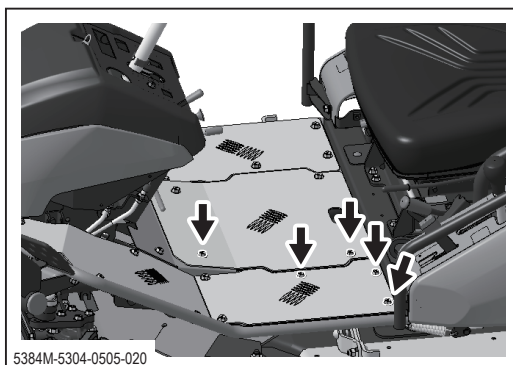
1. Undo four (4) bolts.
2. Remove the engine cover.

Rear Cover

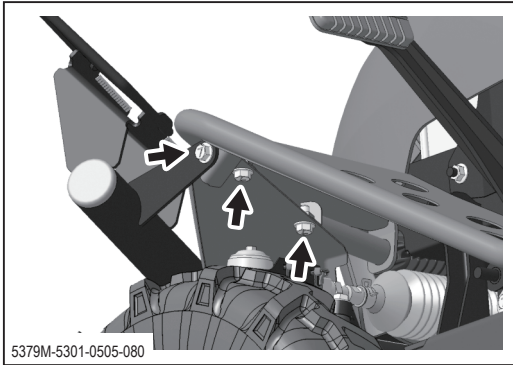


1. Undo two (2) bolts.
2. Pull the handle to open the rear cover.

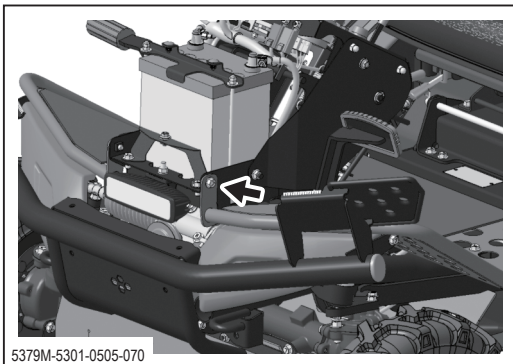
Step



1. Remove five (5) bolts on the top of the step.

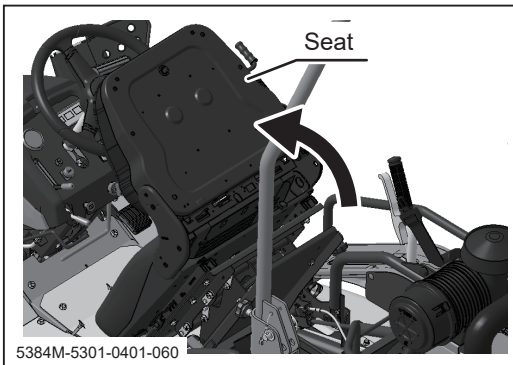


2. Remove two (2) bolts connecting the step to the fender.
3. Remove one (1) bolt connecting the step to the bumper.



4. Remove the battery cover and the front cover.
5. Remove one (1) bolt holding the step.
6. Remove the step.

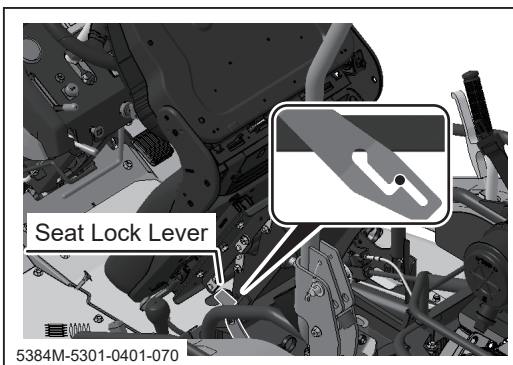
Seat



1. Raise the seat until it locks in place.

NOTE

- When it is raised far enough, the seat locks automatically.
- Push the seat to make sure it is firmly locked in place.



2. Hold the seat and push the lock plate down to unlock and lower the seat.

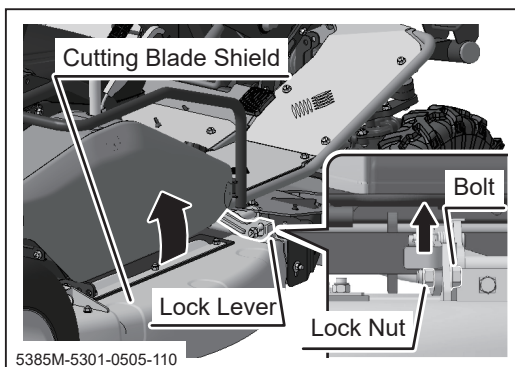
Cutting Blade Shield

⚠ DANGER

- Stop the engine before opening the cutting blade shield. Opening the cutting blade shield when the mower is running can result in injury or death.

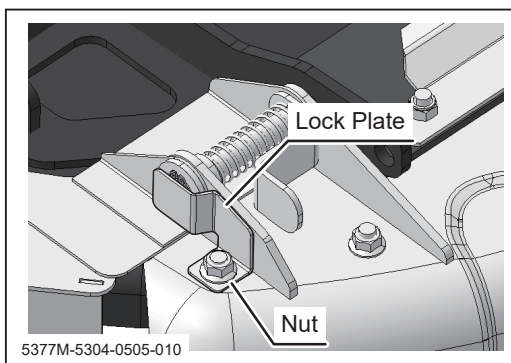
⚠ WARNING

- Make sure the cutting blade shield is securely locked in the lowest position and does not open to the side before operating (mowing). Loose shield can allow objects to be thrown, resulting in injury to the operator or by-standers or in property damage.
- Make sure all the fasteners and mounting plates (including the lock plate and its fasteners) are securely installed before operating.



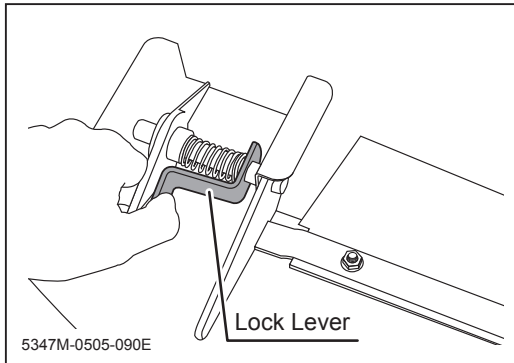
Flipping up shield

1. Remove a bolt and a lock nut.
2. Raise the lock lever.
3. Hold the lock lever and raise the blade shield.
4. Release the lock lever to lock the shield in the raised position.

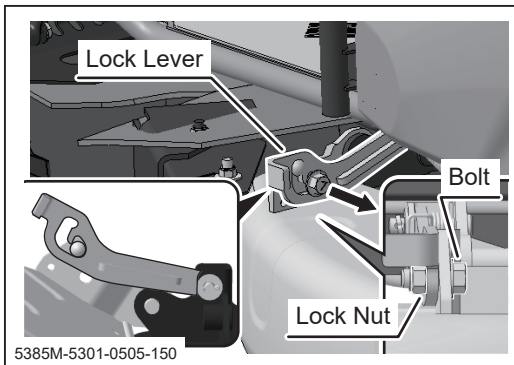
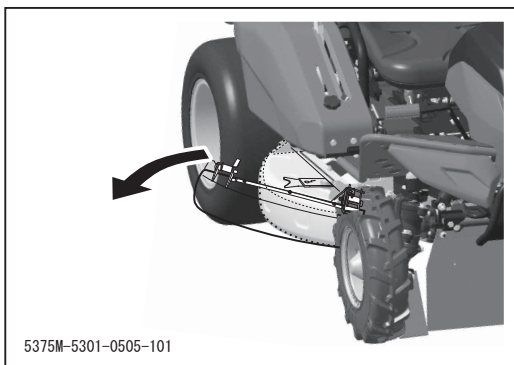


Opening shield to the side (Right-hand side)

1. Undo a the nut to remove the lock plate.

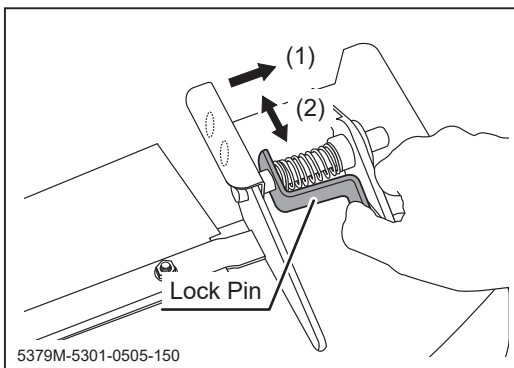


2. Squeeze the lock lever to open the cutting blade shield to the side.



Opening shield to the side (Left-hand side)

1. Remove a bolt and a lock nut.
2. Raise the lock lever.
3. Raise the blade shield while holding the lock lever up.



4. Tilt the lever in the direction of the arrow to release the blade shield from the pins.
5. Push the lock pin in the direction of the arrow.
6. While holding the lock pin, pull the blade shield toward you to remove it.

Engine

⚠ WARNING

- Always stop the engine and remove the ignition key before servicing.
- An engine that has been running is very hot. Allow the engine to cool before servicing, or severe burns can result.
- Keep fire and spark away when servicing.

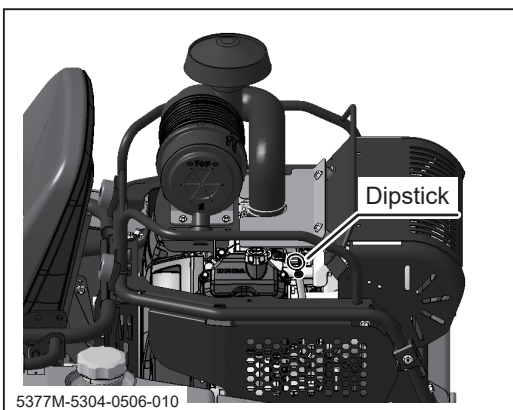
Engine Oil

NOTICE

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

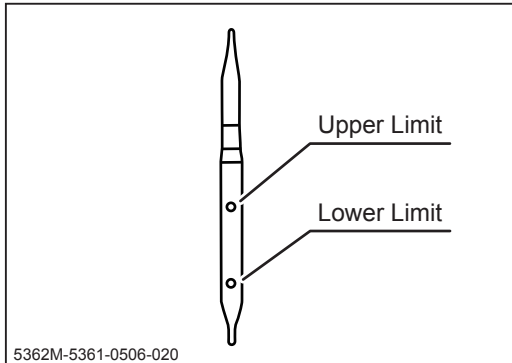
NOTE

- Dispose of the drained oil properly.
- To obtain a correct reading, check the oil level before starting, or wait about 10 minutes after stopping the engine to allow oil to drain back to the oil pan.
- Always check the oil level on a level surface.
- Oil to use and capacity: page 54.

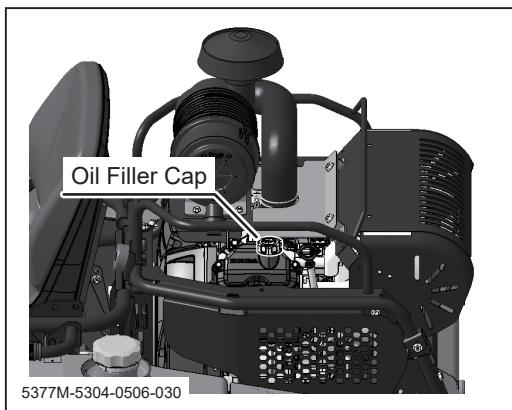


Inspecting

1. Park the machine on a level surface.
2. Pull out the dipstick and wipe it clean.
3. Insert the dipstick fully and pull it out.

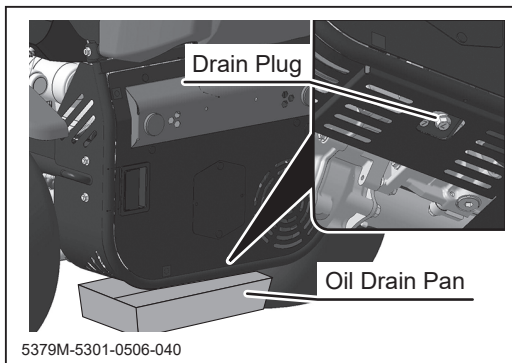


4. Visually inspect the oil level. Make sure the oil level is between the upper and lower limits. If it is below the lower limit, add oil.
5. Visually inspect the condition of oil. If it is too dirty or viscosity is not normal, change oil.
6. Put the dipstick back in place.



Filling

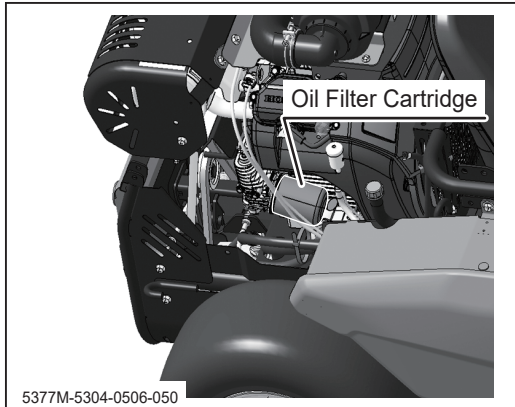
1. Remove the oil filler cap.
2. Fill specified amount of correct oil into the filler.
3. Check the oil level. Make sure the oil level is between the upper and lower limits.
4. Put the oil filler cap back in place.



Changing

1. Have an appropriate oil drain pan.
2. Remove the oil filler cap.
3. Remove the drain plug to drain oil.
4. Put the drain plug back in place.
5. Fill oil.
6. Check the oil level and make sure the oil level is appropriate.
7. Put the oil filler cap back in place.

Oil Filter Cartridge

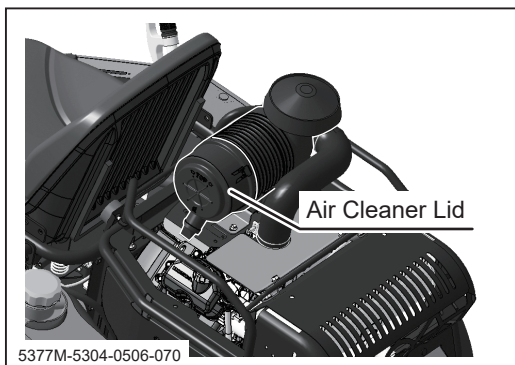


1. Remove the engine cover.
2. Follow the instructions in **Engine Manual** to change the oil filter cartridge.
3. Reinstall the engine cover.

Air Filter

NOTICE

- Clean the air filter element daily. The dirty air filter element causes poor starting, reduces engine performance and shortens engine life.
- Replace the air filter element if damaged.

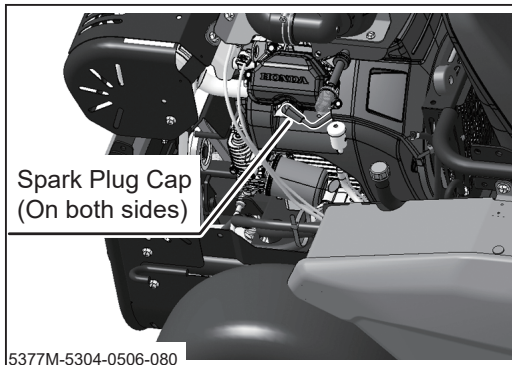


1. Follow the instructions in **Engine Manual** to inspect, clean or change the air filter element.

Spark Plugs

NOTICE

- **Never pull an ignition cable when removing a spark plug cap. The conductor in the cable can be severed or damaged.**
- **If a spark plug is damaged, replace it with a new one.**



1. Follow the instructions in **Engine Manual** to inspect, clean, or change the spark plugs.

Fuel System

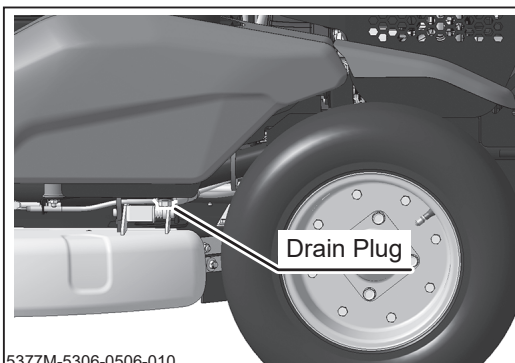
⚠ DANGER

- Fire and explosion hazard. Fuel is highly flammable.
 - When handling fuel, keep fire or spark away.
 - When fuel is spilt, wipe off immediately.
 - When working on the fuel system, stop the engine and remove the key.

NOTICE

- Dispose of drained fuel according to the local regulations.

If the fuel in the fuel tank is contaminated, drain and fill fresh fuel.



5377M-5306-0506-010

1. Remove the fuel tank drain plug to drain fuel.
2. Reinstall the drain plug and fill fresh fuel.

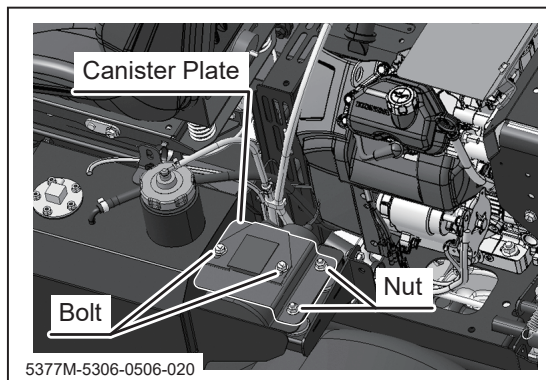
Canister

⚠ DANGER

- Keep fire and spark away when working on the fuel system.

NOTICE

- Replace canister when you feel the engine performance is deteriorated.



1. Remove the right side cover.
2. Remove the two nuts and detach the canister plate from the vehicle.
3. Remove the two bolts and detach the canister from the canister plate.
4. Loosen the hose clamps and remove the hoses from the canister.
5. Replace the canister.
6. Connect the hoses to the canister and secure it with the hose clamps.
7. Secure the canister with the plate and reinstall it on the vehicle.
8. Reinstall the right side cover.

Drive Train

⚠ WARNING

- Stop the engine and remove the ignition key when servicing the drive train.
- Allow the machine to cool off before servicing. An engine and its ancillaries are very hot after operation and can pose a burn hazard.

NOTE

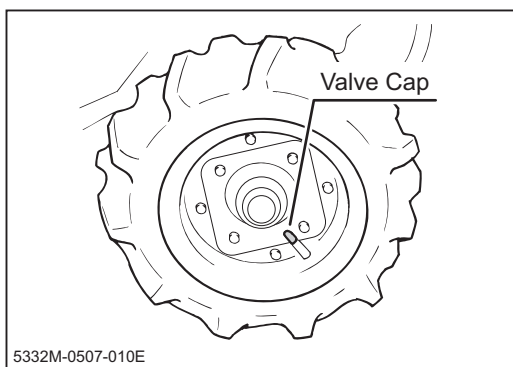
- Dispose of the drained oil properly.

Tires

NOTICE

- Inflate the tires to the specified pressure. Under- or over-inflation causes uneven wear or other damages to the tires.

| | Tire Size | Pressure KPa(kgf/cm ²) |
|-------------|------------------|------------------------------------|
| Front Wheel | 4.00-7 (4PR) | 240 (2.4) |
| Rear Wheel | 19×8.00-10 (4PR) | 240 (2.4) |



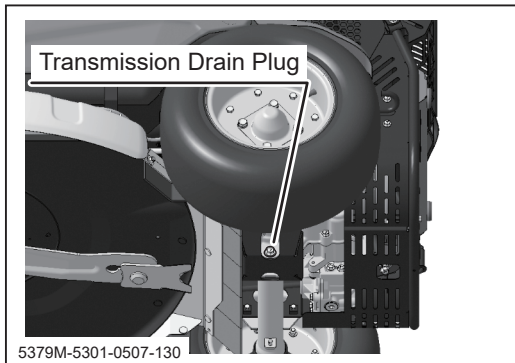
5332M-0507-010E

1. Park the machine on a level ground.
2. Remove the valve cap.
3. Check the tire air pressure. If it is different from the specified values, adjust the pressure.
4. Put the valve cap back in place.

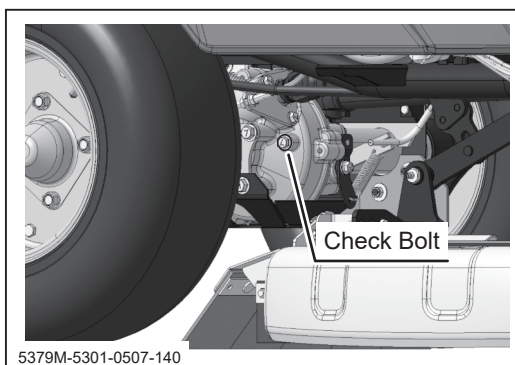
Transmission Oil

NOTE

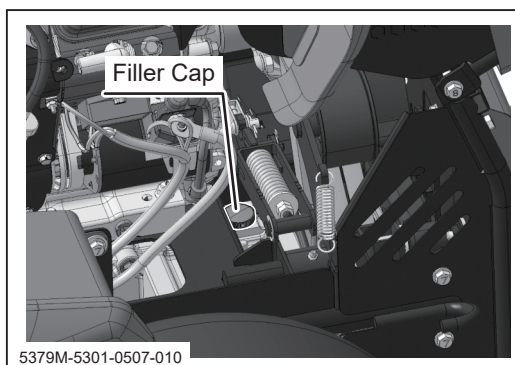
- Oil to use and capacity: page 54.



1. Park the machine on a level ground.
2. Have an appropriate oil drain pan.
3. Remove the transmission oil drain plug to drain oil.
4. Install the drain plug back in place.



5. Lower the mower deck to the lowest position.
6. Remove the transmission oil check bolt on the right-hand side of the transmission.

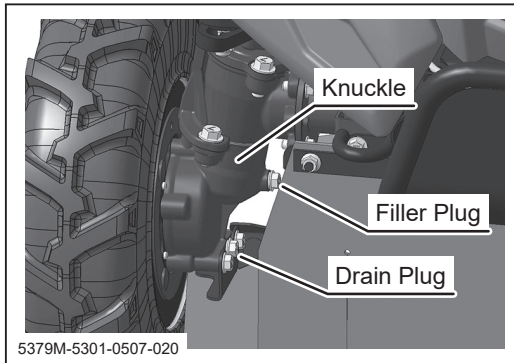


7. Remove the engine cover.
8. Remove the transmission oil filler cap.
9. Fill the specified amount of correct oil into the filler, up to the check bolt hole.
10. Put the check bolt back in place.
11. Put the filler plug back in place.
12. Reinstall the engine cover and raise the mower deck.

Front Axle Oil

NOTE

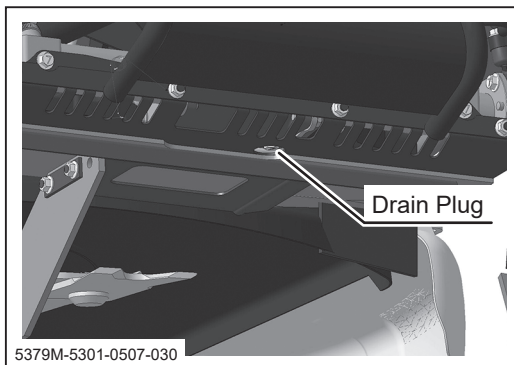
- Oil to use and capacity: page 54.



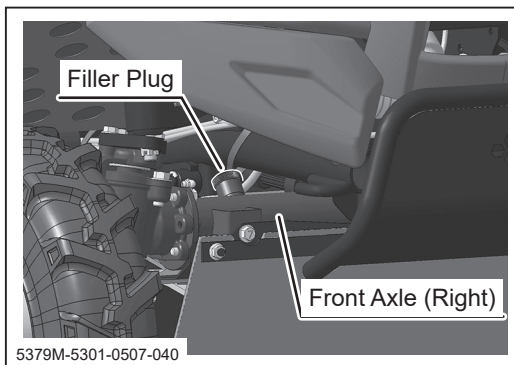
1. Park the machine on a level ground.
2. Have an appropriate oil drain pan.
3. Remove the drain plug on the left front knuckle to drain oil.
4. Remove the drain plug on the right front knuckle to drain oil as well.

NOTE

- The drain plug for the right front knuckle is on the back side of the front axle.



5. Remove the drain plug on the underside of the axle to drain oil.
6. Install all three (3) the drain plugs (for right and left knuckle and the axle) back in place.



7. Remove the right front step.
8. Remove the oil filler cap.
9. Fill the specified amount of oil into the filler.
10. Install the filler cap back in place.
11. Install the right front step.

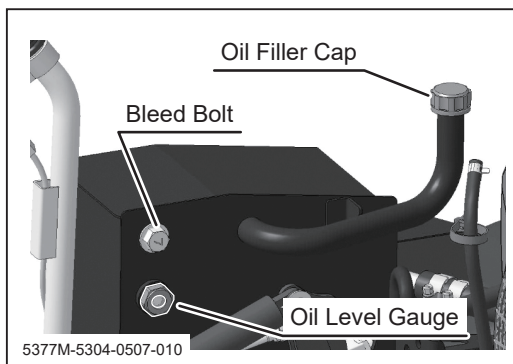
HST (Hydrostatic Transmission) Oil

NOTICE

- An HST is a very delicate mechanism, and contamination of ten-micron-order particles can damage it. When it is necessary to work on an HST, work in a clean and dust-free environment, and make sure dust or dirt do not enter its circuit.

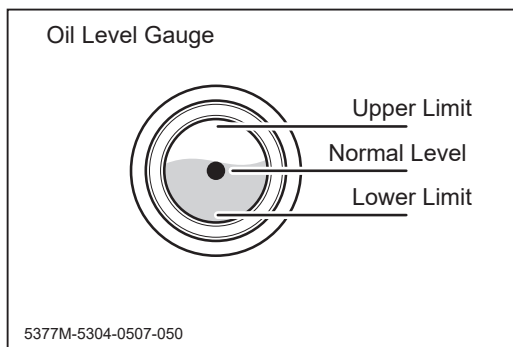
NOTE

- To obtain a correct reading, check the HST oil level before starting, or wait until the HST oil cools off sufficiently. Hot HST oil expands in volume and does not provide a correct reading.
- Change the HST oil once every two years or every 300 hours, whichever comes first.
- Oil to use and capacity: page 54.



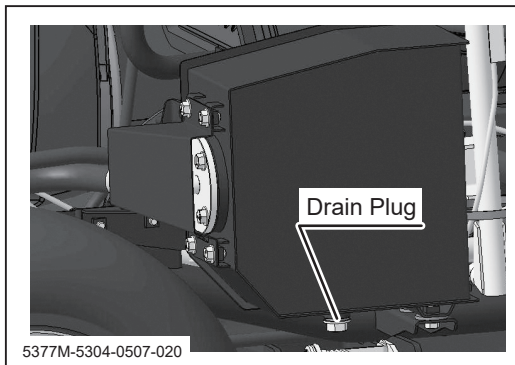
Inspecting

1. Park the machine on a level ground.
2. Visually inspect the oil level and condition in the oil level gauge on the HST oil tank.
3. Make sure the oil level is between the upper and lower limits. If it is below the lower limit, fill.
4. If oil appears dirty, change.



Filling

1. Remove the oil filler cap.
2. Fill the specified HST oil into the tank so that the oil level is between the upper and lower limits in the oil level gauge.
3. Reinstall the oil filler cap securely.

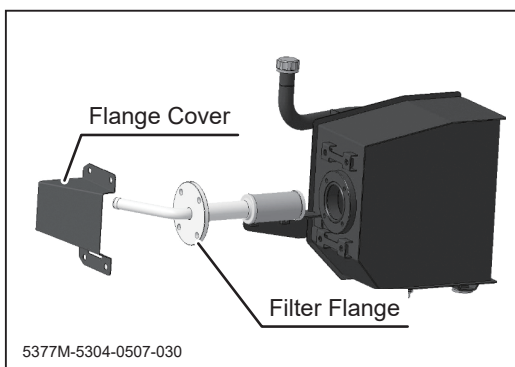


Changing

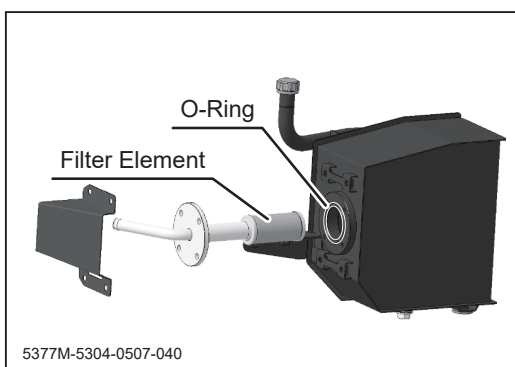
1. Remove the right side cover.
2. Have an appropriate oil drain pan.
3. Remove the oil filler cap.
4. Remove the drain plug to drain oil.

NOTE

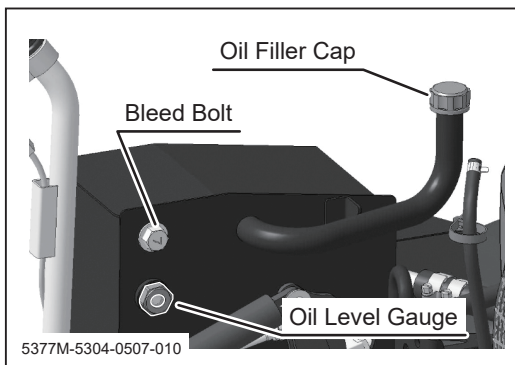
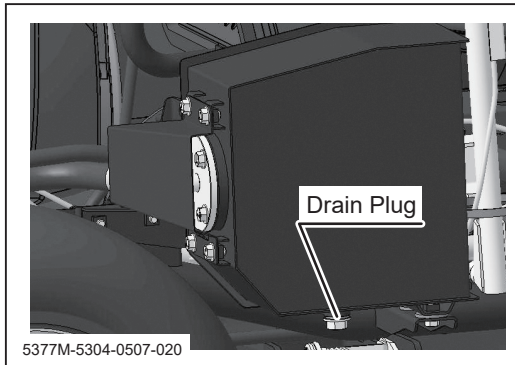
- The HST system cannot be fully drained due to its design.
- Do not operate the drive pedal or drive lever with the HST oil drained. Doing so lets air into the circuit, necessitating to bleed the circuit.



5. Remove four (4) bolts to remove the flange cover.
6. Remove four (4) bolts to remove the oil filter flange.



7. Remove the old filter element and install a new one.
8. Apply a thin coat of fresh oil onto the O-ring.
9. Insert the oil filter flange into the tank, making sure the O-ring stays in the groove.
10. Reinstall the oil filter flange to the tank with four bolts.
11. Reinstall the flange cover with four bolts.



12. Install the drain plug.

13. Remove the bleed bolt.

14. Fill fresh oil to the normal level.

15. Reinstall the oil filler cap and the bleed bolt.

16. Start the engine and run it for a while. Stop it and check the HST oil level.

17. Restart the engine and drive the machine back-and-forth from standstill several times.

18. Check the oil level. If it is low, fill it to the normal level.

19. Perform 13-18 until the oil level stabilizes.

20. Check if there is no oil leak.

21. Install the right side cover.

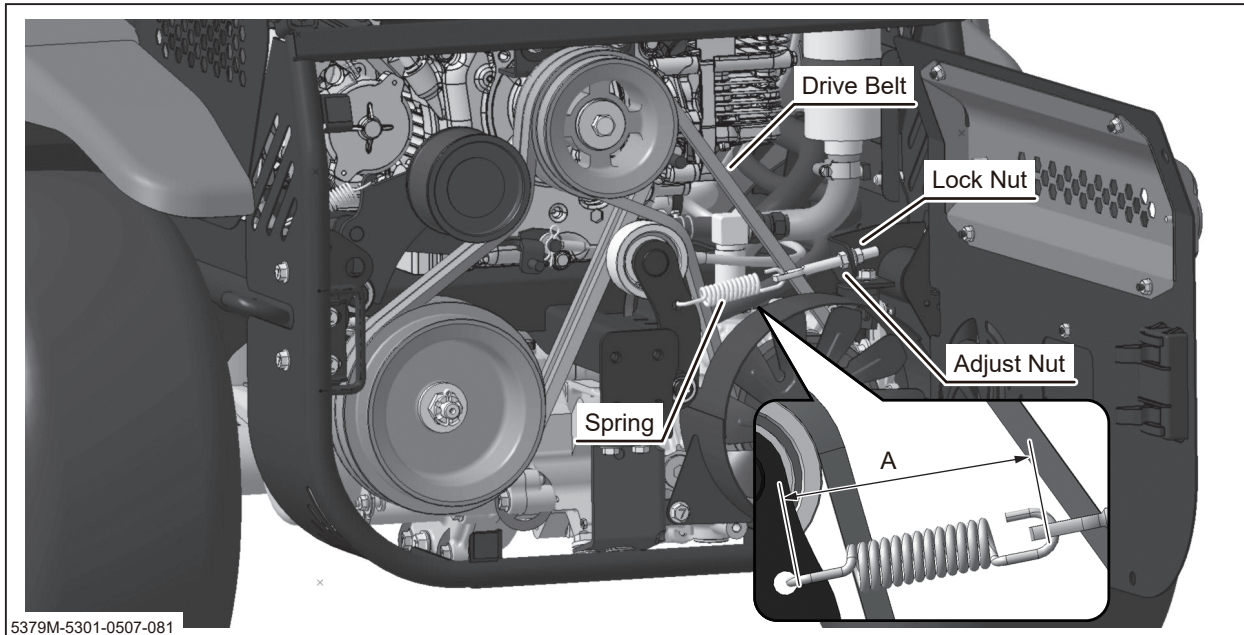
22. After changing the HST oil, check the oil level every 10-30 minutes of use for a while and fill as necessary.

Drive Belt

NOTICE

- Adjust belt tension properly. The improperly tensioned belt can reduce performance and its service life.

1. Open the rear cover.

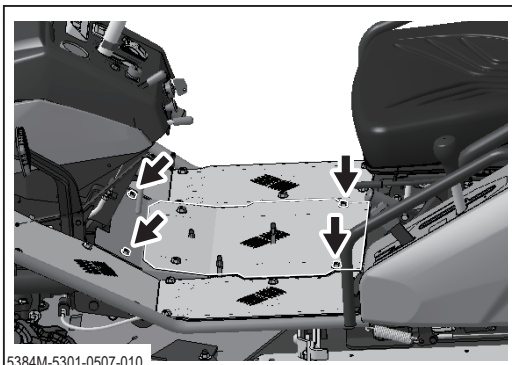


2. Check the V-belt tension by the length A of the tension spring to be approximately 85mm (3.35in). If it is out of this range, adjust with the adjusting nut.
3. Visually inspect the V-belt. Replace the V-belt if it is damaged. For a replacement, contact your CANYCOM representative.
4. Close the rear cover.

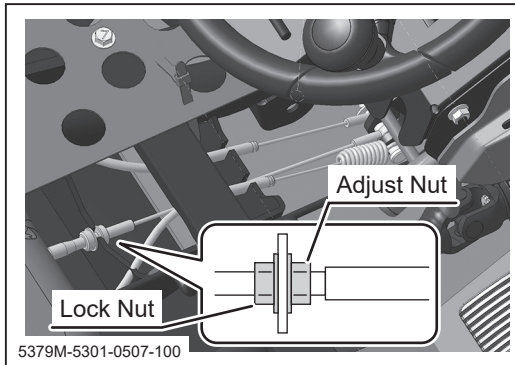
Parking Brake

⚠ WARNING

- Always keep parking brake adjusted for maximum performance. Improperly adjusted parking brake can result in property damage, serious injury, or death.



1. Park machine on level ground.
2. Remove four (4) bolts on the top of the step.
3. Remove the center panel.

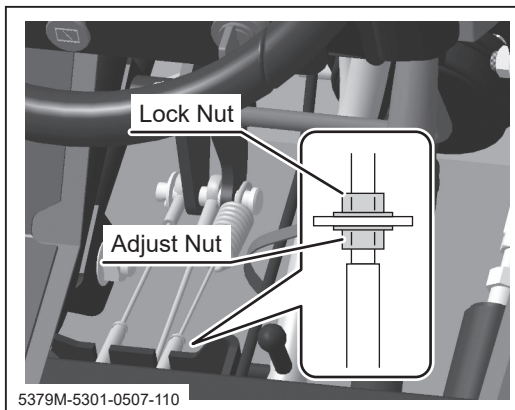


Rear Brake

4. Loosen the lock nut
5. Adjust the brake with the adjusting nut so that the brake does not drag when the parking brake pedal is free.
6. Adjust the brake so that the brake works and the parking brake pedal locks securely when the parking brake lock lever is applied
7. Tighten the lock nut.

NOTE

- If the brake does not work even the parking brake pedal is locked, the brake shoe is worn out. Please contact your CANYCOM representative for replacement.



Front Brake

8. Lock the parking brake pedal and inspect that the stretch of the spring is between 5mm and 8mm (approx. between 0.2 and 0.3in). If it is not within this range, adjust it with the adjusting nut.
9. Tighten the lock nut after adjustment
10. Reinstall the center panel with four bolts in place.

Cutting System

WARNING

- Stop the engine and remove the ignition key when servicing.
- Allow the machine to cool off before servicing. An engine and its ancillaries are very hot after operation and can pose a burn hazard.

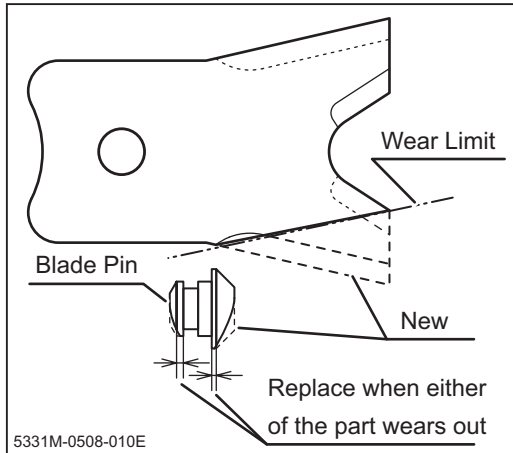
Cutting Blades

CAUTION

- Blades and cutting blade stay can become sharp due to wear. When handling a blade or cutting blade stay, always wear thick gloves and handle carefully. Injury can occur.
- When replacing a blade, do not force it to remove. A blade can move suddenly, causing injury. When it is difficult to remove it, clean the blade and remove foreign object. Turn the blade back and forth to remove.

NOTICE

- When a blade is damaged, replace it and the other blade immediately. Always replace blades in pair. Damage due to vibration can occur.
- When replacing blades, always replace both blades. Replace blade pins and wave washers also.
- When a foreign object is tangled with the blade, immediately stop the engine and remove the foreign object. Damage due to vibration can occur.
- When replacing the blades, inspect the cutting blade stay. If the stay is worn beyond the wear limit, damaged or deformed, replace it immediately. Contact your CANYCOM representative for replacement.

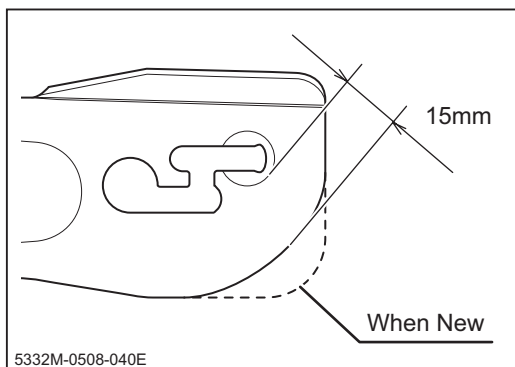


Inspecting

1. Open the cutting blade shield.
2. Visually inspect the blades and blade pins for wear and damage. If the blades are worn normally, turn them over and use. Replace if both of the edges are worn. If the blades or blade pins are worn excessively, deformed, damaged, or missing, replace them with new ones.

NOTE

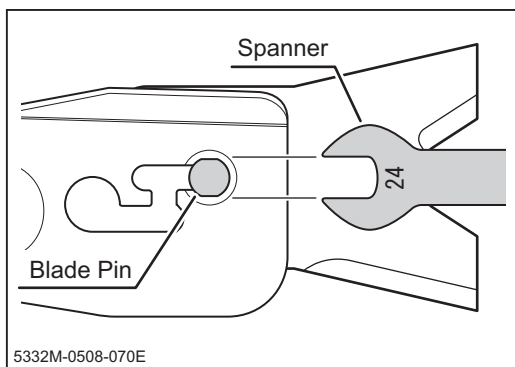
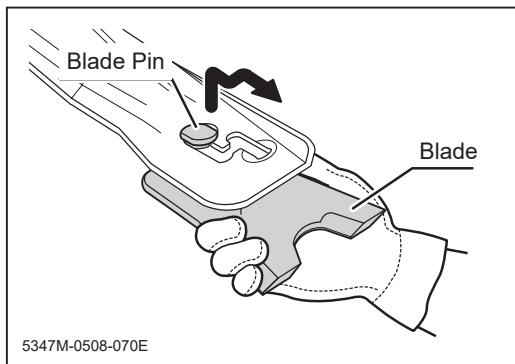
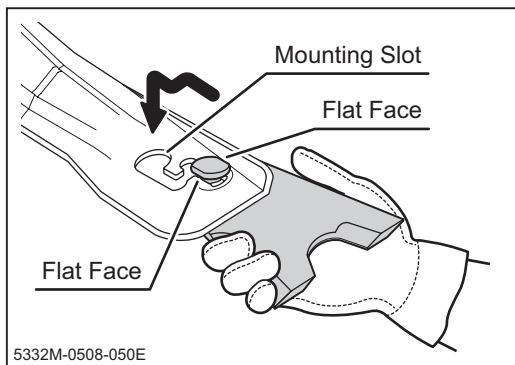
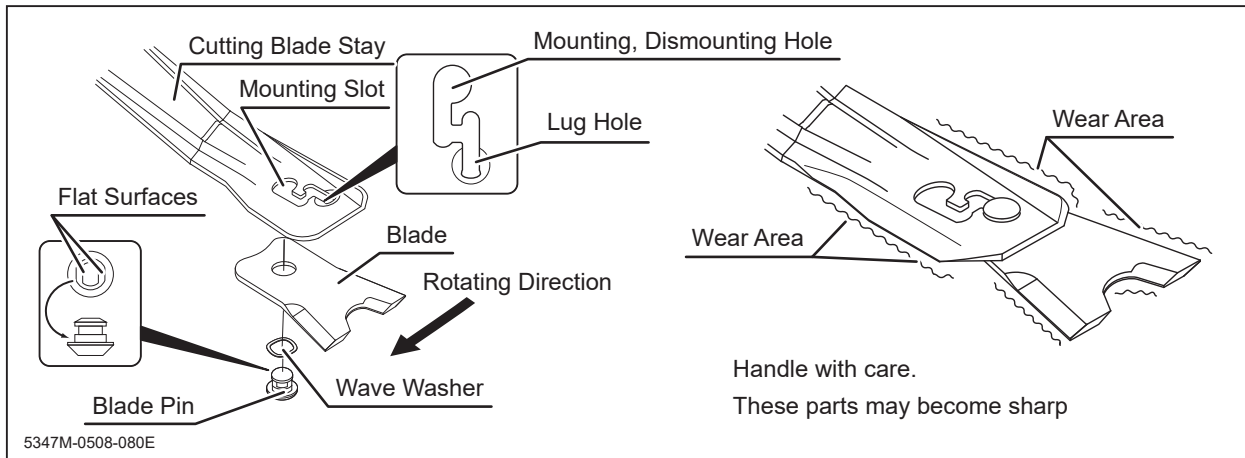
- **Wear Limit**
Blade: Up to the line connecting the outer edge and the inner edge.
Blade Pin: Up to either of the shoulder.



3. Inspect the cutting blade stay. If the stay is worn excessively, deformed or damaged, contact your CANYCOM representative and have it replaced with a new one.
4. Close the cutting blade shield.

NOTE

- **Wear Limit:** Up to the solid line in the left figure (should have more than 15mm (0.6in) clearance between the edge of the cutting blade stay and mounting slot.)



Replacing

1. Open the cutting blade shield.
2. Noting the direction of the flat faces on the blade pin, shift the blade along the mounting slot to remove.
3. Install a new blade pin and a wave washer to the blade and shift blade along the mounting slot, noting the direction of the flat faces.

NOTE

- **Wear Limit:** See page 78.
- If dirt or grass enters into the mounting slot, making removal of the blade difficult, remove dirt or grass with a flathead screw driver before removing the blade.
- If it is difficult to remove the blade, use a 24mm (0.9in) spanner to remove

Mower Drive Belt

DANGER

- Never place any part of the body under the cutting blade shield when the mower is running.

WARNING

- Do not allow bystanders to come near the machine when inspecting the mower drive belt.

NOTICE

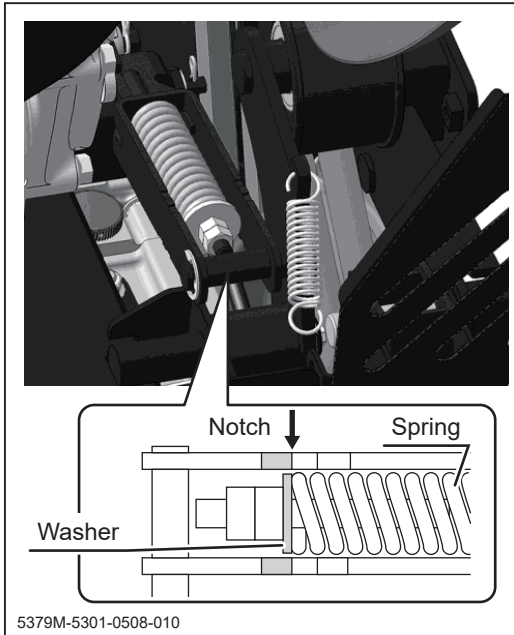
- Adjust belt tension properly. The improperly tensioned belt can reduce performance and its service life.

NOTE

- The V-belt stretches (breaks in) when it is new. Inspect and adjust the V-belt after the first day's (4 hours') use.
- For a longer service life, inspect and adjust (as necessary) the V-belt as the daily pre-start up checks.

Inspecting and Adjusting

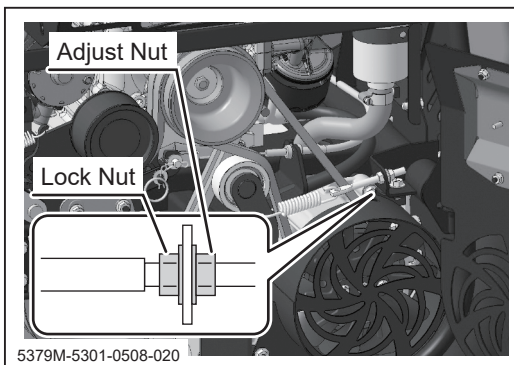
1. Remove the engine cover and open the rear cover.
2. Turn the mower clutch lever to [ON].
3. Inspect the condition of the V-belt to be free of damages or wear. Replace if damaged or worn. Contact your CANYCOM representative for replacement.



4. Visually inspect if the washer that holds the spring is aligned with the right side of the notches on the plates as shown.

NOTE

- There are two sets of notches. Refer to the illustration on the left.



5. If the washer is not aligned with the notch, loosen the lock nut and adjust the turnbuckle.
6. Tighten the lock nut.

NOTE

- If the washer cannot be aligned to the notches by adjusting the adjust nut (V-belt tension cannot be set within the specified range), the V-belt needs to be replaced. Contact your CANYCOM representative for replacement.

7. Close the rear cover and reinstall the engine cover.

Mower Brake


DANGER

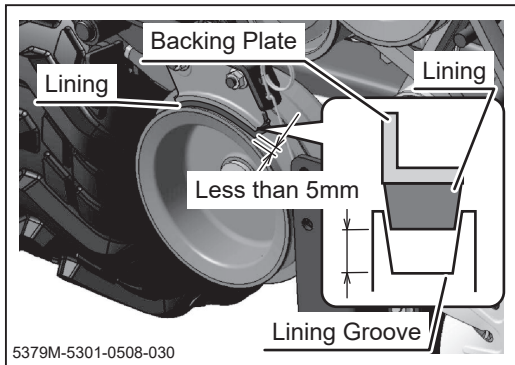
- Never place any part of body under cutting blade shield when mower is running.

WARNING

- Do not allow bystanders to come near machine when inspecting mower brake. Ride on machine when testing mower brake.
- Never attempt to check the performance of the mower brake with the cutting blade shield open. Stones or rocks can be thrown and cause damage to surrounding properties or persons.
- Inspect the mower brake whenever the performance of it seems inadequate.
- Stop the engine when adjusting the mower brake.

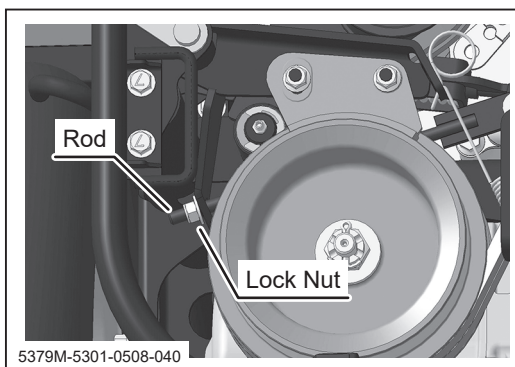
Inspecting

1. Start the engine.
2. Turn the throttle lever to [] (fast) to raise the engine speed.
3. Move the cutting height adjust lever to [6] .
4. Move the mower clutch lever to [ON] to run the mower.
5. Move the mower clutch lever to [OFF] to observe if the mower stops. If it does not stop (if it keeps turning by inertia), adjust the mower brake. To see if the mower is running or not, observe the rotating sound of the mower, or open the engine hood to observe the rotation of the mower V-belt. Avoid observing inside the cutting blade shield directly.

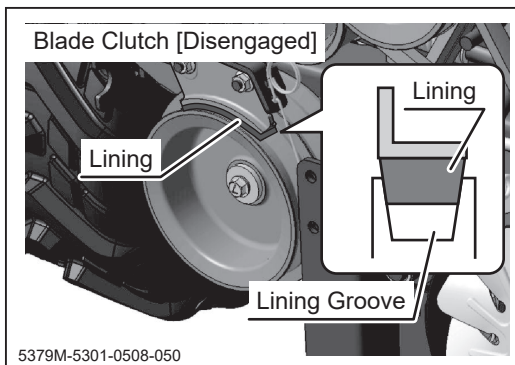


Adjusting

1. Open the rear cover.
2. Move the mower clutch lever to [ON].
3. Visually inspect if the brake lining is not in contact with the lining groove on the pulley. Also inspect if the gap between the backing plate and the pulley is 5mm (0.2in) or less.



4. If the lining is in contact with the lining groove, or the gap between the backing plate and the pulley is greater than 5mm (0.2in), adjust the lock nut on the rod.

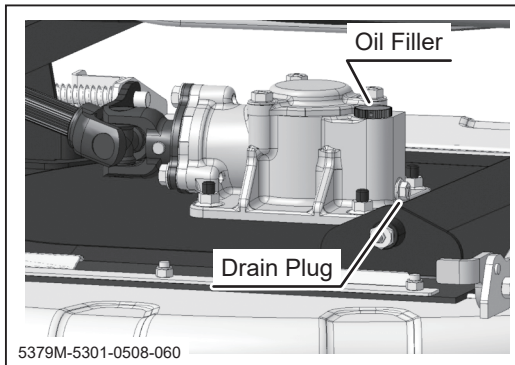


5. Move the mower clutch lever to [OFF].
6. Visually inspect if the lining is firmly in contact with the lining groove on the pulley.
7. Shake the rod (in the above illustration) to see if there is some play.
8. If the lining is not firmly in contact with the groove, or the rod is too tight, readjust the lock nut.
9. Move the mower clutch lever [ON] and [OFF] several times, then perform checks 4 through 8. Adjust as necessary.
10. Close the rear cover.

Mower Gearbox Oil

NOTE

- Oil to use and capacity: page 54.



1. Park the machine on a horizontal ground.
2. Move the cutting height adjust lever to the lowest position.
3. Have an appropriate oil drain pan.
4. Remove the drain plug to drain gearbox oil.

NOTE

- Removing the oil filler cap helps drain oil.

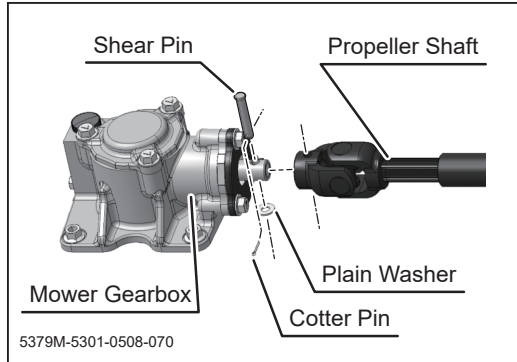
5. Install the drain plug back in place.
6. Remove the filler cap and fill the specified amount of correct oil into the filler.

NOTE

- If it is difficult to reach to the filler, use an oil jug or remove the seat and the plate under the seat.

7. Install the filler cap back in place and move the cutting height adjust lever to the highest position.

Shear Pin



1. Lower the cutting height adjust lever to the lowest position.
2. Push out the broken shear pin.
3. Pull out the propeller shaft from the shaft on the mower gearbox.
4. Align the hole on the gearbox shaft and the hole on the propeller shaft and insert a new shear pin.
5. Insert a plain washer and a cotter pin and split the cotter pin to hold the shear pin in place.

NOTE

- A shear pin works as a fuse-like protection mechanism for the propeller shaft, to prevent mower gearbox or mower from breaking when the mower blade is subjected to impact or overload.
- If the propeller shaft and the gearbox shaft are seized or the hole is worn, contact your CANYCOM dealer.

Electrical System

WARNING

- Always stop the engine and remove the ignition key when servicing the electrical system.
- Shock hazard. Do not handle the electrical components with wet hands.

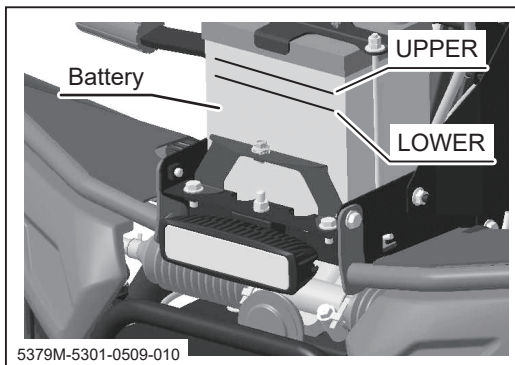
Battery

WARNING

- Never charge a battery when the fluid level is below the "lower level" line. Charging a battery with insufficient fluid can shorten the battery life or cause an explosion.
- Battery fluid (diluted sulfuric acid) is corrosive and causes severe burns. Be extremely cautious when handling battery fluid. If battery fluid is split on clothes, immediately rinse with plenty of water. If split on skin or in an eye, immediately rinse with plenty of water and promptly consult a physician.
- Explosion hazard. Keep open flame or spark away from the battery. Hydrogen gas generated during charging is extremely explosive.
- Never fill battery fluid beyond "upper level" line. Battery fluid can spill and cause damage to the machine or injury to person.
- Always disconnect the (-) terminal first, and connect the (+) terminal first. When connecting, connect the (+) terminal first, then connect the (-) terminal. Disconnecting or connecting in the wrong order can cause a short circuit.
- When installing a battery, make certain to connect the (+) and (-) terminals to their original positions. Avoid contact between the terminals and other surrounding parts.
- Use wet cloth to clean battery. Dry cloth can generate static electricity, which can cause explosion.
- Shock hazard: Do not touch the terminals.

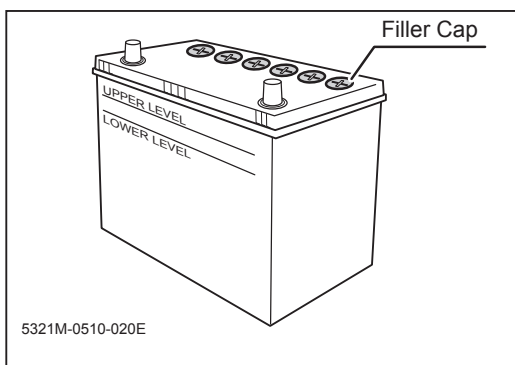
NOTICE

- Always remove the battery from the machine before charging. Failure to do so causes damage to electrical the components and wiring.
- Follow the battery charger user's manual when charging.
- When filling battery fluid, do not fill above [Upper Limit] line. Battery fluid can spill over and damage painted surfaces or corrode metal parts.



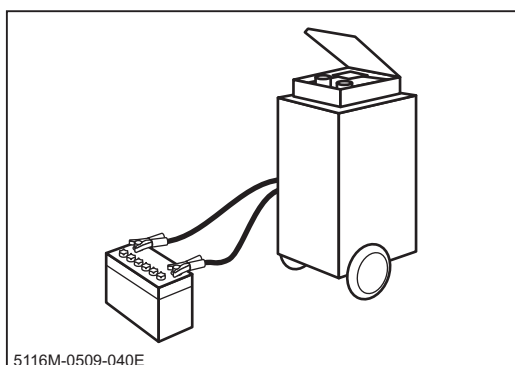
Inspecting

1. Park the machine on a level ground.
2. Remove the battery cover.
3. Visually inspect that the battery fluid level is between the "UPPER" and "LOWER" level lines.
4. If the fluid level is near or below "LOWER" level line, fill.
5. Install the battery cover back in place.



Filling

1. Remove front cover.
2. Remove battery.
3. Remove filler cap.
4. Fill distilled water to "UPPER LEVEL" line.
5. Install filler cap.
6. Install battery.
7. Install front cover.



Charging

1. Remove the battery cover.
2. Remove the battery from machine.
3. Follow instructions in the battery charger user's manual to charge the battery.
4. When the battery is fully charged, install the battery back in place.
5. Install the battery cover back in place.

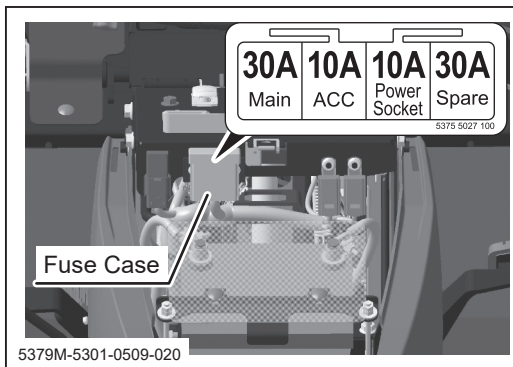
Fuses

NOTICE

- If a fuse blows, investigate the cause before replacing.
- Always replace a fuse with one of the correct rating.

NOTE

- Main Fuse: 30A. Lights Fuse: 10A

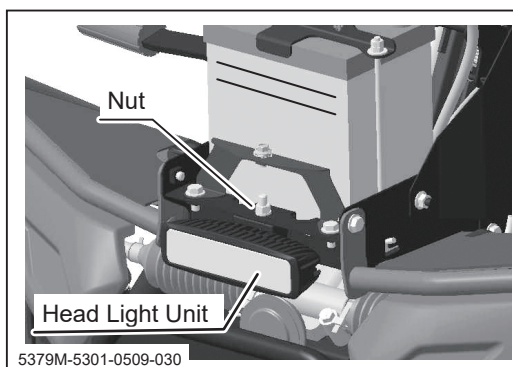


1. Remove the battery cover.
2. Open the fuse case cap. Remove the fuse and visually inspect it. If it is blown, replace it with new one of the same rating.
3. Install the fuse.
4. Install the fuse case cap.
5. Reinstall the battery cover back in place.

Light Unit

NOTE

- Light unit: page 57.



Head Light

1. Remove the battery cover.
2. Remove the front cover.
3. Remove a nut to remove the head light unit.
4. Install a new head light unit.
5. Reinstall the front cover.
6. Reinstall the battery cover.

After Use Care

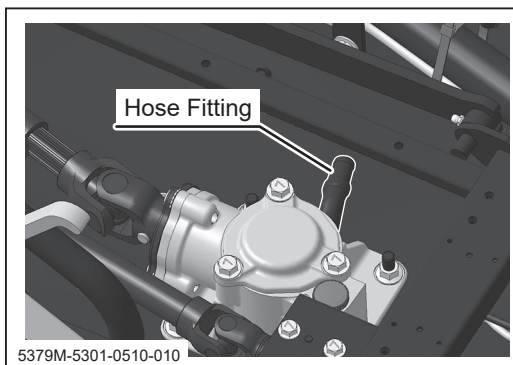
Cutting System

⚠ DANGER

- Never place any part of the body under the cutting blade shield when mower is running.

⚠ WARNING

- Do not allow bystanders to come near the machine when the mower is running.
- Always stay on the machine when performing this operation
- Never attempt to clean the cutting system with the cutting blade shield open. Stones or rocks can be thrown and cause damage to surrounding properties or persons.
- Turn the mower clutch to [ON] only when cleaning. Keep it in [OFF] position all the other times.



1. Park the machine.
2. Set the cutting height to about 50mm (1.9in).
3. Connect a hose to the hose connection. Run water through the hose.
4. Start the engine.
5. Turn the throttle lever to [🐔] (fast) to raise the engine speed.
6. Move the mower clutch lever to [ON] to run the mower to clean.
7. When cleaning is done, move the mower clutch lever to [OFF] to stop the mower.
8. Move the cutting height adjust lever to [6] .
9. Turn the throttle lever to [🐇] (slow) to lower the engine speed.
10. Stop the machine and remove the hose.

NOTE

- Do not set the cutting height too low. The cutting blades can hit the ground.

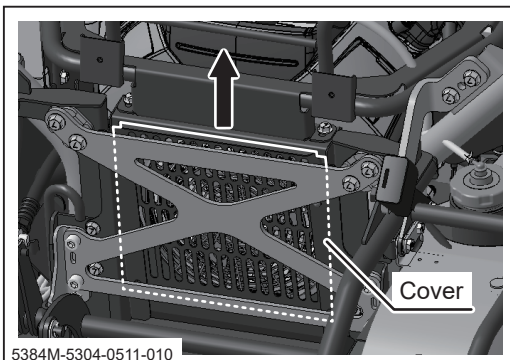
After Normal Use**⚠ WARNING**

- Fire hazard; clean the machine of cut grass and similar material after use. Cut grass that is accumulated on the machine can catch fire.
- Clean the cooling air intake in front of the engine. If the cooling air intake is clogged or blocked, it causes overheating, resulting in damages to the machine.

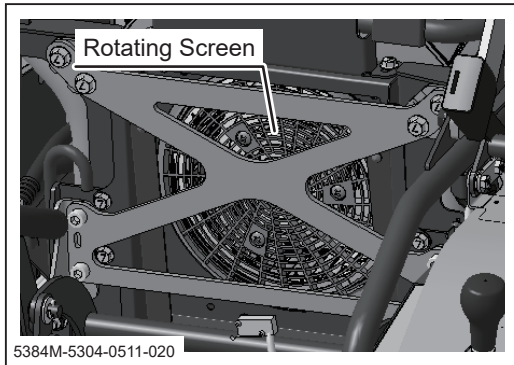
NOTICE

- Do not wash the engine or control panel with running water; water can enter inside and cause rust or damage.
- Always clean the cutting blades and the blade pins after use. Dirt or foreign matters can solidify or corrode the blades and make it difficult to remove them.

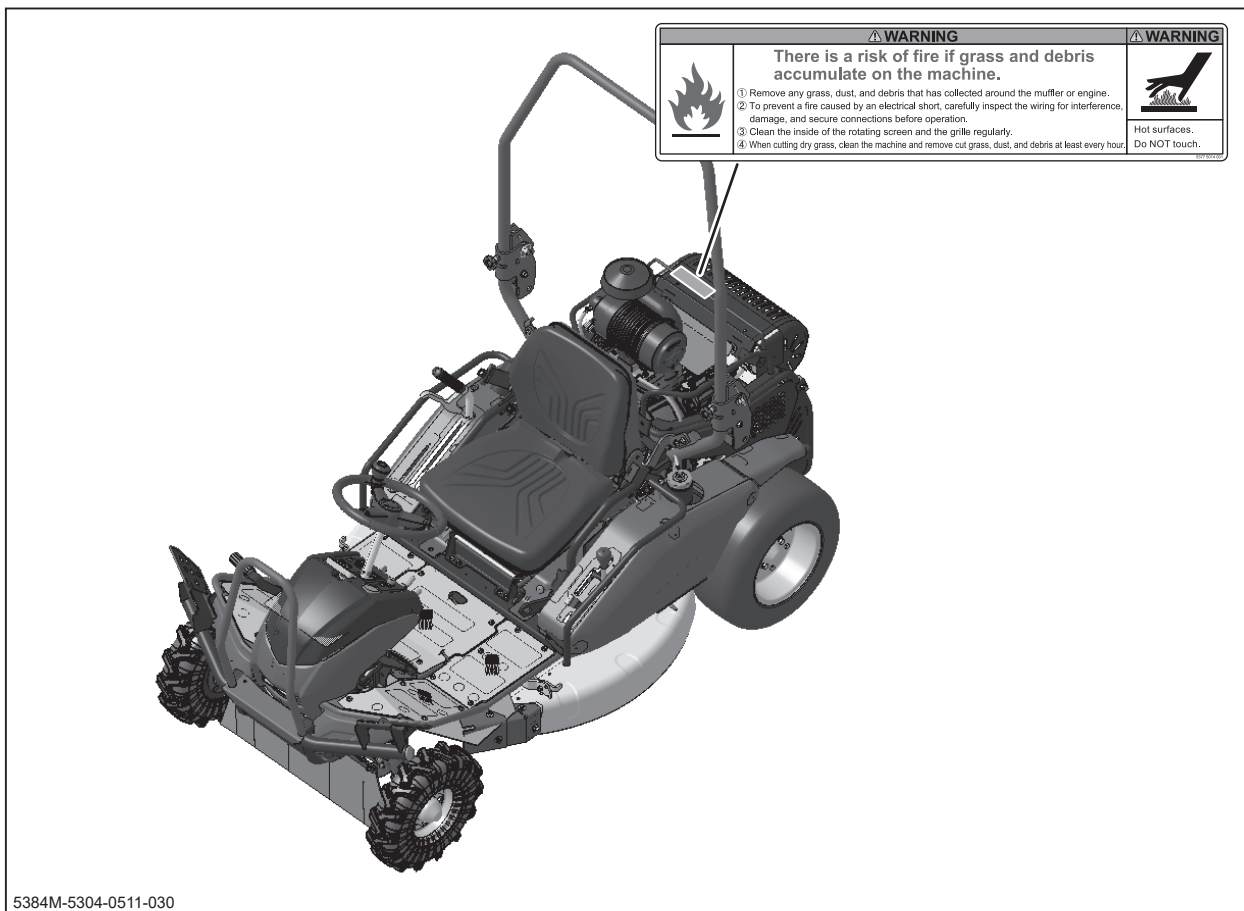
1. Clean the machine; wash off dirt, mud, and remove grass and other foreign materials after use.
2. Clean the cutting system. (See page 89)
3. Check if the cutting blades can be rotated after removing foreign objects such as mud.
4. If the machine is to be left outside, cover the machine with a protective, water-proof covering after it is cooled off.

**Cleaning the Rotating Screen**

1. Raise the seat until it holds in the raised position.
2. Pull up the screen cover to remove.
3. Remove any grass, debris, etc. from the cover.



4. Remove any grass, debris, etc. from around the rotating screen.
5. Reinstall the screen cover.
6. Unlock and lower the seat.



After Cold Weather Use

⚠ WARNING

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

NOTICE

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

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

Storage

WARNING

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

NOTICE

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

1. Park the machine.
2. Clean the machine; wash off dirt, mud, and remove grass and other foreign materials after use.
3. Check the machine according to **Maintenance Schedule** (page 50). If a problem is found, repair.
4. Wipe clean the steel parts with oiled cloth and grease the specified greasing points.
5. Change engine oil.
6. Clean the air filter element.
7. Drain fuel from the carburetor and fuel tank.
8. Turn off () the battery cut off switch. Inspect and fill battery fluid.
9. Inflate the tires to a pressure slightly higher than the specified value. Chock front and back of the front wheels.
10. Remove the battery from the machine. Inspect, fill, and charge the battery.
11. Cover the machine with a protective, water-proof covering after the machine is cooled off.

NOTE

- The battery discharges even when it is not in use. A battery can hold charge for a few months, but it is a good practice to charge the battery before it goes flat; it will extend battery life.
- Refer to Engine Manual for detailed instructions on preparing the engine for storage.

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. | Page20 |
| | | Excessive fuel in the engine. | →Wait a while and try starting again. | |
| | | Battery capacity is insufficient. | →Add battery fluid. →Charge battery. →Replace battery. | Page86 |
| | | Battery cable is disconnected. | →Connect battery cable. | |
| | | Insufficient or wrong oil. | →Fill or change oil. | Page63 |
| | | Dirty or damaged spark plug. | →Clean or replace spark plug. | Page66 |
| | | Other (other than the above). | →Follow the instructions in " Starting " to restart. If problem persists, please contact your CANYCOM representative. | Page27 |
| | Oil pressure warning light stays on | Insufficient amount of oil. | →Fill oil. | Page63 |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| | Engine stalls. | Out of fuel. | →Fill fuel. | Page20 |
| | | Choke valve closed. | →Open choke valve. | |
| Other (other than the above). | | →Please contact your CANYCOM representative. | | |

| Area | Malfunction | Possible Cause | Corrective Measure | Ref. |
|--------|--|---|--|--------|
| Engine | Engine stops abruptly. | Out of fuel | →Fill fuel. | Page20 |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| | Idling is not stable. | Insufficient intake air (clogged air filter). | →Clean or replace air filter element. | Page65 |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| | Poor power or acceleration | Bad fuel | →Change fuel. | |
| | | Insufficient intake air (clogged air filter). | →Clean or replace air filter element. | Page65 |
| | | Loose drive belt. | →Adjust | Page74 |
| | | 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. | Page63 |
| | | Rotating screen or cooling fins clogged or blocked. | →Clean. | |
| | Excessive fuel consumption | Clogged air filter. | →Clean or replace air filter element. | Page65 |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| | Black smoke comes out of exhaust | Choke valve closed. | →Open hoke valve. | |
| | | Clogged air filter. | →Clean or replace air filter element. | Page65 |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |

| Area | Malfunction | Possible Cause | Corrective Measure | Ref. |
|-------------|---|---|--|--------|
| Engine | White or blue smoke comes out of exhaust | Bad fuel. | →Change fuel. | |
| | | Engine oil level is too high. | →Adjust oil level. | Page63 |
| | | Wrong engine oil. | →Change oil. | Page63 |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| Drive Train | Machine does not move when drive lever or pedal is operated. | Insufficient or deteriorated HST oil. | →Add or change oil. | Page72 |
| | | Parking brake is applied | →Release parking brake. | |
| | | V-belt is loose. | →Adjust V-belt. | Page74 |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| | Machine moves when drive lever or pedal is in neutral position. | HST is out of neutral. | →Please contact your CANYCOM representative. | |
| | Transmission jumps out of gear. | Transmission is not positively shifted. | →Shift firmly. | |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| | Machine does not turn smoothly. | Tires are not properly inflated. | →Adjust tire pressure. | Page69 |
| | | Differential lock engaged. | →Disengage differential lock | |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| | Machine does not run straight. | Tie-rod is not properly adjusted. | →Please contact your CANYCOM representative. | |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |

| Area | Malfunction | Possible Cause | Corrective Measure | Ref. |
|-------------------------------|---|---|--|--------|
| Brake | Parking brake does not work well, or machine pulls to one side when braked. | Brake is not properly adjusted. | →Adjust. | Page75 |
| | | 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. | Improperly inflated tires. | →Adjust tire pressure. | Page69 |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| Electrical System | Head light does not illuminate properly. | Blown light unit. | →Replace light unit. | Page88 |
| | | Blown fuse. | →Replace fuse. | Page88 |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| | Warning buzzer sounds | Machine leans too far | →Move to a level area | |
| | | Out of fuel | →Fill fuel | Page20 |
| | | Battery charge is low. | →Fill, charge, or replace battery. | Page86 |
| | | Battery circuit malfunctions | →Please contact your CANYCOM representative. | |
| Other (other than the above). | →Please contact your CANYCOM representative. | | | |
| Cutting System | Mower does not run | Mower drive belt is severed. | →Replace. | |
| | Mower does not stop | Mower brake lining is worn. | →Replace. | |
| | Mower drive belt slips. | Belt is loose. | →Adjust belt tension. | Page80 |
| | | Belt is worn. | →Replace. | |
| | | Cut grass or vines accumulate in the mower. | →Clean. | Page89 |

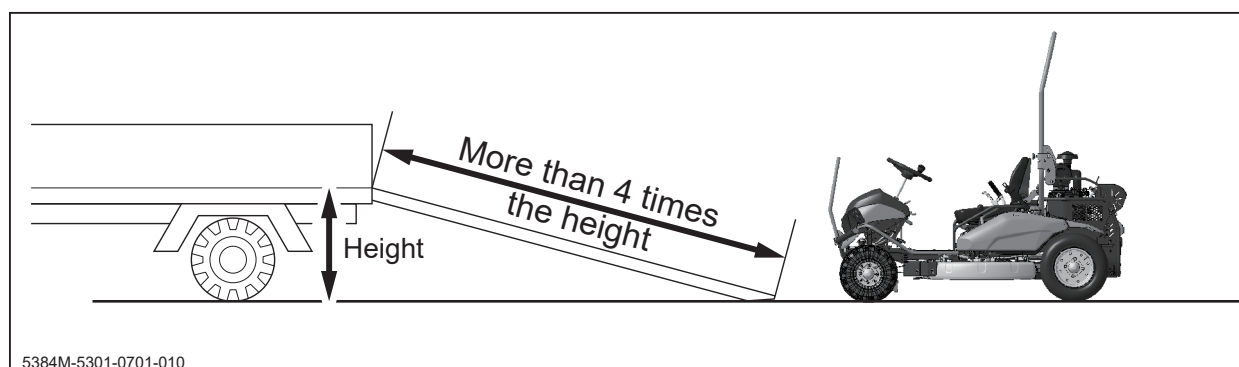
| Area | Malfunction | Possible Cause | Corrective Measure | Ref. |
|----------------|--|---|--|--------|
| Cutting System | Abnormal vibration occurs when cutting blade is rotated. | Cutting blade is damaged or lost. | →Replace cutting blades. | Page77 |
| | | Foreign object is caught by cutting blade. | →Remove or clean foreign object. | |
| | | Other (other than the above). | →Please contact your CANYCOM representative. | |
| | Cut grass is not discharged properly. | 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. | |
| | | Driving speed is too high. | →Drive slow. | |
| | 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. | |
| | | Cut grass or vines accumulate in the mower. | →Clean. | Page89 |
| | 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 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. | |
| | | Cut grass or vines are tangled to cutting blade axle. | →Untangle. | |

Hauling

Loading and Unloading

⚠ WARNING

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



1. Park the transporter on a level ground. Apply parking brake of the transporter and secure the wheels with chocks.
2. Place loading ramps. Secure hooks of ramps firmly and flush with the bed of the transporter.

3. Set cutting height adjust lever to [150] . Shift auxiliary transmission shift lever to [L] (low speed) and drive machine slowly forward onto the bed. Pay attention not to hit the loading lamp or the bed when loading on a transporter.
4. Park machine according to the instructions in "**Parking**" (Page 38). Tie the machine with rope or tie-down belts and secure it onto the bed of the transporter securely.

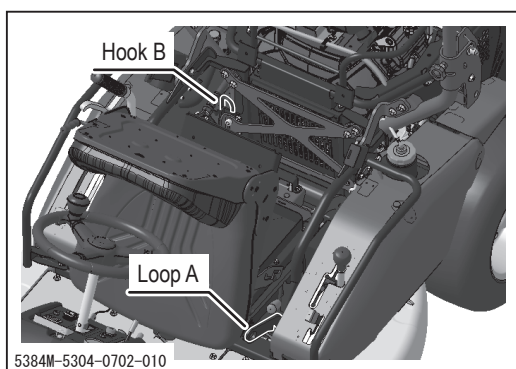
Hoisting

⚠ DANGER

- When hoisting the machine, never go under the machine. The machine can fall, resulting in death or injury.
- Hoist the machine at the lift hooks specifically provided for this purpose. Never hoist the machine at the ROPS or front guard rail.

⚠ WARNING

- License or certification is required to operate a crane. Check your local regulations.
- Use hoisting sling of sufficient strength. Always use the slings of the same length when more than one is used.
- Pay special attention to the center of gravity and the balance of the machine when hoisting.
- Always stop the engine before hoisting. Never start the engine when hoisted.

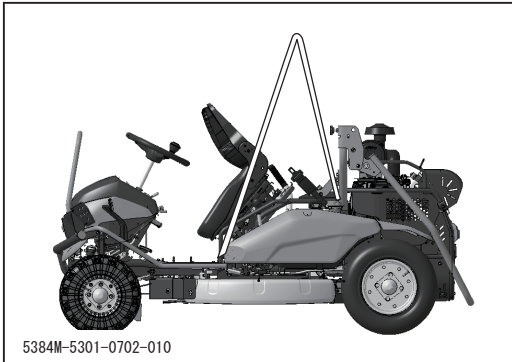


1. Raise the seat.
2. Attach the shackles to the Loop A and Hook B on either side of the frame.
3. Attach the slings to the shackles.
4. Lift up the vehicle with the belt sling, as shown in the illustrations in this and next pages.

NOTE

- **Recommended shackle: Size 10 shackle (e.g. ISO2415/EN13889/AS2741/JIS B2801 wire diameter 10mm, or US 3/8" sizes) with the working load limit (W.L.L.) rating greater than 0.4t and the pin diameter at or smaller than 13mm Dee or Bow shackles.**
- **Recommended belt sling: Load capacity of 0.5t or more and length of 2m or more.**

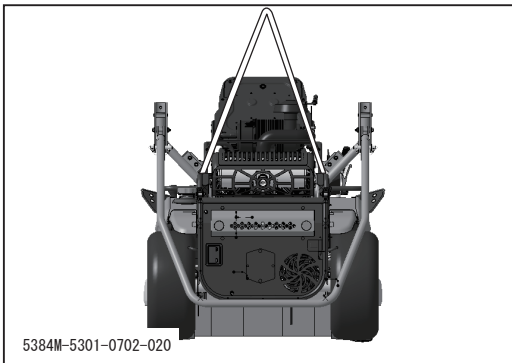
Hoisting Positions (Reference)



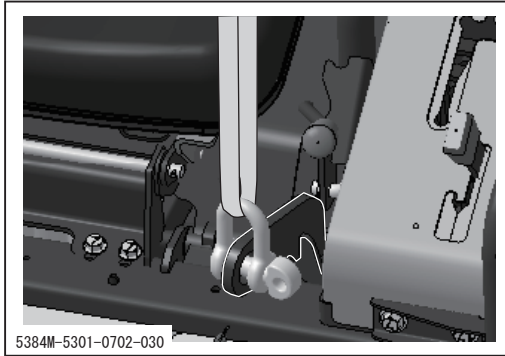
Hoisted Position (Side View)

NOTE

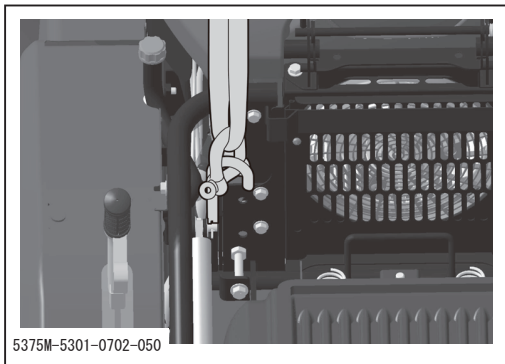
- **The version without the extra step shown. The same applies to the one with the extra step.**



Hoisted Position (Rear View)



Shackle installation (front side)



Shackle installation (rear side)

CHIKUSUI CANYCOM, INC.

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