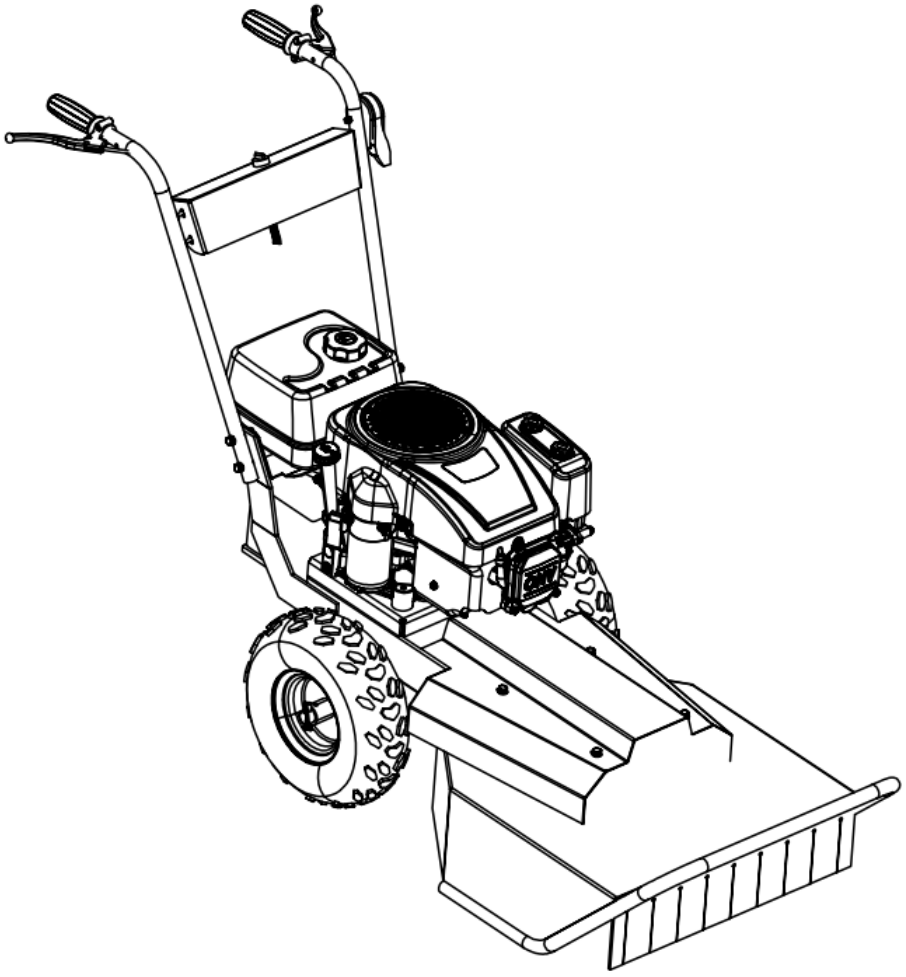
range-road

BRUSH CUTTER

User Manual

SAFETY AND OPERATION INSTRUCTIONS



RR220

IMPORTANT: Read safety rules and instructions carefully before operating equipment.

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Conventions used in this manual

⚠ WARNING

This indicates a hazardous situation, which, if not avoided, could result in death or serious injury.

⚠ CAUTION

This indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.

⚠ NOTICE

This information is important in proper using of your machine. Failure to follow this instruction could result in damage to your machine or property.

Additional Information and Potential Changes

We reserve the right to discontinue, change, and improve its products at any time without notice or obligation to the purchaser. The descriptions and specifications contained in this manual were in effect at printing. Equipment described within this manual may be optional. Some illustrations may not be applicable to your machine.

PART I: General Safety Rules

Safety Labels Found on Your Unit

Your equipment carries several labels as reminders for its proper and safe use. Shown below are copies of the Safety and Information labels that appear on the equipment. Take a moment to study them and make a note of their location you set up and before you operate it. Replace damaged or missing safety and information labels immediately.





⚠ WARNING

Read this Safety & Operating Instructions manual before you use the equipment. Become familiar with the operation and service recommendations to ensure the best performance of your machine.

Propose

⚠ CAUTION

This machine is designed solely to cut grass, brush, saplings with diamter no more than 50mm and must not be used for any other purpose.

It should only be used by trained operators who are familiar with the content of this manual. It is potentially hazardous to fit or use any parts other than your dealer parts. The company disclaims all liability for the consequences of such use, which in addition voids the machine warranty.

Before using the equipment

⚠ NOTICE

A. Operators must be fully trained before using this machine.

B. User Manual is read and understood.

C. Machine is positioned on level ground, all guards are fitted and in good condition.

D. Blades are in good condition and secure.

E. All fasteners are checked for tightness.

F. Fire extinguisher is available on site.

When using the equipment

⚠ NOTICE

A. It is better to have a second trained operator within easy reach of the machine.

B. Maintain strict discipline at all times and service machine at specified periods.

C. Note the wind direction to prevent debris from being blown into highway or where it could affect members of the public.

D. DO NOT put any part of your body into the blade cover while the machine is running.

E. DO NOT operate the machine whilst under the influence of alcohol or drugs.

Protecting Yourself and Those Around You

⚠ WARNING

This is a high-powered machine, with moving parts operating with high energy. You must operate the machine safely. Unsafe operation can create a number of hazards for you, as well as anyone else in the nearby area. Always take the following precautions when using this machine:

A. Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people, their property, and themselves.

B. Always wear protective goggles or safety glasses with side shields while using the equipment to protect your eyes from possible thrown debris.

C. Avoid wearing loose clothing or jewelry, which can catch on moving parts.

D. We recommend wearing gloves while using the equipment. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.

E. Wear shoes with non-slip treads when using your equipment. If you have safety shoes, we recommend wearing them. Do not use the machine while barefoot or wearing open sandals.

F. Wear long pants while operating the equipment.

G. Keep bystanders at least 50 feet away from your work area at all times. Stop the engine when another person or pet approaches.

Safety for Children and Pets

⚠ WARNING

Tragic accidents can occur if the operator is not alert to the presence of children and pets. Children are often attracted to the machine and the chipping activity. Never assume that children will remain where you last saw them. Always follow these precautions:

A. Keep children and pets at least 50 feet from the working area and ensure they are under the watchful care of a responsible adult.

B. Be alert and turn the machine off if children or pets enter the work area.

C. Never allow children to operate the equipment.

Safety with Gasoline - Powered Machines

⚠ WARNING

Gasoline is a highly flammable liquid. Gasoline also gives off flammable vapor that can be easily ignited and cause a fire or explosion. Never overlook the hazards of gasoline. Always follow these precautions:

A. Never run the engine in an enclosed area or without proper ventilation as the exhaust from the engine contains carbon monoxide, which is an odorless, tasteless, and a deadly poisonous gas.

B. Store all fuel and oil in containers specifically designed and approved for this purpose and keep away from heat and open flame, and out of the reach of children.

C. Replace rubber fuel lines and grommets when worn or damaged and after 5 years of use.

D. Fill the gasoline tank outdoors with the engine off and allow the engine to cool completely. Don't handle gasoline if you or anyone nearby is smoking, or if you're near anything that could cause it to ignite or explode. Reinstall the fuel tank cap and fuel container cap securely.

E. If you spill gasoline, do not attempt to start the engine. Move the machine away from the area of the spill and avoid creating any source of ignition until the gas vapors have dissipated. Wipe up any spilled fuel to prevent a fire hazard and properly dispose of the waste.

F. Allow the engine to cool completely before storing in any enclosure. Never store a machine that has gas in the tank, or a fuel container, near an open flame or spark such as a water heater, space heater, clothes dryer or furnace.

G. Never make adjustments or repairs with the engine running. Shut down the engine, disconnect the spark plug wire, keeping it away from the spark plug to prevent accidental starting, wait 5 minutes before making adjustments or repairs.

H. Never tamper with the engine's governor setting. The governor controls the maximum safe operation speed and protects the engine. Over-speeding the engine is dangerous and will cause damage to the engine and to the other moving parts of the machine. If required, see your authorized dealer for engine governor adjustments.

I. Keep combustible substances away from the engine when it is hot.

J. Never cover the machine while the muffler is still hot.

K. Do not operate the engine with the air cleaner or the carburetor air intake cover removed. Removal of such parts could create a fire hazard. Do not use flammable solutions to clean the air filter.

L. The muffler and engine become very hot and can cause a severe burn; do not touch.

General Safety

⚠ WARNING

Operating this equipment safely is necessary to prevent or minimize the risk of death or serious injury. Unsafe operation can create a number of hazards for you. Always take the following precautions when operating:

A. Your equipment is a powerful tool, not a plaything. Exercise extreme caution at all times. Do not use it for any other purpose except its designed purpose.

B. Know how to stop the equipment quickly.

C. Never operate your unit on a slippery, wet, muddy, or icy surface. Exercise caution to avoid slipping or falling.

D. See instructions for proper operation and installation of accessories.

E. Never use the machine without ensuring that all guards and shields are in place.

F. Never, under any conditions, remove, bend, cut, fit, weld, or otherwise alter standard parts on the equipment. This includes all shields and guards. Modifications to your machine could cause personal injuries and property damage and will invalid your warranty.

G. If the machine start to make an unusual noise or vibrate, shut down the engine, disconnect the spark plug wire, keeping it away from the spark plug to prevent accidental starting, wait 5 minutes for engine to cool down, then inspect for damage. Vibration is generally a warning of trouble. Check damaged parts and clean, repair and/or replace as necessary.

H. Never tamper with safety devices. Check their proper operation regularly.

I. Before performing any maintenance or inspection procedure, shut down the engine, disconnect the spark plug wire keeping it away from the spark plug to prevent accidental starting, wait 5 minutes for machine to cool down.

J. Never allow people who are unfamiliar with these instructions to use the equipment. Allow only responsible individuals who are familiar with these rules of safe operation to use your machine.

K. While using, don't hurry or take things for granted. When in doubt about the equipment or your surroundings, stop the machine and take time to look things over.

L. Never operate the machine when under the influence of alcohol, drugs, or medication.

M. Use the machine only in daylight.

N. Stay alert for hidden hazards or traffic.

O. Keep all nuts and bolts tight and keep the equipment in good operating condition.

A Note to All Users

List of warnings and cautions cannot be all-inclusive. If situations occur that are not covered by this manual, the operator must apply common sense and operate this equipment in a safe manner. Contact the dealers for assistance in your area.

PART II: Familiar with the equipment

It may be helpful to familiarize yourself with the controls and features of the equipment. If you have any question, please contact the dealers in your area.

TECHNICAL SPECIFICATIONS

Specification	Brush Cutter
Engine	Loncin 452cc four strokes, electric start
Power	Gasoline/petrol
Handle height	1020mm
Cutting Height	50mm
Cutting width	610mm
Cutting Capacity	50mm dia. Grass/Brush/Saplings
Blade Max RPM	1700rpm
Blade drive	Mechanical, belt tensioner
Blade material	Hardened carbon steel
Blade frame material	45# steel
Blade cover material	Q235 steel
Belts	Drive and blade, A belt
Tire	145/70-6
Dimensions	1682*603*1023mm
Weight(N.W./G.W.)	104/120kgs
Noise level	83dB

PART III: Operating the equipment

It may be helpful to better familiarize yourself with the features of your equipment before beginning the steps outlined in this chapter.

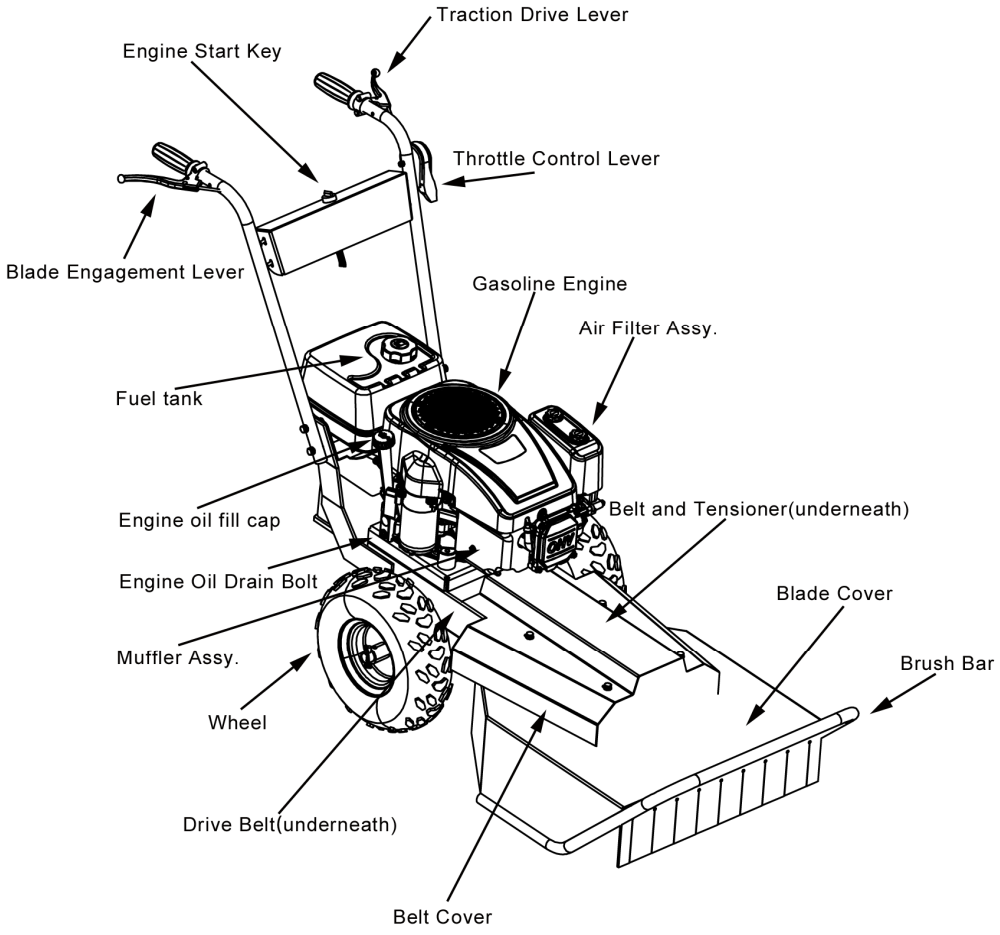
⚠ WARNING

A. Read and understand all instructions, safety precautions, and/or warnings listed in "PART I: General Safety Rules" before operating the equipment. If any doubt or question arises about the correct or safe method of performing anything found in this manual, please contact the dealers in your area.

B. When operating the equipment, make sure you are standing in the safe operating area. You must stay in the safe operating area at all times when the motor is running. Never place any part of your body into a position that causes an unsafe operating condition.

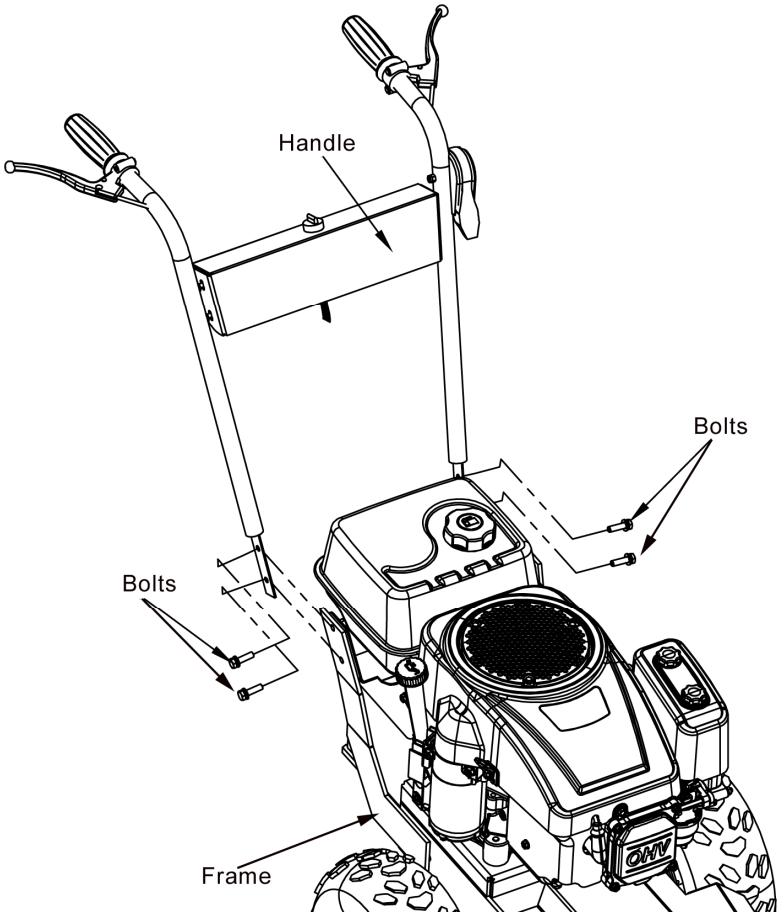
C. Before operating the equipment, always wear protective gear, including safety goggles, hearing protection, tight-fitting gloves without draw strings or loose cuffs, and steel-toed shoes.

D. Knowing the correct and incorrect methods of operating the equipment. Never using an incorrect or unsafe method.

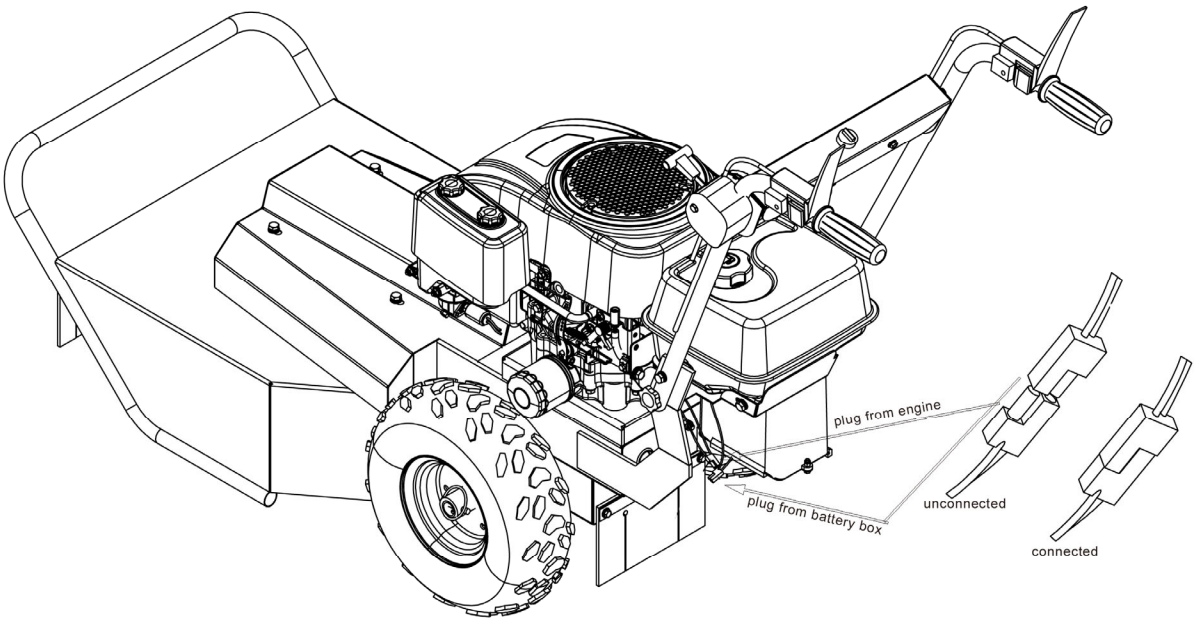


Assemble Instruction

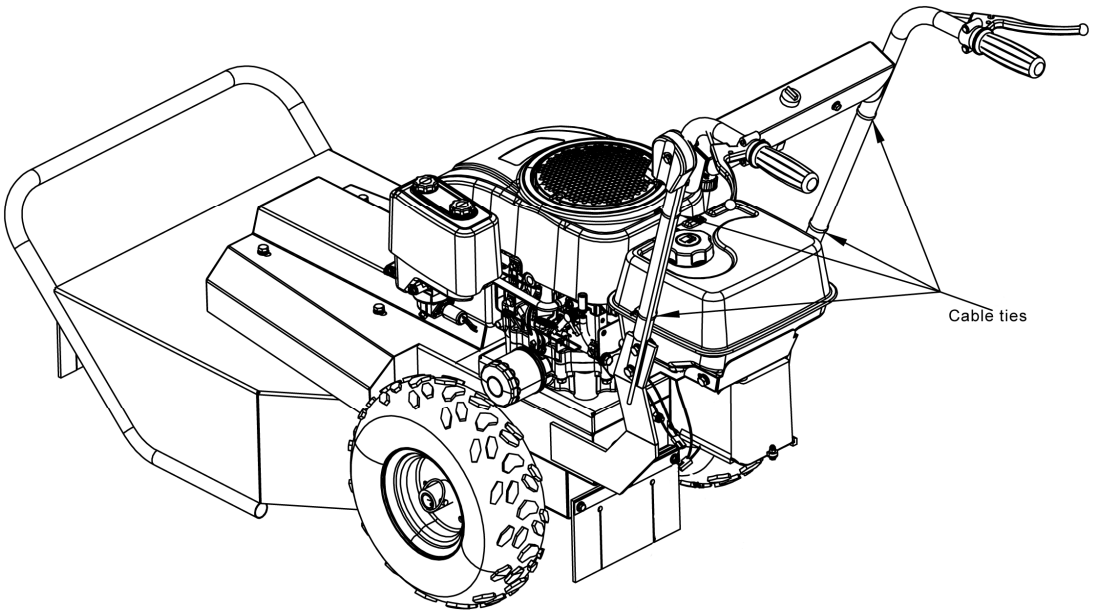
1. Handle assembling: Hold the handle and align the handle holes to the holes on the frame. Secure the handle to the frame with the 4 bolts.



2. Cable connection: Connect the plug from engine to the plug from battery-box.



3. Secure the Cables to the Handlebars with the Cable Ties. Cut off the excess from the Cable Ties using Wire Cutters



Starting

1. **Position your equipment on flat, dry ground.**
2. **Make sure there is enough engine oil and gasoline.**
3. **Turn and hold the Key in the start position until Engine starts**
4. **If the equipment has not been running (cold engine), warm up the engine by running the engine at half throttle for 3 to 4 minutes, then advance the engine throttle control to the maximum speed.**

Traction Drive Engagement

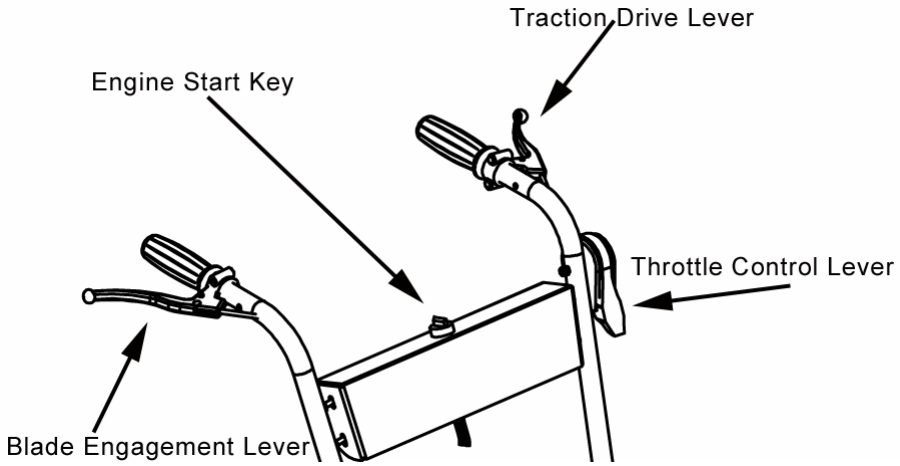
1. Gently squeeze the Traction Drive Lever to engage.

2. Release the Traction Drive Lever if you need to slow down or stop.

Blade Engagement

1. Gently squeeze "Blade Engagement Lever" to engage.

2. Release the "Blade Engagement Lever" to stop the blade rotating.



Engine Stopping

1. Turn the Key to the OFF position.

⚠ NOTICE

Grass, brush and saplings' diameter should be no bigger than 50mm.

Obstacle Tips

⚠ Warning

A. The engine's power can easily throw stones, sticks, and other debris up to 100 feet at great velocity, which could cause personal injury or property damage. Do not run the machine over gravel driveways, loose stones or mulch with the blade spinning.

B. Always check your work area before working and remove any debris that might tangle or damage the machine. If you do run into debris and the blade becomes tangled, turn off the engine and disconnect the spark plug wire before attempting to untangle the machine.

C. **Never touch the exhaust areas when reaching for the spark plug, they are very hot.**

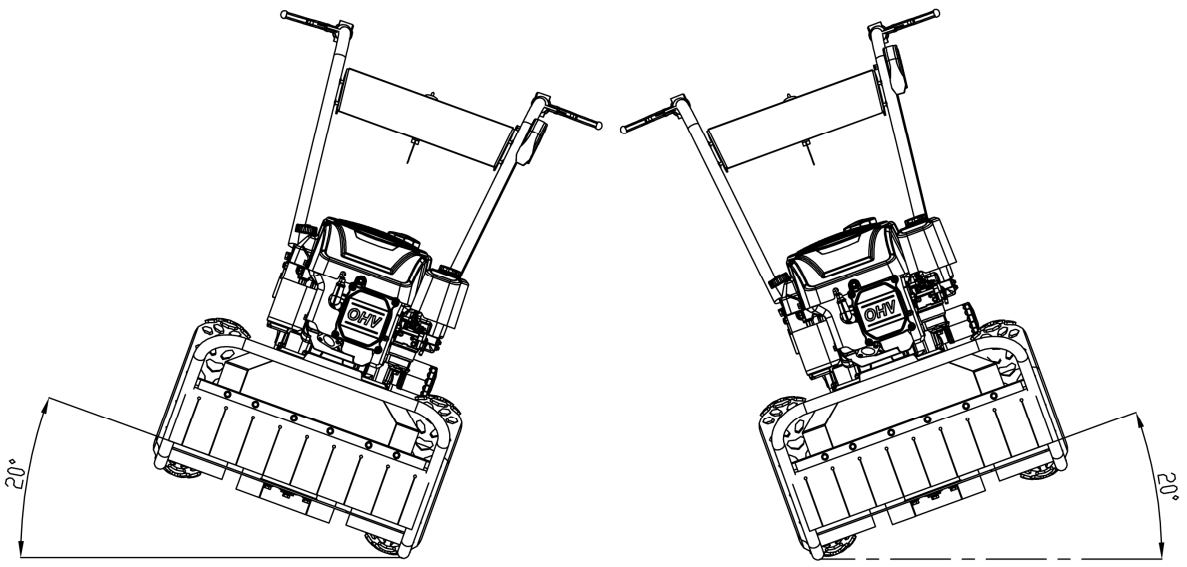
Slope Operation

⚠ Warning

A. When operating the equipment over uneven terrain or slopes, use extreme caution not to tip the machine over.

B. Never use the euipment on slopes greater than 20 degrees. Doing so could result in serious injury or damage to your machine.

C. If you have to mow on sloping terrain, mow across the slope, not up and down, for better control.



PART IV: Maintaining the equipment

Regular maintenance is the way to ensure the best performance and long life of your machine. Please refer to this manual and the engine manufacturer's user manual for maintenance procedures.

⚠ WARNING

Before performing any maintenance procedure or inspection, stop the engine, wait five minutes to allow all parts to cool. Disconnect the spark plug wire, keeping it away from the spark plug. Disconnect the Battery Terminals (Electric start only).

Regular Maintenance Checklist

Procedure	Before Each Use	Every 25 Hours	Every 100 Hours
Check engine oil level	Δ		
Check general equipment condition	Δ		
Check blade for sharpness	Δ		
Check Drive Traction Cable	Δ		
Check Blade engagement Cable	Δ		
Check all Belt Tensions Condition		Δ	
Check Cable connections		Δ	
Check tire pressure		Δ	
Clean engine exterior and cooling		Δ	
Change Engine Oil	First time 5hours	Δ	
Replace air filter		Δ	
Replace spark plug			Δ
Replace Fuel Filter			Δ

Engine Service

Refer to the engine manufacturer's user manual for engine maintenance.

Changing the Engine Oil

1. Remove the "Engine Oil Fill Cap";

2. Remove the "Engine oil drain bolt";

3. When the Engine Oil is completely drained, reinstall the "Engine oil drain bolt";

4. Fill enough Engine Oil from the position of "Engine oil fill cap", and reinstall the fill cap.

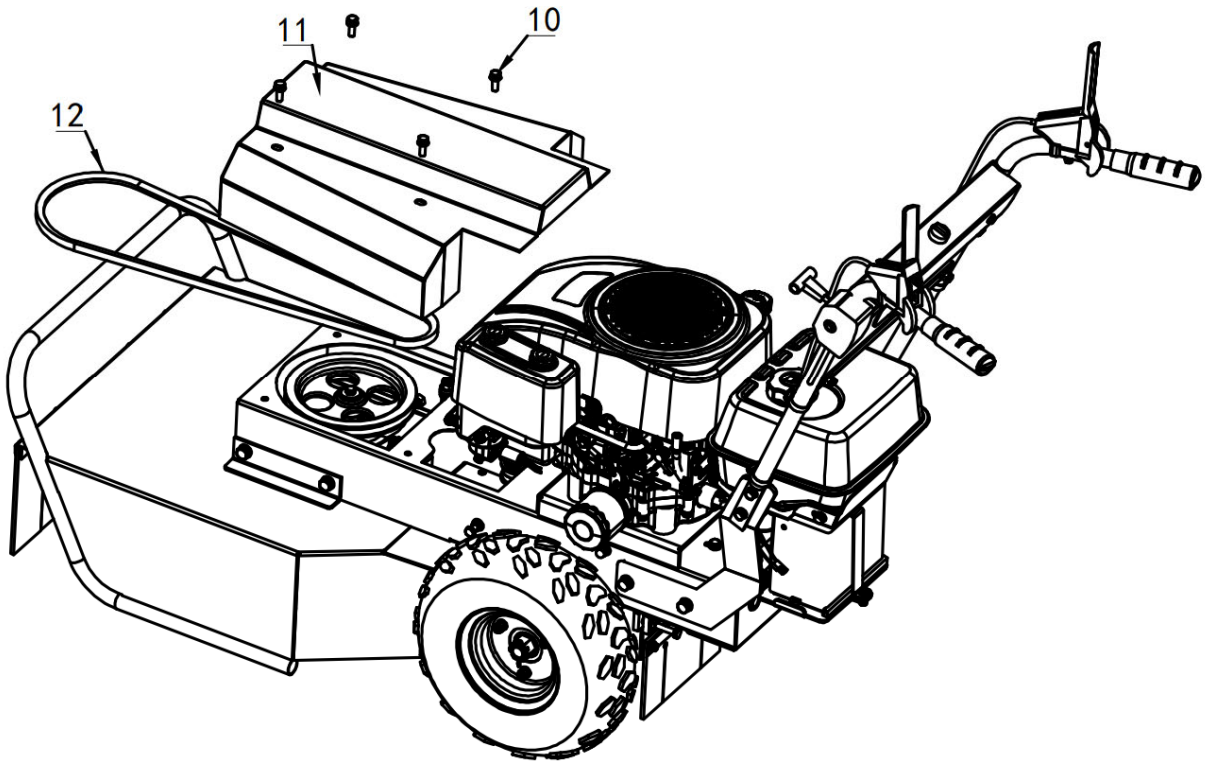
Notice: Check the engine manual for the proper type of engine oil you should use.

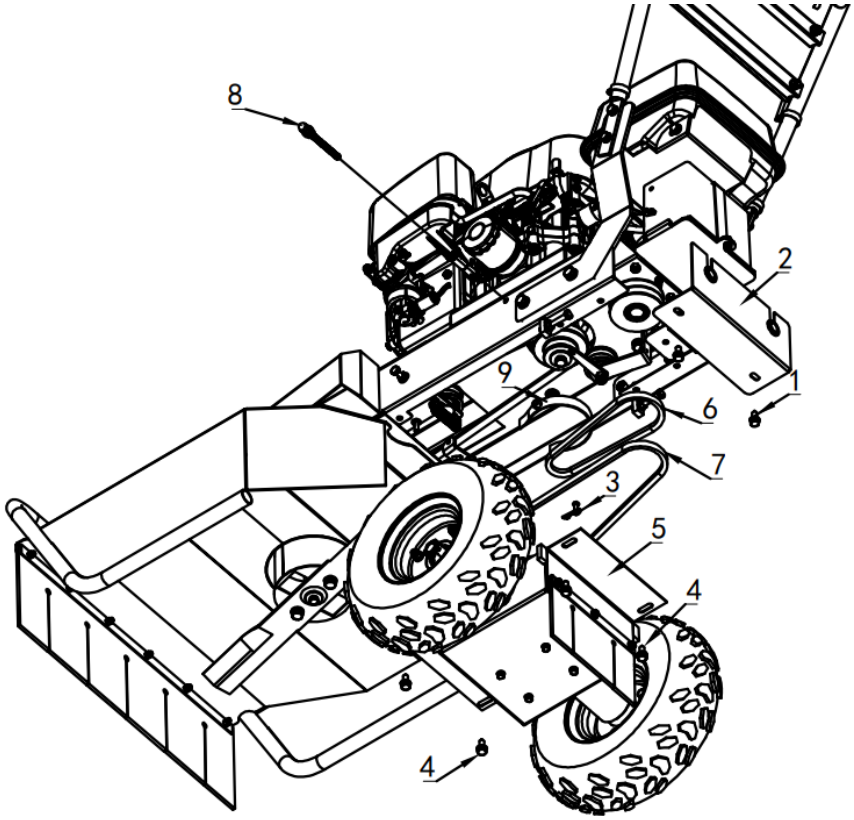
Replacing the Blade Belt

1. Remove the "Belt Cover"(No.11) by unscrewing the 4 bolts(No.10) which fasten the cover to the frame.
2. Remove the "Belt locator strip"(No.9) by unscrewing the screw(No.8).
3. Remove the Belt(No.12).
4. Install new Belt.
5. Install back the belt cover(No.11) and "Belt locator strip"(No.9)).

Replacing the Drive Belts

1. Remove the "Rear Cover"(No.2) by unscrewing the 2 bolts(No.1).
2. Remove the Pins(No.3).
3. Remove the "Gear box"(No.5) by unscrewing the 4 bolts(No.4)
4. Replace the "Drive Belt A500"(No.6) and/or "Drive Belt A940"(No.7).
5. Install back "Gear box", Pins and "Rear Cover" refer to step 1-3.





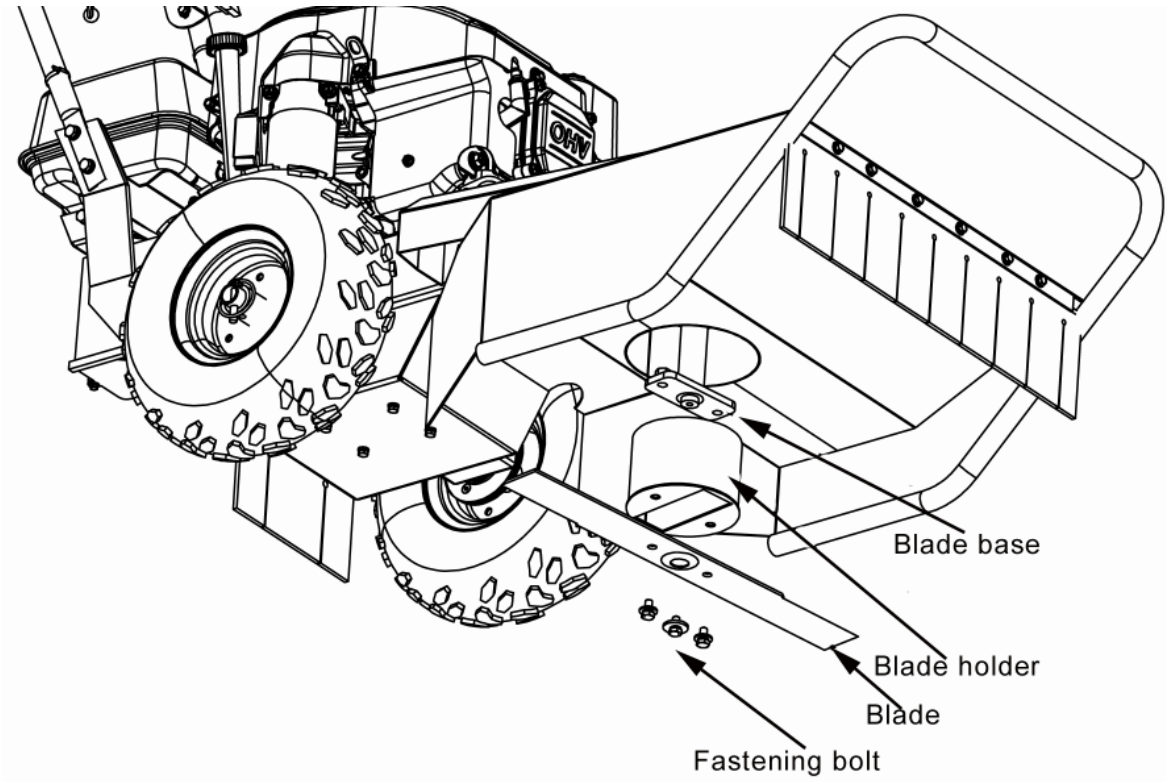
Removing and Replacing the Blade

1. Push Down the handlebar to see the blade system.

2. Use tools to block the blade to prevent the spinning of the blade.

3. Unscrew the 3 fastening bolts from the blade.

4. Install new blade and fasten with the 3 bolts.



PART V: Troubleshooting and Parts List

Most problems are easy to fix. Consult the Troubleshooting Table below for common problems and their solutions. If you continue to experience problems, contact the dealers in your area.

⚠ WARNING

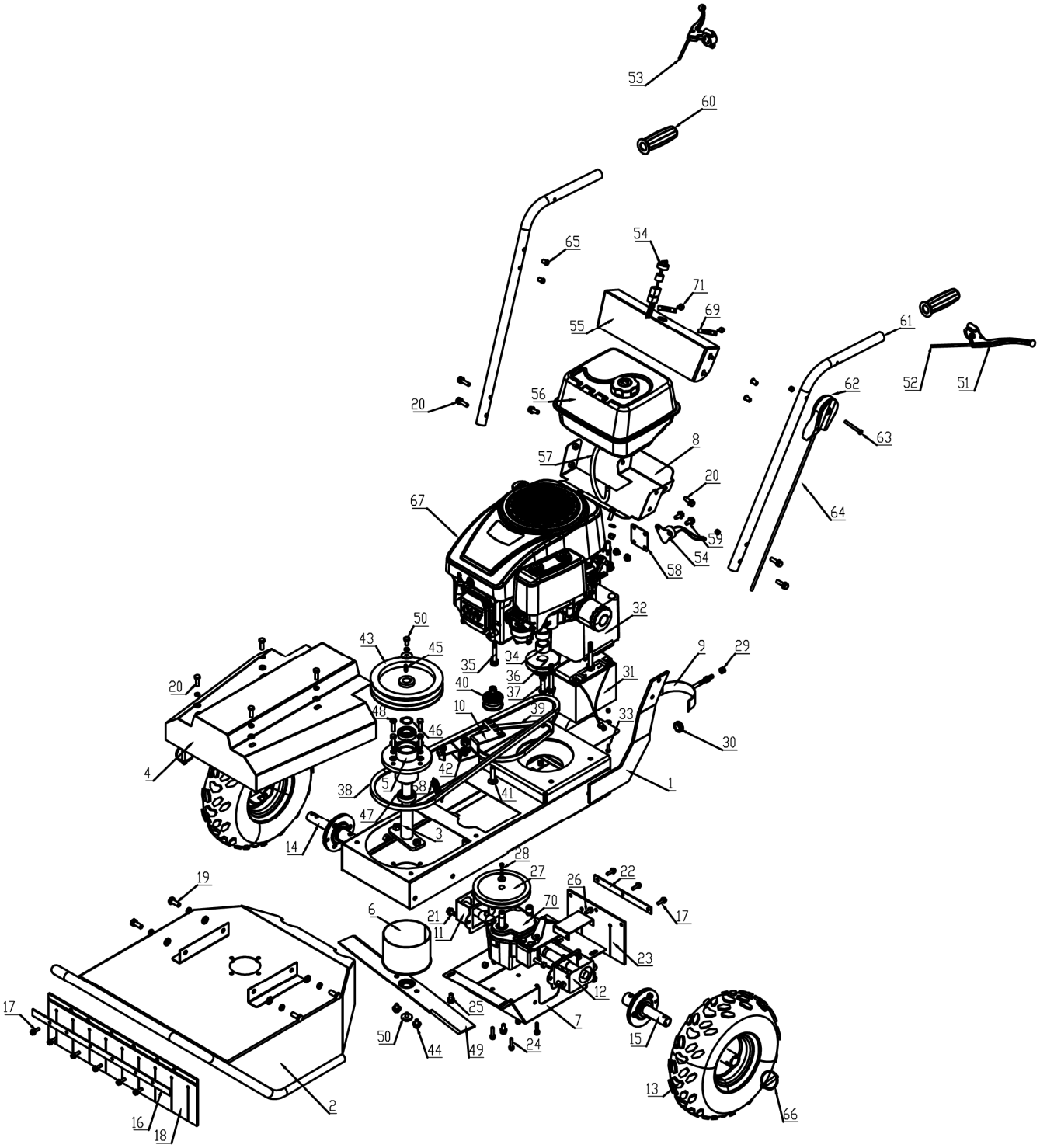
Before performing any maintenance procedure or inspection, stop the engine, wait five minutes to allow all parts to cool. Disconnect the spark plug wire, keeping it away from the spark plug.

Troubleshooting Table

SYMPTOM	POSSIBLE CAUSE
The engine won't start. *(Please refer to the engine user manual for engine-specific procedures.)*	➢ *Is the ignition switch in the "ON" position?* ➢ *Is the fuel shut-off valve on?* ➢ *Are you using fresh, clean gas? If the gas is old, change it. Use a fuel stabilizer if you keep gas longer than 30 days.* ➢ *Is the spark plug clean? If the spark plug is dirty or cracked, change it. If it's oily, leave it out, hold a rag over the plug hole and pull the recoil cord several times to blow out any oil in the cylinder, then wipe off the plug and reinsert it.*
The engine lacks power or is not running smoothly. *(Please refer to the engine user manual for engine-specific procedures.)*	➢ *Check that the Throttle Lever is in the "Run" position.* ➢ *Is the air filter clean? If it's dirty, change it following the procedure in the engine manufacturer's owner's manual.* ➢ *Is the spark plug clean? If it's fouled or cracked, change it. If it's oily, leave it out, hold a rag over the plug hole and pull your recoil cord several times to blow out any oil in the cylinder, then wipe off the plug and reinsert it.* ➢ *Are you using fresh, clean unleaded gas? If it's old, change it. Use a fuel stabilizer if you keep gas longer than 30 days.* ➢ *Does your engine have the right amount of clean oil? If it's dirty, change it following the procedure in the engine manufacturer's owner's manual.* ➢ *Check the oil level and adjust as needed.*
Engine smokes. *(Please refer to the engine user manual for engine-specific procedures.)*	➢ *Check the oil level and adjust as needed.* ➢ *Check the air filter and clean or replace if needed.* ➢ *You may be using the wrong oil—too light for the temperature. Refer to your Engine Owner's Manual for detailed information.* ➢ *Clean the cooling fins if they're dirty.*

The Belt frays or rolls over the Pulley.	➢ *A Pulley groove may be nicked. Check the Belt for wear and hard spots. File off any nicks on the Pulley.* ➢ *The Belt may be stretched; replace it.*
Blade vibrates when engaged.	➢ *Replace the Blade if it is chipped, bent, or broken.* ➢ *The Spindle Bearings may be bad or the Spindle Shaft is bent.*
The Blade is not cutting or is loose.	➢ *The Blade may not be seated properly on the hub. Loosen the Blade Bolt, reseat the Blade, and tighten the Bolt. Be sure to turn OFF the Engine and remove the Spark Plug Wire before performing this operation.* ➢ *Sharpen or replace the Blade; it may be dull or nicked.*
Wheels pulling left or right.	➢ *The Tires may not have the proper air pressure. Check the recommended Tire pressure on the side of the Tire. Do not exceed the maximum pressure recommended.*
The Wheels will not drive.	➢ *Traction Drive Cable needs adjustment.*

Explosion View



Ref.No.	Description	Ref.No.	Description
1	chasis	37	M10*35 hardware
2	protection cover	38	main belt
3	blade axle	39	gearbox belt
4	belt cover	40	tension wheel
5	axle seat	41	M10*45 cuphead hardware
6	axle cover	42	M12 locknut/washer
7	gearbox cover	43	blade axle pulley
8	tank seat	44	M8*16 hardware
9	belt location frame	45	keyway 6*6*20
10	tension wheel frame	46	ϕ25 circlip
11	right wheel axle cover	47	bearing 60052Z
12	left wheel axle cover	48	M8*30 hardware
13	wheel	49	blade
14	right flange	50	M8*16 hardware
15	left flange	51	switch handle
16	front rubber fixing bar	52	gearbox cable
17	M6*20 flange bolt	53	tension cable
18	front rubber guard	54	ignition switch
19	M10*25 hardware	55	panel
20	M8*25 hardware	56	tank
21	M8*16 flange bolt	57	fuel tube
22	rear rubber fixing bar	58	fixing sheet
23	rear rubber guard	59	M8*16 flange hardware
24	M6*30 hardware	60	rubber handle sleeve
25	M8*20 hardware	61	handle bar
26	M6*16 flange bolt	62	throttle switch
27	gearbox pulley	63	M6*55 hardware
28	M5*20 hardware	64	throttle cable
29	M8 lock nut	65	ϕ6 rivet nut
30	ϕ25 wire protection ring	66	wheel pin
31	battery	67	engine
32	battery cover	68	spring
33	M5*16 flange hardware	69	iron cable tie
34	ϕ26 engine spacer	70	gearbox
35	M10*80 hardware	71	M6*12 flange hardware
36	engine pulley		