

# MAGNUS

## Remote-Controlled Lawn Mower User Manual

50/80/100

# MAGNUS



Weifang Magnus Intelligent Equipment Co., Ltd

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This instruction manual outlines key safety information—categorized by labels such as Danger, Warning, Caution, Important, and Reference—to ensure the safe and efficient operation of the power mower.

These labels and symbols highlight critical instructions that must be followed to protect the user and prevent accidents. Before operating the power mower, please read the entire manual carefully to ensure safe and proper use of the equipment.

| Symbolic markers                                                                                 | implication                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>Danger     | This symbol indicates a situation that poses a direct threat to the user's life or could cause serious bodily injury. You must follow the instructions associated with this symbol to prevent accidents; failure to do so could result in a serious accident or death. |
| <br>Warning   | This symbol indicates a hazardous situation that could result in serious personal injury or equipment damage. Strict adherence to the instructions is required to prevent potential imminent danger.                                                                   |
| <br>Notice    | This symbol indicates a situation that could result in minor personal injury or equipment damage. Even minor issues can escalate into serious accidents, so the precautions must be strictly observed.                                                                 |
| <br>Important | This symbol indicates key points essential for maintaining equipment performance and safety—including routine inspections, maintenance, and equipment management—which must be strictly observed.                                                                      |
| <br>reference | This symbol indicates additional information or useful tips relevant to the operation. You may refer to it as needed to ensure efficient use of the equipment.                                                                                                         |

## 1.1 Purpose of the manual

**“For safety, please read this in advance.”**

Thank you for choosing the remote-controlled mower from **Weifang Magnus Intelligent Equipment Co., Ltd.**

This manual is designed to help you operate the equipment safely, maintain it in optimal condition for efficient performance, and understand proper usage, maintenance essentials, and basic troubleshooting procedures.

Please read this manual thoroughly before using the equipment and ensure it is operated in a safe working environment.

After reading, please keep this manual in a convenient location for future reference.

If the equipment is transferred to another user, please ensure this manual is handed over along with it.

Please note that if damage to the equipment occurs due to failure to follow the instructions in this manual, repair services will be provided on a paid basis in accordance with our policies.

Additionally, as our products undergo continuous improvement, the contents of this manual are subject to change without prior notice; the actual product may differ slightly from the descriptions herein. We appreciate your understanding.

If you encounter any issues not covered in this manual during operation, please contact our customer service center for technical support.

Thank you for your patronage.



### Warning

- The user assumes full responsibility for any accidents, malfunctions, or damage resulting from failure to use the equipment safely in accordance with the instructions in this manual.
- The user assumes full responsibility for any issues arising from unauthorized equipment modification or the use of non-original parts without the manufacturer's permission; such issues are not covered by the warranty.

## 1.2 Precautions for Safe Use

### 1.2.1 Pre-use inspection

Please be sure to read the instruction manual before use and complete a comprehensive safety inspection of the equipment as required.

### 1.2.2 Pre-operation inspection

Inspection of components: Before each use, inspect the machine and tighten the connecting screws for the tracks, motor, belts, and blades.

Electrical circuit connections must be verified as secure and correct before use.

Engine Check: Before each use, check the condition of the fuel engine, clean the air filter, and check the oil level.

Check the fuel level and ensure the fuel cap is tightened;

Safety Inspection: Perform all inspections while the equipment is powered off.

Detecting Anomalies: Even for minor issues, complete repairs or maintenance before resuming use. Part Replacement: When replacing parts, use the specified genuine components as required.

### Qualified operator:

1. Operators must possess sound judgment when operating the machine;
2. Operation of the machinery is prohibited for individuals who are unwell, under the influence of alcohol, sleep-deprived, pregnant, colorblind, or under the age of 18;
3. Operators must have received specialized training and be capable of handling emergencies;
4. Operators using the machine for the first time should run it at low speed until they become proficient;
5. Do not wear loose clothing or jewelry. Keep clothing, gloves, and hair away from moving parts, as loose clothing, accessories, or long hair could become entangled in them;

### 1.2.3 Precautions for Use

Prohibited Operations: Operate the equipment within its rated performance limits; avoid overloading. Do not operate the product in environments containing flammable or explosive liquids, gases, or dust. Strictly avoid allowing the machine to bottom out or strike hard objects such as soil, stones, metal, or trees.

Noise Warning: Prolonged exposure to noise may cause hearing damage; please wear appropriate protective gear.

Work Scheduling: Plan work hours reasonably to avoid operating while fatigued.

Confined Space Operations: Ensure adequate ventilation when working in confined spaces to prevent exhaust gas poisoning.

Operational Safety: When starting the engine, the operator must stand to the left or right side of the machine; standing in front of or behind the machine is strictly prohibited to prevent injury from a detached blade. Do not operate this tool when others—especially children or pets—are nearby.

**Work Environment Check:** Verify the work environment in advance to ensure safe operating conditions.

**Prohibition of Improper Operation:** Operate within the equipment's rated specifications; avoid overloading.

**Noise Awareness:** Prolonged exposure to noise may damage hearing; please wear protective gear. **Work Scheduling:** Plan work hours reasonably to avoid fatigue.

**Confined Space Work:** Ensure proper ventilation when working in confined spaces to prevent exhaust gas poisoning.

## **1.2.4 Post-use inspection**

**Post-operation check:** Immediately inspect the equipment after use and turn off the main battery switch and the remote control power. **Inspection items:** Check the engine, coolant, fuel, and lubricating oil; replenish or replace them as necessary.

After use, turn off the power and store the machine in a cool, well-ventilated area; avoid exposure to direct sunlight.

## **1.2.5 Safety Device Inspection**

Keep all protective structures of safety devices intact; do not remove them without authorization.

## **1.2.6 Safety Protection**

Wear safety clothing and protective equipment (such as safety goggles, gloves, safety shoes, etc.) during operation. Do not wear any jewelry while working.

## **1.2.7 Safety Operation Instructions**

### **Prohibited Use in Hazardous Environments:**

Do not operate the machine in areas with flammable materials (gasoline, fuel gas, combustible dust, etc.). Carry a fire extinguisher with you when mowing dry grass or working in yards.

### **Safe Distance:**

Maintain a minimum safe distance of 30 meters from the equipment. Never stand at the front or rear of the machine. Do not operate the machine to ram against soil, stones, metal pieces, trees or other hard objects.

### **Forbidden Dangerous Behaviors:**

Do not approach or touch rotating components while the equipment is running.

### **No Operation with Poor Visibility:**

Stop using the machine under conditions of poor visibility, such as at night or in severe weather.

## **1.2.8 Electrical Safety**

Use the dedicated charger and connect the plug correctly when charging the battery.

Turn off the power and unplug the charger to save electricity if the machine will not be used for a long time.

Keep the battery away from open flames. Disconnect the power supply first after charging to prevent explosion.

**Moisture Prevention:** Do not expose electrical components to humid environments.

## 1.2.9 Personal Safety

### Focused Operation

Maintain full concentration during operation. Never operate the machine when fatigued or under the influence of alcohol.

### Handling Abnormal Conditions

Stop operation immediately, cut off the power supply and conduct inspection if any malfunction occurs on the equipment.

## 1.3 Battery & Electrical Precautions

- 1、 Do not expose this machine to rain or damp environments. Exposure to moisture increases the risk of electric shock.
- 2、 Do not operate the machine if its power switch fails to turn it on or off. Any machine that cannot be controlled by the switch poses severe hazards and must be repaired immediately.
- 3、 Prevent accidental startup. Ensure the power switch is in the OFF position before installing the storage battery, lifting or transporting the machine.
- 4、 Never dispose of batteries in fire, as this may cause battery explosion. Refer to local regulations for proper disposal instructions.
- 5、 Do not open or disassemble the storage battery. Leaked electrolyte is corrosive and may cause injury to eyes or skin; ingestion will lead to toxic hazards.
- 6、 Do not charge the battery in rainy weather or damp locations.
- 7、 Only use the charger designated by the manufacturer for charging. Using a charger intended for one type of battery pack on incompatible batteries may result in fire.
- 8、 Only use the specified battery packs for this electric machine. The use of non-designated battery packs may cause personal injury or fire.
- 9、 When the storage battery is not in use, store it away from paper clips, coins, keys, nails, screws and other small metal objects. These items may short-circuit the battery terminals, which can cause burns or fire.
- 10、 For liquid-filled storage batteries in storage, supplementary charging must be performed once every month.

## 1.4 Operator Precautions

- 1、 This machine shall only be operated by mentally competent persons with operating experience who have fully read this manual. Children and inexperienced personnel are prohibited from operating or borrowing the machine. The manual must be provided together with the machine when lent to others. Read the manual thoroughly and master all operating, assembly, commissioning and maintenance procedures before use.
- 2、 Inspect the complete machine before installing the battery: Check for missing or damaged screws, accessories and cutting components, and verify normal operation of all control switches. Do not start the machine if it is damaged or incompletely assembled.
- 3、 Operation guidelines: Cut off power and shut down the machine immediately if abnormal noise, abnormal vibration, collision with hard objects or dropping impact occurs. Do not resume operation until faults are diagnosed and repaired, and the cutting disc is inspected for cracks or damage. Replace broken cutting heads right away.

- 4、 Take a 10 – 20 minute break after 1 hour of continuous operation to avoid loss of control caused by fatigue.
- 5、 Cut off the power supply even for short absences; never leave the powered machine unattended.
- 6、 Do not touch rotating cutting components before they come to a complete stop to prevent lacerations.
- 7、 If the machine suffers severe impact or drop damage, inspect all safety structures and control components first. Send the machine to after-sales service for maintenance if any damage is found.
- 8、 Do not operate the machine under severe weather or thunderstorm conditions.
- 9、 Do not drop or throw the machine onto the ground except in emergencies; such actions may cause severe damage to the equipment.

## 1.5 Fuel Usage Precautions

### Fuel Usage :

#### Fuel Usage Guidelines

Fuel is highly flammable; open flames and sparks are strictly prohibited during handling.

Shut down the engine before refueling the fuel tank.

Smoking is forbidden while refueling or servicing the fuel system.

Wipe up any spilled fuel or engine oil completely with a clean rag.

### Disposal of Waste Oil :

Used engine oil is waste oil and must not be discarded arbitrarily.

Spent battery acid will pollute the environment and must not be dumped at will.

### **WARNING**

- 1 . New machines or overhauled machines must be run?in in accordance with the machine running?in requirements.
- 2 . Use all fluids strictly as specified. Fuel must be settled and purified for at least 48 hours before use.
- 3 . Frequently check bolts, nuts and other easily?loosened parts at all connection points, such as engine mounting bolts and bearing connection nuts. Tighten them promptly if any looseness is found.
- 4 . Inspect fuel, electrical circuit and engine oil conditions before starting the machine.
- 5 . Mowing head: Lower the mowing head fully to the ground whenever the operator leaves the machine.
- 6 . Guards must be fitted on all moving parts of the machine. Keep personnel well clear.
- 7 . Do not park the machine on slopes. Place the machine on level ground with good visibility.
- 8 . Do not operate the machine with existing faults. Stop the machine immediately for inspection and fault elimination especially in case of excessive vibration, abnormal noise or unusual odors.
- 9 . Shut down the engine when performing lubrication maintenance and field adjustments.

## 1.6 Machine Braking and Parking

1 . This machine is equipped with electromagnetic braking. Automatic braking functions when power is supplied. Slow downhill creep may occur when parking the machine on slopes steeper than 30°.

2 . The automatic brake will become ineffective when power is cut off; external force is required for braking assistance.

3 . Store the machine on flat ground.

**WARNING:** Do not cut off the machine power while working on steep slopes to avoid hazards.

**NOTE:** The operator shall not leave the machine after parking before the engine is shut down.

## 1.7 Machine Operation

1 . After starting the engine, set the throttle lever to the medium speed position, then lower the clutch pull rod slowly.

2 . Adjust the mowing head via remote control to the required stubble height for mowing.

3 . Check the surrounding area for obstacles, approaching persons or animals.

4 . Gradually increase the throttle to bring the machine up to the required working speed.

5 . Do not reduce the rotational speed of the mowing head by partially engaging the clutch during operation, as this will accelerate wear of the release lever and friction plates.

**NOTE:** To prevent gear damage in the gearbox and premature failure of the drive motor, never reverse the travel direction while the machine is moving forward or backward at high speed. Lift the mowing head before starting movement to avoid damage to working components.

## 1.8 Road Traffic & Safety Precautions

### 1.8.1 Machine Transport Instructions

If relocation is required, transport the machine by truck or tractor. Comply strictly with traffic regulations during transportation.

### 1.8.2 Fault Marking Setting Standard

Set fault warning markers in accordance with the following standards:

**Daytime requirement:** Place fault warning markers at least 100m behind the agricultural machine to alert following vehicles in advance.

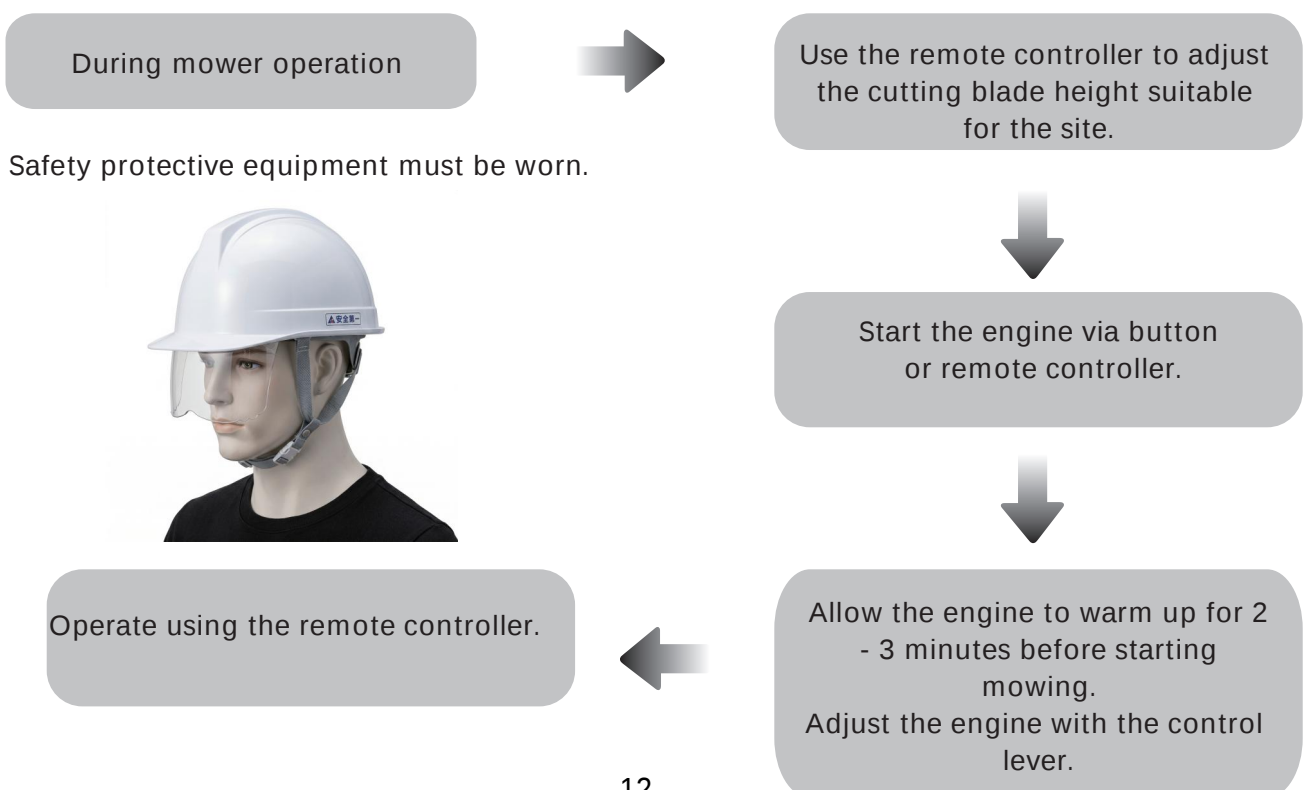
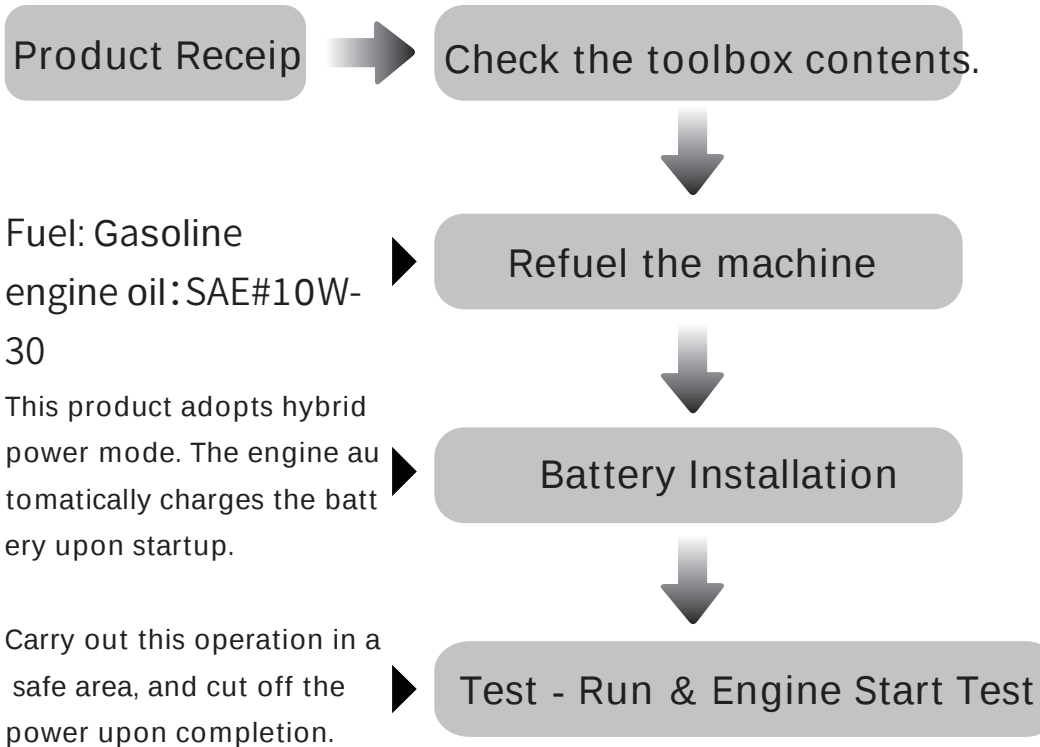
**Night-time requirement:** Place fault warning markers at least 200m behind the agricultural machine on the roadway to maximize visibility, clearly mark the machine position and prevent rear-end collisions by following vehicles.



### **WARNING**

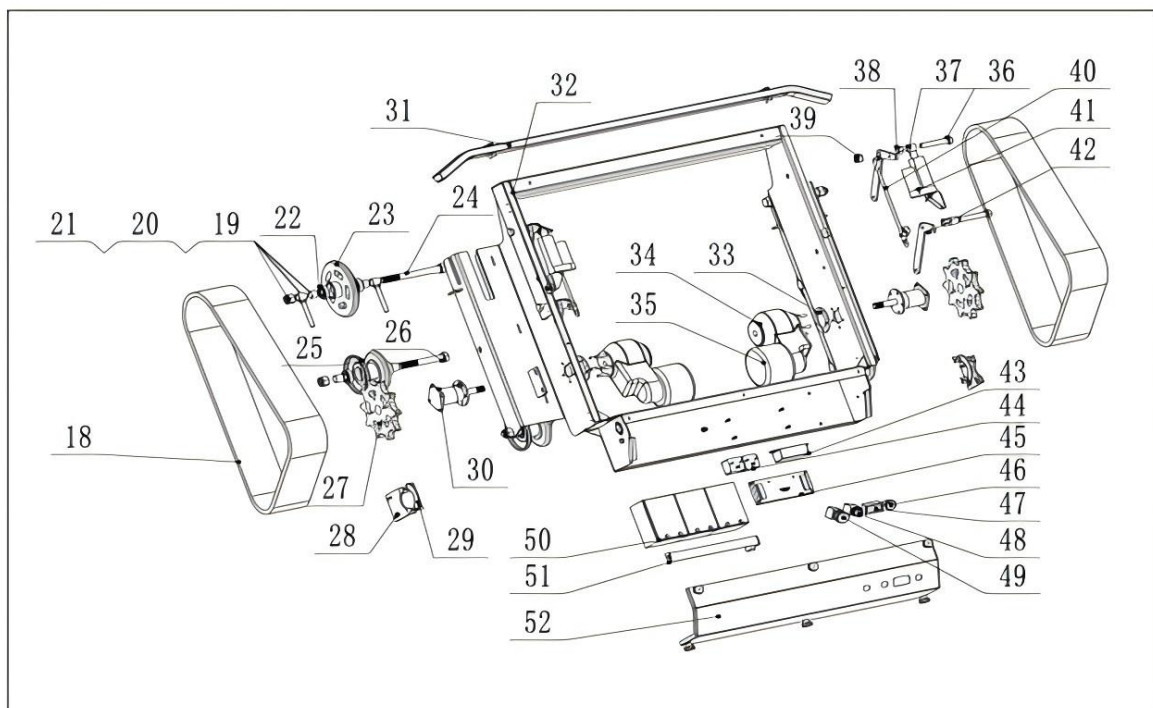
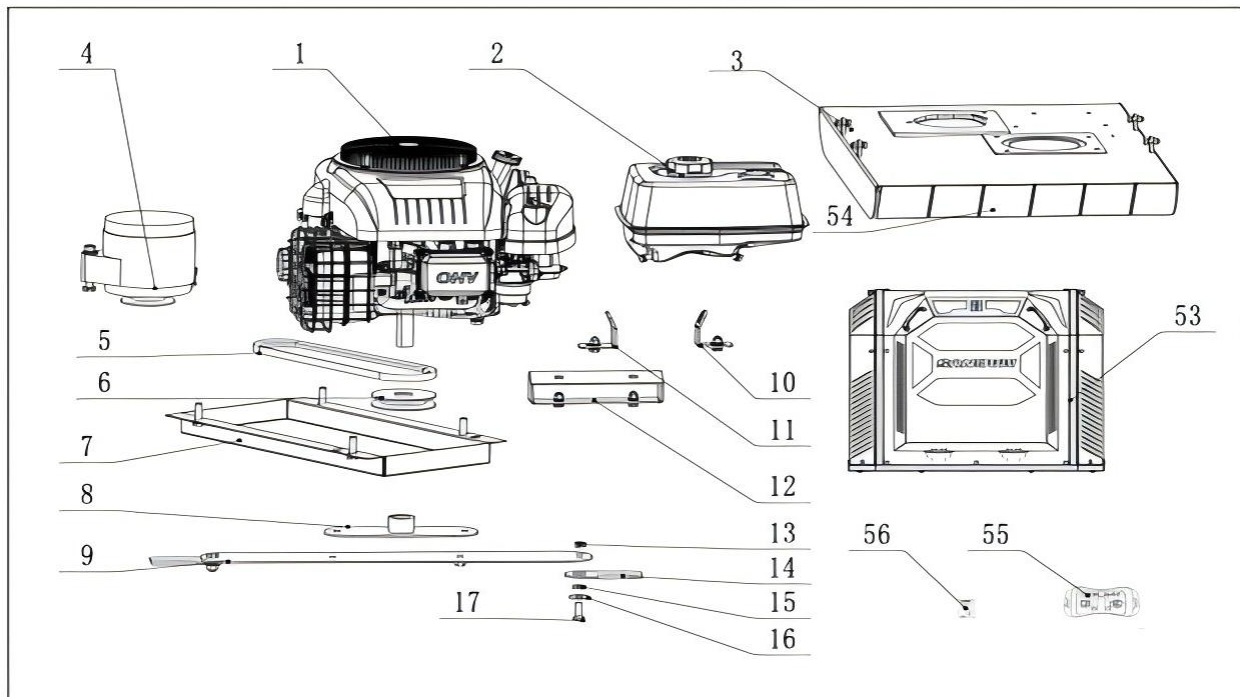
- The above-mentioned standards for fault and marker setting are legal requirements formulated to anticipate road hazards and avoid possible secondary accidents during machine operation. They must be strictly observed.
- Failure to comply may lead to penalties for violating road traffic safety regulations, and relevant civil liabilities shall be assumed in case of an accident.

## 2.1 Main Mower Operating Procedures



## 2.2 Assembly & Circuit Diagrams

### 2.2.1 Product Structure Schematic



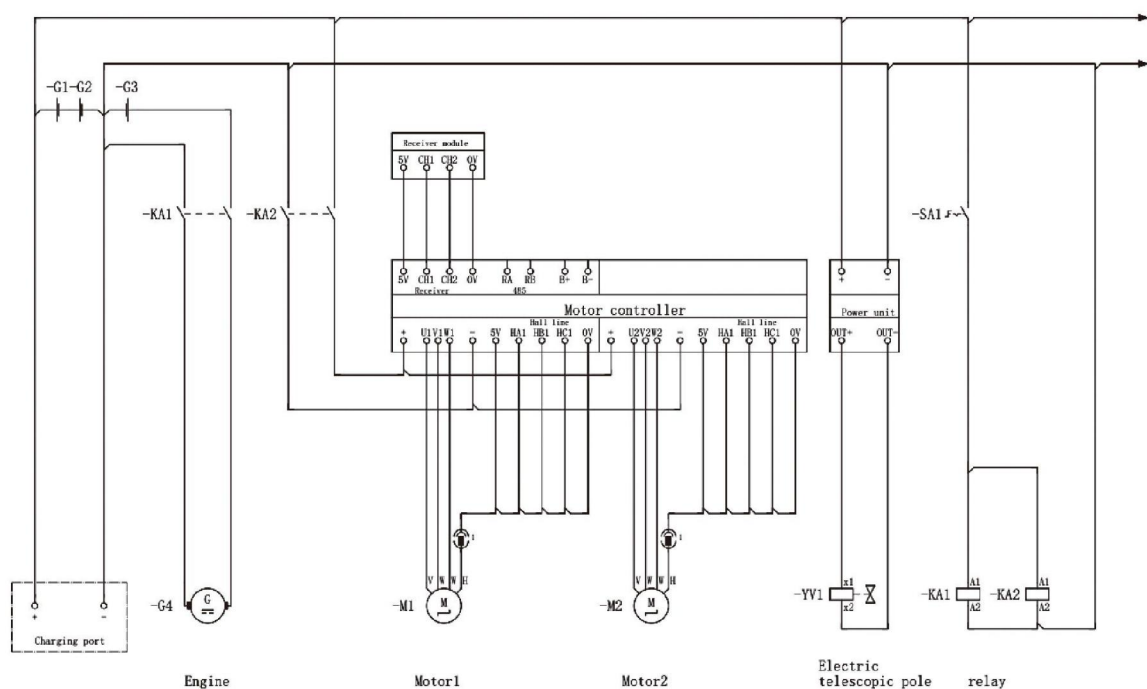
# Equipment Overview



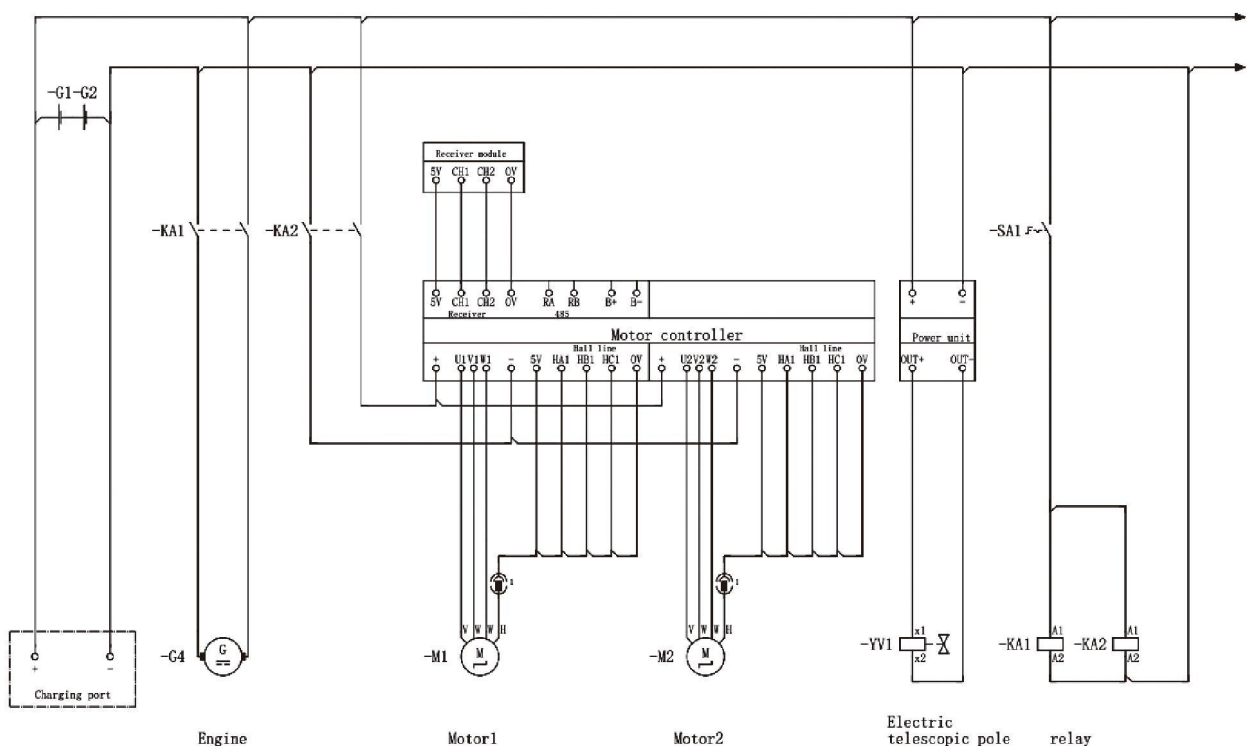
| No. | Name                          | Qty | No. | Name                      | Qty |
|-----|-------------------------------|-----|-----|---------------------------|-----|
| 28  | Half-shaft Snap Ring 2        | 2   | 56  | Remote-control Receiver   | 1   |
| 27  | Track Drive Wheel             | 2   | 55  | Remote Controller         | 1   |
| 26  | M20 Bolt P1                   | 4   | 54  | Grass Deflector           | 1   |
| 25  | Load-bearing Wheel Weldment P | 4   | 53  | Upper Hood Assembly       | 1   |
| 24  | M20 Bolt P                    | 2   | 52  | Cover Plate               | 1   |
| 23  | Track Tensioner Wheel         | 2   | 51  | Battery Pressing Plate    | 1   |
| 22  | SB6204 Bearing                | 12  | 50  | Lead-acid Battery         | 3   |
| 21  | M20 Nut                       | 6   | 49  | Emergency Stop            | 1   |
| 20  | Tension Rod                   | 4   | 48  | Power Switch              | 1   |
| 19  | Spacer Sleeve                 | 12  | 47  | Battery Level Indicator   | 1   |
| 18  | Track                         | 2   | 46  | Start Switch              | 1   |
| 17  | Blade Fixing Bolt             | 2   | 45  | Controller                | 1   |
| 16  | Retaining Ring                | 2   | 44  | Relay                     | 2   |
| 15  | Blade Washer                  | 2   | 43  | Power Unit                | 1   |
| 14  | Straight Blade                | 2   | 42  | Lifting Arm               | 4   |
| 13  | M10 Self-locking Nut          | 2   | 41  | Electric Push Rod         | 2   |
| 12  | Fuel Tank Rear Bracket        | 1   | 40  | Connecting Pull Rod       | 2   |
| 11  | Fuel Tank Right Bracket       | 1   | 39  | M16 Self-locking Nut      | 4   |
| 10  | Fuel Tank Left Bracket        | 1   | 38  | M16 Nut                   | 4   |
| 9   | Cutter Head                   | 1   | 37  | Adjustment Spacer         | 4   |
| 8   | Cutter Head Base              | 1   | 36  | Lifting Arm Fixing Bolt   | 4   |
| 7   | Belt Guard                    | 1   | 35  | Drive Motor               | 2   |
| 6   | B-80 Single-groove Pulley     | 1   | 34  | Drive Gearbox             | 2   |
| 5   | Generator Belt                | 1   | 33  | Reducer Adjustment Shim   | 2   |
| 4   | Generator                     | 1   | 32  | Chassis Weldment          | 1   |
| 3   | Engine Base Weldment          | 1   | 31  | Front Cross Beam          | 1   |
| 2   | Fuel Tank                     | 1   | 30  | Drive Half-shaft Assembly | 2   |
| 1   | Power Engine                  | 1   | 29  | Half-shaft Snap Ring 1    | 2   |

## 2.2.2 Circuit Diagram

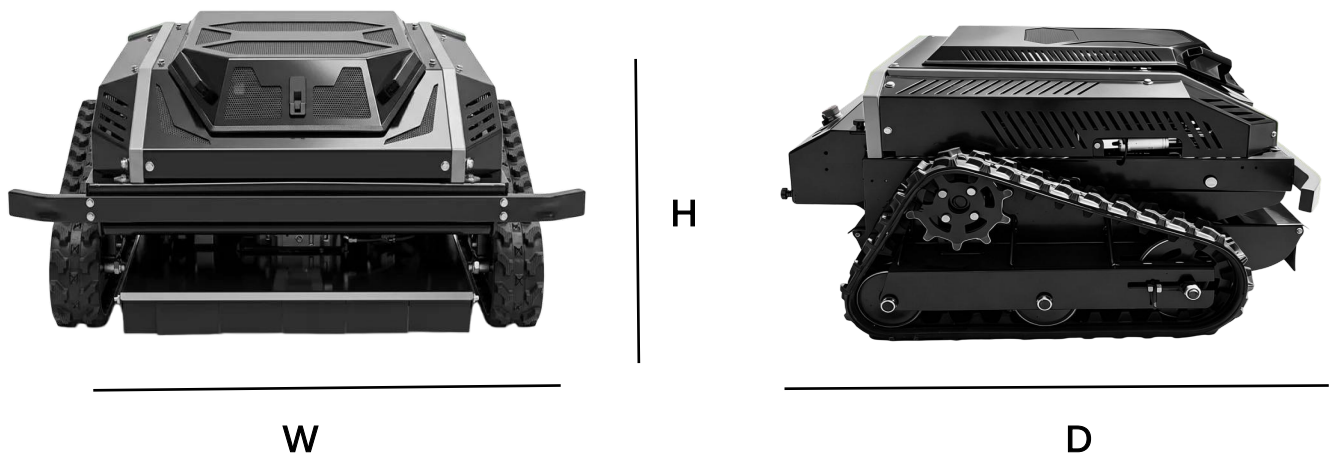
50 Model Circuit Diag.



80/100 Model Circuit Diag.

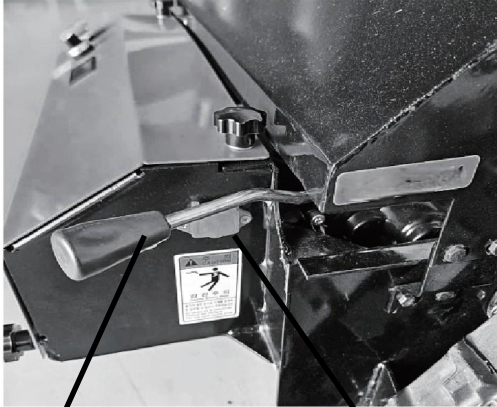


## 2.2.3 Equipment Parameter



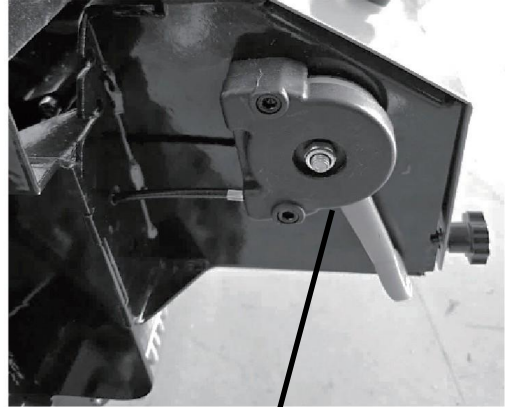
| Supporting Power | Travel (24V) / Working Engine (Gasoline) |                            |                             |
|------------------|------------------------------------------|----------------------------|-----------------------------|
| Engine           | Single-cylinder, four-stroke, air-cooled |                            |                             |
| Driving Type     | Electric-driven tracked type             |                            |                             |
| Displacement     | 224cc                                    | 452cc                      | 608cc                       |
| Battery          | 24V12.3AH ( 2块 )                         | 24V/12.3An ( 3块 )          | 24V/12.3An ( 3块 )           |
| Power            | 4.5kw/3600r/min(6hp)                     | 9.2kw/3600r/min(13hp)      | 10.5kw/3600r/min(15hp)      |
| Weight           | 160kg                                    | 235kg                      | 300kg                       |
| Mowing Width     | 50cm                                     | 800mm                      | 1000mm                      |
| Mowing Height    | 2-25cm                                   | 2-25cm                     | 2-25cm                      |
| Speed            | 2.6km/h                                  | 2.5km/h                    | 2.5km/h                     |
| Dimensions(mm)   | 1030(W) X 1030(D) X 650(H)               | 1300(W) X 1180(D) X 650(H) | 1200(W) X 1500(D) X 700 (H) |
| Fuel Tank        | 1.5L                                     | 6.5L                       | 6.5L                        |
| Oil Capacity     | 0.5L                                     | 1.1L                       | 1.6L                        |

## 2.2.4Parts Names



Air Intake Switch

Charging Socket



Throttle Lever

### MAGNUS MA-80P



Start Button

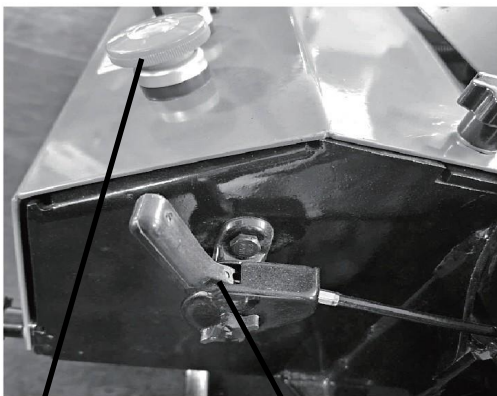
Power Switch

Throttle Lever



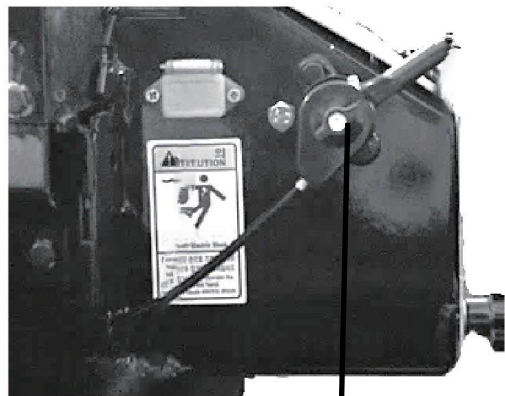
Charging Socket

### MAGNUS MA-100P



E-stop Button

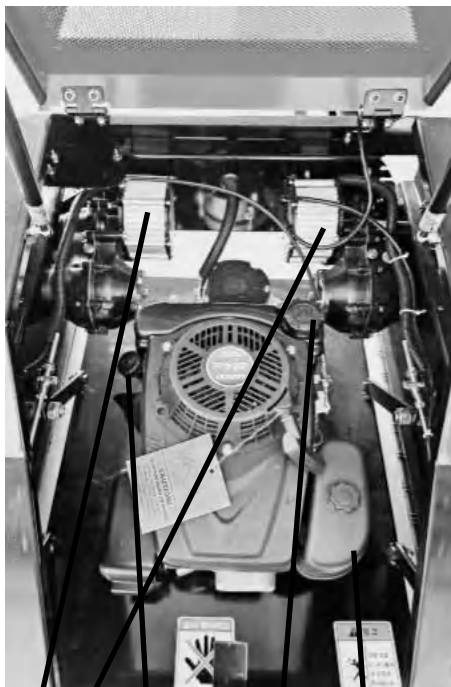
Throttle Lever



Choke Lever

## 2.2.5Parts Names

### Internal Machine Introduction

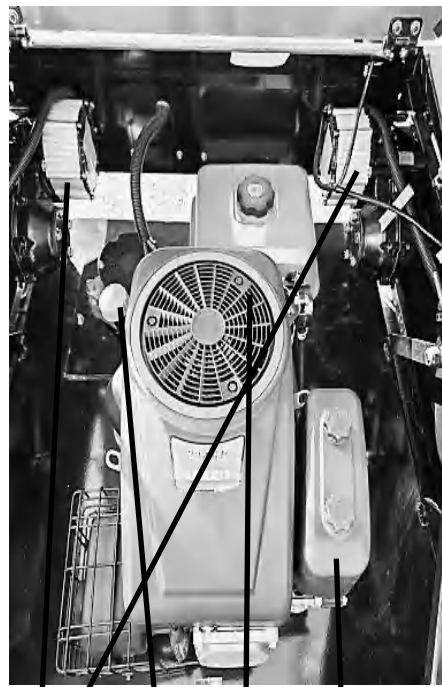


Drive Motor

Fuel Filler Port

Engine Oil Filler Port

Air Filter Element



Drive Motor

Engine Oil  
Filler Port

Fuel Filler Port

Air Filter Element



Drive Motor

Engine Oil  
Filler Port

Fuel  
Filler  
Port

Air Filter Element

## 4.1 Mower Operating Instructions

### Pre - operation Check Items

- ? Refill fuel (gasoline) and engine oil; check the installation status of components including the battery, wires and cutting blades.



Control Unit

- 1、 Slide the main power switch on the operation panel at the rear of the unit to the -ON position.
- 2、 The LCD display on the panel will show the current battery voltage. The unit cannot start normally when the voltage is too low.
- 3 、 The standard voltage ranges from 23-25v. If the voltage drops below 20V, fully charge the battery with the dedicated charger before use.
- 4、 If an emergency-stop shutdown occurs during operation due to the emergency-stop button being pressed, reset the emergency-stop button before resuming operation.



Remote - Controller Power Switch  
( ON/OFF )

- 1.Press the remote?controller power switch to activate communication preparation between the unit and the remote controller.
- 2.After the LCD display lights up, communication and control between the unit and the remote controller become available.
- 3.Use the joystick to control the unit ' s forward, backward, left and right movement, as well as the mowing working speed.



One-Touch Start S  
witch

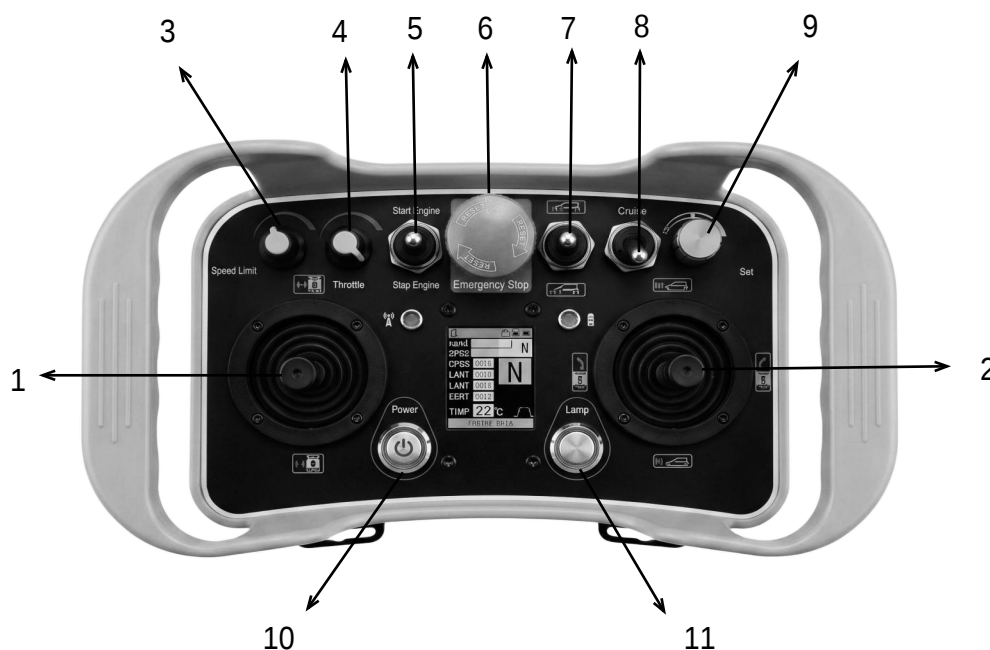


Manual Pull Start

- 1.At the position where you intend to start mowing, press the engine start switch or use key?start.
- 2.Press the switch for about 1 second to start the engine. Mowing operation can begin after approximately 10 seconds.
- 3.Do NOT increase the throttle immediately after starting, to avoid excessive engine load.

## 4.2 Mower Remote Controller

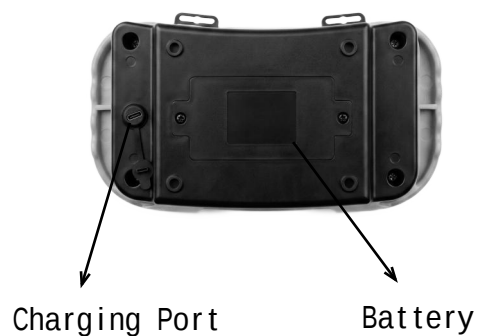
### Remote Controller Button Description



| Remote-Controller Button Description |                           |
|--------------------------------------|---------------------------|
| 1                                    | Forward-Backward Joystick |
| 2                                    | Left-Right Joystick       |
| 3                                    | Speed Adjustment          |
| 4                                    | Throttle Adjustment       |
| 5                                    | Start & Stop              |
| 6                                    | Emergency-Stop Button     |
| 7                                    | M1 Control                |
| 8                                    | Cruise Control            |
| 9                                    | Menu Setting              |
| 10                                   | Power Switch              |
| 11                                   | Lighting                  |

**! WARNING**

Do not allow ordinary users to arbitrarily adjust the trim functions of the remote-controller, to avoid hazards caused by misoperation.



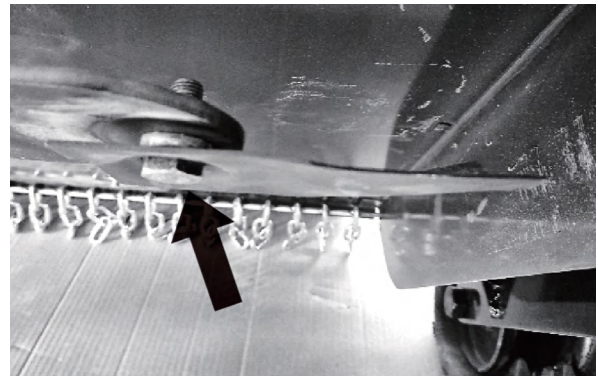
## 4.3 Mower Remote-Controller Operating Instructions

|                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Mowing Height Adjustment</p>                                                            | <ol style="list-style-type: none"> <li>1.The height of the mowing cutter disc can be adjusted within the range of 5-15cm via the mowing height adjustment switch.</li> <li>2.Adjust the height: the more grass the blades contact, the higher the mowing efficiency, and the faster the weeds can be cut off.</li> <li>3.For areas with dense and vigorously-grown weeds, it is recommended to set the mowing height to the maximum to improve working efficiency.</li> </ol>                                                                                                                                                                                                                                        |
| <p>Low-High Speed Adjustment</p> <p>Left / Right Direction</p> <p>Forward / Backward</p>  | <ol style="list-style-type: none"> <li>1.Push the forward/backward joystick to move the unit forward or backward; push the left-right joystick to steer the unit left or right.</li> <li>2.Press the speed gear switch to switch between low-speed and high-speed modes for travel speed adjustment.</li> <li>3.Operate from a safe area at least 5 meters away from the unit , and keep the machine within your line of sight of 50 meters.</li> </ol>                                                                                                                                                                                                                                                              |
| <p>Cruise Control Switch</p>                                                             | <ol style="list-style-type: none"> <li>1.Perform mowing operations based on the forward direction of the unit. Edge areas can be cleared by reversing.</li> <li>2.For large-area mowing work, enable the cruise control function. The unit will maintain straight line travel without continuously pushing the joystick.</li> <li>3.Disable the cruise control function and manually control the travel direction when frequent direction adjustments are required on complex terrain.</li> <li>4.Even when cruise control is activated, the travel route can be adjusted at any time via the direction joystick.</li> </ol>                                                                                         |
| <p>Emergency-Stop Button</p> <p>Control Unit</p>                                         | <ol style="list-style-type: none"> <li>1. Upon completion of mowing work, press the emergency-stop button to shut down the engine.</li> <li>2. Turn off the main power switch, and move the unit to a safe indoor or shaded place for storage.</li> <li>3. Before long-term storage, fully charge the battery and remove the battery from the remote controller.</li> <li>4. Avoid humid and high-temperature environments during storage to prevent damage to electronic components.</li> <li>5. When cleaning the unit, do not directly rinse the control box and electrical components with water.</li> <li>6. Always turn off the main power switch during storage to prevent battery deep discharge.</li> </ol> |

## 5.1 Blade Maint. & Replacement



·To facilitate inspection of the mowing blades at the bottom of the unit, lift the front end of the machine, or safely jack up the unit with tools such as slide rails and jacks. (Do not use slippery and unstable supports.)



- Remove the connecting bolts and fixing pins at the bottom of the mowing cutter disc, and install new blades. (Tools required: 16mm and 17mm wrenches)
- If the mowing blade shaft is severely deformed or damaged, it is recommended to contact professional repair service for handling.



### Precautions

- Both old and new blades are extremely sharp. Exercise extreme caution during operation to prevent cuts.
- Be sure to wear safety protective gloves when replacing blades.
- Only use original manufacturer blades for mowing work, to avoid safety accidents caused by blade fracture.

## 5.2 \*\*Engine Oil Topping Up and Replacement Procedure\*\*

! Always turn off engine power before starting work.

! Recommended Engine Oil Grade: **SAE10W-30** or equivalent

· Locate the engine oil dipstick access point and pull out the dipstick in the direction shown in the diagram.

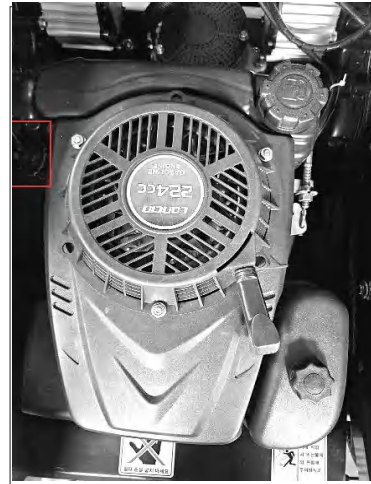
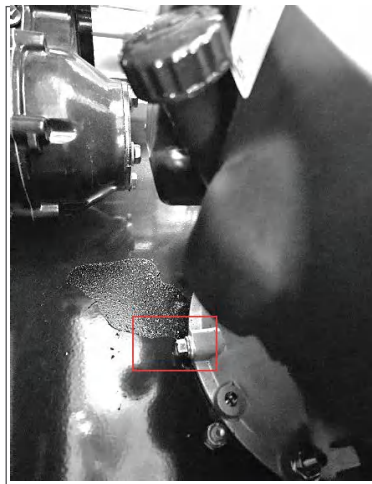
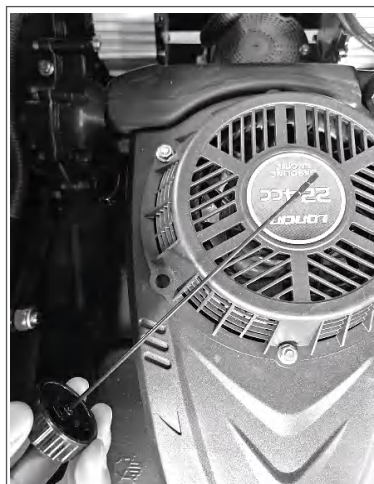
· Check the oil level mark on the dipstick to verify whether the oil level is sufficient.

Top up or replace the oil if the level is low.

· When draining the oil, unscrew the drain plug and drain all the old oil completely.

· For the engine oil filling capacity, please refer to the specification table in the product manual.

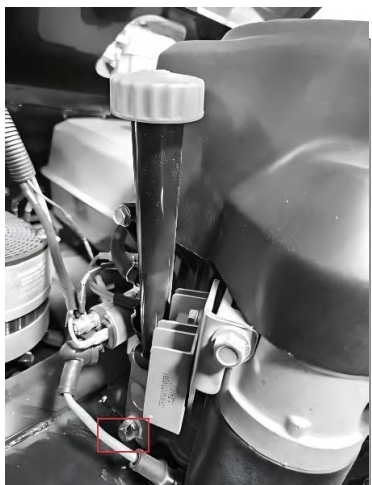
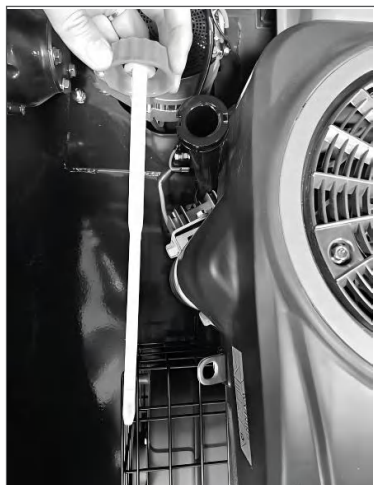
MAGNUS MA-50P



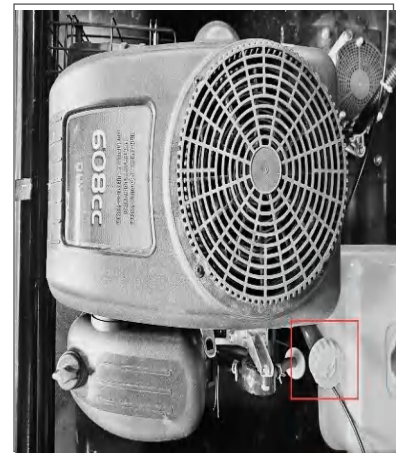
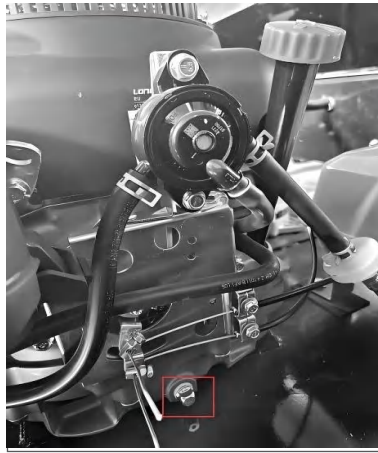
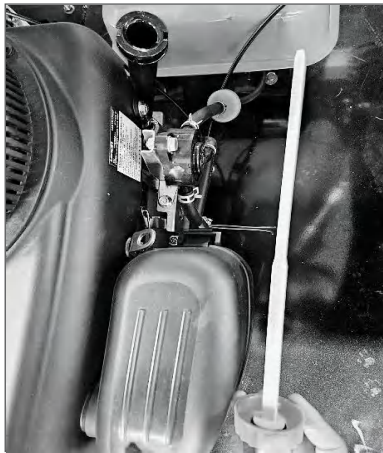
Engine Oil Inspection Port

Engine Oil Drain Port

MAGNUS MA-80P



## MAGNUS MA-100P



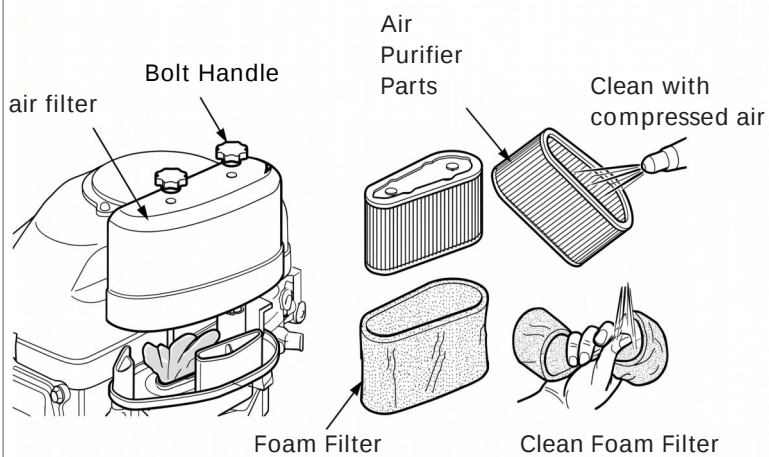
Engine Oil Inspection Port

Engine Oil Drain Port

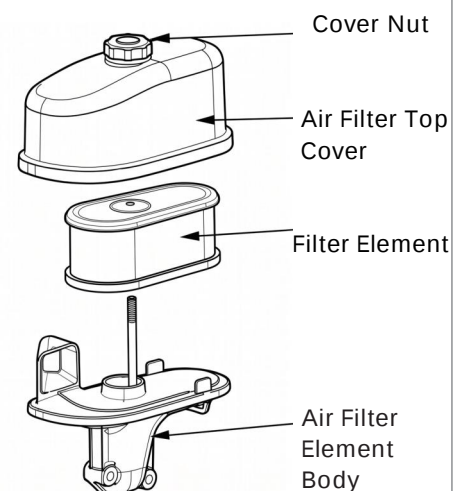
## Air Filter Maintenance & Repair

Remove air filter cover, clean or replace element.

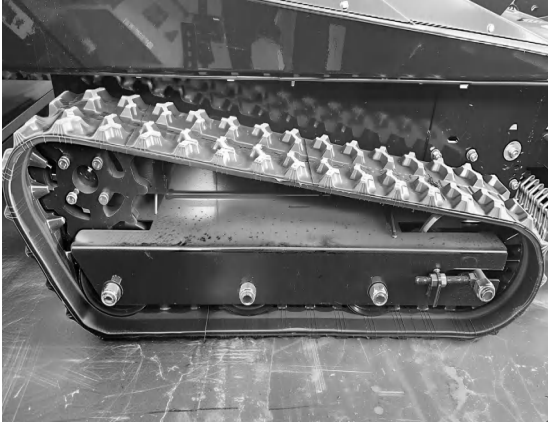
(80/100)



(50)



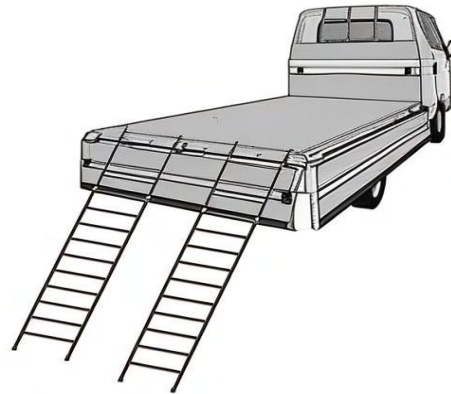
## 5.3 Tracks



- The standard track tension is 30-50mm. Inspect and adjust the tension regularly; replace the tracks when heavily worn.
- Perform inspection and adjustment work in a safe area.

|                     | 50                                     | 80                                  | 100 |
|---------------------|----------------------------------------|-------------------------------------|-----|
| Track Specification | 100 × 60mm<br>Center Distance780<br>mm | 120 × 60mm<br>Center Distance1100mm |     |

## 5.4 Handling



- When handling the unit, load it safely onto the vehicle using agricultural-machine-specific ramps.
- After loading, secure the unit with ropes to prevent sliding during transportation.
- The gradient for handling shall be kept within approximately 20 degrees.
- After handling, place the unit on flat ground before moving it to avoid equipment damage.
- Operators must perform operations from a safe position.

## 5.5 Storage

**Proper storage is critical for safe and long - term equipment service life.**

The unit may fail to start normally if it is left idle for an extended period.

Please complete the following preparations before storage:

- Clean dirt, weeds and other debris from the equipment to prevent corrosion and blockage.
- Store the unit indoors in a dry, well-ventilated area away from direct sunlight.
- Fully charge the battery and disconnect the power supply prior to storage.
- Empty the fuel tank for long-term storage to avoid fuel deterioration and oil line blockage.
- Disconnect the battery negative terminal during storage to prevent battery discharge.

## 6.1 Period. Insp. & Maint. Schedule

Regular cleaning, inspection, lubrication, tightening, adjustment or component replacement for all machine parts are collectively called technical maintenance. Good technical maintenance slows component deterioration, reduces malfunctions, prolongs service life and keeps the machine operating in sound condition.

| Item                             | Inspection Interval                          | Inspection Content                   |
|----------------------------------|----------------------------------------------|--------------------------------------|
| Engine Oil                       | Replace after first 10-17 hours of operation | Replace engine oil                   |
|                                  | Every 50-70 working hours                    | Replace engine oil                   |
| Air Filter                       | Every 8-10 working hours                     | Clean filter element                 |
|                                  | After 6-10 cleanings                         | Replace filter element               |
| Valve Clearance                  | Every 100 hours or annually                  | Inspect and adjust                   |
| Spark Plug                       | Every 100 hours                              | Clean spark plug                     |
| Blade & Cutter-head Fixing Bolts | Before each operation                        | Check for looseness                  |
| Electrical Control Box           | Every 7 working days                         | Use air gun (Do NOT wash with water) |
| Track Tension                    | Before each operation                        | Standard tension: 30mm-50mm          |
| Drive?motor Gearbox              | Once per year or every 1000 working hours    | Replace gear oil                     |
| Motor Belt                       | Every 10-15 working days                     | Adjust tension or replace belt       |
| Storage Battery                  | Every 30-day long-term idle period           | Charge the battery                   |

| Symptom                                             | Possible Cause                                                                     | Remedy                                              |
|-----------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------|
| Mowing head does not work                           | Oil contamination on friction disc and pressure plate                              | Clean with gasoline and eliminate oil-leakage fault |
|                                                     | Uneven or heavy wear of friction disc with exposed rivets                          | Replace friction disc                               |
|                                                     | Weakened pressure of disc spring                                                   | Replace the disc spring                             |
|                                                     | Small free travel; release levers out-of-plane and in contact with release bearing | Adjust cable travel                                 |
| Generator fails to generate power                   | Loose generator belt                                                               | Tighten the belt as required                        |
|                                                     | Short-circuit or loose wiring harness                                              | Inspect and replace                                 |
|                                                     | Damaged generator                                                                  | Replace generator                                   |
| Tracks do not operate                               | Poor wire connection                                                               | Check wire terminal fastening                       |
|                                                     | Damaged controller                                                                 | Replace controller                                  |
|                                                     | Damaged motor                                                                      | Replace motor                                       |
|                                                     | Damaged gearbox gears                                                              | Replace gearbox                                     |
|                                                     | Overheated controller                                                              | Stop operation for cooling                          |
| Machine vibrates, shakes or produces abnormal noise | Missing blade                                                                      | Replace blade                                       |
|                                                     | Damaged cutter shaft                                                               | Replace or perform dynamic balancing                |
|                                                     | Foreign objects wrapped around cutter shaft                                        | Clean up promptly                                   |
| Remote control fails to operate the machine         | Signal loss                                                                        | Re-pair frequency                                   |
|                                                     | Damaged remote controller or receiver                                              | Replace the faulty part                             |
|                                                     | Low machine battery level                                                          | Charge the battery                                  |
| Difficult engine starting                           | Insufficient equipment battery voltage                                             | Charge the battery                                  |
|                                                     | Faulty starter motor or spark plug                                                 | Inspect or replace                                  |
| Poor mowing performance                             | Worn blade                                                                         | Replace blade                                       |
|                                                     | Incorrect installation                                                             | Re-install                                          |
| Machine moves only in one fixed direction           | Faulty control board                                                               | Inspect and replace                                 |
| Controller overheat protection                      | Stop operation for cooling                                                         |                                                     |