



19" Hover Mower

Operator's Manual



Model MHM480
2023

Maruyama U.S. | 4770 Mercantile Dr. Suite 100 | Fort Worth, TX | 76137



Hover Mower Operator's Manual

Introduction

Read this information carefully to learn how to operate and maintain your product properly and to avoid injury and product damage. You are responsible for operating the product properly and safely.

The enclosed Engine Owner's Manual is supplied for information regarding the U.S. Environmental Protection Agency (EPA) and the California Emission Control Regulation of emission systems, maintenance, and warranty.

Important: This engine is **not** equipped with a spark arrester. It is a violation of California Public Resource Code Section 4442 to use or operate the engine on any forest-covered, brush-covered, or grass-covered land. Other states or federal areas may have similar laws. This spark ignition system complies with Canadian ICES-002.

You may contact Maruyama U.S. directly for product and accessory information, help finding a dealer, or help registering your product. Whenever you need service, genuine Maruyama parts, or additional information, please contact your local Maruyama dealer, or Customer Service and have the model and serial number of your product ready. They are located on the decal on the rear of the unit as shown in this photo:



Write the numbers in the following space provided.

Model Number:

Serial Number:

You may complete and mail the enclosed product registration card or you can register on-line at:

www.maruyama-us.com

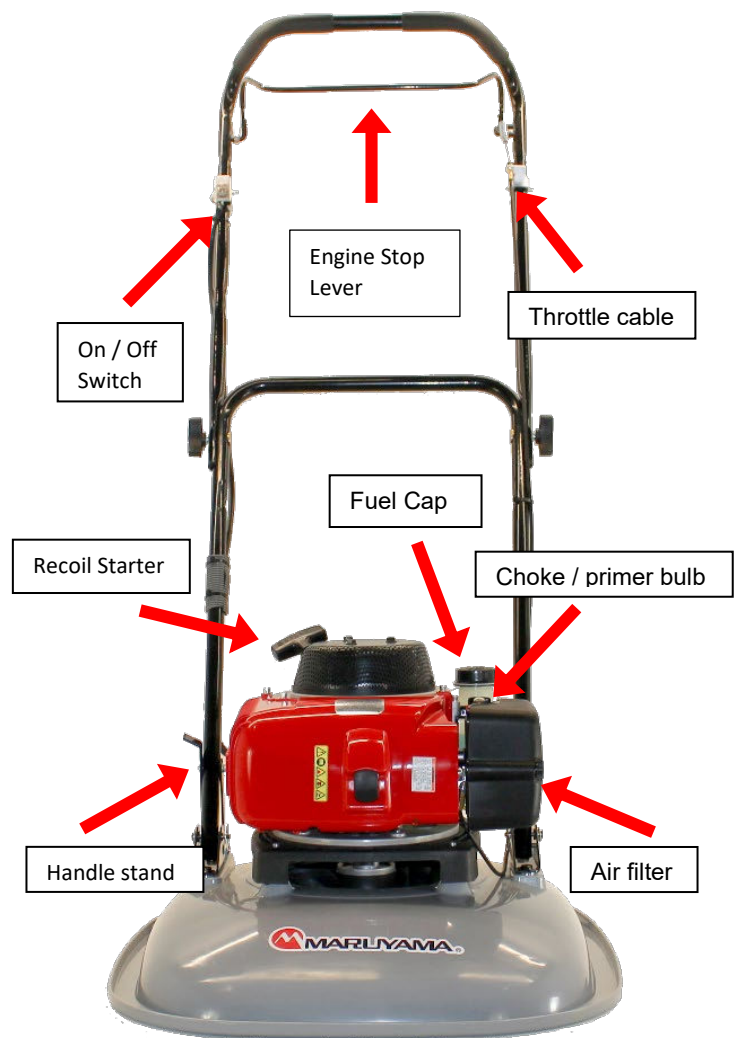
Should you require warranty service, bring a copy of your sales receipt along with your product to your Maruyama authorized servicing dealer.

Carton Contents:

- Maruyama Hover Mower
- Maruyama Product Registration Card
- Engine Owner's Manual / Emission System Warranty
- Lower Handle Assembly (with handle stand)
- Upper Handle Assembly (including throttle cable, engine stop lever, and on/off switch)

Key Components

The image below identifies key components of the Hover Mower so take the time to familiarize yourself with them and their function.



Assembly and Setup

The unit has been carefully pre-assembled with adjustments and quality inspections performed by a team of trained technicians who take great pride in their work. For packaging and shipment, there are components that need installation. **When instructions refer to the left or right side of the unit, it means as standing behind the unit at normal operation position.**

Tools Required

- Regular or needle-nose pliers
- Medium adjustable wrench, and a ½ inch wrench
- Two 10mm wrenches
- 4mm Allen wrench

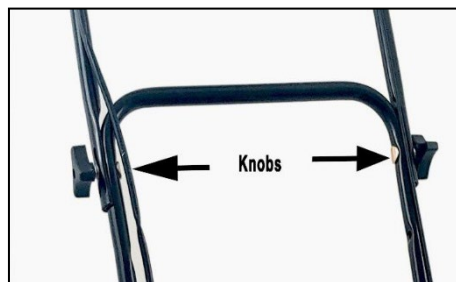
1. Insert the **lower handle** section into the mounting brackets on each side of the deck – noting that the handle stand lever will be on the **right side** of the unit as shown in the photos below:



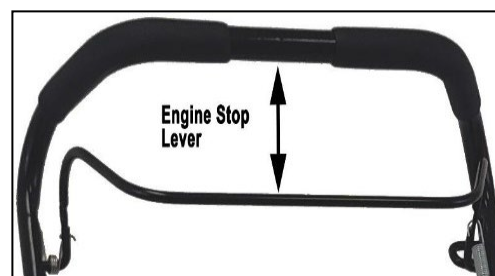
2. Secure the handle by inserting the pins on each side and securing with the spring cotter pin. Note: The spring cotter pin will be on the inside, closest to the engine.



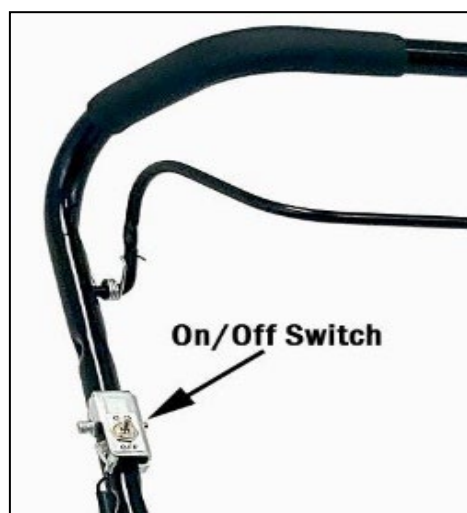
3. Attach the **upper handle** section to the lower handle section – with the stop lever facing forward – using the bolts and knobs as shown:



4. Verify the engine stop lever is properly installed, so it pivots upward completely against the handle when squeezed and returns downward when released:



5. Install the on/off switch onto the **RIGHT** side of the handle (in the **SECOND** hole below the stop lever):



Assembly and Set up (continued)

6. Attach the throttle spring to the hole of the stop lever on the **LEFT** side of the handle, then install the cable adjust bracket onto the handle using the **SECOND** hole below the stop lever:

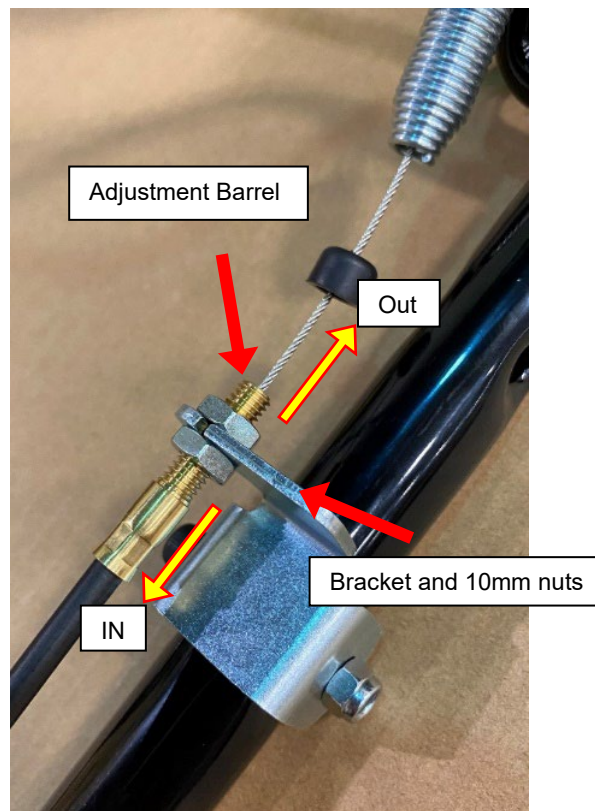


7. The throttle cable **MUST** be adjusted after installation.

Slide the rubber dust cap off the adjustment barrel and loosen the two 10mm lock nuts. Set bracket and lock nuts at approximately the middle of the adjustment barrel.

There should be a small amount of slack in the cable when the Engine Stop Lever is released.

If there is no slack in the cable when the Engine Stop Lever is released, adjust the cable tension by loosening the 10mm nuts, and moving the cable out, away from the engine.



Proper adjustment of the cable will allow for full throttle operation when the Engine Stop Lever is in the Run position. The engine will turn off when the Engine Stop Handle is released.

When adjustment is complete, put the rubber dust cap back in place on the adjustment barrel.



8. Add the plastic tubing to cover the on / off switch wires before connecting the ends. Then use the included tie straps to connect the wires to the handles as shown:



Safety Instructions

The following safety alert symbols are used in these instructions in conjunction with important safety messages related to the operation of the unit and potential hazards. As you familiarize yourself with the various features and functionality of this mower, please take note of the subjects and specific instructions that include these images...

⚠ DANGER

...WILL cause serious or fatal injury if the instructions are not followed.

⚠ WARNING

...CAN cause serious or fatal injury if the instructions are not followed.

Safety Labels

On the unit itself, there are additional labels that identify important safety issues. The following one refers to the hazards of the cutting blades:



The following label identifies important instructions related to the operation of the mower:



Safety Precautions and Training

⚠ WARNING

Understand the operation of all controls and learn how to stop the engine and mower quickly in case of emergency. Make sure the operator receives adequate instruction before operating this unit.

When instructions refer to the left or right side of the unit, it means as if the operator is standing behind at the normal operation position.

1. Read all information contained in this manual and the engine manual carefully. Be thoroughly familiar with the controls and proper use of the equipment.
2. Always use proper PPE including at **minimum** safety glasses, hearing protection, and proper footwear.
3. Never allow children to operate mower.
4. Never operate this unit when you are tired, ill or under the influence of alcohol, drugs or medication.
5. Never try to mow across excessively steep terrain. On inclines, keep the unit in front / below and maneuver in a pendulum motion.
6. Keep area of operation clear of all persons, particularly small children and pets.
7. Never operate the mower without proper guards / shields in place.
8. Thoroughly train anyone using the mower. Make sure all mower operators know the safety, operating and maintenance procedures.
9. Never leave the mower unattended with the engine running.
10. Mow only in daylight or in good artificial light.
11. Always be sure of your footing. Keep a firm hold on the handle and never run with the unit.
12. Do not operate mower when barefoot or wearing open sandals. Always wear substantial footwear and pants or slacks that cover your legs when operating mower.
13. Material may ricochet back toward the operator. Do not operate over gravel surfaces.

Preparation and Inspection

⚠ WARNING

1. Thoroughly inspect the area where mower is to be used and remove all stones, sticks, wire, bones and other foreign objects which might be thrown. Never operate the unit over gravel.
2. Check fuel before starting engine. Do not fill gasoline tank indoors or when engine is running. Wait until engine has been allowed to cool for several minutes. Clean off any spilled gasoline before starting engine.
3. Make sure the unit is on a flat level surface before starting engine.
4. Inspect the unit to verify the controls, safety switches, and handles are assembled properly. Do not operate unless they are functioning properly.
5. If the machine should start to vibrate abnormally, stop the engine, and check for the cause immediately.
6. Use care when loading or unloading the machine into a trailer or truck.
7. Never operate machine in an enclosed area.
8. Keep all nuts and bolts tight to be sure the equipment is in safe working condition.
9. Never tamper with safety devices. Check their proper operation regularly.
10. Keep machine free of grass, leaves, or other debris build-up – especially the recoil starter area of the engine. Clean up oil or fuel spillage and remove any fuel-soaked debris. Allow machine to cool before storing in an enclosed space.
11. Never make any adjustments or repairs with the engine running. Disconnect the spark plug wire to prevent unintended starting.
12. Do not change the engine throttle setting or over- speed the engine.
13. Maintain or replace safety and instruction labels, as necessary.
14. If gasoline is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until the gasoline vapor has dissipated.
15. Before using, always visually inspect to see that the blade(s), bolts, and spacers are not worn or damaged. Replace a worn or damaged blade(s).

16. Stop the engine if the machine must be tilted for transportation when crossing surfaces other than grass, and when transporting the machine to and from the area to be mowed.

Engine Operation

IMPORTANT – THIS IS A 2-STROKE ENGINE THAT REQUIRES MIXED FUEL OF GASOLINE AND 2- STROKE OIL FOMULATED FOR USE IN HIGH-PERFORMANCE AIR-COOLED ENGINES. Oil must be rated JASO-FD or better.

Review the complete operation and safety instructions provided in the Maruyama engine owner's manual – which is included in the information packet of



Any service, warranty, or replacement part needs should be directed to a Maruyama Authorized Service Dealer.

More information can be found at:

www.maruyama-us.com

Operating Controls

⚠ WARNING

Make sure the handle sections are properly tightened in the upright position before starting the engine and do not operate the unit if the engine stop lever is damaged or not functioning correctly.

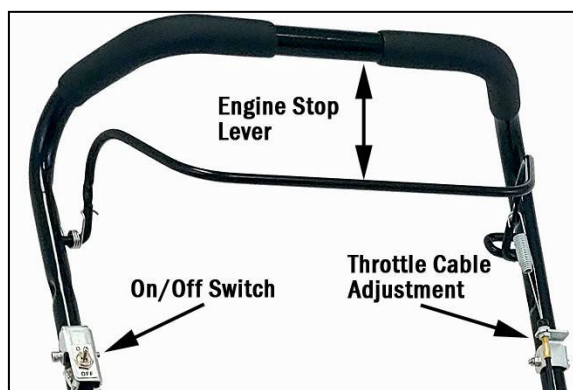
1. Engine Stop Lever

This lever allows the engine to start and run at its optimum speed. It will also stop the engine and the rotation of the cutting blades when released:



2. Engine On/Off Switch / Throttle Cable

The switch is connected to the ignition system with on and off positions. The throttle is set up to provide the optimum engine speed when the stop lever is fully squeezed against the handle – this can be adjusted using the cable adjustment:



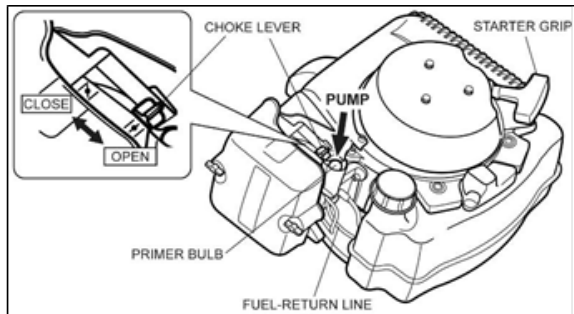
Mower Operation

⚠ WARNING

Make sure the ground is flat and clear of debris and do not attempt to start on a sloped or inclined surface. Make sure the fuel tank cap is properly installed and tightened.

Cold Starting

- Set the on/off switch to "ON".
- Press the primer bulb multiple times until fuel can be seen flowing through the return line to the tank (clear flow with no bubbles).
- Move the choke lever to the "CLOSE" position.



- While standing on the right side of the unit, place your foot on the edge of the deck while simultaneously gripping the engine starter handle and the engine stop lever against the handle to hold the unit before pulling the recoil starter:



- Pull the starter rope out slowly about 6-8" before beginning the full pulling motion and do not pull it all the way out. After the engine has started, move the choke lever to the OPEN position, then carefully move behind the unit while continuing to hold the stop lever against the handle and adjusting your grip position using both hands.

⚠ WARNING

Always maintain a firm grip on the handle and engine stop lever and keep the unit in front of you. If the engine does not start after 4-5 pulls, make sure the on/off switch is on and repeat the priming steps. If mower should vibrate abnormally, immediately stop the engine and check for the cause. Vibration is generally a sign of an issue with the impeller fan or cutting blade underneath the deck.

Mowing

⚠ DANGER

Always use both hands when operating the unit. Steep slopes are a major factor related to slip and fall accidents, which can result in severe injury.

Operation on all slopes requires extra caution. Never operate the mower at an angle above your position. If you feel uneasy on a slope, do not mow it. Do not pull the unit directly backwards when mowing.

- Always keep the unit below your position moving it with side-to-side motion like a pendulum. Exercise extreme caution when changing direction on slopes.
- Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could cause a slip and fall accident. Tall grass can hide obstacles.
- Do not mow wet grass on excessively steep slopes. Poor footing could cause a slip and fall accident.

Mowing (continued)

- Take extra caution near drop-offs, ditches, or embankments. Wear shoes with traction as you could lose your footing or balance.
- When cutting steeper inclines from the top of the slope and a longer reach is needed, never tie a rope to the unit. Use the handle extension kit option (part# 846000)

If striking a foreign object, stop the engine, remove wire from spark plug, thoroughly inspect mower for damage. Repair damage before restarting engine. Watch out for traffic when working near roadways.

For best performance, install new blades before each cutting season begins.

⚠ WARNING

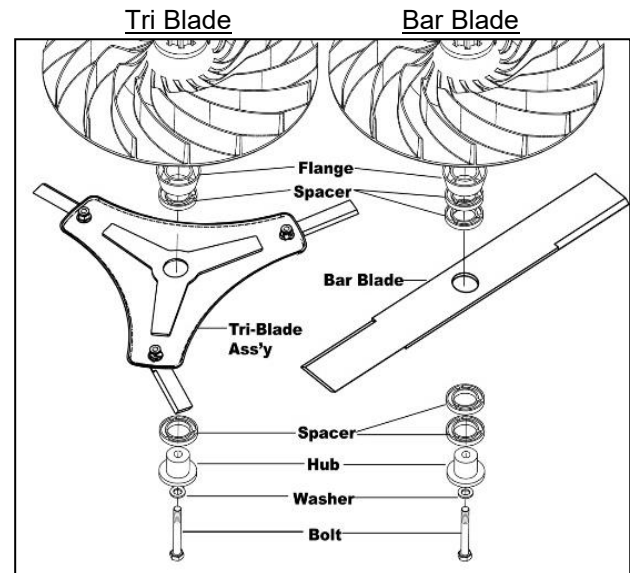
Stop the mower and allow the engine to cool before making inspections or adjustments, and when transporting. If the engine does not stop, move the **CHOKE** lever to the starting (closed) position. Have the unit immediately inspected by an Authorized Maruyama Servicing Dealer.

Changing blade / Cutting Height Adjustment

The unit's cutting height is adjusted by removing the cutting blade and placing the spacers on either side:

⚠ WARNING

Wear quality leather work gloves when changing blades or adjusting the cutting height. Mowing blades and impeller fan edges can be sharp!



Loosen and remove center bolt to disassemble the components. Placing all the spacers **above** the blade will provide the **lowest** cutting height; placing all the spacers **below** will provide the **highest** cutting height.

Optional Bar blade kit part# 845998

IMPORTANT! Always install the tri-blade assembly with flail blade mounting nuts facing upward (toward impeller / engine). The flail blade lock nuts should be inspected before reinstallation and replaced as necessary.

The mounting components: hub, spacers, tri-blade assembly / bar blade and flange, must be installed, aligned, and seated properly before tightening the bolt.

Mower Maintenance

The following maintenance topics are general practices that owners can do to keep the mower in good working condition. For any service or repair issues beyond these, it is recommended that the unit be inspected by an Authorized Maruyama Dealer.

⚠ WARNING

IMPORTANT: Avoid damage! Operating in extreme conditions may require more frequent service intervals. Engine components may become dirty or plugged when operating in extreme heat, dust or other severe conditions.

DAILY INSPECTION FOR COMMERCIAL USE EVERY 8 HOURS FOR NON-COMMERCIAL USE

1. Check engine oil level and air cleaner per the engine manufacturer's instructions.
2. Inspect the cutting blades for damage and movement – NOTE: Blades are reversible but should be replaced if significant wear or damage exists.
3. Use only genuine Maruyama replacement parts. Do not operate the unit without tri-blades or bar blades properly installed.
4. Remove debris and grass from the engine mounting base area and the engine air intake – which is part of the recoil starter.
5. Check the impeller and mower deck for cracks or damage.
6. Check the tightness of the handle mounts.
7. Clean excess grass buildup from the underside of the deck.

Illustrated Parts List is available at:
www.maruyama-us.com

Parts available through Authorized Maruyama Dealers.

Optional wheel kit part# 845999



Handle extension kit part# 846000



Cutting height lift kit part# 845996





Maruyama Limited Warranty Statement

All Maruyama products are warranted to the original purchaser to be free from defects in material and workmanship **from the date of purchase** for the time periods listed as follows:

Non-engine components: (including but not limited to: plastic deck, blade mounting components, handles, and optional accessories) 1 year commercial use / 2 year residential use warranty.

Engine and control components as follows:

Lifetime for solid steel driveshaft and ignition coils

5 Years for qualified IRON 5-YR™ commercial, institutional, or industrial use. (With purchase and use of Maruyama Blue Ultra-Shield oil)

2 years for commercial or residential use with competitors' JASO-FD or ISO-LEGD rated oil.

90 days for rental use

Engine – Refer to engine manufacturer's warranty statement. Only Maruyama engines are covered by this limited warranty statement.

Any part of a Maruyama product found to be defective within the applicable warranty period shall, at Maruyama's option, be repaired or replaced without charge. Warranty consideration is obtained by delivering any Maruyama product believed to be defective to an Authorized Maruyama Service Dealer within the applicable warranty period.

EMISSION-RELATED PARTS WARRANTY: In addition to the above coverage, Maruyama Mfg. Co., Inc. will repair or replace, free of charge, for the original purchaser and each subsequent purchaser any emission related part or parts found to be **defective in material and workmanship** for two (2) years from the original retail delivery date. Emission related parts are the carburetor assembly, the ignition coil assembly, the ignition rotor, the spark plug, the catalytic converter, and the fuel tank. Any replacement part that is equivalent in performance and durability may be used in non-warranty maintenance or repairs, and shall not reduce the warranty obligations of Maruyama Mfg. Co., Inc.

This warranty does not cover the following:

1. Maintenance items (excluding defects in materials and workmanship) including hoses, spark plugs, starter rope, air and fuel filters, clutch shoes, vibration isolators, throttle cables, and all cutting attachments.
2. Extra expenses including shipping and handling, travel, payment for lost time or pay and for any inconvenience and storage.
3. Alterations or modifications including aftermarket parts not authorized by Maruyama.
4. Wear, accident, abuse, neglect, misuse, negligence, improper fuels, lubricants, fuel mixtures (when applicable), or failure to operate or maintain the product in accordance with instructions approved by Maruyama.

Repair or replacement as provided under this warranty is the exclusive remedy of the consumer. Maruyama shall not be liable for any incidental or consequential damages for breach of any express or implied warranty on these products except to the extent prohibited by law. Any implied warranty of merchantability or fitness for a particular purpose on these products is limited in duration to the warranty period as defined in the limited warranty statement. Maruyama reserves the right to change or improve the design on the product without notice and does not assume obligation to update previously manufactured products. This warranty provides you with specific legal rights which may vary from state to state. It is the Owners and Dealers responsibility to make sure the Product is properly registered with Maruyama U.S., Inc. Proof of purchase and registration will be required to obtain warranty service.

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