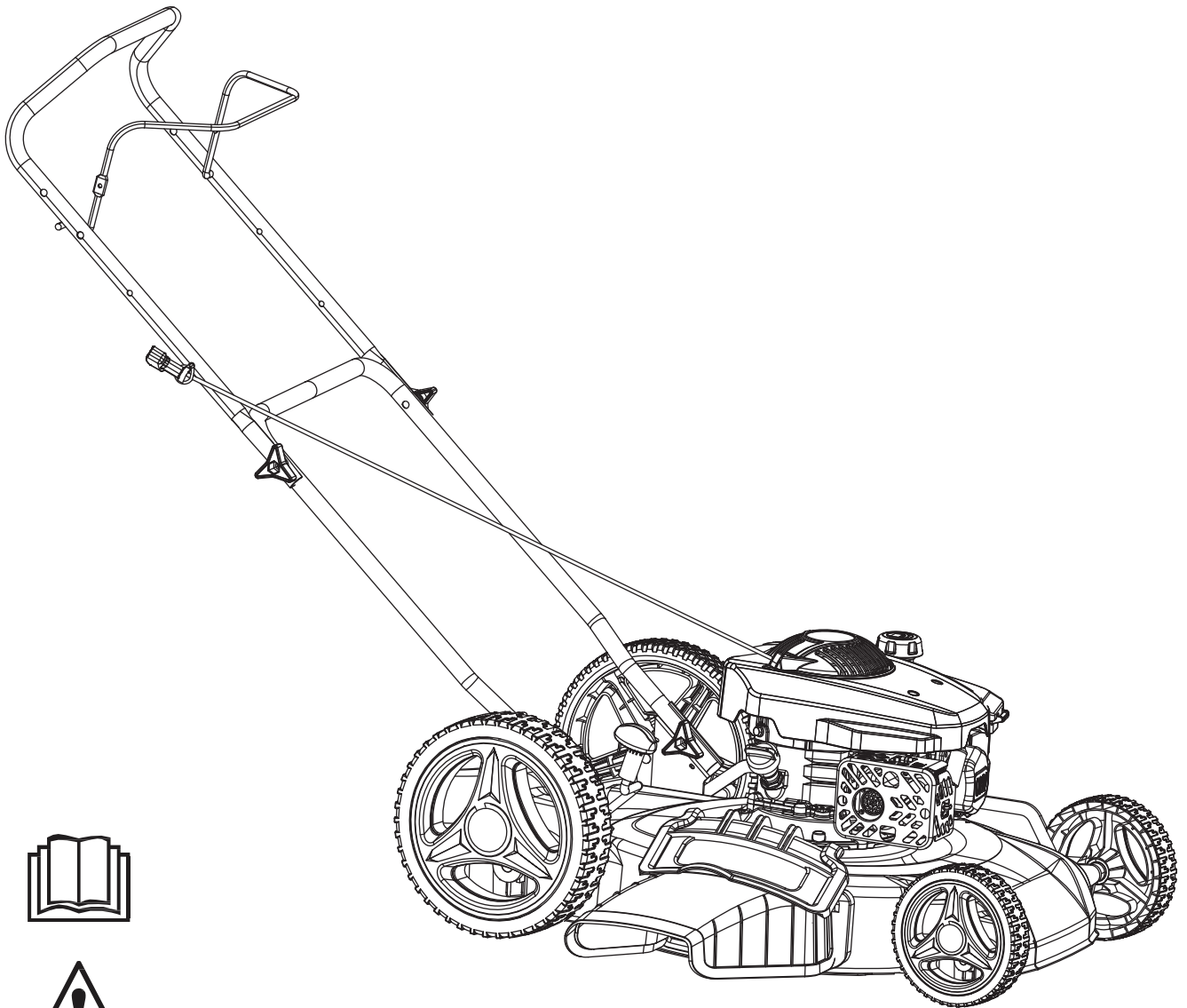




Model: PTG12205BM

Gasoline Powered Lawn Mower
OPERATOR'S MANUAL



Introduction

This rotary-blade, walk-behind lawn mower is intended to be used by residential homeowners or professional, hired operators. It is designed primarily for cutting grass on well-maintained lawns on residential or commercial properties. It is not designed for cutting brush or for agricultural uses.

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.

You may contact Midland directly at 1-877-528-3772 for product and accessory information and help finding a dealer. To register your product please register online at: www.midlandpowerinc.com

This manual identifies potential hazards and has safety messages identified by the safety alert symbol (Figure 1), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



Figure 1

1. Safety Symbols

This manual uses two words to highlight information. **Important** calls attention to special mechanical information and **Warning** emphasizes general information worthy of special attention.



Important: This engine is not equipped with a spark arrest-muffler. 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.

The enclosed Engine Owner's Manual is supplied for information regarding the US Environmental Protection Agency (EPA) and Regulation of emission systems, maintenance, and warranty. Replacements may be ordered through the engine manufacturer.

For models with stated engine horsepower, the gross horsepower of the engine was laboratory rated by the engine manufacturer in accordance with SAEJ1940. As Configured to meet safety, emission, and operating requirements, the actual engine horsepower on this class of lawn mower will be significantly lower.

Do not tamper with the engine controls or alter the governor speed; doing so may create an unsafe condition resulting in personal injury.

Safety

This lawn mower meets or exceeds the CPSC blade safety requirements for walk-behind rotary lawn mowers and the B71.1 of the American National Standards Institute in effect at the time of production.

Read and understand the contents of this manual before you start the engine.

The safety alert symbol (Figure 1) is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death. Improperly using or maintaining this mower could result in injury or death. To reduce this potential, comply with the following safety instructions.

The following instructions have been adapted from the ANSI/OPEI standard B71.1-2003.

This cutting machine is capable of amputating hands and feet and of throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

General Operation

- Read, understand, and follow all instructions on the machine and in the manual(s) before starting.
- Do not put hands or feet near or under the machine.
- Keep clear of the discharge opening at all times.
- Only allow responsible adults, who are familiar with the instructions, to operate this machine.
- Clear the area of objects such as rocks, wire, toys, etc., which could be thrown by the blade. Stay behind the handle when the engine is running.
- Be sure the area is clear of bystanders before operating.
- Stop machine if anyone enters the area.
- Do not operate machine barefooted or while wearing sandals. Always wear substantial footwear.
- Do not pull machine backward unless absolutely necessary. Always look down and behind before and while moving backward.
- Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop the blade when crossing gravel surfaces.
- Do not operate machine without the entire grass catcher, discharge guard, rear guard, or other safety protective devices in place and working.
- Never leave a running machine unattended.
- Stop the engine and wait until the blade comes to a complete stop before cleaning the machine, removing grass catcher, or unclogging the discharge guard.
- Operate machine only in daylight.

- Do not operate this machine while under the influence of alcohol or drugs.
- Never operate mower in wet grass. Always be sure of your footing; walk; never run.
- Disengage the drive system, if so equipped, before starting the engine.
- If the machine should start to vibrate abnormally, stop the engine and check for the cause immediately. Vibration is generally a warning of trouble.
- Always wear eye protection when operating machine.
- Lightning can cause severe injury or death. If you see lightning or hear thunder in the area, do not operate the machine; seek shelter.
- See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by the manufacturer.

Slope Operation

Slopes are a major factor related to slip and fall accidents, which can result in severe injury. Operation on all slopes require extra caution. If you feel uneasy on a slope, do not mow it.

- Mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
- Watch for holes, roots, bumps, rocks, or other hidden objects. Uneven terrain could cause a slip or fall resulting in severe injury. Tall grass can hide obstacles.
- Do not mow on wet grass or excessively steep slopes. Poor footing could cause a slip or fall.
- Do not mow near drop-offs, ditches, or embankments. You could lose your footing or balance.

Children

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

- Keep children out of the mowing area and under the watchful care of a responsible adult other than the operator.
- Be alert and turn mower off if a child enters the area.
- Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.

Service

Safe Handling of Gasoline

To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.

- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- Use only an approved gasoline container.
- Never remove fuel or add fuel with the engine running. Allow engine to cool before refueling.
- Never refuel the machine indoors.

- Never store the machine or fuel container where there is an open flame, spark, or pilot light such as on a water heater or on other appliances.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
- Remove gasoline-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a gasoline dispenser nozzle.
- Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
- If fuel is spilled on clothing, change clothing immediately. Never overfill fuel tank. Replace gas cap and tighten securely.



WARNING

Exhaust contains carbon monoxide, an odorless, deadly poison that can kill you.

Do not run the engine indoors or in an enclosed area.

General Service

- Never operate machine in a closed area.
- Keep all nuts and bolts tight to help ensure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel-soaked debris. Allow machine to cool before storing.
- If you strike a foreign object, stop the engine and inspect the machine. Repair, if necessary, before starting.
- Never make any adjustments or repairs with the engine running. Disconnect the spark plug wire and ground the center electrode to a metal part of the engine.
- Check grass catcher components (*if equipped*) and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp. Wrap the blade or wear gloves, and use extra caution when servicing them.
- Do not change the engine governor setting.
- Maintain or replace safety and instruction labels, as necessary.

Product Specification

Component	Specification
Rated Speed	2800RPM
Displacement	150cc
Cutting Width	20"
Height Adjustment	1"- 3"
Wheels	7" Front 11" Rear
Weight	50.9 lbs

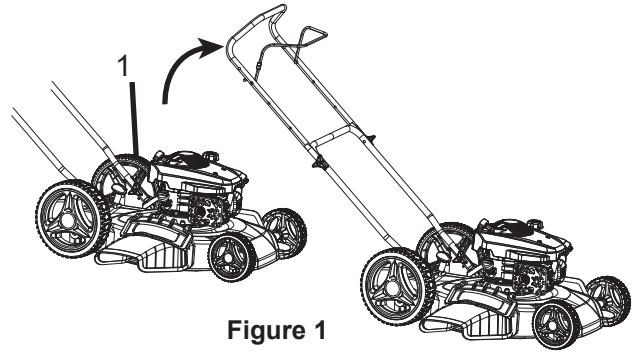


Figure 1

Safety & Instruction Decals

Important: Safety & instruction decals are located near areas of potential DANGER. Replace damaged decals.



1. WARNING: Read the Operator's Manual.
2. Thrown Object Hazard: Keep bystanders a safe distance from the mower.
3. Cutting/Dismemberment Hazard of Hand or Foot, Mower Blade: Disconnect the spark plug wire and read the instructions before servicing or performing maintenance.
4. Cutting/Dismemberment Hazard of Hand or Foot, Mower Blade: Stay away from all moving parts and keep all guards and shields in place.
5. Cutting/Dismemberment Hazard of Hand or Foot, Mower Blade: Do not mow up and down slopes, only mow across; stop the mower and engine, pick up debris before operating; look behind and down before reversing.

Setup

Important: Remove and discard the protective plastic sheet that covers the engine.

1. Unfolding the Handle



Folding or unfolding the handle improperly can damage the cables, causing an unsafe operating condition.

- Do not pinch or bend cables when folding or unfolding the handle.
- If a cable is damaged, Contact an Authorized Service Center by calling 1-877-528-3772.

1. Remove the handle knobs from the mower deck.
Important: Route the cables to the outside of the handle as you install the handle.

1. Handle knob (2)
2. Move the handle to the operating position.
3. Install and tighten the handle knobs that you removed in step 1. (Figure 1)

2. Attaching Wheels (See Figure 2)

- Parts needed - 2 front wheels (7"), 2 rear wheels (11"), 4 washers and 4 nuts.
- Install the washer into wheel axle then put on the wheel into wheel axle.
- Screw lock nut into the end of the thread of the wheel axle until it locks into place.
- Then place wheel cover by tapping it in.
- Repeat process on the other side of the lawn mower to install the other three wheels.

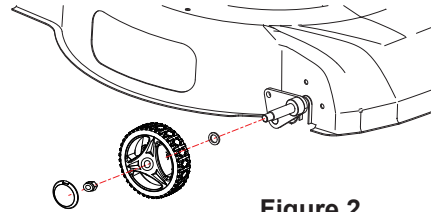


Figure 2

2. Filling the Engine with Oil

Your mower engine does not come filled with oil. Use SAE 30 weight engine oil (not included)

1. Remove the dipstick.(Figure 3)

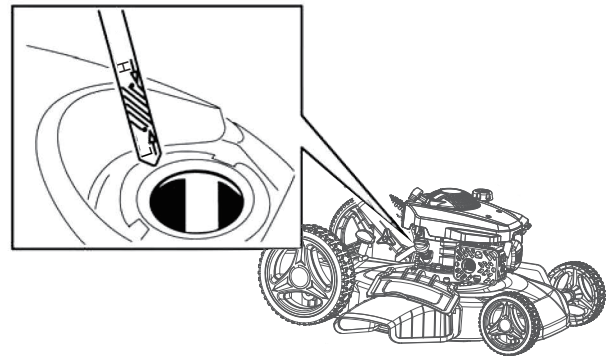


Figure 3

2. Slowly pour oil into the dipstick/fill hole until the oil level reaches the full range on the dipstick. Do not overfill. Max 15.8 oz. (0.45L), type: SAE 10w30 engine oil with an API service rating of SF or higher.

Product Overview

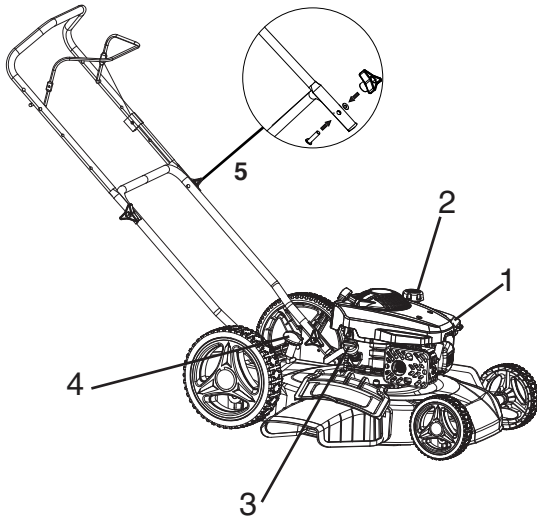


Figure 4

- | | |
|--------------------------|----------------------|
| 1. Air Filter | 2. Fuel Tank Cap |
| 3. Oil Fill / Dipstick | 4. Height Adjustment |
| 5. Handle Loosening Knob | |

Operation

Attachments/Accessories

A selection of Pulsar approved attachments and accessories are available for use with the machine to Enhance and expand its capabilities. Contact your Authorized Service Center or Distributor 1-877-528-3772.

Filling the Fuel Tank



WARNING

- Gasoline is extremely flammable with explosive vapors. A fire or explosion from gasoline can burn you or others.**
- To prevent a static charge from igniting the gasoline, place the container and/or mower directly on the ground before filling, not in a vehicle or on an object.
 - Fill the tank outdoors when the engine is cold; wipe up spills.
 - Do not handle gasoline while smoking or near open flame or sparks.
 - Store gasoline in an approved fuel container, out of the reach of children.

Fill the fuel tank with fresh unleaded regular gasoline from a filling station. (Figure 5)

Important: To reduce starting problems, add fuel stabilizer to the fuel, mixing it with gasoline less than 30 days old. (Figure 5)

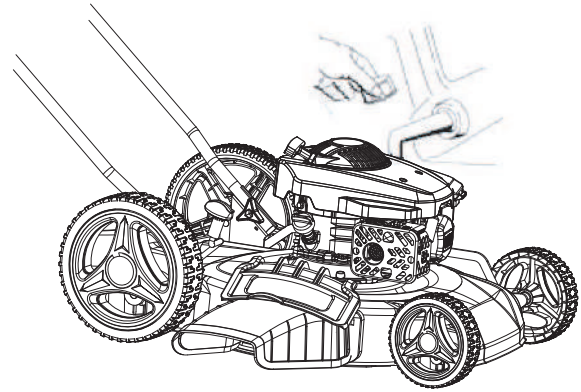


Figure 5

Checking the Engine Oil Level

Service Interval: Before each use.

1. Remove dipstick, wipe it clean, and fully re-insert it, check to see if oil is needed by the oil mark that is left the dipstick. (Figure 6)

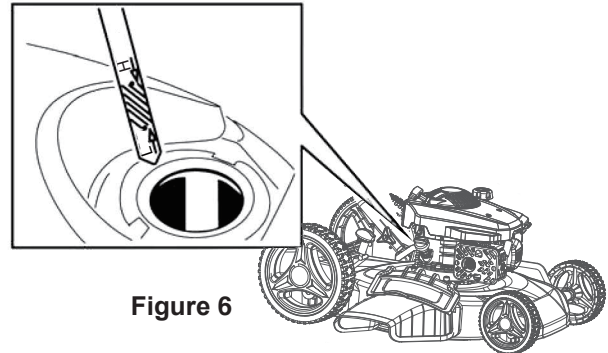


Figure 6

2. Remove the dipstick and check the oil level (Figure 6) If the oil level is low on the dipstick, slowly pour oil into the oil fill hole to raise the oil level to the full range on the dipstick. Do not overfill. Max 15.8 oz. (0.45L), type: SAE 10w30 oil with an API service rating of SF or higher.
3. Install the dipstick and tighten the screw threads.

Cutting Height Adjustment

WARNING

Adjusting the cutting height may bring you into contact with the moving blade, causing serious injury.

- Stop the engine and wait for all the moving parts to stop.
- Do not put your fingers under the housing when adjusting the cutting height.
- Do not exceed cutting height adjustment limited location, or it will causing serious injury or death.

WARNING

If the engine has been running, the muffler will be hot and can severely burn you. Keep away from the hot muffler.

Adjust the cutting height as desired. Set all four wheels to the same height.

Note: To lower the mower, move the cutting height levers forward; to raise the mower, move them towards the rear. (Figure 7)

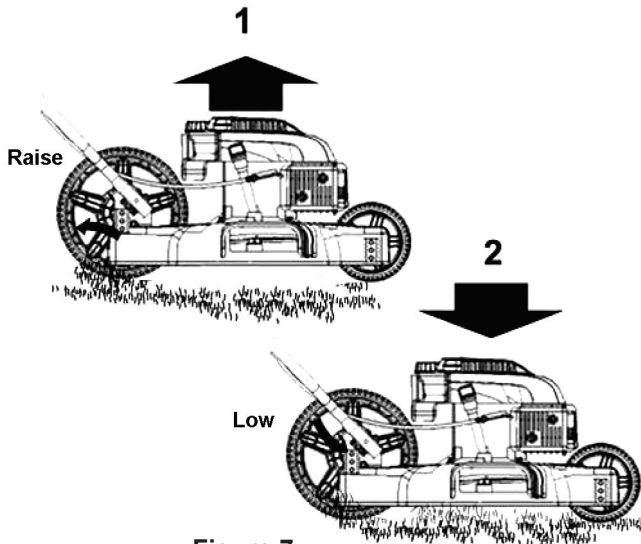


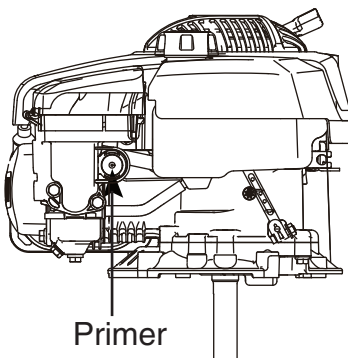
Figure 7

1. Raise the Mower
2. Lower the Mower

Note: Height adjustment. 1" - 3"

Starting the Engine

1. Press the primer three times



2. Hold the blade control bar (Figure 8) against the handle.

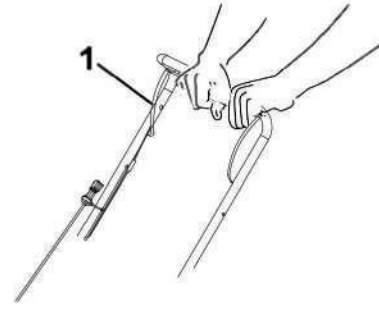


Figure 8

3. Hold blade control bar then pull the pull start to start the mower. (Figure 9)

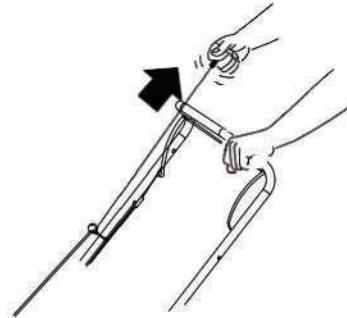


Figure 9

Note: If the mower does not start after several attempts, please contact your authorized service center.

Stopping the Engine

To stop the engine, release the blade control bar (Figure 10)

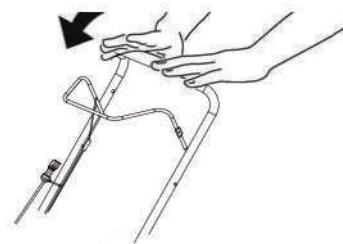


Figure 10

Important: When you release the blade control bar, both the engine and the blade should stop within 3 seconds. If they do not stop properly, stop using your mower immediately and contact an authorized service center.

Mulching the Clippings

Your mower comes mulch ready. If you have a grass catcher please remove it before mulching.

Bagging the Clippings (Not Included)

Use the grass catcher when you want to collect grass and leaf clippings from the lawn.



WARNING

A worn grass catcher could allow small stones and other similar debris to be thrown in the operator's or bystander's direction and result in serious personal injury or death to the operator or bystanders.



WARNING

The blade is sharp. Contact with the blade can cause serious personal injury.

Stop the engine and wait for all moving parts to stop before leaving the operating position.

Operating Tips

General Mowing Tips

- Clear the area of sticks, stones, wire, branches, and other debris that the blade may hit.
- Avoid striking solid objects with the blade. Never deliberately mow over an object.
- If the mower strikes an object or starts to vibrate, immediately stop the engine, disconnect the spark plug and examine the mower for damage.
- Replace the blade when necessary with an AVVIX replacement blade.

Cutting Grass

- Cut only a third of the grass blade at a time. Do not cut below the 1.75 inch setting unless the grass is sparse or it is late in the fall when grass growth begins to slow down.
- When cutting grass over 6 inches tall, mow at the highest cutting height setting and walk slower. Then adjust your adjustment height lever to the desired height and mow again. If the grass is too tall it will be more difficult to navigate and could get stuck and cause the engine to stall.



WARNING

Wet grass or leaves can cause serious injury if you slip and contact the blade. Mow only in dry conditions.

- Alternate the mowing direction. This helps disperse the clippings over the lawn for even fertilization.
- If the finished lawn is unsatisfactory, try one or more of the following.
 - Replace the blade or have it sharpened.
 - Walk at a slower pace while mowing.
 - Raise the cutting height on your mower.
 - Cut the grass more frequently.
 - Overlap cutting swaths instead of cutting a full swath with each pass.
 - Set the cutting height on the front wheel one notch lower than the rear wheels. For example, set the front wheels at 2 inches and the rear at 2-1/2 inches

High Altitude Operation

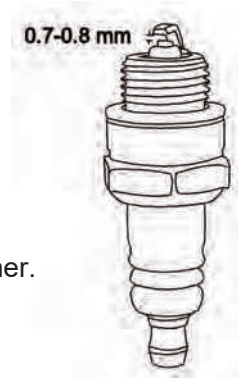
Most small engines with carburetors are designed to work efficiently from sea level to around 5,000 feet elevation. As altitude increases, the air becomes thinner with less available oxygen. This causes the air/fuel mixture to become overly rich which can cause reduced performance, spark plug fouling, difficult starting and increased emissions.

A competent small engine shop can modify the carburetor by installing different 'jets' that are designed for high altitude operation. If your lawn mower is typically operated at an altitude of 5,000 feet or above, you should ask your dealer to 're-jet' the carburetor and calibrate the air fuel mixture to maximize performance at the altitude where it is to be used. You will realize better overall performance, while reducing excess emissions that occur when the air/fuel mixture is too rich. This modification need only be done once and should last for the life of the mower.

Keep in mind that any engine, even with properly calibrated carburetor jets, will realize a decrease in horsepower of about 3.5% for every 1,000 feet (300 meter) increase in altitude, simply due to thinner air. But an engine with a properly jetted carburetor will always run cleaner and more efficiently at high altitude than an identical unit with standard jets.

Spark Plug Maintenance

1. Once the engine has cooled, remove the spark plug wire.
2. Remove the spark plug using a spark plug wrench.
3. Clean the spark plug with a wire brush (not supplied).
4. Using a feeler gauge set the gap to 0.75mm.
5. Install the spark plug carefully by hand, to avoid cross-threading.
6. After the spark plug is seated, tighten with the spark plug wrench to compress the washer.



Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Maintenance Service Interval	Maintenance Procedure
After the first 5 hours	<ul style="list-style-type: none"> • Change the engine oil.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Ensure that the engine stops within 3 seconds after releasing the blade control bar. • Clean grass clippings and dirt from under the mower.
Every 50 hours	<ul style="list-style-type: none"> • Replace the air filter replace it more frequently in dusty operating conditions.
Before storage	<ul style="list-style-type: none"> • Empty the fuel tank before repairs as directed and before annual storage.
Yearly	<ul style="list-style-type: none"> • Change the engine oil. • Replace the blade or have it sharpened (more frequently if the edge dulls quickly). • Refer to your Engine Operator's Manual for any additional yearly maintenance procedures.

Important: Refer to your Engine Operator's Manual for additional maintenance procedures.

How to contact us:

To order parts, receive warranty assistance, or other service inquiries, contact us at:



Customer Service

Online: www.midlandpowerinc.com

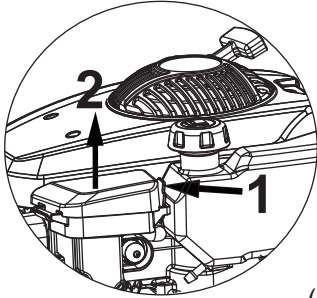
E-mail: support@midlandpowerinc.com

Toll Free: 1-877-528-3772

Replacing the Air Filter

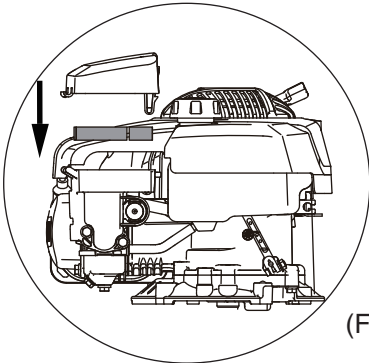
Service Interval: Every 50 Hours

1. Unlock the latch (1) and pull upward to open the air filter compartment (2). (Fig. 12)



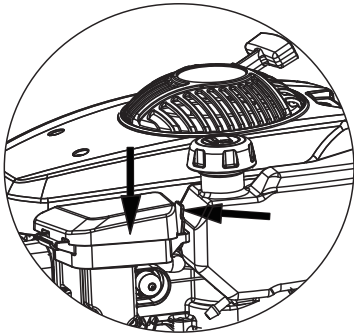
(Figure 12)

2. Replace the air filter element. (Figure 13)



(Figure 13)

3. Press down and lock the latch on the air filter compartment.



(Figure 14)

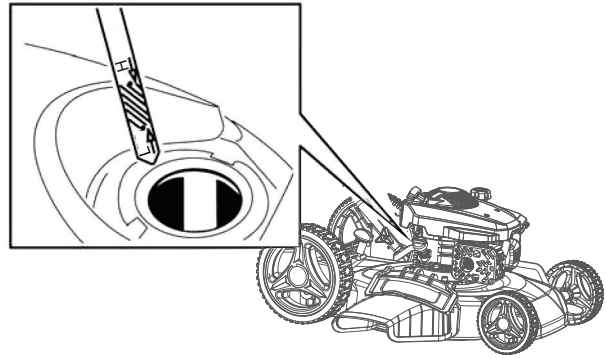
Changing the Engine Oil

Service Interval: After the first 5 hours. Yearly.

Change the engine oil after the first 5 operating hours change it yearly thereafter.

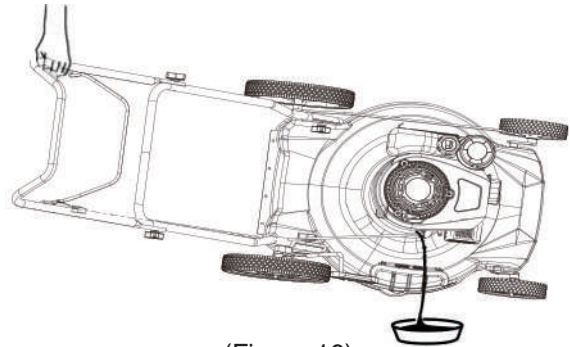
Run the engine a few minutes before changing the oil. Warm oil flows better and carries more contaminants.

1. Perform the Pre-Maintenance procedures. Refer to preparing for maintenance.
2. Remove the dipstick. (Figure 15)



(Figure 15)

3. Tip the mower onto its side, with the dipstick down, to drain the used oil out through the oil fill tube. (Figure 16)



(Figure 16)

4. Slowly pour oil into the oil deposit until the oil level reaches the full line on the dipstick. (Figure 15) Do not overfill. Max fill 15.8oz (0.45 L), type SAE 10w30 detergent oil with an API service of SF, SG, SH, SJ, SL, or higher.)

Note: If you overfill the engine, pour some oil out of it as directed in Changing the Oil.

5. Install the dipstick securely.

6. Dispose of the used oil properly at a local recycling center.

Replacing the Blade

Service Interval: Yearly

Important: You will need a torque wrench to install the blade properly. If you do not have a torque wrench or are uncomfortable performing this procedure, contact an Authorized Service Center.

Examine the blade whenever the mower runs out of fuel. If the blade is damaged or cracked, replace it immediately. If the blade edge is dull or nicked, have it sharpened or replace it.



WARNING

The blade is sharp. Contact with the blade can result in serious personal injury.

- Disconnect the spark plug **wire**.
- **Wear heavy gloves when servicing the blade.**

7. Install new blade with all mounting hardware; tighten blade bolt by turning clockwise.(Figure 16).

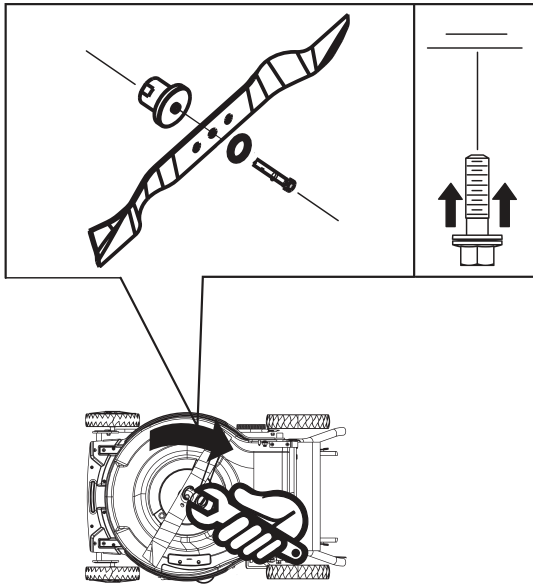


Figure 16

Important: Position the curved ends of the blade to point up toward the mower deck.

8. Use a torque wrench to tighten the blade bolt to 30-38 ft-lb (40-50 N-m).

Important: Correct blade hub bolt torque is very important. Use proper tools only!

Cleaning the Mower

Service Interval: Before each use or daily

WARNING

The mower may dislodge material from under the mower housing.

- Wear eye protection.
- Stay in the operating position (behind the handle).
- Do not allow bystanders in the area.
- Do not turn the lawn mower over, or fuel and oil will leak, causing a hazardous condition and possible malfunction of the lawn mower

1. With the engine running on a flat paved surface, spray a stream of water in front of the right rear wheel (Figure 17).

The water will splash into the path of the blade, cleaning out the clippings.

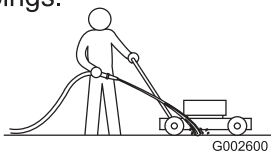


Figure1 7

2. When no more clippings come out, stop the water and move the mower to a dry area.
3. Run the engine for a few minutes to dry the housing to prevent.

Storage

Store the mower in a cool, clean, dry place.

Preparing the Mower for Storage

WARNING

Gasoline vapors can explode.

- Do not store the mower in an enclosure near an open flame.
- Allow the engine to cool before storing it.

4. Always add fuel atabilizer to the fuel as directed by the fuel stabilizer manufacturer.
5. Remove spark plug and spray a light fog of penetrating oil, such as WD-40 into the spark plug hole; Then pull the starter rope.....
6. Install the spark plug and tighten it with a wrench to 15 ft-lb (20 N-m).
7. Tighten all nuts, bolts, and screws.
8. Leave spark plug cable disconnected.

Folding the Handle

WARNING

Folding or unfolding the handle improperly can damage the cables, causing an unsafe operating condition.

- Do not damage the cables when folding or unfolding the handle.
- If a cable is damaged, contact an Authorized Service Dealer.

1. Loosen the handle knobs until you can move the handle freely .