

# POWERHORSE™

## 200cc GASOLINE LAWN MOWER

Owner's Manual



**WARNING:** Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item # 6651285

**READ & SAVE THESE INSTRUCTIONS**

Thank you very much for choosing a Powerhorse product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code (if applicable): \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Save the receipt, warranty, and this manual. It is important that you read the entire manual to become familiar with this product before you begin using it.

This product is designed for certain applications only. Northern Tool and Equipment is not responsible for issues arising from modification or improper use of this product such as an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions, please call **1-800-222-5381**.

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## Technical Specifications

Property	Specification
Cutting Width	21"
Cutting Height	1"- 3"
Wheels	8" Front, 10"Rear
Engine	Gasoline, 4-Stroke Air Cooled
Engine Displacement	200cc
Rated Speed	2800rpm
Full Tank Capacity	1.2L
Oil Tank Capacity	0.4L

## Important Safety Information

### **⚠️WARNING**

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this equipment. Always be aware of the environment and ensure that the equipment is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the product until they have read this manual and have developed understanding of how it works.
- Do not modify this product in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right equipment for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. This product will be safer and do a better job at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.

### **⚠️WARNING**

#### **PROP 65**

- This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).
- Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:
  - - lead from lead-based paints,
  - - crystalline silica from bricks and cement and other masonry products, and
  - - arsenic and chromium from chemically treated lumber.
- Your risk from these exposures varies depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.
- Handling power cords on corded products may expose you to lead, a chemical known to the state of California to cause cancer and birth defects or other reproductive harm. Wash your hands after handling.

### **⚠️WARNING**

#### **WORK AREA SAFETY**

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well-lit. Cluttered, wet, or dark work areas can result in injury. Using the product in confined work areas may put you dangerously close to cutting tools and rotating parts.

- Do not use the product where there is a risk of causing a fire or an explosion, e.g., in the presence of flammable liquids, gases, or dust. The product can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the product to come into contact with an electrical source. The equipment is not insulated, and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the equipment. Do not allow children to handle the product.
- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury and/or property damage if contacted.

## **⚠WARNING**

### **PERSONAL SAFETY**

- Stay alert, watch what you are doing, and use common sense when operating the equipment. Do not use the equipment while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the equipment may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the equipment often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Always keep proper footing and balance.

## **⚠CAUTION**

### **PRODUCT USE AND CARE**

- Do not force the product. Products are safer and do a better job when used in the manner for which they are designed. Plan your work and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.

- Store the product when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the equipment for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your product. Accessories that may be suitable for one product may create a risk of injury when used with another equipment. Never use an accessory that has a lower operating speed or operating pressure than the equipment itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.
- Do not leave any equipment running unattended.

## Specific Operation Warnings

### **⚠WARNING**

- Read this operator's manual carefully in its entirety before attempting to assemble this machine. Read, understand, and follow all instructions on the machine and in the manual(s) before operation. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
- Be completely familiar with the controls and the proper use of this machine before operating it.
- This machine is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times. This machine has been designed to perform one job: to cut vegetation and grass. Do not use it for any other purpose.
- Never allow children under 14 years of age to operate this machine. Children 14 and over should read and understand the instructions and safe operation practices in this manual and on the machine and should be trained and supervised by an adult.
- Only responsible individuals who are familiar with these rules of safe operation should be allowed to use this machine.
- Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones, toys and other foreign objects, which could be tripped over or picked up and thrown by the mower. Thrown objects can cause serious personal injury.
- To help avoid mower blade contact or a thrown object injury, stay in operator zone behind handles and keep children, bystanders, helpers and pets at least 75 feet from mower while it is in operation. Stop machine if anyone enters area.
- Keep children out of the mowing area and under watchful care of a responsible adult other than the operator.
- Be alert and turn mower off if a child enters the area.
- Before and while moving backwards, look behind and down for small children.
- Use extreme care when approaching blind corners, doorways, shrubs, trees, or other objects that may obscure your vision of a child who may run into the mower.
- Keep children away from hot or running engines. They can suffer burns from a hot muffler.
- Never allow children under 14 years of age to operate this machine. Children 14 and over should read and understand the instructions and safe operation practices in this manual and on the machine and be trained and supervised by an adult.

- Always wear safety glasses or safety goggles during operation and while performing an adjustment or repair to protect your eyes. Thrown objects which ricochet can cause serious injury to the eyes.
- Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Shirts and pants that cover the arms and legs and steel-toed shoes are recommended. Never operate this machine in bare feet, sandals, slippery or lightweight (e.g. canvas) shoes.
- Do not put hands or feet near or under rotating parts. Always keep clear of discharge area as the rotating blade can cause injury.
- Never operate the mower without proper shields, guards, control lever or other safety protective devices in place and working.
- Never operate the mower with damaged safety devices. Failure to do so, can result in personal injury.
- Many injuries occur because of the string mower being pulled over the foot during a fall caused by slipping or tripping. Do not hold on to the mower if you are falling; release the handle immediately.
- Never pull the mower back toward you while you are walking. If you must back the mower away from a wall or obstruction first look down and behind to avoid tripping and then follow these steps:
  - a. Step back from mower to fully extend your arms.
  - b. Be sure you are well balanced with sure footing.
  - c. Pull the mower back slowly, no more than halfway toward you.
  - d. Repeat these steps as needed.
- Do not operate the mower while under the influence of alcohol or drugs.
- Do not engage the self-propelled mechanism on machines so equipped while starting engine.
- The control lever is a safety device. Never attempt to bypass its operation. Doing so makes the safety device inoperative and may result in personal injury through contact with the rotating blade. The control lever must operate easily in both directions and automatically return to the disengaged position when released.
- Never operate the mower in wet grass.
- Always be sure of your footing. A slip and fall can cause serious personal injury. If you feel you are losing your footing, release the control lever immediately and the blade will stop rotating within three seconds.
- Operate only in daylight or good artificial light. Walk, never run.
- Stop the blade when crossing gravel drives, walks or roads.
- If the equipment should start to vibrate abnormally, stop the engine, and check immediately for the cause. Vibration is generally a warning of trouble.
- Shut the engine off and wait until the blade comes to a complete stop before cleaning the discharge area. The blade continues to rotate for a few seconds after the control lever is released. Never place any part of the body in the blade area until you are sure the mower has stopped rotating.
- Never operate mower without proper trail shield, discharge cover, control lever or other safety protective devices in place and working. Never operate mower with damaged safety devices. Failure to do so can result in personal injury.
- Muffler and engine become hot and can cause a burn. Do not touch.
- Only use parts and accessories made for this machine by the manufacturer. Failure to do so can result in personal injury.

- When starting engine, pull cord slowly until resistance is felt, then pull rapidly. Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go. Broken bones, fractures, bruises or sprains could result.
- If situations occur which are not covered in this manual, use care and good judgement. Contact Customer Support for assistance or the name of the nearest service dealer.

## 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. Serious personal injury can occur when gasoline is spilled on yourself or your clothes, which can ignite. Wash your skin and change clothes immediately.
- Use only an approved gasoline container.
- 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 gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer 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.
- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- Never fuel machine indoors because flammable vapors will accumulate in the area.
- Never remove gas cap or add fuel while engine is hot or running. Allow engine to cool at least two minutes before refueling.
- Never over fill fuel tank. Fill tank to no more than 1 inch below bottom of filler neck to provide for fuel expansion.
- Replace gasoline cap and tighten securely.
- If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting engine.
- Never store the machine or fuel container near an open flame, spark, or pilot light as on a water heater, space heater, furnace, clothes dryer or other gas appliances.
- To reduce fire hazard, 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 at least 5 minutes before storing.

### General Service:

- Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
- Before cleaning, repairing, or inspecting, make certain the blade and all moving parts have stopped. Disconnect the spark plug wire and ground against the engine to prevent unintended starting.
- Check the blade and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect blade for damage. Replace with the original equipment manufacturer's (O.E.M.) parts only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
- Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly.

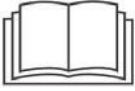








- After striking a foreign object, stop the engine, disconnect the spark plug wire and ground against the engine. Thoroughly inspect the mower for any damage. Repair the damage before starting and operating the mower.
- Mower components, guards and shields are subject to wear and damage which could expose moving parts or allow objects to be thrown. For safety protection, frequently check components and replace immediately with original equipment manufacturers (O.E.M.) parts only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
- Do not change the engine's governor setting or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
- Check fuel line, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.
- Do not crank engine with spark plug removed.
- Maintain or replace safety and instruction labels, as necessary.
- Observe proper disposal laws and regulations. Improper disposal of fluids and materials can harm the environment.

#### ⚠WARNING

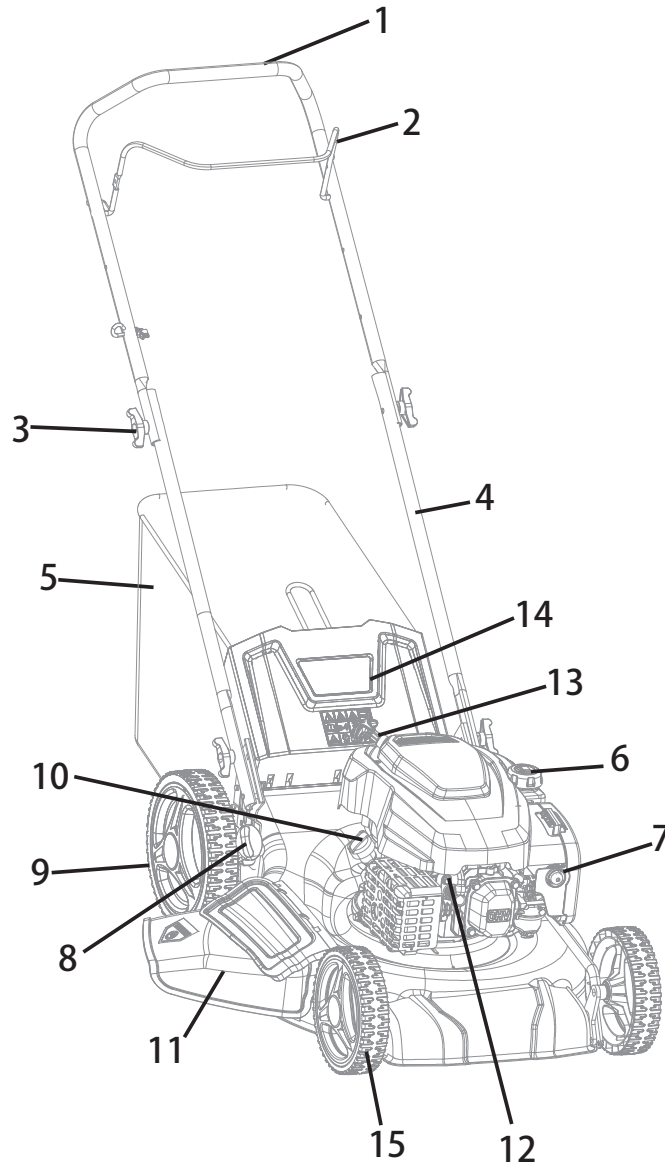
- To avoid serious injury or death, do not modify engine in any way. Tampering with the governor setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.
- This machine is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrestor meeting applicable local or state laws (if any).

## Safety Symbols

This page depicts and describes safety symbols that may appear on this product. Read, understand, and follow all instructions on the machine before attempting to assemble and operate.

Symbol	Description
	<b>READ THE OPERATOR'S MANUAL(S)</b> Read, understand, and follow all instructions in the manual(s) before attempting to assemble and operate
	<b>EYE PROTECTION</b> Always wear safety glasses or safety goggles when operating this machine.
	<b>DANGER — BYSTANDERS</b> Do not trim when children or others are around.
	<b>DANGER — HAND/ FOOT CUT</b> Keep hands and feet away from rotating parts.
	<b>DANGER — THROWN DEBRIS</b> Remove objects that can be thrown by the machine in any direction. Wear safety glasses.
	<b>DANGER — SLOPES</b> Use extra caution on slopes. Do not trim on slopes greater than 15°.
	<b>WARNING—GASOLINE IS FLAMMABLE</b> Allow the engine to cool at least two minutes before refueling.
	<b>WARNING— CARBON MONOXIDE</b> Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
	<b>WARNING— HOT SURFACE</b> Engine parts, especially the muffler, become extremely hot during operation. Allow engine and muffler to cool before touching.

## Main Parts of Product



- |                            |                          |
|----------------------------|--------------------------|
| 1. softgrip                | 9. Rear wheel            |
| 2. Brake lever/stop lever  | 10. Engine oil cap       |
| 3. Quick lock handle       | 11. Side discharge chute |
| 4. Lower handle            | 12. Spark plug boot      |
| 5. Grass box               | 13. Starter handle       |
| 6. Fuel tank cap           | 14. Rear discharge cover |
| 7. Primer                  | 15. Front wheel          |
| 8. Height adjusting handle |                          |

## Assembly Instructions

### Assembling the handle(See Figure 1-2)

1. Fasten the lower handle to the device by using two bolts and two small knobs on each side .
2. Unfold the upper handle and fix it to lower handle by using the big knobs and the bolts on each side

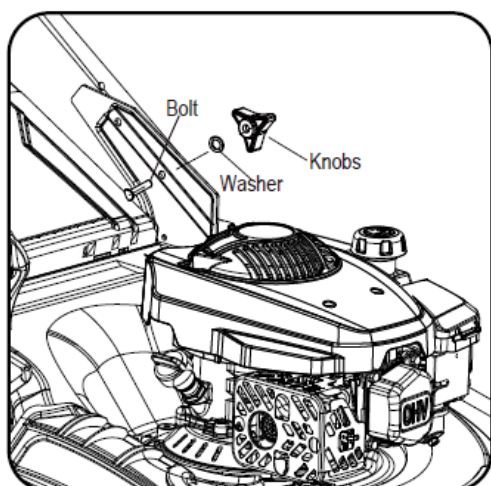


Figure 1

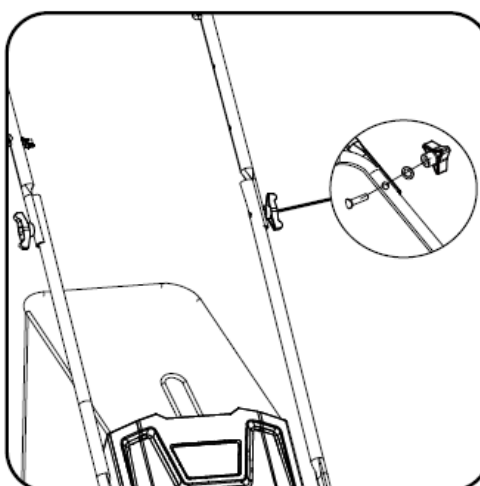


Figure 2

### Fasten the connection cord (See Figure 3)

Fasten the connection cord to the handle with the cord clip .(supplied)

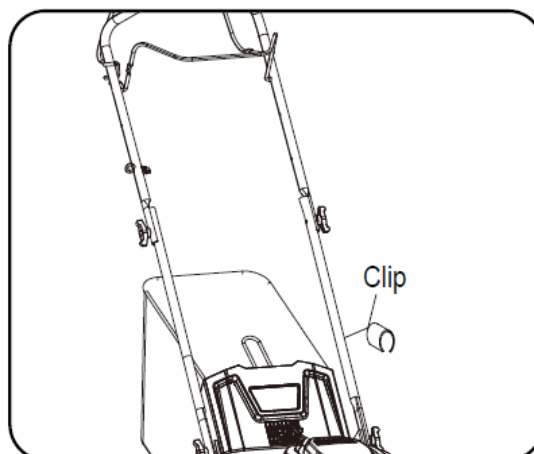


Figure 3

### Assembling the grass bag(See Figure 4)

1. Clip the plastic clips over the metal frame. Make sure that these clips are fully secured to the metal frame.

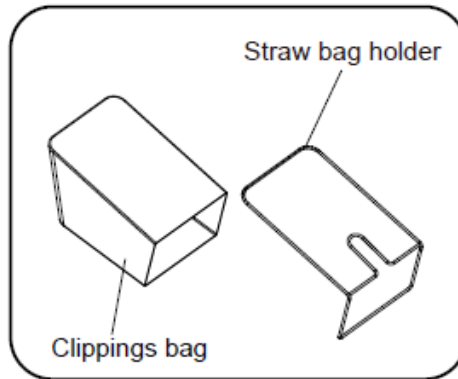


Figure 4

### Assembling the grass bag onto the mower(See Figure 5)

1. Lift the rear discharge cover with one hand and hook in the grass bag .
2. Release the rear discharge cover to secure the grass bag in position

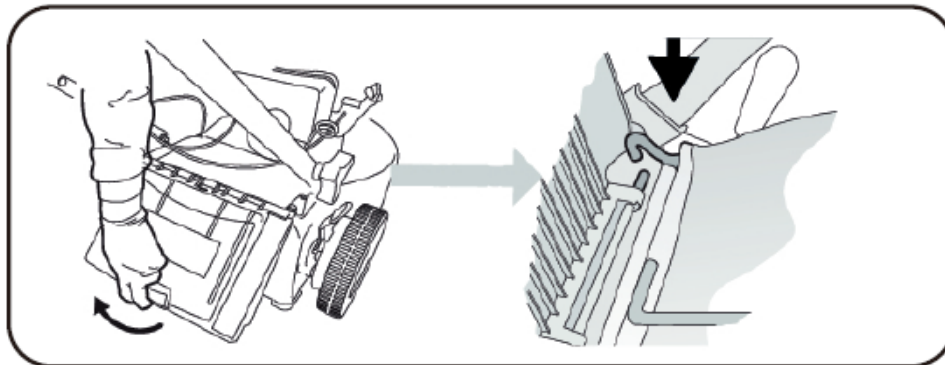


Figure 5

### Assembling the mulching plug(See Figure 6)

1. Remove the grass bag
2. Push the plastic mulching plug into the discharge chute until it is locked in place.
3. Then release the flap, it will close back to cover the mulching plug.

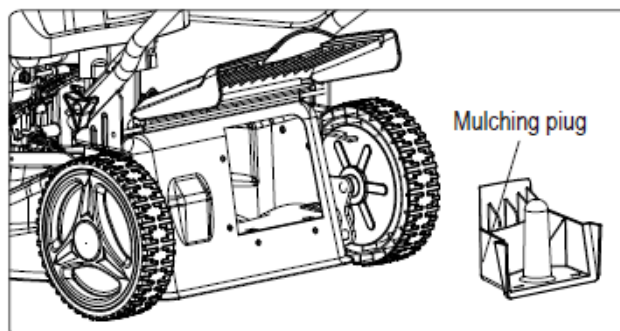


Figure 6

## Assembling the side discharge chute(See Figure 7)

1. According to the pictures below, lift the side discharge cover with one hand and hook in the side discharge chute with the other hand.
2. Release the side discharge cover to secure the chute in position

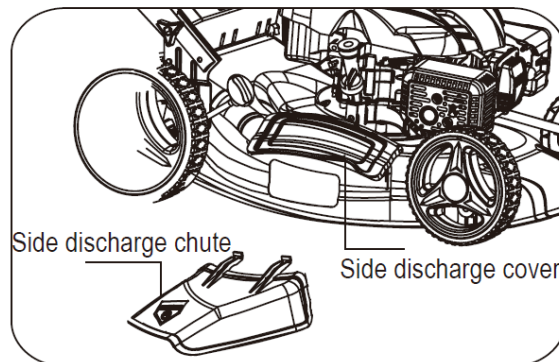


Figure 7

## Checking the engine oil level and filling with engine oil(See Figure 8-9)

### ⚠ CAUTION

The following procedures and adjustments must be performed before the engine started. Do not attempt to make any of these adjustments while the engine is running. To prevent engine damage the engine is shipped without oil or gasoline. The engine must be filled with the correct grade of oil and gasoline before starting the engine.

**NOTE:** Running the engine with a low oil level will cause engine damage. It is recommend that high detergent, premium quality 4-stroke engine oil used. Using non-detergent oil can shorten the engine's service life and using 2-stroke oil will damage the engine

### ⚠ CAUTION

Always use high quality detergent oil classified SAE30 oil (or equivalent e. g SAE 10W/30, often termed as 4 Stroke lawn mower oil). Never use additives with recommended oil. To prolong the life of your engine it is important that the oilis changed after the first 5 hours of use.

**NOTE:** To Check the engine oil level ,stop engine and place the mower on a level surface.

1. Remove the oil filler dipstick and wipe oil from it with a clean cloth.
2. Insert the dipstick into the oil filler neck, but do not turn it in.
3. Then remove the dipstick and check the oil level . the oil level must be between the Min and Max marks on the dipstick. If near the lower level ,fill to upper lever with the recommended oil((SAE30 or equivalent). Do not overfill. Wipe away any spilt oil.)
4. Align the ribs of the cap with the groove of the filler neck . then rotate 1/4 turn to secure it.

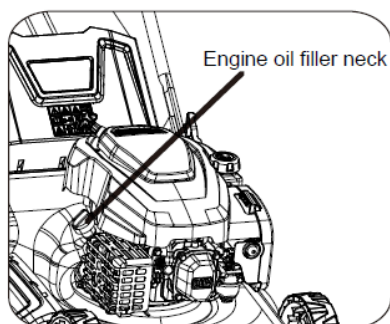


Figure 8

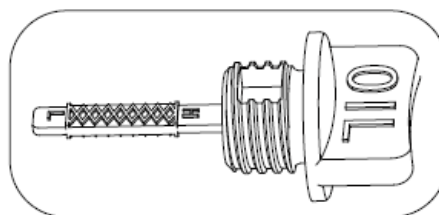


Figure 9

## Filling engine with gasoline (See Figure 10)

### ⚠ CAUTION

- Always use clean, fresh unleaded gasoline. Purchase fuel in quantities that can be used within 30 days. Never mix oil with gasoline.
- Do not fill into the base of neck to allow for fuel expansion. Do not overfill the fuel tank.
- Gasoline is highly flammable and extreme precaution must be taken when handling or working with it. Keep out of reach of children.
- To prevent engine damage the engine is shipped without oil or gasoline. The engine must be filled with the correct grade of oil and gasoline before starting the engine.

### ⚠ WARNING

- Refuel in a well-ventilated area with the engine stopped. Do not smoke or allow flame or sparks in the area where the engine is refueled or where gasoline is stored.
- Avoid repeated or prolonged contact with skin or inhalation of vapour.

1. Clean the area around the fuel filler cap before removing the cap. Remove the warning tag, check the fuel level.
2. Refill the tank if the fuel level is low.
3. Refuel carefully to avoid overfilling or spilling fuel. There should be no fuel in the filler neck.
4. Clean up any overflow or splashes of gasoline before starting the engine.
5. Tighten the filler cap after filling, finger tight.

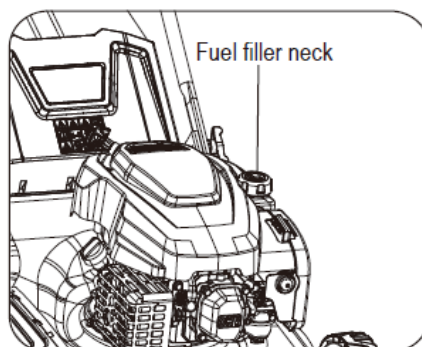


Figure 10

## Setting the cutting height(See Figure 11)

1. Adjust the cutting height only when the engine is switch off the spark plug boot has been pulled.
2. The cutting height is centrally adjusted with cutting height adjusting handle . Different cutting heights can be selected.

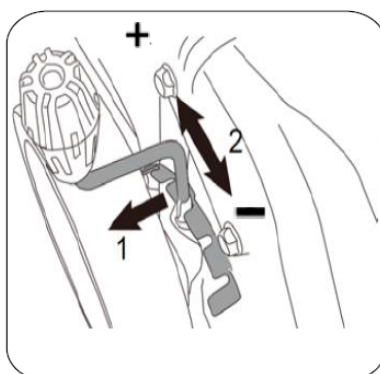


Figure 11

## Before Each Use

- Make sure all safety guards are in place and all nuts and bolts are secure.
- Check oil level in engine crankcase. Add oil if necessary.
- Check the fuel supply. Fill the fuel tank no closer than 1 inch from top of tank to provide space for expansion.
- Be sure the spark plug wire is attached and the spark plug is tightened securely.
- Examine underneath and around engine for signs of oil or fuel leaks.
- Inspect fuel hoses for tightness and fuel seepage. Look for signs of engine damage.
- Remove excessive debris from muffler area and recoil starter.

### CAUTION

Please do not start your mower until you have read the manual that came with your tiller, and the sections in this manual mower controls and safety. If you have read these, follow the steps below to start your mower. Always perform this pre-start checklist before starting the engine.

## Operating Instructions

### Start and stop the engine

#### **⚠ WARNING**

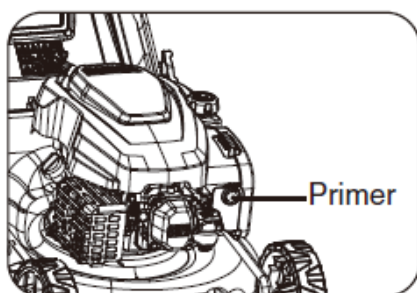
**The blade begins to rotate as soon as the engine is started.**

**NOTE :** Do not operate the machine in enclosed or poorly ventilated areas as the exhaust gas contains toxic substance. Keep hands , feet ,hair and clothing away from all the moving parts of the machine . the exhaust and other parts of the machine will become hot during use. Make sure that the blade is securely fastened before starting the engine.

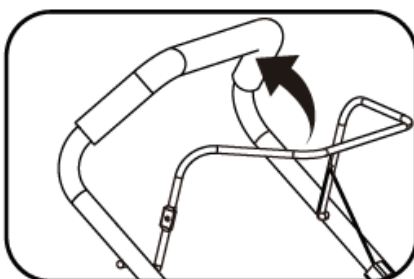
**NOTE :** to start the engine , make sure that the spark plug boot is located on the plug and the machine is filled with sufficient oil and gasoline.

#### **To start the engine(See Figure 12-14)**

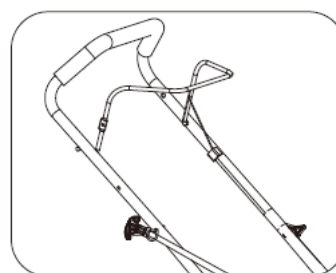
1. When starting a cold engine, press down the primer fully 3-5 times.(For lawnmower with throttle control need to put the throttle control lever on the START position before starting )
2. Stand behind the mower . Pull the engine start/stop lever toward upper handle With one hand . And Place the other hand On the starter handle.
3. Pull the starter handle out approx.. 10-15cm Until you feel a resistance and then start the engine with a sharp pull .
4. Once the engine is running, put the starter rope Into the rope guide .



**Figure 12**



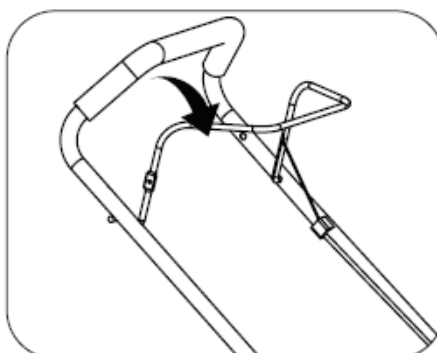
**Figure 13**



**Figure 14**

#### **To stop the engine(See Figure 15)**

Release the engine start/stop lever, it will return to its Initial position, the engine will automatically switches off.



**Figure 15**

## To clean a flooded engine

**NOTE:** if the engine won't start after you have operated the starter several times , the engine may be flood with excess fuel . Use following procedure to clear and start a flooded engine.

**NOTE:** Install the spark plug carefully by hand, to avoid cross-threading. After the plug is seated tighten 1/8 to 1/4 turn with socket spanner of spark plug to compress the washer.

1. Release the engine start/stop lever to stop engine.
2. Remove the spark plug, dry it, and then reinstall it.
3. Pull the engine start/stop lever toward upper handle.
4. Operate the starter as described above.

## Working advices

1. Walk, never run with the mower, be very careful when mowing uneven or rough ground.
2. Mow across slopes, never up and down.
3. Be careful when changing the direction of the mower on a slope.
4. Do not mow excessively steep slopes.
5. The best result will be achieved if the grass is dry. Wet grass will tend to clog the blade and the grass collection system.
6. Grass grows at different rates at different time of the year. Never use the lowest cutting height for the first cut of the season or in drought conditions.
7. Only about one thirds of the grass height should be cut.
8. When mowing with mulching, to ensure that the cut grass can be scattered efficiently, do not cut high or wet grass. When you have been cutting for several minutes, please stop the mower, and clean the blade and the deck.
9. Do not remove grass debris in the mower casing or on the blade by hand or with your feet. Instead use suitable tools such as a brush or broom.

## Emptying the grass bag

As soon as grass clippings start to trail the lawn mower, it is time to empty the grass bag.

**NOTE:** Before taking off the grass bag, switch off the engine and wait until the blade has come to a stop.

**NOTE:** If any grass residue is caught in the discharge chute, clean it using a brush .Do not remove grass debris in the mower casing or On the blade by hand or with your feet. Instead use suitable tools such as a brush or broom. To ensure that the cut grass can be collected into grass bag, the discharge opening and inside the mower casing must be cleared of any blockage.

1. To take off the grass bag, use one hand to lift up ejector flap and the other to grab onto the carry handle. The ejector flap automatically falls down after removing the grass bag and closes off the rear chute opening.
2. Empty the grass debris in the grass bag, and refit grass bag.

## HIGH ALTITUDE OPERATION

If operating equipment with engines regularly at altitudes over 5,000 feet, the carburetor's air-fuel mixture will be too rich and emissions may increase. On engines not built for the United States the carburetor can be adjusted to operate under this condition. The carburetor should be returned to its normal setting if regular operation is less than 5,000 feet. Contact your service center to modify the carburetor.

## After Each Use

Take the following steps to prepare your mower for storage.

1. Clean and lubricate the mower.
2. Store the mower in a dry, clean area. Do not store next to corrosive materials, such as fertilizer.
3. Using a light oil or silicone, coat the equipment, especially cables and all moving parts of your mower.
4. Clean the engine regularly with a cloth or brush. Keep the top of the engine clean to permit proper air circulation. Remove all grass, dirt and debris from muffler area.
5. Engines stored between 30 and 90 days need to be treated with a gasoline stabilizer such as STA-BIL® to prevent deterioration and gum from forming in fuel system or on essential carburetor parts.
6. Scrape and clean the underside of the machine with a suitable equipment. Do not spray with water.

**IMPORTANT:** Do not use a pressure washer or garden hose to clean the machine. These may cause damage to the engine. The use of water will result in shortened life and reduce serviceability.

## Maintenance

### General Recommendations

- Always observe safety rules when performing any maintenance.
- The warranty on this mower does not cover items that have been subjected to operator abuse or negligence. To receive full value from warranty, operator must maintain the mower as instructed here.
- Changing of engine-governed speed will void engine warranty.
- All adjustments should be checked at least once each season.
- Periodically check all fasteners and make sure these are tight.

### ⚠WARNING

Always stop engine, disconnect spark plug, and ground against engine before performing any type of maintenance on your machine.

### Engine

A list of key engine maintenance jobs required for good performance by the mower is given below.

#### **Maintain oil level. Always check oil before each use.**

- Remove the dipstick and wipe with a clean cloth.
- Insert the dipstick into the filler neck without screwing it in.
- Remove the dipstick and check the oil level. The oil level should be in between the MIN. and MAX. levels.
- If low, add oil slowly into the engine oil fill tube. Do not overfill. After adding oil wait one minute and then re-check the oil level.
- Replace and tighten the dipstick.

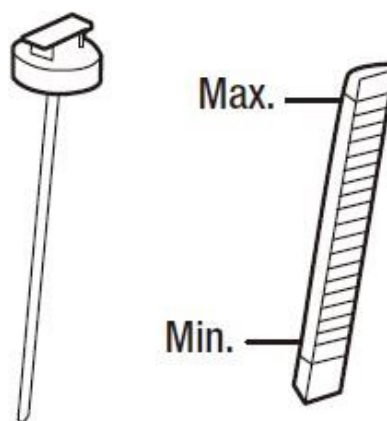


Figure 16

## HOW TO REMOVE OIL

### ⚠CAUTION

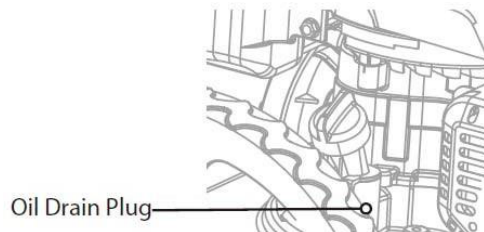
CAUTION: Used oil is a hazardous waste product and must be disposed of properly. Do not discard with household waste. Check with your local city or service center for safe disposal/recycling facilities

The oil must be drained from the oil drain plug. See Figure 7-1.

1. Remove the dipstick.
2. Put a container below the oil drain plug.
3. Remove the oil drain plug and allow oil to drain into the container.
4. Install the oil drain plug and tighten with a wrench.

### ⚠WARNING

When you drain the oil from the oil drain plug, the fuel tank must be empty, or fuel can leak out and result in fire or explosion. To empty the fuel tank, run the engine until it runs out of fuel.

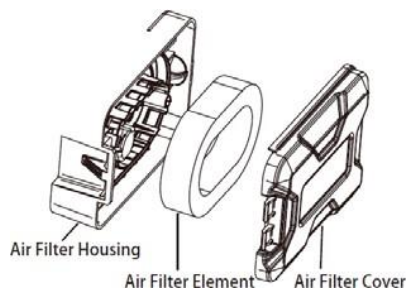


**Figure 17**

## AIR FILTER

Service the air filters every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air filter should be serviced.

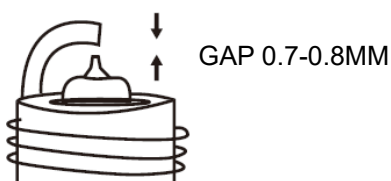
1. Remove the air cleaner outside cover. Be careful to prevent dirt and debris from falling into the air cleaner assembly.
2. Separate the air filter from the air filter housing.
3. Inspect the air filter. Clean the dirty air filter with warm water and mild soap. Allow air filter to dry thoroughly before re-installing.
4. Install the air filter assembly onto the carburetor and secure with the screw.



**Figure 18**

## SPARK PLUG

Clean spark plug and reset the gap once a season. Spark plug replacement is recommended at the start of each mowing season.



Check the gap with a wire gauge. If necessary, reset the gap. Install and tighten the spark plug.

### ⚠WARNING

Never tip the mower more than 90° in any direction and do not leave the mower tipped for any length of time. Oil can drain into the upper part of the engine causing a starting problem.

Maintain the product by adopting a program of conscientious repair and maintenance in accordance with the following recommended procedures. It is recommended that the general condition of any equipment be examined before it is used. Keep your equipment in good repair. Keep all cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control. Keep handles dry, clean, and free from oil and grease. Also refer to the engine manufacturer's instruction manual for additional information about engine maintenance. The following chart is based on a normal operation schedule.

Maintenance Interval	Maintenance Point
Daily before operating	Always check oil before each use
Every 25 hours	Service the air filters every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions.
Every 90 days	Clean sparkplug and reset the gap once a season. Spark plug replacement is recommended at the start of each mowing season.

### Changing the engine oil

Tilt the lawnmower towards the oil filler , have a container ready to catch the oil and remove the dipstick, once the oil has been emptied, replace the dipstick and wipe clean any spillages.

Refill with SAE30 oil or equivalent i. e SAE10W/30. When the dipstick is rested on the filler pipe (i. e . not turn in pace ), the oil level must be between the min and max marks on the dipstick.

See "Checking the engine oil level and filling with engine oil "

Start the engine and allow it to run briefly.

Stop the engine, wait one minute and check the oil level, top off if necessary .

Note ! Refer to engine manual for more information.

### Replacing the blade(See Figure 20)

For safety reasons you should only ever have your blade sharpened, balanced and mounted by an authorised service workshop. For optimum results it is recommended that the blade should be inspected once a year.

Install new blade with all mounting hardware; tighten blade bolt by turning clockwise.

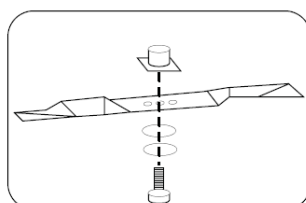


Figure 20

## Storing the Lawnmower for Short Periods

The lawnmower can be stored for short periods of time (less than 15 days) without performing any storage maintenance. Before placing the lawnmower into storage always carry out the following:

1. Allow the engine to fully cool.
2. Ensure the grass bag is empty.
3. Clean all debris from under the mower deck.
4. Store the lawnmower on flat and level surface with the mower upright.
5. Store in a safe place which is not accessible by children or people who are not familiar with operation.

## Storing the Lawnmower for Extended Periods

If the lawnmower is to be placed into storage for more than 15 days, storage maintenance must be performed on the lawnmower. If the following steps are not carried out, when you next operate the lawnmower it may not start correctly and may need to be serviced.

1. Empty the fuel tank with a gasoline suction pump if available.
2. Start the engine and let it run until any remaining gasoline has been used up.
3. Change the oil at the end of every season. To do so, remove the used engine oil from a warm engine and refill with fresh oil.
4. Clean the cooling fins of the cylinder and the housing
5. Be sure to clean the entire machine to protect the paint.
6. Store the machine in a well-ventilated place.

## Maintenance Schedule

Performing routine maintenance correctly on your lawnmower will ensure you get years of trouble free use.

Please keep this manual safe for future reference.

It is recommended that the following maintenance schedule is adhered to. This will ensure the lawn-mower operated correctly and is safe to use.

	12 hours of use	24 hours of use	36 hours of use
Air filter	Clean	Clean	Replace
Spark plug	Check	Clean	Replace
Engine oil	Check	Replace	Check

The Engine oil should be changed after the first 5 hours.

## Transport

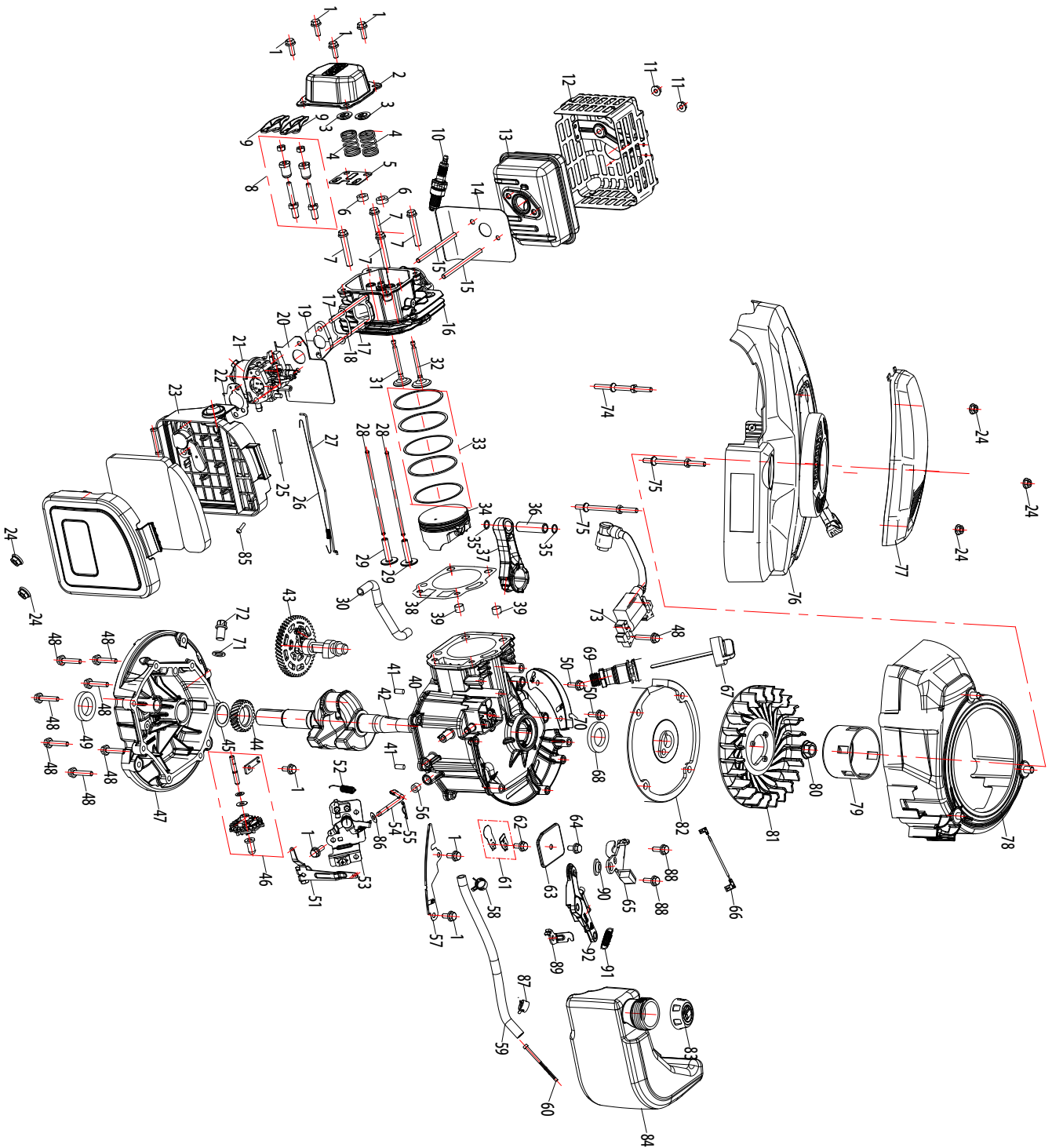
1. Empty the fuel tank
2. Always let the engine run until it has used up the remainder of gasoline in the tank.
3. Empty the engine oil from the warm engine.
4. Remove the spark plug boot from the spark plug.
5. Clean the cooling fins of the cylinder and the housing.
6. Use the original packaging to ship whenever possible.

## Troubleshooting

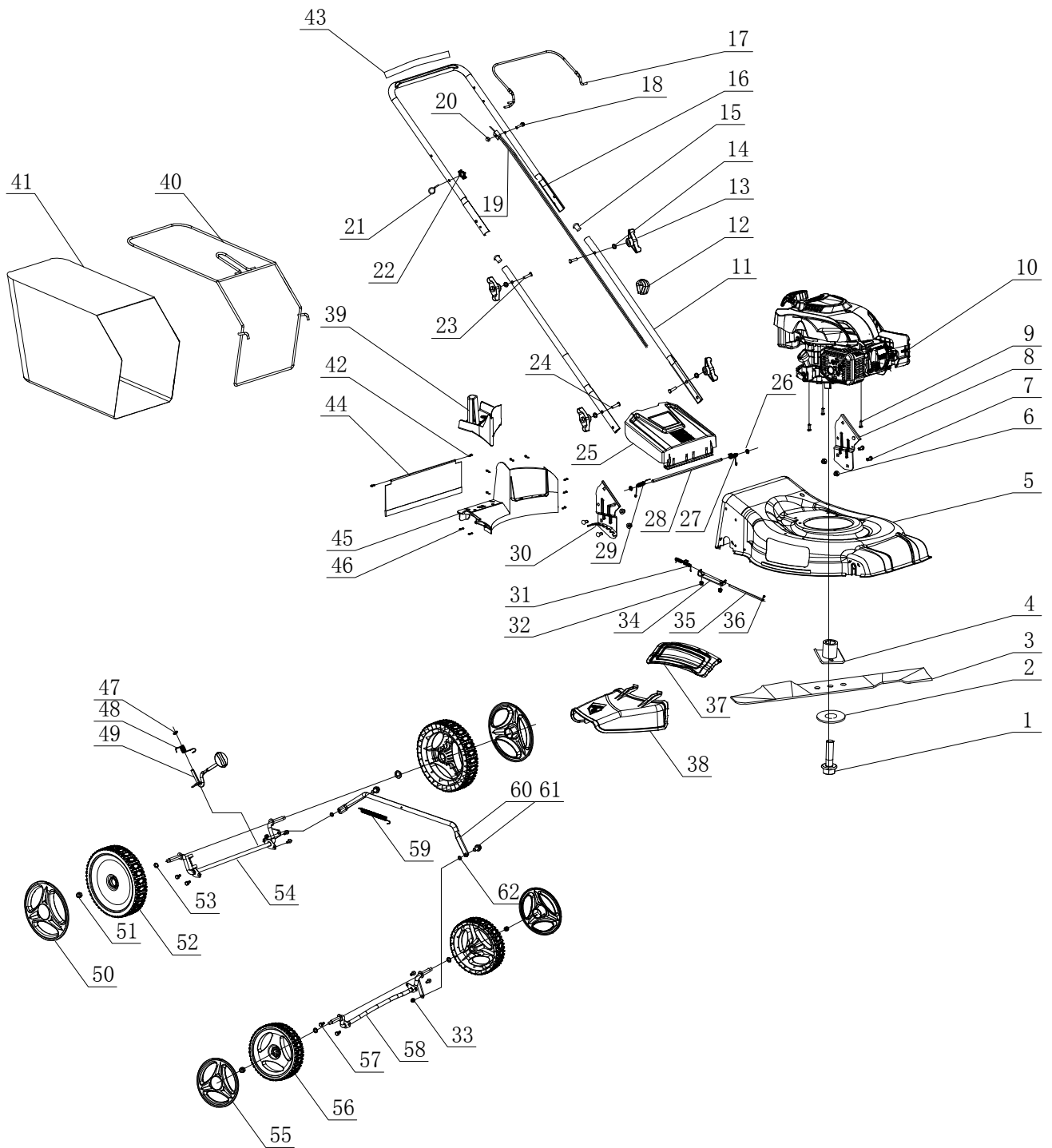
Use the table below to troubleshoot problems before contacting service personnel or your local dealer. If the problem continues after troubleshooting, call your local dealer for assistance.

Failure	Possible Cause	Corrective Action
Engine Fails to start	Control lever disengaged.	Engage control lever.
	Spark plug boot disconnected.	Connect wire to spark boot.
	Fuel tank empty or stale fuel.	Fill tank with clean, fresh gasoline.
	Engine not primed (if equipped with primer).	Prime engine as instructed in the operation section.
	Faulty spark plug.	Clean, adjust gap, or replace.
	Blocked fuel line.	Clean fuel line.
	Engine flooded.	Wait a few minutes to restart, but do not prime.
	Fuel valve (if equipped) closed.	Open fuel valve. See engine manual.
	Engine not choked (if equipped with choke).	Choke engine. See engine manual.
Engine runs erratic	Spark plug boot loose.	Connect and tighten spark plug boot.
	Blocked fuel line or stale fuel.	Clean fuel line; fill tank with clean, fresh gasoline.
	Vent in gas cap plugged.	Clear vent.
	Water or dirt in fuel system.	Drain fuel tank. Refill with fresh fuel.
	Dirty air cleaner.	Refer to engine manual.
	Unit running with CHOKE (if equipped) applied.	Push CHOKE knob in.
Engine overheats	Engine oil level low.	Fill crankcase with proper oil.
	Air flow restricted.	Clean area around and on top of engine.
Occasional skips (hesitates) at high speed	Spark plug gap too close.	Adjust gap to .030".
Idles poorly	Spark plug fouled, faulty, or gap too wide.	Reset gap to .030" or replace spark plug.
	Dirty air cleaner.	Refer to engine manual.

# Engine Parts Explosion



# Unit Parts Explosion



## Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following information will be required: item description, item model number, item serial number/item lot date code, and the replacement part reference number.
- The distributor reserves the rights to make design changes and improvements to product lines and manuals without notice.

## Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the Powerhorse product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of two year from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product or product component without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

### Limitations on the Warranty

This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

### Obligations of Purchaser

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

### Remedy Limits

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product or product component; or any indirect, incidental or consequential damages of any kind for any reason.

### Assumption of Risk

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

### Governing Law

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County; Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.

# POWER HORSE™

Distributed by:

Northern Tool & Equipment Company, Inc.

Burnsville, Minnesota 55306

[www.northerntool.com](http://www.northerntool.com)

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