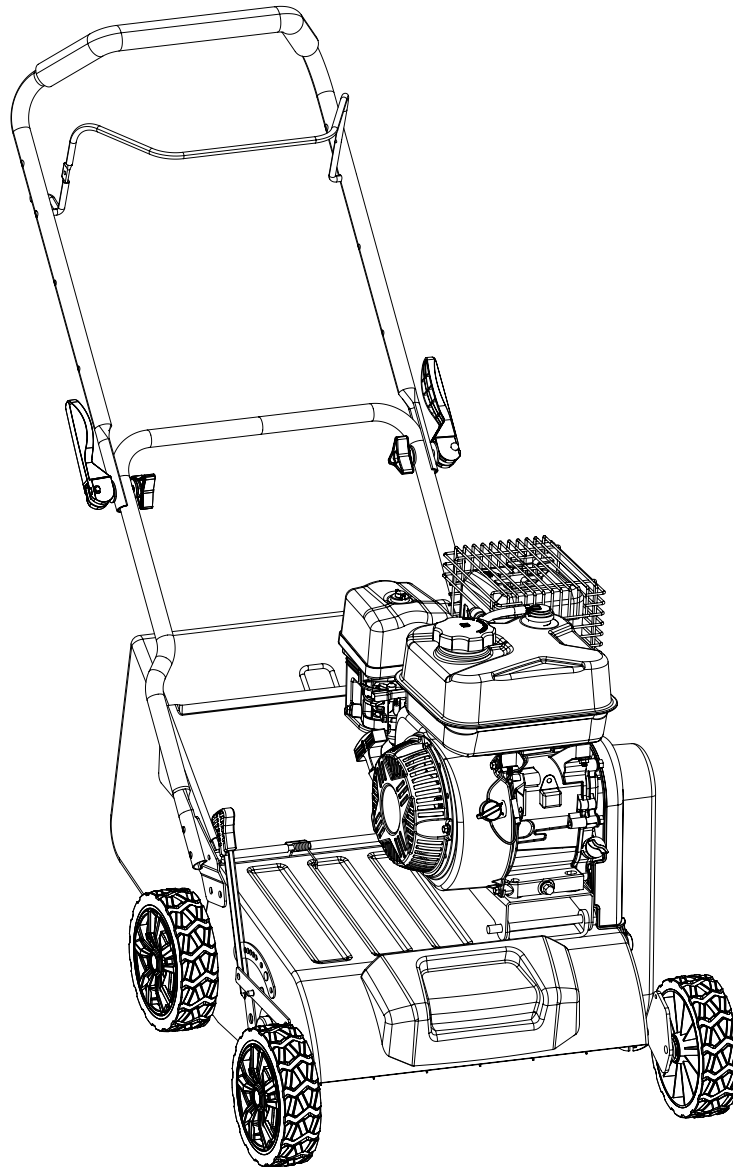


POWERHORSE™

212cc Petrol Scarifiers

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 # 6651736

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
Working width	400mm
Working speed	2800rpm
Wheels	7" Front 7"
Engine	Petrol, 4-Stroke Air Cooled
Engine Displacement	212cc
Engine rated speed	3600rpm
Full Tank Capacity	3.6L
Oil Tank Capacity	0.6L

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 tool. Always be aware of the environment and ensure that the tool 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 tool 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.
- 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 tool is not insulated, and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the tool. 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 tool. Do not use the tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool 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 tool 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.
- Remove keys or wrenches before connecting the tool to an air supply, power supply, or turning on the tool. A wrench or key that is left attached to a rotating part of the tool may cause personal injury.
- Secure the work with clamps or a vise instead of your hand when practical. This safety precaution allows for proper tool operation using both hands.

⚠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.
- Do not use a product with a malfunctioning switch. Any power tool that cannot be controlled with the power switch is dangerous and must be repaired by an authorized service representative before using.
- Disconnect the power/air supply from the product and place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.

- Store the product when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool 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 tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.
- Do not leave the tool 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 string trimmer. Thrown objects can cause serious personal injury.
- To help avoid trimmer line contact or a thrown object injury, stay in operator zone behind handles and keep children, bystanders, helpers and pets at least 75 feet from string trimmer while it is in operation. Stop machine if anyone enters area.
- Keep children out of the trimming area and under watchful care of a responsible adult other than the operator.
- Be alert and turn string trimmer 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 string trimmer.
- 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 spindle and trimmer lines can cause injury.
- Never operate the string trimmer without proper shields, guards, control lever or other safety protective devices in place and working.
- Never operate the string trimmer with damaged safety devices. Failure to do so, can result in personal injury.
- Many injuries occur because of the string trimmer being pulled over the foot during a fall caused by slipping or tripping. Do not hold on to the string trimmer if you are falling; release the handle immediately.
- Never pull the string trimmer back toward you while you are walking. If you must back the string trimmer away from a wall or obstruction first look down and behind to avoid tripping and then follow these steps:
 - a. Step back from string trimmer to fully extend your arms.
 - b. Be sure you are well balanced with sure footing.
 - c. Pull the string trimmer back slowly, no more than halfway toward you.
 - d. Repeat these steps as needed.
- Do not operate the string trimmer 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 trimmer line. The control lever must operate easily in both directions and automatically return to the disengaged position when released.
- Never operate the string trimmer 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 spindle will stop rotating within three seconds.
- Operate only in daylight or good artificial light. Walk, never run.
- Stop the spindle 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 spindle comes to
- a complete stop before cleaning the discharge area. The spindle continues to rotate for a few seconds after the control lever is released. Never place any part of the body in the trimmer line area until you are sure the spindle has stopped rotating.
- Never operate string trimmer without proper trail shield, discharge cover, control lever or other safety protective devices in place and working. Never operate string trimmer 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 spindle and all moving parts have stopped. Disconnect the spark plug wire and ground against the engine to prevent unintended starting.
- Check the spindle and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect spindle 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.

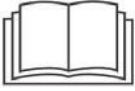








- After striking a foreign object, stop the engine, disconnect the spark plug wire and ground against the engine. Thoroughly inspect the string trimmer for any damage. Repair the damage before starting and operating the string trimmer.
- Trimmer components, guards and shields are subject to wear and 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

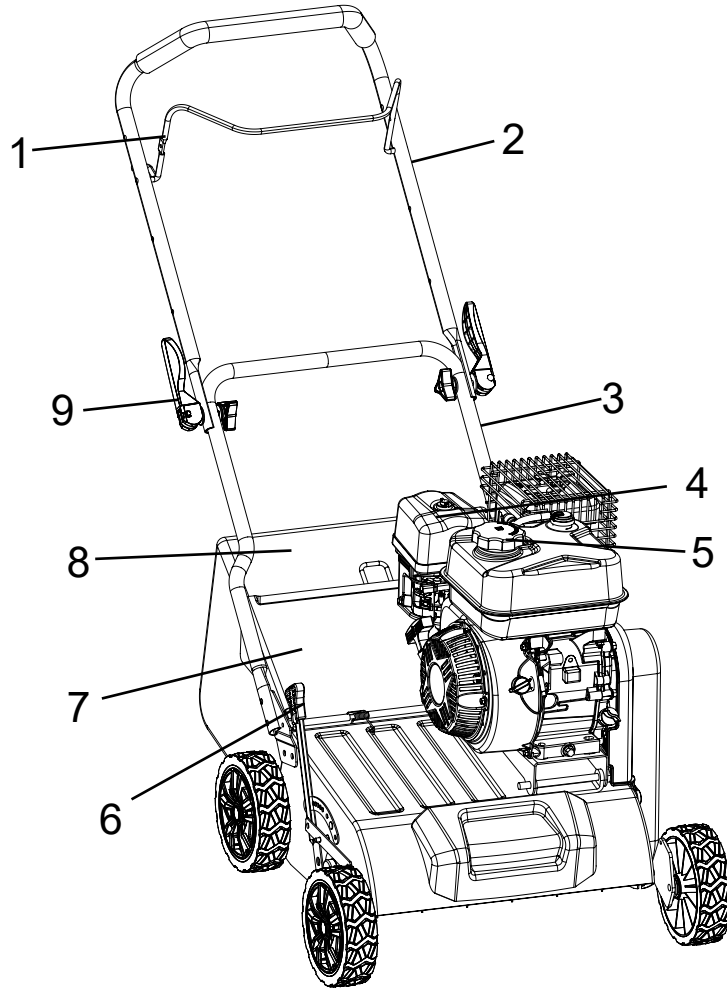
- To avoid serious injury or death, do not modify engine in any way. Tampering with the governor setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.
- This machine is equipped with an internal combustion engine and should 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

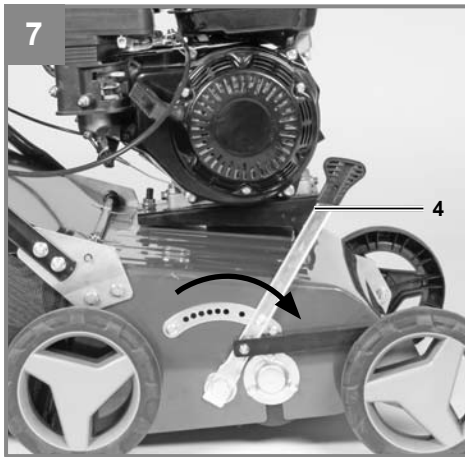
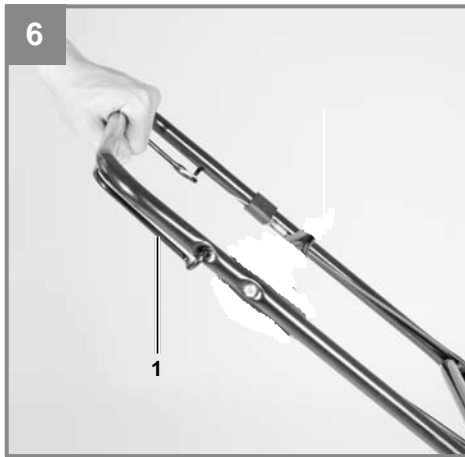
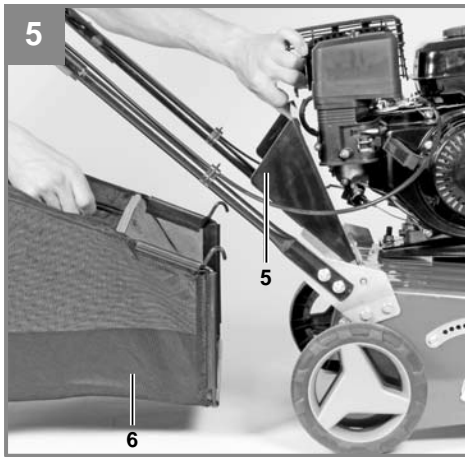
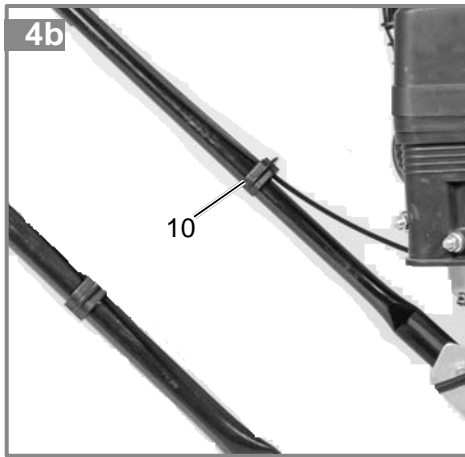
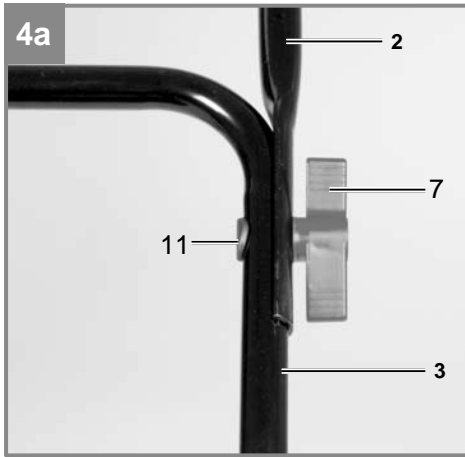
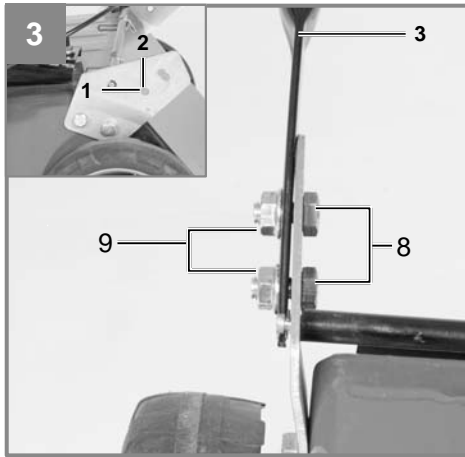
This page depicts and describes safety symbols that may appear on this product. Read, understand, and follow all instructions on the machine before attempting to assemble and operate.

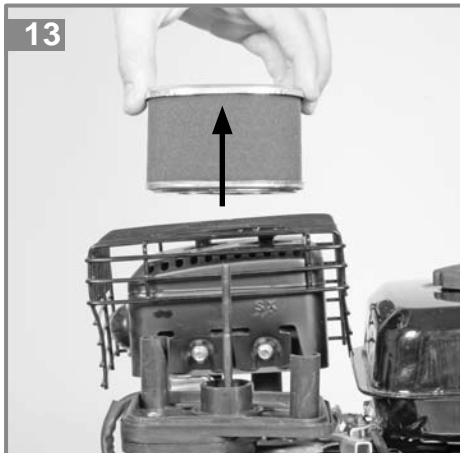
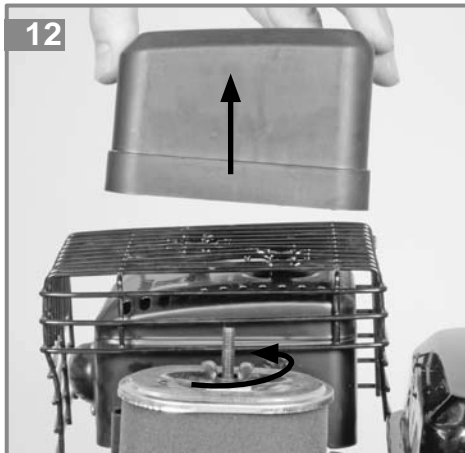
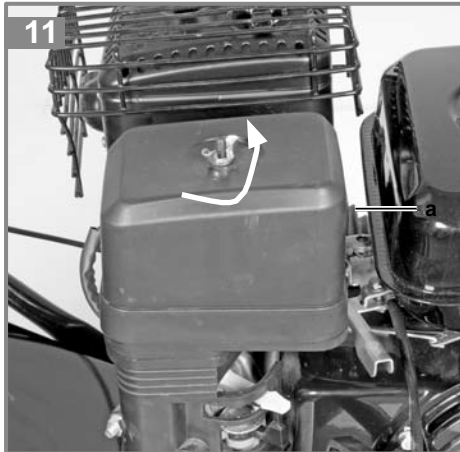
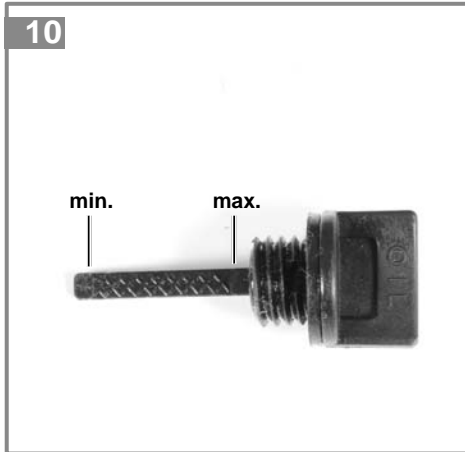
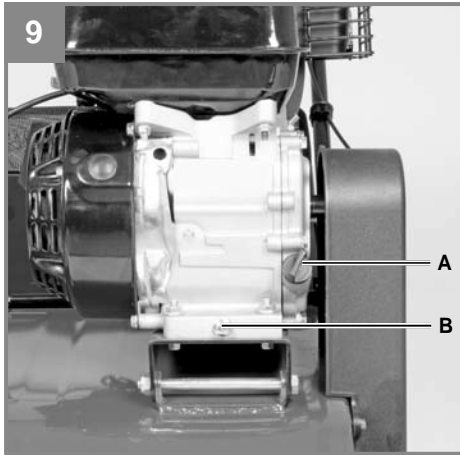
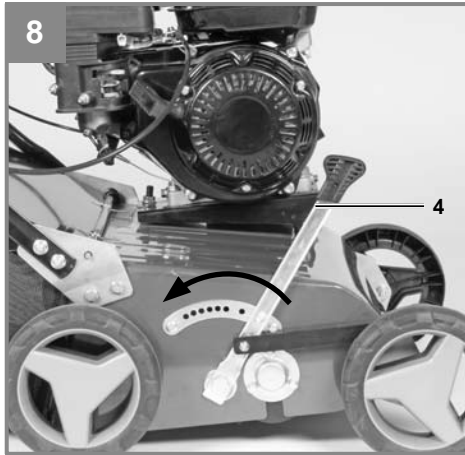
Symbol	Description
	READ THE OPERATOR'S MANUAL(S) Read, understand, and follow all instructions in the manual(s) before attempting to assemble and operate
	EYE PROTECTION Always wear safety glasses or safety goggles when operating this machine.
	DANGER — BYSTANDERS Do not trim when children or others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

Main Parts of Product



- 1.Engine start/stop lever–engine brake
- 2.Top push bar
- 3.Bottom push bar
- 4.Air filter
- 5.Fuel tank cap
- 6.Scarifying depth
- 7.Ejector flap
- 8.Grass basket
- 9.Quick lock handle





Assembly Instructions

Layout and items supplied

Items supplied

Please check that the article is complete as specified in the scope of delivery. If parts are missing, please contact our service center or the sales outlet where you made your purchase at the latest within 5 working days after purchasing the product and upon presentation of a valid bill of purchase. Also, refer to the warranty table in the service information at the end of the operating instructions.

Open the packaging and take out the equipment with care.

Remove the packaging material and any packaging and/or transportation braces (if available).

Check to see if all items are supplied.

Inspect the equipment and accessories for transport damage.

If possible, please keep the packaging until the end of the guarantee period.

Danger!

The equipment and packaging material are not toys. Do not let children play with plastic bags, foils or small parts. There is a danger of swallowing or suffocating!

Original operating instructions

Safety instructions

Proper use

The equipment is designed for scarifying lawned areas. The scarifying process is designed for rip-ping moss and weeds - complete with their roots. Out of the soil and for loosening the soil. As a result your lawn can absorb nutrients better and is cleaned. We recommend you to scarify you lawn in the spring (April) and autumn (October).

Important!

Due to the high risk of bodily injury to the user, the equipment may not be used to grind up branch or hedge clippings. Moreover, the equipment may not be used as a power cultivator to level out high areas such as mole hills. For safety reasons, the equipment may not be used as a drive unit for other work tools or tool sets of any kind.

The equipment is to be used only for its prescribed purpose. Any other use is deemed to be a case of misuse. The user / operator and not the manufacturer will be liable for any damage or injuries of any kind caused as a result of this.

Please note that our equipment has not been designed for use in commercial, trade or industrial applications. Our warranty will be voided if the machine is used in commercial, trade or industrial businesses or for equivalent purposes.

Before starting the equipment

The equipment is delivered unassembled. The grass basket and the complete push bar must be assembled and mounted before using the equipment. Follow the operating instructions step-by-step and use the pictures provided as a visual guide to easily assemble the equipment.

Fitting the top push bar holder (Fig. 4a)

Position the upper push bar (Fig. 4a / Item 2) such that its holes line up with the holes of the lower bar. Screw the tubes together, using the screws (Fig. 4a / Item 12) and nuts (Fig. 4a / Item 8) supplied. Use the supplied cable clips (Fig. 4b / Item 11) to secure the throttle cable and the engine Start / Stop cable to the lower push bar.

Fitting the debris box (Fig. 5)

Lift the ejector flap (Fig. 5 / Item 5) with one hand and attach the debris box (Fig. 5/Item 6) to the handle from above using your other hand.

Important: Before you attach the debris box you must ensure that the engine is switched off and the roller is not rotating.

Operating Instructions

Operation

Important!

The engine does not come with oil in it. Therefore, be sure to add oil before starting the engine. The oil level in the engine must be checked each time before carrying out any work.

Important!

When the engine brake lever is re-leased it must return to its initial position and the engine must stop. If this is not the case, do not use the equipment again.

Starting the equipment (Fig. 6 – 7)

In order to avoid any unintentional start-ups of the engine, it comes equipped with an engine brake (Fig. 6/Item 1) which must be pressed at all times whilst the device is in use, otherwise the engine will stop.

Open the petrol cock (Fig. 7 / Item B). Set the cock to “ON” for this purpose.

Set the choke lever (Fig. 7/Item C) to the “Choke” position.

Note: Normally the choke is not required to restart a warm engine.

Move the throttle lever (Fig. 1 / Item 7) to the center position.

Press the engine brake lever (Fig. 6 / Item 1) and pull the starter cable (Fig. 7 / Item A) forcefully until the engine starts.

Allow the engine to warm up briefly and then set the choke lever (Fig. 7 / Item C) to the “RUN” Position.

The speed of the cutter unit can be controlled using the throttle lever (Fig. 6 / Item 7) (tortoise = slow / rabbit = fast).

Important!

Always pull the starter cable slowly until you feel the initial resistance before you then pull it quickly to start the engine. Do not allow the starter cable to whip back of its own accord.

Important!

The scarifier roller begins to rotate as soon as the engine is started.

Important!

Never open the ejector flap when the motor is running. A rotating cutting unit can cause injuries.

Always fasten the ejector flap carefully. The flap flips back to the “Closed” position by the tension springs!

Always ensure that a safe distance (provided by the long handles) is maintained between the user and the housing. Be especially careful when scarifying and changing direction on slopes and inclines. Maintain a solid footing and wear sturdy, non-slip footwear and long trousers. Always scarify along the incline (not up and down).

For safety reasons, the scarifier may not be used to scarify inclines whose gradient exceeds 15 degrees.

Use special caution when backing up and pulling the scarifier (tripping hazard)!

Adjusting the working depth (Fig. 8)

To set the working depth, push the lever for setting the depth (Fig. 8 / Item 4) gently away from the device, set the required depth and then lock the lever back into position.

Stopping

When the work is finished, release the rotor engagement lever.

Maintenance

Important!

For transport move the lever for setting the depth to the highest position.

Tips for proper working

It is recommended that you overlap scarifying paths a little. Try to scarify in straight lines for a nice, clean look. In so doing, the aeration swaths should always overlap each other by a few centimeters in order to avoid bare strips.

As soon as grass clippings start to trail the scarifiers, it is time to empty the grass basket.

Important!

Before taking off the grass basket, switch off the motor and wait until the roller has come to a stop.

To remove the grass basket, lift up the ejector flap with one hand, while unhooking the basket with the other.

How frequently you should scarify your lawn is determined primarily by the speed at which the grass grows and the hardness of the soil.

Keep the underside of the equipment clean and remove soil and grass build-up. Deposits make it more difficult to start the aerator and decrease the quality of the scarifying.

Always scarify along inclines (not up and down). Switch off the motor before doing any checks on the roller.

Important!

The roller rotates for a few seconds after the motor is switched off. Never attempt to stop the roller. In the event that the rotating roller strikes an object, immediately switch off the equipment and wait for the roller to come to a complete stop. Then inspect the condition of the roller. Replace any parts that are damaged.

Cleaning, maintenance, storage, transport and ordering of spare parts

Important!

Never work on or touch conducting parts on the ignition unit with the engine running. Always pull the spark plug boot from the spark plug before starting any work of care or maintenance. Never perform any work on the machine while it is running. Any work not described in these Operating Instructions must be performed by an authorized service workshop only.

Cleaning

The scarifier should be cleaned thoroughly every time after it has been used. This particularly applies to its underside and the blades. To do so tip the scarifier slightly on to its side and remove the dirt.

Important. Before you tip the equipment, the petrol tank must be emptied to prevent petrol leaking out. Ideally you should use a conventional petrol extraction pump for this purpose.

Servicing

Checking the oil level

Set the equipment down on a flat, level surface.

Unscrew the oil dipstick by turning it anti-clockwise. The oil level must be as shown in Figure 10.

Important!

Never run the engine with no or too little oil. This can cause serious damage to the engine.

Changing the oil

- a) Change the engine oil every year before the start of the season (in addition to the information in the petrol service manual) when the engine is warm.
- b) Use only recommended engine oil.
- c) Place a suitable oil drip tray beneath the oil drain screw.
- d) Remove the oil filler screw (Fig. 9 / Item A).
- e) Undo the oil drain screw (Fig. 9 / Item B) and drain the oil into a suitable container.
- f) Close the drain screw again when all the used oil has been drained.
- g) Pour engine oil into the equipment as shown in Figure 10.
- h) Dispose of the used oil in accordance with applicable regulations.

Care and adjustment of the cables

Oil the cables at regular intervals and check that they move easily.

Servicing the air filter

Soiled air filters reduce the engine output by supply too little air to the carburetor. Regular checks are therefore essential. The air filter should be checked after every 50 hours of use and cleaned if necessary. If the air contains a lot of dust, the air filter should be checked more frequently.

- a) Remove the air filter as shown in Fig. 11-13.
- b) Clean the air filter only with compressed air or by tapping it.
- c) Assemble in reverse order

Important!

Never clean the air filter with petrol or inflammable solvents.

Servicing/Replacing the spark plug

Check the spark plug for dirt and grime after 10 hours of operation and if necessary clean it with a copper wire brush. Thereafter service the spark plug after every 50 hours of operation.

- a) Pull off the spark plug boot (Fig. 14) with a twist.
- b) Remove the spark plug using a spark plug wrench (Fig. 15).
- c) Assemble in reverse order.

Preparing the equipment for storage

Caution

Do not empty the petrol tank in enclosed areas, near fire or when smoking. Petrol fumes can cause explosions and fire.

- a) Empty the petrol tank with a petrol suction pump.
- b) Start the engine and let it run until any remaining petrol has been used up.
- c) 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.
- d) Remove the spark plug from the cylinder head. Fill the cylinder with approx. 20 ml of oil from an oil can. Slowly pull back the starter handle, which will bathe the cylinder wall with oil. Screw the spark plug back in.
- e) Clean the cooling fins of the cylinder and the housing.
- f) Be sure to clean the entire machine to protect the paint.
- g) Store the machine in a well-ventilated place.

Preparing the device for transport

- a) Drain the petrol tank using a petrol extraction pump.
- b) Always let the engine run until it has used up the remainder of petrol in the tank.
- c) Empty the engine oil from the warm engine.
- d) Remove the spark plug boot from the spark plug.
- e) Clean the cooling fins of the cylinder and the housing.
- f) Remove the push bars if necessary. Ensure that the cables are not kinked.

Ordering replacement parts

Please quote the following data when ordering replacement parts:

- a) Type of machine
- b) Article number of the machine
- c) Identification number of the machine
- d) Replacement part number of the part required For our latest prices and information please go to www.ducar.cn

Cleaning, maintenance and ordering of spare parts

The unit is supplied in packaging to prevent its being damaged in transit. This packaging is raw material and can therefore be reused or can be returned to the raw material system. The unit and its accessories are made of various types of material, such as metal and plastic. De- fective components must be disposed of as spe- cial waste. Ask your dealer or your local council.

Troubleshooting

Troubleshooting guide

Fault	Possible causes	Remedy
The motor does not start	Engine brake lever not pressed Spark plug defective	Press the engine brake lever Replace spark plug Top up fuel
Engine does not run smoothly	Air filter dirty Spark plug worn Choke open	Clean the air filter Clean/Replace the spark plug Set choke lever to "Run" position
The equipment does not operate smoothly and	- Blades imbalanced	- Have the blades replaced by a cus- tomer service workshop.
Motor is running, roller	- V-belt torn	- Have the V-belt replaced by a cus- tomer service workshop.

Service information

We have competent service partners in all countries named on the guarantee certificate whose contact details can also be found on the guarantee certificate. These partners will help you with all service requests such as repairs, spare and wearing part orders or the purchase of consumables.

Please note that the following parts of this product are subject to normal or natural wear and that the following parts are therefore also required for use as consumables.

Category	Example
Wear parts*	Spark plug, air filter, V-belt, petrol filter, blade (roller)
Consumables*	
Missing parts	

* Not necessarily included in the scope of delivery!

In the event of defects or faults, please register the problem on the internet at www.ducar.cn. Please ensure that you provide a precise description of the problem and answer the following questions in all cases:

- a) Did the equipment work at all or was it defective from the beginning?
- b) Did you notice anything (symptom or defect) prior to the failure?
- c) What malfunction does the equipment have in your opinion (main symptom)? Describe this malfunction.

Engine Parts Diagram

Engine Parts List

Parts Diagram

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.

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POWER HORSE™

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