Operation Manual

Petrol Ground Drill

61197, 61770, 61771, 61784-61788





Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information before using for the first time.

Technical changes reserved!

Due to further developments, illustrations, functioning steps, and technical data can differ insignificantly.

Updating the documentation

If you have suggestions for improvement or have found any irregularities, please contact us.





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Introduction

Thank you for purchasing this quality product. To minimise the risk of injury we urge that our clients take some basic safety precautions when using this device. Please read the operation instructions carefully and make sure you have understood its content.

Keep these operation instructions safe.

Warnings!

- To reduce the risk of injury, the user must read and understand the operating manual.
- Do not attempt to operate this petrol ground drill until you have thoroughly read and understood
 the complete instructions and safety rules contained in this manual. Failure to comply may result
 in accidents involving fire, electric shock, or serious personal injury. Save the operating manual
 and review it frequently to be able to continue a safe operation and instruct others who use this
 tool as well.

Please read all instructions and follow them!

Safety rules

General safety rules

- For safe operation read and understand all instructions before using the petrol ground drill. Follow all safety instructions. Failure to follow all safety instructions below can result in serious personal injury.
- Do not allow children or untrained individuals to use this unit.
- The drill must only be used by adults in good physical condition with knowledge of the operating manual.
- Never start or run the engine in a closed or poorly ventilated area; inhaling exhaust fumes can kill
- Clear the work area before each use. Remove all objects such as rocks, broken glass, nails, wires, or strings which can become entangled in the auger.
- Wear protective non-slip safety shoes, gloves, glasses, and ear protection while operating this unit.
- Wear thick long trouser. Do not wear loose clothing, short pants, loose jewellery or have bare feet.
- Tie long hair together to prevent entanglement in any moving parts.
- Keep all bystanders, children, and pets at least 3 m away.
- Do not operate this unit when you are tired, ill or under the influence of alcohol, drugs, or medicine.
- Do not operate the device in poor lighting.
- Ensure to keep always firm footing and your balance. Do not overreach. Overreaching can result in loss of balance or exposure to dangers, e.g., hot surfaces, etc.
- Keep all parts of your body away from any moving part.
- Do not touch area around the muffler or cylinder of the drill because these parts get hot from operation.
- Always stop the engine and remove the spark plug wire before making any adjustments or repairs except for carburettor adjustments.
- Inspect the unit before each use for loose fasteners, damaged components, fuel leaks or other damages. Replace any damaged part before use.
- It has been reported that vibrations from hand-held tools may contribute to a condition called Raynaud's Syndrome. Symptoms may include tingling, numbness and blanching of the fingers, usually apparent upon exposure to cold. Hereditary factors, exposure to cold and dampness, diet, smoking, and work practices are all thought to contribute to the development of these symptoms. It is presently unknown what may contribute to the condition. There are measures that can be taken by the operator to possibly reduce the effects of vibrations:





- Keep your body warm in cold weather. When operating the unit wear gloves to keep the hands and wrists warm. It is reported that cold weather is a major factor contributing to Raynaud's Syndrome.
- After each period of operation, you should exercise to increase blood circulation.
- Take frequent work breaks. Limit the amount of exposure per day.
 If you experience any of the symptoms of this condition immediately stop the use and see your physician.
- Keep the tool well maintained, fasteners tightened and worn parts replaced.
- Mix and store fuel in a container approved for fuel.
- Mix fuel outdoors where there are no sparks or flames. Wipe up any fuel spillage. Move 9 m away from the refuelling site before starting the engine.
- Stop the engine and allow it to cool before refuelling or storing the unit.
- Allow the engine to cool; empty the fuel tank and secure the unit from moving before transporting it in a vehicle.

Specific safety rules for the use of the petrol ground drill

- Replace the auger if cracked, bent, or damaged in any way. Be sure the auger and extension shaft are properly installed and securely fastened. Failure to do so can cause serious injury.
- Make sure all guards, straps, deflectors, and handles are properly attached.
- Do not start working until you have a clear work area. Do not work near electric cables or underground utilities. It is recommended to check with local authorities before starting to drill.
- If the auger turns whilst the engine is idling, stop the engine and immediately adjust the idle settings following the instructions in this manual.
- Only use the manufacturer's replacement augers on this unit. Do not use any other attachments.
- Never operate the machine until the safety clutch is working. The safety clutch will engage when the engine is at idle or if a hard object is struck.
- Replace the auger immediately if any cracks or other damage are present.
- Maintain a firm grip on both handles during operation.
- Never use the drill with the handles above the waist level. Drilling with the units handles above the waist level restricts control and can cause serious chest injuries if a hard object is struck.
- Never carry the unit with the engine running.
- Carry the unit with the engine stopped and with the auger bit removed.
- Never drill in a horizontal angle. This drill should only be operated with the auger at a 90° angle to the ground.
- Always keep handles dry and clean.
- Before starting to drill make sure the bit is not obstructed.
- Always work in a firm-footed and safe position.
- Never touch the auger bit or carry out maintenance with the engine running.
- Carry routine maintenance work out on all parts. For other repairs, the tool must be serviced by an authorised technician.
- Store the power drill off the ground in a vertical position in a dry place and with an empty fuel tank
- If the auger bit jams, stop the engine immediately.





Symbols and their meaning

Important! Some of the following symbols may be used on the tool. Study them and understand their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

Symbol		Explanation
\triangle	Safety symbol	Indicates danger, warning, or caution. It means "Attention! Your safety is involved!"
&	Read your operators manual	Your manual contains special message to bring attention to potential safety concerns as well as operating and serving information. Please read all information carefully to ensure safe use.
	Eye and hearing protection	Wear eye and hearing protection when operating this equipment.
□↔∱	Keep bystanders away	Keep all bystanders at least 3 m away.
	Boots	Wear non-slip safety footwear when using this equipment.
	Gloves	Wear non-slip, heavy-duty gloves.
&	No smoking	Do not smoke when mixing fuel or filling the fuel tank.
	Petrol	Use unleaded petrol intended for motor vehicle use with an octane rating of 90 ([R+M]/2) or higher
!	Oil	Use a synthetic two-stroke oil for air cooled engines.
	Mix petrol and oil	Mix the fuel mix thoroughly and each time before refuelling.
1	Switch	On/off switch I = on (to run) O = off (to stop)

Maintenance

Servicing requires extreme care and knowledge and should be performed only by a qualified service technician. For servicing and repair bring the product to your nearest **qualified technician**. Damages caused by incorrect repair or maintenance are not covered by the warranty.

Technical specifications

Dimensions (mm)	Device	530 × 370 × 320	
Dimensions (mm)	Shaft	58 × ∅ 20	
Empty weight (kg)		9.5	
Application/information/equipment		Fuel-oil mix ratio: 1:30 Transfer ratio: 40:1	
Motor design		Air cooled two-stroke one-cylinder fuel motor	
Ignition		Magneto transistor ignition (CDI)	
	Power (kW)	1.4	
Max motor nower	Power (hp)	1.9	
Max. motor power	Speed (^r /min)	6500	
	Capacity (cm³)	52	
Tank capacity (ℓ)		0,98	
Compatible drill attachment (mm)		Ø 100–300	





Assembly

Unpacking

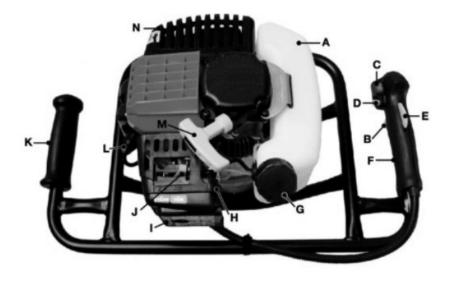
- Carefully remove the tool and any accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the tool carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated

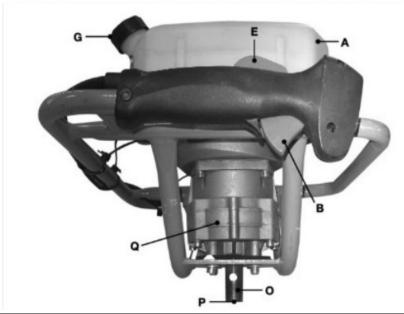


⚠ Warnings!

- If any parts are missing, do not operate this tool until the missing parts are replaced. Failure to do so could result in possible serious injury.
- Do not attempt to modify this tool or create accessories not recommended for use with this tool. Any such action or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

Parts names and functions









Letter	Name	Letter	Name	Letter	Name
Α	Fuel tank	G	Fuel tank cap	M	Starter grip
В	Throttle trigger	Н	Primer pump	N	Exhaust pipe
С	Engine switch	ı	Air box	0	Gaugeon pin locator hole
D	Throttle lock	J	Choke lever	Р	Driveshaft
E	Trigger lock	K	Left hand grip	Q	Gearbox
F	Right hand grip	L	Primer bulb		

The safe use of this product requires an understanding of the information on the product and on the operating manual as well as knowledge of the project you are attempting. Before starting the project, familiarise yourself with all operating features and safety rules of this petrol ground drill.

Air box

The air box cover houses the air filter which helps to limit the amount of dirt and dust drawn into the unit during operation.

Choke lever

The choke lever is used when starting the engine.

Driveshaft

The driveshaft is connected to attachments to transfer movement.

Engine switch

The engine switch is used in combination with the recoil starter grip to start the engine. It is also used to turn the engine off.

Gearbox

The gearbox transfers the engines rpm to a slower high torque output.

Gaugeon pin locator hole

The gaugeon pins secure the attachments to the driveshaft via the locator holes.

Primer bulb

The primer bulb is used to prime the carburettor prior to cold starting or if the unit has not been used for a while.

Recoil starter grip

The recoil starter grip is used (along with the engine switch) to start the engine.

• Throttle lock

The throttle lock is used to help the engine on cold starts.

Throttle trigger

The throttle trigger helps the operator control the speed of the auger to suit various ground conditions.

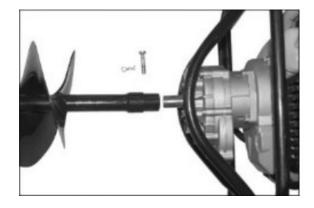
Trigger lock

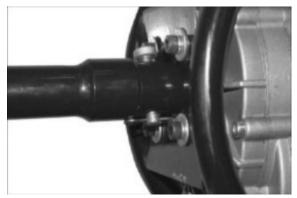
The trigger lock prevents the operator from accidentally activating the throttle trigger. The trigger lock must be depressed before applying the throttle.





Fitting the auger bits





Never use with handles being

Align the engine drive shaft into the seat on the auger bit and secure it using the appropriate gaugeon pin and cotter pin.

Note! Do not start digging a hole without the auger bit attached.



CAUTION!

Never use the drill with the handles above waist level. Drilling with the unit handles above waist level restricts control and can cause serious chest injuries if a hard object is struck.



CAUTION!

Do not change the ratio of the reduction gearbox. The characteristics of the machine could change and unforeseen reactions could occur.

Working rules



above waist level! Always follow the safety rules. The petrol ground drill must only be used to drill in the ground. Do not lock the power drill onto fixed supports. It is forbidden to apply tools or applications other than the ones indicated and approved by the manufacturer.

Operation



!! Warning!

Do not allow familiarity with tools to make you become careless. Remember that a fraction of a second of carelessness is sufficient to inflict serious injury.



Warning!

Always wear safety goggles or safety glasses with side shields when operating this tool. Failure to do so could result in objects being thrown around and into your eyes resulting in personal injury.



Warning!

Do not use any attachments or accessories not recommended by the manufacturer of this tool. The use of attachments or accessories not recommended can result in personal injury.



Note! Read the operating manual and follow all warnings and safety instructions.





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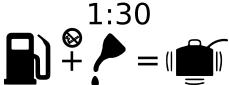
Note! Keep all bystanders, especially children and pets, at least 3 m from the operating area.

Fuel and refuelling safety

- Always handle fuel with care, it is highly flammable.
- Always refuel outdoors where there are no sparks and flames.
- Do not smoke in the refuelling area.
- Do not inhale fuel vapours.
- Do not let petrol and oil come in contact with your skin.
- Keep petrol and oil away from eyes. If petrol or oil comes in contact with eyes, wash them immediately with clean water. If irritation is still present, immediately see a doctor.
- Clean up spilled petrol immediately.

Mixing fuel

- This product is powered by a two-stroke engine and requires pre-mixing of petrol and two-stroke oil. Mix unleaded petrol and two-stroke engine oil in a clean container approved for petrol.
- This engine is certified to operate on unleaded petrol intended for automotive use with an octane rating of 90 ([R+M]/2) or higher.
- Do not use fuels containing Ethanol. The use of ethanol fuels may void your warranty.
- Do not use any type of pre-mixed petrol/oil intended for use in motorised scooters, motorcycles, etc.
- Use synthetic two-stroke oil only. Do not use automotive oil or two-stroke outboard oil.
- Mix 2 % synthetic two-stroke oil into the petrol. This is a 1:30 ratio. Mix the fuel thoroughly and each time before fuelling.
- Mix in small quantities. Do not mix quantities larger than usable in 30-day period. Synthetic twostroke oil containing a fuel stabiliser is recommended.



Filling the tank

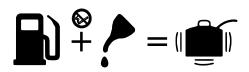
- 1. Clean surface around fuel cap to prevent contamination.
- 2. Loosen fuel cap slowly to release pressure and to keep fuel from escaping around the cap.
- 3. Carefully pour fuel mixture into the tank. Avoid spillage.
- 4. Prior to replacing the fuel cap, clean and inspect the gasket. Immediately replace fuel cap and tighten it hard.
- 5. Wipe up any fuel spillage. Move 9 m away from refuelling site before starting engine.

Note! It is normal for smoke to be emitted from a new engine during and after first use.



Always turn the engine off before fuelling. Never add fuel to a machine with a running or hot engine. Move at least 9 m away from the refuelling site before starting the engine. Do not smoke!

Mixing ratio: $1 \ell + 20 \text{ m}\ell = 2 \ell + 40 \text{ m}\ell = 3 \ell + 60 \text{ m}\ell = 4 \ell + 80 \text{ m}\ell = 5 \ell + 100 \text{ m}\ell = 60 \text{ m}\ell = 100 \text{ m}\ell = 10$







Starting and stopping



- Never start or run the engine inside a closed or poorly ventilated area, breathing in exhaust fumes can kill.
- Do not have the auger bit attached when starting a cold engine. The auger bit may rotate when the engine starts with the throttle lock engaged. Start the engine following the procedure below. Allow the engine to warm up. With the engine warmed up, you may stop the engine, fit the auger bit and restart the engine following the warm start procedure.

Note! Be sure to return the stop switch to the "I" position before trying to start the unit.

How to start a cold engine

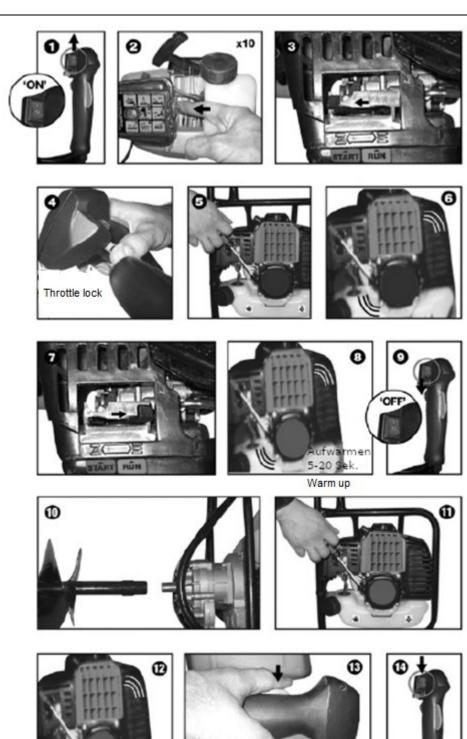
- Place the engine switch to the on position "I."
- PRIME press the primer bulb 10 times slowly.
- Set the choke lever to the "start" position.
- Lock the throttle by pulling the throttle trigger and pressing in the lock button.
- Pull on the **starter cable** with a guick, firm, and regular upward movement until the motor **ig**nites or starts and operates.
- With the motor fuelling (popping), but not continuing to operate, remove the choke lever to the "RUN" position.
- Let the motor warm up during 5-20 s.

How to start a warm engine

- With the engine switch being on position "I," pull on the starter cable with a quick, firm, and regular upward movement until the engine runs.
- **Note!** Do not use the choke lever to start a hot engine.







How to cut off the engine

Press the engine switch to "O." Wait until the engine has stopped.

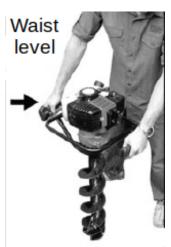




Operating the petrol ground drill

- Grasp the drill firmly with both hands and keep all body parts away from the auger and the silencer.
- Hold the drill tightly on the throttle with your right hand and tightly on the handle with your left hand
- Always keep a firm grip with both hands during operation.
- The ground drill should be held in a comfortable position with the handle height no higher than waist height.
- The throttle helps to adapt the drill speed to the respective soil conditions.
- Keep a comfortable distance between you and the drill, without leaning too far forward.
- Always give your full attention to your work. Touching the rotating auger can result in serious injury.





You have the correct working position if both handles are beneath the waist level.



Maintenance



Use only spare parts, accessories, and attachments from the original manufacturer. Failure to do so could result in personal injury, poor performance, and voiding your warranty.

- You can make the settings and repairs described here. A qualified specialist should be called in for all other repairs.
- The consequences of improper maintenance can be excess carbon deposits, which lead to loss
 of performance, as well as the leakage of oily residues from the exhaust.
- Ensure that all guards, deflectors, and handles are properly and securely in place to prevent injury.

Engine

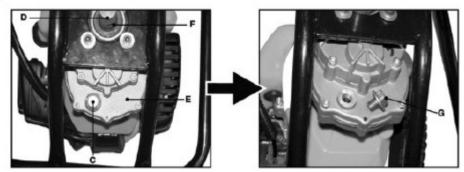
Regularly clean the cylinder lamellas with compressed air or a brush. Contamination on the cylinder can cause the engine to overheat.





Reduction gear

Change the grease in the reduction gear every 100 hours of operation.



C: Gear lubrication inspection screw

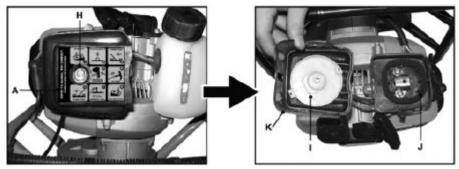
D: Drive shaft E: Transmission F: Piston pin seat

G: Bolt

Cleaning the exhaust port and the exhaust

Depending on the type of fuel and oil and the operating conditions, the exhaust port and the exhaust pipe can become blocked with carbon deposits. If you experience any loss of performance from your fuel powered tools, a qualified and authorised technician must remove these deposits to restore performance.

Cleaning the air filter



A: Air filter cover H: Air filter cover screw I: Air filter holder

J: Air filter K: Housing

A dirty air filter causes starting difficulties, a loss of performance and shortens the service life of the engine. Check the air filter monthly. The air filter should be replaced at least once a year for optimal performance.

- Loosen the air filter cover by turning the mounting screw counter clockwise.
- Remove the filter cover and air filter.
- Clean the foam filter with warm soapy water. Stand it upright and let it dry.

Note! If the foam filter is damaged, it should be replaced.





- Apply a light coat of engine oil to the foam filter element, then squeeze it out.
- Reinstall the air filter.

Note! Make sure the filter is properly seated in the cover. If the filter is installed incorrectly, dirt can enter the engine, which leads to rapid engine wear.

Refit the air filter cover and tighten the fastening screw.

Petrol tank



Marning! A leaky tank cap means a fire hazard and must be replaced immediately!

The tank cap contains a seal and a check valve to vent any accumulated fuel gases. A clogged check valve will result in poor engine performance. If performance improves with the tank cap loosened, the check valve may be defective. Replace the fuel cap if necessary. The fuel supplied to the engine is passed through a filter to remove contaminants before entering the engine. Impurities in the fuel can lead to poor performance and damage to the engine.

The fuel filter is a non-serviceable item and may only be replaced by authorised specialist personnel!

Spark plug change

This engine uses a spark plug with an electrode gap of 0.5 mm. Use an identical replacement and replace the spark plug annually.



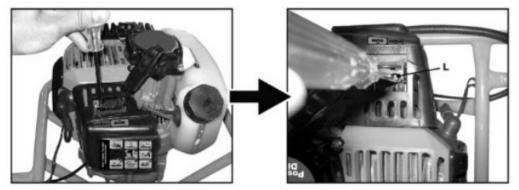
K: Spark plug B: Spark plug cap

Setting the idle speed

If the screw device is turning while being in idle state, the idling speed must be adjusted using the screw on the motor. Turn the idle screw counter-clockwise to reduce the idle speed and stop the auger from moving. If the auger attachment is still turning, contact a qualified person to adjust and discontinue use until the repair is complete.







L: Idle screw

Storing

- Remove all foreign matter from the device. Store the device when not in use indoors and in a
 dry, well-ventilated area inaccessible to children. Keep away from corrosive agents such as
 garden chemicals.
- Follow all ISO and all local regulations for the safe storage and handling of fuel.

When stored for more than a month

Drain all fuel from the tank into a fuel-approved container. Let the engine run until it stops.

Troubleshooting

If these solutions do not solve the problem, please contact a qualified technician.

Problem	Possible cause	Solution	
Engine will not start	No spark	Check Spark. Remove spark plug. Reattach the spark plug cap and lay spark plug on metal cylinder. Pull the starter rope and watch for spark at spark plug tip. If there is no spark, repeat the test with a new spark plug.	
	No fuel	Push primer bulb until bulb is full of fuel. If bulb does not fill, the primary fuel system is blocked. Contact a service dealer. If the primer bulb fills, the engine might be flooded. Proceed with the next solution.	
	Engine is flooded	Set the choke lever to the START position. Squeeze the throttle trigger and pull the starter rope repeatedly until the engine starts and runs. Note! Depending on the severity of the rope.	
	Starter rope pulls harder now than when new	Contact a qualified technician.	
Engine starts but will not accelerate		Allow engine to completely warm up. If engine does not accelerate after three minutes, contact a qualified technician.	
Engine starts but will only run at high speed at half choke	•	Contact a qualified technician.	





reach full speed		Use fresh fuel and the correct 2-stroke oil mix.
and emits exces- sive smoke	Air filter is dirty	Clean air filter. Refer to cleaning the air filter earlier in this manual.
	Spark arrestor screen is dirty	Contact an authorised service dealer.
	carburettor requires	Turn idle speed screw clockwise to increase idle speed.
	Idle speed is set to high. Gearbox clutch is inoperable.	Turn the idle speed screw counter clockwise to reduce the idle RPM and stop the auger attachment. Contact an authorised service dealer for adjustment and discontinue use until the repair is made. Serious personal injury might result from the auger attachment turning at idle.
Oil drips from the muffler.	Check oil-fuel mix-ture.	Use fresh fuel and the correct synthetic two-stroke oil mix.
	Air filter is dirty.	Clean following the instructions in the maintenance section.

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