

Operation Manual

Engine Pump

63444-63445

XPO ^{the} **tool**
experts



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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If you should find a mistake or wish to make a suggestion for improvement, we look forward to hearing from you.

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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.**

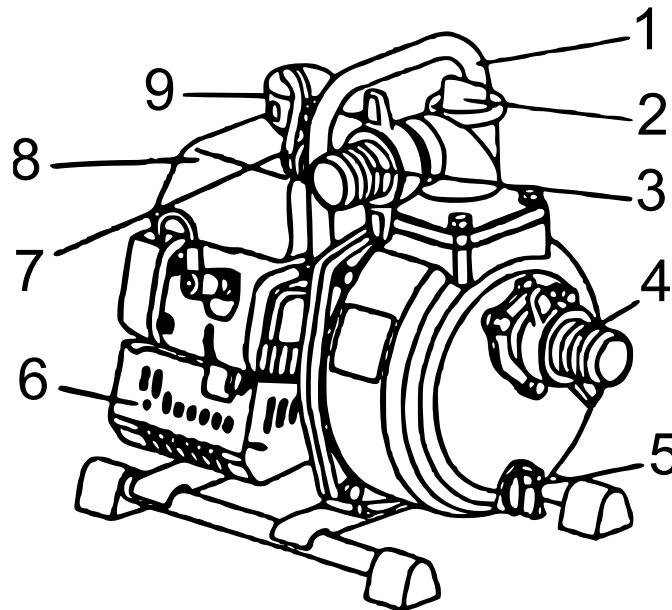
Keep these operation instructions safe.

Safety instructions

- The motor pump is designed to pump water and neutral liquids at room temperature. Any other use, not being in accordance with the intended use, can lead to damage.
- The pump was designed for private use in the home and garden and is not suitable for commercial, craft, or industrial use.
- Do not use the pump to fill containers that may explode under excess pressure.
- Only use the pump in its intended performance range. Overloading the pump can cause damage.
- Keep children and animals away from the work area when working with the pump.
- Never allow children or persons unfamiliar with the operation and safety instructions to operate the pump.
- This device is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the device by a person responsible for their safety.
- Keep the work area clean and well lit. An untidy and poorly lit work area increases the risk of accidents.
- Check the pump (especially the motor) for damage before each operation. If the pumps functionality is limited, it must no longer be used. Have the damage repaired by a qualified specialist before putting the pump back into operation.
- Before starting, make sure that all attachments (silencer, tank cap, spark plug, etc.) are properly mounted and functional.
- Always place the pump on a level and firm surface to prevent it from slipping or tipping over. If possible, secure the pump to the ground.
- **Caution!** The pump and suction pipe must be filled with water before each start to prevent the pump from overheating. Overheating can damage the seals and cause water to enter the motor.
- Never allow the pump to run dry. Switch off the pump immediately when it stops pumping water. Allow the pump to cool down and refill it with water before resuming operation.
- **Caution! Danger of burns!** During operation, the motor and its attachments (e.g., the exhaust) can heat up considerably. After switching off, make sure that all parts have cooled down before carrying out maintenance or cleaning work or storing the pump.
- Ensure sufficient ventilation of the motor and place the pump at least 1 m away from other objects or buildings.
- Do not place the pump near flammable liquids, gases, or dust. The heat of the motor or possible sparking can ignite them.
- Never clean the pump with flammable substances.
- Refuel before starting the engine. Never remove the fuel tank cap when the engine is running or still hot.
- Do not overfill the tank. Fill the tank to a maximum of 3 cm below the filler neck.
- Make sure that the tank is properly closed.
- If petrol is spilled, do not start the engine. Remove the pump from the site of the spillage and avoid any possible source of ignition. Remove the spilled petrol immediately and wait until the fuel vapours have completely evaporated before placing and operating the pump again.
- **Caution! Danger of suffocation!** Do not leave the engine running in a closed room. There is a risk of poisoning from carbon monoxide.
- **Caution! Fire hazard!** Never place objects on top of the engine or cover it during operation. Ensure sufficient cooling and keep the cooling openings free of dirt and objects.
- Wear appropriate protective equipment during work (respirator, non-slip work shoes, ear protection, safety glasses, etc.). Do not wear jewellery or loose clothing and tie long hair securely.

- **Caution! Risk of injury!** Keep hands, feet, hair, and clothing away from the rotating machine parts, as they can get caught in them causing serious injuries.
- Do not use the pump when you are tired or under the influence of alcohol, drugs, or medicine. A moment of inattention can lead to loss of control and serious injury.
- Do not overestimate yourself. Always make sure that you have a secure footing and keep your balance.
- Only transport the pump with the tank emptied and the fuel tap closed.

Main components



No	Name
1	Handle
2	Self-priming plug
3	Drainage opening
4	Suction opening
5	Water drain plug
6	Silencer
7	Throttle lever
8	Petrol tank
9	Fuel filler cap

Preparations before commissioning

- Check all parts, such as fuel tank cap, spark plug, etc., to make sure they are not loose or have come loose.
- Make sure that the cooling air inlet and outlet are not blocked by dirt and dust. A blocked air duct will cause the air-cooled engine to overheat during operation.
- Pay attention to the air filter. A dirty air filter will cause uneven operation, increasing fuel consumption.
- Check the spark plug. If it is dirty, clean the spark plug completely and adjust the spark plug gap properly (a proper spark plug gap is 0.6 to 0.7 mm).

Mounting the pump

1. Mount your pump on a flat spot close to the water source.
2. Remove the self-priming plug and fill the pump with water until the water overflows. Then tighten the plug again.

Caution! Always tighten the self-priming plug, suction hose, and other connections. If they are loose, air can get into the pump, making it unable to prime itself.

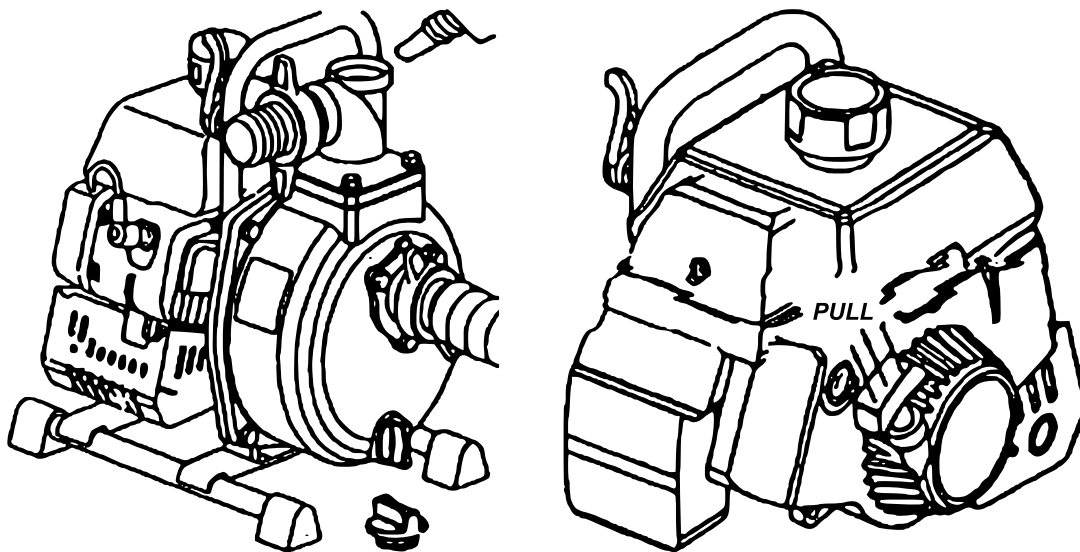
Fuel supply

- Fill the fuel tank with fuel. The fuel is a mixture of branded petrol with at least 70 octane and approved two-cylinder engine oil, the mixing ratio is 1:20–25. Make sure that petrol and oil are of good quality.
- Do not refill your pump without stopping the engine completely. Refuelling while the engine is running may cause the pump to catch fire.

Starting the pump

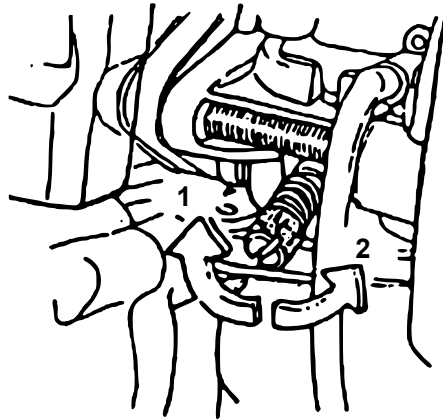
Attention! Never let the pump run dry.

1. Move the fuel tap to the open position. Move the choke lever to the closed position.
2. Move the throttle lever to the start position.
3. Pull the starter rope with a firm pull.
Caution! When starting the engine, the starter rope may recoil. Never pull the entire rope and never let the rope run back by letting go of it.
4. Once the engine has started, gradually move the choke lever to the open position.
Caution! If too much fuel is sucked in, close the fuel tap and open the throttle and choke lever fully. Then operate the pull starter.
5. After starting the engine, check that the water in the intake hose to the pump is rising. The amount of water can be adjusted by opening the throttle lever.
Caution! The pump cannot initially draw in water if a valve connected on the pressure side is blocked or a double hose is used.



Adjusting the idle speed

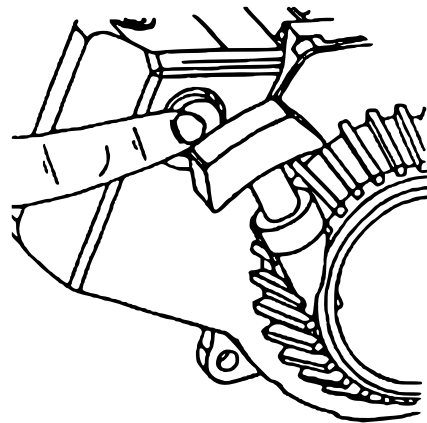
- The idle speed is set at the factory, but can be adjusted if necessary.
 - Turning the idle adjustment screw clockwise increases the engine speed, turning it anticlockwise decreases the engine speed.
- Notice!** The idle speed should be adjusted five minutes after starting the engine.



No	Name
1	Increasing the engine speed
2	Lowering the engine speed

Storing the engine

1. Move the throttle to the slow speed position and let the engine cool down for 2 or 3 min.
 2. Close the fuel tap.
 3. Press the stop button until the engine stops completely.
- Caution!** Suddenly stopping the engine at high speeds can cause engine damage, so avoid doing so except in emergencies.



Maintenance

The life expectancy of the water pump depends on the quality of maintenance. It is recommended to check your unit before and after use.

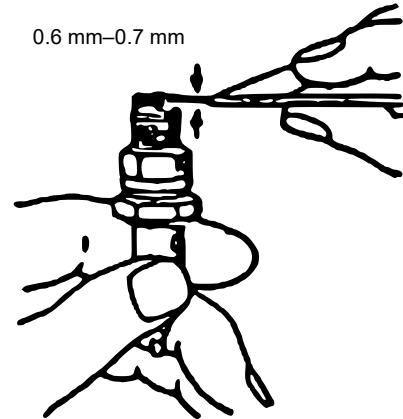
Maintenance after use

1. Remove dirt and dust completely from the engine after operation.
2. Check the engine to make sure there is no fuel leakage.
3. Check each fastened part for possible looseness.
4. If water mixed with soil and sand has been pumped, run fresh water through the pump to clean the internal parts of the pump (suction and discharge pipes, etc.).

Caution! In extreme cold in winter, the pump can be damaged by the water freezing in the pump housing. After completing the work, drain the water in the housing and in the hose.

Maintenance after 30 hours

- Remove and clean the spark plug.
- Adjust the spark plug gap (0.6–0.7 mm).
- Spark plug used: L6 (LD)



Maintenance after 50 hours

- Remove the air filter and rinse it thoroughly.
- After rinsing, thoroughly squeeze out the air filter and replace it.

Storage over a longer period

- Drain water from pump, intake, and pressure lines.
- Drain fuel from the fuel tank and carburettor float chambers.
- Store in a dry and dust-free environment.

Technical data

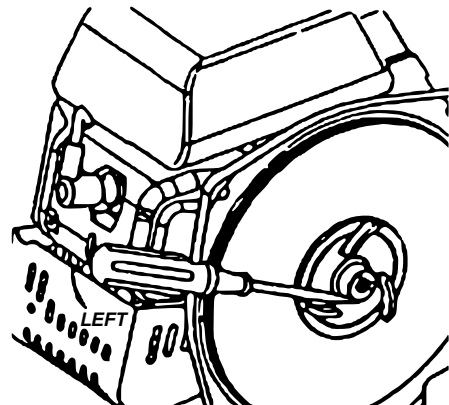
Item No	63444	63445
Diameter of the intake opening (mm)	25	40
Diameter of the discharge opening (mm)	25 (1")	40 (1,5")
Max. flow rate (m ³ /h)	8	15
Total water height (m)	30	35
Suction height (m)	8	
Self-priming time (3 m) (s)	≤ 80	
Motor type	Air-cooled two-stroke engine	
Engine power	1.1 kW / 7500 rpm	1.3 kW / 7000 rpm
Displacement (cm ³)	42.7	51.7
Ignition type	Electronic ignition (CDI)	
Ignition system	L8RTC	
Fuel used	Gasoline mixture (oil:gasoline = 1:25)	
Tank capacity (ℓ)	1.1	

Disassembly and assembly

Attention! Please do not disassemble the motor under any circumstances. Have disassembly carried out only by a qualified specialist.

Disassembly

- Loosen the screw and remove the handle and the pump housing one after the other.
Note! Note the mounting position of the volute casing in the pump casing
- The screw of the impeller turns clockwise, when turned, the impeller is turned down.

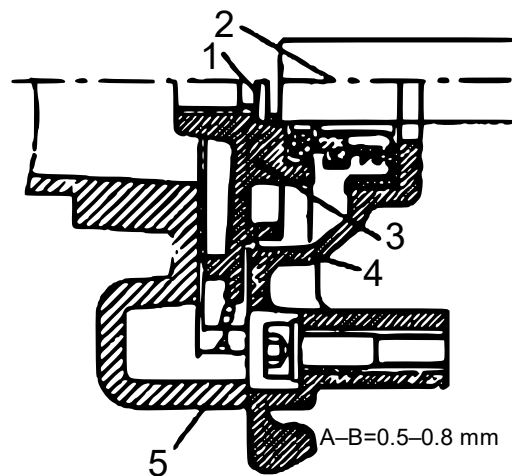


Caution! Please make sure that you do not lose the possible adjusting washer between impeller and shaft.

Assembly

1. When replacing the impeller and volute casing, please adjust the distance to 0.8 mm by adjusting the adjusting washer.
2. The tightening torque of the screws on the pump is shown in the following list.

Screw	Torque (Nm)
M5	2.5–3.5
M6	4–6
M7	9–11
M8	9–11



Nº	Name
1	Adjusting disc
2	Shaft
3	Impeller
4	Housing cover
5	Volute casing



Troubleshooting

Engine cannot be started

Error		Cause	Suggested solution
The spark plug does not ignite	Spark plug	Ignition device wet	Allow to dry.
		Deposit on spark plug	Remove deposit.
		Spark plug gap too large or too small	Adjust distance to 0.6–0.7 mm.
		Spark plug contacts burnt	Replace.
		Insulation damaged	Replace.
	Ignition	Wire connection loose or broken	Tighten or replace.
		Poor insulation of the coil	Replace.
		Gap between stator and rotor too large	Adjust distance to 0.4 mm.

Error		Cause	Suggested solution
The spark plug works normally	Compression ratio OK and fuel supply normal	Fuel intake too high	Reduce fuel.
		Quality of fuel poor and mixes with water and dirt	Replace fuel.
	Good fuel supply, but poor compression ratio	Cylinder or piston ring worn or cracked	Replace.
	Carburettor does not get fuel	No fuel in tank	Fill with fuel.
		Fuel tap not open	Open tap.
		Air hole of tank blocked	Clean.

Engine stops during operation

Error	Cause	Suggested solution
Engine stops suddenly	Piston seizure	Replace or repair piston.
	Carbon deposits on spark plug lead to short circuit	Remove carbon deposits.
	Poor ignition	Check and remedy.
Engine stops slowly	Too little fuel	Refill fuel.
	Carburettor clogged	Clean carburettor.
	Water in fuel	Replace with fresh fuel.



Insufficient engine power

Error	Cause	Suggested solution
The compression ratio is OK and the ignition fire is not extinguished.	Fuel line connection sucks in air	Tighten.
	Carburettor connection sucks in air	Replace and tighten gasket.
	Fuel mixes with water	Replace fuel.
	Filter clogs	Clean.
	Carbon clogs exhaust cylinder	Clean.
Engine overheated	Lean gas mixture	Adjust carburettor.
	Cylinder covered with carbon	Clean.
Engine noise or knocking	Poor fuel	Replace.
	Combustion chamber covered with carbon	Clean.
	Moving parts worn or defective	Check and replace.

Hard engine stop

Error	Cause	Suggested solution
Engine	Overheating of cylinder and piston lead to self-ignition	Remove carbon deposits.
Relay circuit	Overheating of spark plug connector	Clean spark plug and check gap.
	Stop switch faulty	Check and remedy.

Troubleshooting and rectification of pump problems

Error	Cause	Suggested solution
Pump cannot self-priming	No water or lack of water in pump	Refill water.
	Seal of connection damaged or connection loose so that suction hose sucks in air.	Replace or tighten.
	Suction hose broken, so that air is sucked in	Replace hose.
	Valve connected on the pressure side closed	Check and adjust.
	Distance between impeller and volute casing not correct	Adjust.
	Pump clogged by foreign object	Clean.



The water outlet is insufficient and the pressure is too low.	Strainer of suction pipe clogged	Clean.
	Suction hose clogged	Clean.
	Pump clogged by foreign object	Clean.
	Impeller and volute casing worn	Replace.
	Position of discharge opening too high	Change mounting of pump.
Starter rope cannot be pulled	Impeller and volute casing rusty	Clean.
	Pump clogged	Clean.
Leaking water	Mechanical seal worn	Replace.
	Pump shaft O-ring damaged	Replace.

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