Operating instructions

LIFAN Petrol Water Pump

64767

Illustration similar, may vary depending on model

Please read and follow the operating instructions and safety information prior to initial operation.

Technical changes reserved!
Illustrations, functional steps, and technical data may deviate insignificantly due to continuous further developments.

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Introduction

Thank you for choosing to purchase this quality product. To minimise the risk of injury, we ask you to always take some basic safety precautions when using this product. Please read this operating manual carefully and make sure that you understand it.
Keep these operation instructions in a safe place.

Safety instructions

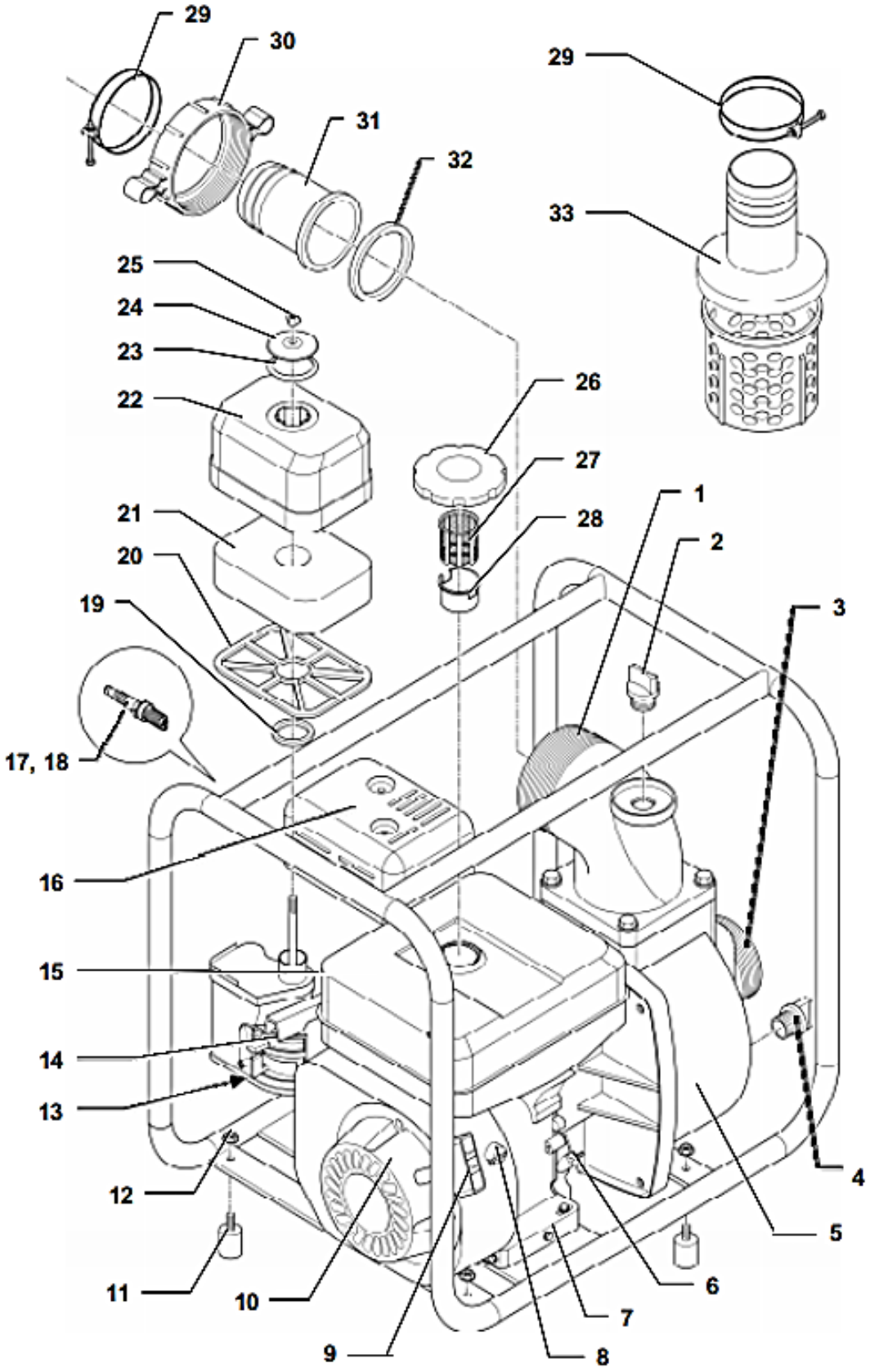
Before using the pump for the first time, read the manual and familiarise yourself with it; otherwise, there is a risk of serious damages, injuries, or even death.

- Before using the pump for the first time, inspect it to make operation of the pump safer.
- For safety reasons, you must not use the pump to convey flammable or corrosive liquids such as petrol or acids. Make sure that neither caustic liquids such as seawater, nor chemical solutions, nor alkaline liquids are conveyed.
- Place the pump on a level and solid surface. An inclined pump or a pump standing upside down can provoke fuel leakage.
- Only operate the water pump in a well-ventilated place and respect a minimum distance of 1 m to other devices. Keep away from sources of ignition.
- Keep children and domestic animals away from the water pump. **Hot motor parts! Burning hazard!**
- Familiarise yourself with the method of quick stop of the water pump and with the manipulation of the control parts. It is forbidden to use the water pump without having read the instructions of this manual.
- Only those who have read and understood the manual are allowed to operate the water pump.
- Minors are not entitled to work using the water pump – except those older than 16 years instructed under supervision.
- The safety installations and protective covers of the water pump must not be removed or modified.
- Respect all safety and hazard notes found on the pump and keep them complete and readable.

Attention!

- Petrol is highly flammable and can explode under certain conditions.
- Fill in petrol in a well-ventilated place and with the motor switched off. When filling in and stocking petrol, make sure that no sources of fume or fire such as naked flames, sparks, etc. are or can get near. **Fire hazard! Explosion hazard!**
- Do not spill any petrol from the tank. After refuelling, make sure that the tank lid is firmly closed.
- When filling in petrol, avoid spilling it; spilt petrol and petrol fumes are highly flammable. Wipe up spilt petrol before operation.
- Do not leave the motor run in a closed room or a badly ventilated place. The exhaust fumes of the motor contain toxic carbon monoxide (CO) that provoke unconsciousness or even death. **Danger of suffocation!**

Parts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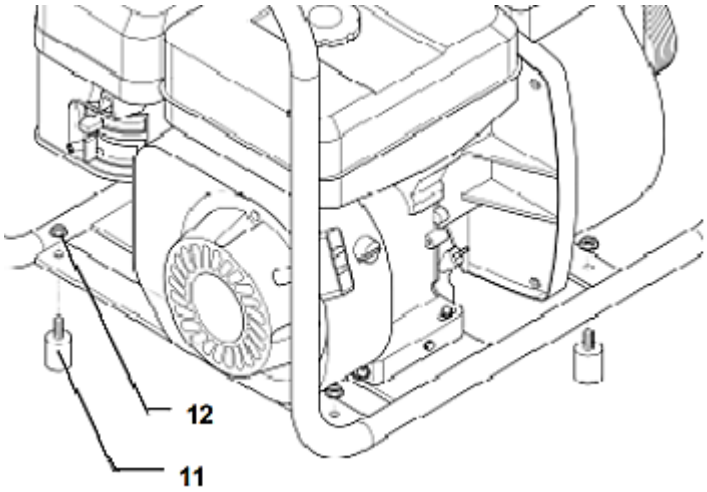
№	Name	Qty.	№	Name	Qty.
1	Pump outlet	1	18	Spark-plug connector (not shown)	1
2	Plug	1	19	Spacer ring	1
3	Pump inlet	1	20	Air inlet	1
4	Plug (drain)	1	21	Air filter	1
5	Pump	1	22	Air filter housing	1
6	Plug (engine oil)	2	23	Seal washer	1
7	Oil drain screw	2	24	Disc	1
8	Main switch	1	25	Winged nut	1
9	Starter / starter handle	1	26	Tank cap	1
10	Motor	1	27	Filter insert	1
11	Pedestal	4	28	Filter holder	1
12	Lock nut	4	29	Hose clamp	3
13	Carburettor	1	30	Screwing	2
14	Operating levers (accelerator, choke lever, petrol lever)	1	31	Hose nozzle	2
15	Tank	1	32	Seal washer	2
16	Exhaust pipe / muffler	1	33	Suction basket	1
17	Spark plug	1			

Preparing the commissioning

Mounting the feet

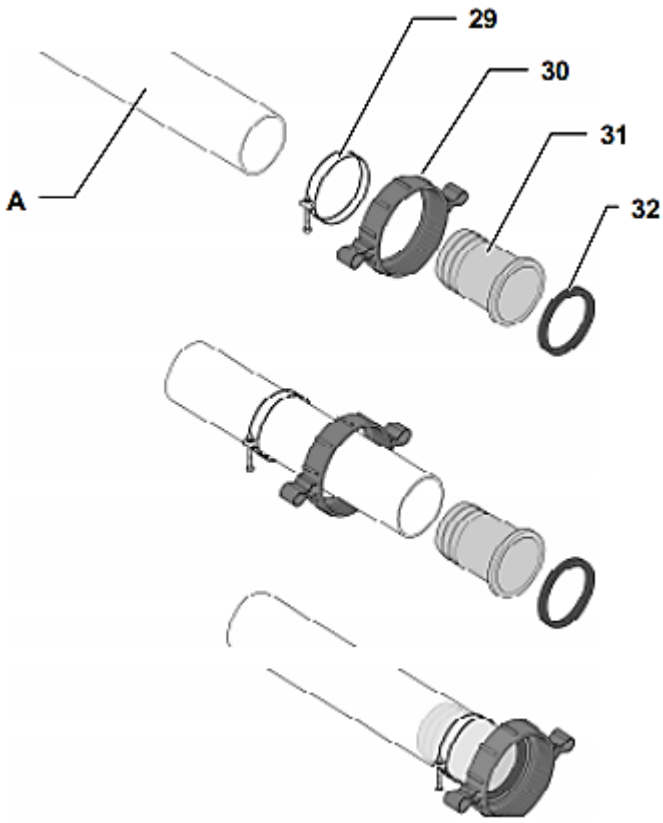


Screw the four feet **(11)** to the frame using the four locking nuts **(12).**

Connecting the water admission hose

- Use a customary hose, hose connection, and clamp. The water admission hose must be through and not be kinked. The length of the hose should not exceed the length absolutely required. The lower the distance to the water surface is, the bigger is the suction effect.

- The suction time varies as a function of the length of the water admission hose. The filter corresponding to the water pump should be connected at the end of the water admission hose with the help of a hose clamp.

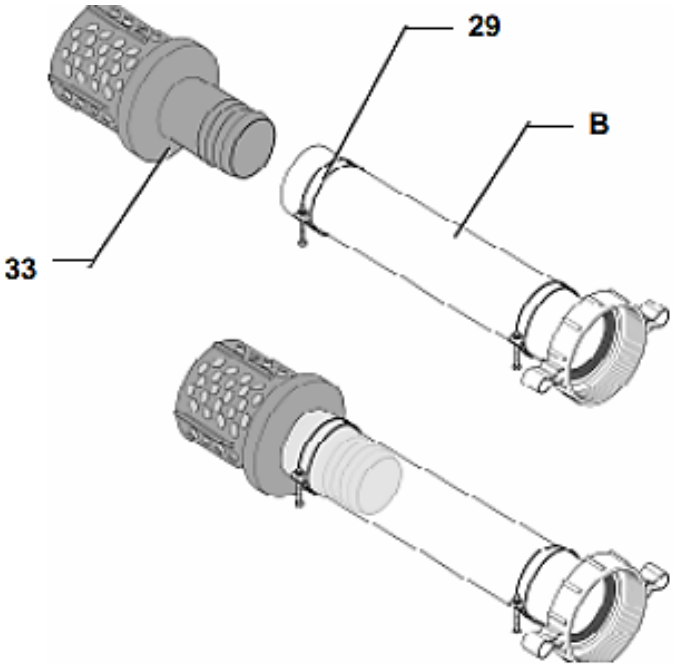


Preparing the conveying hose

Connection 80 mm (3″)

The conveying hose is not included in the delivery.

1. Slide a hose clamp **(29)** and screwing piece **(30)** onto the conveying hose **(A).**
2. Put the hose nozzle **(31)** into the conveying hose and fix using the hose clamp **(29).**
3. Put the O-ring **(32)** into the screwing piece **(30).**
4. Screw the conveying hose to the outlet **(1)** of the pump.



Preparing the suction hose

Connection 80 mm (3″)

The suction hose is not included in the delivery.

1. Slide a hose clamp **(29)** and screwing piece **(30)** onto the conveying hose **(B).**
2. Put the hose nozzle **(31)** into the suction hose and fix using the hose clamp **(29).**
3. Put the O-ring **(32)** into the screwing piece **(30).**
4. Screw the suction hose to the inlet **(3)** of the pump.
5. Slide a hose clamp **(29)** onto the other end of the suction hose **(B).**
6. Put the suction basket **(33)** into the suction hose and fix using a hose clamp **(29).**

Attention!

- Attach the filter firmly to the water admission hose before pumping. The filter will rinse out contaminations that block the passage and could damage the impellers.
- Make sure that the hose connection and clamp are safely installed to avoid any intake of air and a consequential fall of the pump power. A loose water admission hose will reduce the power of the water pump and the self-aspiration feature.

Connecting the water outlet hose

Use a customary hose, hose connection, and clamp. A short hose with large diameter is best. A long hose with small diameter will increase the flow resistance and reduce the power of the water pump.

Note! Tighten the clamp to avoid it falling off with the pressure increasing.

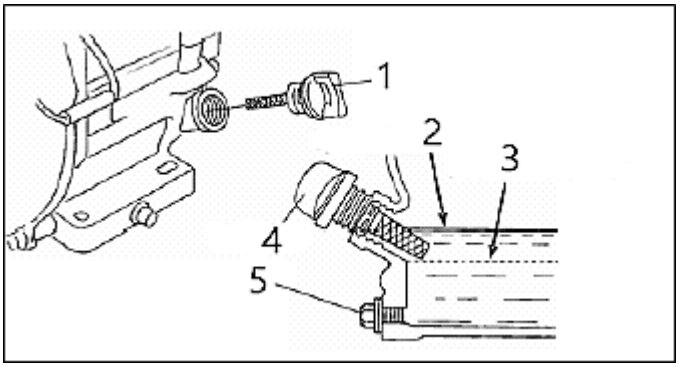
Controlling the motor oil level

Attention!

- The quality of the motor oil is one of the decisive parameters defining the power and service life of the motor. Neither use dirty motor oil nor vegetable oil.
- Control the motor oil level with the motor being switched off and the pump standing on a firm, level surface.
- Only use motor oil SAE 15 W/40 mineral for winter/summer.

Motor oil pressure switch

- The motor oil pressure switch is meant to avoid a damage of the motor due to too low an oil level. Before the motor oil level inside the crankcase falls beneath the safety mark, the motor is switched off automatically (even with the main switch being set to “ON”). Whenever the motor stops and cannot be started again, first check the oil level.
- For this purpose, screw out the oil gauge and wipe it clean; then re-stick it into the oil orifice without screwing it in, then take it out again to read the oil level. In case the oil level is too low, top up with the correct type of oil until the oil level reaches the upper end of the oil orifice.

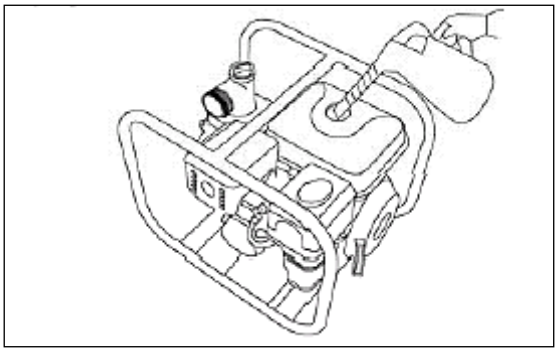


№	Name	№	Name
1	Oil level gauge	4	Oil level gauge
2	Upper oil level	5	Drain screw
3	Lower oil level		

Attention! Operating the device with too low a motor oil level can cause serious damages to the motor!

Controlling the fuel level

- Remove the tank lid and check the fuel level; if it is too low, top up.
- Only use the petrol indicated in the manual (we recommend using non-leaded petrol).
- Do not use any mixture of motor oil and petrol or dirty petrol. Avoid that dirt, dust, or water get into the fuel tank.



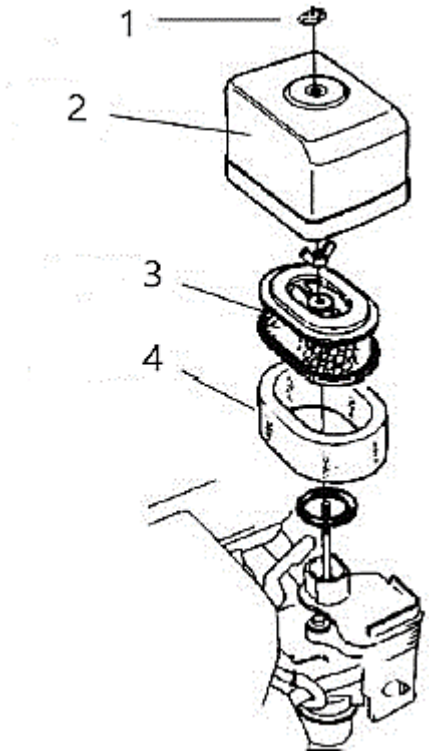
Attention!

- Petrol is highly flammable and can explode under certain conditions.
- Only top up with petrol with the motor being switched off and in a well-ventilated place. In the place of topping up, smoking and naked flames, sparks, etc. must absolutely be avoided.
- Close the tank lid firmly again after topping up.
- When refuelling the device, avoid spilling petrol; petrol and petrol fumes are highly flammable. Wipe up spilt petrol with a cloth before operation.
- Do not leave the pump operate in a closed room; the exhaust pipes of the motor contain toxic carbon monoxide (CO) that provoke unconsciousness or even death.
- Avoid repeated inhalation of petrol fumes and any contact of petrol with your skin.
- Store petrol out of children's reach.

Controlling the air filter element

Remove the winged nut, washer, and cover. Check the filter insert; if it is dirty or clogged, clean it.

Attention! Do not let the motor run without installed air filter; otherwise, dirt and other contaminations can penetrate the motor through the carburettor, provoking an early wear of the motor.

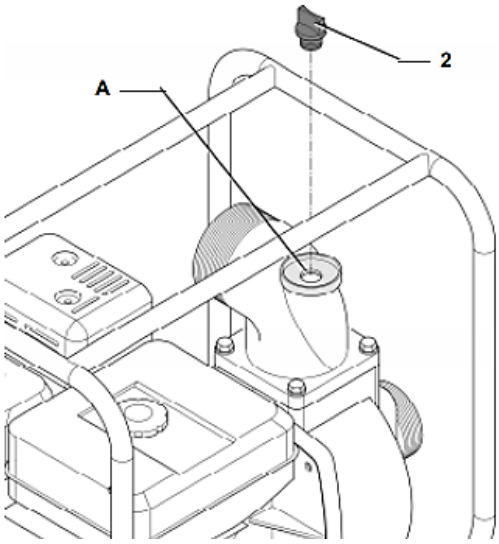


№	Name
1	Winged nut
2	Air filter cover
3	Paper filter
4	Foam filter

Controlling the water level inside the pump

Before the pump is used, it must be filled with a sufficient quantity of water.

Attention! Never operate the pump without water filled it; otherwise, it will overheat, and the gaskets of the pump will be destroyed. In case the pump is empty and has run hot, stop the motor, wait until it has cooled down, then fill in new water.



№	Name	Letter	Name
2	Plug	A	Water opening

Operation

Before the operation

- For your own safety and for a maximum of service life of your device, it is ivital to take a few minutes for checking the condition of the device; after that, you can operate it. Do not ignore any problem found; repair it or have a specialist repair it.
- Make sure that the pump stands on an even surface and that the switch of the motor is set to the “OFF” position.
- To avoid fire hazard, keep the pump away from walls and other devices a minimum distance of 1 m. Do not place flammable objects near the motor.
- The exhaust fumes contain toxic carbon monoxide. Avoid inhaling the exhaust fumes. Never let the engine run inside a closed garage or another closed area!

Attention!

- In case you do not maintain the pump correctly or do not repair any problem before further use, this might lead to dysfunctions and to serious injuries.
- Before every operation, visually examine the pump and repair any problem found.

Controlling the condition of the pump

- Inspect the pump to find damages.
- Search for signs of oil or petrol leakage under the pump and around it.
- Remove excesses of dirt and deposits, particularly around the exhaust pipe and hand starter.

Controlling the suction hose and pressure hose

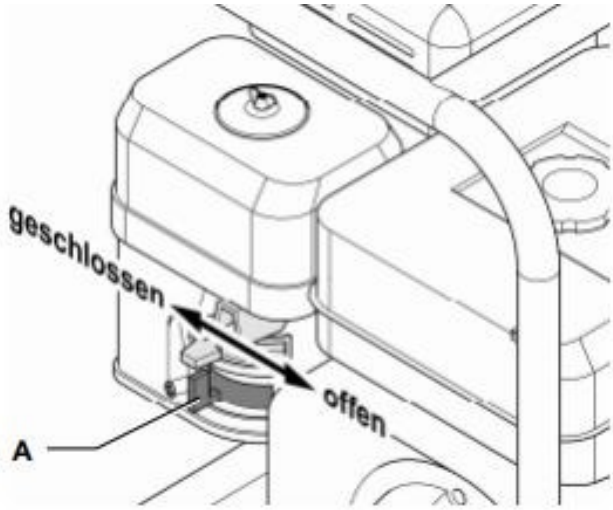
- Check the general state of all hoses. Make sure that the hoses are ready for use before connecting them to the pump. Keep in mind that the suction hose needs to have a (spiral) reinforcement.
- Check the condition of the seal washer inside the suction hose connection point.
- Check if the hose connections and clamps are correctly attached.
- Check if the filter is in good condition and correctly installed on the suction hose.

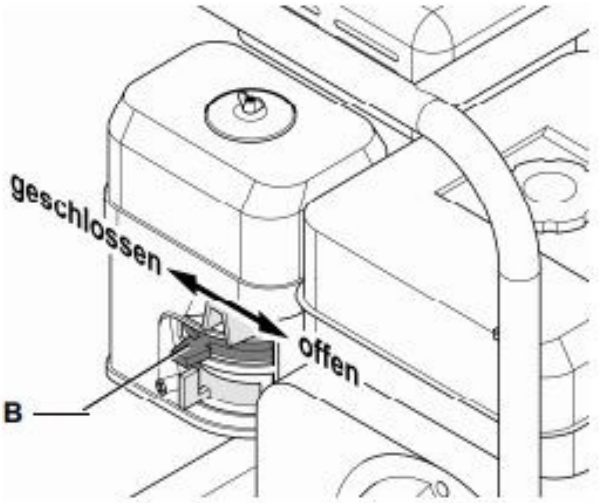
Controlling the motor

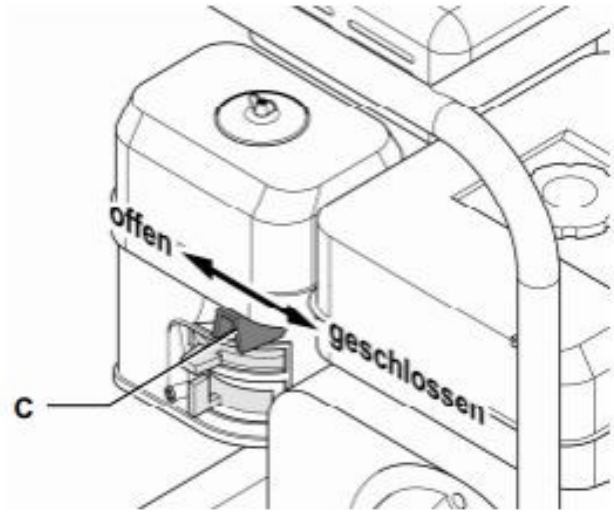
- Check the oil level. To avoid any sudden switching off caused by the motor oil alert system, always check the motor oil level before operation.
- Check the air filter. A dirty air filter hinders the air supply to the carburettor and reduces the power of the motor and pump.
- Check the petrol level. Starting with the tank filled up helps to avoid or reduce interruptions of the operation due to the need of refuelling.

Starting the motor

1. Prepare the pump and fill in water.
2. Switch the fuel cock to the “ON” position.
3. For starting a cold motor, set the throttle to the “CLOSED” position. For starting a warm motor, the throttle should be set to the “OPEN” position.







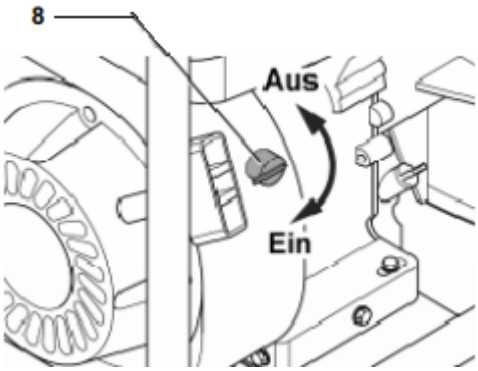
1. Open the fuel cock **(A)** (to the right).
2. Adjust the choke lever **(B)** to the “closed” position (“geschlossen,” left position) when the motor is cold.
3. Adjust the gas lever **(C)** to “⅓ open.”
4. Switch on the main switch **(8).**
5. Grasp the frame of the water pump and hold it down.
6. Grasp and pull out the starter handle **(9)** until the starter engages (light resistance).
7. Pull the starter rope quickly and guide it back slowly (do not let go of it). Repeat until the engine starts. The engine runs. Water is pumped.
8. Re-adjust the choke lever **(B)** to the “open” position (“offen,” to the right) during the motor warms up.

Adjust the amount of water to be pumped – gas lever

Do not operate the water pump under full throttle during the first 20 operating hours for the pump and motor to be able to run in.

- Raise the amount of water to be pumped: slide the gas lever **(C)** to the left.
- Reduce the amount of water to be pumped: slide the gas lever **(C)** to the right.

Switch off the water pump/emergency off

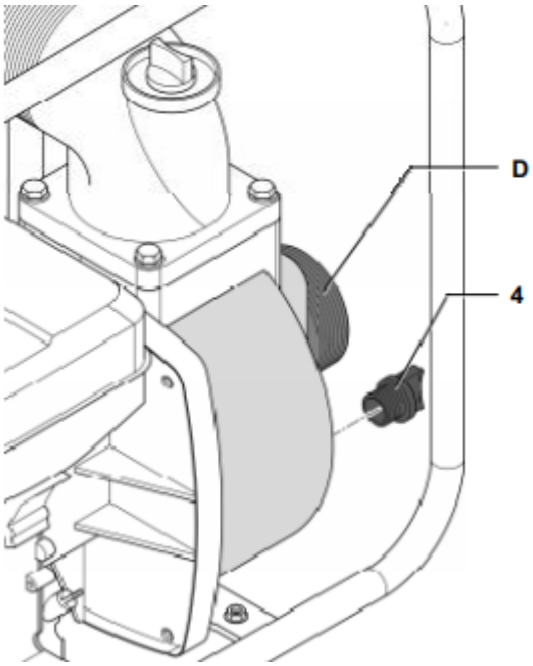


In the case of an emergency

Immediately switch the main switch **(8)** off.

In all other cases

1. Slide the gas lever **(C)** to the right (idling).
2. Switch off the main switch **(8).**
3. Close the fuel cock **(A)** (to the left).



Drain water from the pump

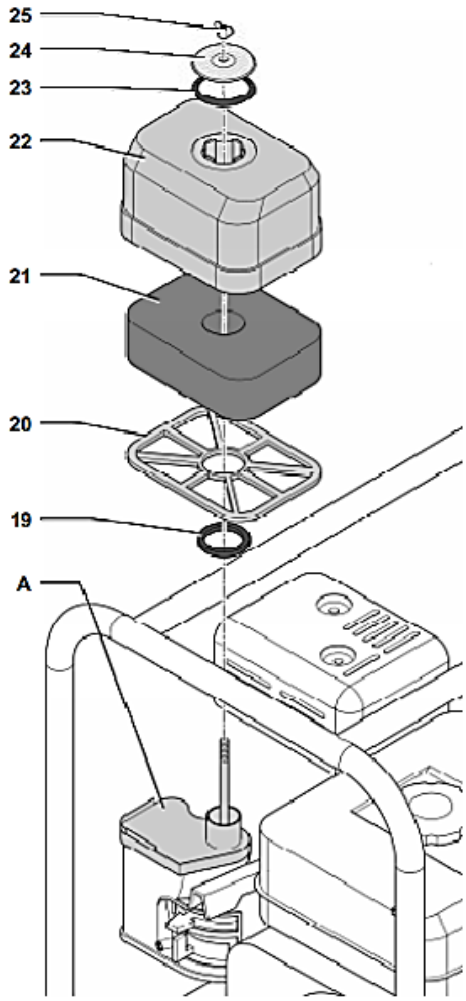
1. Screw out the plug **(4)** of the underside of the inlet **(D).** Water is being drained.
2. Re-screw the plug **(4)** in after the water has flowed out.

Maintenance and care

Keeping the water pump in an optimal condition requires regular checks and adjustments. Regular checks extend the service life of the device considerably. The following maintenance chart shows you the frequency of the maintenance jobs to do and the type of maintenance to perform.

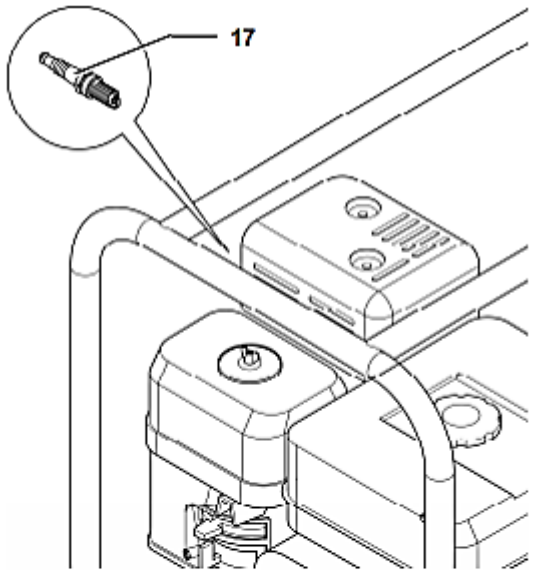
Attention! Switch off the motor before any maintenance! If you absolutely need to perform maintenance on a running motor, only work in a well-ventilated room. Exhaust fumes contain carbon monoxide (CO; this is a toxic gas that may cause unconsciousness or even death.

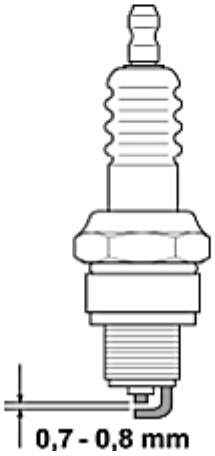
Component \ Frequency	Type of intervention	Before every use	Every month or after 20 hours	After 3 months or 50 hours	After 6 months or 100 hours	Every year or after 300 hours
Motor oil	Check	X				
	Change		X	X	X	
Air filter	Check	X				
	Change					
Spark plug				X		X
Play of valves						
Residues		Every 200 hours of operation				
Electrode		Every 200 hours of operation				
Petrol line		Every 200 hours of operation				
Pump wheel	Check					X
Tank cap						X
Inlet valve						X

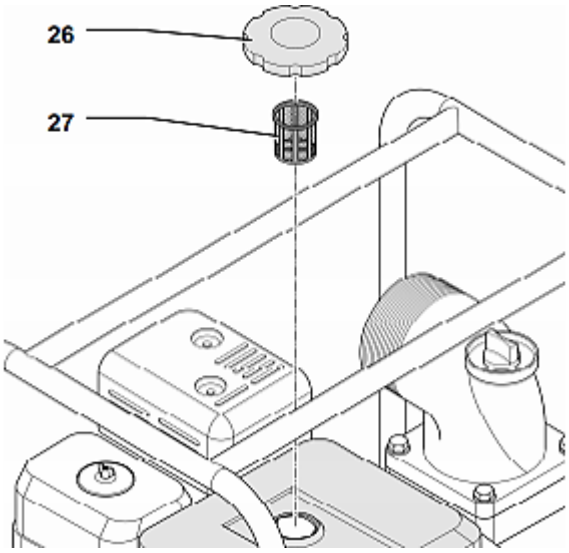


Cleaning/replacing the air filter

1. Unscrew the wing nut **(25).**
2. Remove all parts of the air filter **(19–24).**
3. Clean the air filter **(21)** with soap water, then let it dry. Replace a damaged air filter.
4. Clean all the other parts **(19, 20, 22–25)** and the hub of the filter **(A)** using a cloth.
5. Add a few drops of engine oil onto the air filter **(21)** and squeeze it to spread the oil.
6. Re-plug the parts **(19–24)** to the filter hub (A).
7. Re-screw the wing nut **(25)** by hand.







Cleaning/replacing the spark plug

1. Pull the spark-plug connector off the spark plug **(17).**
2. Screw out the spark plug **(17)** using a spark-plug wrench **(34).**
3. Replace a damaged spark plug. Clean sooty electrodes. Adjust the spark gap (0.7–0.8 mm).
4. Re-screw the spark plug **(17)** well in (20 Nm).
5. Re-plug the spark-plug connector onto the spark plug **(17).**

Attention! Whenever the motor is running, the silencer is very hot. So, be extremely careful to avoid burns.

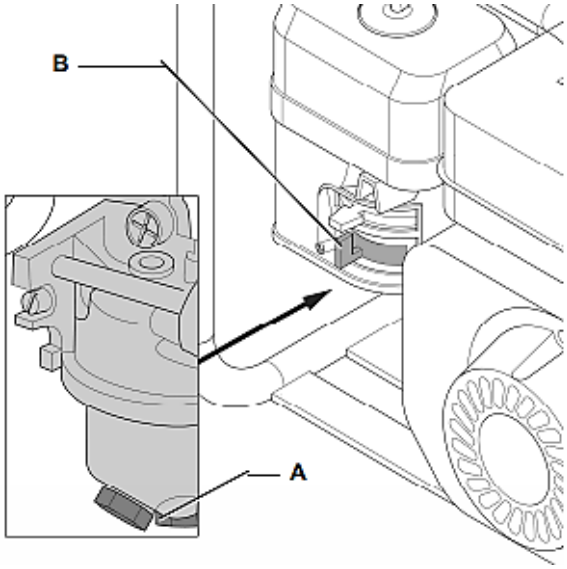
Visually examine the spark plug. If you detect open signs of wear or remark a torn gasket, replace it. Before reinstalling a spark plug, first clean it with the help of a wire brush.

Note! When screwing in a new spark plug: After stop of the gasket, screw half a turn farther. A used gasket is screwed ¾ of a turn farther after stop.

Attention! Make sure that the spark plug is firmly screwed in; otherwise, it can become very hot and damage the motor. Never use any spark plug the heat rating of which is incorrect!

Cleaning the tank filter inset

1. Thoroughly clean the area around the filler. Prevent dirt from penetrating into the tank.
2. Open the tank lid **(26).**
3. Take out the filter inset **(27).**
4. Clean the filter inset **(27)** using spirit/ethanol and let it dry.
5. Re-place the filter inset **(27).**
6. Re-close the tank lid **(26).**



Draining fuel from the carburettor/fuel tank

1. Place a suitable collection container under the drain plug **(A)** of the carburettor.
2. Open the fuel cock **(B)** (right position). By opening the fuel cock, the fuel is drained.
3. Screw out the drain plug **(A).** The fuel is being drained.
4. Re-screw the drain plug **(A)** in.
5. Re-close the fuel cock **(B)** (left position).

Checking the engine-oil level, topping up/changing engine oil

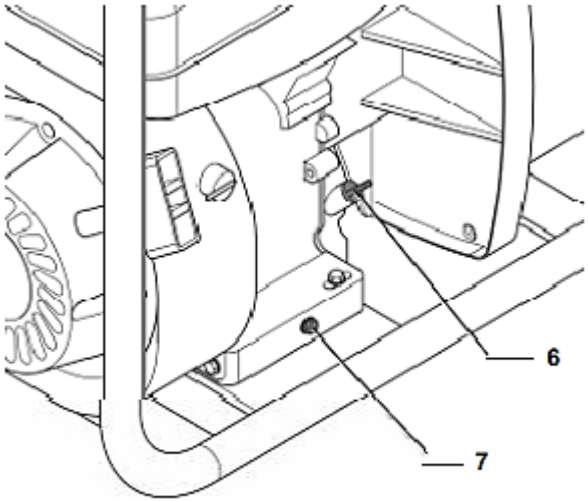
To avoid damages to the engine, the oil-warning system switches off the engine under a low oil level. Nevertheless, the main switch remains on the “On” position.

After the oil-warning system has switched the engine off,

1. switch off the main switch,
2. top up with oil,
3. re-start the water pump.

Before working on the filler

1. Thoroughly clean the area around the filler; prevent dirt or water from penetrating into the oil system.
2. Place the water pump horizontally.



Checking the oil level/topping up oil

1. Screw out the plug **(6).**
2. Wipe off the dipstick of the plug.
1. Hold the plug **(6)** into the filler (do not screw it in).
2. Pull out the plug **(6)** and inspect the dip-stick to check the oil level (target state: marking of max. oil level of the lower edge of the filler, see fig.).
3. Top up with oil if required.
4. Re-screw the plug **(6)** in.

Changing the oil

1. Let the engine warm up during several minutes before changing the oil.
2. Place a suitable collection container under the drain plug **(7)** (if necessary, place the water pump on a raised position and place a collecting tray under the water pump).
3. Screw out the drain plug **(7)** together with the O-ring.
4. Screw out the plug **(6).** The engine oil is being drained.
5. Re-screw the drain plug **(7)** in; do not forget the O-ring.
5. Top up with engine oil.
6. Re-screw the plug **(6)** in.

Notes!

- When using the pump in very dusty conditions, the maintenance frequency lowers.
- Maintenance should be performed by a qualified person.

Note! Dispose of used oil in accordance with the national regulations.

Cleaning

- After work, thoroughly rinse the pump with clean water, particularly when having pumped dirty water; if required, drain the water residues afterwards. Thoroughly clean the water pump after every use using a soft cloth. Be sure not to use pointed or scratching cleaning agents.
- Particularly look to it that the air vents and cooling fins of the engine are free from dirt.

Transporting and storing the device

Attention! Before carrying the water pump into a closed room, wait for the pump to cool down for a minimum of 20 min to avoid any fire hazard. When transporting the device, close the petrol cock. Transport the device in an upright position to avoid petrol leakage.

1. The room where the pump is stored should be dry and clean.
2. Clean the inner part of the pump. After mud, sand, or dirt has been pumped, pump clean water, then open the drain plug and, after draining, re-install it. Otherwise, the impeller could be damaged when you re-use the device.
3. Empty the petrol tank.

Attention! Petrol is highly flammable and might explode.

- Close the petrol cock. Empty the float chamber of the carburettor, collect the petrol.
- Open the fuel cock and screw the drain plug into the carburettor.

4. Screw the spark plug loose and fill in approx. one soup spoon full of motor oil in the opening of the spark plug. Turn the motor several times for the oil to disperse evenly, then screw the spark plug in again.
5. Cover the water pump to protect it against dust.

Troubleshooting

Motor does not start

Check the following:

- Sufficient quantity of petrol? Petrol cock open? Petrol getting into the carburettor? If the petrol cock is open, open the petrol drain plug of the bottom of the carburettor to see if there is petrol.
- Is the motor switch set to the “ON” position?
- Is there enough motor oil?
- Check the ignition spark.
    - Remove the spark-plug connector, remove the dirt around the spark plug, screw out the spark plug.
    - Put the spark plug into its connector.
    - Set the motor switch to the “ON” position.
    - Earth the side electrode by touching the motor, apply the hand starter to see if an ignition spark is visible.
    - If there is no ignition spark, read and follow the section “Starting the motor.”

Water pump does not pump

Check the following:

- Is there enough water in the pump?
- Is the suction basket clogged?
- Is the suction side screwed tight?
- Are the hoses in a good condition?
- Is the suction distance to high (> 5 m)?

Technical specifications

GENERAL REMARKS		
Item number		**64767**
Dry weight (kg)		approx. 25
Dimensions (L×W×H) (mm)		505×380×415
Conditions of use	**Temperature** (°C)	−20–+40
	Max. height of use (m)	1000
WATER PUMP (SELF PRIMING)		
Max. flow rate (m^3/h)		60
Max. suction depth (m)		7
Max. lifting height (m)		30
Diameter of pressure-suction connection (mm)		80

MOTOR	
Type	Air-cooled one-cylinder four-stroke engine
Model	170F-1, OHV
Cubic capacity (cm^3)	212
Engine power (kW/hp)	4.1/7.0
Nominal speed (min^{-1})	3600
Fuel	Lead-free petrol with a min. octane of 95
Fuel tank capacity (ℓ)	3.6
Fuel consumption (ℓ/h)	approx. 1.6
Oil tank capacity (ℓ)	approx. 0.6
Oil type	10 W30
Start method	Recoil starter, e-starter (depending on model)
Stop method	Main switch

Important note:

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