

# User's manual

## LIFAN petrol water pump

92491–92495

# wiltec



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.

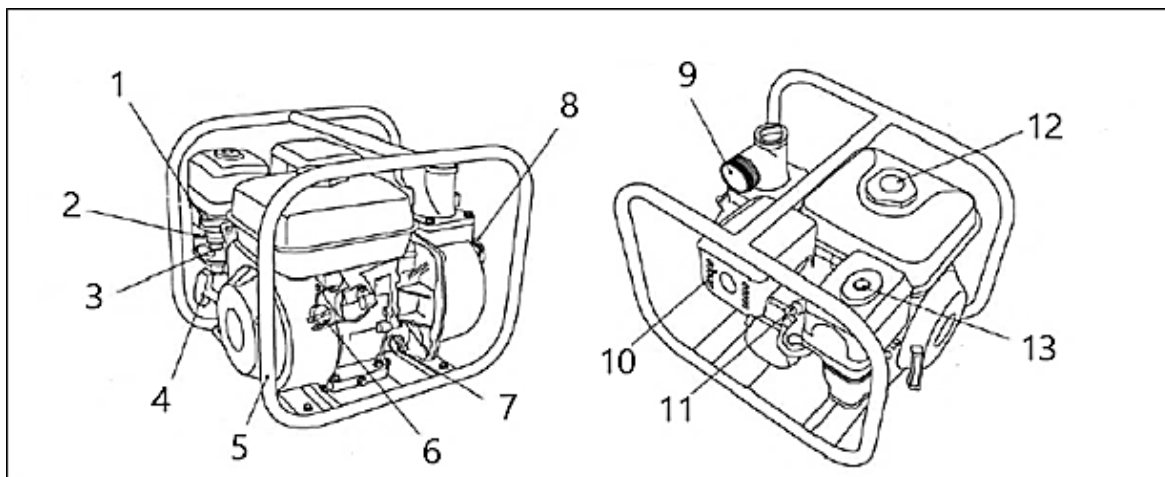
- Before using the pump for the first time, inspect it to make operation of the pump safer.
- For safety reasons, you must not use the pump to convey flammable or corrosive liquids such as petrol or acids. Make sure that neither caustic liquids such as seawater, nor chemical solutions, nor alkaline liquids are conveyed.
- Place the pump on a level and solid surface. A water pump placed in an inclined position or upside down might provoke fuel leakages.
- 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 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.



### 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

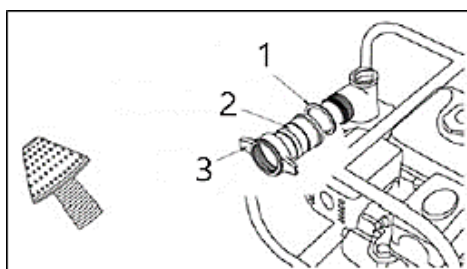


Nº	Name	Nº	Name
1	Throttle lever	8	Pump inlet
2	Throttle	9	Pump outlet
3	Petrol tap	10	Exhaust
4	Starter rope	11	Spark plug
5	Frame	12	Tank cap
6	ON/OFF motor switch	13	Air filter
7	Oil level gauge		

## Preparing the commissioning

### 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.



Nº	Name	Nº	Name
1	Gasket	3	Bracket
2	Hose fitting		



### 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.

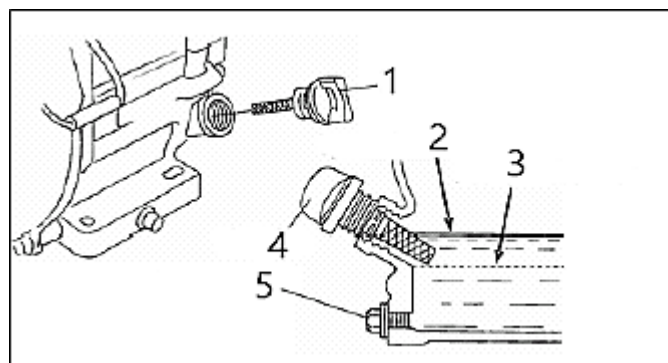
## Controlling the motor oil level

### **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.

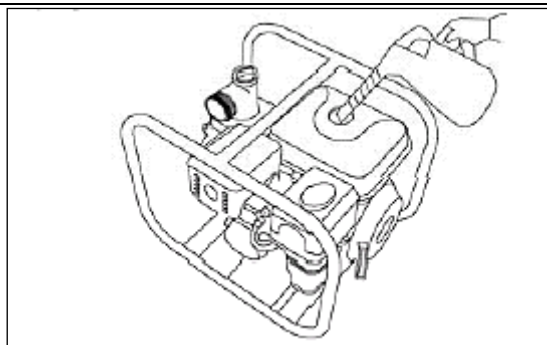


No	Name	No	Name
1	Oil level gauge	4	Oil level gauge
2	Upper oil level	5	Drain screw
3	Lower oil level		

 **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 combination of motor oil and petrol or dirty petrol. Avoid that dirt, dust, or water get into the fuel tank.



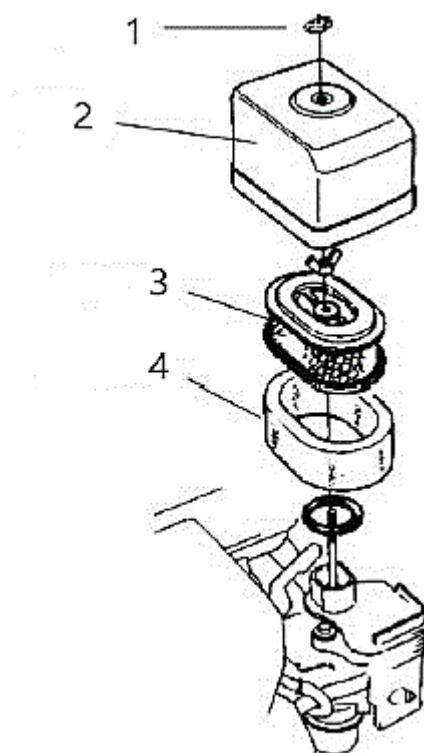
## **Attention!**

- 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.
- Avoid that petrol be spilt when filling petrol in; 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 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.

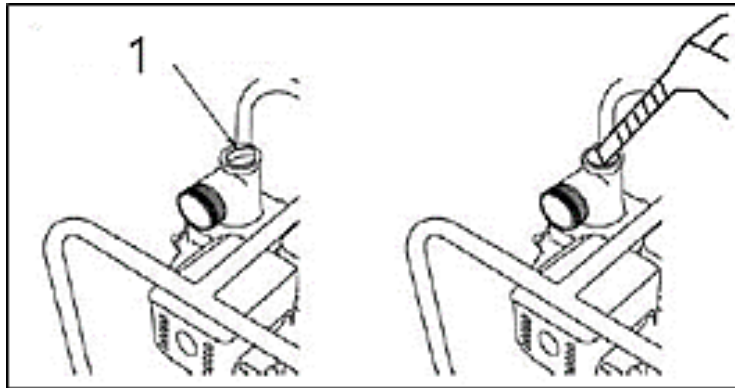


No	Name
1	Winged nut
2	Air filter cover
3	Paper filter
4	Foam filter

## 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 gas-kets 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.



No	Name
1	Water fill-in cover

## Operation

### Before the operation

- For your own safety and for a maximum of service life of your device, it is vital 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.

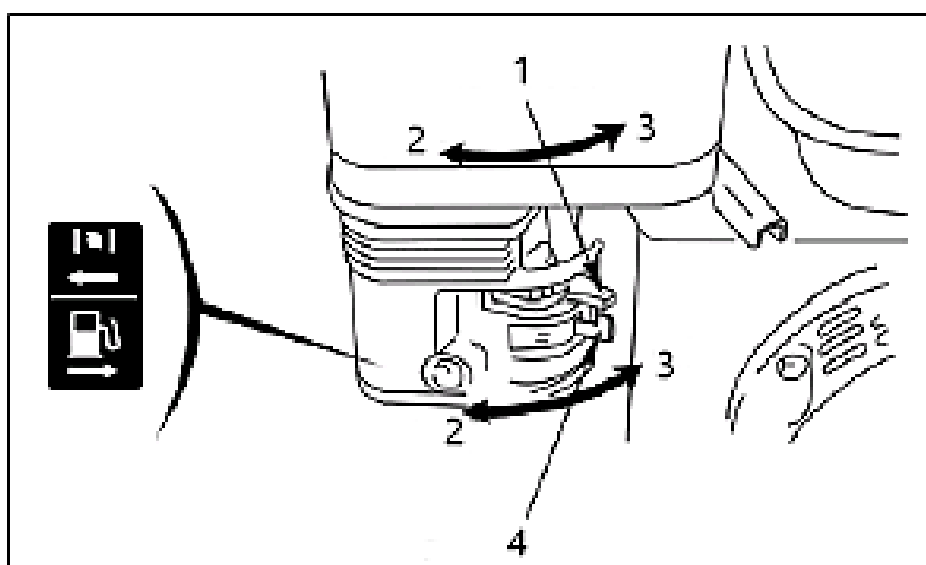
- Check if the hose connections and clamps are correctly attached.
- Check if the filter is in good condition and correctly installed on the suction hose.

## 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 petrol tap 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.



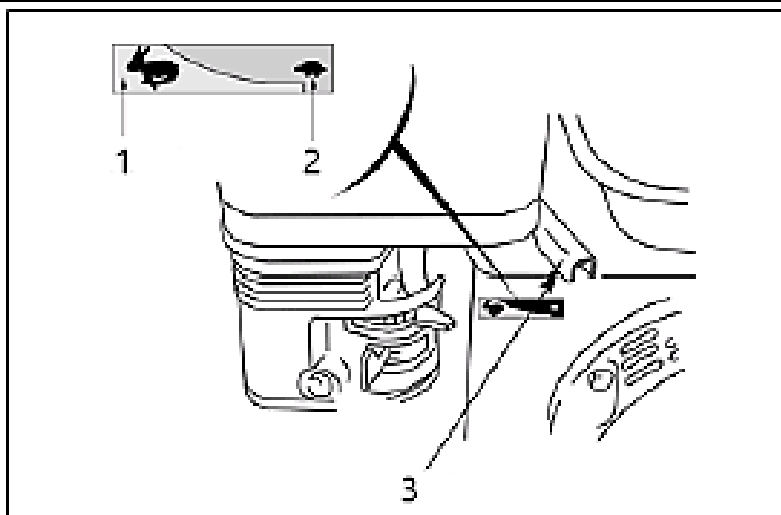
No	Name	No	Name
1	Throttle intensity	3	On/open
2	Off/closed	4	Fuel valve

4. Move the gas lever from the "OFF" position towards "ON" for approx. a  $\frac{1}{3}$  of the distance.
5. Set the motor switch to the "ON" position.
6. Pull the starter handle slightly until you feel a resistance, then pull it speedily. The starter handle must not rebound and hit against the motor. Guide it back with caution to avoid any damage of the starter.
7. If, when starting the motor, the throttle lever is set to the "CLOSED" position, set it gradually to the "OPEN" position as soon as the motor has become warm.

## Setting the speed of the motor

After starting the motor, set the gas lever to "Fast" for the pump to prime itself, and check the output of the pump. The power of the pump is controlled via the adjustment of the speed. By moving the gas lever to "Fast," the power of the pump is increased; by moving the gas lever to "Slow," the power of the pump is reduced.





No	Name	No	Name
1	Fast (hare)	3	Throttle lever
2	Slow (tortoise)		

### Switching the motor off

To perform an emergency switch-off, turn the motor switch to “OFF.” For normal switch-off, proceed as follows:

1. Move the gas lever to the lowest position.
2. Set the motor switch to the “OFF” position.
3. Set the petrol tap to the “OFF” position.
4. After use, open the water drain tap and empty the pump chamber. Remove the water fill-in cap and rinse the pump chamber with clean, fresh water. Then screw the water fill-in cap and water drain tap on again.

**Note!** After an automatic emergency switch-off, the motor switch must be set to the “OFF” position by the user.

### 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; this is a toxic gas that may cause unconsciousness or even death.

Component	Frequency	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
	Type of intervention					
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

#### Notes!

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



**Attention!** Only use original spare parts! Otherwise, the motor or pump could be damaged.

#### Changing the motor oil

Only use motor oil SAE 15 W/40 mineral for winter/summer. Change the motor oil with the motor being warm.

1. Screw out the oil gauge and oil drain plug, let the used oil drain into an appropriate collection container, screw the oil drain plug in again.
2. Fill in new oil.
3. Screw the oil gauge in again.

Oil quantity: 80ZB30–4.8Q      0.6 l

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

#### Maintaining the air filter

A dirty air filter reduces the quantity of air in the carburettor. To avoid problems with the carburettor, clean the air filter on a regular basis. Clean it more often under dusty conditions.



**Attention!** Do not clean the air filter with petrol or another highly flammable liquid; otherwise, there is a risk of fire or explosion.



**Attention!** Do not operate the motor without the air filter installed; otherwise, the device sucks in dirt and dust, which might lead to an early wear.

1. Screw off the air filter casing.
2. Wash the air filter in any high-boiling thinner or cleaning liquid, wait for it to dry.
3. Soak the air filter with clean motor oil and wrench out excess of oil.
4. Re-install the air filter.

## Maintaining the spark plug

- Recommended spark plugs: 8oZB3o–4,8Q NHSP LD F6RTCUI
- To keep the motor in a good state, the gap of the spark plug must be in a perfect condition, no carbon must have collected.

## Dismount the spark-plug connector



**Attention!** Whenever the motor is running, the silencer is very hot. So, be extremely care 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.
- Measure the spark-plug gap using a feeler gauge, readjust it by bending the side electrode. The spark-plug gap must be 0.70–0.80 mm.
- Check the condition of the spark-plug gasket or replace it by a new gasket. Slide it into the motor using a spark-plug wrench to avoid that the thread is damaged.

**Note!** When screwing in a new spark plug: After stop of the gasket, screw half a turn farther. A used gasket is screwed  $\frac{3}{4}$  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!

## 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 tap. 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 tap. Empty the float chamber of the carburettor, collect the petrol.
  - Open the petrol tap.
  - 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. Pull the starter handle lightly until you feel a resistance, then pull it further until the triangle mark of the starter wheel and the hole of the starter screw are aligned (s. picture below). At this position, both air inlet and outlet valves are closed; this will avoid that the inner part of the motor rust.

6. Cover the water pump to protect it against dust.

## Troubleshooting

### *Motor does not start*

Check the following:

- Sufficient quantity of petrol? Petrol tap open? Petrol getting into the carburettor? If the petrol tap 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 the its plug.
  - 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."

If the motor still does not start, contact an expert.

### *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 too high (> 5 m)?

If the pump still does not pump, contact an expert.

## Technical specifications

Item number	92491	92492	92493	92494	92495
Motor type	177F	50ZB20-1.4Q	168F-2E	168F-2E	168F-2B
Hose connection (mm)	100 (4")	50 (2")	80 (3")	50 (2")	80 (3")
Max. flow rate (m <sup>3</sup> /h)	80	9	66	36	48
Lifting height (m)	26	20	30	26	30
Motor power under 3600 $\frac{1}{m}$ (hp / kW)	8.9 / 6.6	2.5 / 1.4	6.5 / 4.8	6.5 / 4.8	6.5 / 4.8
Max. size of dirt particles (mm)	20	—	20	20	—
Noise level with 7 m distance (dB (A))	78				

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