

# Clarke®

## PUMP



## DIESEL ENGINE DRIVEN 4" PUMP

### MODEL NO: WPD100

PART NO: 7230178

## OPERATION & MAINTENANCE INSTRUCTIONS

UK  
CA | CE



ORIGINAL INSTRUCTIONS

GC 11/25

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## INTRODUCTION

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Thank you for choosing this Clarke Pump. Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully.

Keep these instructions for future reference.

**DO NOT** use it to pump:

- Sewage
- Dangerous liquids
- Salt water

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## GUARANTEE

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This pump is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the pump has been abused, tampered with, or not used for its primary function.

Faulty goods must be returned to their place of purchase, no pump can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

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## INVENTORY

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You should find the items in the list below in the carton.

1 x Diesel Powered Water Pump	2 x Rubber Washers
2 x 4" Hose Adaptors	3 x 'Jubilee Clip' style hose clip
2 x 4" BSP Locking Rings	1 x Filter / Strainer
1 x Toolkit containing 3 x open wrenches & screwdriver	2 x Ignition Keys

Speak to your Clarke dealer if items are missing or damaged.

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## GENERAL SAFETY RULES

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**WARNING: WHEN USING PUMPS, ALWAYS FOLLOW BASIC SAFETY PRECAUTIONS TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK AND PERSONAL INJURY. READ ALL INSTRUCTIONS BEFORE YOU OPERATE THIS PUMP AND SAVE THEM FOR FUTURE REFERENCE.**

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1. **ALWAYS** follow all safety precautions for the handling of fuel.
2. **ALWAYS** make sure that you are familiar with this pump and follow all instructions in this manual.
3. **ALWAYS** make sure that the pump is positioned correctly to prevent it from moving during operation.
4. Keep the area adjacent to the pump clear.
5. **ALWAYS** connect the strainer to the suction hose to stop stones and other solids from being pulled into the pump. These can cause damage to the pump.
6. **ALWAYS** keep the pump dry and clear of the discharge hose.
7. Only use parts supplied by the manufacturer. Using non-standard parts can be dangerous.
8. **ALWAYS** use at least 300mm of flexible hose to make plumbing connections to the pump. Rigid piping can put stress on the pump, causing damage. If you use rigid piping, it must be supported to eliminate strain on the connections.
9. **DO NOT** refuel the engine while it is operating, let the engine cool before refuelling.
10. **DO NOT** use to pump petrol (or other flammable liquids), or corrosive chemicals. The function of this pump is to pump WATER ONLY.
11. **DO NOT** operate this pump in an explosive atmosphere, near combustible materials, or where there is insufficient ventilation.
12. **DO NOT** let children use this pump.
13. **DO NOT** run the pump dry. **ALWAYS** fill the pump with water before starting.
14. **DO NOT** direct the discharge flow towards another person.
15. **DO NOT** over-tighten drain or filler plugs. Excessive force can damage the threads or the pump body.
16. **DO NOT** direct the water discharge towards electrical wiring or equipment.

## GENERAL SAFETY IN THE WORKPLACE

1. **ALWAYS** keep work area clean & tidy. Cluttered work areas invite accidents.
2. **NEVER** over-reach. Keep proper footing and balance at all times.
3. **ALWAYS** make sure that the workplace is well lit. Make sure that that lighting is placed so that you will not be working in your own shadow.
4. Dress correctly. Loose clothing or jewellery can get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
5. **ALWAYS** wear safety glasses. (Everyday glasses are not safety glasses).

## CARE OF PUMPS

1. **ALWAYS** examine the pump for damage that can effect the operation.
2. The Clarke service department will only replace damaged components using original spare parts.

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## ENVIRONMENTAL PROTECTION

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At the end of its working life, do not discard this pump or its components with general household waste. Packaging must be taken to a recycling centre and discarded appropriately.

One of the most damaging sources of environmental pollution is oil and diesel products. Never throw away unused diesel or used oil with domestic refuse or flush it down a sink or drain. Collect any oil or diesel in a leak proof container and take it to your local waste disposal site.










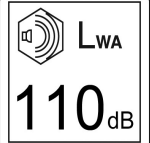

Should any components become completely un-serviceable and require disposal, plastic and metal components should be disposed for re-cycling according to local regulations.



Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.

In effect, this means that this product must not be disposed of with general household waste but in accordance with the laws governing Waste Electrical and Electronic Equipment (WEEE) at a recognised disposal facility.

## SAFETY SYMBOLS

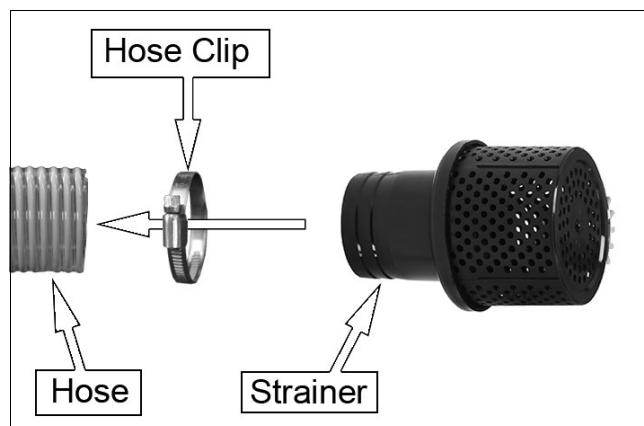
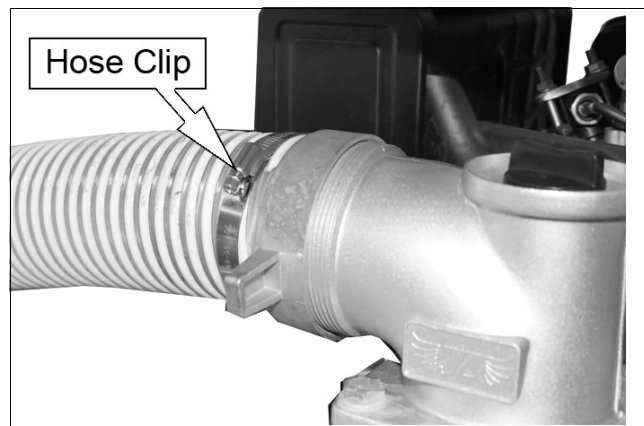
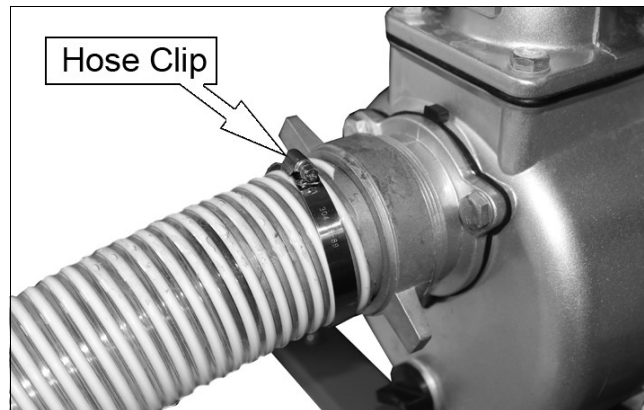
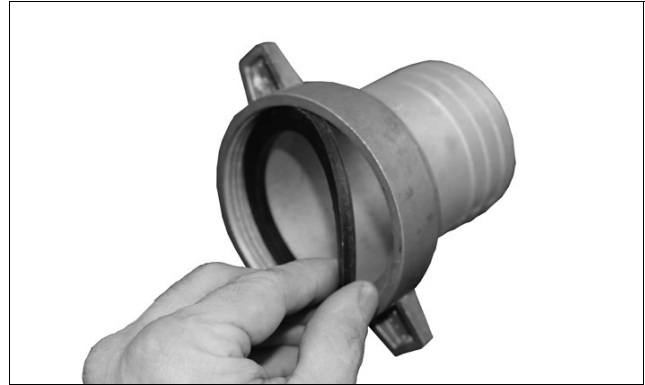
	Read instruction manuals before use.		Wear eye protection.
	Wear ear protection.		Wear protective footwear.
	<b>Warning:</b> Hot surfaces		<b>DO NOT</b> remove or tamper with protection and safety devices.
	<b>Warning:</b> Keep away from rotating parts.		Keep bystanders at a safe distance.
	<b>Warning:</b> Asphyxiating Atmosphere. Only use outdoors or in a well ventilated area.		<b>Warning:</b> High Noise Level
	Use extreme caution when handling fuels.		

The meanings of the markings and symbols on the pump are shown above.

# ASSEMBLY

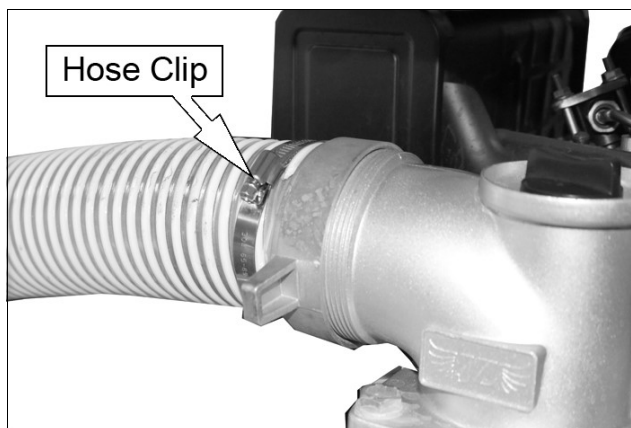
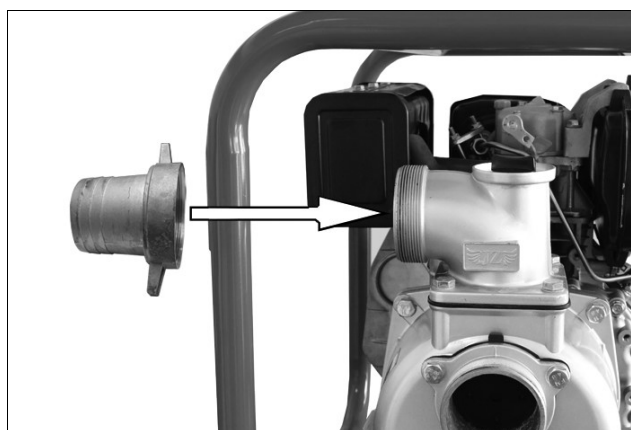
## INSTALLING THE SUCTION HOSE

1. Fit the rubber washer into the adaptor.
  - Make sure that it is seated correctly.
2. Screw the hose adaptor onto the pump.
3. Slide the hose on to the adaptor and lock in position with the hose clip supplied.
4. Install the strainer on to the other end of the hose as protection from pickup of solid materials.



## INSTALLING THE DISCHARGE HOSE

1. Fit the rubber washer into the adaptor.
  - Make sure that it is seated correctly.
2. Screw the adaptor onto the pump.
3. Slide the hose onto the adaptor and lock in position with the hose clip supplied.



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## BEFORE USE

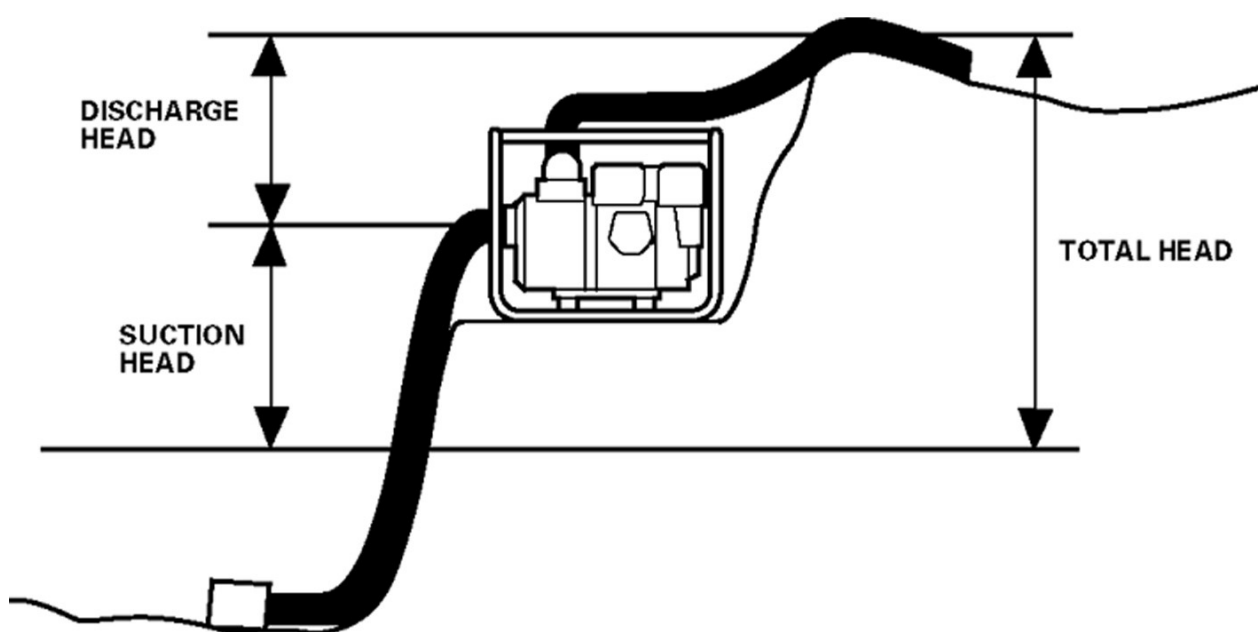
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### POSITIONING THE PUMP

For optimum performance, place the pump near the water level and use hoses that are no longer than necessary.

As "head" (pumping height) increases, pump output decreases. The length and size of the suction and discharge hoses can also effect pump output.

The discharge head is always greater than the suction head, so it is important for the suction head to be the smaller part of the total head.





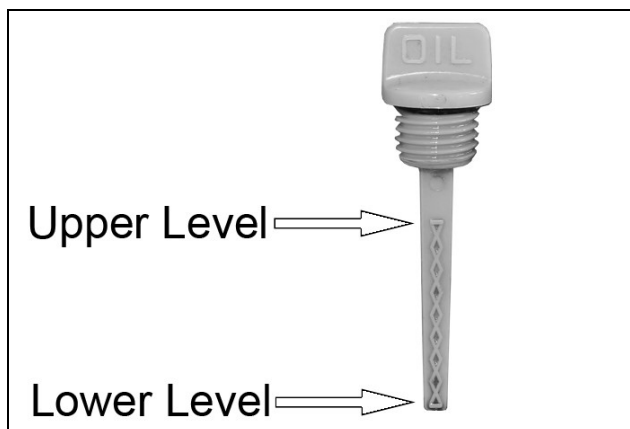
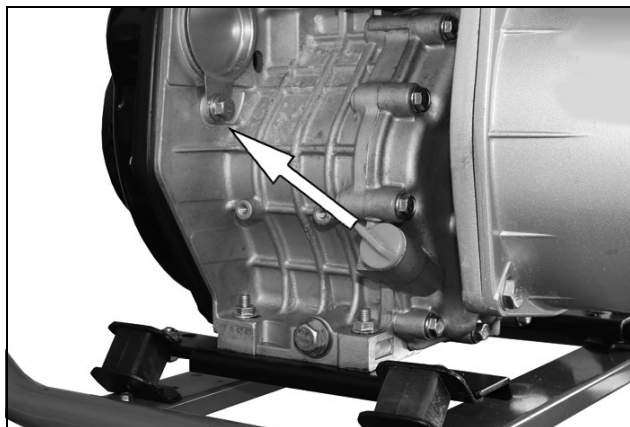
## CHECK THE ENGINE OIL LEVEL



**WARNING: TO DO THIS CHECK, STAND THE PUMP ON LEVEL GROUND WITH THE ENGINE SWITCHED OFF.**

**WARNING: BE CAREFUL NOT TO TOUCH HOT PARTS OF THE ENGINE WHEN CHECKING THE OIL LEVEL.**

1. Turn the oil filler cap anti-clockwise and remove from the oil filler tube.
2. Wipe the dipstick clean with a lint free cloth.
3. Slide the dipstick into the oil filler tube and remove it again. DO NOT screw in the oil filler cap/dipstick when doing this.
4. If the oil level is at or below the 'Lower level' mark on the dipstick, Fill the crankcase with oil to the 'Upper Level' mark.
  - Oil capacity is 1.65 Litre.
  - We recommend you use SAE 10W30 oil in this pump, available from your Clarke dealer.
5. Replace the oil filler cap.



## ADD DIESEL FUEL



**WARNING: REFUEL IN A VENTILATED AREA, AWAY FROM SOURCES OF IGNITION.**

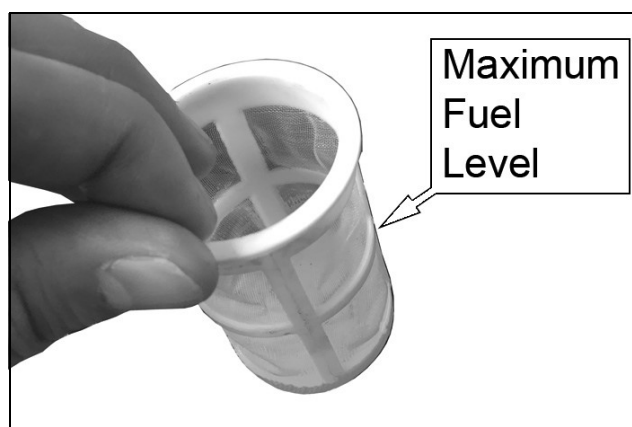
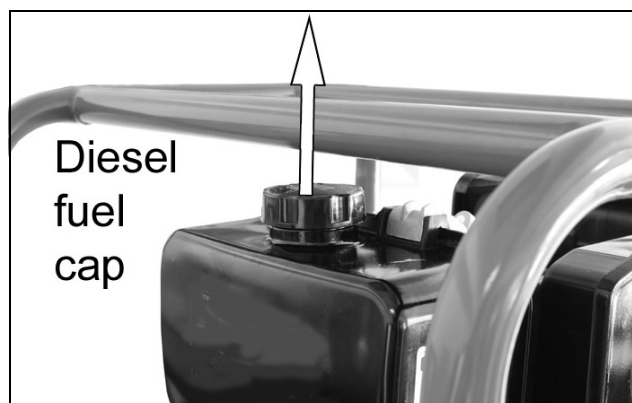
**WARNING: IF THE ENGINE IS HOT, LET IT COOL BEFORE REFUELING.**

**WARNING: KEEP FUEL OUT OF THE REACH OF CHILDREN.**

### RECOMMENDED FUEL

**Only use regular diesel.**

1. Remove the fuel tank cap.
  - Inside the fuel tank is a fuel filter which collects contaminants as you refuel.
2. Slowly add fuel to the fuel tank.
  - Make sure that the fuel level is not above the maximum fuel level band on the fuel filter.
3. Replace the fuel tank cap.



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## OPERATION

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**WARNING: THE WATER BEING PUMPED WILL BE POLLUTED IF THIS PUMP BECOMES DAMAGED AND LUBRICANT WITHIN THE ENGINE ESCAPES.**

**WARNING: WHEN YOU OPERATE THE PUMP THE EXHAUST MUFFLER WILL BECOME VERY HOT.**

**WARNING: DO NOT OPERATE THE ENGINE IN A CLOSED SPACE, MAKE SURE THAT THERE IS SUFFICIENT AIRFLOW AROUND THE PUMP.**

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### PRIME THE PUMP

1. The pump **MUST** be primed before use.
2. Before starting the engine, remove the filler cap from the pump chamber.
3. Fill the pump chamber and inlet hose with water.
  - A foot valve should be connected to the lower end of the inlet hose between the hose and the strainer will help to maintain priming.
4. Replace the filler cap and tighten it securely.

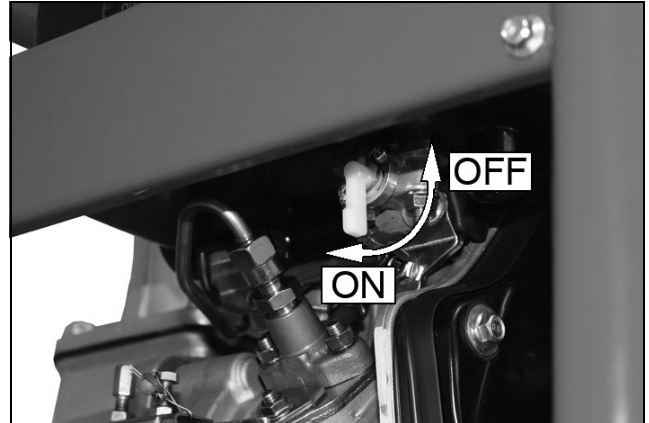


**WARNING: OPERATING THE PUMP DRY WILL DESTROY THE PUMP SEAL. IF THE PUMP IS OPERATED DRY, STOP THE ENGINE IMMEDIATELY AND LET THE PUMP COOL BEFORE PRIMING**

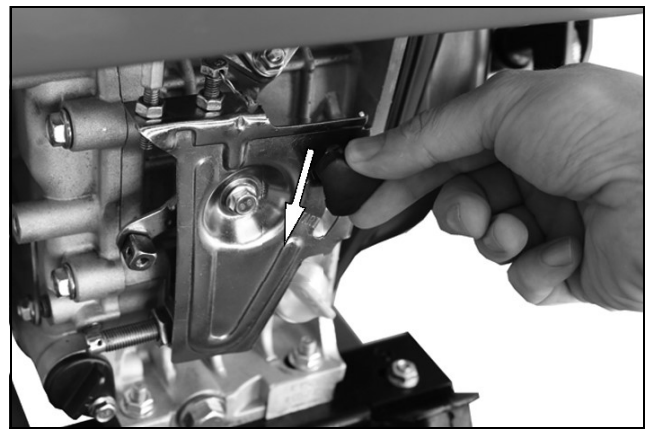
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## STARTING THE ENGINE-HAND RECOIL STARTING

1. MAKE SURE THE PUMP IS PRIMED
2. Set the fuel valve to the ON position.



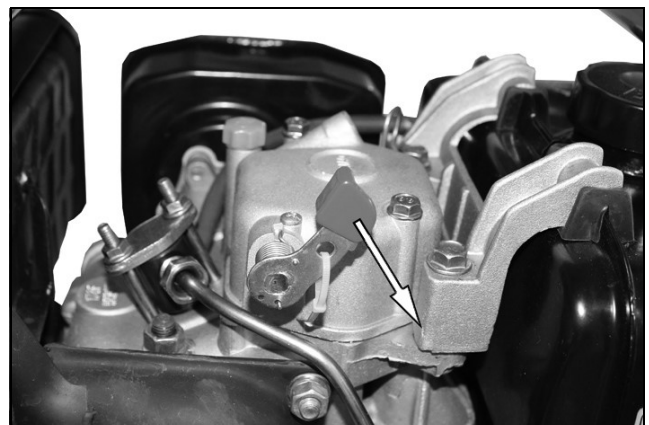
3. Set the speed adjusting knob to the START position.



4. Hold the starting handle tightly and pull until you start to feel resistance, then return it slowly to its initial position.



5. Push the decompression lever down and release.



6. Pull the starting handle lightly until you start to feel resistance. Then pull up and away suddenly to start the engine.

**NOTE:** If the engine fails to start go back to step 4 and try again.



**WARNING: WHEN THE ENGINE HAS STARTED, RETURN THE STARTING HANDLE SLOWLY TO PREVENT INJURY/DAMAGE AS IT RETURNS.**

## **STARTING THE ENGINE-ELECTRIC STARTING**

The procedure for starting using the starting motor is the same as for manual starting

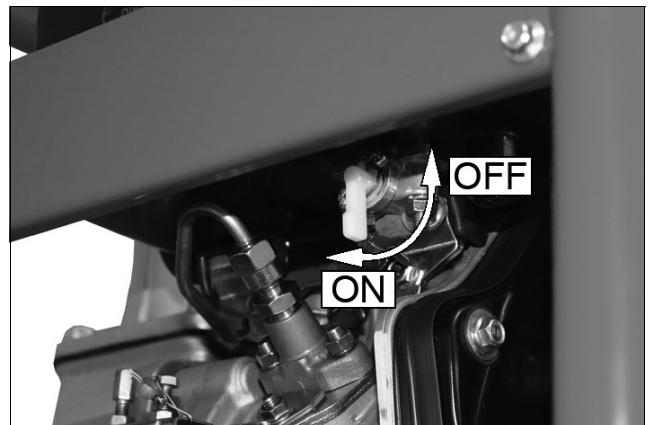
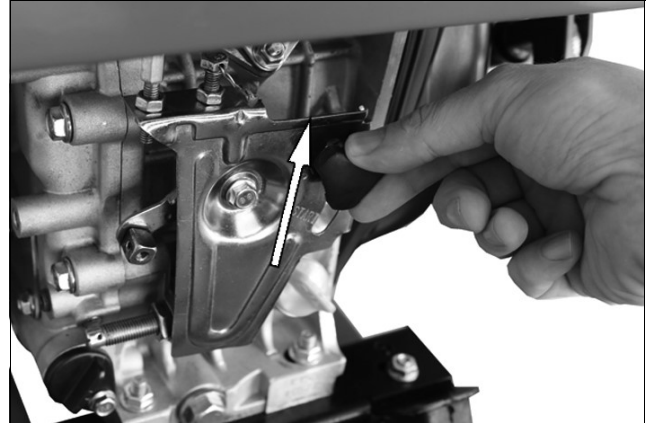
1. Open the fuel valve.
2. Set the speed lever to the start position.
3. Turn the starter key-switch to the "Start" position.

If the engine does not start after 10 seconds, wait for about 15 seconds before trying again.

## STOPPING THE ENGINE

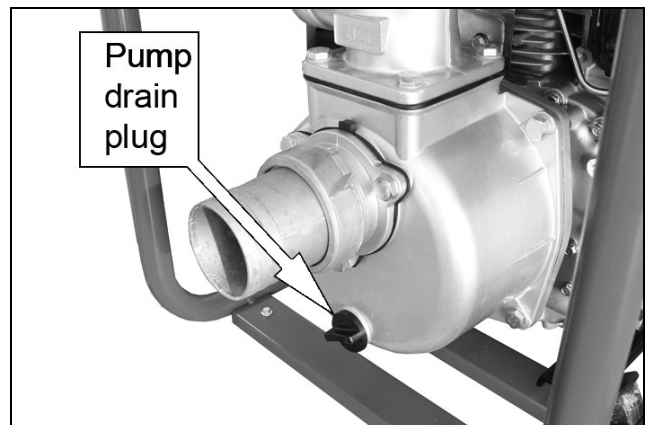
1. Set the speed adjusting knob to "Stop" position.
  - You do not need to use the decompression lever when stopping the engine.
2. Turn fuel switch back to "S" (OFF) position.
3. Hold the starting handle tightly and pull until you start to feel resistance, then return it slowly to its original position.

**NOTE:** This can help to prevent cylinder corrosion.



## AFTER USE

1. Remove the pump drain plug to drain the pump chamber.
2. Remove the filler cap and flush the pump chamber with clean, fresh water.
3. Let the water drain from the pump chamber, then replace the filler cap and drain plug.



# MAINTENANCE

## ENGINE MAINTENANCE

Refer to the engine manual that is included with the machine for the relevant information on engine maintenance. Your engine manual provides detailed information for performing this task.

## CHANGING THE ENGINE OIL



**CAUTION:** PROLONGED EXPOSURE TO USED ENGINE OIL IS DANGEROUS, ALWAYS WASH YOUR HANDS THOROUGHLY AFTER HANDLING USED ENGINE OIL.

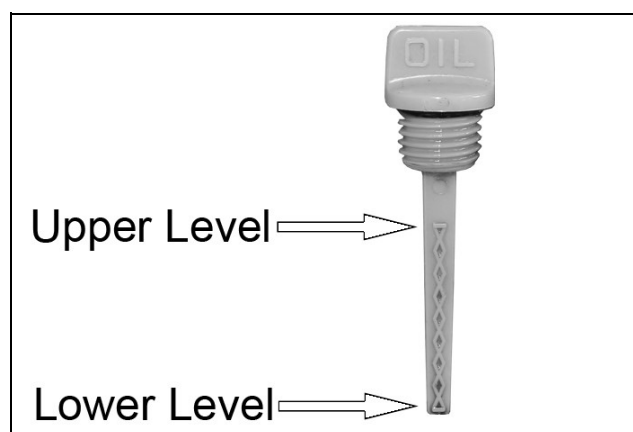
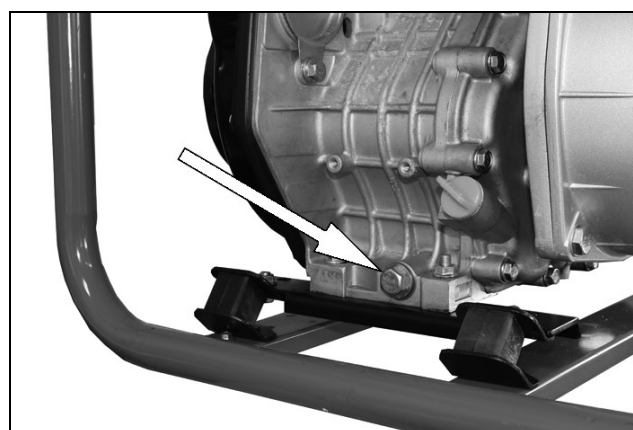
The oil in the engine must be changed after the first 20 hours use and then every 6 months or 50 running hours.

Replace the oil filter at the 3rd change of machine oil. After that, change the filter every 500 running hours.

1. Unscrew and remove the oil filler cap/dipstick.
2. Put an oil collection tray below the drain plug.
3. Unscrew the drain plug and let the used engine oil drain from the crankcase into the oil collection tray.

**NOTE:** Drain the engine oil when the engine is warm; as the oil will flow more freely.

4. Replace the drain plug.
5. Fill the crankcase with oil to the 'Upper Level' mark on the dipstick.
  - Oil capacity is 1.65 Litre.
  - We recommend you use SAE 10W30 oil in this pump, available from your Clarke dealer.
6. Replace the oil filler cap/dipstick.



## ENVIRONMENTAL PROTECTION

One of the most damaging sources of pollution is oil, do not throw it away or pour it down drains. Put it in a leak proof container and take it to your local waste disposal site.

## CHECK THE FUEL SYSTEM

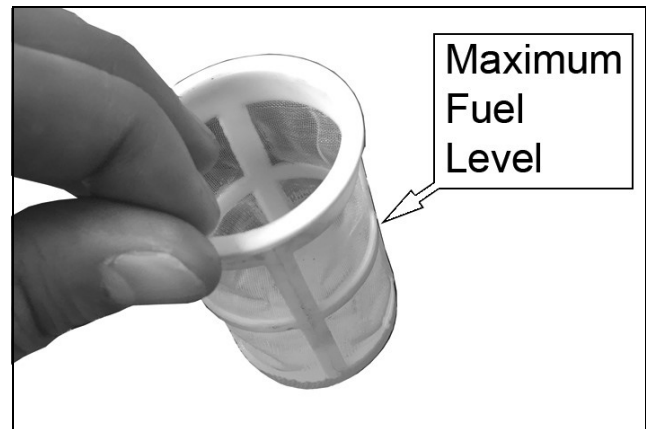
Check the fuel tank monthly for contamination.

### CHANGING THE FUEL FILTER

The fuel filter must be kept clean to guarantee best performance from the engine. Remove the filter from the tank and clean it every 6 months or 200 running hours. It should be replaced every year of 500 running hours.

Loosen the fuel plug and drain off the fuel.

Disconnect the high pressure fuel pump and pull out the fuel filter.



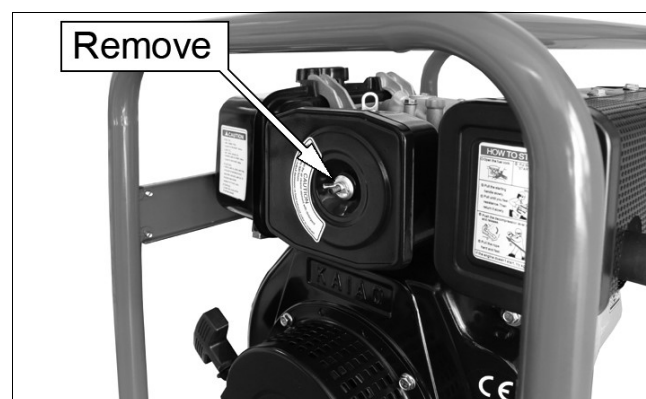
## CHANGING THE AIR FILTER



CAUTION: DO NOT OPERATE THE PUMP WITHOUT THE AIR FILTER INSTALLED AS THIS WILL CAUSE EXCESSIVE WEAR TO THE ENGINE.

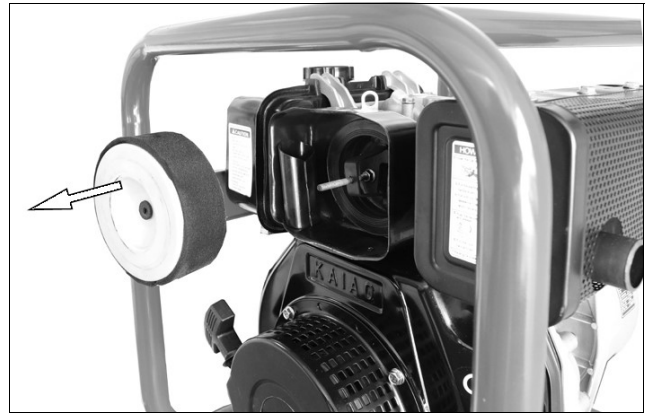
Clean the air filter after 6 months or 500 hours of operation (or more often in unusually dusty conditions) as follows.

Remove the wingnut and lift off the air filter cover.





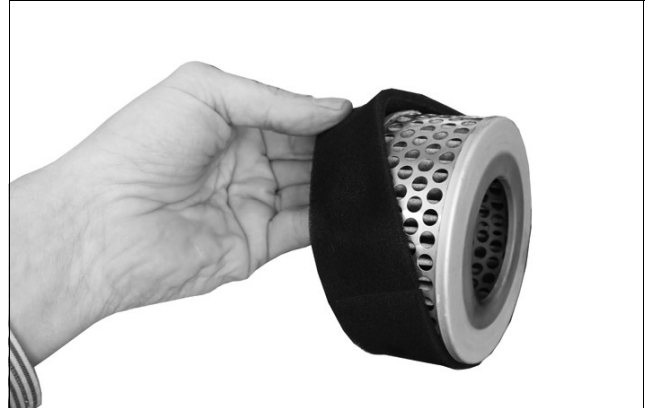
7. Remove the air filter assembly.



8. Remove the air filter element.

9. Clean the air filter or replace if necessary.

- If the filter is dirty, wash the foam filter in a solution of warm water and mild detergent and rinse thoroughly. Let the filter dry fully.
- When it is dry, dip the filter in clean engine oil and squeeze out excess oil.
- It is normal for blue smoke to come out of the exhaust for a short time when the filter has been cleaned.



10. Replace the filter and cover.

## STORAGE

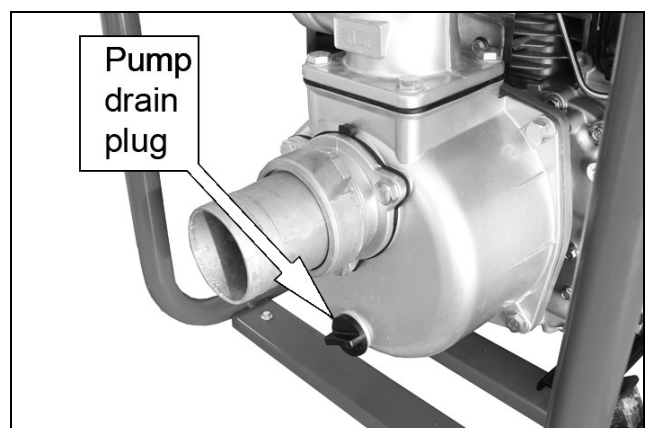
Before long-term storage:

The pump must be cleaned by flushing with clean water, otherwise, the impeller may be damaged in next operation. After flushing, remove the Pump drain plug and drain all the water from the pump. Then replace the drain plug.

Run the engine briefly to consume any fuel inside.

While the engine is still warm, drain off and refill the engine oil using the draining and filling plugs previously shown

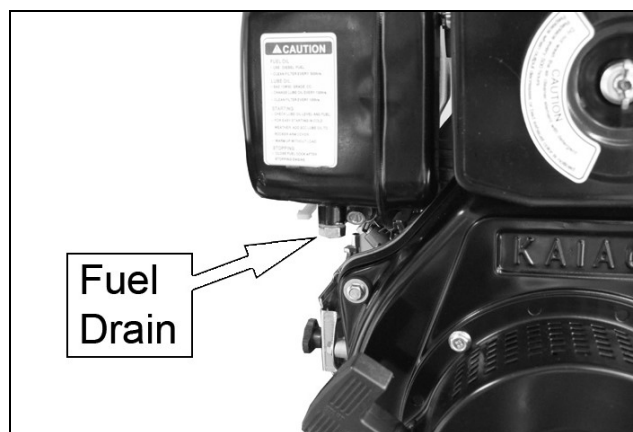
Remove the rubber plug from the cover of the rocker shaft and put about 2cc of lubricant into it before replacing the plug



Hold down the decompression lever and turn the key-switch to the start position. Let the engine rotate for 2 or 3 seconds. This drives any intake mixture out of the combustion chamber.

Discharge the fuel in the fuel tank. Remove the fuel pipe connector to drain the fuel, then re-tighten the fuel pipe connector.

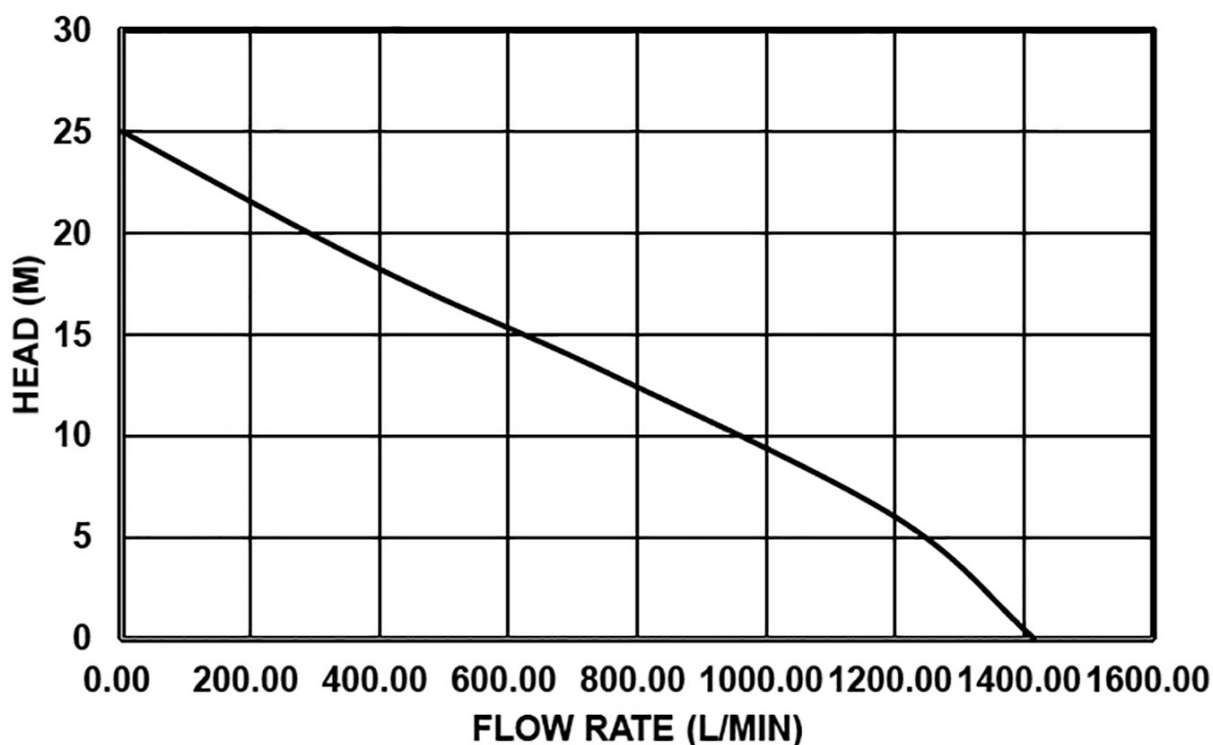
Store the machine in a dry location.



## PERFORMANCE CURVE

WPD100 Performance Curve

Model	Power	Q (m <sup>3</sup> /h)	0	17.4	28.8	45.6	72	85
		Q (l/min)	0	290	480	760	1200	1416
WPD100	10.0HP	Head (m)	25	20	17	13	6	0



## SPECIFICATION

Item	Specifications
Pump dimensions (L x W x H)	650 x 520 x 600 mm
Pump Weight (kgs)	78 kg
Water classification	Clean water
Max solids in suspension	7 mm
Inlet/Outlet Size	4" BSP
Maximum Delivery	1416L/min (85,000 L/hr)
Max flow (rated)	85 m <sup>3</sup> /hr
Max Head	25 m
Suction Head	7 m
Max Pressure	2.5 bar
Engine type/speed	7.5 kW (10.0Hp)
Fuel tank capacity (diesel)	5.0 L (safe limit)
Lubrication oil capacity/grade	1.65 L (SAE 10W/30)
Sound Pressure Level	94 dB LpA
Sound Power Level	107 dB LWA
Guaranteed sound power level	110 dB LWA
Uncertainty Factor (K)	3 dB
IP Rating	IP20
Fuel consumption	1.7 L/hr max (1.5 L/hr@75% power)
Battery model	28B20L (12V lead-acid)
Battery rating	32 Ah

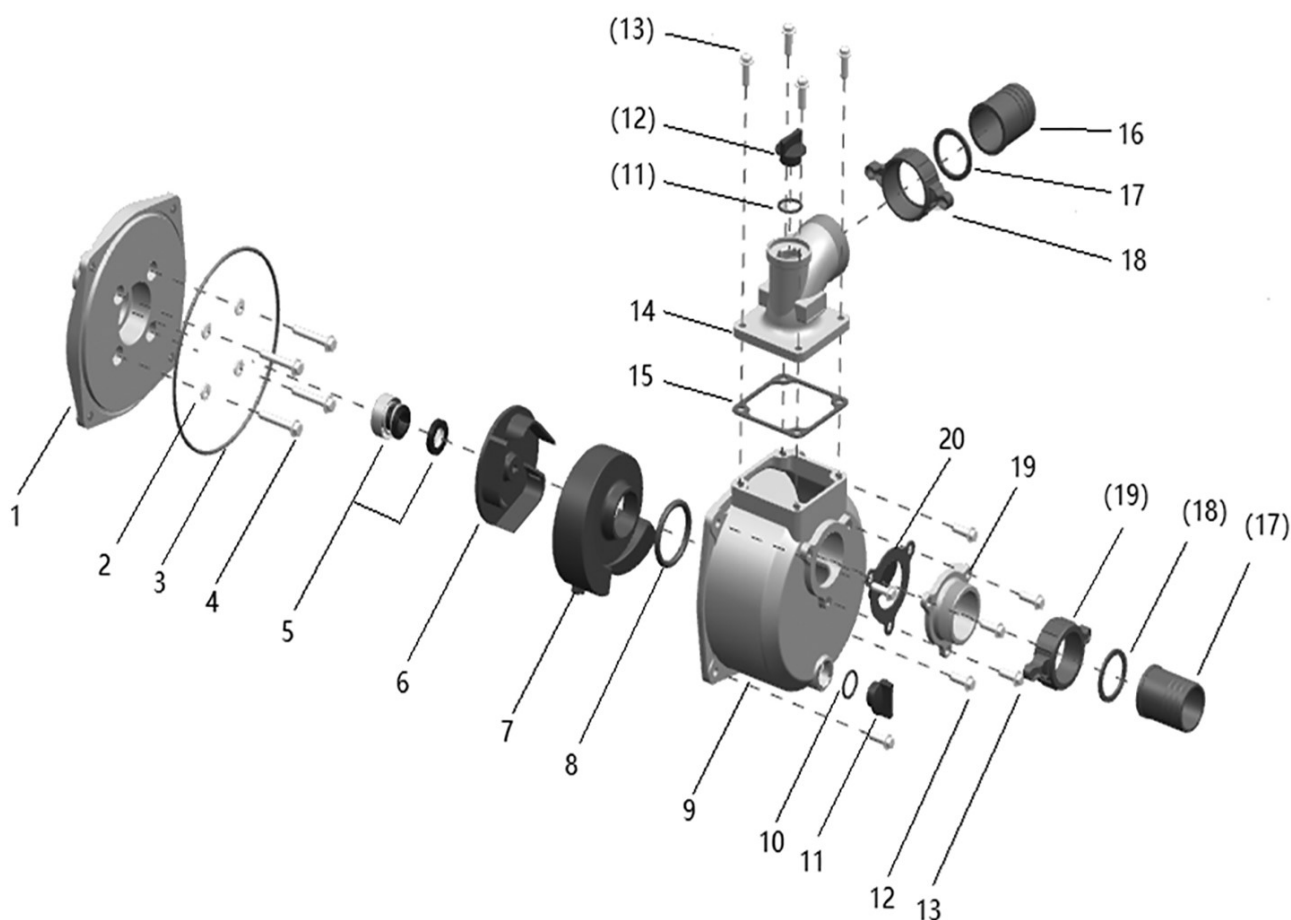
## TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
The engine does not start.	No fuel in tank.	Add fuel.
	Fuel valve is set to Off.	Set the fuel valve to On
The engine stops and will not restart.	No fuel in tank.	Add fuel to the tank.
The pump fails to prime.	Priming chamber not filled correctly.	Fill priming chamber leaving no air gap.
	Air leaking due to damaged hose, broken hose clamps, split/ill-fitting gasket.	Repair as necessary.
	Blocked inlet hose.	Clean strainer and make sure that it is not submerged in mud or sediment. Make sure that there are no kinks in the delivery hose.
	Damaged impeller.	Disassemble the pump and replace the impeller.
	Air leaking through damaged seal.	Replace seal.
Low output from pump.	The impeller is clogged.	Clean strainer and make sure that it is not submerged in mud or sediment.
	Pickup or delivery hose obstructed.	Clear obstruction and make sure that there are no kinks in hose.
	Suction lift too high.	Set the pump nearer to the water level.
	Congested material inside pump.	Disassemble the pump and clean out.
	Damaged impeller.	Disassemble the pump and replace the impeller.

If you cannot correct the fault, speak to your local dealer or the Clarke International service department.

# COMPONENT PARTS

## PUMP ASSEMBLY



No	DESCRIPTION
1	Pump cover
2	Nylon gasket M8
3	O-ring
4	Bolt M8
5	Mechanical seal
6	Impeller
7	Impeller cover
8	O-ring
9	Pump body
10	Cover sealing ring

No	DESCRIPTION
11	Observation hole cover
12	Bolt M8 x 22
13	Bolt M8 x 20
14	Outlet pipe
15	Outlet pipe gasket
16	Inlet pipe
17	Inlet pipe gasket
18	Pipe joint nut
19	Pipe connector
20	Check valve

For engine components, refer to Engine Manual supplied with the pump.



## DECLARATION OF CONFORMITY


This is an important document and should be retained.

We hereby declare that this product(s) complies with the following legislation: The following standards have been applied to the product(s):

2000/14/EC	Outdoor Noise Directive	EN 62321-4:2014/A1:2017, EN IEC 62321-2:2021, EN 62321-7-1:2015, EN 62321-7-2:2017,
2006/66/EC	Battery Directive	EN 809:1998+A1:2009+AC:2010, EN 62321-3-1:2014, EN 62321-5:2014, EN 62321-6:2015,
2006/42/EC	Machinery Directive	EN ISO 3744:1995, EN 62321-1:2013, EN 62321-8:2017
2016/1628	Particulate Emission and Type-Approval for Non-Road Mobile Machinery Regulation	
2011/65/EU	Restriction of Hazardous Substances (RoHS) Directive	

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

The UKCA mark was first applied in: 2025

<b>Manufacturer:</b>	Clarke International Ltd, Hemnall Street, Epping, Essex, CM16 4LG, United Kingdom	<b>Notified Body:</b>	N/A
<b>Product Description:</b>	Water Pump	<b>Assessment Procedure:</b>	Annex V of above noise legislation
<b>Model Number(s):</b>	WPD100	<b>Measured LWA:</b>	107 dB
<b>Serial/Batch Number:</b>	Refer to product/packaging label	<b>Guaranteed LWA:</b>	110 dB
<b>Document Holder:</b>	Alan Pond	<b>Signed:</b>	 J.A Clarke Director
<b>Date of Issue:</b>	21/05/2025		

WPD100 UKCA Clarke DOC 052125

Page 1 of 1

# DECLARATION OF CONFORMITY - CE



## DECLARATION OF CONFORMITY


This is an important document and should be retained.

We hereby declare that this product(s) complies with the following legislation: The following standards have been applied to the product(s):

2000/14/EC	Outdoor Noise Directive	EN 62321-4:2014/A1:2017, EN IEC 62321-2:2021, EN 62321-7-1:2015, EN 62321-7-2:2017,
2006/66/EC	Battery Directive	EN 809:1998+A1:2009+AC:2010, EN 62321-3-1:2014, EN 62321-5:2014, EN 62321-6:2015,
2006/42/EC	Machinery Directive	EN ISO 3744:1995, EN 62321-1:2013, EN 62321-8:2017
2016/1628	Particulate Emission and Type-Approval for Non-Road Mobile Machinery Regulation	
2011/65/EU	Restriction of Hazardous Substances (RoHS) Directive	

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2025

<b>Manufacturer:</b>	Clarke International Ltd, Fitzwilliam Hall, Fitzwilliam Place, Dublin 2, Republic of Ireland	<b>Notified Body:</b>	N/A
<b>Product Description:</b>	Water Pump	<b>Assessment Procedure:</b>	Annex V of above noise legislation
<b>Model Number(s):</b>	WPD100	<b>Measured LWA:</b>	107 dB
<b>Serial/Batch Number:</b>	Refer to product/packaging label	<b>Guaranteed LWA:</b>	110 dB
<b>Document Holder:</b>	Alan Pond	<b>Signed:</b>	 J.A Clarke Director
<b>Date of Issue:</b>	21/05/2025		

WPD100 CE Clarke DOC 052125

Page 1 of 1

# A SELECTION FROM THE VAST RANGE OF

# Clarke®

## QUALITY PRODUCTS



**AIR COMPRESSORS**  
From DIY to industrial, Plus air tools, spray guns and accessories.

**GENERATORS**  
Prime duty or emergency standby for business, home and leisure.

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