Operator’s Manual

Pump

PST3 750

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Manufacturer

Wacker Neuson Production Americas LLC

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www.wackerneuson.com

Original instructions

This Operator’s Manual presents the original instructions. The original language of this Operator’s Manual is American English.

Foreword

SAVE THESE INSTRUCTIONS—This manual contains important instructions for the machine models below. These instructions have been written expressly by Wacker Neuson Production Americas LLC and must be followed during installation, operation, and maintenance of the machines.

Machine	Item Number
PST3 750	0620454 0620455 0620457

Machine documentation

- From this point forward in this documentation, Wacker Neuson Production Americas LLC will be referred to as Wacker Neuson.
- Keep a copy of the Operator's Manual with the machine at all times.
- Use the separate Parts Book supplied with the machine to order replacement parts.
- If you are missing any of these documents, please contact Wacker Neuson to order a replacement or visit www.wackerneuson.com.
- When ordering parts or requesting service information, be prepared to provide the machine model number, item number, revision number, and serial number.

Expectations for information in this manual

- This manual provides information and procedures to safely operate and maintain the above Wacker Neuson model(s). For your own safety and to reduce the risk of injury, carefully read, understand, and observe all instructions described in this manual.
- Wacker Neuson expressly reserves the right to make technical modifications, even without notice, which improve the performance or safety standards of its machines.
- The information contained in this manual is based on machines manufactured up until the time of publication. Wacker Neuson reserves the right to change any portion of this information without notice.
- The illustrations, parts, and procedures in this manual refer to Wacker Neuson factory-installed components. Your machine may vary depending on the requirements of your specific region.

Manufacturer's approval

This manual contains references to *approved* parts, attachments, and modifications. The following definitions apply:

- **Approved parts or attachments** are those either manufactured or provided by Wacker Neuson.
- **Approved modifications** are those performed by an authorized Wacker Neuson service center according to written instructions published by Wacker Neuson.
- **Unapproved parts, attachments, and modifications** are those that do not meet the approved criteria.

Unapproved parts, attachments, or modifications may have the following consequences:

- Serious injury hazards to the operator and persons in the work area
- Permanent damage to the machine which will not be covered under warranty

Contact your Wacker Neuson dealer immediately if you have questions about approved or unapproved parts, attachments, or modifications.

EC Declaration of Conformity

Manufacturer

Wacker Neuson Production Americas LLC, N92W15000 Anthony Avenue, Menomonee Falls, Wisconsin 53051 USA

Product

Product	PST3 750, PS3 1503, PS3 2203, PS3 3703, PS3 5503
Product category	Water Pump Units
Product function	To pump fluid
Item number	5000620454, 5000620455, 5000620457, 5000009188, 5000008808, 5000008809, 5000009192, 5000008820, 5000008821, 5000008832, 5000008833, 5000009200, 5000008844, 5000008845

Directives and Standards

We hereby declare that this product meets and complies with the relevant regulations and requirements of the following directives and standards:

2006/42/EC, 2006/95/EC, 2004/108/EC, EN 809, EN ISO 12100, EN 60204-1, EN 60335-1, EN 60335-2-41, EN 62233, EN 61000-6

Authorized Person for Technical Documents

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Original Declaration of Conformity

1 Safety Information

1.1 Signal Words Used in this Manual

This manual contains DANGER, WARNING, CAUTION, *NOTICE,* and NOTE signal words which must be followed to reduce the possibility of personal injury, damage to the equipment, or improper service.

This is the safety alert symbol. It is used to alert you to potential personal hazards.

► Obey all safety messages that follow this symbol.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

► To avoid death or serious injury from this type of hazard, obey all safety messages that follow this signal word.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

► To avoid possible death or serious injury from this type of hazard, obey all safety messages that follow this signal word.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

► To avoid possible minor or moderate injury from this type of hazard, obey all safety messages that follow this signal word.

NOTICE: Used without the safety alert symbol, NOTICE indicates a situation which, if not avoided, could result in property damage.

Note: *A Note contains additional information important to a procedure.*

1.2 Machine Description and Intended Use

This machine is a submersible water pump. The Wacker Neuson Submersible Pump consists of an electric motor, an impeller, a strainer, and a metal casing with ports for water suction and discharge. Power is supplied to the pump through a corded plug or a hard-wired connection, depending on the installation. The operator connects hoses to the pump and routes them so that water is pumped from the work area and discharged into an appropriate location.

This machine is intended to be used for general de-watering applications. This machine is intended for the pumping of clear water, or water containing solids up to the size stated within the product's specifications, and up to the flow, head, and suction lift limits also stated within the product's specifications.

This machine has been designed and built strictly for the intended use described above. Using the machine for any other purpose could permanently damage the machine or seriously injure the operator or other persons in the area. Machine damage caused by misuse is not covered under warranty.

The following are some examples of misuse:

- Pumping flammable, explosive, or corrosive fluids
- Pumping hot or volatile fluids that result in pump cavitation
- Operating the pump outside of product specifications due to incorrect diameter hoses, incorrect length hoses, other inlet or outlet restrictions, or excessive suction lift or head
- Using the machine as a ladder, support, or work surface
- Using the machine to carry or transport passengers or equipment
- Operating the machine outside of factory specifications
- Operating the machine in a manner inconsistent with all warnings found on the machine and in the Operator's Manual.

This machine has been designed and built in accordance with the latest global safety standards. It has been carefully engineered to eliminate hazards as far as practicable and to increase operator safety through protective guards and labeling. However, some risks may remain even after protective measures have been taken. They are called residual risks. On this machine, they may include exposure to:

- Electric shock from improper electrical connections or high voltage
- Personal injury from improper lifting techniques
- Projectile hazard from discharge

To protect yourself and others, make sure you thoroughly read and understand the safety information presented in this manual before operating the machine.

1.3 Safety Guidelines for Operating the Machine

Operator training

Before operating the machine:

- Read and understand the operating instructions contained in all manuals delivered with the machine.
- Familiarize yourself with the location and proper use of all controls and safety devices.
- Contact Wacker Neuson for additional training if necessary.

When operating this machine:

- Do not allow improperly trained people to operate the machine. People operating the machine must be familiar with the potential risks and hazards associated with it.

Operator qualifications

Only trained personnel are permitted to start, operate, and shut down the machine. They also must meet the following qualifications:

- have received instruction on how to properly use the machine
- are familiar with required safety devices

The machine must not be accessed or operated by:

- children
- people impaired by alcohol or drugs

Application area

Be aware of the application area.

- Keep unauthorized personnel, children, and pets away from the machine.
- Remain aware of changing positions and the movement of other equipment and personnel in the application area/job site.
- Identify whether special hazards exist in the application area, such as toxic gases, or unstable ground conditions, and take appropriate action to eliminate the special hazards before using the machine.

Be aware of the application area.

- Do not operate the machine in areas that contain flammable objects, fuels, or products that produce flammable vapors.

Safety devices, controls, and attachments

Only operate the machine when:

- All safety devices and guards are in place and in working order.
- All controls operate correctly.
- The machine is set up correctly according to the instructions in the Operator’s Manual.
- The machine is clean.
- The machine’s labels are legible.

To ensure safe operation of the machine:

- Do not operate the machine if any safety devices or guards are missing or inoperative.
- Do not modify or defeat the safety devices.
- Only use accessories or attachments that are approved by Wacker Neuson.

Safe operating practices

When operating this machine:

- Remain aware of the machine's moving parts. Keep hands, feet, and loose clothing away from the machine's moving parts.

When operating this machine:

- Do not operate a machine in need of repair.

Personal Protective Equipment (PPE)

Wear the following Personal Protective Equipment (PPE) while operating this machine:

- Close-fitting work clothes that do not hinder movement
- Safety glasses with side shields
- Hearing protection
- Safety-toed footwear

After Use

- Stop the engine when the machine is not being operated.
- Close the fuel valve on engines equipped with one when the machine is not being operated.
- Ensure that the machine will not tip over, roll, slide, or fall when not being operated.
- Store the machine properly when it is not being used. The machine should be stored in a clean, dry location out of the reach of children.

1.4 Service Safety

Service training

Before servicing or maintaining the machine:

- Read and understand the instructions contained in all manuals delivered with the machine.
- Familiarize yourself with the location and proper use of all controls and safety devices.
- Only trained personnel shall troubleshoot or repair problems occurring with the machine.
- Contact Wacker Neuson for additional training if necessary.

When servicing or maintaining this machine:

- Do not allow improperly trained people to service or maintain the machine. Personnel servicing or maintaining the machine must be familiar with the associated potential risks and hazards.

Precautions

Follow the precautions below when servicing or maintaining the machine.

- Read and understand the service procedures before performing any service to the machine.
- All adjustments and repairs must be completed before operating the machine. Do not operate the machine with a known problem or deficiency.
- All repairs and adjustments shall be completed by a qualified technician.
- Turn off the machine before performing maintenance or making repairs.
- Remain aware of the machine's moving parts. Keep hands, feet, and loose clothing away from the machine's moving parts.
- Re-install the safety devices and guards after repair and maintenance procedures are complete.

Machine modifications

When servicing or maintaining the machine:

- Use only accessories/attachments that are approved by Wacker Neuson.

When servicing or maintaining the machine:

- Do not defeat safety devices.
- Do not modify the machine without the express written approval of Wacker Neuson.

Replacing parts and labels

- Replace worn or damaged components.
- Replace all missing and hard-to-read labels.
- When replacing electrical components, use components that are identical in rating and performance to the original components.
- When replacement parts are required for this machine, use only Wacker Neuson replacement parts or those parts equivalent to the original in all types of specifications, such as physical dimensions, type, strength, and material.

Cleaning

When cleaning and servicing the machine:

- Keep the machine clean and free of debris such as leaves, paper, cartons, etc.
- Keep the labels legible.

When cleaning the machine:

- Do not clean the machine while it is running.
- Never use gasoline or other types of fuels or flammable solvents to clean the machine. Fumes from fuels and solvents can become explosive.

Personal Protective Equipment (PPE)

Wear the following Personal Protective Equipment (PPE) while servicing or maintaining this machine:

- Close-fitting work clothes that do not hinder movement
- Safety glasses with side shields
- Hearing protection
- Safety-toed footwear

In addition, before servicing or maintaining the machine:

- Tie back long hair.
- Remove all jewelry (including rings).

1.5 Safety Guidelines for Lifting the Machine

When lifting the machine:

- Make sure slings, chains, hooks, ramps, jacks, forklifts, cranes, hoists, and any other type of lifting device used is attached securely and has enough weight-bearing capacity to lift or hold the machine safely. See section *Technical Data* for machine weight.
- Remain aware of the location of other people when lifting the machine.
- Only use the lifting points and tie-downs described in the Operator's Manual.
- Make sure the transporting vehicle has sufficient load capacity and platform size to safely transport the machine.

To reduce the possibility of injury:

- Do not stand under the machine while it is being lifted or moved.
- Do not get onto the machine while it is being lifted or moved.

1.6 Operating and Electrical Safety

This pump has not been investigated for use in swimming pool areas.

An acceptable motor-control switch shall be provided at the time of installation according to local codes and regulations.

WARNING
Electric shock hazard.

- ► To reduce risk of electric shock, connect only to a properly grounded, grounding-type receptacle.
- ► To reduce risk of electric shock, follow instructions in this manual for proper installation.

CAUTION
Electric shock hazard. This pump may automatically restart.

- ► Prior to working on the pump or control panel, all supply circuits must be disconnected.
- ► Do not remove cord and strain relief.

1.7 Labels

	CAUTION Do not attempt to operate this product before reading the Operator's Manual and understanding its contents. Mishandling of this product may result in explosion, fire, or electrical shock. ■ Do not pull on the power cord or use the power cord to lift the pump. ■ Always use a dedicated ground leakage circuit breaker. ■ Be sure to install the ground wire securely. ■ Be sure to disconnect the power supply before handling or inspecting the pump. Never insert your hand into the pump inlet holes while the pump is connected to the power supply.

2 Lifting and Transporting

WARNING
Personal injury hazard. The cable may be damaged, causing electrical leakage, shock, or fire. If the pump is not lowered into place correctly, it may fall and be damaged or cause injury.

- ► Do not under any circumstances install or move the pump by suspending it from the cable assembly.
- ► When installing the pump, pay close attention to its center of gravity and weight.

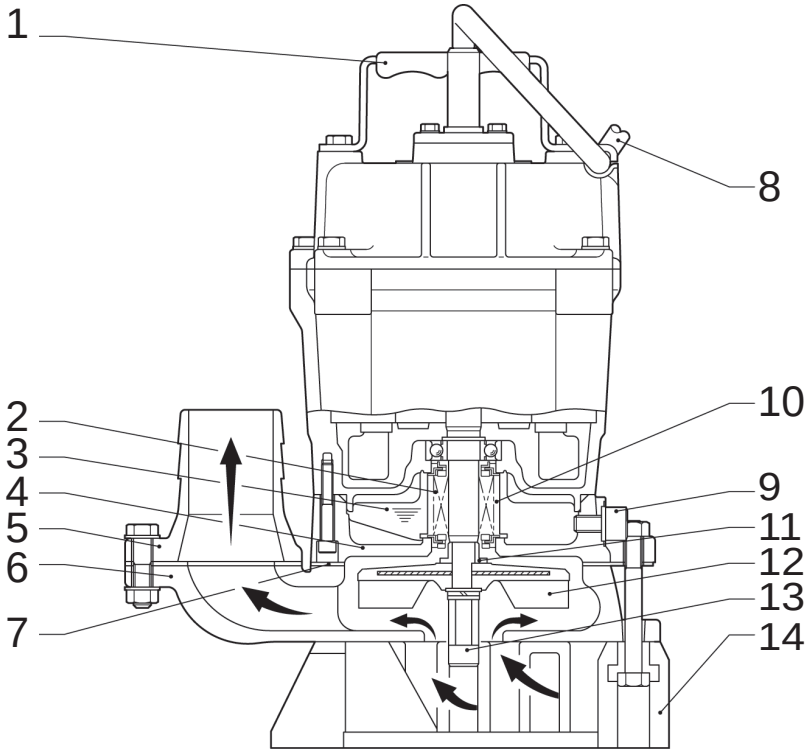
CAUTION
Personal injury hazard. When transporting the pump by hand, be sure to employ manpower commensurate with the weight of the pump.

- ► To avoid back injury when lifting the pump, bend the knees to pick it up rather than bending your back only.

Avoid dropping the pump or other strong impact. Lift the pump by holding it firmly with the hands or by attaching a rope or chain to the handle.

3 Installation

3.1 Components



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Ref.	Description	Ref.	Description
1	Lifting handle	8	Cable assembly
2	Mechanical seal	9	Oil plug
3	Lubricant	10	Oil lifter
4	Oil casing	11	Shaft sleeve
5	Hose coupling	12	Impeller
6	Pump casing	13	Stirrer
7	Casing packing	14	Strainer stand

3.2 Preparing the Machine for First Use

When the pump is delivered, first perform the following inspection checks:

- While unpacking, inspect the product for damage during shipment, and make sure all bolts and nuts are tightened properly.
- Check the model number to make sure it is the product that was ordered. Be certain it is the correct voltage and frequency.

Note: *If there is any problem with the product as shipped, contact your nearest dealer or Wacker Neuson representative at once.*

CAUTION
Personal injury hazard. Failure to observe this caution can lead to electrical shock, current leakage, fire, water leakage, or other problems.

► Do not operate this product under any conditions other than those for which it is specified.

3.3 Application Area

WARNING
Personal injury hazard.

- ► If the pump is used to drain a swimming pool, the pump must be connected to a Ground Fault Interrupter (GFI).
- ► If the pump is used in fountains, the pump must be connected to a Ground Fault Interrupter (GFI).
- ► The pump must not be used when people are in the water.
- ► Leakage of pump lubricants may cause pollution of water.
- ► Proper plug must be provided according to local codes and standards. Refer to wiring diagram.
- ► Do not use this pump in liquids other than water, such as oil, salt water, or organic solvents.
- ► Use with a power supply voltage within ±5% of the rated voltage.
- ► Do not use in water temperatures outside the range of 0–40°C (32–104°F) which can lead to failure, current leakage or shock.
- ► Do not use in the vicinity of explosive or flammable materials.
- ► Use only in fully assembled state.

Note: *Consult your local dealer or Wacker Neuson representative before using with any liquids other than those indicated in this document.*

1. Install the pump in a location with sufficient water level, where water collects readily.

Note: *See "Operating Water Level" for the water level necessary for operation. The discharge end of the hose should be located higher than the water surface. If the end of the hose is submerged, water may flow back to the pump when the pump is stopped; and if the hose end is lower than the water surface, water may overflow when the pump is turned off.*

2. The hose should be run as straight as possible, since excessive bending will hinder the water flow, preventing sufficient lift, and can even cause the hose to become clogged with earth. If the hose is crimped near the pump, air can become trapped in the pump and cause idle running.

CAUTION
Personal injury hazard. If large quantities of earth are sucked up, damage resulting from friction in the pump can lead to electrical leakage and shock.

- ► Use the pump in the upright position. To prevent the pump from becoming submerged in mud, mount it on a block or other firm base if necessary.

3. If used in a permanent installation, where the pump is not readily accessible after installation, please contact Wacker Neuson for a duplicate nameplate to be installed at the wellhead or on the control box so that it will be readily visible.

3.4 Preparing for Installation

Before installing the pump at a work site, you will need to have the following tools and instruments ready:

- Insulation resistance tester (megohmmeter)
- AC voltmeter
- AC ammeter (clamp-on type)
- Bolt and nut tighteners
- Power supply connection tools (screwdriver or box wrench)

Note: *Please also read the instructions that come with each of the test instruments.*

3.5 Checks to Make Before Installation

When a grounded plug is used:

Use the megohmmeter to measure the motor insulation resistance between the cable assembly prongs and ground.

When connection wires are used:

With the megohmmeter, measure the insulation resistance between the ground wire (Green) and each one of the two power wires.

Reference insulation resistance: 20MΩ or greater.

Note: *The reference insulation resistance (20MΩ or greater) is the value when the pump is new or has been repaired. For the reference value after installation, see the Periodic Maintenance table.*

3.6 Discharge Fittings

This pump series is offered with a variety of discharge fittings. Follow procedures noted below to assure a proper discharge connection.

Threaded Discharge Fitting (BSP)

Tighten hose coupling or discharge pipe securely and with proper gaskets.

Quick Disconnect Coupling (QD)

Assure coupling is tightened securely to pump discharge fitting and companion coupling is securely fastened with proper gaskets.

Barbed Discharge Fitting (Barb)

Place hose clamp over hose and push hose to the base of the discharge fitting. Tighten the hose clamp to secure the hose in place.

3.7 Electrical Wiring

WARNING
Personal injury hazard. Incorrect wiring can lead to current leakage, electrical shock or fire.

► Electrical wiring should be connected by a qualified person in accordance with all applicable regulations. Failure to observe this precaution not only risks breaking the law but is extremely dangerous.

Always make sure the pump is equipped with the specified overload protectors and fuses or breakers, so as to prevent electrical shock from a current leak or pump malfunction.

Operate within the capacity of the power supply and wiring.

WARNING
Electrical shock hazard. Failure to ground the pump properly can lead to electrical shock from a current leak or pump malfunction.

► Do not attach the grounding wire to a gas pipe, water pipe, lightning arrester, or telephone grounding wire.

3.8 Connecting the Power Supply

WARNING
Personal injury hazard. Electrical shock, shorting, fire, or unexpected starting of the pump can occur.

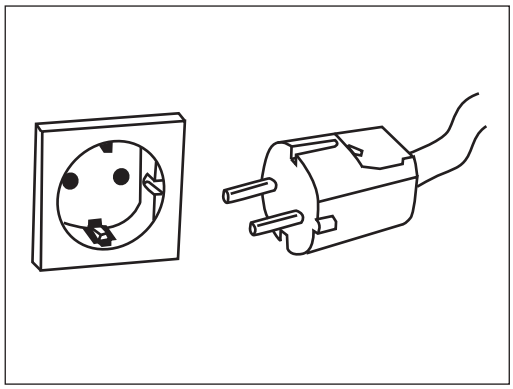
- ► Before connecting wires to the terminal, make certain the power supply is turned off (circuit breaker, etc.)
- ► Before inserting the power supply plug, make certain the power supply is turned off (circuit breaker, etc.).
- ► Do not use the pump with the cable assembly or plug connected loosely,

Draw power from a dedicated power outlet rated at 15 A or above. Sharing the outlet with other equipment may cause overheating at the branch outlet and could result in fire.

- ■ The grounded plug shall be connected as shown in the drawing.

***NOTICE*:** Be sure to use a dedicated power supply with a ground leakage circuit breaker.

Note: *The shape of the plug may differ from that shown in the illustration.*



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3.9 Cable Assembly

CAUTION
Fire, electrical leakage, or electrical shock hazard.

► If it is necessary to extend the cable assembly, use a core size equal to or larger than the original. This is necessary not only to avoid a performance drop, but to prevent cable overheating.

If a cable with cut insulation or other damage is submerged in water, there is a danger of damage to the pump, electrical leakage, electrical shock, or fire.

Be careful not to let the cable assembly be cut or become twisted. This may result in damage to the pump, electrical leakage, electrical shock, or fire.

If it is necessary to submerge the connection wires of the cable assembly in water, first seal the wires completely in a molded protective sleeve, to prevent electrical leakage, electrical shock, or fire.

Do not allow the cable assembly wires or power supply plug to become wet.

Make sure the cable does not become excessively bent or twisted, and does not rub against a structure in a way that might damage it.

If used in a deep-well installation, the cable assembly should be secured every 6 m (20 ft).

4 Operation

4.1 Before starting

1. Make sure once again that the product is of the correct voltage and frequency rating.

***NOTICE*:** Using the product at other than rated voltage and frequency will not only lower its performance but may damage the product.

Note: *Confirm the rated voltage and frequency on the model nameplate.*

2. Confirm the wiring, supply voltage, circuit breaker capacity, and motor insulation resistance.

Reference insulation resistance = 20 MΩ or greater.

Note: *The reference insulation resistance (20 MΩ or greater) is the value when the pump is new or has been repaired. For the reference value after installation see Maintenance and Inspection.*

3. The setting on the circuit breaker or other overload protector should be made in accord with the rated current of the pump.

Note: *See* Operating Specifications *for the rated current of the pump.*

4. When powering the pump with a generator, be certain the generator is sized to supply the required power for the pump and any other equipment powered by the generator.

4.2 Operation

WARNING
Burn hazard. The pump may become very hot during operation. Allow the pump to cool before handling.

- ► To avoid being burned, be careful not to contact the pump accidentally.
- ► Do not touch an operating pump.

Make sure no extraneous objects such as pins, nails or other metal objects are sucked into the pump. These can damage the pump or cause it to malfunction, and can result in electrical shock or electrical leakage.

When the pump is not used for an extended period, be sure to turn off the power (circuit breaker, etc.). Deterioration of the insulation may lead to electrical leakage, electrical shock, or fire.

In case of a power outage, turn off the power to the pump to avoid having it start unexpectedly when the power is restored, presenting serious danger to people in the vicinity.

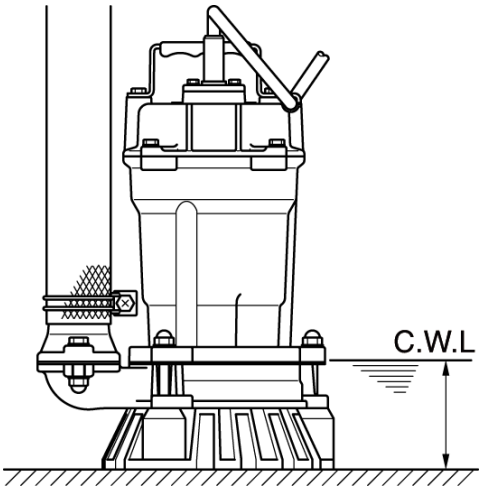
NOTICE: Pay careful attention to the water level while the pump is operating. Dry operation may cause the pump to malfunction.

Note: *See* Operating Water Level *for the water level necessary for operation.*

Sharp bends in the hose, especially near its base, may cause air pockets to form resulting in idle operation. Lessen the degree of bending while continuing to operate the pump.

4.3 Operating Water Level

CAUTION
Damage to pump, current leakage, or electrical shock hazard.
► Do not operate the pump below the C.W.L. (Continuous running Water Level) indicated below.



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Pump Model	Continuous running Water Level (C.W.L.)
PST3 750	90 mm (3.5 in)

4.4 Motor Protection System (Motor Protector)

The pump has a built-in motor protection system. If the motor overheats, for reasons such as the following, the pump will automatically stop operating regardless of the water level, to protect the motor:

- Change in supply voltage polarity
- Overload
- Open-phase operation or operation under constraint

NOTICE: Always determine the cause of the problem and resolve it before resuming operation. Simply repeating cycles of stopping and restarting will result in damage to the pump. Do not continue operation at very low lift, low water level, or while the strainer is clogged with debris. Not only will performance suffer, but also such conditions may cause noise, heavy vibration, and malfunctioning.

4.5 Emergency Shutdown Procedure

Perform the procedure below if a breakdown/accident occurs while the machine is operating.

1. Turn off the pump.
2. Disconnect the power supply.
3. Contact the rental yard or machine owner.

5 Maintenance

5.1 Periodic Maintenance Schedule

The table below lists basic machine maintenance. Tasks designated with check marks may be performed by the operator. Tasks designated with square bullet points require special training and equipment.

Pump	Daily	Monthly	Every 6 months or 1000 hrs.	Every year or 2000 hrs.	Every 2–5 years
Measure operating current. Compare with rated current.	✓				
Measure supply voltage. Compare with allowable range (within ±5% of rated voltage).	✓				
Measure insulation resistance. Reference insulation resistance = 1MΩ or greater. **(1)**		✓			
Pump inspection. A noticeable drop in performance may indicate wear in the impeller, etc., or else clogging of the strainer, etc. Remove the clogged debris and replace any worn parts.		■			
Lubricant inspection.			■		
Change lubricant. Designated lubricant: SAE 10W/20W. **(2)**				■	
Change mechanical seal. **(3)**				■	
Overhaul. This should be carried out even if there are no problems with the pump. The frequency depends on how continuously the pump is in use. **(4)**					■

(1) *If the insulation resistance has become noticeably lower than the previous inspection, an inspection of the motor will be necessary.*
(2) *See Lubricant Inspection and Lubricant Change in this section.*
(3) *Specialized know-how is required for inspecting and replacing the mechanical seal. Consult with your nearest dealer or Wacker Neuson representative.*
(4) *Consult with your nearest dealer or Wacker Neuson representative regarding overhauls.*

5.2 Maintenance and Inspection

Regular maintenance and inspections are a necessity for continued efficient functioning of the pump. If any abnormal conditions are noticed, refer to the *Troubleshooting* section and take corrective measures immediately. It is recommended that a spare pump be kept ready in case of any problems.

WARNING
Personal injury hazard from electrical shock or unexpected starting of the pump motor.

► Before inspecting the pump, make certain the power supply (circuit breaker, etc.) is turned off. Then unplug the cable assembly from the receptacle or detach it from the terminals.

Washing the pump

Remove accumulated matter from the surface of the pump and wash it with clean water. Take special care to remove any debris from the impeller.

Inspecting the pump exterior

Look for any peeling or chipped paint, and make sure the nuts and bolts are fastened tightly. Any cracks in the surface should be repaired by cleaning that area, drying it and then applying a touch-up coating.

Note: *Touch-up paint is not supplied. Note that some kinds of damage or looseness may require that the unit be disassembled for repairs. Please consult your nearest dealer or Wacker Neuson representative.*

5.3 Storage

When the pump is out of use for an extended period, wash it and dry it thoroughly, then store it indoors.

Note: *Always run a test operation before putting the pump back into service.*

If the pump is left in the water, it should be run a minimum of once a week.

5.4 Lubricant Inspection and Changing Procedures

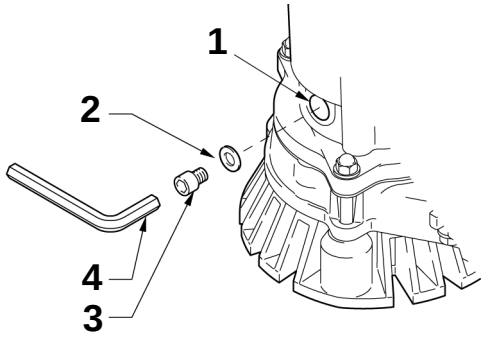
Inspecting Lubricant

Remove the oil plug and tilt the pump to drain a small amount of lubricant. If the lubricant is milky white or has water mixed in with it, the mechanical seal may be faulty. In this case the pump will need to be disassembled and repaired.

Replacing Lubricant

Remove the oil plug and drain the oil completely. Pour a specified volume of oil into the oil filler inlet.

Note: *Worn lubricant and other waste products should be disposed of by a qualified agent, in accord with applicable laws. The oil plug gasket should be replaced each time the lubricant is inspected or changed.*



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Ref.	Description	Ref.	Description
1	Oil inlet	3	Oil plug
2	Gasket	4	Allen wrench

Pump Model	Lubricant Capacity
PST3 750	160 ml (5.4 fl. oz.)

5.5 Replacement Parts

The table lists the parts that need to be replaced periodically. Replace these using the recommended frequency as a guideline.

Part	Replacement Frequency
Mechanical seal	When lubricant in oil compartment becomes milky.
Lubricant (SAE 10W/20W)	Every 2,000 hours or 12 months, whichever comes first.
Gasket	Each time pump is disassembled or inspected.
Dust seal	When ring is worn, and each time pump is disassembled or inspected.
Sleeve	When it becomes worn.

5.6 Disassembly and Reassembly

Before disassembling the pump, make certain the power supply (circuit breaker, etc.) is turned off. Then, unplug the cable assembly from the receptacle or detach it from the terminals.

WARNING
Electrical shock hazard.

► Do not work with wet hands.

Do not check the operation of any parts (impeller rotation, etc.) by turning on the power while the unit is partially assembled. Failure to observe these precautions may result in a serious accident.

Do not disassemble or repair any parts other than those designated here. If repairs are necessary in any other than the designated parts, consult your nearest dealer or Wacker Neuson representative. Improper repairs can result in electrical leakage, electrical shock, fire, or water leaks.

After reassembly, always perform a test operation before resuming use of the pump. Improper assembly will cause the pump to malfunction, resulting in electric shock or water leaks.

The procedure for disassembly and reassembly is shown here to the extent necessary for impeller replacement. A specialized environment and facilities are necessary for work on the mechanical seal and the motor parts. Contact your nearest dealer or Wacker Neuson representative in the event such repairs are necessary.

5.7 Disassembly

Note: *For assembly or disassembly, place the pump on its side.*

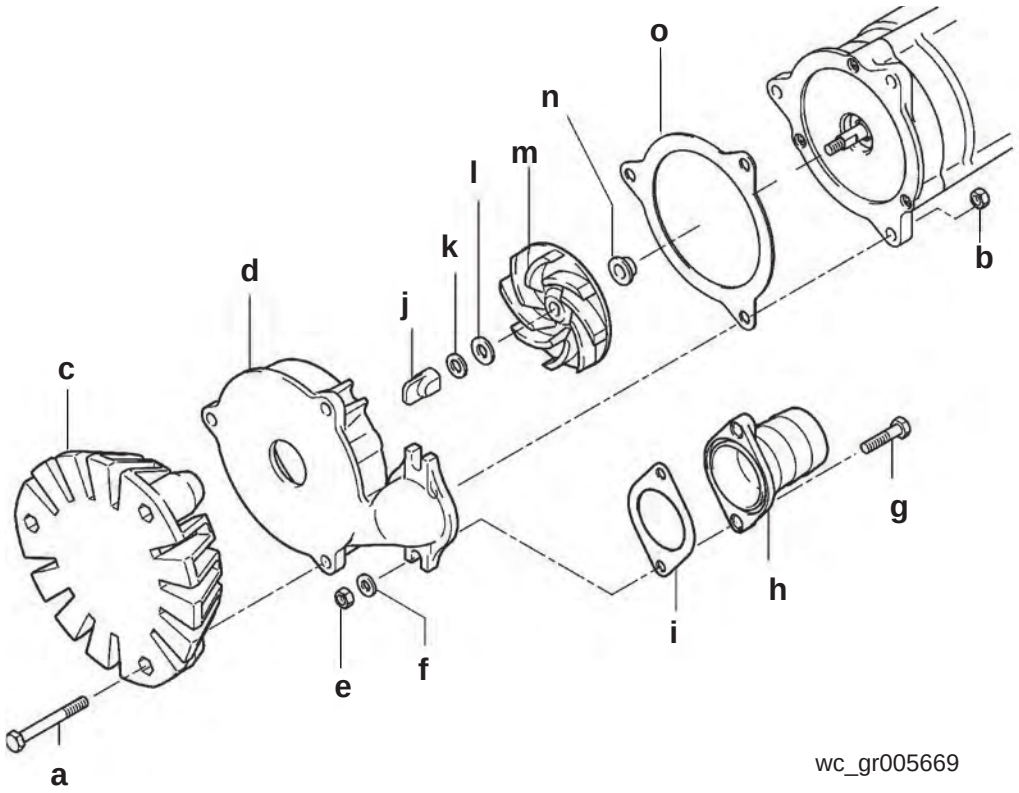
Note: *It is not necessary to drain the oil for disassembly and inspection of the impeller **(m)**. However, drain oil if further disassembly and testing is required.*

1. Loosen the three hex nuts **(b)** and remove the three hex bolts **(a)**.
2. Remove the strainer stand **(c)** and the pump casing **(d)**.
3. While keeping the impeller from rotating, remove stirrer nut **(j)**, spring washer **(k)** and plain washer **(l)**.

CAUTION
Impeller vanes may be very sharp due to excessive wear.
► Handle with care.

4. Remove impeller.

Note: *If the parts are worn or damaged, make sure to replace them with new ones.*



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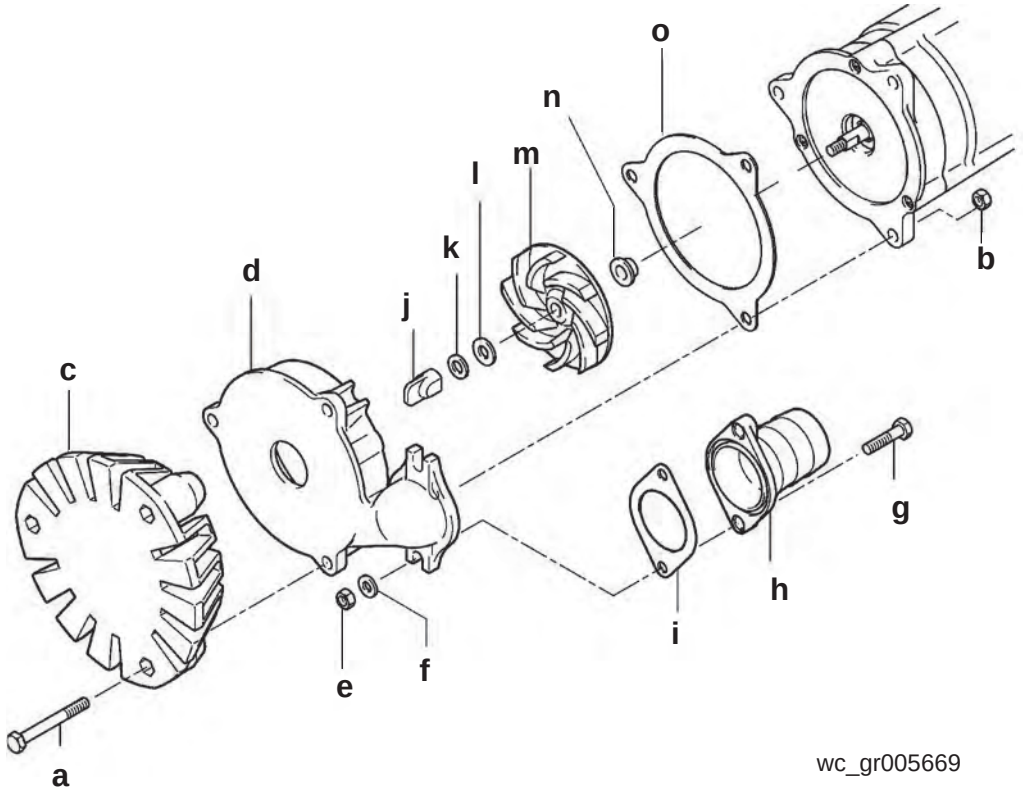
5.8 Impeller Inspection

1. Visually inspect impeller **(m)** for corrosion, wear or damage. Worn impellers compromise peak performance.
2. Visually inspect shaft sleeve **(n)** and pump shaft for signs of uneven wear.
3. Visually inspect pump casing **(d)** for cracks, wear and damage. Look for signs of wear on surfaces facing impeller.

5.9 Impeller Reassembly

Note: *If, upon inspection and testing, a pump component requires replacement, use only replacement parts available from or approved by Wacker Neuson.*



1. Turn pump on its side.
2. Remove sand, dirt, and other debris from rubber parts such as the impeller **(m)** and casing packing **(o)** before assembling the pump.
3. Make sure the casing packing fits snugly against the pump base.
4. Place the shaft sleeve **(n)**, impeller, plain washer **(l),** and spring washer **(k)**, and stirrer **(j)** onto the pump shaft.
5. Tighten the stirrer, being careful not to apply excessive force that might deform the impeller or cause the rubber liner to flake off.
6. Pre-test pump to verify proper operation.

6 Troubleshooting

Before ordering repairs, carefully read through this manual, then repeat the inspection. If the problem remains, contact your nearest dealer or Wacker Neuson representative.

WARNING
Personal injury hazard.
► Always turn off the power before inspecting the pump.

Problem	Cause	Remedy
Pump will not start	Power is off.	Restore power.
	Cable assembly is cut or not connected properly.	Repair/replace the cable or fix the connection.
	Impeller is clogged.	Inspect the pump and remove any debris.
Pump stops soon after starting (Motor protector operates)	Impeller is clogged.	Remove debris.
	Low voltage.	Provide the rated voltage, or make sure the cable assembly extension is the proper standard.
	Wrong power frequency.	Check the nameplate, and replace the pump or the impeller.
	Extended operation with a clogged strainer.	Remove debris from the strainer.
	Float (if equipped) is obstructed, not moving freely, or malfunctioning.	Remove obstructions. Repair or replace float switch if necessary.
Pump does not stop automatically	Float (if equipped) is obstructed, not moving freely, or malfunctioning.	Remove obstructions. Repair or replace float switch if necessary.
	Water level of float (if equipped) set lower than pump's minimum operating water level.	Set float higher than pump's minimum operating water level.
Poor lift or discharge capacity	Faulty motor.	Repair or replace the motor.
	Excessive sand is discharged.	Place the pump on a block or other base to prevent the sand from being sucked into it.
	Worn out impeller.	Replace.
	Sharply bent or clogged hose.	Straighten out any sharp bends. Enclose the pump with a screen to keep away debris.
	Strainer clogged or buried.	Remove debris from the strainer, or place a block under the pump.

Problem	Cause	Remedy
Heavy vibration or noise	Damaged motor shaft or bearings.	Contact dealer and replace motor or bearings.

7 Technical Data

7.1 Standard Specifications

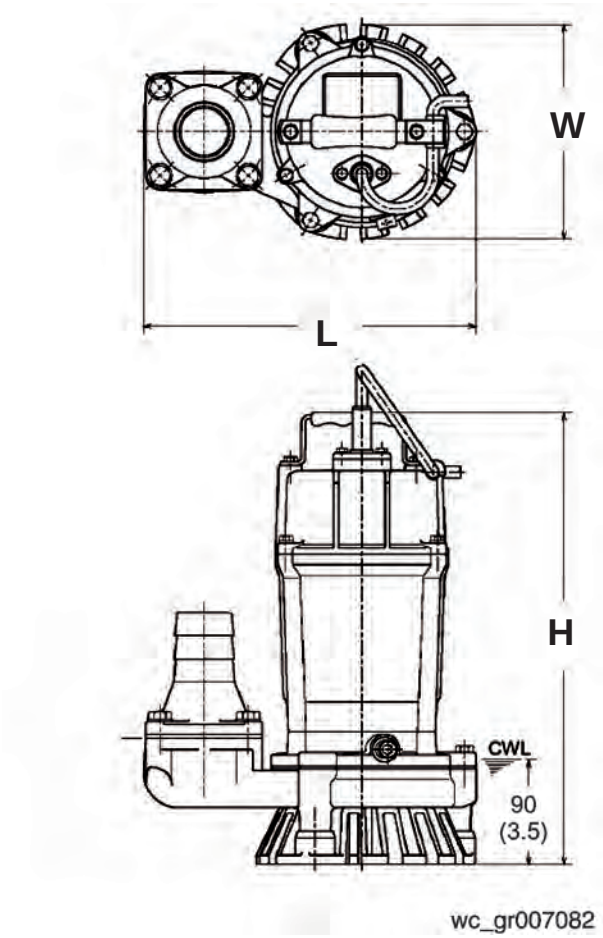
Applicable liquids, consistency and temperature	Water, rain water, ground water, sand-carrying water, mud-carrying water 0–40°C (32–104°F)	
Pump	Impeller	Vortex type
	Shaft seal	Double mechanical seal
	Bearing	Shielded ball bearing
Motor	Specification	Dry submersible induction motor (2-pole)
	Insulation	Class E
	Protection system (built-in)	Miniature protector (0.4 kW) Circle thermal protector (0.55 kW)
	Lubricant	SAE 10W/20W Such as: –Turbine Oil ISO VG #32 –Shell Victrolia Oil #27 –British Pet Energol THB #32 –Gulf Paramount #32 –Tellus #T22 Shell Oil –Shell Turbo T32
Connection	Storz and hose barb	5000620454, 5000620455
	Hose barb	5000620457

7.2 Operating Specifications

Pump **Part No.**		**PST3 750** 5000620457	**PST3 750** 5000620454 5000620455
Pump			
Electric power	V/Ph/Hz	110/1/50	230/1/50
Rated current	A	10.0	4.6
Starting method		Capacitor-run	
Bore	mm (in.)	80 (3)	
Output	kW (Hp)	0.75 (1)	
Maximum head	m (ft.)	18 (59)	
Maximum flow rate	L/min (GPM)	300 (79.3)	
Maximum pressure	kg/cm^2 (psi)	1.79 (25.5)	
Solid size capacity	mm (in.)	7 (0.28)	
Weight*	Kg (lbs.)	17.5 (38.6)	19 (41.9)

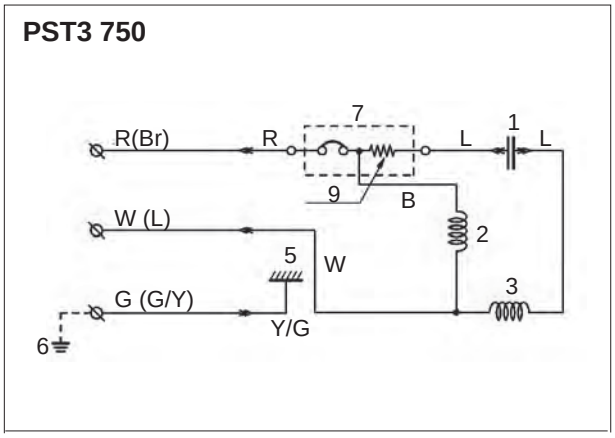
*The weight (mass) given above is the operating weight of the pump itself, not including the cable assembly.

7.3 Dimensions



		5000620457	5000620454 5000620455
Dimensions			
Length (L)	mm (in.)	285 (11.2)	317 (11.5)
Width (W)	mm (in.)	185 (7.3)	
Height (H)	mm (in.)	388 (15.3)	

8 Schematics



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NOTICE: If connected to a circuit protected by a fuse, use a time-delay fuse with this pump.

Ref.	Description	Ref.	Description
1	Capacitor	6	Ground
2	Main coil	7	Circle thermal protector
3	Auxiliary coil	9	Heater
5	Frame grounding	—	—

Wire Colors					
B	Black	V	Violet	Or	Orange
G	Green	W	White	Pr	Purple
L	Blue	Y	Yellow	Sh	Shield
P	Pink	Br	Brown	LL	Light Blue
R	Red	Cl	Clear	G/Y	Green/Yellow
T	Tan	Gr	Gray		

Notes

Important: For spare parts information, please see your Wacker Neuson Dealer, or visit the Wacker Neuson website at http://www.wackerneuson.com/.

Wichtig! Informationen über Ersatzteile erhalten Sie von Ihrem Wacker Neuson Händler oder besuchen Sie die Wacker Neuson Website unter http://www.wackerneuson.com/.

Important : Pour des informations sur les pièces détachées, merci de consulter votre distributeur Wacker Neuson, ou de visiter le site Internet de Wacker Neuson sur http://www.wackerneuson.com/.

Importante : Para saber más sobre las piezas de repuesto, póngase en contacto con su distribuidor de Wacker Neuson o acceda al sitio web de Wacker Neuson en http://www.wackerneuson.com/.

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FONTOS: A pótalkatrészekre vonatkozó információkért kérjük, forduljon Wacker Neuson kereskedőjéhez vagy látogasson el a Wacker Neuson weboldalára a következő címen: http://www.wackerneuson.com/.

Важно! Для ознакомления с информацией о запасных частях, пожалуйста, обратитесь к местному торговому представителю компании Wacker Neuson или посетите веб-сайт http://www.wackerneuson.com/.

Σημαντικό : Για πληροφορίες σχετικά με τα ανταλλακτικά, μιλήστε με τον αντιπρόσωπό σας της Wacker Neuson, ή επισκεφθείτε τον ιστότοπο http://www.wackerneuson.com/.

Važno : Za rezervne dijelove obratite se svom Wacker Neuson prodavaču ili posjetite mrežne stranice tvrtke Wacker Neuson: http://www.wackerneuson.com/.

Önemli : Yedek parça bilgileri için Wacker Neuson Bayinize bakın veya Wacker Neuson web sitesini ziyaret edin. http://www.wackerneuson.com/

重要 交換部品の情報については、ワッカーノイソンディーラーにお問い合わせ頂くか、ワッカーノイソンウェブサイト http://www.wackerneuson.com/ をご覧ください。

重要 有关备件信息，请咨询您的威克诺森经销商或访问威克诺森网站：http://www.wackerneuson.com/。

Important : Pentru informaţii referitoare la piesele de schimb, vă rugăm să vă adresaţi distribuitorului Wacker Neuson sau să vizitaţi site-ul web Wacker Neuson la adresa http://www.wackerneuson.com/.

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