

Operating instructions



NEPTUNE PE/DE



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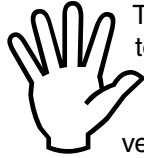
Symbols used to mark instructions



Before using the high-pressure cleaner, be sure to also read the enclosed operating instructions and keep them within reach at all times.



Safety instructions in these operating instructions which must be observed to prevent risks to persons are marked with this danger symbol.



This symbol is used to mark safety instructions that must be observed to prevent damage to the machine and its performance.



This indicates tips and instructions to simplify work and to ensure safe operation.



Operations marked with this symbol should only be carried out by Nilfisk-ALTO Service Technicians.

1 Important safety instructions



For your own safety

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

High pressure cleaners shall not be used by children or untrained personnel.

Children should be supervised to ensure that they do not play with the appliance.

Warning

Inhalation of aerosols can be hazardous to health.

Where applicable use a device in order to avoid or reduce aerosols production, e.g., a shield covering the nozzle.

For protection against aerosols use a respiratory mark of class FFP 2 or higher.

General

Use of the high-pressure cleaner is subject to the applicable

local regulations.

Besides the operating instructions and the binding accident prevention regulations valid in the country of use, observe recognized regulations for safety and proper use. Do not use any unsafe work techniques.

Transport

For safe transport in and on vehicles we recommend preventing the equipment from sliding and tilting. Secure it with tie-downs.

For transport at temperatures around or below freezing 0°C (32°F), anti-freeze should be drawn into the pump beforehand (see section 6).

Before starting the cleaner

CAUTION!

High-pressure water jets can be dangerous if misused. The jet must not be directed at persons, animals, live electrical equipment or the cleaner itself.

Wear appropriate protective clothing and eye protection.

Do not direct the jet towards yourself or towards other persons in order to clean clothes or footwear.

During operation of the cleaner, recoil forces are produced at the spray handle and spray lance and, when the spray lance is held at an angle, a torque is also created. The spray handle and spray lance must therefore be held firmly in both hands.

Do not use the cleaner when other people without protective clothing are in the working area.

Check that cleaning will not result in dangerous substances (e.g. asbestos, oil) being washed off the object to be cleaned and harming the environment.

Do not clean delicate parts made of rubber, fabric, etc. with the 0° jet. Keep some distance between high pressure nozzle and surface in order to prevent the surface from damage.

Do not use the high-pressure hose for lifting loads.

NOTE!

The maximum permissible working pressure and temperature are printed on the high-pressure hose.

Do not use the cleaner if the high-pressure hose or the equipment is damaged.

Ensure adequate air circulation. Do not cover the cleaner or operate it in inadequately ventilated rooms!



Store the cleaner where it will not be exposed to frost!

Never operate the cleaner without water. Even brief shortages of water result in severe damage to the pump seals.

Operation**CAUTION!**

Unsuitable fuels (e.g. gasoline) must not be used as they can explode and catch fire.

Use clean fuel only, free of moisture and contamination. Contact your dealer for fuel source and type recommendations.

Diesel according to EN 590 (up to 7% bio diesel) can be used with the following restrictions: Maximum storage time in high pressure cleaner diesel tank: 1 month.

Diesel stored externally for more than 6 months is not allowed to be filled into Nilfisk-ALTO high pressure cleaners.

Diesel EN 590 from an open container must not be used.

If the machine is to be operated at fuel stations or in other potentially hazardous areas, the machine may only be employed outside the hazard areas defined in the German „Technical Guidelines for Inflammable Fluids“ applicable at the point of use due to the potential ex-

plosion hazard posed by the burner.

Do not use the machine in closed rooms.

CAUTION!

Do not touch or cover the exhaust. Risk of burns and fire.

Maintenance and repair**CAUTION!**

Always remove the ignition key before cleaning or carrying out maintenance work on the cleaner.

Carry out only the maintenance operations described in the operating instructions. Use only original Nilfisk-ALTO spare parts.

Do not make any technical modifications to the high-pressure cleaner.

Ensure that the machine is regularly serviced by authorized Nilfisk-ALTO dealers in accordance with the maintenance plan. Failure to do so will void the warranty.

CAUTION!

High-pressure hoses, fittings and couplings are important for the safety of the cleaner. Use only high-pressure parts approved by the manufacturer!

Please contact your local authorized Nilfisk-ALTO equipment distributor for all other maintenance or repair needs!

Testing

The cleaner conforms to the German „Guidelines for Liquid Spray Jet Devices“. The high-pressure cleaner must be subjected to a safety examination in accordance with the „Accident Prevention Regulations for Working with Liquid Spray Jet Devices“ as required, but at least every 12 months, by an authorised inspector.

The complete „Accident Prevention Regulations for Working with Liquid Spray Jet Devices“ are available from the Carl Heymanns Verlag KG, Luxemburger Strasse 449, 50939 Cologne or from the appropriate association of employers' liability insurances.

The pressure-bearing parts of this high-pressure cleaner have been manufactured in accordance with § 9 of the German Pressure Vessels Ordinance and successfully subjected to a pressure test.

Unloader valve

Pump pressure is reduced by means of an “unloader valve” which returns water to the inlet side of the pump at a minimum pressure. The point at which this occurs is set and sealed at the factory and must not be adjusted.



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2 Description

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2.1 Purpose

This high-pressure cleaner has been designed for professional use in

- Agriculture
- Industry
- Transport industry
- Automotive
- Municipal Facilities
- Janitorial
- Construction
- Food industry

etc.

Section 5 describes the use of the high-pressure cleaner for various cleaning jobs.

Always use the cleaner as described in these operating instructions. Any other use may damage the cleaner or the surface to be cleaned or may result in severe injury to persons.

2.2 Operating elements



See illustration at front of these operating instructions.

1. Water inlet and filter (quick-coupler for supply hose)
2. Pump oil level inspection and fill cup
3. Fuel filling cap
4. Burner coil

5. High pressure outlet (male quick-connector)
6. Frame lift points
7. Castor wheel with parking brake
8. Spray lance
9. Spray lance storage
10. Control panel

3 Before starting the machine

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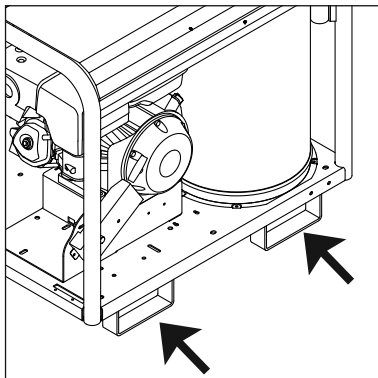
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3.1 Transport and assembly



1. The safest way to lift the machine is to use a fork-lift truck. The arrows in the illustration indicate the best places to position the fork.

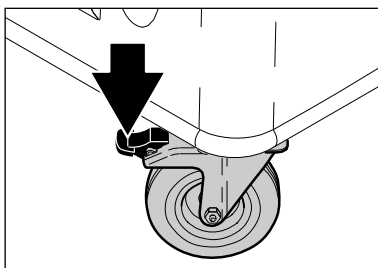
Every fuel-burning appliance, such as pressure washers, depends upon a proper mix of fuel and air (by weight) for proper combustion. Therefore some adjustment of the air supply to

the burner may be necessary to take account of altitude and the resulting air pressure. This is true whether your fuel is 'Natural gas', Propane or Diesel.

Your Nilfisk-ALTO hot water pressure washer was thoroughly tested and adjusted for optimum performance before it left our factory. The factory is located at approximately 200m (650 ft) above sea level, and the combustion settings are optimal for that elevation.

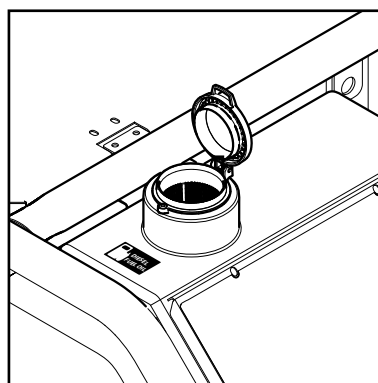
If your location is higher than 1200m (3900 ft) above sea level, your burner may require re-adjustment for proper performance and best fuel economy. Contact your Dealer or Nilfisk-ALTO for assistance.

3.2 Set the brake (only machines with wheels)



1. Before using the cleaner for the first time, check it carefully for any faults or damage.
2. Run the machine only when it is in perfect working condition.
3. Set the brake.

3.3 Fill up fuel tank



With the machine cold and turned off:

1. Fill fuel tank from a clean container with a fresh fuel or Diesel EN 590 (Diesel with bio diesel content up to 7%). See chapter 1.
- Tank capacity max. 57 l.

NOTE!
At temperatures below 8°C



(46°F), the fuel oil begins to solidify (paraffin precipitation). This can lead to difficulties in starting the burner. Before the winter

months it is recommended that a fuel conditioner/stabilizer be

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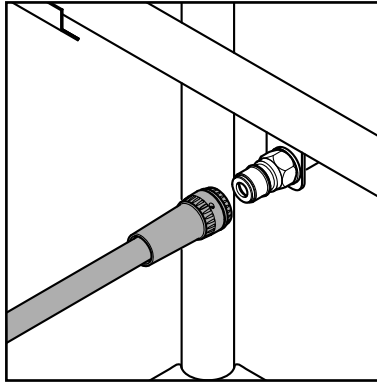
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added (available from the fuel oil trade).

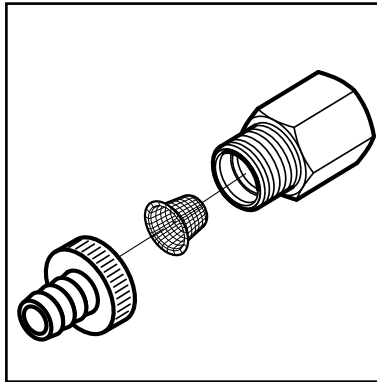
Filling up the engine with fuel, see the enclosed instructions for the engine.

3.4 Connecting the high pressure hose



1. Connect the high pressure hose quick connector to the high pressure nipple.

3.5 Connecting the water supply



1. Attach hose coupling found with Owners Manual to the water supply hose.
2. Rinse the water supply hose briefly in order to prevent sand and other dirt particles entering into the machine.
3. Attach hose coupling to inlet.
4. Open water supply faucet.



NOTE!

See section 9.4 Technical Data for required quantity of water and water pressure. In the case of poor water quality (sand, etc.), it is recommended that an inlet water filter be in-

stalled.

Water supply hose should be a reinforced hose and have a minimum inside diameter of **3/4" (19 mm)**.

4 Control / Operation

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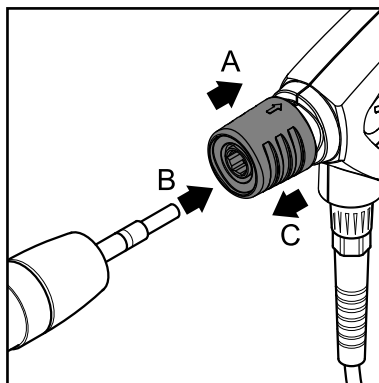
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4.1 Connections

4.1.1 Connecting the spray lance to the spray gun



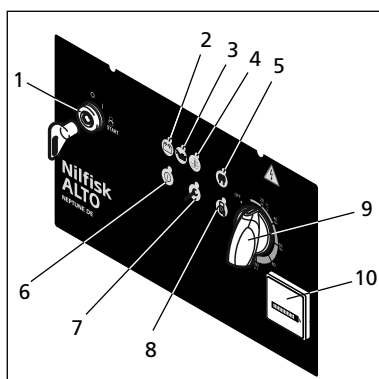
1. Pull the blue quick-release grip (A) of the spray gun backwards.
2. Insert the nipple of the spray lance (B) into the quick-release connection and release it.
3. Pull the spray lance (or other accessory) forwards to check that it is securely attached to the spray gun.



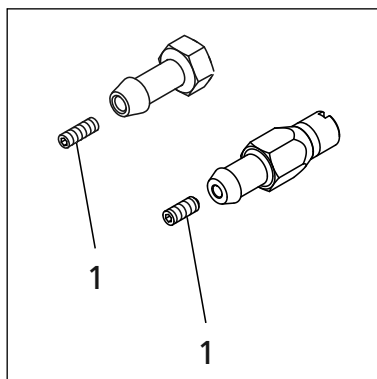
NOTE!

Always remove any dirt from the nipple before connecting the spray lance to the spray gun.

4.2 Description of light indicators



Not all machines feature all light indicators. Here is a description of the light indicators:



1. Start switch for engine
2. Battery charging indicator
3. Oil indicator
4. Pump temperature. Temperature of high pressure pump too high. Turns off the engine. **NOTE!** Not NEPTUNE 5-51 DE. This machine has a valve open-

ing when the temperature gets too high.

With NEPTUNE 5-46/5-54/7-61/7-66/7-72 PE you have the opportunity to lead the by-pass water back to a water tank if the suction operation is run from a water tank. Remove the screw (pos. 1) and attach the hose to the hose union. Lead the hose back to the water tank. This will prevent the temperature in the pump from getting too high.

5. Preheating indicator.
6. Working indicator for hot water.
7. Service indicator. Alight when service is required.
8. Fuel low. Alight when fuel filling is required.
9. Operation and temperature regulation.
10. Hour counter

EN**4.3 Switching on the cleaner****4.3.1 Cold water operation**

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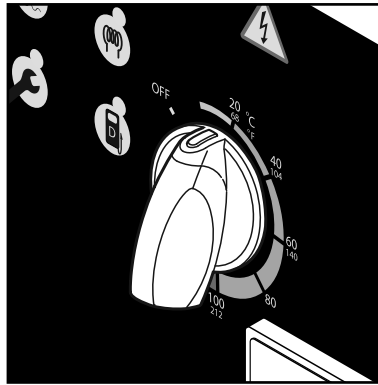
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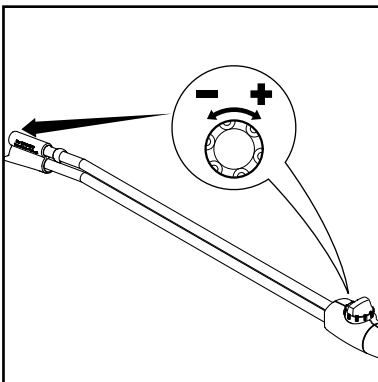
4.3.2 Hot water operation

Before starting up the engine, you must carefully read through the instructions for use of the engine. In the instructions for use the operation and service of the engine is described.

When the engine has been started, the high pressure washer can be used for cleaning with cold water.



1. Turn the switch to the required temperature. Now 6 lights up and the machine is ready for use. If you want to operate with a temperature above 100°C, turn the rotary knob (black) on the pump clockwise to limit stop.
2. Unlock the spray handle and squeeze the trigger.
3. The oil burner will start.
4. Release the trigger and lock the spray handle when not in use.

4.4 Pressure regulation (Tornado Lance)

1. Turn the twist grip on the spray unit:
 - High pressure = clockwise (+) for high pressure
 - Low pressure = counter-clockwise (–) for low pressure.

4.5 Using cleaning agents

If you want to use detergents, you will need an external injector. Please contact your local Nilfisk-ALTO distributor for further information.

CAUTION!
Never allow cleaning agent to dry on the surface to be cleaned. The surface may be damaged.

5 Applications and methods

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5.1 Techniques

Efficient high pressure cleaning is achieved by following a few guidelines, combined with your own personal experience of specific cleaning tasks. Accessories and detergents, when correctly chosen, can increase the efficiency of your pressure washer. Here is some basic information about cleaning.

5.1.1 Soaking

Encrusted or thick layers of dirt can be loosened or softened up by a period of soaking. This is for example an ideal method within agriculture – for example, within pig sties. The ideal soaking method can be achieved by using foam or simple alkaline detergent. Let the product lie on the dirty surfaces for about 30 minutes before pressure washing. The result will be a much quicker high pressure cleaning process.

5.1.2 Detergent and Foam

Foam or detergent should be applied onto dry surfaces so that the chemical product is in direct contact with the dirt. Detergents are applied from bottom to top, for example on a automobile bodywork, in order to avoid “super clean” areas, where the detergent may collect in higher concentrations and streams downwards. Let the detergent work for several minutes before rinsing and never let it dry on the surface being cleaned.

5.1.3 Temperature

Detergents are more effective at higher temperatures. Greases, oils and fats can be broken down more effectively at higher temperatures also. Proteins can be cleaned at temperatures of around 60°C (140°F). Oils and traffic film around 70°C (158°F), and grease can be cleaned at 80°-90°C (176-194°F).

5.1.4 Mechanical Effect

In order to break down tough layers of dirt, additional mechanical effect may be required. Special lances and rotary or wash brushes offer this supplementary effect that cuts through dirt.

5.1.5 High Water Flow or High Pressure

High pressure is not always the best solution and may also damage surfaces. The cleaning effect also depends upon water flow. Pressure levels of around 100 bar (1450 psi) may be sufficient for vehicle cleaning (in association with hot water) and higher flow levels give the ability to rinse and flush away large amounts of dirt easily.



5.2 Some typical cleaning tasks

5.2.1 Agriculture



Task	Accessories	Method
Stables Pig Pens, Sties	Chemical Foam Injectors Foam lance Powerspeed lance Floor Cleaner	<ol style="list-style-type: none"> 1. Soaking – apply foam to all surfaces (bottom to top) and wait for approx. 30 minutes. 2. Remove the dirt from surfaces with the high pressure lance or chosen accessory. Again, clean from bottom to top on vertical surfaces. 3. To flush away large quantities of dirt, change to low pressure mode and use the higher flow to push away the dirt. 4. Use recommended disinfectant products and methods to ensure hygiene. Apply DES 3000 disinfectant once the surfaces are perfectly clean.
Cleaning of walls, floors and equipment Disinfectant	Detergents Universal Alkafoam Disinfectant DES 3000	
Machinery Tractors ploughs etc.	Detergent injection Powerspeed lances Curved lances and underchassis washers Brushes	<ol style="list-style-type: none"> 1. Apply detergent to vehicle or equipment surfaces in order to soften up dirt and grime. Apply from bottom to top. 2. Proceed with cleaning using the high pressure lance. Clean again from bottom to top. Use accessories to clean in difficult to reach places. 3. Clean fragile areas such as motors, rubber at lower pressure levels to avoid damage.

5.2.2 Vehicle

Task	Accessories	Method
Vehicle bodywork	Standard lance Detergent injection Curved lances and underchassis washers brushes Detergents Active Shampoo Active Foam Sapphire Super Plus Aktive Wax Allosil RimTop	<ol style="list-style-type: none"> 1. Apply detergent to vehicle or equipment surfaces in order to soften up dirt and grime. Apply from bottom to top. In cases of particularly dirty vehicles, pre-spray with a product such as Allosil in order to remove traces of insects etc, then rinse at low pressure and apply normal car cleaning detergent. Let detergents settle for 5 minutes before cleaning off. Metallic surfaces can be cleaned using RimTop. 2. Proceed with cleaning using the high pressure lance. Clean again from bottom to top. Use accessories to clean in difficult to reach places. Use brushes in order to add a mechanical cleaning effect. Short lances can help for cleaning of motors and wheel arches. Curved lances or undercarriage washers can be valuable for the cleaning of car underchassis and wheel arches. 3. Clean fragile areas such as motors, rubber at lower pressure levels to avoid damage. 4. Apply a liquid wax using the pressure washer in order to protect the bodywork from pollution.

5.2.3 Buildings and Equipment

Task	Accessories	Method
General surfaces Metallic equipment	Foam injectors Stand-ard lance Curved lances Tank cleaning head Detergents Intensive J25 Multi Combi Active Alkafoam Disinfectant DES 3000	<ol style="list-style-type: none"> 1. Apply thick foam over the surfaces to be cleaned. Apply on dry surfaces. Apply from top to bottom on vertical surfaces. Let the foam act for up to 30 minutes for the optimal effect. 2. Proceed with cleaning using the high pressure lance. Use applicable accessories. Use high pressure to dislodge large amounts of incrustated dirt or grime. Use lower pressure and high water volume in order to rapidly flush away loose dirt and rinse surfaces. 3. Apply DES 3000 disinfectant once the surfaces are perfectly clean. <p>Areas covered by amounts of loose dirt, such as animal remains in slaughterhouses, can be removed by using high water flow to flush away the dirt to evacuation pits or drains.</p> <p>Tank cleaning heads can be used to clean barrels, vats, mixing tanks etc. Cleaning heads may be hydraulically or electrically powered and give the possibility for automatic cleaning without a constant user.</p>
Rusted or damages surfaces prior to treatment	Wet Sandblasting equipment	<ol style="list-style-type: none"> 1. Connect the sandblasting lance to the pressure washer and place the suction tube in the sand. 2. Always wear protective equipment during sandblasting. 3. Spray the surfaces to be treated with the mix of water and sand. Rust, paint etc will be stripped off.

These are merely several examples of cleaning tasks that can be solved by a pressure washer in association with accessories and detergents. Each cleaning task is different. Please consult your local dealer or Nilfisk-ALTO representative in order to discuss the best solution for your own cleaning tasks.

EN 6 After using the cleaner

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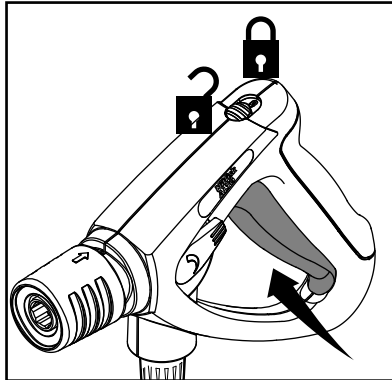
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6.1 Switching off the cleaner



1. Close water tap
2. Activate spray handle without lance in order to empty all residual water in the system.
3. Turn the ON/OFF switch to position "OFF".
4. Turn off the engine.
5. Activate spray handle until the washer is depressurised.
6. Lock the safety catch on the spray handle.

6.2 Storing / frost protection

It is advisable to store the machine in a frost proof place between operations. If this is not possible the machine should be protected in the following way:

1. Disconnect the water inlet hose. Remove the lance and empty it of water.
2. Start the machine allowing it to run with the spray handle opened until it is empty of water.
3. Place a suction hose in a bucket with 6-8 l (1.5-2 gallons) anti-freeze.
4. Place the spray handle (without spray lance) above the bucket, activate the spray handle so that the anti-freeze can circulate.

5. Place the spray handle above the opening of the anti-freeze container and allow the machine to pump all of the solution back into the anti-freeze container. The anti-freeze can be re-used, but keep in mind that it is slightly diluted with water each time this is done.

Important:

To avoid damage always ensure that the washer, the hoses and the spray lance are unfrozen before restarting. Place the washer and the accessories in a warm environment for some time before starting up.

7 Maintenance

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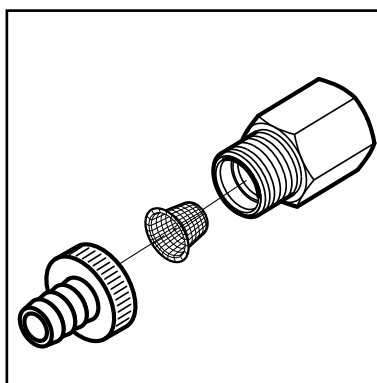
7.1 Maintenance Schedule

	Weekly	NEPTUNE 5-51 DE / 5-85 PE only After the first 50 operating hours	Every six months or 500 operating hours	As required
7.2.1 Water filters				●
7.2.2 Oil filter				●
7.2.3 Checking the pump oil quality	●			
7.2.4 Changing the pump oil		●	●	
7.2.5 Emptying the fuel oil tank				●
7.2.6 Flame Sensor				●

Service on engine: See attached user instructions for engine.

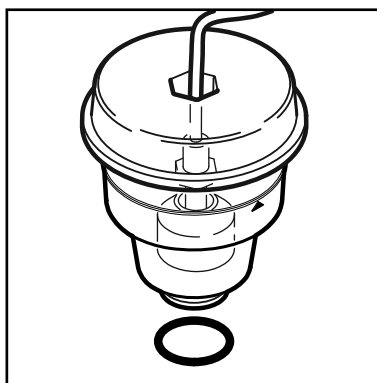
7.2 Maintenance work

7.2.1 Water filters



1. Unscrew quick coupling.
2. Remove filter with tool and clean it.

7.2.2 Checking the pump oil quality



1. Check color of pump oil.
If the oil has a grey or white shade, change the oil (see section 7.2.3)
2. Top off oil level with fresh oil if necessary.
Oil type see section 9.4 Technical Specifications.

EN 7.2.3 Change of oil

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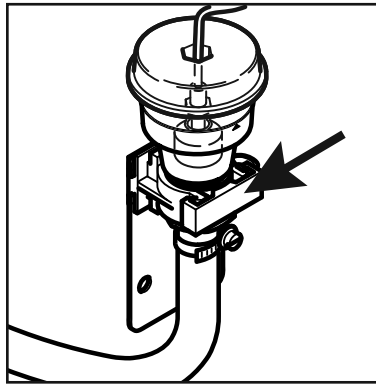
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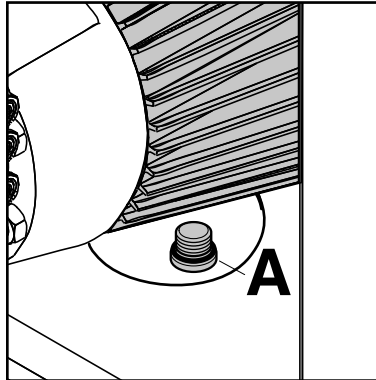
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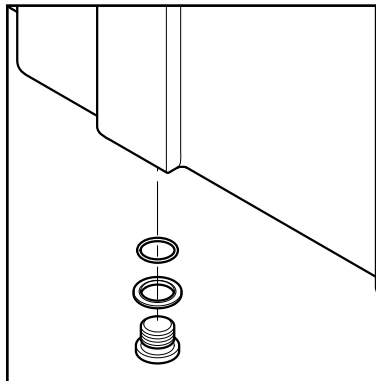
1. Loosen oil container by opening the clip. Hold the oil container into a container until all oil has run out of the pump.
2. Remount oil container and top up with new oil. It may take some time for the oil level to equalize in the pump and the oil container.



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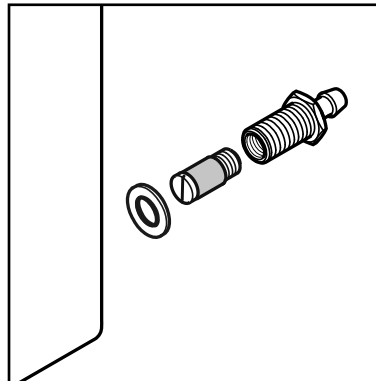
1. Unscrew the oil drain plug (A) and drain oil into a suitable container.
2. Check that the drain plug gasket is in place and re-install drain plug.
3. Fill pump with proper grade and amount of oil. Oil grade and capacity see section '9.4 Technical Specifications'.

7.2.4 Emptying the fuel oil tank



1. Prepare a container which is capable of containing the amount of fuel remaining in the tank.
2. Place the container beneath the drain plug.
3. Remove the drain plug and drain the fuel into the prepared container carefully not to spill fuel oil.
4. Check that the drain plug gasket is in place and re-install drain plug.
5. Check tank and plug for leaks.

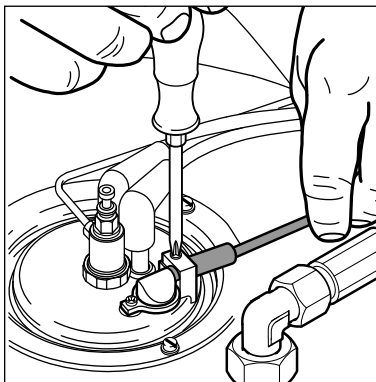
7.2.5 Cleaning of fuel filter



On the back of the fuel tank where the hoses are mounted, there is a filter.

To clean this or these filters (depending on model), dismount the hose and unscrew the hose nipple.

7.2.6 Flame sensor



1. Remove the sensor and clean with a soft cloth.
2. Confirm that the sensor is correctly seated when reinstalling.

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EN 8 Troubleshooting

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8.1 Indications on Display

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Indication light	Cause	Remedy
Green LED  ON	> Appliance ready for operation. When switching on, all the LEDs light up once.	
Yellow LED  ON	> Fuel shortage	<ul style="list-style-type: none"> Top up with fuel Cold water operation possible
Red LED  flashing	> Service interval: Service due in 20 hours	 Contact Nilfisk-ALTO Service
Red LED  ON	> Service interval expired	 Contact Nilfisk-ALTO Service
Red LED  ON	> Pump oil low > Engine oil low	<ul style="list-style-type: none"> Top up with pump oil Top up with engine oil
Green LED  flashing	> Flow sensor failure > Water tap closed or water shortage > Machine scaled	 Contact Nilfisk-ALTO Service Cold water operation possible <ul style="list-style-type: none"> Required volume flow and pressure see section 9.4 Technical Specifications  Contact Nilfisk-ALTO Service
Green LED  and red LED  flash simultaneously	> Leakage or inadmissible operating condition by short-time operation > Spray handle leaking > High pressure hose, coupling or line system leaking > Water inlet filter dirty > High-pressure pump drawing in air	<ul style="list-style-type: none"> After three times of short-time operation the heating switches off. Reset: Turn main switch to position "OFF", then start again. Keep spray gun pressed for longer than 3 seconds. If a leak occurs causing the machine to start and stop briefly 3 times, then the heating will switch off. Check spray handle Replace high-pressure hose, retighten screw fittings Clean filter (see section 7.2.1) Repair leaks Cold water operation possible
Red LED  ON	> Charging rate too low	<ul style="list-style-type: none"> Engine has not started Generator defective  Contact Nilfisk-ALTO Service
Red LED  ON	> Pump overheated	<ul style="list-style-type: none"> Let pump cool down, avoid long by-pass time (NEPTUNE 5-46/5-54 PE, see section 4.2)
	> Engine cooling water overheated (Mitsubishi)	<ul style="list-style-type: none"> Check water level in radiator
Green LED  and red LED  flash alternately	> Overheating failure	 Contact Nilfisk-ALTO Service. Operation with cold water possible.

Indication light	Cause	Remedy
Green LED  flashes slowly and red LED  flashes rapidly	<ul style="list-style-type: none"> > Flame sensor sooted > Ignition or fuel system failure 	<ul style="list-style-type: none"> • Clean flame sensor (see section 7.2.6).  Contact Nilfisk-ALTO Service Cold water operation possible

8.2 Other faults

Fault	Cause	Remedy
 not ON	<ul style="list-style-type: none"> > Engine not started > Engine RPM too low > Generator defective 	<ul style="list-style-type: none"> • Start engine.  Contact Nilfisk-ALTO Service. NEPTUNE 5-51DE: Adjust RPM on the speed control to max.  Contact Nilfisk-ALTO Service. Cold water operation possible.
Pressure too low	<ul style="list-style-type: none"> > High pressure nozzle worn out > Pressure regulation set to low water volume 	<ul style="list-style-type: none"> • Replace nozzle • Turn the twist grip on the spray lance to a higher water volume.
Burner soots	<ul style="list-style-type: none"> > fuel contamination > Burner sooted or adjustment incorrect 	<ul style="list-style-type: none">  Contact Nilfisk-ALTO Service



EN 9 Further information

DE

FR

NL

IT

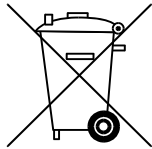
NO

SV

DA

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9.1 Recycling the machine



Make the old cleaner unusable immediately.

1. Unplug the cleaner and cut the power cord.

The pressure washer contains

valuable materials that should be recycled.

Contact your local waste disposal site. If you have any queries, please contact your local authorities or your nearest dealer.

9.2 Warranty

Your Nilfisk-ALTO product is guaranteed for 12 months from date of purchase (purchase receipt must be presented) on the following conditions:

- that defects are attributable to flaws or defects in materials or workmanship. (Usual wear and tear as well as misuse are not covered by the guarantee).
- that repairs have not been carried out or attempted by other than Nilfisk-ALTO-trained service staff.
- that only original accessories have been applied.
- that the product has not been

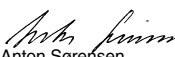
exposed to abuse such as knocks, bumps or frost.

- that the instructions in the manual have been carefully observed.

A warranty repair comprises the replacement of defective parts, but it does not cover freight and packaging charges. Besides we refer to national Sale of Goods Act.

Any **illegitimate** guarantee repair will be invoiced. (I.e. malfunctions due to **causes** mentioned in section “**7 Trouble shooting**” of the instruction manual).

9.3 CE Declaration of Conformity

CE Declaration of Conformity	
Product:	High Pressure Washer
Type:	NEPTUNE PE/DE
The design of the unit corresponds to the following pertinent regulations:	EC Machine Directive 2006/42/EC EC Low-voltage Directive 2006/95/EC EC EMC Directive 2004/108/EC RoHS Directive 2011/65/EC Noise Emission Directive 2000/14/EC
Applied harmonised standards:	EN 12100-1 (2004), EN 12100-2 (2004), EN 55014-1 (2006), EN 55014-2 (2001)
Applied international standards and technical specifications:	IEC 60335-2-79 (2007)
Name and address of the person authorised to compile the technical file:	Anton Sørensen General Manager, Technical Operations EAPC Nilfisk-ALTO Division of Nilfisk-Advance A/S Industrivej 1 DK-9560 Hadsund
Identity and signature of the person empowered to draw up the declaration on behalf of the manufacturer:	 Anton Sørensen General Manager, Technical Operations EAPC Nilfisk-ALTO Division of Nilfisk-Advance A/S Industrivej 1 DK-9560 Hadsund
Place and date of the declaration:	Hadsund, 06.11.2013

9.4 Technical Specifications

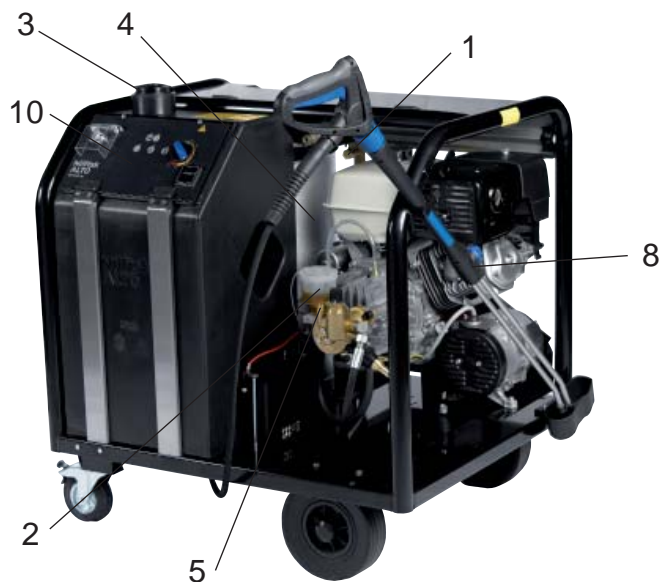


		NEP-TUNE 5-46 PE	NEP-TUNE 5-54 PE	NEP-TUNE 7-61 PE	NEP-TUNE 5-85 PE	NEP-TUNE 5-51 DE	NEP-TUNE 7-66 DE	NEP-TUNE 7-72 DE
Item no.		106239510	106239515	106239530	106239540	106239610	106239630	106239635
Pump pressure	bar	200	220	220	240	200	200	220
mQuic	l/h	800	900	1010	1350	900	1150	1200
Qmax	l/h	860	1000	1120	1450	1000	1200	1300
Nozzle		0400	0450	0500	0650	0450	0640	0640
Suction capacity dry	m	1.5	1.5	5.0	1.5	1.5	1.5	5.0
Max. water inlet temperature	°C	40	40	40	40	40	40	40
Water inlet pressure min/max	bar	1/10	1/10	1/10	1/10	1/10	1/10	1/10
Pump type		NA5	NA5	C3	NP5	NP5	C3	C3
Motor manufacturer		Honda GX340	Honda GX390	Honda GX390	Honda GX630	Yanmar	Ruggerini	Mitsubishi
Oil quantity	l	0.5	0.5	1.1	0.7	0.7	1.1	1.1
Pump oil type		2)	2)	3)	1)	1)	3)	3)
Fuel type motor		Petrol	Petrol	Petrol	Petrol	Diesel	Diesel	Diesel
Fuel tank motor	l	6.1	6.1	6.1	25	5.5	*	*
Motor oil SAE 15W 40, capacity	l	1.1	1.1	1.1	1.9	1.65	1.8	4.2
Boiler	kW	68	81	87	108	81	108	108
Delta temp.	°C	75	80	70	72	80	82	79
Fuel consumption dt. 45°		3.5	3.9	4.6	5.8	3.9	5.0	5.2
Onboard diesel fuel tank	l	57	57	57	57	57	57	57
Sound power level Lwa/LpA	dB(A)	105/91	105/91	105/91	106/91.5	110/95	112/97	99/84
Vibration level at spray handle	m/s ²	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Dimensions l x w x h	mm	970 x 780 x 1000			1100 x 910 x 1050	970 x 780 x 1000	1100 x 910 x 1050	
Weight	kg	208	208	210	260	220	315	510

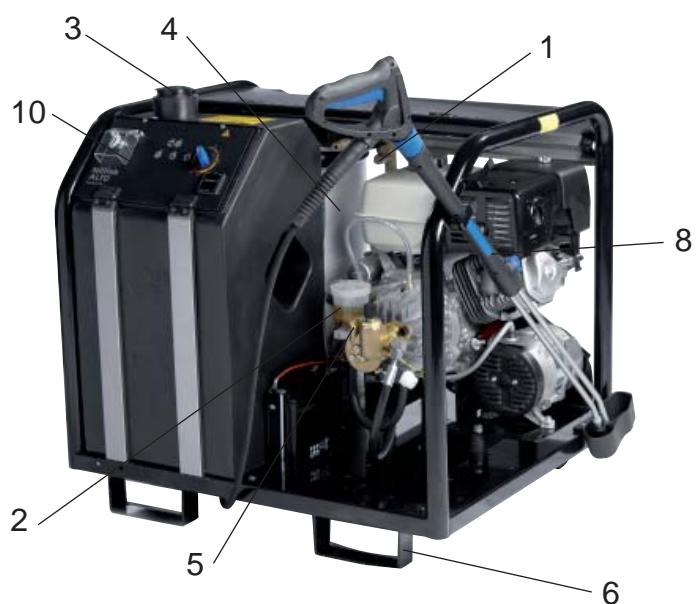
* Same as for boiler (57 l)

- 1) SAE 15W 40
- 2) BP Energol GR-XP 220
- 3) Castrol Alphasyn - T ISO 150

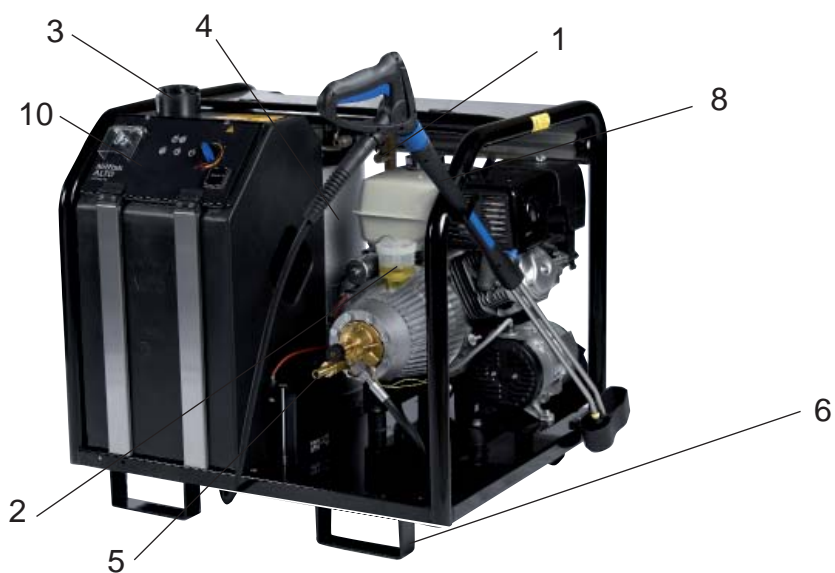
NEPTUNE 5-46 PE



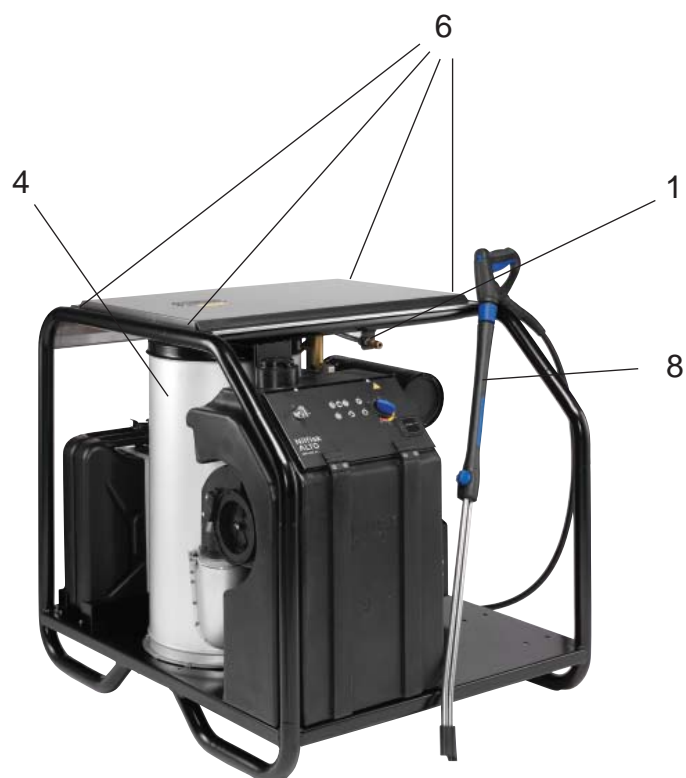
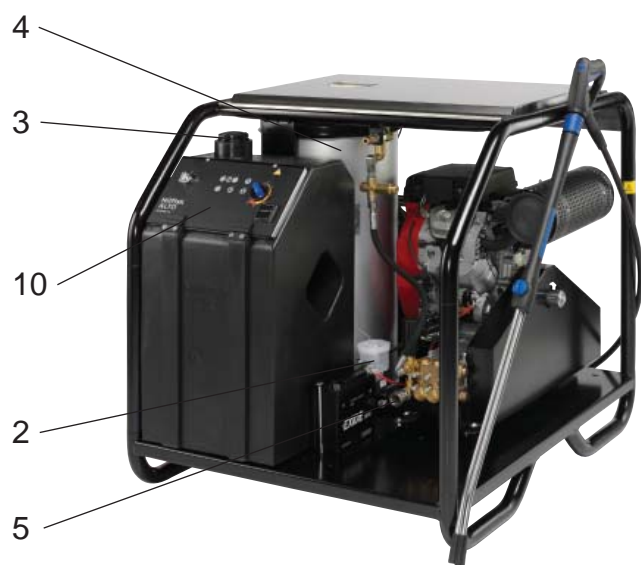
NEPTUNE 5-54 PE



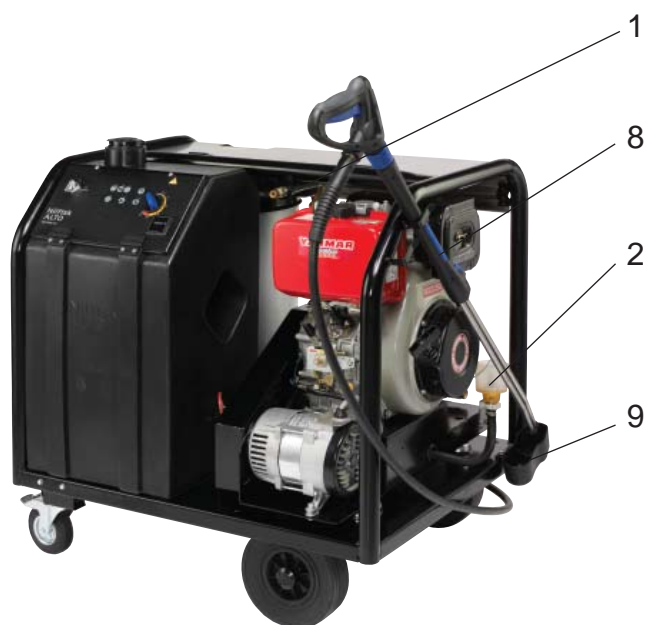
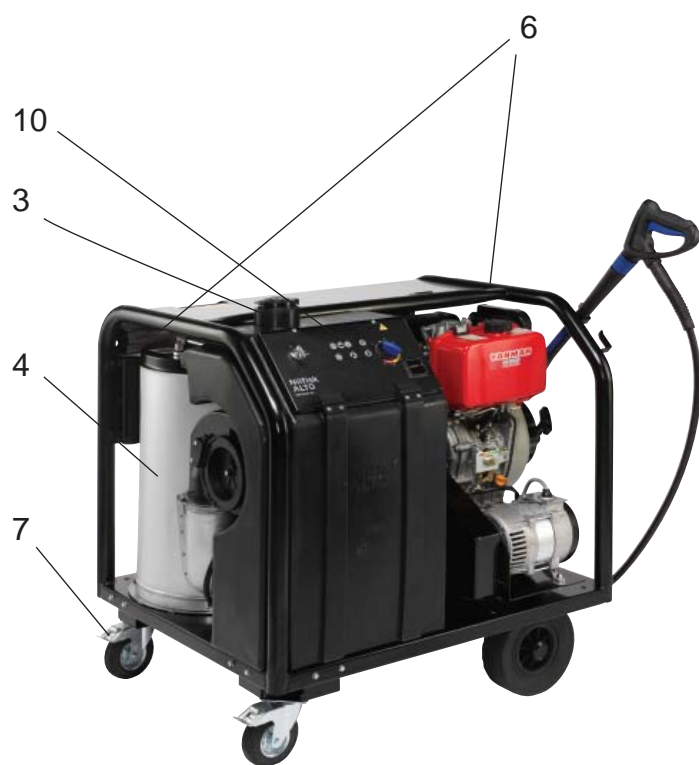
NEPTUNE 7-61 PE



NEPTUNE 5-85 PE



NEPTUNE 5-51 DE



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