

 **KÄRCHER**  
**K 2.99 M**

**5.961-117**  
11/03\_2006738

## Operating Instructions

# PRESSURE WASHER



**Before first use of the unit read these operating instructions  
and act in accordance with them**

## Safety Instructions

- △ The operation of the device in hazardous locations is not admissible.
- △ Please comply with the corresponding safety instructions if you use the appliance in danger areas (e.g. filling stations).
- △ Do not turn on the appliance if the power supply line or important components of the appliance, such as safety components, high-pressure hoses, spray jet, are damaged.
- △ **Warning:** High-pressure hoses, fittings, and couplings are of importance for the appliance safety. Only use high-pressure hoses, fittings, and couplings recommended by the manufacturer.
- △ The appliance is not intended for use by young children or infirm persons without supervision.  
Young children should be supervised to ensure that they do not play with the appliance.
- △ The operator must use the appliance properly. He must take the local conditions into consideration and must pay attention to third persons, in particular children, while working with the appliance.
- △ **Warning:** Do not use the appliance if third persons are within the reach of the appliance unless such persons wear protective clothes.
- △ **Warning:** High-pressure jets may be dangerous if they are used improperly.  
The jet must not be directed at people, animals, active electrical equipment, or the appliance itself.
- △ Never direct the jet at yourself or third persons to clean clothes or shoes.
- △ Never use the appliance to spray objects containing hazardous substances (e.g. asbestos).
- △ **Warning:** Vehicle tyres/tyre valves may be damaged and burst by the high-pressure jet. A first sign is the discoloration of the tyre. Damaged vehicle tyres/tyre valves are hazardous. Always perform the cleaning with a minimum distance of 30 cm.
- △ Cleaning operations during which oil saturated waste water is generated, such as engine cleaning and underbody cleaning, may only be performed in cleaning locations that are equipped with an oil separator.
- △ If you clean varnished surfaces, please respect a minimum distance of 30 cm to avoid damages.
- △ Never take in solvent-containing liquids or undiluted acids and solvents! These include, for example, benzene, paint thinner, or heating oil. The spray is highly inflammable, explosive, and toxic. Do not use acetone, undiluted acids, and solvents as they affect the materials used on the appliance.
- △ If required, wear appropriate protective clothes and glasses to protect yourself from return spray.
- △ Never leave the appliance unattended as long as it turned on.
- △ **Warning:** This appliance has been developed for the use of detergents that are supplied or recommended by the manufacturer. The use of other detergents or chemicals may affect the safety of the appliance.

### Safety Devices

Safety devices are intended to ensure the protection from injuries and must not be modified or circumvented.

#### *Overflow Valve with Pressure Switch*

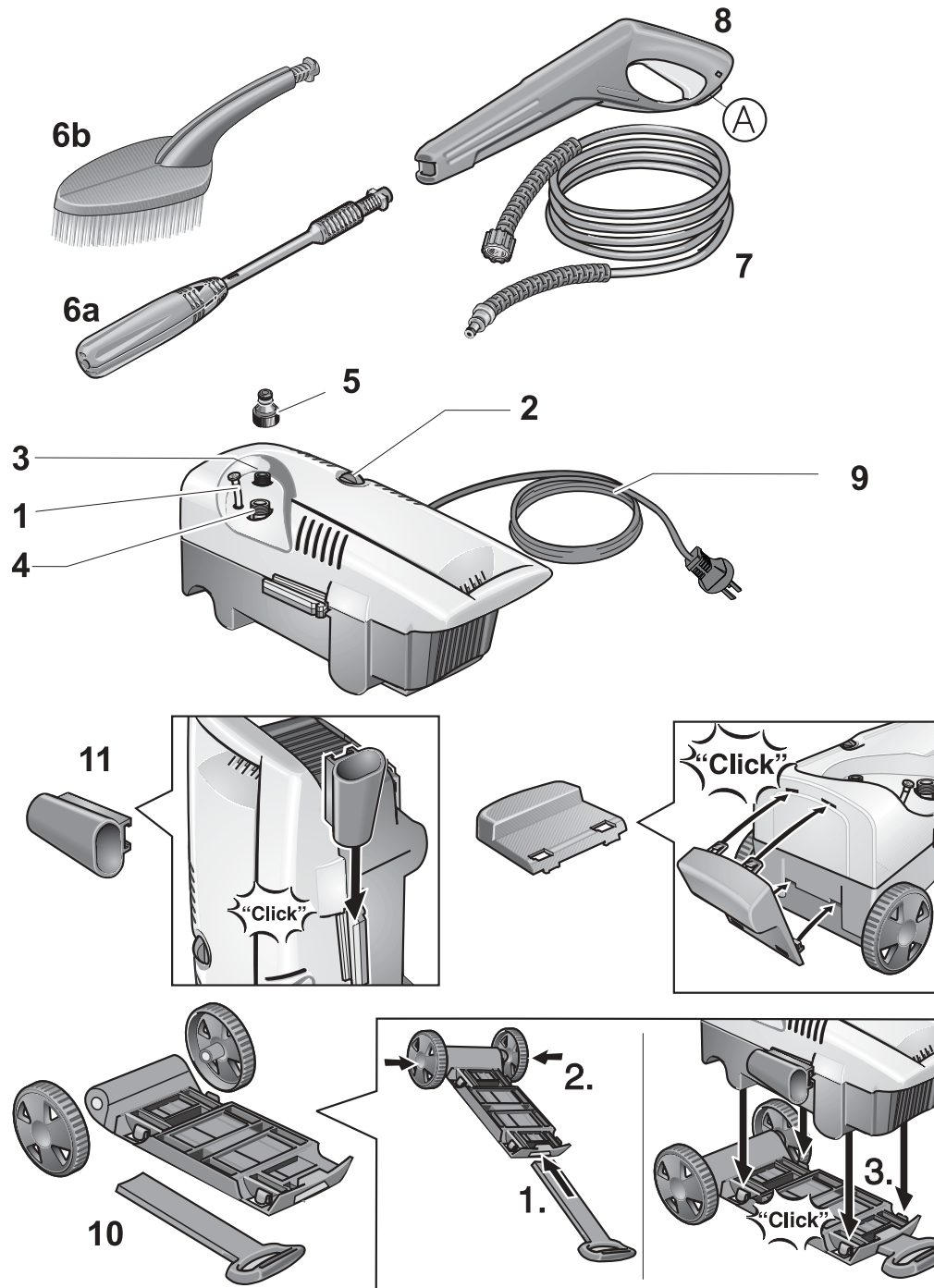
When the lever located on the trigger gun is released, the pressure switch turns off the pump, and the high-pressure jet comes to a stop. When the lever is pulled, the pressure switch turns the pump on again. In addition, the overflow valve ensures that the admissible operating pressure is not exceeded.

#### *Safety Ratchet*

The safety ratchet located on the trigger gun ensures that the appliance is not switched on inadvertently.

## Contents

Before first use of the unit read these operating instructions and act in accordance with them. Keep these operating instructions in a safe place for later use or for a subsequent owner.

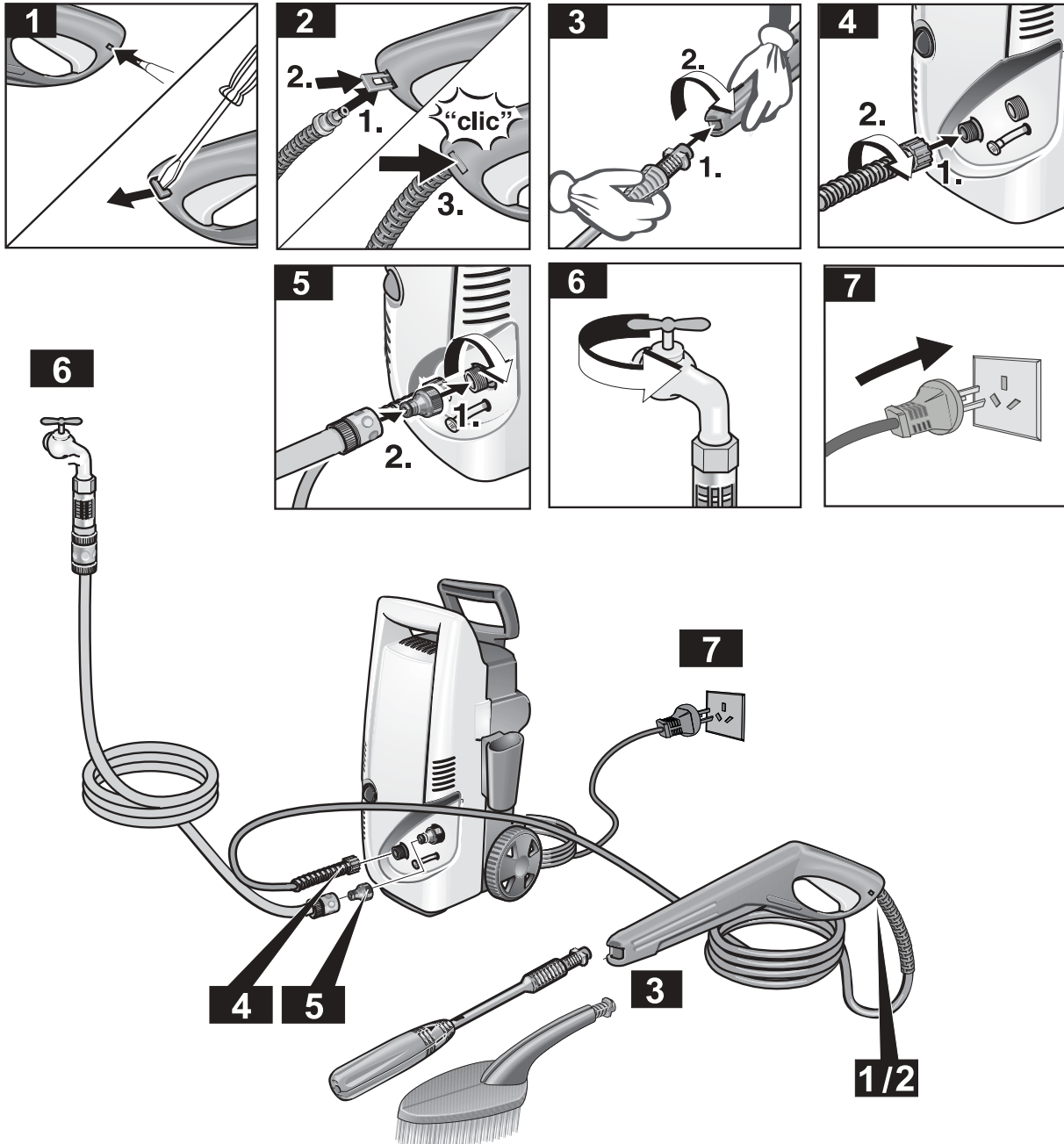


- 1 Detergent suction hose
- 2 Appliance switch (ON/OFF)
- 3 High-pressure outlet
- 4 Water connection with filter
- 5 Coupling
- 6a Spray lance with 4-jet nozzle

- 6b Washing brush
- 7 High-pressure hose
- 8 Spray gun with safety ratchet (A)
- 9 Power plug
- 10 Transport cart
- 11 Accessory holder

## Preparation

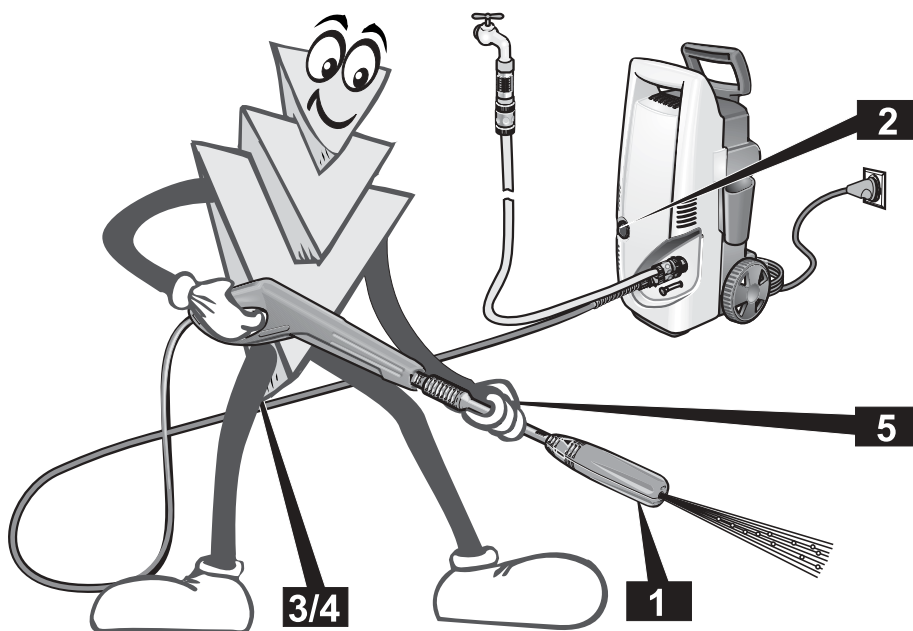
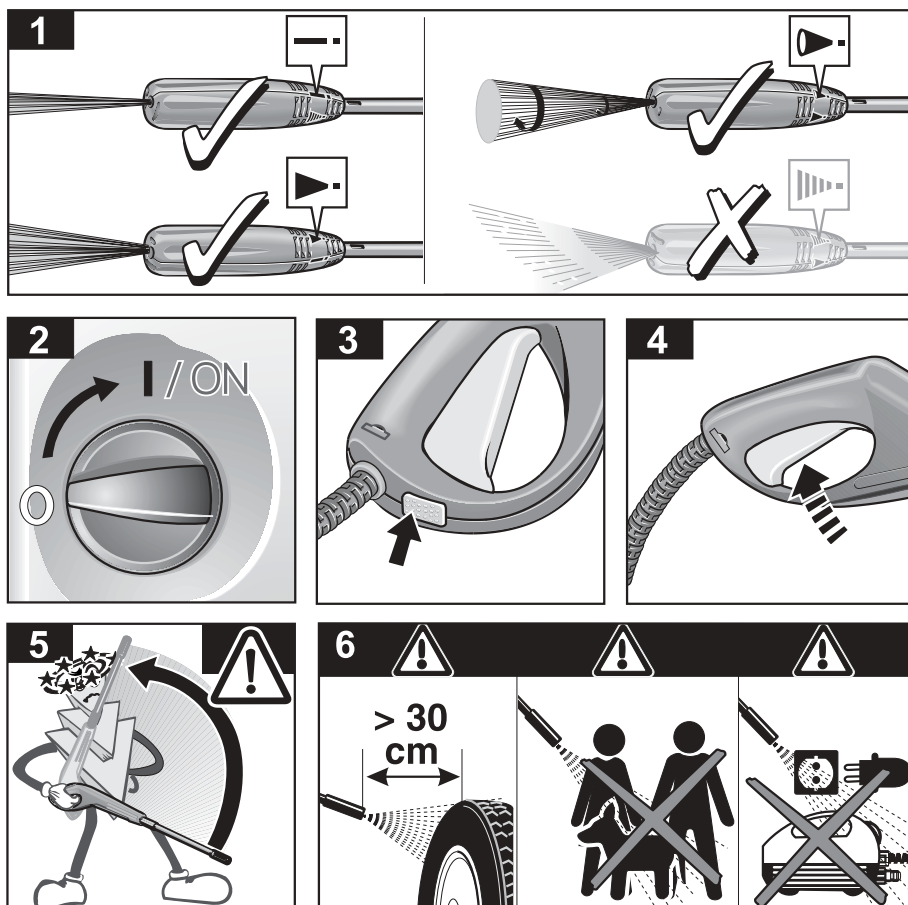
- |                                      |                                 |
|--------------------------------------|---------------------------------|
| <b>1</b> <b>2</b> Spray gun assembly | <b>5</b> Connect to water inlet |
| <b>3</b> Attach spray lance          | <b>6</b> Open water tap fully   |
| <b>4</b> Screw on high-pressure hose | <b>7</b> Plug in power plug     |



For additional  
information  
see page 8  
and following

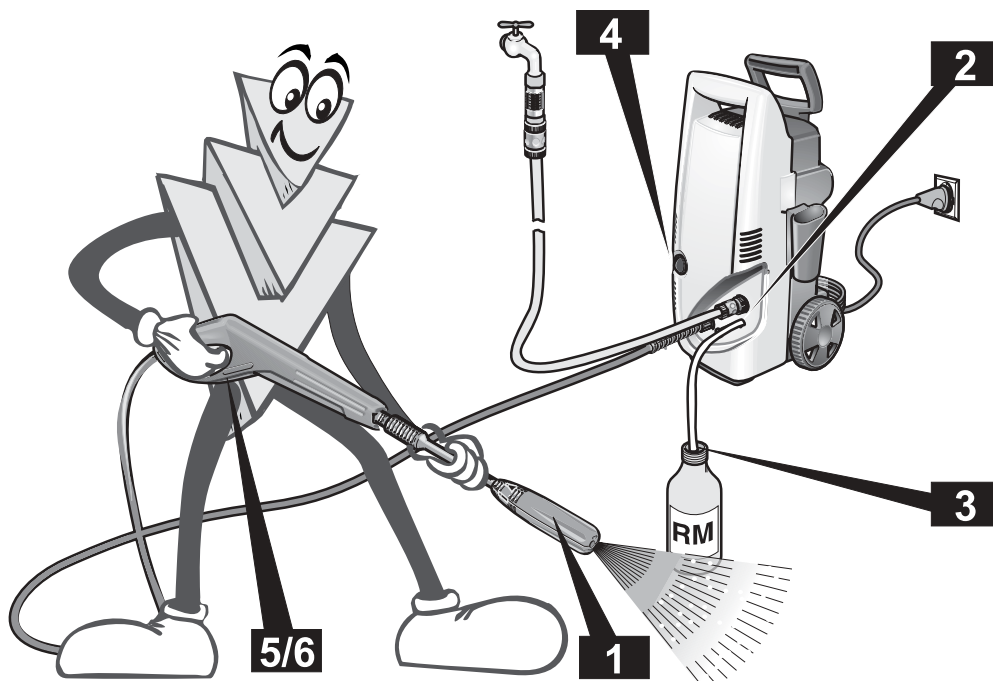
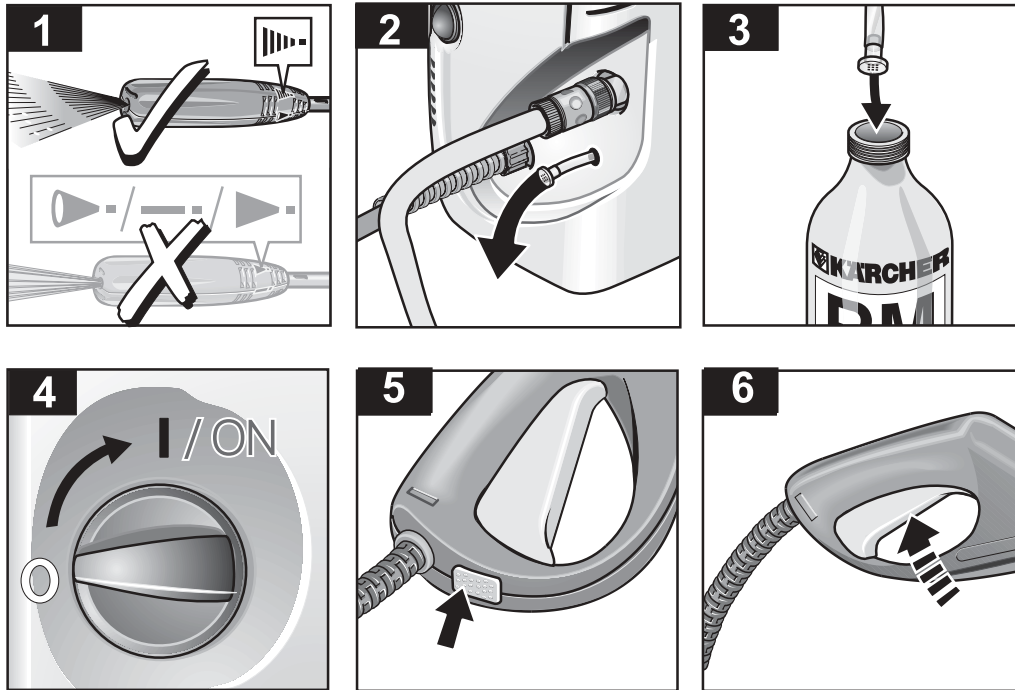
## Operation with high pressure

- 1** Choose operation mode of the spray lance
- 2** Unit switch on "1"
- 3** Release safety ratchet on handgun
- 4** Press lever
- 5** **Caution:** recoil
- 6** Safety instructions



## Operation with Detergent

- 1** Adjust spray lance to low-pressure jet or choose washing brush  
*No detergent in high-pressure mode*
- 2 3** Suspend detergent suction hose in detergent reservoir
- 4** Switch on high-pressure cleaner
- 5** Release safety ratchet on handgun
- 6** Press lever



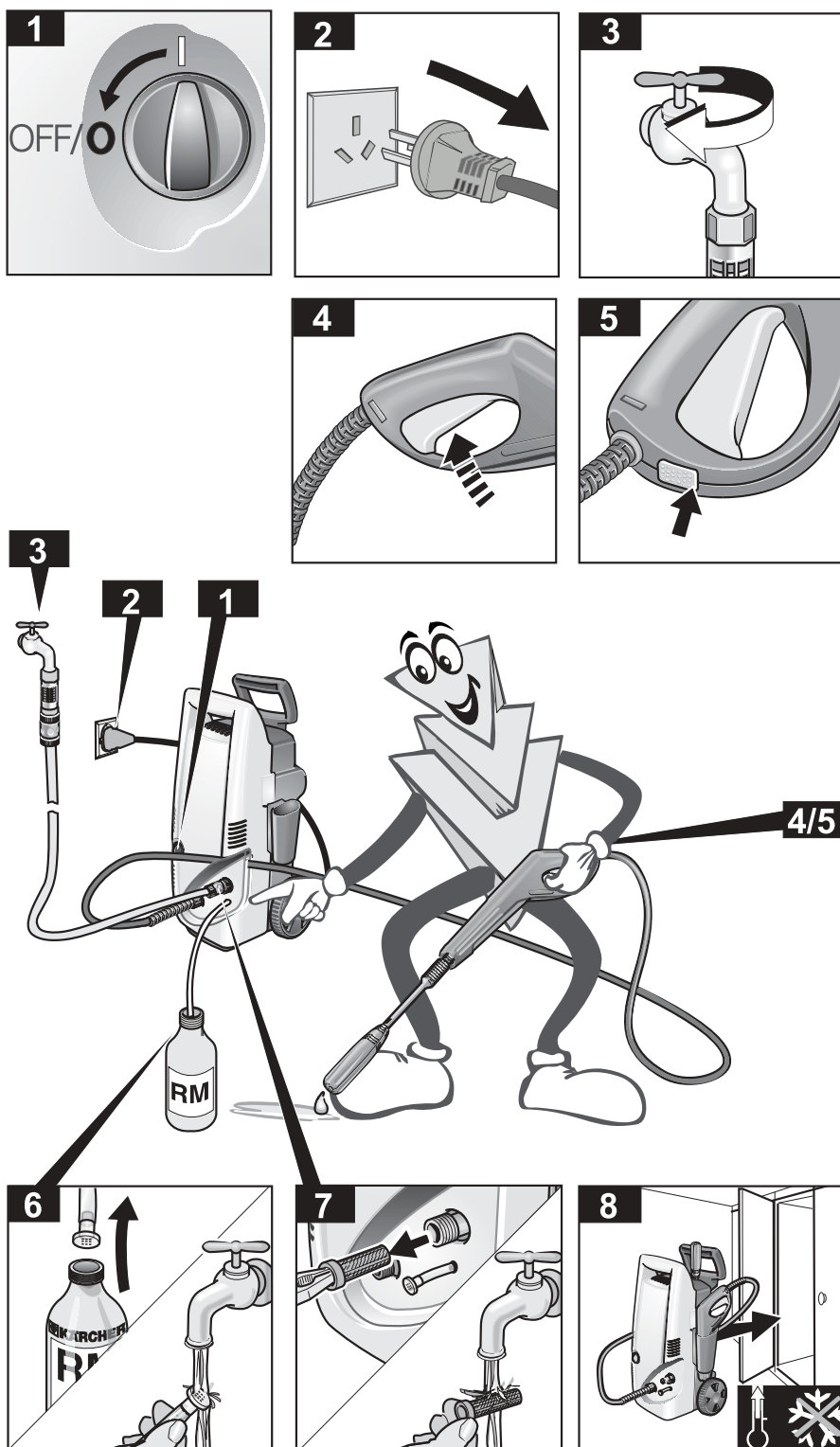


## Finishing the operation

- 1** Unit switch to "0"
- 2** Unplug power plug
- 3** Turn off water tap
- 4** Press lever (to de-pressurise)
- 5** Engage safety catch on handgun

## Care, storage

- 6** Clean detergent filter
- 7** Clean water filter
- 8** Frost protection



## Environmental protection

### Dispose of packaging

The packaging materials are recyclable. Please hand in the packaging for recycling.

### Dispose of old equipment

In the development of this appliance careful attention has been given to its ability to be easily recycled. Nevertheless, it contains parts or substances which should not go into the household rubbish. You can obtain information from any Kärcher sales house about disposal facilities which protect the environment.

### Save water

In comparison to other cleaning methods, by the use of this unit you save up to 85 % of the water otherwise needed. The unit can also be operated with rain-water (use a water filter).

### Ease the burden on waste water

Please use the cleaning agents sparingly. Observe the dosage recommendations which are supplied with the cleaning agents.

## Before the First Use

### Assembly

Check the contents of the box when unpacking the appliance. If you detect any transport damages, please contact your dealer.

### Electrical Connection

- ⚠ Never use defect connection or extension lines! If the connection line is damaged, it must be replaced with a special connection line that is available from the manufacturer or his customer service.
- ⚠ Please make sure that the connection or extension lines are not damaged by being ran over, pulled or dragged. Protect the connection lines from heat, oil, and sharp edges.

- ⚠ Never touch the mains plug and the socket with wet hands.
- ⚠ The connection between connection line and extension line must not lie in the water.
- ⚠ All current-carrying components within the working area must be jet-proof.
  - The appliance may only be connected to an electrical connection that was performed by an electrician according to IEC 60364.
  - Only connect the appliance to alternating current. The voltage must comply with the voltage specified on the typeplate.
  - Minimum fuse protection of the socket 10 A (delay-action fuse).
  - To avoid electric accidents, we recommend to use sockets with a series connected residual current operated device (rated breaking current max. 30 mA).
  - **Warning:** Inappropriate extension lines may be dangerous. If you work outside, only use extension lines that are approved and specifically labelled and provide of a sufficient conductor cross section:  
**1 to 10 m: 1.5 mm<sup>2</sup> 10 to 30 m: 2.5 mm<sup>2</sup>**
  - The plug and the coupling of an extension line must be waterproof.
  - Always unwind the extension line completely from the cable drum.

### Connection to the Water Conduit

Please observe the provisions of the local water supply company.

Only use supply hoses (not included in the delivery) with the following dimensions:

- minimum length 7.5 m
- minimum diameter ½"

Please see the typeplate or the section "Specifications" for the connection values.



## Operation

### **Serious danger!**

Vehicles tyres and tyre valves can be damaged by the high-pressure jet and become perforated. The first sign of this is a discoloration of the tyre. When cleaning them maintain a distance of at least 30 cm. Never grasp the power plug with wet hands. Before each use check the power cord and power plug for damage. Have a damaged power cord replaced immediately by an authorized Kärcher service point or an electrical specialist.

Before each use check the high-pressure hose for damage. Replace a damaged high-pressure hose immediately.

### **Danger of injury!**

Owing to the water jet emerging from the high-pressure nozzle a recoil force operates on the handgun. Ensure you have a secure footing and hold the handgun and spray lance firmly.

If necessary wear protective clothing for protection against return spray.

## Water supply

**Caution!** Impurities in the intake water damage the pump. To prevent this we expressly urge you to use the Kärcher water filter (not included, order no. 4.730-097). The operation of the high-pressure cleaner with a closed water supply line causes damage to the pump. **Please never operate the high-pressure cleaner with a closed water supply tap.**

The unit can either be supplied from the water main or from water in an open container.

### Water supply from the water main

- Connect a supply hose (not included) to the water inlet of the unit and to the water supply (e.g. water tap).
- Open the water supply.

### Water supply from an open container

- Unscrew the coupling part for the water inlet.

- Screw the suction hose with filter (not included, order-no. 4.440-238) onto the water connection of the unit.
- Hang the filter in the container.
- Vent the unit before operation.
  - Unscrew the high-pressure line at the high-pressure outlet of the unit.
  - Switch on the unit and let it run until water free of bubbles emerges at the high-pressure outlet.
  - Switch off the unit and screw on the high-pressure hose again.

## Preparation

- Insert power plug.
- Turn master switch to "I".

## Switching on

- Press safety ratchet on the handgun and pull the lever.

## Switching off

- Release the lever.

During breaks in work and when leaving the unit secure it against inadvertent switching on by pressing the safety ratchet.

## Working with accessory

### ■ **Washing brush**

The washing brush is ideally suited for the cleaning of vehicles.





**Note:** Please make sure that the washing brush is free from dirt or other particles. Otherwise, it may cause defects in the paint work. Please make also sure that the water flow is ensured.

### ■ **Spray lance with 4-jet nozzle**


- Release the trigger of the handgun.
- Rotate the nozzle head until the symbol is aligned with the marking on the spray lance.

**Note:** The marking on the spray lance must be up during operation.

## Meaning of the symbols

-  Low-pressure fan jet; for operating with detergent or for cleaning with low pressure.
-  High-pressure pencil jet; for especially stubborn spot soiling.
-  High-pressure fan jet; for large area soiling.
-  High-pressure rotating pencil jet; for stubborn large area soiling.

## Adding the cleaning agent

- Draw the cleaning agent suction hose out of the housing to the required length.
- Hang the cleaning agent suction hose in the cleaning agent container.
- Rotate the spray lance in the direction of () until reaching the stop.

### *If cleaning agent has been added:*

- Hang the cleaning agent suction hose in a container of clear water, switch on the unit for about one minute and flush through.

## Recommended cleaning method

1. Spray the cleaning agent on the dry surface sparingly and let it react (but not dry out).
2. Wash off the loosened dirt with the high-pressure jet.

## Finishing operations

- Master switch to “0”.
- Draw out power plug.

### Water supplied from the water main

- Close the water supply tap.
- Separate the unit from the water connection.

### Water supplied from an open container

- Unscrew the suction hose with filter at the water inlet of the unit.
- Pull the lever on the handgun until the unit is without pressure.
- Press in the safety ratchet to protect the unit against inadvertent switching on.

## Safekeeping

**Caution!** Frost can destroy an incompletely emptied unit. In the winter keep the unit in a frost-free room.

- Separate the spray lance from the handgun.
- Wind up the power cord and, for example, hang it around the handgun.

## Transportation

- Switch off the unit before transporting it.
- To transport it over stairs or obstacles lift the unit at the transportation handle.
- To transport the unit over even surfaces draw it by the drawing bar.

## Cleaning agents

For trouble-free operation and for matching to the relevant cleaning task we recommend our Kärcher cleaning agents and care range. Please let us advise you or ask for information about them. Here is a small selection:

Universal cleaner	Profi RM 555 ULTRA
Automobile cleaner	Profi RM 565 ULTRA
House and garden cleaner	Profi RM 570 ULTRA
Boat cleaner	Profi RM 575 ULTRA

## Care and Maintenance

### Cleaning

Before long periods of storage, e.g. in winter:

- Pull out the strainer in the water inlet with flat-nose pliers and clean it under running water.

### Maintenance

The unit is maintenance-free.

## Help with faults

Faults often have simple causes which you can rectify yourself with the aid of the following summary. In case of doubt or of faults or remedies not mentioned here apply to the authorized customer service.

#### **Danger of electric shock!**

Repair work on the unit can only be carried out by the authorized customer service.

#### **Appliance does not work**

- Please check whether the voltage specified on the typeplate corresponds to that of the power source.
- Check the power cord for damages.

#### **Appliance does not achieve the operational pressure**

- Deaerate the appliance: allow the pump to operate without the high-pressure hose until bubble-free water emerges from the high-pressure outlet. Then reconnect the high-pressure hose.
- Clean the sieve in the water connection (it can be easily removed using flat pliers).
- Check the inlet water flow rate.
- Check all supply lines to the pump for leaks or clogging-up.

#### **Strong pressure variations**

- Clean the high-pressure nozzle. Remove dirt from the nozzle boring using a needle, and then rinse the nozzle with water.

#### **Pump leakage**

- A slight leakage of the pump is normal. If

you detect an excessive leakage, please contact the authorized customer service.

#### ***Detergent is not taken in***

- Clean filter of detergent suction hose
- Set to low-pressure jet

*No detergent in high-pressure mode*

### Replacement parts

Use exclusively Kärcher original replacement parts. You will find a replacement parts summary at the end of these operating instructions.

## Service

### Guarantee

In each country the guarantee conditions issued by our responsible sales company are applicable. We clear any faults occurring in the unit free of charge during the period of guarantee providing the cause is a fault in a material or in the manufacture.

In the case of a claim under the guarantee please contact your dealer or the nearest authorized customer service point, accompanying your claim with accessories and purchase voucher.

### Customer Service

In the case of questions or faults our Kärcher branches will be pleased to assist you further.

**Karcher Pty Ltd**  
40 Koornang Road  
Scoresby 3179  
Victoria, Australia  
Tel. 61 3 9765 2300

## Technical Data

### Power supply

Voltage (at 1~50 Hz)	240 V
Connected load	1,6 kW
Supply fuses (time-lag)	10 A
Safety class	1

### Water connection

Supply temperature, max.	40 °C
Supply volume, min. (500 l/h)	8 l/min
Supply pressure, max. (12 bar)	1,2 MPa

### Performance data

Operating pressure (85 bar)	8,5 MPa
Max. permissible pump pressure (100 bar)	10 MPa
Flow volume (300 l/h)	5 l/min
Cleaning agent metering	0,3 l/min
Recoil force of the handgun	10 N
Unit vibrations	0.8 m/s <sup>2</sup>

### Sound level

L <sub>PA</sub> (EN 60704-1)	74 dB(A)
L <sub>WA</sub> (EN 4871)	84 dB(A)

### Dimensions

Length/Width/Height	240/300/555 mm
Weight	10,5 kg

## Special accessories

Special accessories expand the scope of use of your machine. You can obtain further information from your Kärcher dealer.

**See page 13 for illustrations.**

### 1 Rotary nozzle

for tenacious dirt accumulation, such as moss-covered or weathered outside surfaces

### 2 Spray guard for dirt blaster

### 3 Tube cleaning kit

for choked tubes and discharges

### 4 Rotary wash brush

for the cleaning of car bodies and glass surfaces

### 5 Wash brush

for the cleaning of smooth surfaces, e.g. car or boat

### 7 Flexible jet spray lance

swivelling nozzle for the cleaning of places difficult to access

### 8 Triple nozzle with jet spray lance

### 9 Jet spray lance for places that are difficult to access

extra long jet spray lance, for example, for the cleaning of gutters

### 11 Jet spray lance extension, 0.5 m

### 12 High-pressure hose, 7.5 m

### 13 Hose extension

### 14 Large volume suction kit

### 15 Suction hose with filter

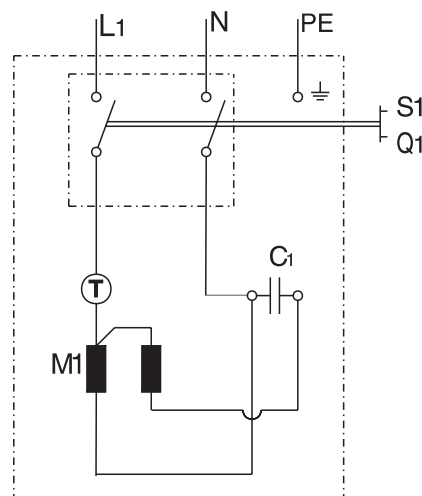
to suck up water reserves, e.g., from ponds and water-butts

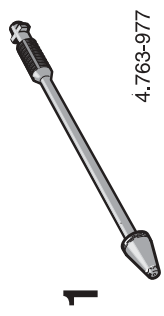
### 16 Water filter

### 17 Non-return valve

## Circuit Diagram

- C1 Capacitor
- M1 Motor
- Q1 Switch
- T Temperature limiter
- S1 Pressure switch

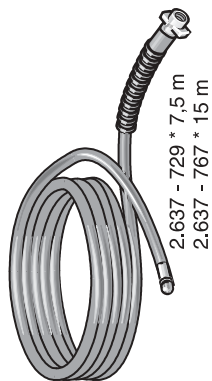




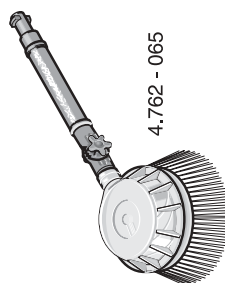
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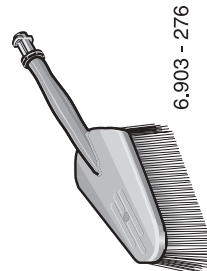
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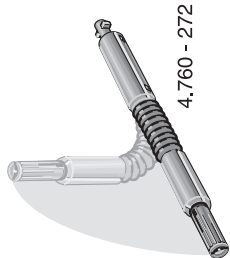
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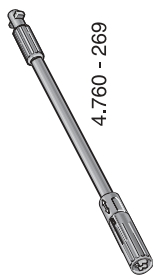
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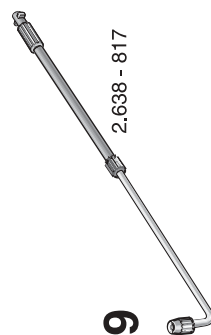
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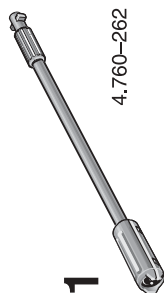
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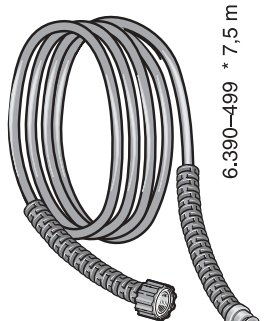
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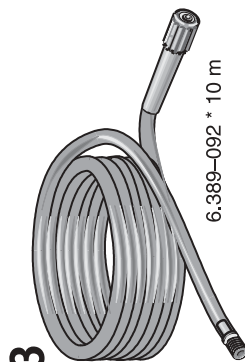
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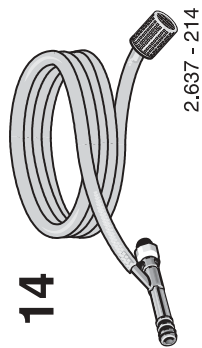
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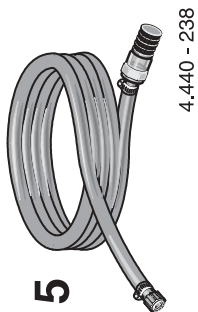
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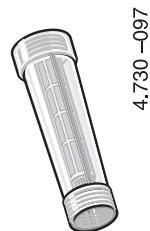
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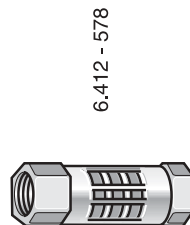
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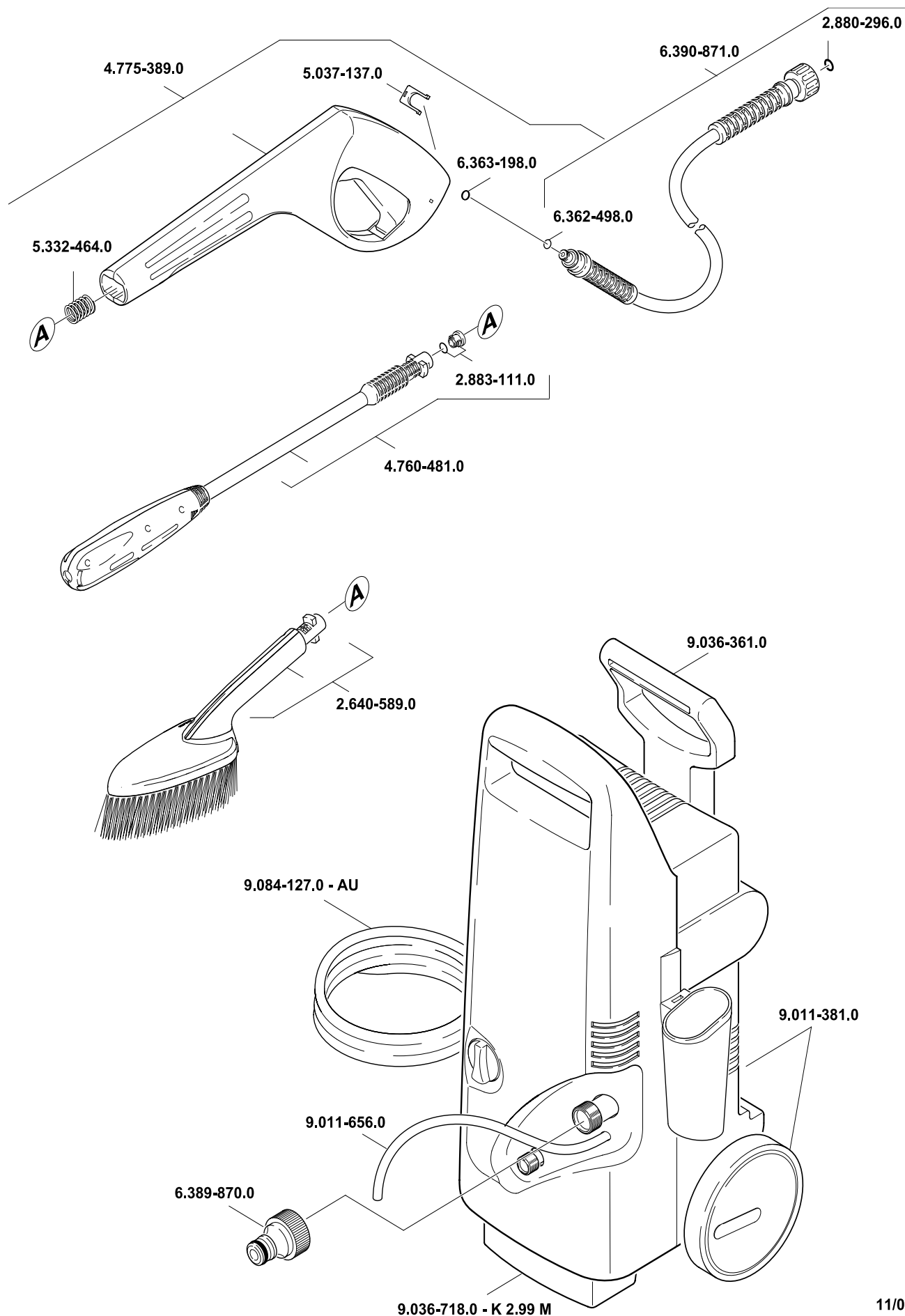
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17







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