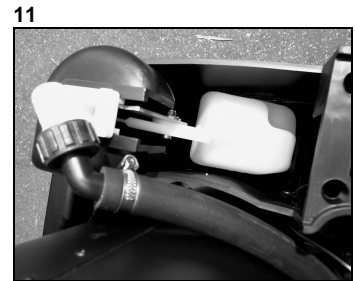
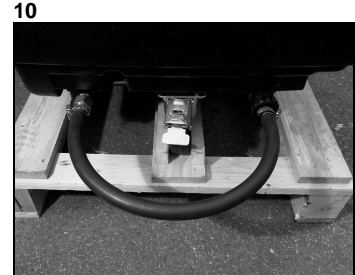
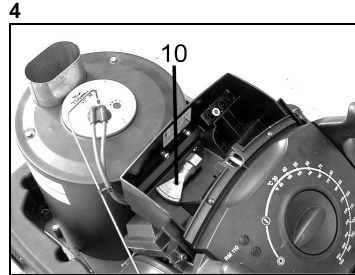
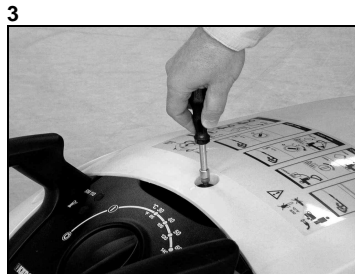
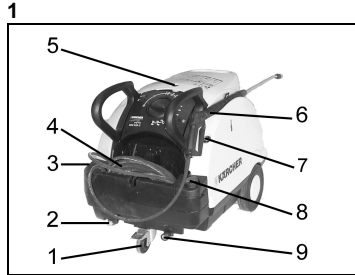


HDS 796 CW



HDS 796 CW



Operating Instructions

3

Spare Parts List

14

Prior to initial startup, operating manual and safety
instructions no. 5.951-949 must be consulted

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**IMPORTANT SAFETY
INSTRUCTIONS**

WARNING

**WHEN USING THIS PRODUCT
BASIC PRECAUTIONS SHOULD
ALWAYS BE FOLLOWED,
INCLUDING THE FOLLOWING:**

- * DO NOT USE WITH FLAMMABLE LIQUIDS AND TOXIC CHEMICALS.
- * INJECTION HAZARD: EQUIPMENT CAN CAUSE SERIOUS INJURY IF THE SPRAY PENETRATES THE SKIN. DO NOT POINT THE GUN AT ANYONE OR ANY PART OF THE BODY. IN CASE OF PENETRATION SEEK MEDICAL AID IMMEDIATELY.
- * THIS SYSTEM IS CAPABLE OF PRODUCING 12000KPA. TO AVOID RUPTURE AND INJURY, DO NOT OPERATE THIS PUMP WITH COMPONENTS RATED LESS THAN 12000KPA WORKING PRESSURE (INCLUDING BUT NOT LIMITED TO SPRAY GUNS, HOSE AND HOSE CONNECTIONS).
- * BEFORE SERVICING, CLEANING OR REMOVAL ANY PARTS, SHUT OFF POWER AND RELIEVE PRESSURE.

- * DO NOT USE GASOLINE, CRANCASE DRAININGS, OR OIL CONTAINING GASOLINE OR SOLVENTS.
- * WARNING: RISK OF INJECTION OR SEVERE INJURY. KEEP CLEAR OF NOZZLE. DO NOT DIRECT DISCHARGE STREAM AT PERSONS. THIS EQUIPMENT IS TO BE USED ONLY BY TRAINED OPERATORS.
- * Read all the instructions before using the product.
- * To reduce the risk of injury, close supervision is necessary when a product is used near children.
- * Know how to stop the product and bleed pressure quickly. Be thoroughly familiar with the controls.
- * Stay alert watch what you are doing.
- * Do not operate the product when fatigued or under the influence of alcohol or drugs.
- * Keep operating area clear of all persons.
- * Do not overreach or stand on unstable support. Keep good footing and balance all times.
- * Follow the maintenance instructions specified in the manual.
- * This product must be connected to a power supply receptacle protected by a GFCI (ground fault circuit interrupter). „If Replacement Of The Plug Or Cord Is Needed, Use

Only Identical Replacement Parts.“

- * WARNING Risk of injection or injury-Do Not Direct Discharge Stream At Persons.

Grounding Instructions

- * This Product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.
- * DANGER - Improper connection of the equipment grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the product - if it will not fit the outlet, have a proper outlet installed by a qualified electrician. Do not use any type of adaptor with the product.

SAVE THESE INSTRUCTIONS



Prior to initial startup, operating manual and safety instructions no.. 5.951949 must be consulted!

Inform retailer immediately of any transportation damage.

ENVIRONMENTAL PROTECTION

Items used when working, such as fuel, oil, cleaning agent and contaminated maintenance materials, are to be deposited at a special collection point.



Packaging materials, metal and plastic containers are to be set aside for recycling as appropriate.

OVERVIEW

Fig. 1

- 1 Swivel caster with parking brake
- 2 Connection for high-pressure hose
- 3 Fuel tank inlet
- 4 High-pressure hose
- 5 Cover latch
- 6 Handgun
- 7 Pressure gauge
- 8 Filler opening for cleaning agent and metering equipment
- 9 Water connection 1 with strainer

Fig. 2

- 1 Selector switch ON/OFF and temperature

Indicator lamps

- 2 Fuel low
- 3 Ready for operation

Fig. 3

Press down cover latch with screwdriver or coin and turn counter-clockwise to open.
Turn clockwise to close.

Fig. 4

Compartment for accessories beneath cover
10 Steam nozzle (4.766-023) optional

COMMISSIONING



- Unit, piping, high-pressure hose and connections must be in perfect working order!
- Lock the hand brake.

Checking oil level

Fig. 5

Oil reservoir



Prior to initial startup, cut off tip of oil reservoir cap

Contact KÄRCHER AFTER-SALES SERVICE immediately if oil is opaque!

If oil level is approaching MIN mark, fill up with oil as far as MAX mark.

Seal oil filler inlet.

Refer to technical data for oil grade.

Filling with fuel



- Never operate unit with fuel tank empty! Fuel pump would otherwise be destroyed!

Fig. 6

Only fill with Kerosin.
Close tank cap
Wipe off excess fuel

Fill with cleaning agent



- * Only use KÄRCHER products.
- * Never pour in solvent (petrol, acetone, thinner etc.)!
- * Avoid contact with eyes and skin
- * Pay attention to cleaning-agent manufacturer's instructions on safety and handling

KÄRCHER can provide an individual range of cleaning and treatment agents.

Your dealer will be pleased to advise you.

Fig. 8

Fill with cleaning agent

Mounting handgun

- Connect spray lance to handgun
- Insert high-pressure nozzle in union nut
- Mount and tighten unit nut
- Mount high-pressure hose at high-pressure connection Fig. 1 Item 2

Water connection

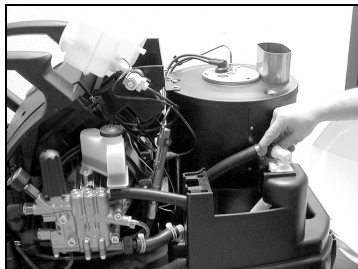
For connected loads, refer to Technical Data.

Mount supply hose at water connection of unit.

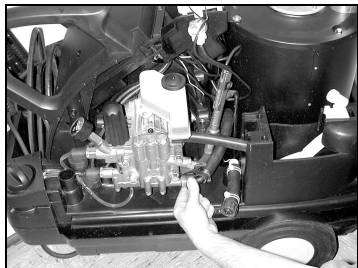
Fig. 1 Item 9
(supply hose is not part of scope of delivery)

Drawing in water from tank

The following conversion work is necessary if water is to be drawn in from an external tank.



Lift off scale inhibitor reservoir.
Remove upper supply hose to water reservoir and route to pump head.



Detach water connection at pump head and swivel aside.
Connect supply hose to pump head.

For drawing in, use 3/4 hose with suction filter.
Max. suction height 0,5 m.

Mains connection

Refer to technical data and rating plate for connected loads.

Fitting power plug

Have power plug fitted by KÄRCHER AFTER-SALES SERVICE or an authorised electrician.

Set selector switch to "0"
Insert power plug



Whenever socket is changed, check direction of rotation of motor.

If direction of rotation is correct, powerful jet of air will be felt at exhaust-gas opening of burner. In the event of incorrect direction of rotation, refer to Faults "Burner not ignited".

If an extension cable is used, this should always be fully uncoiled and have an adequate cross-section. (10 m min. 1,5 mm², 30 m min. 2.5 mm²)

OPERATION

* Never operate unit with fuel tank empty! Fuel pump would otherwise be destroyed!

Switching on unit**Fig. 2**

Set selector switch (1) to "I"
Indicator lamp (3) lights

* If indicator lamp (2) come on during operation, switch off unit immediately. Eliminate fault, refer to Faults.

Unit starts up briefly and is switched off as soon as operating pressure is reached.

Fig. 7

Release handgun
Actuation of handgun switches unit back on again.

Bleed pump if no water emerges from high-pressure nozzle. Refer to Faults "No build-up of pressure by unit"

Setting cleaning temperature

Set selector switch (1) to desired temperature

30°C 90°C
Hot water cleaning

Measuring out cleaning agents

* Use cleaning agents sparingly to protect the environment
* The cleaning agent must be suitable for the surface to be cleaned.

Fig. 9

Set cleaning-agent concentration as specified by manufacturer
0 = Working without cleaning agent

Metering setting	Concentration
1	0,25%
2	1,00%
3	1,25%
4	1,50%
5	1,75%
6	2,00%
Approximate values at maximum operating pressure	

Intended use

Cleaning of: Machines, vehicles, structures, tools, facades, terraces, garden implements, etc.



- * Engine cleaning is only to be performed in areas provided with oil separator.
- * Heed appropriate safety regulations for use at petrol stations or in other hazardous environments.

Working with high-pressure nozzle

Spray angle is crucial to efficiency of high-pressure jet.
Use is normally made of 25° fan jet nozzle (included).

Recommended nozzles, available as accessories

- For stubborn dirt 0° full jet nozzle
- For delicate surfaces and slight contamination 40° fan jet nozzle
- For thick layers of stubborn dirt dirt blaster
- Nozzle with variable spray angle, for adaptation to various cleaning tasks variable-angle nozzle

Cleaning

- * Set pressure/temperature and cleaning-agent concentration in line with surface to be cleaned
- * Always start by directing high-pressure jet from a good distance at object to be cleaned to avoid damage caused by excessive pressure.

Recommended cleaning method

Loosen up dirt:

Spray on cleaning agent sparingly and allow to react for 1...5 min (do not allow to dry on).

Remove dirt:

Spray off loosened-up dirt with high-pressure jet.

Operation with cold water

Removal of slight contamination and rinsing
e.g.: Garden implements, terrace, tools, etc.

Set operating pressure as required
Set selector switch to "I"

Operation with hot water

- * Danger of scalding

We recommend the following cleaning temperatures

- Slight contamination 86-122°F
- Protein soiling, e.g. in foodstuffs industry max. 140°F
- Motor vehicle cleaning, machine cleaning 140-194°F

Set selector switch to desired temperature

AFTER EVERY OPERATION**Following operation with cleaning agent**

- Set cleaning-agent regulator to "0"
- Set mode selector switch to "I"
- Actuate handgun and flush unit for approx. 1 min

Stopping machine

- Set mode selector switch to "0"
- Shut off water supply
- Briefly switch on pump with selector switch (approx. 5 sec.)
- Make sure hands are dry when pulling power plug out of socket
- Detach water connection
- Actuate handgun to depressurise unit
- Secure handgun (Fig. 7)

- Engage spray lance in cover holder
- Roll up high-pressure hose and cable and place in compartment
- * Take care not to kink high-pressure hose and cable!



Frost will destroy unit if water is not drained off completely!
Store unit in a frost-free location

Take unit out of service if frost-free storage is not possible.

SHUTTING DOWN

In the event of lengthy periods of non-use or if frost-free storage is not possible:

- Drain unit or flush with anti-freeze
- Drain cleaning fluid tank

Draining unit

- Unscrew water supply hose and high-pressure hose
- Unscrew supply line at boiler base and allow heating coil to drain
- Run unit for max. 1 min until pump and lines are empty

Flushing unit with anti-freeze

- Use commercial grade antifreeze
- Observe handling instructions of antifreeze manufacturer
- By this means, a certain degree of corrosion protection is achieved.

FROST PROTECTION

The unit has a frost protection feature, which avoids freezing of the watersystem down to -30 °C. The frost protection will be activated as follows.

1. Unscrew the water inlet hose of the unit. (Fig.1)
2. Unscrew the high pressure hose with handgun, store in freeze protected room. (Fig.1)
3. Connect waterinlet - and high pressure connection with the enclosed hose. (Fig.10)
4. Fasten the lever to open the float valve. (Fig.11)
5. Set the frost protection switch on the instrument panel to the symbol frost protection (penguin). (Fig.12)

**Caution:**

The unit may not be separated from the electric circuit.

To get the ready of separated, do the following points:

1. Set the frost protection on the instrument panel on the symbol spray lance. (Fig.12)
2. Unfasten the lever of the float valve. (Fig.11)
3. Disconnect hose between water inlet and high pressure connection. (Fig. 10)
4. Connect high pressure hose with handgun. (Fig.1)
5. Connect water inlet hose. (Fig.1)

MAINTENANCE

- * Disconnect unit from mains before carrying out any maintenance or repair work.
- * Always use genuine spare parts

Shut off unit before performing any work, refer to AFTER USE.

Set mode selector switch to "0"
Pull power plug out of socket
Shut off water supply
Actuate handgun to depressurise unit.
Detach water connection
Allow unit to cool down

Please consult your KÄRCHER dealer for details of regular safety inspection/maintenance agreement

Maintenance intervals**Once a week**

- Clean strainer in water connection
- Check oil level

Contact KÄRCHER AFTER-SALES SERVICE immediately if oil is opaque!

Once a month

- Clean strainer in low water protection
- Clean filter at cleaning-agent suction hose

After 500 hours of operation, at least once a year

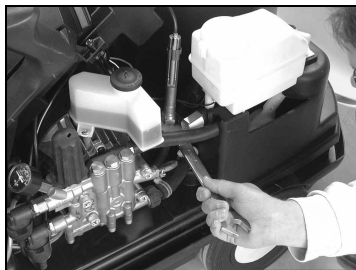
- Change oil

MAINTENANCE WORK

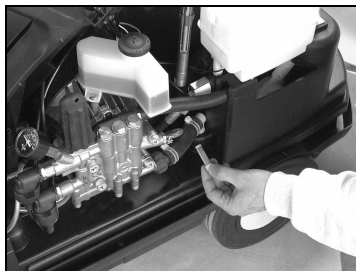
Clean strainer in water connection



- Remove strainer
- Clean in water and re-insert

Clean strainer in low water protection

- Unfasten union nut and detach hose



- Take out strainer
- If necessary, screw in bolt M8 approx. 5mm to pull out strainer.
- Clean strainer in water
 - Slide in strainer
 - Mount hose
 - Tighten union nut

Clean filter at cleaning-agent suction hose

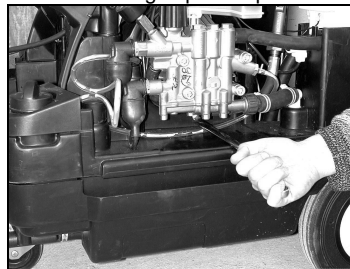
- Pull out cleaning-agent suction hose



- Clean filter in water and re-insert

Change oil

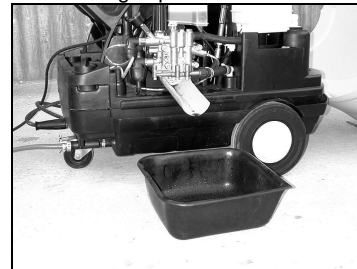
- Provide a collecting container for approx. 1 litres of oil
- Place drainage spout in position



- Loosen starting screw

KÄRCHER tip

- * Cut open RM 110 bottle and use as drainage spout



- Drain off oil via drainage spout into collector

- * Dispose of used oil in appropriate manner or hand in at a collection point.

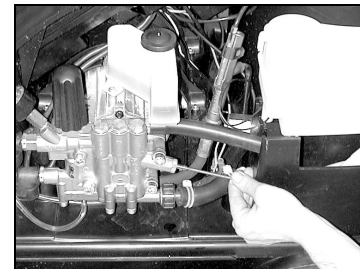
- Tighten drain plug again
- Slowly fill with oil as far as MAX mark

Air bubbles must be able to escape. Refer to technical data for oil grade and quantity to be used.

FAULTS			If fault cannot be rectified, have unit checked by After-Sales Service.
Fault	Cause	Remedy	
FUEL indicator lamp on	<ul style="list-style-type: none"> – Fuel tank empty 	Fill up	
READY FOR OPERATION indicator lamp off	<ul style="list-style-type: none"> – Motor overloaded/overheated 	Set selector switch to "0" and allow motor to cool down for at least 5 min. Have unit checked by After-Sales Service if this does not remedy fault.	
Unit does not run	<ul style="list-style-type: none"> – No mains voltage 	Check mains connection/power cord	
Unit does not build up pressure	<ul style="list-style-type: none"> – Air in system 	Bleed pump: <ul style="list-style-type: none"> – Set cleaning-agent metering to "0" – With handgun open, use selector switch to switch unit on and off several times. Fill up cleaning-agent tank if empty. Check connections and lines	
	<ul style="list-style-type: none"> – Pressure set to MIN – Strainer in water connection dirty – Insufficient water supply 	Set pressure to MAX Clean strainer Check water supply volume (refer to technical data)	

Fault	Cause	Remedy
Unit leaking, water dripping out at bottom	<ul style="list-style-type: none"> – Pump leaking 	<p>3 droplets/min are permitted. In the event of a major leak, have unit checked by After-Sales Service.</p>
Unit constantly switched on and off with handgun closed	<ul style="list-style-type: none"> – Leak in high-pressure system 	<p>Check high-pressure system and connections for leaks</p>
Unit does not draw in cleaning agent	<ul style="list-style-type: none"> – Filter in cleaning-agent suction hose dirty – Non-return valve gummed up 	<p>Clean filter Pull off cleaning-agent hose and use blunt object to release non-return valve (see Fig.).</p>
Burner not ignited	<ul style="list-style-type: none"> – Fuel tank empty – Lack of water – Fuel filter dirty – Incorrect direction of rotation. If direction of rotation is correct, powerful jet of air will be felt at exhaust-gas opening of burner. – No ignition spark 	<p>Fill up Check water connection, check supply lines, clean low water protection. Replace fuel filter. Check direction of rotation. If necessary, have connection replaced by a qualified electrician.</p>
Set temperature not attained when working with hot water	<ul style="list-style-type: none"> – Soot deposits on heating coil 	<p>Have After-Sales Service remove soot deposits from unit</p>

If fault cannot be rectified, have unit checked by After-Sales Service.



WARRANTY

The warranty terms and conditions issued by our responsible sales company apply in every country. Within the warranty period, any faults in the unit will be rectified free of charge provided that the problem was caused by a material defect or manufacturing error.

The warranty only applies if the dealer fills in, stamps and signs the enclosed reply card when the unit is sold and the purchaser then returns it to the appropriate local distributor.

In the event of a warranty claim, please contact your dealer or the nearest authorised After-Sales Service office and produce both accessories and proof of purchase.

GENERAL NOTES**Safety features**

- * Overflow valve with two pressure switches

Reducing the water volume at the pump head or with the servopress control opens the overflow valve and some of the water runs back to the pump suction end.

If the handgun is closed thus causing all the water to return to the pump suction end, the pressure switch at the overflow valve shuts off the pump.

Reopening the handgun causes the pressure switch at the cylinder head to switch the pump back on again.

The overflow valve is set at the factory and sealed. Adjustment can only be made by After-Sales Service.

- * Safety valve

The safety valve opens if the overflow valve or pressure switch is defective. The safety valve is set at the factory and sealed. Adjustment can only be made by After-Sales Service.

- * Low water protection

The low water protection stops the burner being switched on in the event of a lack of water. A strainer stops the protection feature becoming dirty and requires regular cleaning.

- * Motor protection switch

The motor protection switch interrupts the circuit should overloading occur.

Guidelines for liquid spraying equipment

- * The accident prevention regulation (VBG 87) "Working with liquid spraying equipment" applies. In accordance with these guidelines, high-pressure spraying equipment must be checked at least every 12 months by an expert and the results of the inspection recorded in writing.

Order governing boilers

- * Test pressure and design of unit comply with Order governing boilers as per TRD. The water content of the heating coil is less than 10 litres. The boiler section of the unit is thus not subject to installation regulations. Local building regulations are to be heeded.

TECHNICAL DATA

Type	HDS 796 CW-50 (1.173-114)	HDS 796 CW-60 (1.173-115)
Mains connection	200 V 3~ 50 Hz	120 V 1~ 60Hz
Connected load	3.0 kW	3.1 HP
Engine output	2.2 kW	
Fuse (slow blow)	13 A	20 A
Water connection		
Supply temperature	max. 30 °C	max. 30 °C
Supply volume	min. 900 l/h	min. 900 l/h
Suction height when drawn from open tank	0.5 m	0.5 m
Performance data		
Flow rate: cold/hot water	750 l/h	750 l/h
Operating pressure: cold/hot water (with standard nozzle supplied)	100 MPa (100 bar)	100 MPa (100 bar)
Operating temperature		
- Hot water	max. 80 °C	max. 80 °C
- Steam	--	--
Cleaning-agent intake	0 – 12 l	0 – 12 l
Burner output	40 kW	40 kW
Recoil force of handgun	max. 30 N	max. 30 N
Sound level as per DIN 45635 T36	76 dB(A)	76 dB(A)
Fuels		
Fuel	Kerosene	Kerosene
Oil quantity	0.5 l	0.5 l
Oil grade	Hypoid SAE90 (6.288-016)	Hypoid SAE90 (6.288-016)
Dimensions and weights		
Length x Width x Height	940x600x740 mm	940x600x740 mm
Weight not incl. accessories	94 kg	94 kg
Fuel tank	16 l	16 l
Cleaning-agent tank	8 l	8 l

1.173-114.0	HDS 796 CW
1.173-115.0	HDS 798 CW

