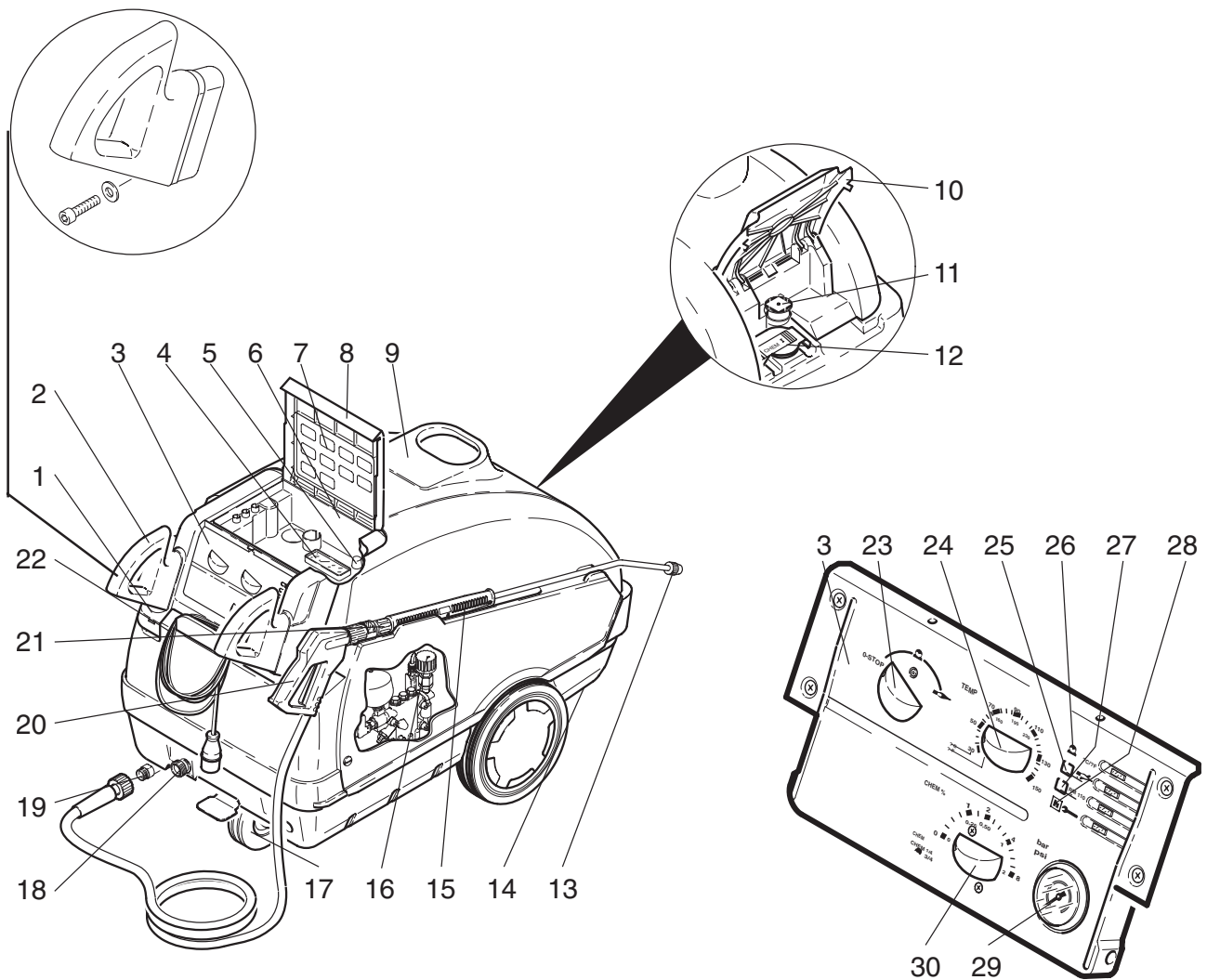


HDS995

| | |
|------------|--|
| Deutsch | Lesen Sie vor der Inbetriebnahme diese Betriebsanleitung und beachten Sie besonders die " Sicherheitshinweise für Hochdruckreiniger ". |
| Seite 4 | |
| English | Please read these operating instructions before starting and strictly observe the " Safety Instructions for High Pressure Cleaners ". |
| Page 16 | |
| Français | Veillez lire attentivement la présente notice d'instructions avant la mise en service et respecter en particulier les " Consignes de sécurité pour nettoyeurs haute pression ". |
| Page 28 | |
| Italiano | Leggere queste istruzioni per l'uso prima della messa in esercizio facendo particolarmente " Istruzioni per la sicurezza per l'idropulitrice ad alta pressione ". |
| Pagina 42 | |
| Nederlands | Lees voor de ingebruikneming deze gebruikshandleiding en neem in het bijzonder de " Veiligheidsvoorschriften voor hogedrukreinigers " in acht. |
| Pagina 54 | |
| Español | Antes de poner en marcha el aparato deberá estudiar atentamente las " Advertencias y observaciones relativas a la seguridad para limpiadoras de alta presión ". |
| Página 66 | |
| Dansk | De bedes læse denne driftsvejledning igennem før idrifttagningen i denne forbindelse skal især " Sikkerhedsforskrifter for højtryksrensere " overholdes. |
| Side 80 | |
| Norsk | Før ibruktaking må bruksanvisningen leses nøye og det må taes hensyn til " Sikkerhetsregler for høytrykksvaskere ". |
| Side 92 | |
| Svenska | Läs igenom bruksanvisningen före driftstart och uppmärksamma " Säkerhetsanvisningar för högtryckstvättar " extra noga. |
| Sida 104 | |
| Suomi | Lue ennen käyttöönottoa tämä käyttöohje huolellisesti läpi ja kiinnitä erikoista huomiota " Korkeapainepesurien turvallisuusohjeita ". |
| Sivu 116 | |
| Ελληνικά | Πριν θέσετε τη συσκευή για πρώτη φορά σε λειτουργία, διαβάστε τις παρούσες οδηγίες χειρισμού και τηρείτε ιδιαίτερα τις " Υποδείξεις για μηχανήματα καθαρισμού υψηλής πίεσης ". |
| Σελίδα 130 | |
| Slovensko | Pred uporabo preberite ta navodila in posvetite posebno pozornost odstavku " Varnost pri delu z visokotlačnim čistilcem ". |
| Stran 142 | |
| Türkçe | Cihazın kullanılmaya başlanmadan önce bu kullanma kılavuzunu özenle okuyunuz ve özellikle " Yüksek Basınçlı Temizleyiciler için Güvenlik Talimatları " bölümündeki bilgileri dikkat ediniz. |
| Sayfa 154 | |

1. Diagram of the appliance



2. Controls

| | | | |
|----|--|----|---|
| 1 | Filling orifice for fuel | 16 | Pressure and volume control |
| 2 | Handle | 17 | Guide roller with parking brake |
| 3 | Instrument panel | 18 | Water connection with strainer |
| 4 | View window with maintenance/fault display | 19 | High-pressure connection |
| 5 | Reset button | 20 | Hand-held spray gun with high-pressure hose |
| 6 | Compartment for accessories | 21 | Servo pressure valve |
| 7 | Short-time operating instructions | 22 | Elec. connecting cables |
| 8 | Cover flap for filling orifices | 23 | Appliance switch |
| 9 | Appliance hood | 24 | Thermostat |
| 10 | Cover flap for filling orifices | 25 | Fuel indicator light |
| 11 | Filling orifice for liquid softener | 26 | Engine indicator light |
| 12 | Filling orifice for detergent | 27 | Liquid softener indicator light |
| 13 | High-pressure nozzle | 28 | Maintenance/fault indicator light |
| 14 | Recessed grips in the bottom pan | 29 | Manometer |
| 15 | Spray lance | 30 | Detergent metering valve |

3. Technical Data

| | | |
|---|-----------------------|-----------------------|
| | 1.027-111 | 1.027-261 |
| | 1.027-291 | |
| | 1.027-8_1 | |
| Power connection | | |
| Voltage | 420 V | 230 V |
| Type of current | 3 Ph/ 50 Hz | 3 Ph/ 50 Hz |
| Connected load | 6.4 kW | 6.4 kW |
| Mains fuse (slow) | 13 A | 25 A |
| Water connection | | |
| Supply temperature (max.) | 30 °C | 30 °C |
| Supply rate (min.) | 1200 l/h | 1200 l/h |
| Suction height fom open tank at a water temperature of 20°C | 0.5 m | 0.5 m |
| Performance data | | |
| Operating pressure | 30–170 bar | 30–170 bar |
| Flow rate | 470–1000 l/h | 470–1000 l/h |
| Operating temperature (max.) | 140°C/ 80°C | 140°C/ 80°C |
| Detergent intake | 0–50 l/h | 0–50 l/h |
| Burner capacity | 76 kW | 76 kW |
| Recoil force of hand-held spray gun at operating pressure (max.) | 43 N | 43 N |
| Sound pressure level (DIN 45 635) | 76 dB(A) | 76 dB(A) |
| Dimensions | | |
| Length | 1285 mm | 1285 mm |
| Width | 690 mm | 690 mm |
| Height | 835 mm | 835 mm |
| Weight without accessories | 133 kg | 133 kg |
| Fuel tank | 25 l | 25 l |
| Fuel | EL fuel oil or diesel | EL fuel oil or diesel |
| Detergent tank | 20 l | 20 l |
| Pump oil quantity | 1 l | 1 l |
| Pump oil type (order no. 6.288-016) | Hypoid SAE 90 | Hypoid SAE 90 |

4. Start-up

4.1 Unpacking the appliance

- Please contact your dealer immediately if, on unpacking the appliance, you discover damage has been caused during transportation.

4.2 Attaching the accessories

- Attach the two handles to the appliance.
- Connect the spray lance to the gun.
- Attach the high-pressure nozzle to the spray lance.
- Tighten all union nuts hand-tight.

4.3 Checking the oil level of the high-pressure pump

- Before the initial start-up, open the appliance hood and cut the tip off the oil tank cover (venting the oil housing).
- Check the oil level in the oil tank. Do not start the appliance if the oil level has dropped below "MIN". Top up the oil as required (see tech. data, chap. 3).

4.4 Pouring in the fuel

- The appliance is delivered with an empty fuel tank.
- Fill the fuel tank with diesel or a light fuel oil before the initial start-up.



- *When the fuel tank is empty, the fuel pump will operate dry and will be damaged.*
- *Unsuitable fuels must not be used, e.g. petrol (danger of explosion).*

4.5 Pouring in the liquid softener

- The liquid softener prevents the heating element from becoming calcified when operating with hard supply water. The liquid softener is added in drops to the supply water in the water tank. The metering is set to an average value at the factory. This setting may be adjusted to local conditions by customer service.
- Pour the RM 110 liquid softener (included in standard delivery) into the filling orifice of the white tank.
- You can also work without liquid softener when operating with soft water, e.g. rain water. In this case you should remove the small (!) cover from the white tank and place the supplied spring underneath on the cover support. Then replace the cover. This prevents the indicator light on the instrument panel from continually flashing. This spring must be removed when operating with supply water.

4.6 Connecting the water

- See technical data, chap. 3 for connected loads.
- Attach the supply hose to the appliance and to the water line. The supply hose is not included in standard delivery.
- If you draw in the water from an open tank, you should
 - disconnect the water supply from the pump head
 - unscrew the upper supply hose from the water tank and connect to the pump head.
 - use a water supply hose which has a minimum diameter of 3/4" and a suction filter.

4. Start-up

- Until the pump has drawn in the water, you should:
 - rotate the pressure and volume control to “MAX”,
 - close the detergent metering valve.



– *Never draw in water from a drinking water tank.*

– *Never draw in liquids which contain solvents, e.g. paint thinners, petrol, oil and unfiltered water. The seals in the appliance are not resistant to solvents. The aerosol from solvents is highly flammable, explosive and toxic!*

4.7 Connecting the power

- See technical data, chap. 3 for connected loads
- The voltage stated on the rating plate must correspond to the voltage of the power source.
- The electric plug must only be fitted by an authorized customer service/electrical engineer. The direction of rotation of the engine must also be observed. If the direction of rotation is correct, there will be a powerful air flow from the exhaust gas opening of the burner.
- First, position the appliance switch to “STOP” and then put the electric plug into the socket.
- If you are using an extension lead, it should always be completely unwound from the cable drum and have an adequate cross-section (10 m = 1.5 mm², 30 m = 2.5 mm²).



– *The connection lead and extension lead must not be damaged.*

– *Connect the appliance only to correctly earthed power sources.*

– *All current-carrying components in the working area must be hose-proof.*

– *Never touch the plugs with wet hands.*

– *A residual-current-operated circuit-breaker will offer additional personal protection (30 mA).*

4.8 Intended use

- Use the appliance to clean machines, vehicles, buildings, tools, etc.
- Clean facades, patios, garden implements, etc. with the high-pressure spray only, i.e. without detergent. We recommend the dirt blaster, a special accessory, for stubborn dirt.
- Engines must only be cleaned in places which have appropriate oil traps (protection of the environment).
- If the machine is used at petrol stations or in other hazardous areas, the appropriate safety regulations must be observed.

5. Operation



- *The appliance must not be left unattended during operation.*
- *Ensure that the appliance is situated on firm ground.*
- *Provide adequate ventilation when operating the appliance in rooms (danger of poisoning).*
- *The appliance must not be installed in damp rooms or in rooms with an aggressive atmosphere.*
- *The water jet emerging from the high-pressure nozzle causes the gun to recoil. An angular spray lance will also cause a torque. Therefore, grip the spray lance and gun firmly.*
- *Never direct the water jet at people, animals, the appliance or electrical components.*
- *The high-pressure cleaner must not be operated by children (danger of accidents caused by improper use of the appliance).*
- *Vehicle tyres/tyre valves may only be cleaned at a minimum distance of 30 cm. Otherwise the vehicle tyres/tyre valve may be damaged by the high-pressure jet. The first indication of damage is discolouration of the tyre. Damaged vehicle tyres can be highly dangerous.*
- *Materials containing asbestos and other substances which are detrimental to health must not be sprayed down.*
- *Suitable protective clothing should be worn to protect the operator from back-spray.*
- *Always ensure that all connecting hoses are securely screwed on.*
- *The gun trigger must not be clamped when operating the appliance.*
- *The exhaust opening must not be blocked.*
- *Do not bend over or touch the inside of the exhaust opening when operating with hot water/steam (danger of burns).*

5.1 Venting the appliance

- Open the water intake.
- Allow the appliance to run without the high-pressure hose until the water emerges without bubbles.
- Then connect the high-pressure hose.
- If the spray lance and high-pressure nozzle have already been fitted to the high-pressure hose, you can vent the appliance as follows: With the hand-held spray gun open, switch the appliance on and off several times at intervals of 10 seconds until the water emerges from the high-pressure hose without bubbles.

5.2 High-pressure nozzle

- The effectiveness of the high-pressure jet depends to a great extent on the spray angle. A 20 degrees fan jet nozzle is usually employed (included in standard delivery).
- Other nozzles are available as accessories.

0° full jet nozzle

for stubborn dirt.

40° fan jet nozzle

for sensitive surfaces.

Dirt blaster

for thick layers of dirt.

Variable angle nozzle

with adjustable spray angle

- At first always direct the high-pressure jet from a greater distance at the object which is to be cleaned, thereby preventing damage from excessive pressure.

5. Operation

5.3 Adjusting the Operating Pressure and Flow Rate

- You can adjust the operating pressure and flow rate in two different ways:
 1. With the pressure and volume control on the pump head
 - Screwing in the adjusting screw increases the flow rate and operating pressure
 - Screwing out the adjusting screw decreases the flow rate and operating pressure.
 2. With the servo pressure valve on the hand spray gun
 - Turning the control sleeve to the right increases the operating pressure and water volume
 - Turning the control sleeve to the left decreases the operating pressure and water volume.

5.4 Operating with cold water

- Switch the appliance switch to “ ”.

5.5 Operating with hot water

- Set the thermostat to the desired temperature.
- We recommend the following cleaning temperatures:
 - 30 – 50°C for light dirt
 - max. 60°C for dirt which contains protein, e.g. in the food industry
 - 60 – 90°C for cleaning vehicles, machines
- Switch the appliance switch to “ ”.
- If you also increase the operating pressure and flow rate, you also change the water temperature.

5.6 Operating with steam

- When operating temperatures are above 98°C, the operating pressure must not exceed 32 bar. Thus, the standard high-pressure nozzle must be replaced by a steam nozzle (available as an accessory).
- Adjust the thermostat to the desired temperature.
- We recommend the following cleaning temperatures:
 - 100 – 110°C for depreservation, dirt containing high levels of grease
 - up to 140°C for thawing aggregates, partial cleaning of facades.
- Rotate the pressure and volume control on the pump head to the lowest value.
- When you have finished operating the appliance with steam, you should adjust the appliance switch to the “ ” symbol, and run the appliance for approx. 2 minutes with the gun open to allow it to cool down.

5. Operation

5.7 Operating with detergent

- Fill the detergent tank.
- Set the detergent metering valve to the desired concentration.
- In order to protect the environment, we recommend that detergent is used sparingly. Comply with the metering recommendation on the detergent container label.
- We offer an individual range of detergents and preservatives and therefore guarantee trouble-free operation. Please ask for advice, or request our catalogue or detergent information leaflets.
- Only those detergents may be used which have been authorized by the manufacturer of the appliance.
- Unsuitable detergents can damage the appliance and the object which is to be cleaned.
- We recommend the following cleaning method:

Step 1: Loosening the dirt

Spray on detergent sparingly and allow to react for 1–5 minutes.

Step 2: Removing the dirt

Spray off the dissolved dirt with the high-pressure jet.

- When you have finished working with detergent, you should set the detergent metering valve to “0” and rinse the appliance thoroughly with the gun open for approx. 1 minute.

5.8 Interrupting operation

- If you release the trigger of the hand-held spray gun, the appliance switches off. If the trigger is pulled again, the appliance switches on again.
- If operation is interrupted for more than 30 minutes, the appliance will not switch on when the trigger is pulled.
- No maintenance/fault message appears in the display window. The appliance is ready to use again if you switch the appliance switch off and then on again.

5.9 Switching off the appliance

- Switch the appliance off and pull the electric plug out of the socket.
- Close the water intake.
- Pull the gun trigger until the appliance is depressurized.
- Secure the gun trigger with the safety catch to prevent the gun from accidentally opening.

5.10 Reading the Operating Hours

- When you open the storage compartment cover flap, you will notice the electronic operating hours display in the viewing window, e.g.

| | | | |
|---|---|---|---|
| h | 2 | 4 | 5 |
|---|---|---|---|

 = 245 hours.

6. Care and maintenance



Always disconnect the appliance from the electric mains supply before carrying out any maintenance work.

- You can arrange a regular safety inspection with your dealer or take out a maintenance contract. Please ask for advice.

6.1. Maintenance/Fault Warning Light Illuminates

- If certain maintenance work is required on the basis of elapsed operating hours, this warning light illuminates.
- When you open the storage compartment cover flap, you will see the electronic display in the view window.
- When the necessary maintenance work has been carried out, you should press the reset button next to the display for at least 7 seconds until the warning light goes out.

| Display | Required Maintenance Work |
|-----------------|---|
| 6 [] [] [] 5 | <ul style="list-style-type: none"> – Optical inspection – Check high-pressure connections for leaks – Clean fuel tank and filter |
| 7 [] [] [] 5 | <ul style="list-style-type: none"> – Check pump for leaks – Change pump oil – Clean strainer in the water connection – Clean strainer before the low-water safety device |
| 8 [] [] [] 5 | <ul style="list-style-type: none"> – Decarbonize heater element* – Descale heater element* – Clean/replace ignition electrodes* – Clean/replace Burner nozzles* – Adjust burner* |
| 9 [] [] [] 5 | <ul style="list-style-type: none"> – Check pump overflow valve for leaks* – Check high-pressure hose* – Clean hand spray gun – Check pressure damper* |

* These maintenance tasks should be carried out by the Customer Service only.

6. Care and maintenance

6.2. Visual Inspection

- Checking the connector cable
The connector cable must not be damaged (risk of electricution). A damaged connector cable must be replaced immediately by an authorized Customer Service/qualified electrician.
- Check the high-pressure hose
The high-pressure hose must not be damaged (risk of bursting). A damaged high-pressure hose must be replaced immediately.

6.3. Cleaning the fuel Tank

- Remove the tank from the appliance (first unscrew the handle, appliance hood and cover from the switch box).
- Dispose of the remaining fuel.
- Rinse out the tank thoroughly. If you rinse out the tank with water, allow it to dry completely.
- Replace the fuel filter.

6.4. Pump leaks

- 3 drops per minute are permissible. You should contact customer service if the leakage is more rapid.

6.5 Changing the oil

- If the oil is milky (water in the oil), contact customer service immediately.
- Unscrew the oil drain plug and dispose of the old oil via an authorized collecting point (protection of the environment).

- When the oil has completely drained, screw the oil drain plug back in and slowly pour in oil up to the “MAX” position on the oil tank (air bubbles must escape).
- See technical data, chapter 3 for quantity and type of oil.

6.6 Cleaning the Strainer Upstream of the Low-water Safety Device

- Unscrew the high-pressure hose from the pump head at the safety block.
- Rotate an M8 screw into the strainer hole and use it to pull the strainer out.

6.7 Protection from frost

- Frost will damage the appliance if it is not drained completely of water. In winter the appliance should be kept in a room which is above freezing point. Otherwise, it is recommended to drain the appliance or rinse it thoroughly with anti-freeze.
- Draining the appliance
 - Unscrew the water intake hose and high-pressure hose from the appliance.
 - Unscrew the supply line from the base of the boiler and allow the heating element to drain.
 - Allow the appliance to run for a max. of 1 minute until the pump and the lines have drained.
- Anti-freeze
During extended down-time periods, it is recommended to pump an anti-freeze through the appliance. This also protects the appliance to a certain degree from corrosion.

7. Troubleshooting



- Always disconnect the appliance from the electric mains supply before carrying out any repair work.
- The electrical components must only be checked by the authorized customer service.

7.1 Maintenance/Fault Warning Light Illuminates

- This warning light illuminates if there is a fault.
- When you open the storage compartment cover flap, you will see the electronic display in the view window.
- The warning light extinguishes when you have corrected the fault and switched the appliance back on.

| Display | Corrective Action |
|-----------|---|
| 1 F | <ul style="list-style-type: none"> – Increase water supply volume – Clean strainer in water connection – Clean strainer before the low-water safety device |
| 2 F | <ul style="list-style-type: none"> – Replace the reed switch of the low-water safety device* – Clean the low-water safety device* |
| 3 F | <ul style="list-style-type: none"> – Repair leak in the high-pressure system |
| 4 F | <ul style="list-style-type: none"> – Decarbonize heater element* – Readjust burner* – Replace exhaust gas thermostat* |
| 5 F | <ul style="list-style-type: none"> – Check fuses and voltage on all 3 phases* – Change phases in the electrical connection* – Replace air pressure switch* |

* These faults should be corrected by Customer Service or a qualified electrician only.

7. Troubleshooting

7.2 Indicator lights

- Indicator light for fuel tank lights up
 - Refill with fuel.
 - Check that the fuel level sensor is functioning correctly.
- Indicator light for engine-overheating lights up
 - Eliminate the cause of the overload.
 - Allow the engine to cool down to room temperature.
- Indicator light for liquid softener lights up
 - Refill with RM 110 liquid softener.
 - Clean the electrodes in the liquid softener tank.

7.3 The appliance does not come up to pressure

- Rotate the pressure and volume control to the maximum value.
- Fill the detergent tank or set the metering valve to zero.
- Vent the appliance (see Operation, chap. 5).
- Clean the strainer in the water connection.
- Check the water intake volume (see technical data, chap. 3).
- Check all the supply lines to the pump for leaks and blockages.

7.4 The pump is knocking

- Check all the supply lines to the pump, also the detergent system, for leaks and blockages.
- Vent the appliance (see Operation, chap. 5).

7.5 Detergent is not being drawn in

- Let the appliance run with opened metering valve (max. setting) and without high-pressure hose, until the detergent visibly emerges at the appliance outlet.
- Clean the detergent suction hose and filter.
- Clean the metering valve for cleaning agent.
- Clean the non-return valve on the pump head and the connection for the detergent suction hose.
- Check all the detergent hoses and connections for leaks.

7.6 Burner does not ignite

- The ignition sparks can be observed through the inspection window in the burner cover. The appliance has a continuous ignition., i.e. even when operating with cold water an ignition spark must be visible. Clean, adjust or replace the ignition electrodes as required.
 - Fill the fuel tank.
 - Check that the fuel pump and the fuel solenoid valve function correctly.
 - Clean the strainer in the low-water safety device.
 - Change the fuel filter.

7.7 The temperature is not reached when operating with hot water/steam

- Set the thermostat higher.
- Reduce the operating pressure and the flow rate.

8. General Information

8.1 Safety equipment

Overflow valve with 2 pressure switches

When the water flow rate is reduced with the servo compression valve on the hand-held spray gun or with the flow regulator on the pump head, the overflow valve opens and some of the water flows back to the pump suction side.

If the gun is completely closed, enabling all of the water to flow back to the pump suction side, the pressure switch located on the overflow valve switches off the pump.

If the hand-held spray gun is opened again, the pressure switch located on the cylinder head switches on the pump again. The overflow valve is set and lead-sealed at the factory.

Adjustments must only be carried out by customer service.

Safety valve

The safety valve opens when the pressure switch is defective. The safety valve is set and lead-sealed at the factory. Adjustments may only be carried out by customer service.

Low-water safety device

The low-water safety device prevents the burner from switching on when the water is low. A strainer prevents the safety device from becoming fouled and must be cleaned regularly.

8.2 Accessories

Incorrect, badly fitting or defective accessories impair the function of the appliance and are dangerous. It is advisable to use Kärcher accessories which are made-to-order. Your dealer will be glad to advise you.

8.3 Spare parts

Please note that the use of other than Kärcher spare parts can result in damage and even serious accidents if these parts have not been correctly manufactured, if they do not replace the Kärcher spare part exactly or if they result in unsafe operation of the appliance.

Kärcher spare parts guarantee that the appliance can be operated safely and trouble-free.

A selection of the most common spare-part numbers are listed at the end of these operating instructions.

8.4 Guarantee

The terms of guarantee issued by our competent distribution company are valid in every country. If the appliance malfunctions in any way, we shall rectify the fault free of charge within the period of guarantee, provided the cause can be attributed to faulty material or a manufacturing error.

The guarantee will only come into force when your dealer has completely filled out, stamped and signed the enclosed reply card on completion of sale and when you have sent the reply card to the distribution company in your country.

In the event of a claim on the guarantee, please consult your dealer with accessories and receipt of purchase or contact your nearest authorized customer service centre.

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- 1.027-111.0
- 1.027-261.0
- 1.027-281.0 GB
- 1.027-291.0 CH
- 1.027-611.0 SF
- 1.027-801.0
- 1.027-811.0
- 1.027-821.0
- 1.027-831.0

