Inhaltsverzeichnis

Erstellungsdatum: 20111215

Dokumentliste:

Service Bulletin
UBS metering pump

4. HDS Medium Class
Fan wheel (5.600-045)

Service Bulletin
No. 2005-026 dated 09.12.2005
Classification level IV

Problem:

For the medium class units, the tolerance ring connection sometimes comes loose or the fan wheel (5.600-045) breaks at the hub. Especially 60 Hz units are effected by this.

This topic was already addressed in Service Bulletins 2002-007, point 2 and 2005-006, point 5.

Cause:

The tolerance ring connection is not process-sure. The rigidity of the plastic material is not sufficient.

Solution 1:

When a fan wheel malfunctions due to a loose tolerance ring connection or a defect hub, repair set 2.641-021 is used.

Since 1/05 (Production Date Symbol on the fan wheel), the plastic material has had a higher proportion of fiber glass and thus a higher stability.

Solution 2:

In the series, all unit types of the current medium class since week 47/2005 were changed over to a fan wheel with a tongue and groove joint.

No units in the field should be retrofitted from a tolerance ring connection to a tongue and groove joint. If there are problems, solution 1 continues to apply.

Note:

For a new fan wheel, please mind the following:

Extraction tool
The new fan wheel is removed with the extraction tool (6.816-069). The old extraction tool (6.815-019) does not fit.

Clutch member
With the new fan wheel, the clutch member to the drive unit of the fuel pump was also changed over. The clutch member (5.471-097) from the compact class is now used.

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4. HDS Medium Class
Fan wheel (5.600-045)

Service Bulletin
No. 2005-026 dated 09.12.2005
Classification level IV

Picture 1: Fan wheel (5.600-080), outward-facing side

Picture 2: Fan wheel (5.600-080), inward-facing side

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2. SB-Wash 5/10 (1.319-xxx)
Processor module (6.682-763)

Service Bulletin
No. 2006-011 dated 02.05.06
Classification level III

Problem:

The basic settings on the printed circuit board do not remained saved there. After an electrical power outage or after the unit is turned off and on via the master switch, the operating data and setting values are missing under certain conditions.

Sometimes the coin acceptor accepts coins without starting the device.

Cause:

The processor module is not always successfully initialised when the unit is switched on.

Solution:

The processor module on the printed circuit board (6.682-754) was reworked in both hardware and software. If the problems described above occur, the new processor module (6.682-803) must be installed (see figure 1).

Note 1:

- Before replacing the processor module, the unit must be switched off via the master switch.
- Avoid electrostatic charge! Touch grounded metal parts with your hand before taking the new processor module out of the packaging.
- When the processor module is replaced, customer-specific settings and operating data are lost.
- Pressing the key combination "<", ">" and "ESC" for 2 seconds, resets the unit to the manufacture settings.
- Mind that the processor module is aligned correctly (see figure 1).
- For units with a half-load valve and/or with the WSO accessory kit, reset the functions "Half-Load" and/or "Osmosis" to "ON"

Note 2:

In order to correspond with the official Kärcher labelling, the original unit labelling has been corrected. Order number and technical specifications remain unchanged.

Old: SB-Wash 50/10 now becomes: SB-Wash 5/10

Change/improvement in production since: 13.02.06

Unit:	Order number:	from factory number:
SB-Wash 5/10	1.319-201	10 362
SB-Wash 5/10	1.319-202	10 351
SB-Wash 5/10	1.319-203	10 375
SB-Wash 5/10	1.319-204	10 362
SB-Wash 5/10	1.319-205	10 022
SB-Wash 5/10	1.319-206	10 023

2. SB-Wash 5/10 (1.319-xxx)
Processor module (6.682-763)

Service Bulletin
No. 2006-011 dated 02.05.06
Classification level III

SB-Wash 5/10	1.319-207	10 002
SB-Wash 5/10	1.319-208	10 002
SB-Wash 5/10	1.319-209	10 004
SB-Wash 5/10	1.319-210	10 000
SB-Wash 5/10	1.319-211	10 000
SB-Wash 5/10	1.319-212	10 002
SB-Wash 5/10	1.319-213	10 000

Figure 1: Printed circuit board (6.682-754) with processor module. Left: new processor module (6.682-803). When attaching, mind the correct position!

3. Var. SB-Wash Units (1.070-/1.179-/1.319-xxx)
Coin acceptor (6.768-333, 2.884-218)

Service Bulletin
No. 2006-011 dated 02.05.06
Classification level III

Problem: The electronic coin acceptor (6.768-333 or 2.884-218) accepts coins poorly or not at all anymore.

Cause: Moisture in the coin acceptor. Under the cover on the printed circuit board, visible on the receptacle for the ribbon cable and the connection wires of the take-up reel. Spray protection flap on the outside of the machine for coin insert slot is missing or defective.

Solution: Optical parts and the coating on the printed circuit board have been improved on the coin acceptor since production date **03/06**.
The spray protection flap on the coin insert slot must be in order.

Note 1: The coin acceptor can only be ordered as a part set (2.884-218).

Figure 1: Production date (month/year) on the rating plate.
Improved version from 03/06

Note 2: Take note of Service Bulletin 2004-925, points 1 and 2 regarding this topic.

2. SB-Wash 5/10
Remaining value display (6.601-530)

Service Bulletin
No. 2007-015 dated 07.05.2007
Classification Level IV

Note: During the winter, the glass of the remaining value display can mist up. If a corresponding complaint is made, this can be prevented by subsequently drilling two vent openings (D = 4.5 mm) see Fig. 1.

Drilled remaining value displays have been fitted since April 2007.

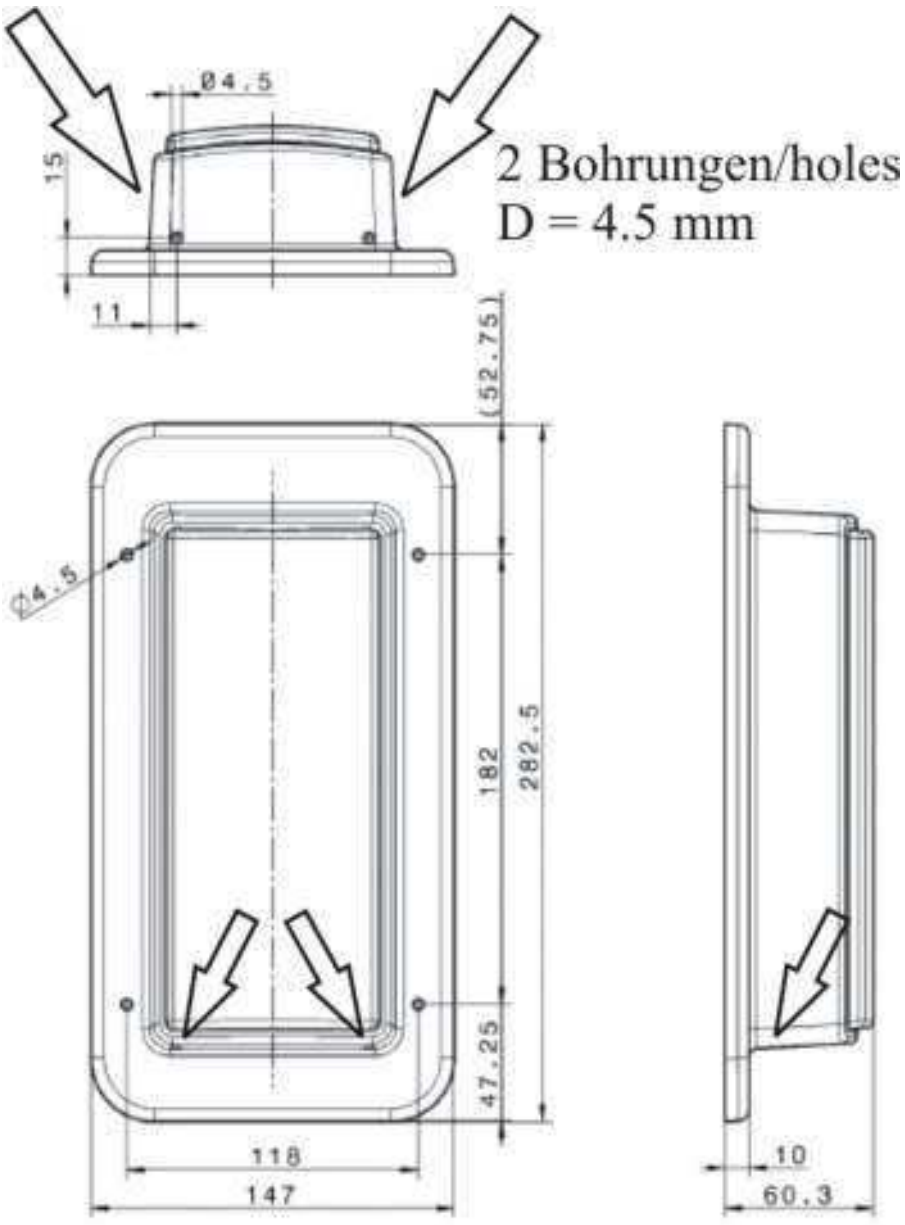

Fig. 1: The arrows show the position of the two holes. They can also be drilled simply in retrospect.

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3. SB-Wash 5/10
Centrifugal pump frost protection (6.473-482)

Service Bulletin
No. 2007-015 dated 07.05.2007
Classification Level IV

Please find below 6 important notes on frost protection and the centrifugal pump (6.473-482) for SB-Wash 5/10 (1.319-21x) . We ask you to comply accordingly.

Note 1: (Filter)

A filter which is accessible from the outside is fitted before the centrifugal pump. Initially a wrong part number was stated for this in the spare parts list and in Disis.

Please only use filter (5.731-587), see Fig. 1. The wrong filter is too fine and therefore clogs up frequently. In addition, the centrifugal pump can overheat and/or the quantity of frost protection water is reduced to less than 0.5 l/min.

Fig. 1: Please only use the coarse filter 5.731-587 (in the lower picture)

Note 2: (Filter cleaning)

Regular cleaning of the two filters in the frost protection section is always important. These are the filter (5.731-587) in front of the circulation pump which is accessible from the outside, and the filter (6.414-172) in a threaded connection in front of the cylinder head. See also the chapter on "Frost protection" in the operating instructions of the unit.

Please also inform the customer correspondingly and provide instructions on cleaning the filter.

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3. SB-Wash 5/10
Centrifugal pump frost protection (6.473-482)

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No. 2007-015 dated 07.05.2007
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Note 3: (Pump cycle)

To prevent blockage of the centrifugal pump, an automatic pump cycle is programmed on the control electronic.

- Centrifugal pump starts up just after the unit master switch has been turned on,
- also every 24 h after switching on, repeated automatically every day,
- for approx. 5 seconds in each case,
- regardless of the outside temperature, in both summer and winter.

The pump cycle after turning the master switch on is very important. If the centrifugal pump does not run, it is advisable to check straight away, so that the centrifugal pump does not seize up and block. This would result in a defective motor.

Note 4: (Blocked pump)

It is possible for a long period of time to pass after final inspection of the units in the factory before they are started up by the customer. There is a risk of the centrifugal pump seizing up and blocking during initial commissioning.

Check the function of the centrifugal pump during initial commissioning or after it has been at a standstill for a longer period of time:

- Vent the system,
- take hold of the spray lance,
- turn the master switch off and on again after approx. 10 seconds,
- the centrifugal pump must run for approx. 5 seconds (see also note 3) and water must come out of the high-pressure nozzle,
- if this is not the case, check that the pump runs freely and that the electric actuator is working properly.

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3. SB-Wash 5/10
Centrifugal pump frost protection (6.473-482)

Service Bulletin
No. 2007-015 dated 07.05.2007
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Note 5:

(Seal)

Water penetrating the terminal box can cause failure of the centrifugal pump (6.743-482). This is why an additional seal (6.984-606) is inserted between the motor and the lid of the terminal box, see Fig. 2. This can be retrofitted to existing centrifugal pumps without any problems.

Fig. 2: Seal (6.984-606) between motor and the lid of the terminal box

Note 6:

(Thermal switch)

A thermal switch is fitted in the motor of the centrifugal pump. At approx. 130 °C winding temperature, the motor is switched off a nd on again after it has cooled down. If this is repeated several times in a short period of time, the thermal switch can cake up so that the winding burns out.

4. Div. HDS units
Ignition cable compl. (4.821-071)

Service Bulletin
No. 2007-015 dated 07.05.2007
Classification Level IV

Note:

In early 2005, the ignition cable contacts under the same part number (4.821-071) were fitted with an additional index notch. This prevents the ignition cable from sliding out of the ignition transformer (Fig. 1).

For safety reasons, when making repairs we advise using only ignition cables with index notch and inserting the ignition cables firmly in the ignition transformer. Ignition cables sliding out of the transformer can cause an electric arc and trigger a fire in the worst case.

The index notch is visible when looking into the plug contact of the ignition cable, but cannot be shown in a photo. The index notch is shown in the section diagram (Fig. 2).

Please also ensure that the plastic clip (6.647-527) is on the ignition cable and keeps it at a safe distance from the outer jacket of the vessel.

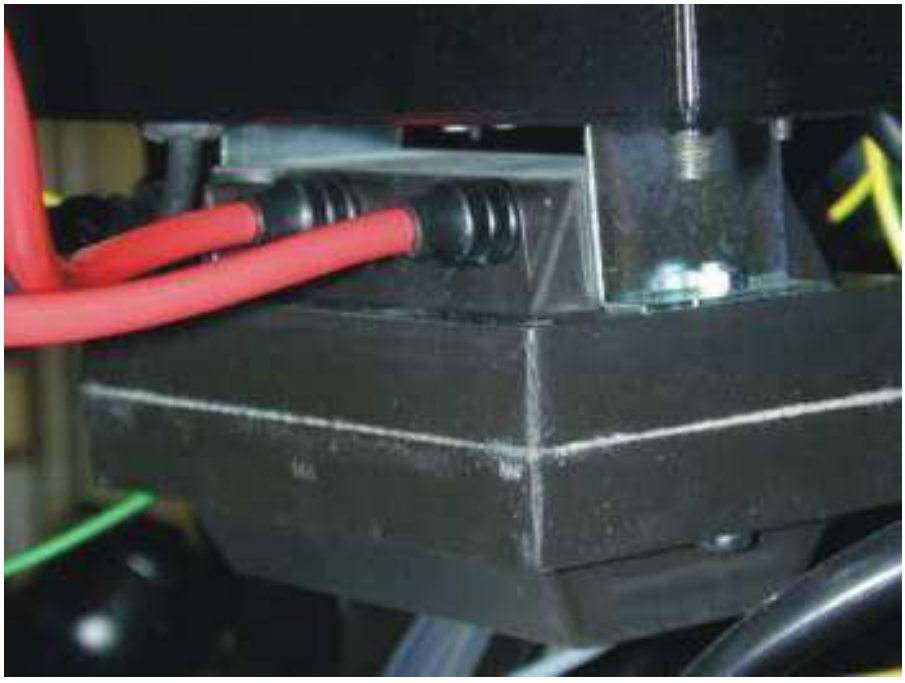

Fig. 1: Plug-in connection ignition cable – ignition transformer

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4. Div. HDS units
Ignition cable compl. (4.821-071)

Service Bulletin
No. 2007-015 dated 07.05.2007
Classification Level IV

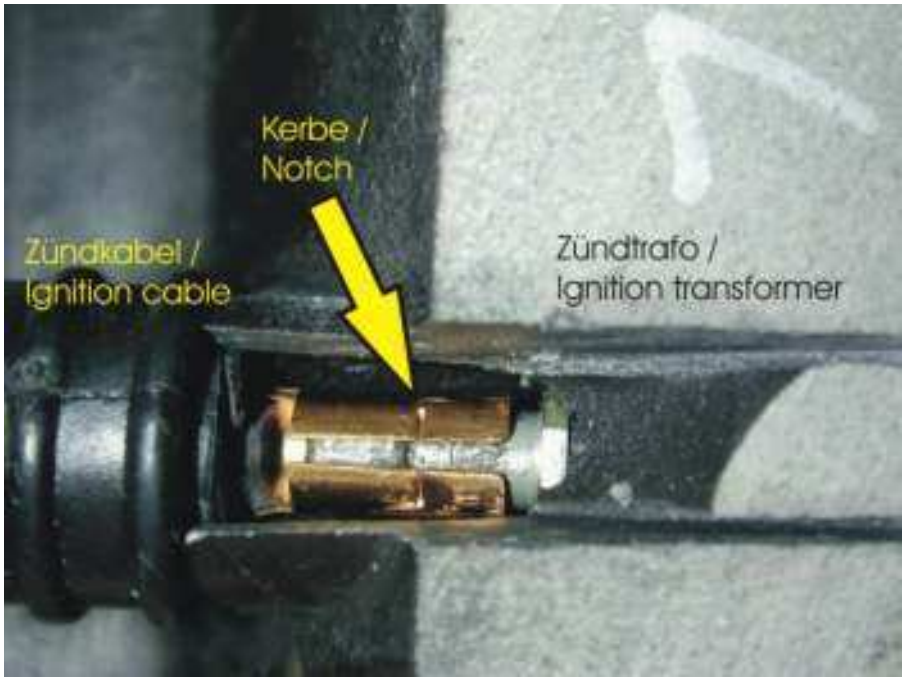

Fig. 2: Section diagram of the plug-in connection ignition cable – ignition transformer.
Use only ignition cable with index notch.

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1. SB-Wash, SB-C, HDS-C
Cleaning and Maintenance of Stainless Steel

Service Bulletin
Nr. 2007-022 dated 07. Dec. 2007
Classification Level IV

Note:

Complaints are occasionally received about rusty stainless steel parts on self-service units and self-service systems or on other equipment made of stainless steel.

The reason for these complaints is the assumption that the steel quality used is not of the required standard, that stainless steel should never rust and that stainless steel requires no care.

These assumptions are generally based on a lack of information and general misconceptions about stainless steel.

The stainless steel used by us is a totally suitable standard grade; the rust is caused by environmental influences and tramp iron contamination.

Stainless steel requires regular and proper care in order to remain optically clean and shiny at all times.

A host of information on the subject of “Cleaning and maintenance of stainless steel” has been compiled in a leaflet. The information is provided by the stainless steel industry, but expanded to include Kärcher-specific experience. They are generally valid for all our stainless steel products.

The leaflet of “Cleaning and maintenance of stainless steel” is attached as an attachment to this service bulletin. It contains the following points:

Contents

Please observe the information provided there in order to avoid complaints in the future.

Quality Management & Central Service

Alfred Kärcher GmbH &Co. KG, Alfred-Kärcher-Str. 28-40, 71364 Winnenden, Germany

Cleaning and Maintenance of Stainless Steel

Attachment to Service Bulletin No. 2007-022

Source: Leaflet 965, European Stainless Steel Development Association – www.euro-inox.org

Contents:

1. Introduction

Stainless steel is corrosion resistant and does not require any coatings or metallic coatings. **Regular care and maintenance is important** to remove deposits and therefore to achieve a good visual appearance.

These notes are directed at sales and service staff and owners/operators of self-service high-pressure cleaners and vehicle washing facilities made of stainless steel. Effective and **cost-effective cleaning and maintenance methods** retain the positive properties of stainless steel long-term.

2. Self-Repair of Stainless Steel

Stainless steel is corrosion resistant, because the alloy constituents in steel form an ultra-thin "passive layer" on the surface. After any surface damage, this layer spontaneously forms again using oxygen from air or water.

3. Basic cleaning

The basic cleaning is carried out **directly before handover/initial operation** of the facility. If the stainless steel components have been protected against dirt, the basic cleaning is the equivalent of regular maintenance cleaning.

Stainless steel surfaces are frequently protected with **plastic films or sheeting** during transport, storage, processing and installation. Old film is difficult to remove and adhesive residues remain on the surface. The films/sheeting must therefore be removed immediately, as soon as they are no longer needed to protect the parts.

Remove **splashes of lime and mortar** with diluted phosphoric acid and then rinse with plenty of clean water. Never use cement smear (cement skin/surface laitance) remover for tiles or diluted hydrochloric acid!

Iron particles from tools and transport equipment must be removed immediately. Rust quickly forms on stainless steel if structural steel is machined in the surroundings and grinding dusts, chips and weld spatter deposit on the stainless steel (tramp iron contamination). If these contaminations are identified in good time, they can be removed with normal household (iron free) cleaning sponges or special cleaners.

If corrosion has already begun, mechanical surface treatment (polishing, grinding/sanding) is necessary. Sanding/grinding can cause visual changes to the surface. Therefore, avoid contaminations with tramp iron.

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Cleaning and Maintenance of Stainless Steel

Attachment to Service Bulletin No. 2007-022

4. Maintenance Cleaning

Rain has a good cleaning effect on **outdoor applications**. Areas not or hardly exposed to the rain must be regularly cleaned to remove **harmful deposits**. This is especially important in coastal and industrial atmospheres where concentrations of chlorides and sulphur dioxide occur. Sulphur residues caused by burning oil or cleaning residues also cause unsightly deposits and discolorations if they are not regularly removed.

5. Cleaning Agents

A washing-up liquid solution is adequate for removing **finger marks**. Polished stainless steel surfaces can also be cleaned using chloride-free glass cleaners with good effects.

Stubborn dirt and **discolorations** are effectively removed using normal household cleaning milk/creams. Then rinse the surface with plenty of clean water.

Severe oily and greasy dirt can be removed using alcohol-based cleaning agents and solvents, e.g. white spirits, isopropyl-alcohol or acetone. They are safe for use on stainless steel surfaces. Ensure that partially dissolved dirt is not spread over large areas of the surface. Repeat the cleaning several times with fresh cloths until all traces have been removed.

Special alkali and solvent-based cleaners are available for **paint and graffiti**. Avoid using knives, blades and scrapers as they scratch the metal surface.

Severely neglected surfaces can be treated with **polishes and polish abrading pastes**, like those used for chrome and for preparing vehicles for painting. However, they can leave grinding marks on stainless steel.

Another alternative is **stainless steel cleaners containing phosphoric acid**, as recommended for the removal of tramp iron contaminations. The whole components should be treated with these agents to avoid staining.

Always follow the manufacturer's instructions for use as well as any health & safety and environmental protection regulations.

Cleaning agents which may not be used on stainless steel:

- Products containing chloride, in particular those containing hydrochloric acid.
- Bleaching agents (thoroughly rinse with water if accidentally used on stainless steel).
- Silver cleaning agents.

6. Cleaning Utensils

A damp cloth is usually sufficient for removing finger marks.

Use normal household (**iron-free**) cleaning sponges to remove stubborn dirt. Never use abrasive sponges containing iron, steel wool or steel brushes as they leave rusting tramp iron particles on the surface of the stainless steel.

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Cleaning and Maintenance of Stainless Steel

Attachment to Service Bulletin No. 2007-022

Use a soft nylon brush to clean structured or textured surfaces. **Steel brushes are harmful**.

Brushed and polished surfaces should always be wiped in the direction of the grinding/polishing and not perpendicular to it.

After cleaning with water, the surfaces should be wiped dry, especially in regions with hard water, to avoid the formation of limescale traces.

To avoid tramp iron contaminations, do not use any cleaning utensils which have previously been used for "normal" steel. It is advisable to keep separate cleaning utensils available for stainless steel surfaces.

7. Cleaning Intervals

Cleaning intervals for indoor stainless steel surfaces do not differ from those of other materials. To keep costs and time required low, the cleaning should be carried out before coarse dirt and soiling occurs.

Outdoors, stainless steel can be exposed to many corrosive contaminations, e.g.

- Coastal atmosphere (salty air),
- Industrial gas emissions,
- Splashed water containing de-icing salt,
- Salt and salty water from water softeners,
- Air pollution and traffic exhaust,
- Dusts from metal machining,
- Aggressive cleaning agents (containing chlorine, chloride or hydrochloric acid) used for cleaning vehicles,
- Wheel cleaners.

In the long-term, these factors can result in discolorations or damage to the stainless steel surface. Cleaners containing phosphoric acid reliably remove discolorations.

Maintenance cleaning should be carried out at regular intervals depending on the environmental conditions and resulting soiling. At intervals of 2 to 6 weeks in critical parts of systems and between 2 to 6 months in less critical areas.

8. Conservation of Stainless Steel

Following cleaning, conservation with **Stainless Steel Oil** is advisable (Kärcher order number 6.288-911). To this end, soak polishing wadding or a suitable dry cloth with stainless steel oil and lightly rub into the cleaned, dried surfaces. Then polish with a clean, absorbent cloth.

Cleaning and Maintenance of Stainless Steel

Attachment to Service Bulletin No. 2007-022

9. Additional Notes on the Use of Stainless Steel by Kärcher in Practice

- During winter, recycled water from washing facilities can contain extreme levels of chloride. Thoroughly rinse weld seams and rebates occasionally with fresh water.
- If washing facilities are cleaned with cleaning agents, rinse their seams and rebates extremely well with fresh water.
- When installing stainless steel facilities outdoors, do not use zinced screws, nuts and washers.
- If stainless steel rust has formed it must be removed quickly and thoroughly.
- Stainless steel is suitable for osmosis water, not for seawater.
- Stainless steel is not suitable for oxygen-deficient supernatant in recycling facilities.
- Disinfectants used in the food sector and based on chlorine bleaching agents are not allowed to be used on normal stainless steels (V2A / V4A).

10. Literature and Other Information Sources

In German

Informationsstelle Edelstahl Rostfrei. Internet: www.edelstahl-rostfrei.de
The free stainless steel information which can be downloaded from there is highly recommended.

Useful information can also be found in the Internet encyclopaedia "Wikipedia" (www.wikipedia.de) under the key words "Rostfreier Stahl" or directly under:
http://de.wikipedia.org/wiki/Rostfreier_Stahl

In English

British Stainless Steel Association. Internet: www.bssa.org.uk
More details in the booklet "Care and maintenance of stainless steel" and other interesting brochures about stainless steel.

Useful information can be found in the internet encyclopaedia "Wikipedia" (en.wikipedia.org)
with the keyword "stainless steel" or direct at http://en.wikipedia.org/wiki/Stainless_steel

In French

Helpful information can be found in the internet encyclopaedia "Wikipedia" (fr.wikipedia.org)
with the keyword "inox" or direct at http://fr.wikipedia.org/wiki/Inox

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3. SB-Wash 5/10
Electronic control circuits 6.682-754

Service Bulletin
Nr. 2007-022 dated 07. Dec. 2007

Classification Level IV

Note:

Procedure for resetting the maintenance display, resetting of the counters and calling up the basic setting on the electronic control circuits 6.682-754 in SB-Wash 5/10 (1.319-2xx).

Resetting to manufacture settings with key combination:

- Press keys left (<) and right (>) simultaneously and
- at the same time press the “ESC” key for 2 seconds.

Reset the coin total day counter

- Press keys left (<) and right (>) simultaneously for 2 seconds.

Maintenance notes for HP pump and burners

The message “**Service S0XX**“ signals necessary maintenance operations, see operating instructions under “Maintenance operations”.

- Cancel the message by pressing the “ESC” key. The message appears again when the system is switched on.
- Delete all messages with the key combination:
  Press keys left (<) and right (>) simultaneously and at the same time press the “OK” key three times.
  This is only possible from the corresponding menu.
- This key combination should not be passed on to the customer. Reset only by After-sales Service after carrying out maintenance.

Caution! The alert for the need for service by all the LEDs flashing 3 times when the system is switched on is not active at present.

Counters for total coins and total operating hours

These counters cannot be reset.

Note

The key combinations described are only effective in the corresponding menu.

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KÄRCHER®
makes a difference

1. SB wash 5/10
UBS metering pump

Service Bulletin
No. 2011-015 dated 18.11.2011
Classification level II

Problem: Problems with the intake of chemicals can be encountered in SB wash units.

Cause: The system with the chemicals metering piston in the chemicals block no longer works reliably when there are minor leaks. The vacuum generated in the chemicals piston is not sufficient for correct intake of the cleaning agent.

Solution: Installation of hose metering pump for pre-feed of the cleaning agent to the solenoid valve block.

In the field, the modification is carried out according to the modification instructions.

Retrofitting kit 2.642-710.0 contains two metering pumps with the corresponding installation material.

Change/improvement introduced to production since: 14.11.2011

Unit:	Part number	from serial number
SB wash 5/10 FP	1.319-201.0	10692
SB wash 5/10 Fp	1.319-203.0	10574
SB wash 5/10	1.319-204.0	10430
SB wash 5/10 Fp * SKAN	1.319-206.0	10038
SB wash 5/10 Fp, Esso	1.319-207.0	10004
SB wash 5/10 Fp, Aral	1.319-208.0	10014
Sb wash 5/10 FP, Shell	1.319-209.0	10012
SB wash 5/10 Fp, Total	1.319-210.0	10004
SB wash 5/10 Fp, OMV	1.319-211.0	10002
SB wash 5/10 Fp, Agip	1.319-212.0	10002
SB wash 5/10 Fp, Orlen	1.319-213.0	10002

Warranty handling	Causing fault	5.580-064.0
	Fault code	200