

<b>Service-Code</b>	<b>Description</b>	<b>Remedy</b>	<b>Circuit Board + Plug + PIN</b>	<b>Concerned Parts</b>
1.2.5.1.	Thermo switch brush motor 1 (left)	Check current consumption of brush motor (-M03) and wiring of the thermo switch	A1.X15/11 or A1.X15/23	M3.1/T (TB1230 ) or M3.2/T (TB1520 )
1.2.5.2.	Thermo switch brush motor 2 (right)	Check current consumption of brush motor (-M04) and wiring of the thermo switch	A1.X15/12 or A1.X15/24	M4.1/T (TB1230 ) or M4.2/T (TB1520 )
1.2.5.5.	Thermo switch brush motor 3 (center)	Check current consumption of brush motor (-M05) and wiring of the thermo switch	A6.X15/4 or A6.X15/16	M5.1/T (TB1230 ) or M3.2/T (TB1520 )
1.2.6.1.	Brush motor 1 (left) overload	Short circuit in the brushmotor (-M03) or in it's wiring; Brush motor overload	A1.X3/1 or A1.X4/1 (TB1230) A1.X3/2 or A1.X4/2 (TB1520)	M3.1 (TB1230 ) or M3.2 (TB1520 )
1.2.6.2.	Brush motor 3 (center) overload	Short circuit in the brushmotor (-M05) or in it's wiring; Brush motor overload	A1.X5/1 or A1.X6/1 (TB1230) A1.X5/2 or A1.X6/2 (TB1520)	M4.1 (TB1230 ) or M4.2 (TB1520 )
1.2.6.3.	Lifting element brush deck	Overload of the brush deck lifting element (-M09) or short circuit	A1.X11/1 or A1.X11/4	M9
1.2.6.8.	Brush motor 2 (right) overload	Short circuit in the brushmotor (-M04) or in it's wiring; Brush motor overload	A6.X3/1 or A6.X4/1 (TB1230) A6.X3/2 or A6.X4/2 (TB1520)	M5.1 (TB1230 ) or M5.2 (TB1520 )

1.4.5.2.	Malfunction filling level sensor (-B05), recovery tank	Value of the sensor -B05 out of range. Voltage signal at -A06:X15.3 and -A06:X15.15 has to be within the range of 0.160V and 4.0V	A6.X14/5 or A6.X15/15 or A6.X15/3	B5
1.4.6.1.	Lifting element squeegee	Overload of the squeegee lifting element (-M10); squeegee lifting mechanically blocked; short circuit in it's wiring	A1.X11/2 or A1.X11/5	M10
1.4.6.3.	Blocking protection Suction motor 1	Short circuit in the suction motor (-M16) or in it's wiring	A1.X7/1 or A1.X8/1	M16
1.4.6.4.	Blocking protection Suction motor 1	Short circuit in the suction motor (-M17) or in it's wiring	A1.X9/1 or A1.X10/1	M17
1.5.2.3.	Relais High pressure Cleaner	Interrupted wiring of -K29 or short circuit in it's wiring	A1.X12/8 or A1.X12/18	K29
1.5.5.1.	Malfunction filling level sensor (-B04), solution tank	Value of the sensor -B04 out of range. Voltage signal at -A01:X15.3 and -A01:X15.15 has to be within the range of 0.160V and 4.0V	A1.X14/5 or A1.X15/15 or A1.X15/3	B4
1.5.5.3.	Thermo switch Pump High pressure cleaner	High pressure cleaner motor (-M29) overload or interrupted wiring of it's thermo switch	A1.X15/9 or A1.X15/21	M29/T
1.5.8.1.	LED High pressure cleaner	Short circuit or open wire at -A01:X13.3/9 (-S29)	A1.X13/3 or A1.X13/9	S29/LED
2.2.5.1.	Thermo switch broom motor	check Current consumption of broom motor and wiring thermo switch (-M21)	A6.X15/8 or A6.X15/20	M21.1/T (man. emptying) M21.2/T (hydr. emptying)
2.2.6.1.	Blocking protection Broom motor	Over current broom motor -M21	A6.X5/1 or A6.X6/1 (man. emptying) A6.X5/2 or A6.X6/2 (Hydr. emptying)	M21.1 (man. emptying) M21.2 (hydr. emptying)
2.2.6.2.	Blocking protection lifting element Pre sweep attachment	Lifting element -M13 mechanically blocked or overloaded or short circuit in it's wiring	A6.X11/1 or A6.X11/4	M13.1 (man. emptying) M13.2 (hydr. emptying)

2.3.5.1	Thermo switch side broom motor left and right	Current consumption of the side broom motors (-M19 and -M20) or wiring of it's thermo switch	A6.X15/9 or A6.X15/21	M19.1/T (SB r.h., man. emptying) or M19.2/T (SB r.h., hydr. emptying) or M20.1/T (SB l.h., man. emptying) or M20.2/T (SB l.h., hydr. emptying)
2.3.6.1.	Blocking protection side broom motor left and right	Short circuit in the side broom motors (-M19 and -M20) or in it's wiring. Motors are overloaded.	A6.X9/1 or A6.X10/1 (man. emptying) A6.X9/2 or A6.X10/2 (hydr. emptying)	M19.1(SB r.h., man. emptying) or M19.2 (SB r.h., hydr. emptying) or M20.1 (SB l.h., man. emptying) or M20.2 (SB l.h., hydr. emptying)
2.4.6.1.	Blocking protection Suction Motor Pre sweep	Over current suction motor (-M25)	A1.X11/3 or A1.X11/6	M25.1 (man. emptying) M25.2 (hydr. emptying)
2.5.6.1.	Blocking protection shaker motor	Overcurrent shaker motor (-M24)	A6.X11/3 or A6.X11/6	M24.1 (man. emptying) M24.2 (hydr. emptying)
2.6.3.3.	Blocking Protection, switching relais hydraulic motor	Overload switching relais (-K08) Hydraulic motor, short circuit in ist Wiring (-A06:X12.5/15; -	A6.X12/5 or A6.X12/15	K8
2.6.3.4.	Blocking Protection, switching relais hydraulic motor	Overload switching relais (-K08) Hydraulic motor, short circuit in ist Wiring (-A06:X12.5/15; - A06:X12.9/19)	A6.X12/9 or A6.X12/19	K8
2.6.5.1.	Position sensor Dust bin		A6.X15/10 or A6.X15/22	S13
2.6.5.4.	Position sensor high dump		A6.X15/11 or A6.X15/23 (S12) A6.X15/12 or	S11 or S12

2.6.6.1.	Blocking protection turning dust bin	Lifting element (-M27) mechanically blocked, or overload caused by high load or short circuit	A6.X12/2 or A6.X12/5	M27
2.6.6.2.	Blocking protection hydraulic motor	Overcurrent of hydraulic motor (-M06); short circuit in it's wiring	A6.X7/1 or A6.X8/1	M6
3.1.1.2.	Fleetrekorder communication interruption	Check wiring between machine control unit and Fleetrecorder (CAN-Bus). (During switch on cycle the machine is blocked for 2 minutes). The fleet recorder is deactivated (Power supply). Option Fleet recorder is activated in the menu but no fleet recorder is	A1.X20/4 or A1.X20/5	A20
3.1.4.5.	Power supply camera		A6.X13/2 or A6.X13/8	B27 (Camera) or P27 (Monitor)
3.1.4.6.	Camera On		A6.X13/6	B27 (Camera) or P27 (Monitor)
3.1.6.E.	Power fuses (group signal)	The internally measured voltage at -A01:X1 and -A01:X2 is insufficient. (U >33V)	A1.X1/1 or A1.X2/1 A6.X1/1 or A6.X2/1	F2 (A1) or F8 (A6)
3.2.6.5.	Backup battery weak	Replace backup battery; Type CR2030	/	A1
3.2.6.6.	Backup battery empty	Replace backup battery; Type CR2030	/	A1
3.3.1.1.	Service intervall expired	Reset the service intervall with the Hako diagnosis	/	A2
3.3.1.5.	SD-Card on the Display	re format the SD-card with the diagnosis system, if error repeats, replace the SD-card with a new one	/	A2
3.3.4.2.	external buzzer	Buzzer -P02; short circuit or open wire at -A01:X13.2/8	A2.X104/10	H1
3.3.6.2.	Group signal low power output overload	Overload of small cosumer outputs (e.g. buzzer, magnetic valve. Etc.)	A1.X12 (kpl.) und X13/1,2,3,7,8,9 A6.X12 (kpl.) und X13/1,2,3,7,8,9	A1 or A6

3.4.1.1.	Malfunction Accelerator signal	Malfunction drive control unit; pre selection of driving direction implausibly or interrupted wiring accelerator	/	A4
3.4.1.2.	Malfunction drive control unit front (-A04)	see blinking code of drive control unit front in the machine diagnosis	/	A4
3.4.1.3.	Malfunction drive control unit, general	Configuration machine control unit (0.6.X) single drive / All-Wheel-Drive does not match the Variant in the wiring of the	/	A4
3.4.1.4.	Malfunction drive control unit rear (-A05)	see blinking code of drive control unit rear in the machine diagnosis	/	A5
3.4.5.1.	over temperature drive motor front (-M01)	check the wiring of the drive motor thermo switch. Is the machine used outside it's specification?	/	M1/T
3.4.5.2.	over temperature drive motor rear (-M02) (option all wheel drive)	check the wiring of the drive motor thermo switch. Is the machine used outside it's specification?	/	M2/T
3.5.4.1.	Working head light front	Overload of Output - A01:X12.5/15, short circuit or open wire at -E01 and -E11	A1.X12/5 or A1.X12/15	E1 or E11
3.5.4.2.	Blue spot rear	Overload of Output - A06:X12.10/20, short circuit or open wire at -E15	A6.X12/10 or A6.X12/20	E15
3.5.4.3.	Blue spot front	Overload of Output - A01:X12.10/20, short circuit or open wire at -E14; -E16; -E17	A1.X12/10 or A1.X12/20	E14
3.5.4.5.	Working head light rear	Overload of Output - A06:X12.4/14, short circuit or open wire at -E12	A6.X12/4 or A6.X12/14	E12
3.5.4.6.	StVZO Brake		A6.X12/7 or A6.X12/17	K31B
3.5.5.1.	StVZO configuration	Configuration of StVZO does not meet the StVZO equipment	/	probably A6

3.6.6.4.	Seat contact switch manipulation	Seat contact switch (-S05) was more than 6 hours in the same position (open or closed), or both contacts of -S05 have the same state.	A1.X15/6 or A1.X15/18 (N.C.) A1.X15/7 or A1.X15/19 (N.O.)	S5
3.8.1.1.	Servo steering Malfunction	Message is generated by the control unit for steering (-A09), Check the blinking code on the control unit.	A1.X16/3 or A1.X16/7	A9
4.1.3.1.	Communication problem drive control unit front	CAN-Bus-error between machine control unit and drive control unit (-A01 => -A04)	A1.X18/3 or A1.X18/7 A4.A31 or A4.A22	A1 A4
4.2.1.4.	Chemical dosing pump not recognized (CAN problem)	CAN-bus error between machine control unit and chemical dosing unit (-A01 => -A10)	A1.X18/1 or A1.X18/5 A10.X1/3 or A10.X1/4	A1 A10
4.2.3.1.	Communication problem drive control unit rear	CAN-bus error between machine control unit and drive control unit (-A01 => -A05)	A1.X18/3 or A1.X18/7 A5.A31 or A5.A22	A1 A5
4.4.2.1.	CAN Slave control unit not recognized	Communication between Master- and slave control unit is interrupted (-A01 => _A06)	A1.X18/1 or A1.X18/5	A1 or A6
4.5.2.1.	Malfunction CAN Diagnosis		A1.X18/3 or A1.X18/7 X60/11 or X60/12	A1 X60
4.5.2.5.	Display communication problems	Communication between display and control unit interrupted (-A01 => -A02); (message is generated by the display). Appears during switching on the machine.	A1.X18/1 or A1.X18/5 A2.X105/1 or A2.X105/2	A1 or A2
4.5.3.5.	Display communication problems (Timeout)	Communication between display and control unit interrupted (-A01 => -A02); (message is generated by the display). Appears during operation of the	A1.X18/1 or A1.X18/5 A2.X105/1 or A2.X105/2	A1 or A2
4.6.1.2.	Internal malfunction of machine control unit	e.g. EEPROM failure (defect control unit). Replace the control unit (-A01) The chassis of the machine (VGND) is connected to any voltage. E.g. by a defective insulation of any wire of the machine.	/	A 1
4.6.1.3.	Malfunction of internal software control unit	(is the battery voltage without load >36V? Loadvoltage >32V?)	/	A 1
5.2.6.1.	Malfunctionn Battery discharge indicator	Machine working functions are inhibited. The machine can be moved to charging station with reduced speed. Check the voltage at -A01:X1 and -A01:Y2; is this voltage identical with	/	A 1

7.1.3.5.	STVZO Power supply problems		A6.X12/6 or A6.X12/16	A 6
7.1.5.1.	USB-Output low voltage	Short circuit at the output -X97; Overload of the USB Output -X97; Internal problem control unit -A01	A1.X14/3 or A1.X14/9	X 9 7