
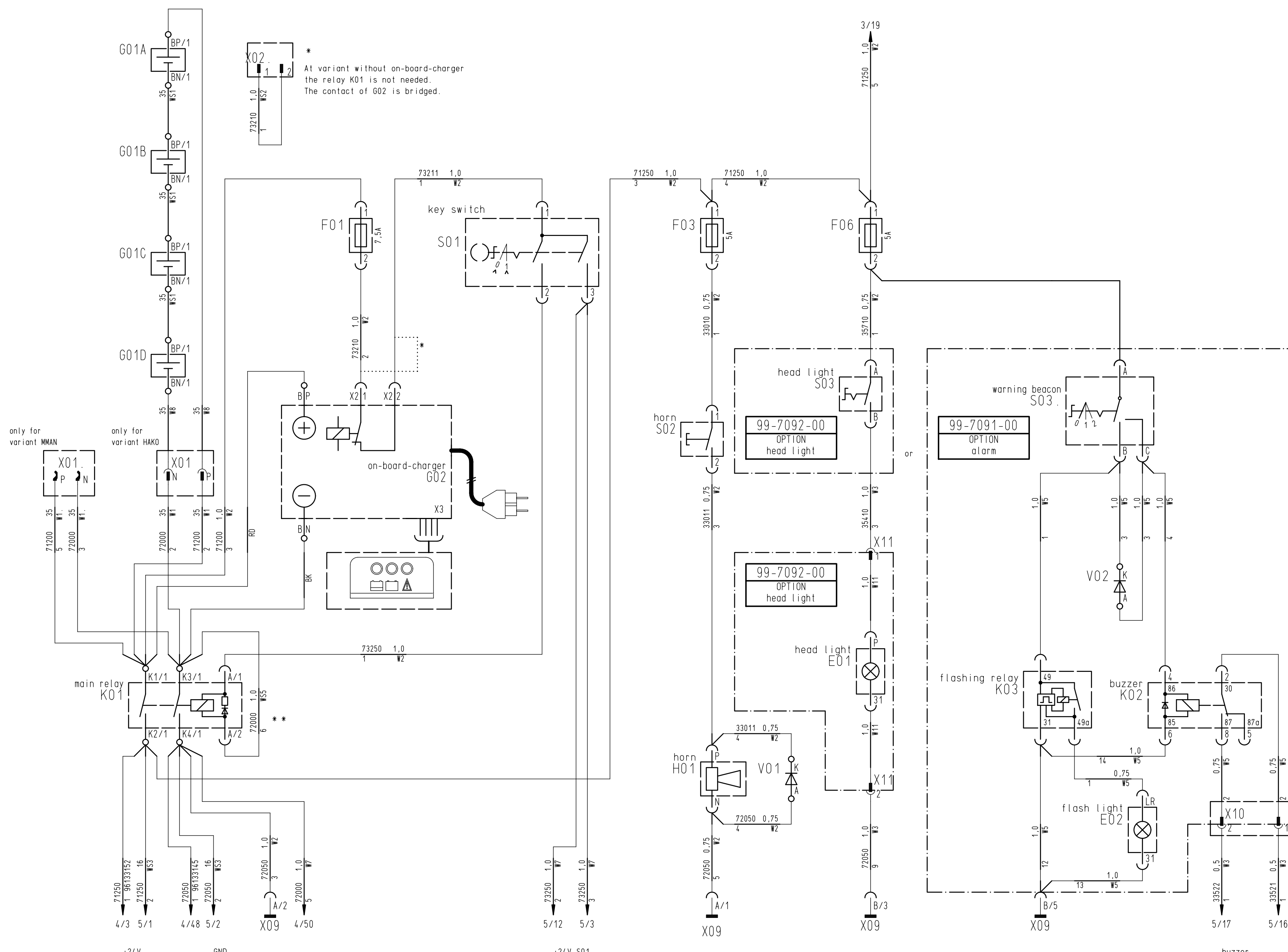


Part	Description	Code no.	Sheet Pos.	Loc.
A01	machine controller	90594300	3/17	4/12 5/12
A01:G01	battery of controller	90601907	5/45	
A02	touch panel with electronic	97113823	3/4	
A04	drive controller	90522442	5/1	
A101	controller chemical pump	90596511	3/24	
B01	buzzer	90333105	4/38	
B101	flow meter	90596529	3/25	
E01	head light	90434457	2/38	
E02	flash light	90415019	2/50	
F01	fuse controller 7,5A	19731066	2/15	
F02	main fuse 125A	19731140	4/3	
F03	fuse horn 5A	19731181	2/31	
F06	fuse working headlight 5A	19731181	2/38	
F07	fuse chemical dosing 2A	19731448	3/19	
G01	battery		2/7	
G02	on-board-charger	97117733	2/13	
H01	horn	90136383	2/31	
K01	main relay	90597535	2/6	
K02	buzzer	90267485	2/51	
K03	flashing relay	90552530	2/45	
K05	direction relais	90522459	5/42	
K101	chemical dosing	90567777	3/17	
M01	drive motor	90412578	5/41	
M02	suction motor	90240714	4/3	
M05	motor disc brush right	90586645	4/11	
	or			
M05	motor cylindrical brush right	90529371	4/11	
M06	motor disc brush left	90586645	4/21	
	or			
M06	motor cylindrical brush left	90529371	4/21	
M07	actuator squeegee	90344987	4/42	
M08	water pump	90329095	4/48	
M09	actuator brush deck	90528803	4/32	
R01	drive pot.	90305996	5/6	
S01	key switch	90323437	2/23	
S02	horn	90125782	2/31	
S03	head light	90260282	2/38	
S03.	switch warning beacon	90437286	2/49	
S04	sensor recovery tank	90273160	4/12	
S05	seat switch	90425034	4/6	
S06	parking brake	90243908	4/18	
S07	direction switch	90270208	5/20	
S08	switch drive potentiometer	90306002	5/14	
S09	switch TOOL	90541764	3/6	
V01	recovery diode horn	90194879	2/34	
V02	diode warning beacon	90194879	2/49	
VGND	VGND sheet A02		3/45	
X01	battery connector DIN 2 pole		2/7	
X01.	battery connector Anderson 2 pole		2/2	
X02	connector 3-pole		5/6	
X02.	connector 2-pole		2/11	

Part	Description	Code no.	Sheet Pos.	Loc.
X03	connector 2-pole		4/28	
X04	connector 2-pole		4/23	
X05	connector 2-pole		4/12	
X07	connector 2-pole		4/38	
X09	junction 6-polig		2/11	
X10	connector 2-pole		2/53	
X100	VGND chassis		3/45	
X103	connector 2-pole		3/21	
X104	connector 4-pole		3/25	
X11	connector 2-pole		2/38	
X12	connector 2-pole		4/48	
X14	connector 3-pole		4/26	
X16	connector 2-pole		4/43	
X17	connector 2-pole		4/35	
X20	connector 2-pole		4/3	
X21A	connector 1-pole		4/8	
X21B	connector 1-pole		4/6	
X23	connector 2-pole		5/51	
X26	connector 4-pole		3/4	
X29	junction 6-polig		5/36	
X30	stud terminal M8	90268657	2/14	
X31	stud terminal M8	90268657	2/17	
X35	connector 2-pole		4/38	
X37	connector 2-pole		3/17	
Y01	water valve	90435595	4/45	
	bar (+)	96133152	2/5 4/2	
	bar (-)	96133145	2/7 4/47	
	bar drive controller	90598632	5/49	
	ribbon cable	90594672	3/9	
W1	wire harness variant HAKO	97116016		
W1.	wire harness variant MMAN	97116701		
W2	wire harness	97116024		
W3	wire harness	97116032		
W4	wire harness	97116040		
W5	wire harness option 99-7091-00	97078976		
W6	wire harness	97116057		
W7	wire harness	97116073		
W8	wire harness variant HAKO	97041446		
W11	wire harness option 99-7092-00	97080337		
W13	wire harness option 99-7376-00	97100960		
W20	wire harness option 99-7376-00	97117261		
W101	wire harness option 99-7678-45	97117477		
W102	wire harness option 99-7678-45	97117485		
WS1	wire set variant HAKO	97041438		
WS2	wire set variant without charger	97116461		
WS3	wire set	97116065		
WS4	wire set	97116487		

Part	Description	Code no.	Sheet Pos.	Loc.
WS5	wire set variant with charger	97117493		
WS	wire set variant cylindrical brush	97115729		

Plot-Datum:	Eingeführt lt.	2249-07	06.07.11	Ri	2011 Gezeichnet	Datum 07.06.	Name Ri	B115 R	Benennung	Schaltplan B115 R			 Zeichnungs-Nr. 91031054	
	Nr.	Zahl kommt vor	Änd.-Nr.	Datum	Name	Normgepr.		Änd. Nr. :	Für diese Zeichnung behalten wir uns alle Rechte vor (Gemäß DIN 34)	KABl 470	Typ: 7090	Abt.: ELK	Blattzahl: 6	Blatt: 1



- ### Legende
- E01 head light
 - E02 flash light
 - F01 fuse controller 7,5A
 - F03 fuse horn 5A
 - F06 fuse working headlight 5A
 - G01A battery
 - G01B battery
 - G01C battery
 - G01D battery
 - G02 on-board-charger
 - H01 horn
 - K01 main relay
 - K02 buzzer
 - K03 flashing relay
 - S01 key switch
 - S02 horn
 - S03 head light
 - S03. switch warning beacon
 - V01 recovery diode horn
 - V02 diode warning beacon
 - X01 battery connector DIN 2 pole
 - X01. battery connector Anderson 2 pole
 - X02. connector 2-pole
 - X09 junction 6-polig
 - X10 connector 2-pole
 - X11 connector 2-pole
 - X30 stud terminal M8
 - X31 stud terminal M8

only for variant MMAN

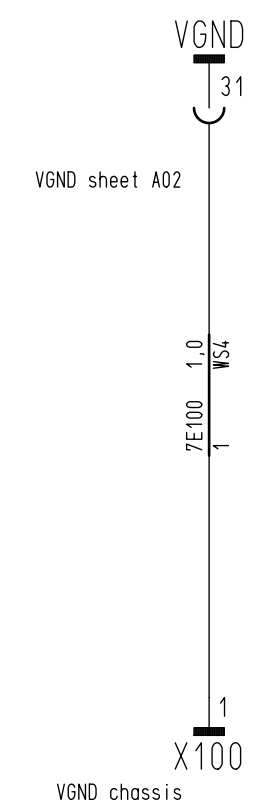
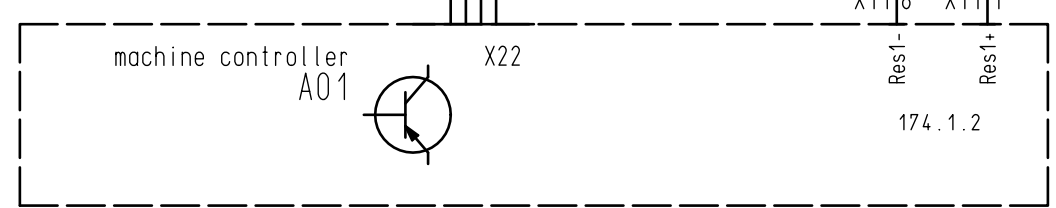
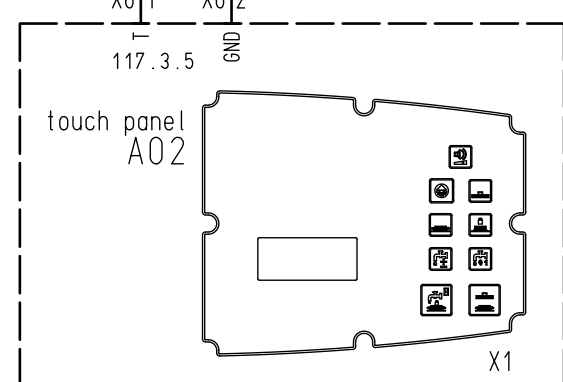
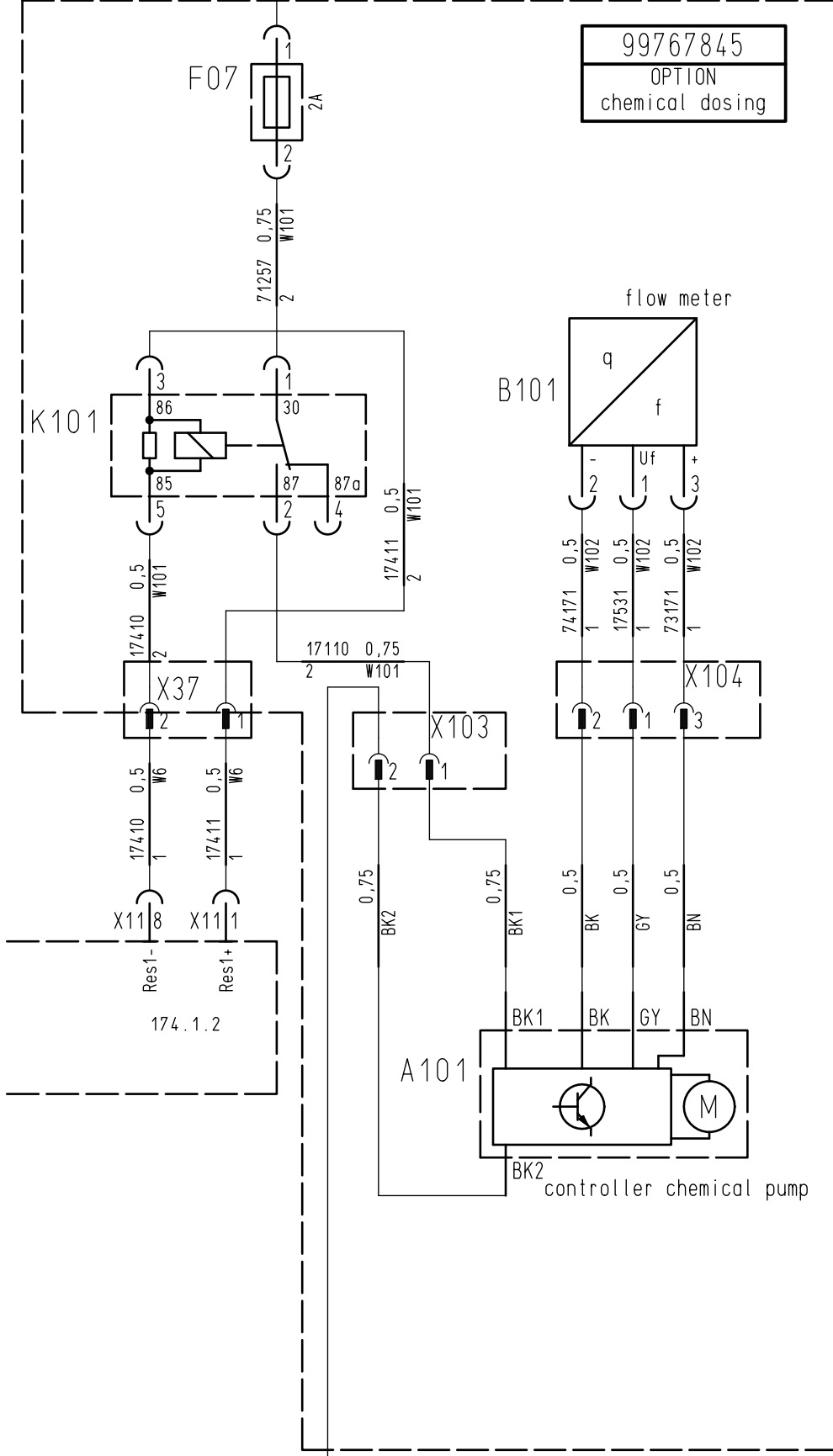
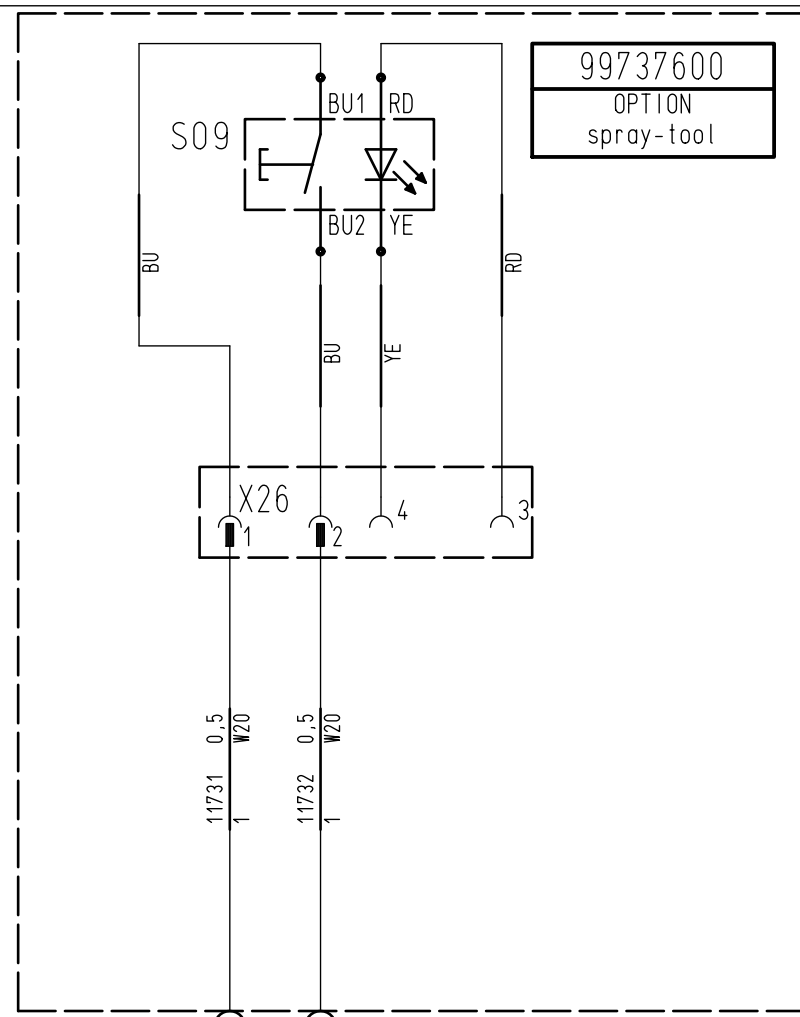
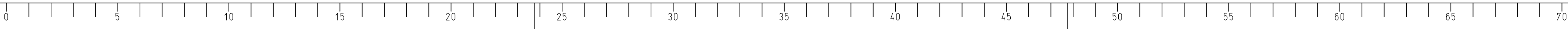
only for variant HAKO

+24V GND

+24V S01

** X30 X31
 At variant without on-board-charger the main contactor K01 is not needed. Connect the wires K01/K1/1 and K01/K2/1 to the stud terminal X30. Connect the wires K01/K3/1 and K01/K4/1 to the stud terminal X31. Fix the wire K01/A/1 at the wire harness W2 with cable ties. The wire set W5 is not applicable

Eingeführt lt. 2249-07		06.07.11		Ri	2011	Datum	Name	B115 R	Benennung	Schaltplan B115 R		 Zeichnungs-Nr. 91031054	
Gezeichnet		Geprüft		Normgepr.		Ersatz für :		Für diese Zeichnung behalten wir uns alle Rechte vor (Gemäß DIN 34)		KABI 470	Typ: 7090	Abt: ELK	Blattzahl: 6
Änd.-Nr.		Datum		Name		Änd. Nr. :		KABI 470		Typ: 7090	Abt: ELK	Blattzahl: 6	Blatt: 2



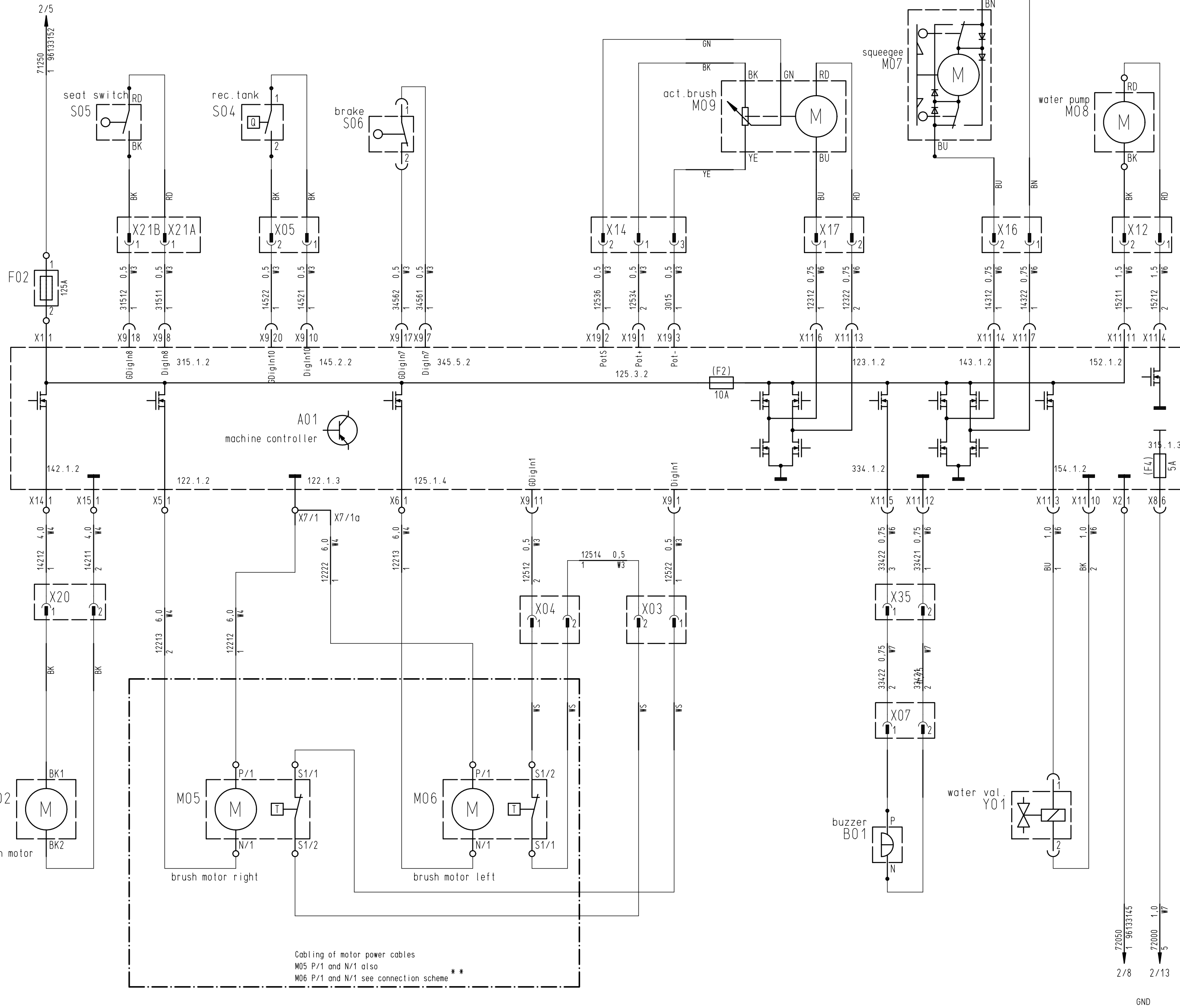
Legende

- A01 machine controller
- A02 touch panel with electronic
- A101 controller chemical pump
- B101 flow meter
- F07 fuse chemical dosing 2A
- K101 chemical dosing
- S09 switch TOOL
- VGND VGND sheet A02
- X26 connector 4-pole
- X37 connector 2-pole
- X100 VGND chassis
- X103 connector 2-pole
- X104 connector 4-pole

Plot-Datum:

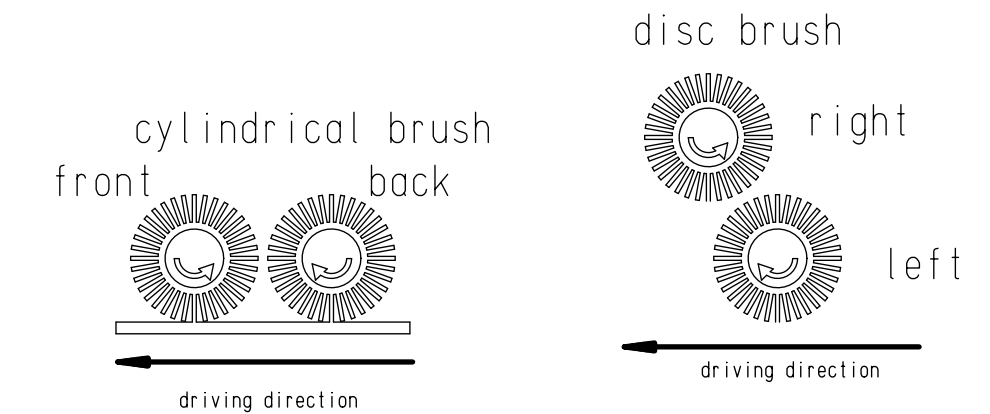
Eingeführt lt. 2249-07		06.07.11		Ri	2011 Datum	Name	B115 R	Benennung		 Zeichnungs-Nr.			
Gezeichnet		06.07.		Ri	Ersatz für :		Schaltplan B115 R		91031054				
Geprüft					Änd. Nr. :		Für diese Zeichnung behalten wir uns alle Rechte vor (Gemäß DIN 34)		KABl 470	Typ: 7090	Abt: ELK	Blattzahl: 6	Blatt: 3





Legende

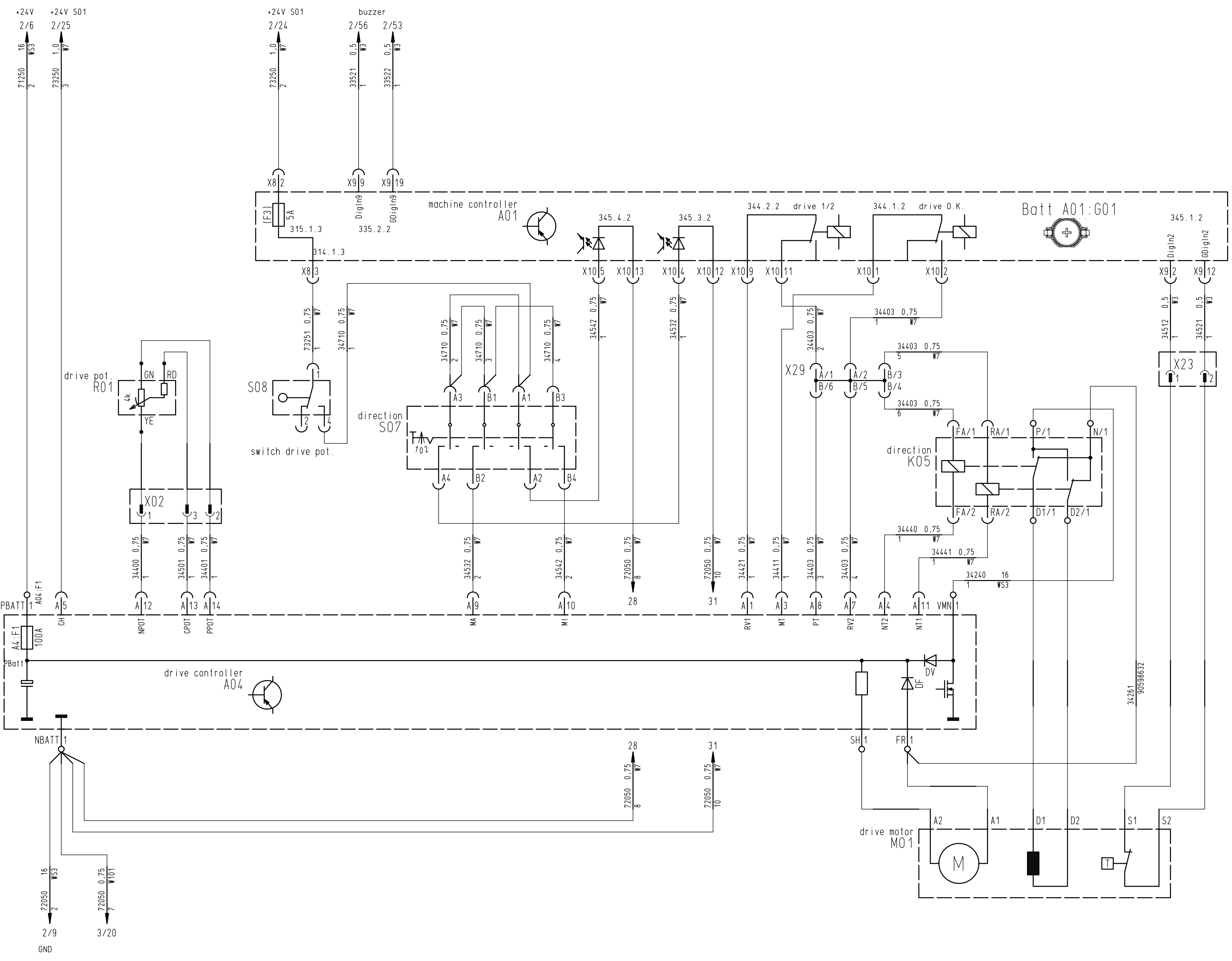
- A01 machine controller
- B01 buzzer
- F02 main fuse 125A
- M02 suction motor
- M05 brush motor right
- M06 brush motor left
- M07 actuator squeegee
- M08 water pump
- M09 actuator brush deck
- S04 sensor recovery tank
- S05 seat switch
- S06 parking brake
- X03 connector 2-pole
- X04 connector 2-pole
- X05 connector 2-pole
- X07 connector 2-pole
- X12 connector 2-pole
- X14 connector 3-pole
- X16 connector 2-pole
- X17 connector 2-pole
- X20 connector 2-pole
- X21A connector 1-pole
- X21B connector 1-pole
- X35 connector 2-pole
- Y01 water valve



Cabling of motor power cables
M05 P/1 and N/1 also
M06 P/1 and N/1 see connection scheme **

** connection scheme

cable marker	brush motor	99-7090-XX	
		VARIANTE cylindrical brush	VARIANTE disc brush
A01.X5/1 (M05:N/1)	to brush motor right (M05)	bolt N(-)	bolt cable red (+)
A01.X7/1 (M05:P/1)	to brush motor right (M05)	bolt P(+)	bolt cable black (-)
A01.X6/1 (M06:N/1)	to brush motor left (M06)	bolt N(-)	bolt cable black (-)
A01.X7/1a (M06:P/1)	to brush motor left (M06)	bolt P(+)	bolt cable red (+)



Legende

- A01 machine controller
- A01:G01 battery of controller
- A04 drive controller

- K05 direction relais

- M01 drive motor

- R01 drive pot.

- S07 direction switch
- S08 switch drive potentiometer

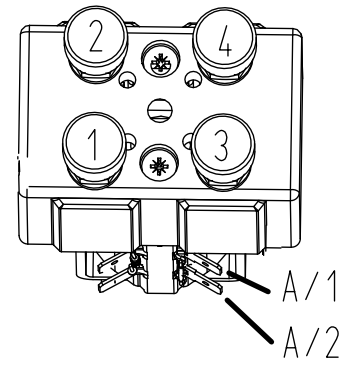
- X02 connector 3-pole
- X23 connector 2-pole
- X29 junction 6-polig

Eingeführt lt. 2249-07		06.07.11		Ri		2011 Date 06.07. Name R1		B115 R Name		Schaltplan B115 R		Hako-Werke GmbH D-23840 Bad Oldesloe		Drawing Number 91031054	
No. Number appears		Change No.		Date		Standard		Replacem. for Change No.		For this drawing we reserve all rights		(acc. DIN 34) KABI 470 Type 7090 Dep. ELK		No. of Sh. 6 Sheet 5	

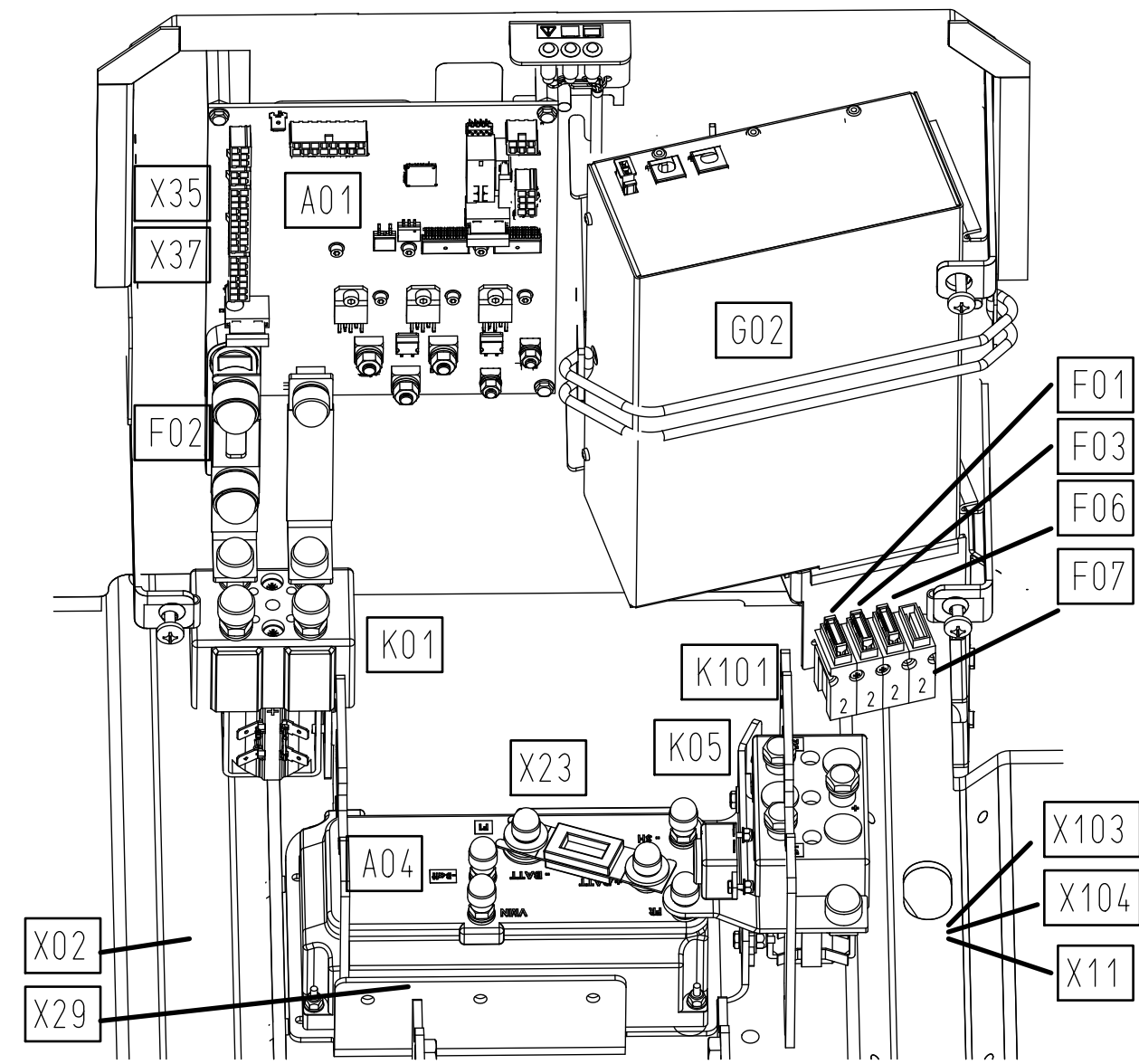
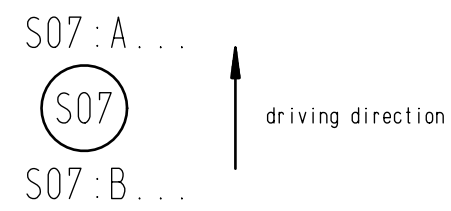
X30 X31 X02.

At variant without on-board-charger
instead of the relay K01
the bolts X30 and X31 are installed.
The wire with X02. is installed.

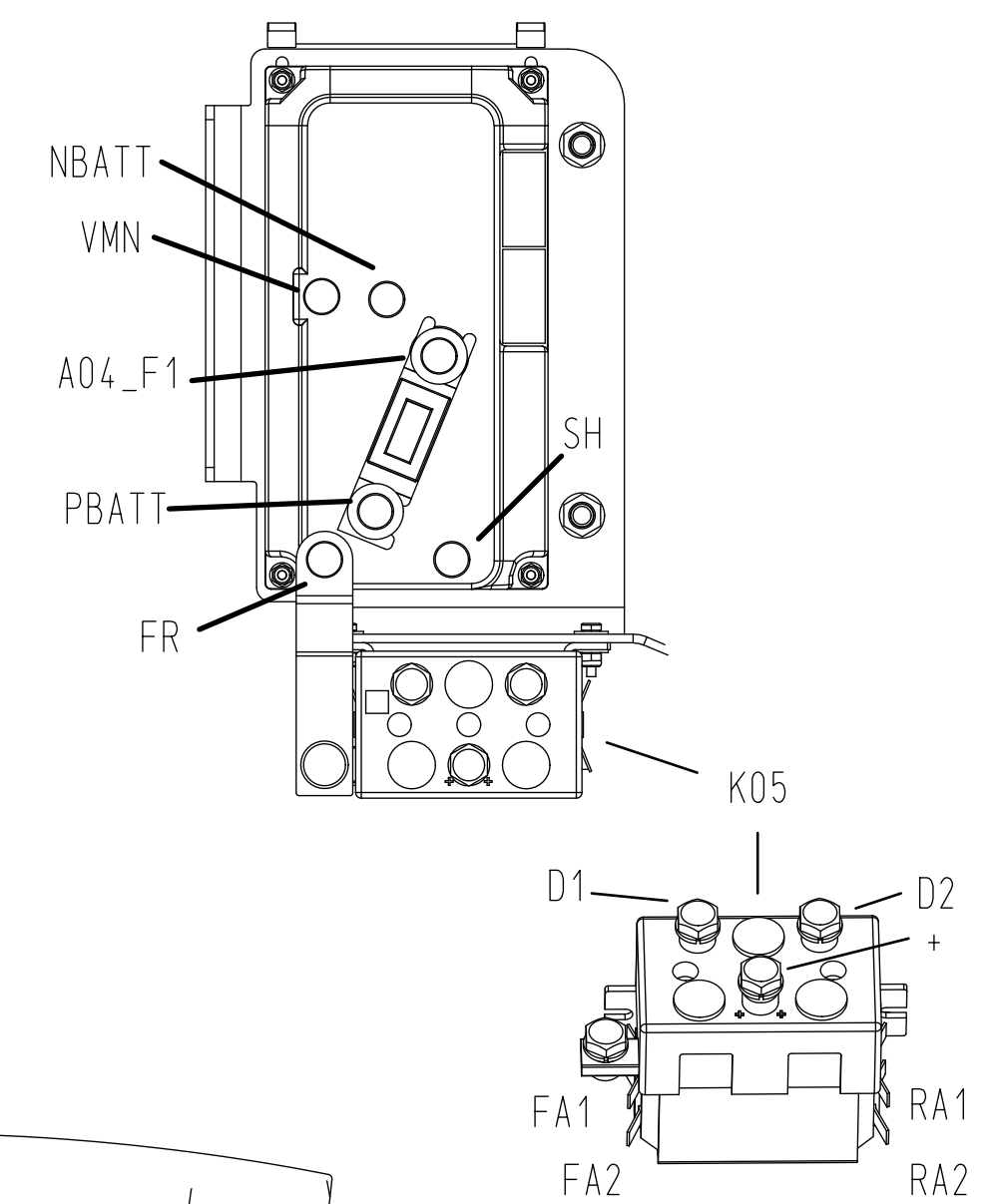
position of connection K01



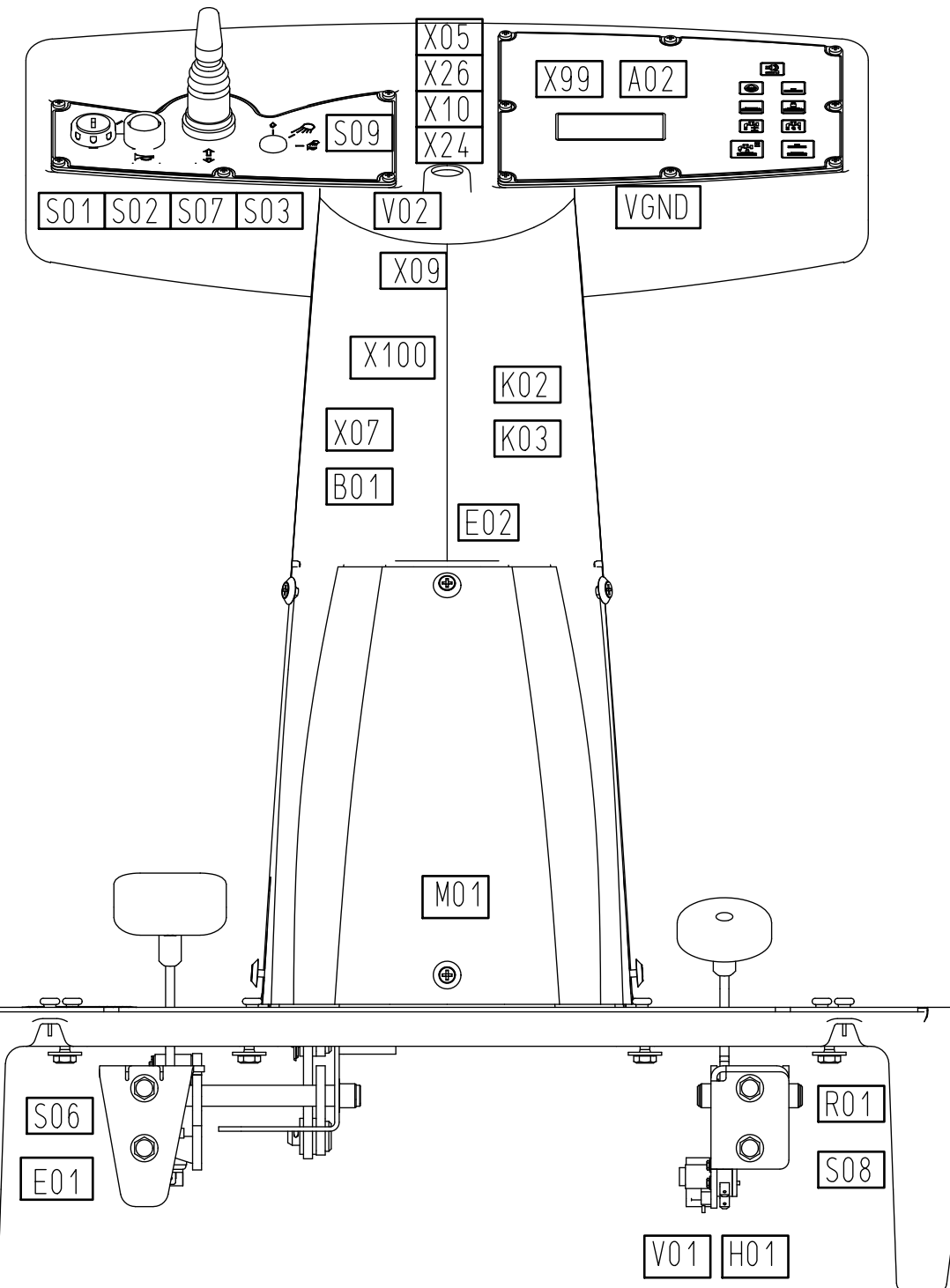
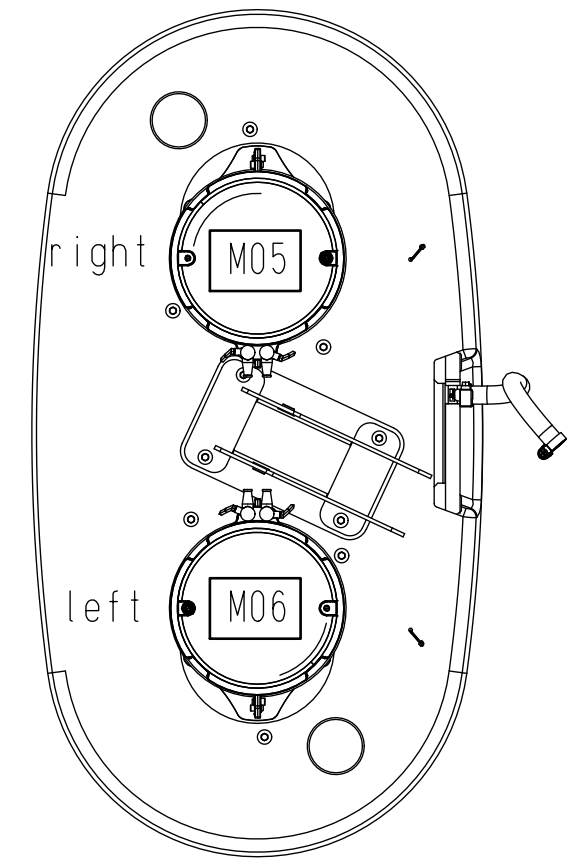
position of connection levels S07



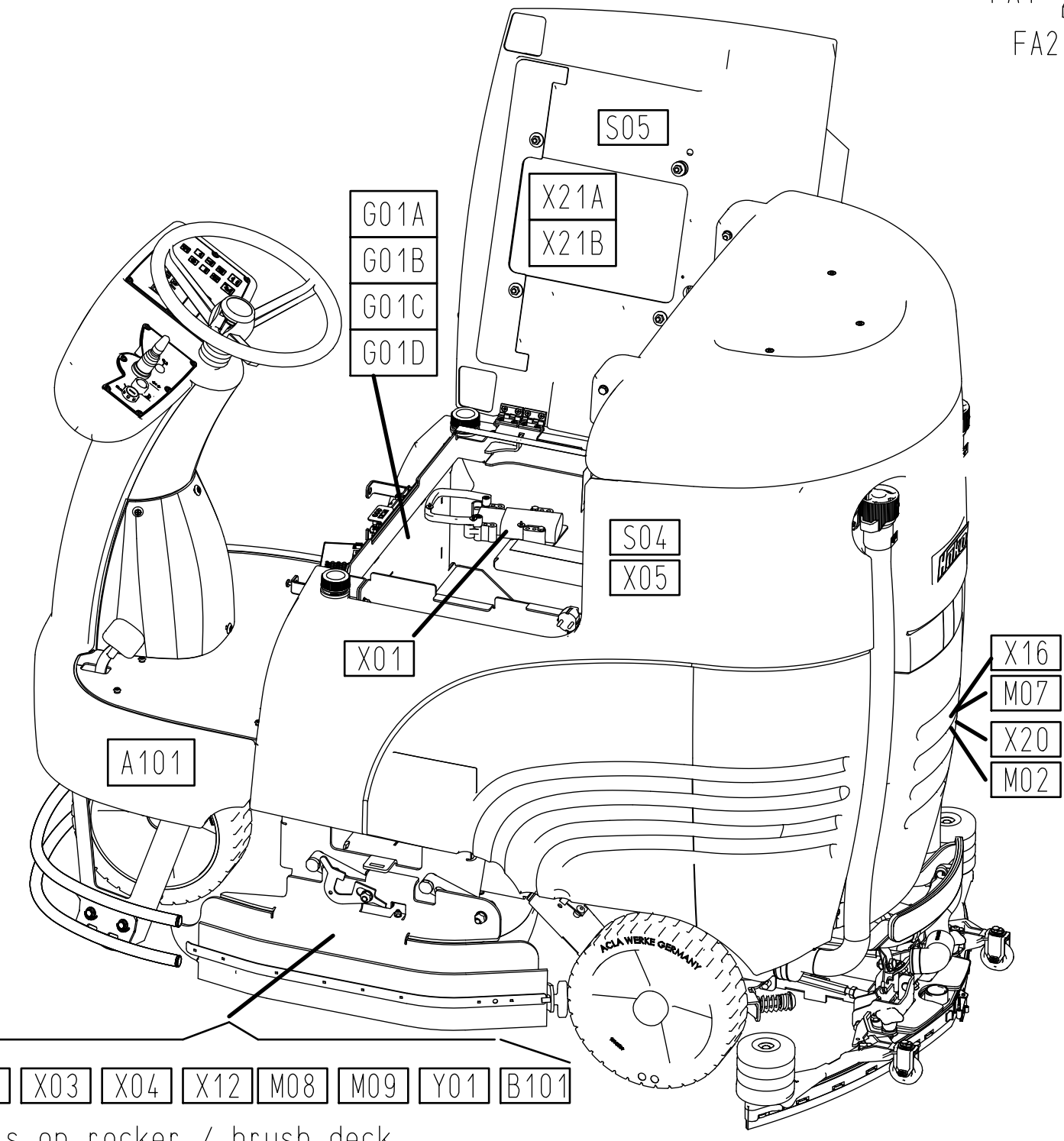
view drive controller A04



motor disc brush deck

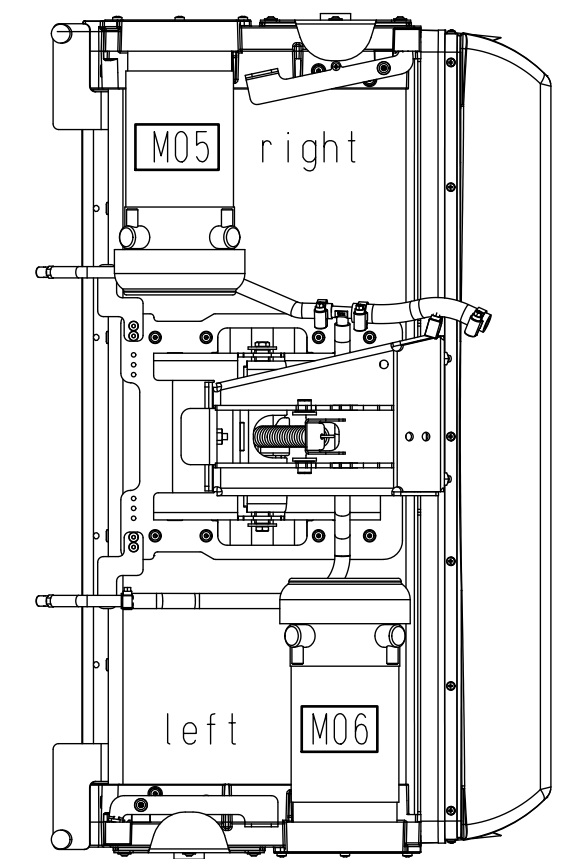



chassis



X17 X14 X03 X04 X12 M08 M09 Y01 B101
komponents on rocker / brush deck

motor cylindrical brush deck



Eingeführt lt.		2249-07	06.07.11	Ri	2011	Datum	Name	B115 R	Benennung	 Zeichnungs-Nr. 91031054	
Gezeichnet					06.07.		Ri	Ersatz für :	Schaltplan B115 R		Für diese Zeichnung behalten wir uns alle Rechte vor (Gemäß DIN 34) KABI 470 Typ: 7090 Abt: ELK Blattzahl: 6 Blatt: 6
Geprüft								Änd. Nr. :			
A2	Nr.	Zahl kommt vor	Änd.-Nr.	Datum	Name	Normgepr.					