

Part Description	Code no.	Sheet Pos.	Loc	Part Description	Code no.	Sheet Pos.	Loc	Part Description	Code no.	Sheet Pos.	Loc
A01 engine control unit Hatz	LF Hatz	8/27		B13 vehicle speed sensor left	-	13/9		F06 fuse 10A (15)	19731082	7/12	
A01 engine control unit Hatz	LF Hatz	9/47		B14 vehicle speed sensor right	-	13/15		F07 fuse 15A (15)	19731090	7/15	
A01 engine control unit Hatz	LF Hatz	10/47		B15 hopper reed sensor	90501073	22/22		F08 fuse 15A (75)	19731090	7/33	
A03 controller drive	90841743	11/10		B16 carrier reed sensor	90501073	22/18		F09 fuse 10A (75)	19731082	7/36	
A03 controller drive	90841743	12/13		B17 suction hood lifted reed sensor	90501073	32/2		F10 fuse 15A (75)	19731090	7/39	
A03 controller drive	90841743	13/12		B20 temperature sensor coolant liquid	90647694	11/33		F11 fuse 15A (75)	19731090	7/42	
A03 controller drive	90841743	14/13		B21 loudspeaker left	90462375	30/10		F12 fuse 15A (75)	19731090	7/45	
A04 controller hydraulic	90646647	15/10		B22 loudspeaker right	90462375	30/10		F13 fuse 10A (58)	19731082	7/39	
A04 controller hydraulic	90646647	17/13		B25 level sensor water tank	92052778	22/42		F14 fuse 15A (30)	19731090	7/15	
A04 controller hydraulic	90646647	20/15		B26 proximity sensor hopper	97090138	29/32		F15 fuse 7,5A (57)	19731066	7/48	
A04 controller hydraulic	90646647	21/12		B27 reverse drive camera	92701325	30/25		F16 fuse 7,5A (57)	19731066	7/51	
A04 controller hydraulic	90646647	22/11		B28 additional camera	92701325	30/38		F17 fuse 50A pre-fuse 15/75	19731512	6/14	
A04 controller hydraulic	90646647	23/15		B29 level sensor hydraulic oil tank	90846791	22/48		F18 fuse 50A pre-fuse 30	19731512	6/10	
A06 controller mirror heating	90550393	27/12		B30 i-button-reader	97131429	34/45		F19 fuse 50A pre-fuse	19731512	6/17	
A08 controller 3-brooms	90699653	32/17		B31 air cleaner differential pressure sensor	LF Hatz	10/36		F20 fuse 7,5A (50)	19731066	6/27	
A08 controller 3-brooms	90699653	33/13		B32 pressure based air mass flow meter	LF Hatz	10/36		F21 fuse 15A (30)	19731090	7/18	①
A09/D1 Hatz control modul / diode	LF Hatz	9/16		B33 water in fuel sensor	LF Hatz	10/36		F22 fuse 5A (30)	19731181	7/21	
A09/F1 Hatz control modul / fuse 5A	LF Hatz	9/6		B34 colant level switch	90840612	10/36		F23 fuse 15A (58)	19731090	7/42	
A09/F2 Hatz control modul / fuse 10A	LF Hatz	9/17		B35 differ. press. sensor Diesel particle filter	LF Hatz	10/36		F24 fuse 5A (58)	19731181	7/45	
A09/F3 Hatz control modul / fuse 40A	LF Hatz	9/8		B36 DPF exhaust gas temperat. sensor T1 (top)	LF Hatz	10/35		F25 fuse 10A (75)	19731082	7/48	
A09/F4 Hatz control modul / fuse 15A	LF Hatz	9/7		B37 DPF exhaust gas temperat. sensor T2 (down)	LF Hatz	10/35		F26 fuse 15A (30)	19731090	7/24	
A09/F5 Hatz control modul / fuse 10A	LF Hatz	9/11		E01 headlight left RH	90609066	18/2		F27 fuse 15A (15)	19731090	7/18	
A09/F6 Hatz control modul / fuse 30A	LF Hatz	9/15		oder headlight left LH	90612870	18/2		F28 fuse 10A (75)	19731082	7/51	
A09/F7 Hatz control modul / fuse 4A	LF Hatz	9/9		E02 headlight right RH	90609066	18/6		F29 fuse 5A (15)	19731181	7/21	
A09/K4 Hatz control modul / relais starter	LF Hatz	9/12		oder headlight right LH	90612870	18/6		F30 fuse 10A (75)	19731082	7/54	
A09/K5 Hatz control modul / relais fuel pump	LF Hatz	9/15		E03/E04 front indicator/position LH/RH	92036417	37/34		F31 fuse 5A (30)	19731181	7/27	
A09/K6 Hatz control modul / main relais	LF Hatz	9/4		E05 tail light left	97126692	24/14		F32 fuse for SOW (30)	-	7/30	
A09/R1 Hatz control modul / resistor	LF Hatz	9/11		E06 tail light right	97126692	24/24		F33 fuse for SOW (30)	-	7/33	
A09/R2 Hatz control modul / resistor	LF Hatz	9/11		E09 work lamp top left	92708841	28/21		F34 fuse for SOW (15)	-	7/24	
A09/X1. Hatz control modul / connecting bolt UBatt	LF Hatz	9/7		E10 work lamp top right	92708841	28/25		F35 fuse for SOW (57)	-	7/54	
A09/X3 Hatz control modul / connector 9 pole	LF Hatz	9/21		E11/E12 work lamps A-pillar LH/RH	92708841	37/52		F36 spare fuse 5A	19731181	7/59	
A09/X8 Hatz control modul / connector 8pole	LF Hatz	9/20		E14 rear fog lamp	97126304	27/45		F37 spare fuse 7,5A	19731066	7/62	
A10 fusebox side console right	97152920	6/27		E15 license plate light	92065580	24/3		F38 spare fuse 10A	19731082	7/65	
A10 fusebox side console right	97152920	7/11		E18 rotating beacon lamp	90552548	19/21		F39 spare fuse 15A	19731090	7/68	
A11 auxiliary heating system	92074947	39/5		oder flashing beacon lamp LED	00004150007	19/21		F40 fuse 15A	19731090	6/39	
A20 fleetrecorder	92060623	34/14		E19 interior lamp standard	97161509	19/33		F41 fuse 15A	19731090	6/42	
A21 gateway	92067180	40/14		oder interior lamp LED	97161491	19/33		F42 fuse 30A	19731157	11/11	
A100 controller preglow	LF Hatz	9/39		E21 reversing light	97126296	27/32		F43 fuse 20A	19731058	39/5	
B01 pressure sensor pressure to drive Ma	92023183	11/36		E22/E23 headlight LED LH/RH	92053073	37/51		G01 starter battery 12V	19410026	6/2	
B02 pressure sensor pressure to drive Mb	92023183	11/31		E25 tail light left	90425786	35/11		G02 alternator 14V / 150A	LF Hatz	6/17	
B03 pressure sensor brake pressure	90624719	12/2		E26 tail light right	90425786	35/21		H01 horn	90422619	15/53	
B04 fuel level sensor	92052869	22/31		E27 working light cabin back left	92708841	37/5		H02 buzzer	92045913	29/46	
B05 pressure switch AC	90679416	26/41		E28 working light cabin back right	92708841	37/9		H03 pilot lamp battery charge / preheating	19256700	8/18	
B06 freeze switch AC	90679416	26/41		E31 working light suction mouth	92708841	37/23		H04 pilot lamp switch battery main	97146294	13/26	
B08 driver seat Cobo	90619578	15/18		E32/E33 navigation lights LED LH/RH	97155436	37/41		K05 relay supply 75	90539271	6/50	
oder driver seat Grammer	90608761	15/18		E34/E35 indicator lamps front LED LH/RH	97158265	37/34		K06A relay starter active	90539305	6/27	
oder driver seat König	92027267	15/18		E38 working light 3-brooms unit	92708841	32/13		K06B relay brake light	90539305	11/43	
oder driver seat Isri	92027242	15/18		F01 fuse 20A (30)	19731058	7/6		K07 relay voltage + 3-brooms moduls	00004149102	6/37	
B09 angle sensor throttle pedal forward	92013135	12/12		F02 fuse 15A (30)	19731090	7/9		K08A relay windscreen wiper	90539305	17/36	
B10 angle sensor throttle pedal backward	92017904	12/22		F03 fuse 20A (30)	19731058	7/12		K08B relay fog light	90539305	18/42	
B11 hall sensor brake pedal	97145270	12/33		F04 fuse 10A (15)	19731082	7/6		K09 relay AC system	000041491102	26/29	
B12 temperature sensor hydraulic oil	90647694	11/29		F05 fuse 5A (15)	19731181	7/9					



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A2	No. Number appears	Change No.	Date	Name	Standard	24.04.	DK	Replacem. for same no.	For this drawing we reserve all rights (acc. DIN ISO 16016)			KABI 472	Type 1491

Part	Description	Code no.	Sheet Pos.	Loc.
K10A	relay release	90539305	21/1	
K10B	relay voltage + prop.valve	90539305	23/2	
K11A	relay windscreen washer pump (opt.)	90539305	35/48	
K12	relay auxiliary heating system	00004149102	26/5	
M01	starter	LF Hatz	6/11	
M03	spraying pump	97092258	23/34	
M04	condensor fan	90679416	26/35	
M05	windscreen wiper motor	90603762	17/38	
M06	windscreen washer pump	90783408	17/24	
M07	heating fan	90679416	26/4	
M09	water pump	97142186	31/52	
M10	fuel pump	LF Hatz	9/29	
M11	metering pump auxiliary heating system	-	39/15	
M12	circulation pump auxiliary heating system	-	39/20	
P01	multifunction display	90686403	16/10	
P02	display	90850876	30/31	
P03	operating unit auxiliary heating system	-	39/27	
R13	resistor 1200hm (CAN1-A03)	-	11/29	
R14	resistor 1200hm (CAN external)	-	40/23	
R17	mirror heating left (opt.)	97118723	27/17	
R18	mirror heating right (opt.)	97118723	27/21	
R20	resistor 1200hm (CAN1-X63)	-	16/39	
R24	resistor 1k0hm	-	22/32	
R25	resistor 1k0hm	-	22/37	
R26	resistor 1k0hm	-	22/42	
R27	resistor 1k0hm	-	22/46	
R28	resistor 10k0hm	-	15/30	
R29	resistor 6800hm	-	13/26	
R102	resistor 1k	-	34/45	
R103	resistor 1k	-	22/1	
S01	starter switch	90432998	6/25	
S02	switch warning flasher	92050673	15/4	
S03	steering wheel switch	90122219	15/47	
S04	switch work lights A-pillar a. cabin top	19256551	19/10	
S05	push-button mirror heating	19256577	27/5	
S06	switch beacon lamp	19256643	19/25	
S07	push-button engine speed tip-up / down	19256478	15/8	
S08	switch light	19256650	18/10	
S09	steering wheel switch comfort	92709096	35/33	
S10	switch windscreen wiper	19256601	17/14	
S11	push-button switch hopper up/down	19256619	22/4	
S12	switch rear fog light	19256585	18/48	
S13	switch AC	19256668	26/15	
S14	rotary switch heating fan	90791146	26/6	
S15	switch parking brake	19256502	13/44	
S16	push-button cruise control/limiter	19256676	12/45	
S18	push-button reverse blower	19256536	14/21	
S19	switch battery main	92021278	6/2	
S21	joystick switch left hydraulics	90623547	22/32	
S22	push-button switch working mode	90505686	22/14	
S23	encoder switch with push-button	90600115	22/19	
S24	joystick switch right hydraulics	90623547	22/42	

Part	Description	Code no.	Sheet Pos.	Loc.
S29	switch working lights cabin back	19256684	37/11	
S30	switch working light suction mouth	19256684	37/22	
S31	push-button container 2'nd hand	97095608	28/44	
S32	push-button hopper up	97095608	28/44	
S33	push-button hopper down (opt.)	97095608	28/37	
S34	push-button emergency to stop (SOW)	90789389	14/50	
S35	push-button lift side broom left/right (SOW)	-	22/5	
T01	USB plug socket	92053040	19/47	
V01	diode 1A	-	8/21	
V02	diode 1A	-	22/2	
X05	connector 2 pole (W1<->W5)		6	
X06	connector 6 pole for SOW (W5)		7	
X07	connector 2 pole (W1<->W5)		6	
X08	connector 16 pole (W3<->W5)		22	
X09	connector 8 pole (W1<->W5)		6	
X09	connector 8 pole (W1<->W5)		11	
X09	connector 8 pole (W1<->W5)		19	
X09	connector 8 pole (W1<->W5)		22	
X09	connector 8 pole (W1<->W5)		25	
X10	connector 22 pole (W1<->W5)		8	
X10	connector 22 pole (W1<->W5)		12	
X10	connector 22 pole (W1<->W5)		13	
X10	connector 22 pole (W1<->W5)		14	
X10	connector 22 pole (W1<->W5)		15	
X10	connector 22 pole (W1<->W5)		22	
X10	connector 22 pole (W1<->W5)		26	
X10	connector 22 pole (W1<->W5)		28	
X11	connector 14 pole (W1<->W5)		15	
X11	connector 14 pole (W1<->W5)		16	
X11	connector 14 pole (W1<->W5)		18	
X11	connector 14 pole (W1<->W5)		22	
X11	connector 14 pole (W1<->W5)		29	
X11	connector 14 pole (W1<->W5)		39	
X12	connector 12 pole (W1<->W2)		12	
X12	connector 12 pole (W1<->W2)		15	
X13	connector 8 pole (W1<->W10)		18	
X13	connector 8 pole (W1<->W10)		21	
X13	connector 8 pole (W1<->W10)		23	
X13	connector 8 pole (W1<->W10)		29	
X14	connector 3 pole (W5<->W10)		23	
X15	connector 20 pole (W5<->W10)		13	
X15	connector 20 pole (W5<->W10)		15	
X15	connector 20 pole (W5<->W10)		16	
X15	connector 20 pole (W5<->W10)		17	
X15	connector 20 pole (W5<->W10)		19	
X15	connector 20 pole (W5<->W10)		22	
X15	connector 20 pole (W5<->W10)		23	
X15	connector 20 pole (W5<->W10)		37	
X16	connector 6 pole (W1<->W6)		8	
X16	connector 6 pole (W1<->W6)		12	
X16	connector 6 pole (W1<->W6)		15	
X16	connector 6 pole (W1<->W6)		19	

Part	Description	Code no.	Sheet Pos.	Loc.
X17	connector 22 pole (W5<->W6)		8	
X17	connector 22 pole (W5<->W6)		12	
X17	connector 22 pole (W5<->W6)		15	
X17	connector 22 pole (W5<->W6)		17	
X17	connector 22 pole (W5<->W6)		18	
X17	connector 22 pole (W5<->W6)		19	
X18	connector 24 pole (W4<->W5)		8	
X18	connector 24 pole (W4<->W5)		11	
X18	connector 24 pole (W4<->W5)		15	
X18	connector 24 pole (W4<->W5)		16	
X18	connector 24 pole (W4<->W5)		18	
X18	connector 24 pole (W4<->W5)		19	
X18	connector 24 pole (W4<->W5)		26	
X18	connector 24 pole (W4<->W5)		27	
X18	connector 24 pole (W4<->W5)		37	
X18	connector 24 pole (W4<->W5)		39	
X19	connector 6 pole (W4<->W5)		18	
X19	connector 6 pole (W4<->W5)		19	
X19	connector 6 pole (W4<->W5)		26	
X20	connector 10 pole (W1<->W5)		8	
X20	connector 10 pole (W1<->W5)		14	
X21	connector 6 pole (W1<->W33)		32	
X22	connector 3 pole (W16<->motor)		6	
X22	connector 3 pole (W16<->motor)		9	
X23	connector 2 pole (W1<->W36)		24	
X24	connector 4 pole (W4<->W15)		27	
X28	connector 6 pole (W5<->W14)		30	
X32	connector 22 pole (W1<->W16)		6	
X32	connector 22 pole (W1<->W16)		11	
X32	connector 22 pole (W1<->W16)		12	
X32	connector 22 pole (W1<->W16)		13	
X32	connector 22 pole (W1<->W16)		26	
X33	connector 12 pole (W1<->W16)		12	
X33	connector 12 pole (W1<->W16)		13	
X33	connector 12 pole (W1<->W16)		14	
X33	connector 12 pole (W1<->W16)		19	
X34	connector 12 pole (W1<->W13)		11	
X34	connector 12 pole (W1<->W13)		13	
X34	connector 12 pole (W1<->W13)		14	
X34	connector 12 pole (W1<->W13)		22	
X34	connector 12 pole (W1<->W13)		36	
X36	connector 8 pole (W16<->W13)		11	
X36	connector 8 pole (W16<->W13)		13	
X36	connector 8 pole (W16<->W13)		14	
X37	connector 16 pole (W1<->W16)		6	
X37	connector 16 pole (W1<->W16)		8	
X37	connector 16 pole (W1<->W16)		11	
X37	connector 16 pole (W1<->W16)		39	



1	2x	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number		
A2	No. Number appears	Change No.	Date	Name	Standard	24.04.	DK	Replacem. for same no.	4105-11			For this drawing we reserve all rights (acc. DIN ISO 16016)	KABI 472	Type 1491
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Part Description	Code no.	Sheet Pos.	Loc.	Part Description	Code no.	Sheet Pos.	Loc.	Part Description	Code no.	Sheet Pos.	Loc.
X39	connector 4 pole (W1<->W30)	28		X80	connector 8 pole (W44<->W44)	29		XS22	ussp (W1)	36	
X40	ground bolt M10 chassis tail	9		X90	connector 2 pole (W21<->W21)	33		XS23	ussp (W5)	36	
X40	ground bolt M10 chassis tail	36		X91	connector 8 pole (W5<->W77)	-	34	XS24	butt joint (W11)	31	
X41	ground bolt M5 electric box	36		X91A	connector 8 pole (W5<->W79)	-	40	XS25	ussp (W4)	11	
X42	ground bolt M6 console right	36		X92	connector 6 pole (W5<->W44)	-	34	XS26	ussp (W3)	22	
X43	ground bolt M6 cabin roof right	36		X92A	connector 6 pole (W77/W79<->W44)	-	29	XS27	ussp (W5)	22	
X44	ground bolt M6 sweeper	31		X92D	connector 6 pole (W79<->W44)	-	40	XS28	ussp (W17)	31	
X45	ground bolt M6 sweeper attachm. 3 brooms	32		X93	connector 12 pole (W10<->W40)		23	XS30	ussp (W16)	11	
X46	ground bolt M8 engine	6		X94	connector 8 pole (W10<->W40)		23	XS31	ussp (W16)	11	
X47	ground bolt M6 citycleaner	31		X96	connector 4 pole (W6<->W22)		35	XS32	ussp (W16)	11	
X48	ground bolt M6 attachment uncoded	31		X97	connector 6 pole (W16<->DPF heater)		9	XS33	ussp (W1)	8	
X49	ground bolt M6 mower suction	31		X98	connector 8 pole (W12<->W16)		10	XS34	ussp (W16)	8	
X50	ground bolt M6 hydr. driven comb.sweeper	31		X99	connector 3 pole (W16<->harness motor)		9	XS37	ussp (W10)	23	
X51	connector 4 pole (W4<->W8/W42)	18		X100	connector 1 pole (W1<->W5)		6	XS39	ussp (W5)	7	
X51	connector 4 pole (W4<->W8/W42)	19		X101	connector 4 pole (W16<->GCU)		9	XS40	ussp (W10)	23	
X51/52	connector 4 pole (W4<->W8/W42)	37		X102	connector 12 pole (W12<->W16)		11	XS41	ussp (W2)	12	
X52	connector 4 pole (W4<->W8/W42)	18		X102	connector 12 pole (W12<->W16)		13	XS42	ussp (W2)	12	
X52	connector 4 pole (W4<->W8/W42)	19		X102	connector 12 pole (W12<->W16)		26	XS43	butt joint (W30)	28	
X53	connector 2 pole (W15<->R17)	27		X103	connector 2 pole (W10<->W38)		37	XS44	ussp (W1)	19	
X54	connector 2 pole (W15<->R18)	27		X104	connector 3 pole (W4<->W41/W43)		18	XS45	butt joint (W5)	16	
X56	connector 6 pole (W10<->W31)	20		X104/105	connector 3 pole (W4<->W41/W43)		37	XS46	butt joint (W5)	16	
X56	connector 6 pole (W10<->W31)	21		X105	connector 3 pole (W4<->W41/W43)		18	XS47	butt joint (W31)	21	
X56	connector 6 pole (W10<->W31)	23		X106	connector 1 pole (W14)		30	XS48	butt joint (W35)	31	
X58	socket 6 pole progr. display	16		X107	connector 1 pole (W4<->W4)		19	XS51	ussp (W1)	24	
X59	diagnosis socket 4 pole Hatz	8		X110	diagnosis socket 6 pole Fleet		34	XS52	ussp (W1)	24	
X60	diagnosis socket 16 pole	16		X111	connector 4 pole (W16<->W45)		39	XS53	ussp (W1)	24	
X61	socket 3 pole	19		X113	connector 2 pole (W5<->W5)		39	XS54	ussp (W1)	24	
X63	socket 19 pole front attachment	23		X114	connector 1 pole (W5<->W5)		26	XS55	ussp (W1)	24	
X63B	plug 19 pole 2-brooms	31		X116	connector 2 pole (W21<->W37)		32	XS56	butt joint (W23)	31	
X63C	plug 19 pole mower suction	31		X117	ground bolt M6 2-brooms comfort		31	XS57	butt joint (W26)	31	
X63D	plug 19 pole 3-brooms	32		X118	connector 2 pole (W4<->W46) ①		28	XS58	butt joint (W26)	31	
X63E	plug 19 pole citycleaner	31		XS01	ussp (W16)		11	XS59	butt joint (W26)	31	
X63F	plug 19 pole attachment uncoded	31		XS02	ussp (W16)		7	XS60	ussp (W77)	34	
X63G	plug 19 pole hydr. driven comb.sweeper	31		XS03	ussp (W16)		11	XS61	ussp (W21)	32	
X63H	plug 19 pole 2-brooms comfort	31		XS04	ussp (W16)		7	XS62	ussp (W16)	14	
X64	socket 7 pole rear	25		XS05	ussp (W5)		11	XS63	ussp (W6)	17	
X64A	plug 7 pole coding spreader rear	25		XS06	ussp (W12)		13	XS64	ussp (W21)	32	
X65	trailer socket 7 pole	24		XS07	ussp (W10)		23	XS65	ussp (W21)	33	
X65A	socket 7 pole lighting weight holder	35		XS08	ussp (W13)		36	XS66	ussp (W21)	32	
X66	socket 9 pole front attachment	32		XS09	ussp (W1)		36	XS67	ussp (W21)	32	
X66A	plug 9 pole 3-brooms	32		XS10	ussp (W1)		6	XS68	ussp (W6)	36	
X67	connector 12 pole spreader steering pillar	29		XS11	ussp (W5)		7	XS69	ussp (W21)	33	
X68	connector 7 pole spreader cabine back	29		XS12	ussp (W1)		22	XS70	ussp (W5)	12	
X70	ground bolt M6 coding spreader rear	25		XS13	ussp (W2)		12	XS71	ussp (W5)	12	
X71	connector 8 pole radio ISO-A (W14)	30		XS14	ussp (W5)		18	XS72	ussp (W21)	33	
X72	connector 8 pole radio ISO-B (W14)	30		XS15	ussp (W5)		7	XS73	ussp (W21)	33	
X73	connector 3 pole video (W6)	19		XS16	ussp (W5)		7	XS75	ussp (W5)	15	
X73A	connector 3 pole video	30		XS17	butt joint (W16)		11	XS76	ussp (W5)	8	
X75	connector 13 pole Bildschirm	30		XS18	butt joint (W16)		11	XS77	ussp (W5)	16	
X76	connector 4 pole camera 1	30		XS19	ussp (W13)		11				
X77	connector 4 pole camera 1	30		XS20	ussp (W10)		36				
X79	connector 4 pole camera 2	30		XS21	ussp (W10)		36				



1	1x	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	Hako GmbH D-23840 Bad Oldesloe	Drawing Number 91039958				
					Drawn by	24.04.	DK									
A2	No. Number appears	Change No.	Date	Name	Standard			Replacem. for same no.	Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)	KABI 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 3

Part	Description	Code no.	Sheet Pos.	Loc
XS78	ussp (W5)		16	
XS79	ussp (W5)		11	
XS80	ussp (W3)		22	
XS81	ussp (W3)		22	
XS82	ussp (W3)		22	
XS83	ussp (W3)		22	
XS84	ussp (W3)		22	
XS85	ussp (W10)		13	
XS86	ussp (W1)		12	
XS88	ussp (W16)		9	
XS89	ussp (W16)		9	
XS90	ussp (W16)		9	
XS91	ussp (W16)		10	
XS92	ussp (W5)		7	
XS93	ussp (W12)		11	
XS94	ussp (W12)		11	
XS95	ussp (W1)		6	
XS96	ussp (W4)		19	
XS97	ussp (W5)		15	
XS99	ussp (W5)		22	
XS100	ussp (W5)		15	
XS101	ussp (W4)		36	
XS104	ussp (W4)		37	
XS105	ussp (W4)		36	
XS106	ussp (W1)		8	
XS107	ussp (W1)		8	
XS108	ussp (W1)		18	
XS110	ussp (W1)		12	
XS111	ussp (W1)		13	
XS112	ussp (W16)		11	
XS113	ussp (W16)		11	
XS114	ussp (W6)		17	
XS116	ussp (W4)		27	
XS117	ussp (W4)		27	
XS118	ussp (W4)		36	
XS119	ussp (W5)		36	
XS120	ussp (W4)		19	
XS122	ussp (W43)		37	
XS123	ussp (W5)		15	
XS124	ussp (W5)		15	
XS125	ussp (W77)		34	
XS126	ussp (W77)		34	
XS127	ussp (W16)		6	
XS128	ussp (W79)		40	
XS129	ussp (W79)		40	
XS130	ussp (W79)		40	
XS131	butt joint (W79)		40	
XS132	butt joint (W79)		40	

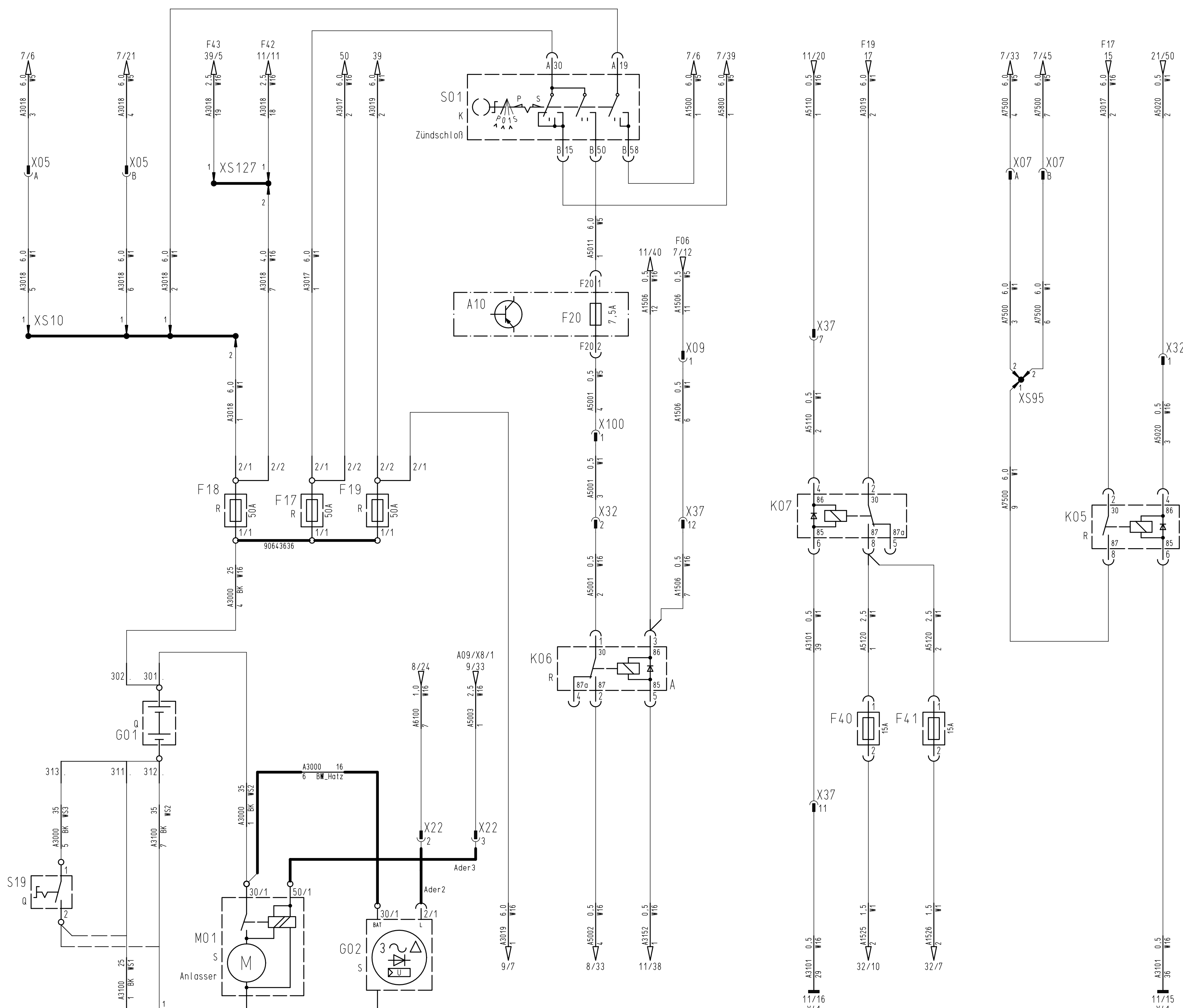
Part	Description	Code no.	Sheet Pos.	Loc
Y01	hydraulic valve overrun function	-	13/6	
Y02	hydraulic valve drive stage	-	13/12	
Y03	hydraulic valve driving direction forward	-	13/19	
Y04	hydraulic valve driving direction backward	-	13/24	
Y05	hydraulic valve parking brake	-	13/43	
Y09	clutch compressor AC	LF Hatz	26/41	
Y10	prop.valve fan	-	23/5	
Y12	hydraulic valve front carrier circ.	-	20/7	
Y13	hydr.valve front carrier released	-	21/20	
Y14	hydraulic valve front carrier up	-	21/27	
Y15	hydraulic valve actuator right pos. P/T	-	20/30	
Y16	hydraulic valve actuator right pos. T/P	-	20/37	
Y17	hydraulic valve hopper up	-	21/5	
Y18	hydraulic valve hopper down	-	21/12	
Y19	hydraulic valve actuator left pos. P/T	-	20/15	
Y20	hydraulic valve actuator left pos. T/P	-	20/22	
Y22	water valve fresh/sloppy water	90579475	31/52	
Y29	hydraulic valve stop func. front attachment	-	21/35	
Y30	hydraulic valve switching function	-	31/20	
Y31	prop.valve speed fan	-	14/16	
Y32	hydraulic valve reverse blower	-	14/7	
Y33	prop. valve front attachment dispres.	-	23/15	
Y34	hydraulic valve front attachment press	-	21/42	
Y35	hydraulic valve pressure switched on	-	21/50	
Y36	hydraulic valve floating position	-	20/45	
Y37	hydraulic valve broom right displacement	-	31/68	
Y40	prop. valve speed rear brooms	-	32/46	
Y41	prop. valve speed front broom	-	32/22	
Y42	hydra. valve driv. dir. front broom left	-	33/13	
Y43	hydra. valve driv. dir. front broom right	-	33/19	
Y44	hydra. valve front broom floating position	-	33/30	
Y45	prop. valve front broom dispresure/up	-	33/46	
Y46	hydraulic valve main arm swing left	-	33/35	
Y47	hydraulic valve main arm swing right	-	33/24	
Y48	hydraulic valve front arm swing left	-	32/17	
Y49	hydraulic valve front arm swing right	-	33/41	
Y50	hydraulic valve side brooms floating position	-	32/30	
Y51	prop. valve side brooms dispres./up	-	32/52	
Y52	hydraulic valve front arm swing right	-	32/41	
Y53	hydraulic valve front arm swing left	-	32/35	
Y55	prop.valve rotation speed broom	-	23/10	
Y60	watervalue 3-brooms	97136196	33/51	

Part	Description	Code no.	Sheet Pos.	Loc
W1	wire harness W1 (joint)	97152284		
W2	wire harness W2 (cabine floor)	97153878		
W3	wire harness W3 (arm rest)	97154140		
W4	wire harness W4 (cabine roof)	97153886		
W5	wire harness W5 (side console right)	97152292		
W6	wire harness W6 (steering pillar)	97152300		
W8	wire harness W8 (work lamps)	97158273		
W10	wire harness W10 (hydraulic front)	97153969		
W11	wire harness W11 (sweeper attach. 2-brooms)	97133763		
W12	wire harness W12 (motor)	97152680		
W13	wire harness W13 (hydraulic back)	97152490		
W14	wire harness W14 (radio)	97154256		
W15	wire harness W15 (mirror heating)	97122337		
W16	wire harness W16 (chassis)	97152698		
W17	wire harness W17 (sweeper attach. 2-brooms comfort)	97161947		
W21	wire harness W21 (sweeper attach. 3-brooms)	97158760		
W22	wire harness W22 (comfort steering pillar)	97142244		
W23	wire harness W23 (universal front mower)	97134134		
W26	wire harness W26 (Citycleaner)	97132401		
W29	wire harness W29 (attatchment uncoded)	97127591		
W30	wire harness W30 (container switch rear)	97126809		
W31	wire harness W31 (press. cont. front tool carrier)	97122915		
W32	wire harness W32 (weight holder)	97131718		
W33	wire harness W33 (socket 9 pole front attach.)	97132740		
W34	wire harness W34 (spreader coding rear)	97132393		
W35	wire harness W35 (front sweeping mashine)	97134142		
W36	wire harness W36 (licence plate light)	97153571		
W37	wire harness W37 (work light 3-brooms)	97153712		
W38	wire harness W38 (work light suction mouth)	97158703		
W40	wire harness W40 (socket X63)	97142814		
W41	wire harness W41 (front indicator/posl. Std.)	97154157		
W42	wire harness W42 (headlights LED)	97156822		
W43	wire harness W43 (front indicator/posl. LED)	97156830		
W44	wire harness W44 (spreader preliminary)	97158844		
W45	wire harness W45 (auxiliary heating system)	97159552		
W77	wire harness W77 (fleetreorder)	97158851		
W78	wire harness W78 (Fleetreorder expansion)	97158869		
W79	wire harness W79 (gateway)	97161426		
WS1	loom of wires	97156798		
WS2	loom of wires (engine)	97156806		
WS3	loom of wires battery main switch)	97156814		

next Sheet 6



1	1x	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number					
					Drawn by	24.04.	DK					91039958					
A2	No.	Number appears	Change No.	Date	Name	Standard		Replacem. for same no.	Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)		KAB1 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 4



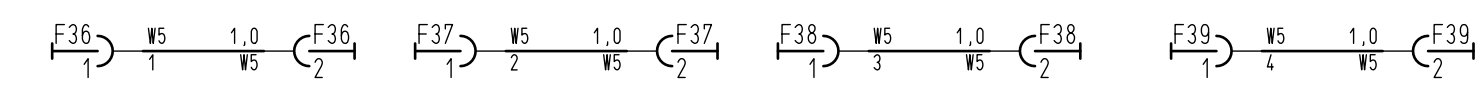
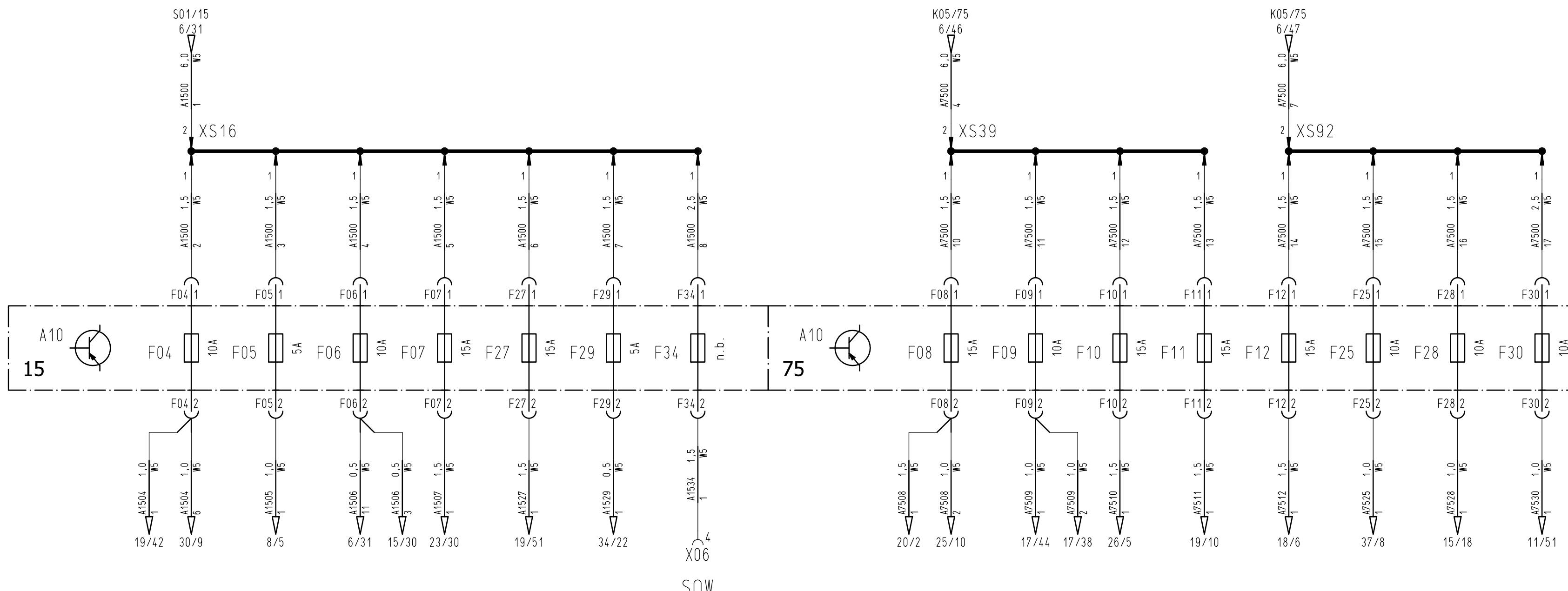
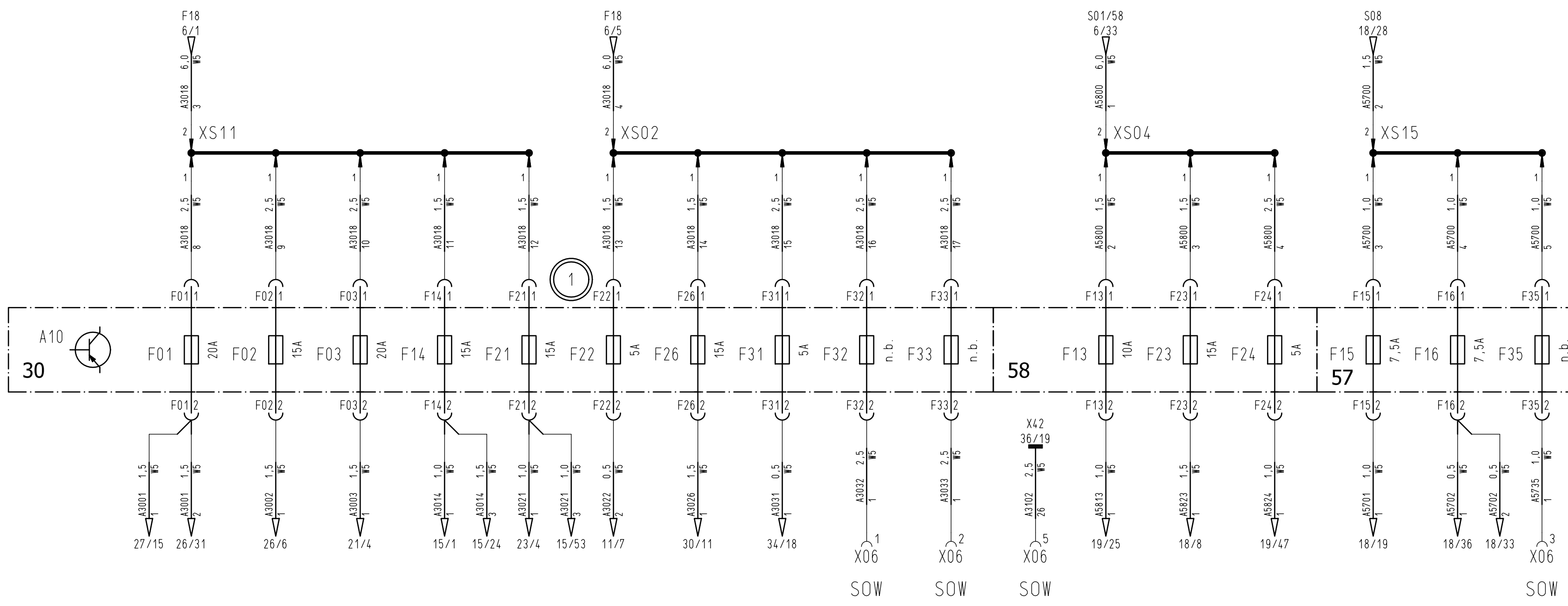
Legende

- A10 fusebox side console right
- F17 fuse 50A pre-fuse 15/75
- F18 fuse 50A pre-fuse 30
- F19 fuse 50A pre-fuse
- F20 fuse 7,5A (50)
- F40 fuse 15A
- F41 fuse 15A
- G01 starter battery 12V
- G02 alternator 14V / 150A
- K05 relay supply 75
- K06 relay starter active
- K07 relay voltage + 3-brooms moduls
- M01 starter
- S01 starter switch
- S19 switch battery main
- X05 connector 2 pole (W1<->W5)
- X07 connector 2 pole (W1<->W5)
- X09 connector 8 pole (W1<->W5)
- X22 connector 3 pole (W16<->motor)
- X32 connector 22 pole (W1<->W16)
- X37 connector 16 pole (W1<->W16)
- X46 ground bolt M8 engine
- X100 connector 1 pole (W1<->W5)
- XS10 ussp (W1)
- XS95 ussp (W1)
- XS127 ussp (W16)



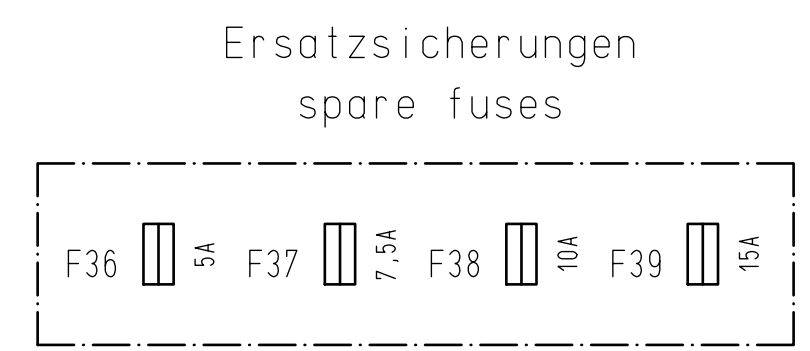
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A2	No. Number appears	Change No.	Date	Name	Standard	Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)				KABI 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 6





Legende

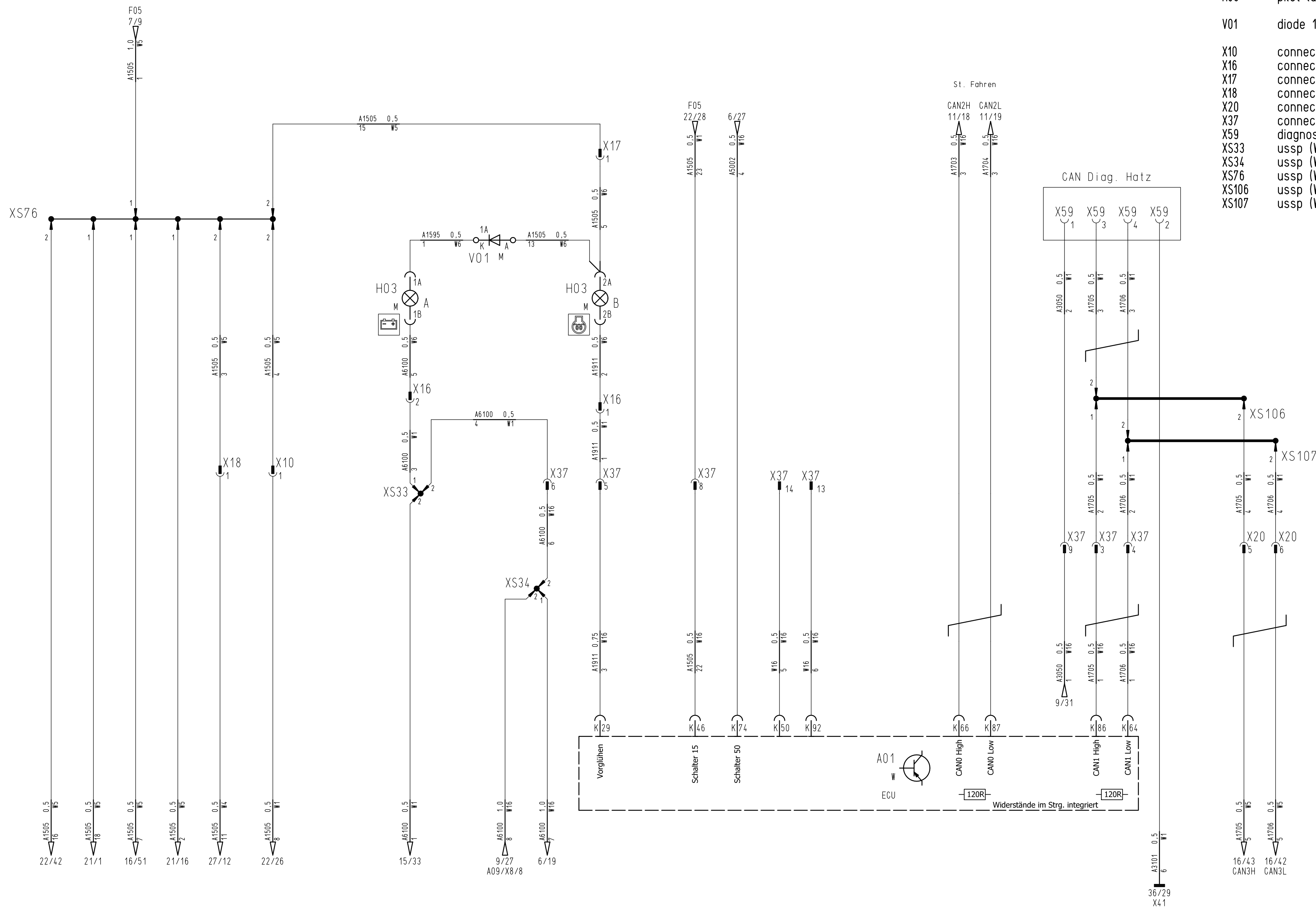
- A10 fusebox side console right
- F01 fuse 20A (30)
- F02 fuse 15A (30)
- F03 fuse 20A (30)
- F04 fuse 10A (15)
- F05 fuse 5A (15)
- F06 fuse 10A (15)
- F07 fuse 15A (15)
- F08 fuse 15A (75)
- F09 fuse 10A (75)
- F10 fuse 15A (75)
- F11 fuse 15A (75)
- F12 fuse 15A (75)
- F13 fuse 10A (58)
- F14 fuse 15A (30)
- F15 fuse 7,5A (57)
- F16 fuse 7,5A (57)
- F21 fuse 15A (30)
- F22 fuse 5A (30)
- F23 fuse 15A (58)
- F24 fuse 5A (58)
- F25 fuse 10A (75)
- F26 fuse 15A (30)
- F27 fuse 15A (15)
- F28 fuse 10A (75)
- F29 fuse 5A (15)
- F30 fuse 10A (75)
- F31 fuse 5A (30)
- F32 fuse for SOW (30)
- F33 fuse for SOW (30)
- F34 fuse for SOW (15)
- F35 fuse for SOW (57)
- F36 spare fuse 5A
- F37 spare fuse 7,5A
- F38 spare fuse 10A
- F39 spare fuse 15A
- X06 connector 6 pole for SOW (W5)
- XS02 ussp (W16)
- XS04 ussp (W16)
- XS11 ussp (W5)
- XS15 ussp (W5)
- XS16 ussp (W5)
- XS39 ussp (W5)
- XS92 ussp (W5)



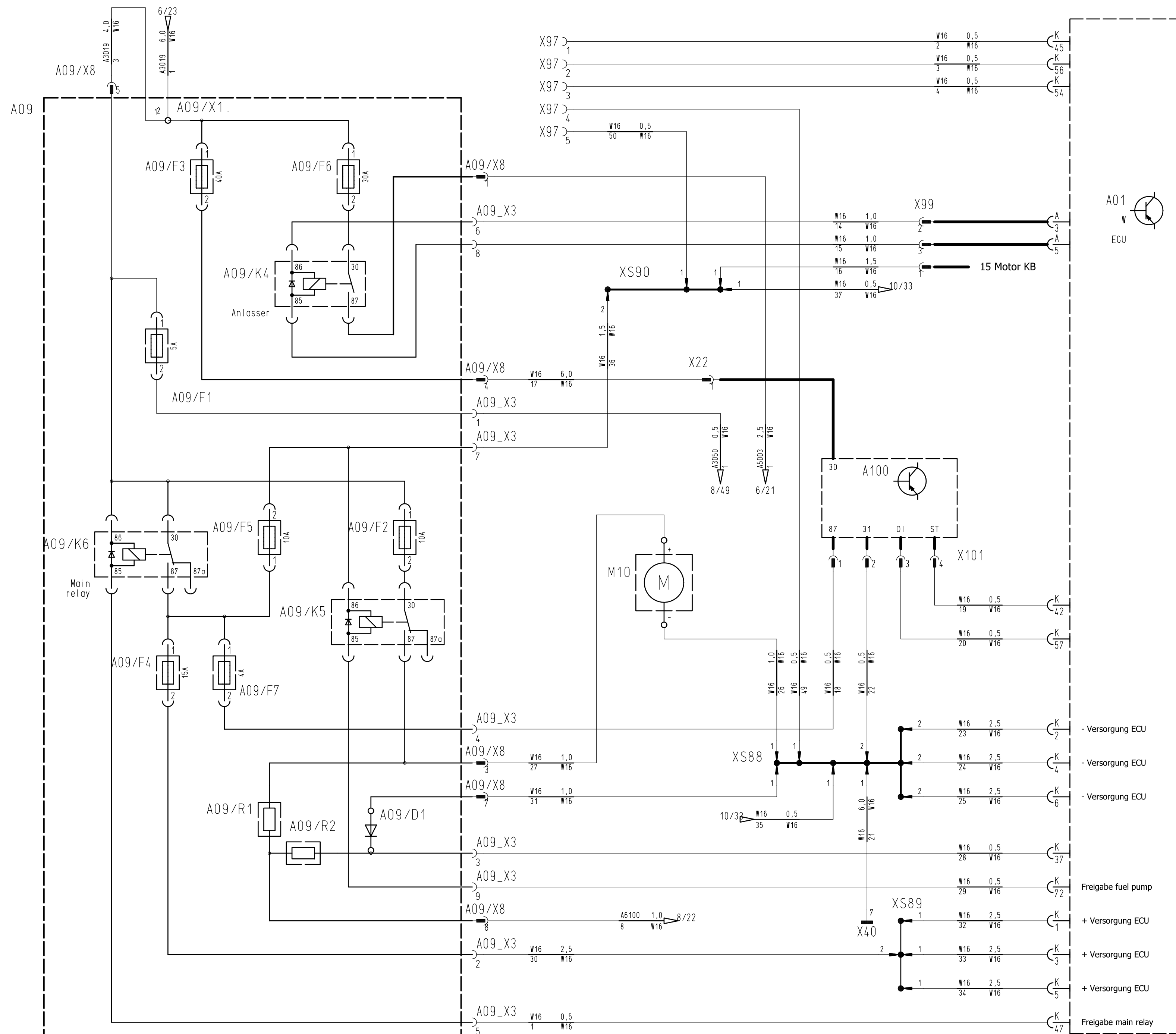
1	2x	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number		
No. Number appears		Change No.	Date	Name	Standard	24.04.	DK	Replacem. for same no.	4105-11			91039958		
For this drawing we reserve all rights (acc. DIN ISO 16016)										KABI 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 7

Legende

- A01 engine control unit Hatz
- H03 pilot lamp battery charge / preheating
- V01 diode 1A
- X10 connector 22 pole (W1<->W5)
- X16 connector 6 pole (W1<->W6)
- X17 connector 22 pole (W5<->W6)
- X18 connector 24 pole (W4<->W5)
- X20 connector 10 pole (W1<->W5)
- X37 connector 16 pole (W1<->W16)
- X59 diagnosis socket 4 pole Hatz
- XS33 ussp (W1)
- XS34 ussp (W16)
- XS76 ussp (W5)
- XS106 ussp (W1)
- XS107 ussp (W1)



1	/.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	Hako GmbH D-23840 Bad Oldesloe	Drawing Number 91039958				
					Drawn by	24.04.	DK						Replacem. for same no.			
A2	No. Number appears	Change No.	Date	Name	Standard			Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)			KAB1 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 8



Legende

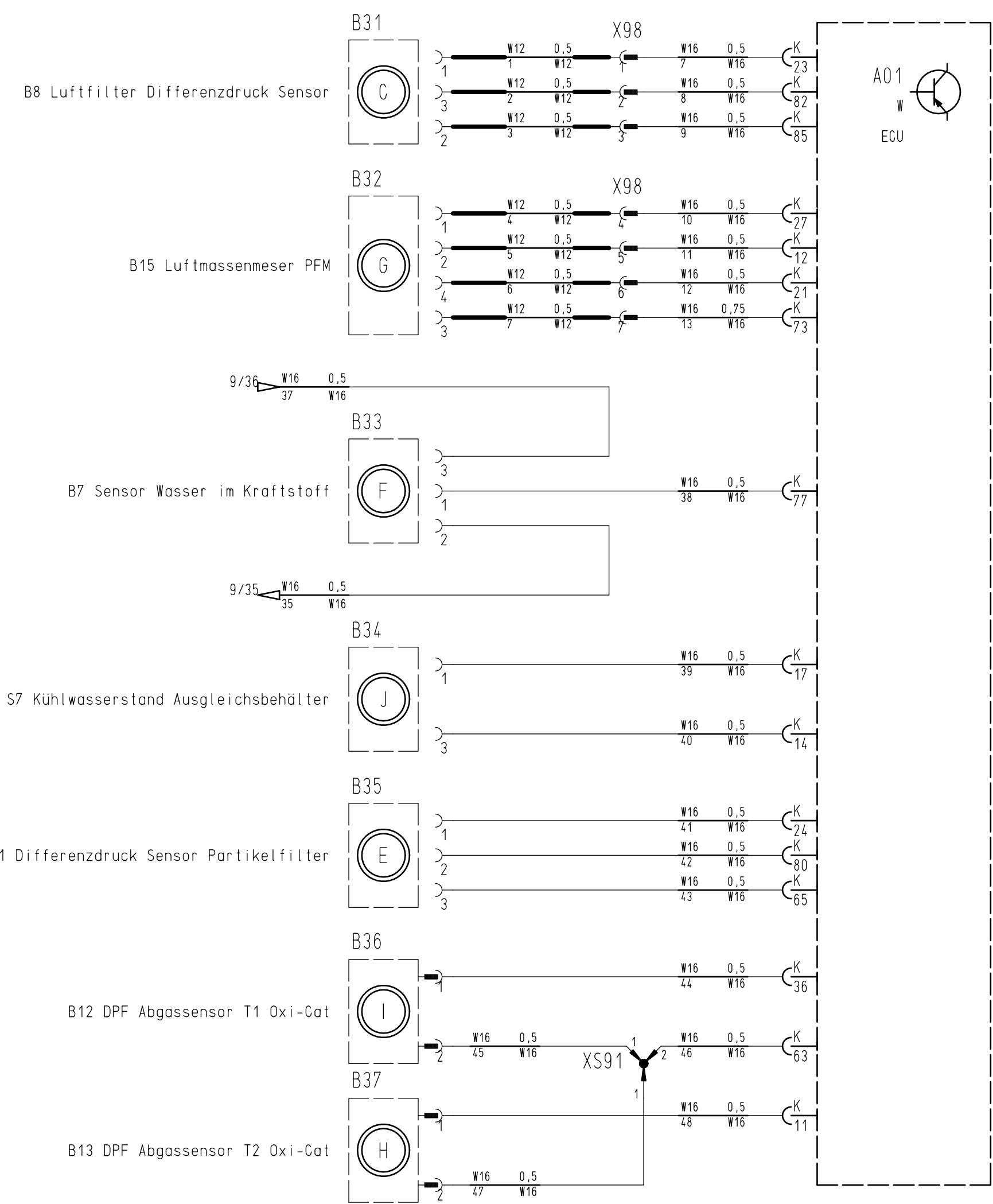
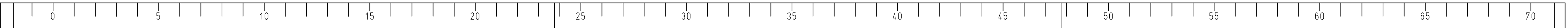
- A01 engine control unit Hatz
- A09/D1 Hatz control modul / diode
- A09/F1 Hatz control modul / fuse 5A
- A09/F2 Hatz control modul / fuse 10A
- A09/F3 Hatz control modul / fuse 40A
- A09/F4 Hatz control modul / fuse 15A
- A09/F5 Hatz control modul / fuse 10A
- A09/F6 Hatz control modul / fuse 30A
- A09/F7 Hatz control modul / fuse 4A
- A09/K4 Hatz control modul / relais starter
- A09/K5 Hatz control modul / relais fuel pump
- A09/K6 Hatz control modul / main relais
- A09/R1 Hatz control modul / resistor
- A09/R2 Hatz control modul / resistor
- A09/X1. Hatz control modul / connecting bolt UBatt
- A09/X8 Hatz control modul / connector 8pole
- A09_X3 Hatz control modul / connector 9 pole
- A100 controller preglow

- M10 fuel pump

- X22 connector 3 pole (W16<->motor)
- X40 ground bolt M10 chassis tail
- X97 connector 6 pole (W16<->DPF heater)
- X99 connector 3 pole (W16<->harness motor)
- X101 connector 4 pole (W16<->GCU)
- XS88 ussp (W16)
- XS89 ussp (W16)
- XS90 ussp (W16)



1	.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number			
												91039958	No. of Sh.	46	Sheet
A2		No. Number appears	Change No.	Date	Name	Standard		Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)			KAB1 472	Type 1491	Dep. DS



Legende

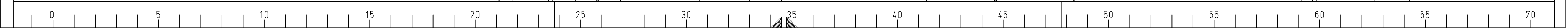
- A01 engine control unit Hatz
- B31 air cleaner differential pressure sensor
- B32 pressure based air mass flow meter
- B33 water in fuel sensor
- B34 colant level switch
- B35 differ. press. sensor Diesel particle filter
- B36 DPF exhaust gas temperat. sensor T1 (top)
- B37 DPF exhaust gas temperat. sensor T2 (down)
- X98 connector 8 pole(W12<->W16)
- XS91 ussp (W16)



1	./.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	KAB1 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 10
					Drawn by	24.04.	DK								
A2	No. Number appears	Change No.	Date	Name	Standard			Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)						

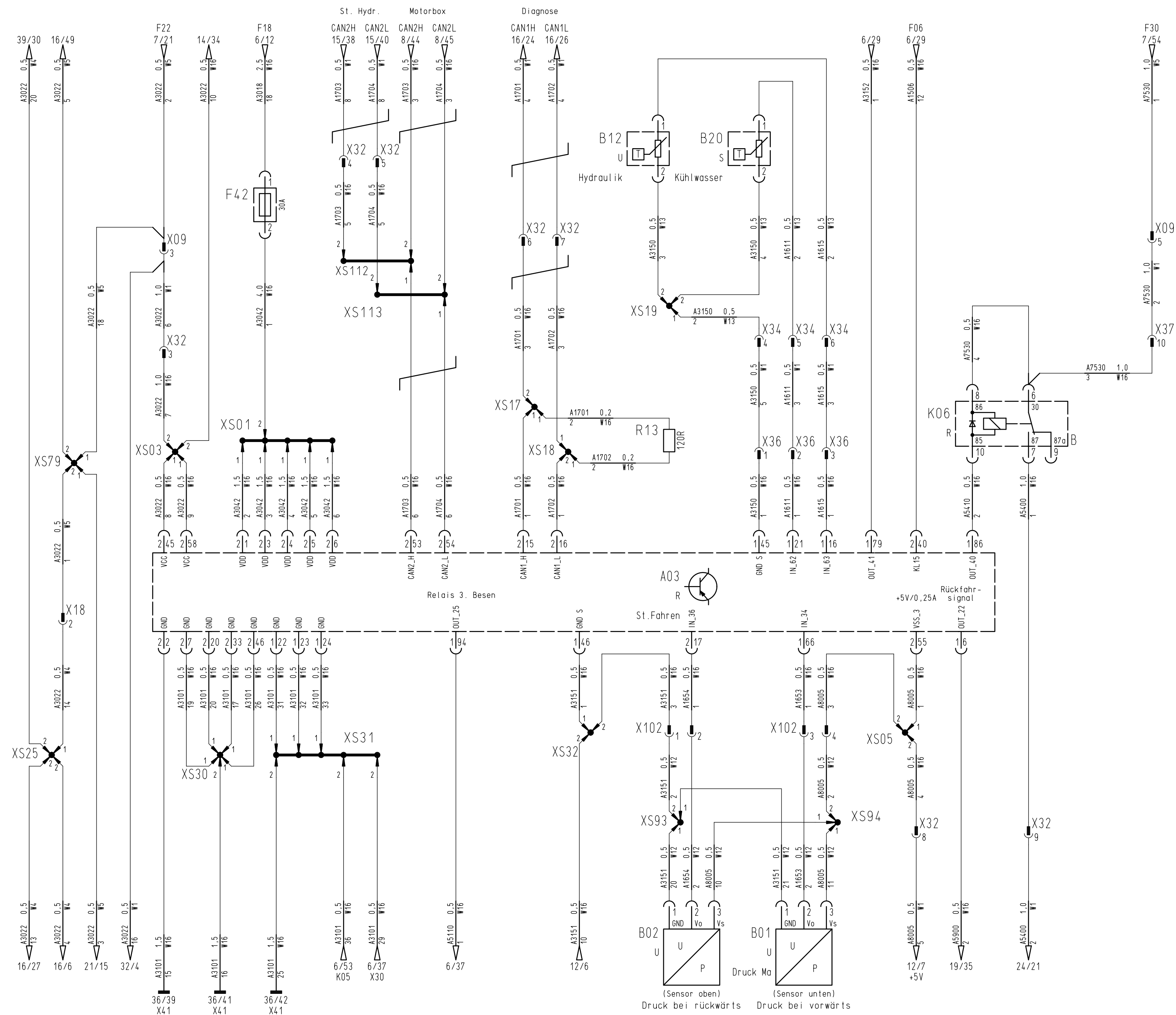


Drawing Number
91039958

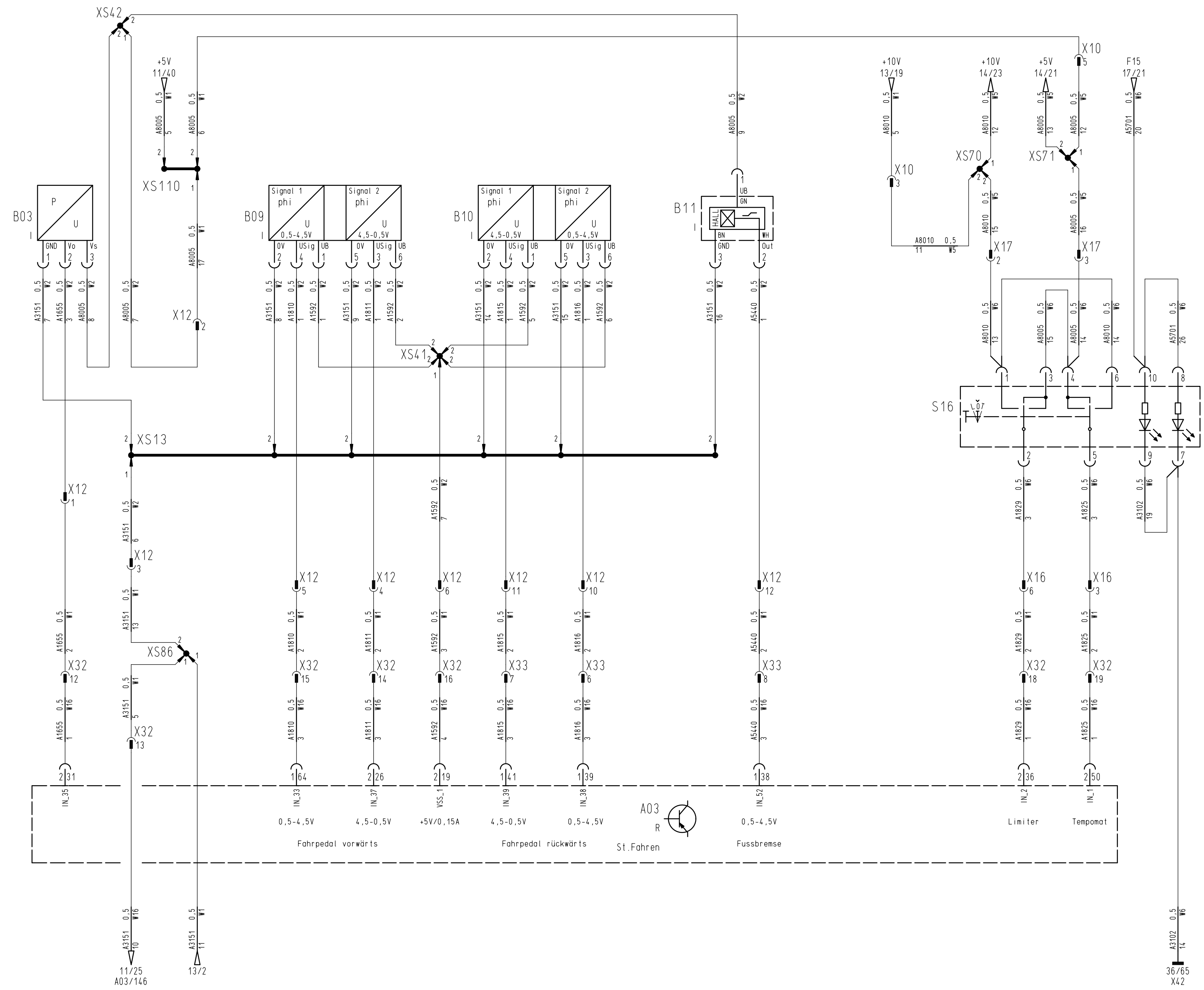


Legende

- A03 controller drive
- B01 pressure sensor pressure to drive Ma
- B02 pressure sensor pressure to drive Mb
- B12 temperature sensor hydraulic oil
- B20 temperature sensor coolant liquid
- F42 fuse 30A
- K06 relay brake light
- R13 resistor 1200hm (CAN1-A03)
- X09 connector 8 pole (W1<->W5)
- X18 connector 24 pole (W4<->W5)
- X32 connector 22 pole (W1<->W16)
- X34 connector 12 pole (W1<->W13)
- X36 connector 8 pole (W16<->W13)
- X37 connector 16 pole (W1<->W16)
- X102 connector 12 pole (W12<->W16)
- XS01 ussp (W16)
- XS03 ussp (W16)
- XS05 ussp (W5)
- XS17 butt joint (W16)
- XS18 butt joint (W16)
- XS19 ussp (W13)
- XS25 ussp (W4)
- XS30 ussp (W16)
- XS31 ussp (W16)
- XS32 ussp (W16)
- XS79 ussp (W5)
- XS93 ussp (W12)
- XS94 ussp (W12)
- XS112 ussp (W16)
- XS113 ussp (W16)



1	.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number		
					24.04.	DK		Replacem. for same no.	Schaltplan / circuit diagram		91039958		
A2	No. Number appears	Change No.	Date	Name	Standard			Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)			No. of Sh. 46	Sheet 11



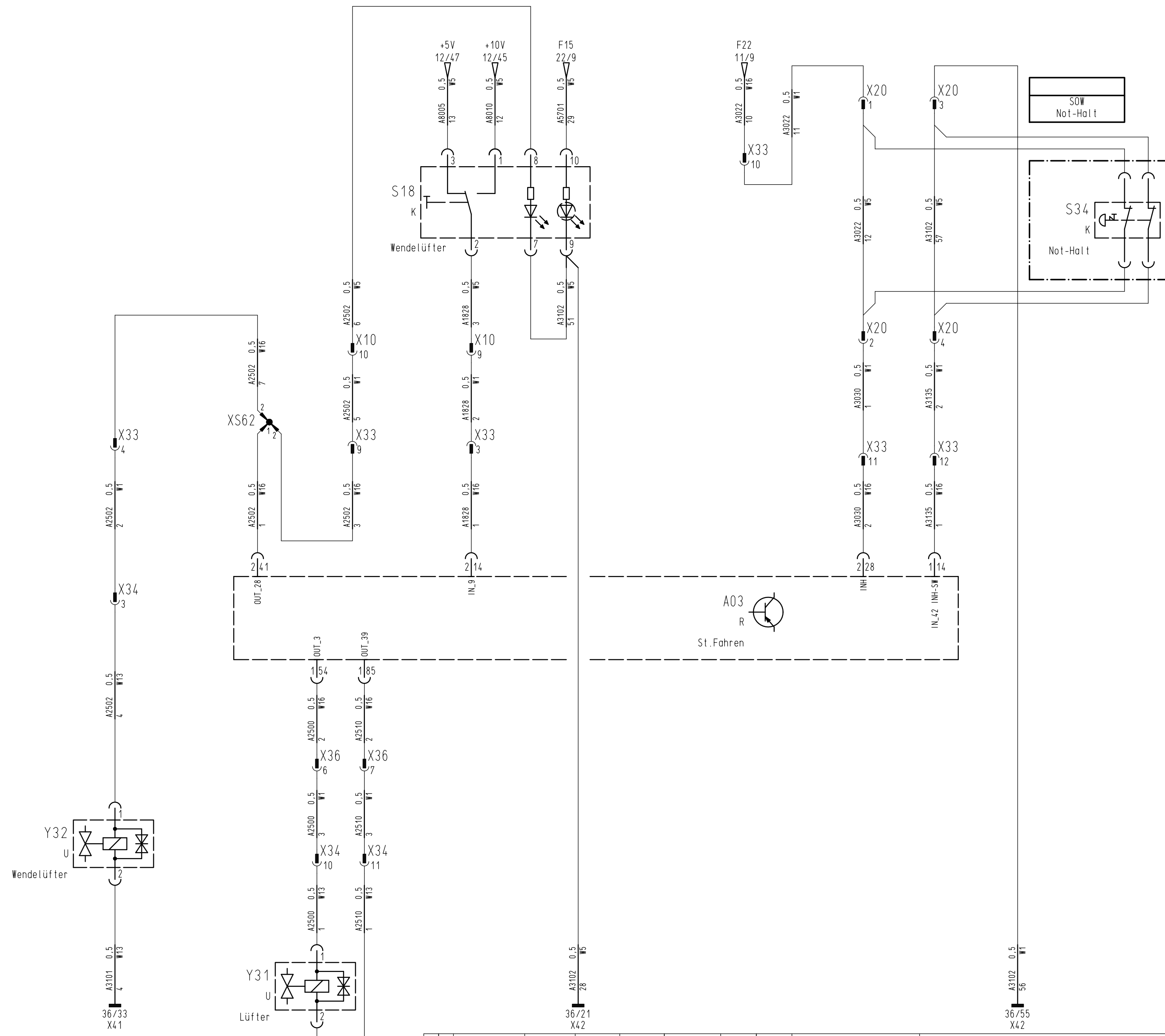
- ### Legende
- A03 controller drive
 - B03 pressure sensor brake pressure
 - B09 angle sensor throttle pedal forward
 - B10 angle sensor throttle pedal backward
 - B11 hall sensor brake pedal
 - S16 push-button cruise control/limiter
 - X10 connector 22 pole (W1<->W5)
 - X12 connector 12 pole (W1<->W2)
 - X16 connector 6 pole (W1<->W6)
 - X17 connector 22 pole (W5<->W6)
 - X32 connector 22 pole (W1<->W16)
 - X33 connector 12 pole (W1<->W16)
 - XS13 ussp (W2)
 - XS41 ussp (W2)
 - XS42 ussp (W2)
 - XS70 ussp (W5)
 - XS71 ussp (W5)
 - XS86 ussp (W1)
 - XS110 ussp (W1)



1	./.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 <small>Hako GmbH D-23840 Bad Oldesloe</small>	Drawing Number	91039958
					Drawn by	24.04.	DK						
A2 No. Number appears		Change No.	Date	Name	Standard	Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)						

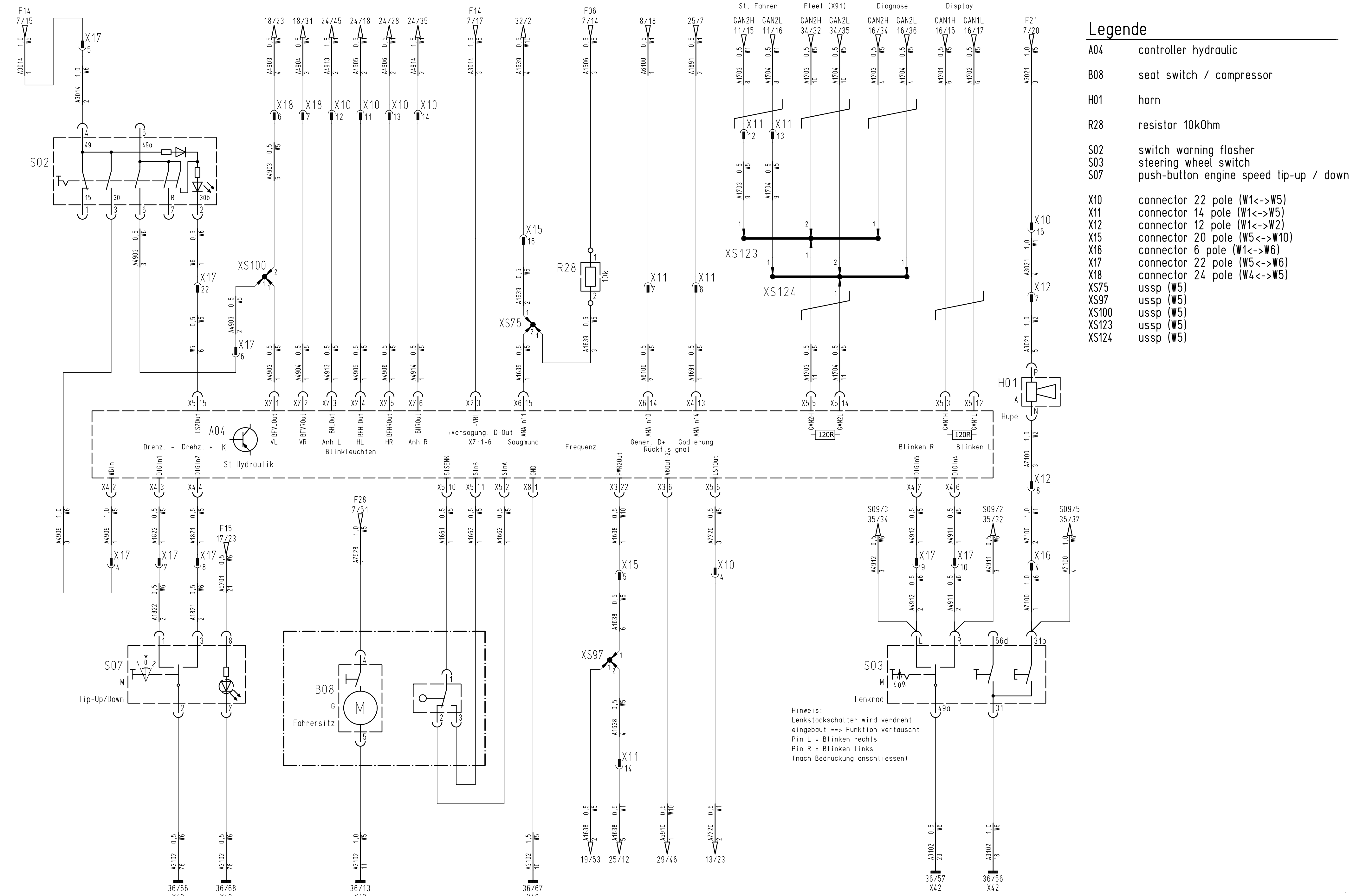
Legende

- A03 controller drive
- S18 push-button reverse blower
- S34 push-button emergency to stop (SOW)
- X10 connector 22 pole (W1<->W5)
- X20 connector 10 pole (W1<->W5)
- X33 connector 12 pole (W1<->W16)
- X34 connector 12 pole (W1<->W13)
- X36 connector 8 pole (W16<->W13)
- XS62 ussp (W16)
- Y31 prop.valve speed fan
- Y32 hydraulic valve reverse blower



1	.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	 Hako GmbH D-23840 Bad Odesloe	Drawing Number		
A2		No. Number appears	Change No.	Date	Standard	24.04.	DK	Replacem. for same no.	Schaltplan / circuit diagram		91039958		
Change No. 4105-11									For this drawing we reserve all rights (acc. DIN ISO 16016)			No. of Sh. 46	Sheet 14





- ### Legende
- A04 controller hydraulic
 - B08 seat switch / compressor
 - H01 horn
 - R28 resistor 10kOhm
 - S02 switch warning flasher
 - S03 steering wheel switch
 - S07 push-button engine speed tip-up / down
 - X10 connector 22 pole (W1<->W5)
 - X11 connector 14 pole (W1<->W5)
 - X12 connector 12 pole (W1<->W2)
 - X15 connector 20 pole (W5<->W10)
 - X16 connector 6 pole (W1<->W6)
 - X17 connector 22 pole (W5<->W6)
 - X18 connector 24 pole (W4<->W5)
 - XS75 ussp (W5)
 - XS97 ussp (W5)
 - XS100 ussp (W5)
 - XS123 ussp (W5)
 - XS124 ussp (W5)

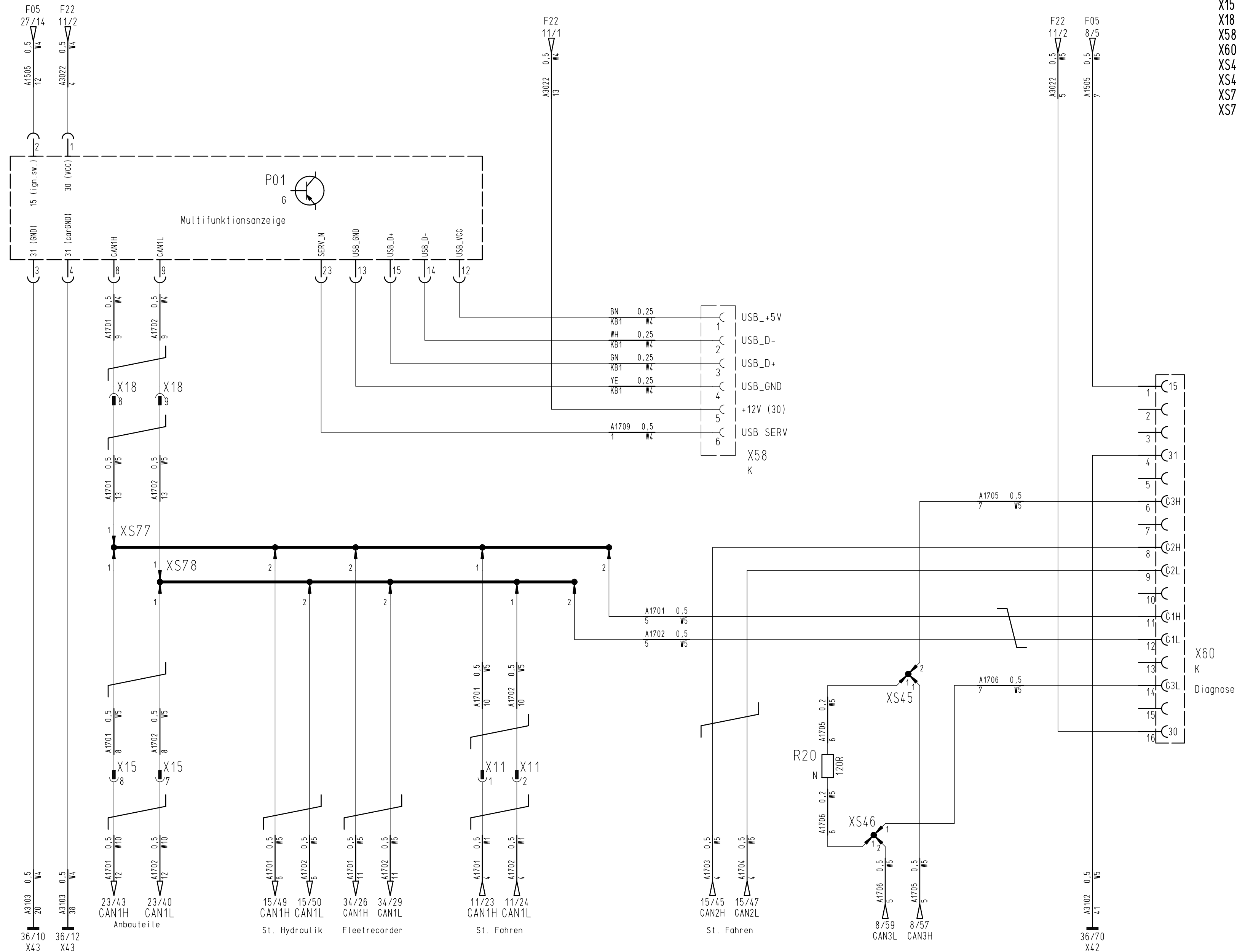
Hinweis:
 Lenkstockschalter wird verdreht
 eingebaut ==> Funktion vertauscht
 Pin L = Blinken rechts
 Pin R = Blinken links
 (nach Bedruckung anschliessen)



1	/.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number			
No. Number appears		Change No.	Date	Name	Standard	Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)				KAB1 472	Type 1491	Dep. DS	No. of Sh. 46

Legende

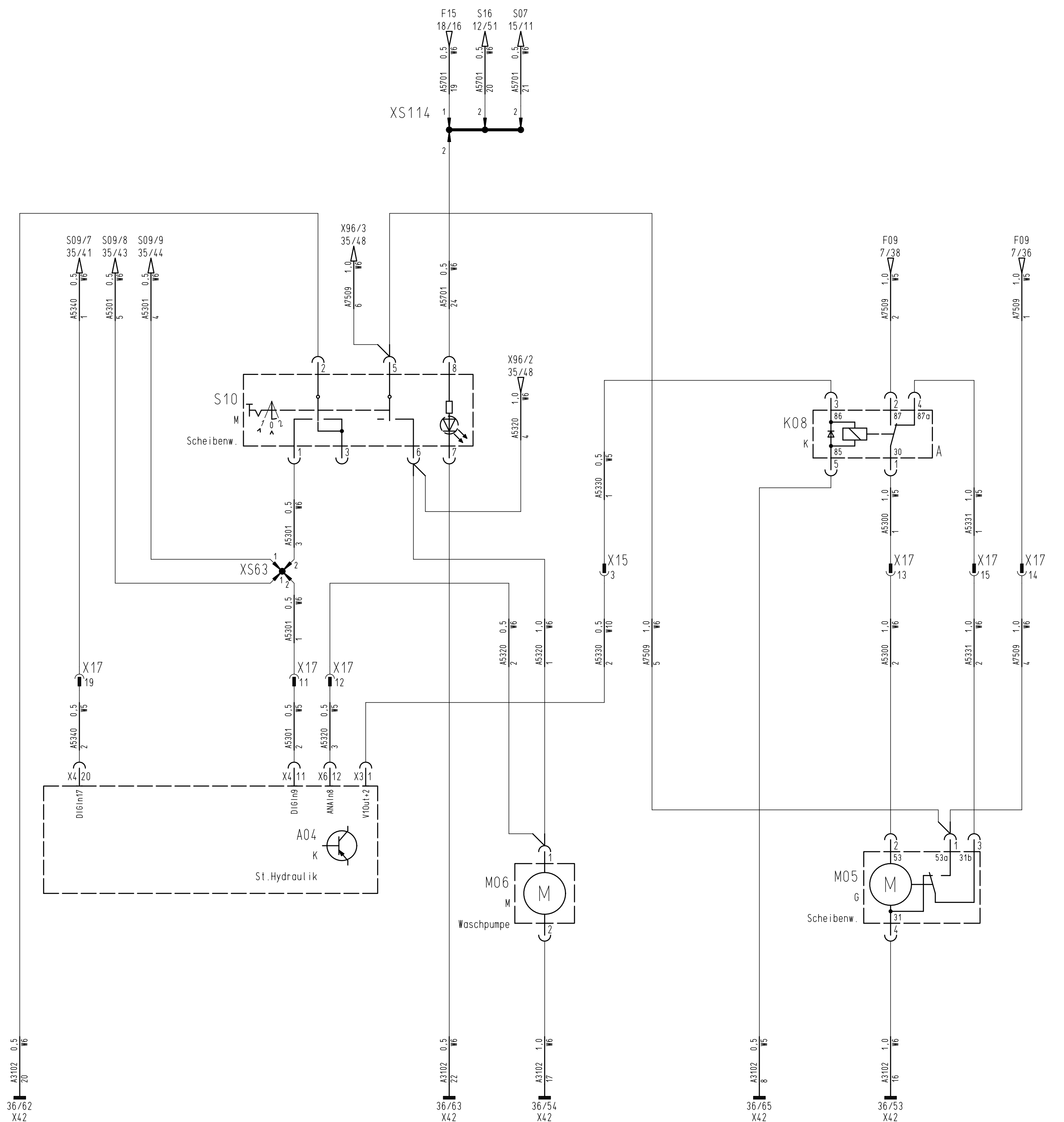
- P01 multifunction display
- R20 resistor 1200hm (CAN1-X63)
- X11 connector 14 pole (W1<->W5)
- X15 connector 20 pole (W5<->W10)
- X18 connector 24 pole (W4<->W5)
- X58 socket 6 pole progr. display
- X60 socket 6 pole progr. display
- XS45 butt joint (W5)
- XS46 butt joint (W5)
- XS77 ussp (W5)
- XS78 ussp (W5)



1	.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number		
					24.04.	DK		Replacem. for same no.	Schaltplan / circuit diagram		91039958		
A2	No. Number appears	Change No.	Date	Name	Standard			Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)			No. of Sh. 46	
										KAB1 472	Type 1491	Dep. DS	Sheet 16

Legende

- A04 controller hydraulic
- K08 relay windscreen wiper
- M05 windscreen wiper motor
- M06 windscreen washer pump
- S10 switch windscreen wiper
- X15 connector 20 pole (W5<->W10)
- X17 connector 22 pole (W5<->W6)
- XS63 ussp (W6)
- XS114 ussp (W6)



1		4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name
						24.04.	DK		Schaltplan / circuit diagram
								Replacem. for same no.	
								Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)
No. Number appears		Change No.	Date	Name	Standard				



Drawing Number
91039958

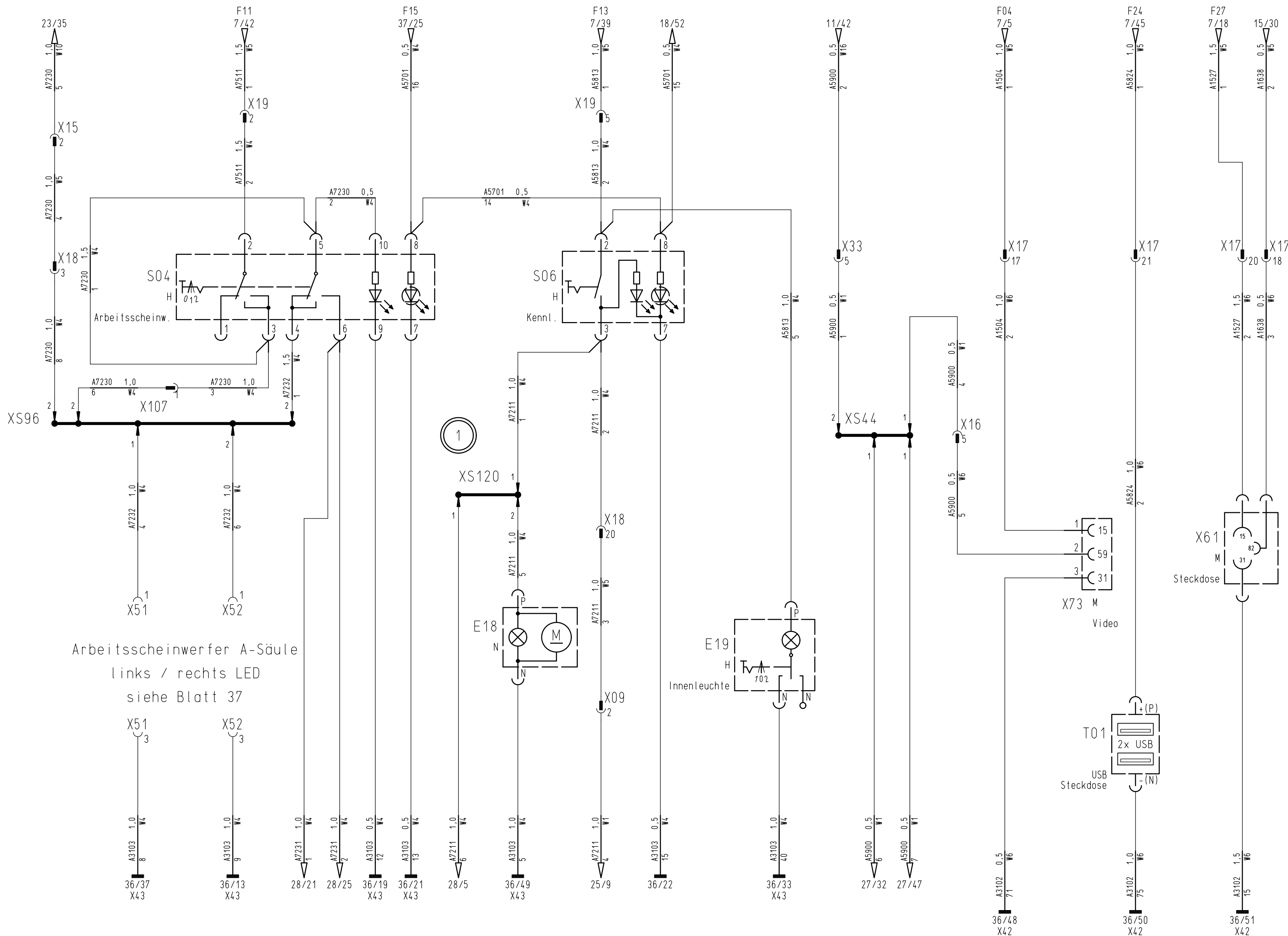
Legende

- E18 rotating beacon lamp
- E19 interior lamp standard

- S04 switch work lights A-pillar a. cabin top
- S06 switch beacon lamp

- T01 USB plug socket

- X09 connector 8 pole (W1<->W5)
- X15 connector 20 pole (W5<->W10)
- X16 connector 6 pole (W1<->W6)
- X17 connector 22 pole (W5<->W6)
- X18 connector 24 pole (W4<->W5)
- X19 connector 6 pole (W4<->W5)
- X33 connector 12 pole (W1<->W16)
- X51 connector 4 pole (W4<->W8/W42)
- X52 connector 4 pole (W4<->W8/W42)
- X61 socket 3 pole
- X73 connector 3 pole video (W6)
- X107 connector 1 pole (W4<->W4)
- XS44 ussp (W1)
- XS96 ussp (W4)
- XS120 ussp (W4)



Arbeitsscheinwerfer A-Säule
links / rechts LED
siehe Blatt 37

Schalter S04 Schaltungsart

0/1/2 Schalter als Zuschaltung (Standard)
X107 BU-Gehäuse mit
X107 ST-Gehäuse zusammenstecken

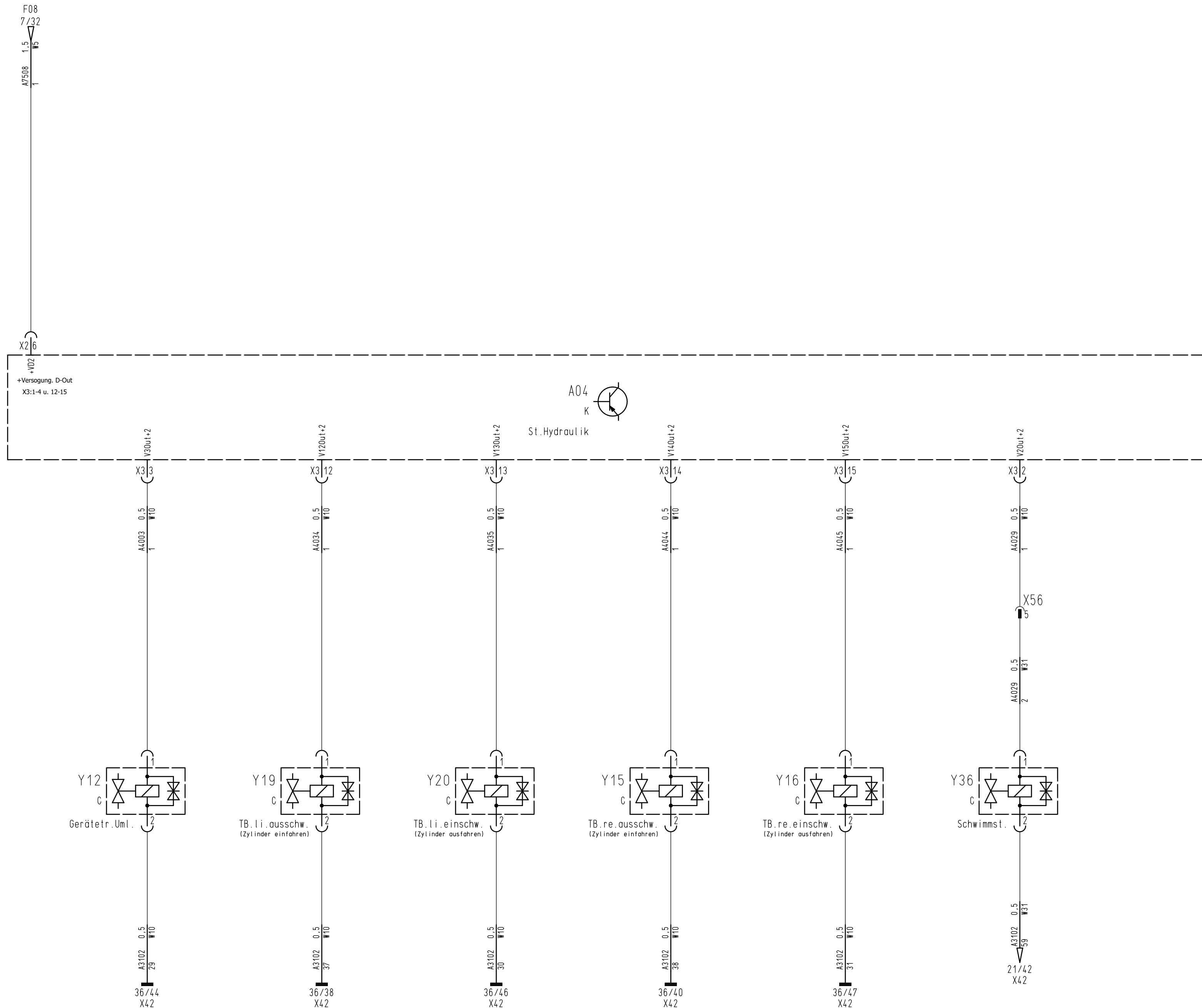
0/1/2 Schalter als Wechselschaltung (SOW)
X107 BU-Gehäuse mit
X107 ST-Gehäuse nicht zusammenstecken



1	2x	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number			
					24.04.	DK		Replacem. for same no.				91039958	No. of Sh.	46	Sheet
A2	No. Number appears	Change No.	Date	Name	Standard			Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)			KABI 472	Type 1491	Dep. DS	

Legende

- A04 controller hydraulic
- X56 connector 6 pole (W10<->W31)
- Y12 hydraulic valve front carrier circ.
- Y15 hydraulic valve actuator right pos. P/T
- Y16 hydraulic valve actuator right pos. T/P
- Y19 hydraulic valve actuator left pos. P/T
- Y20 hydraulic valve actuator left pos. T/P
- Y36 hydraulic valve floating position

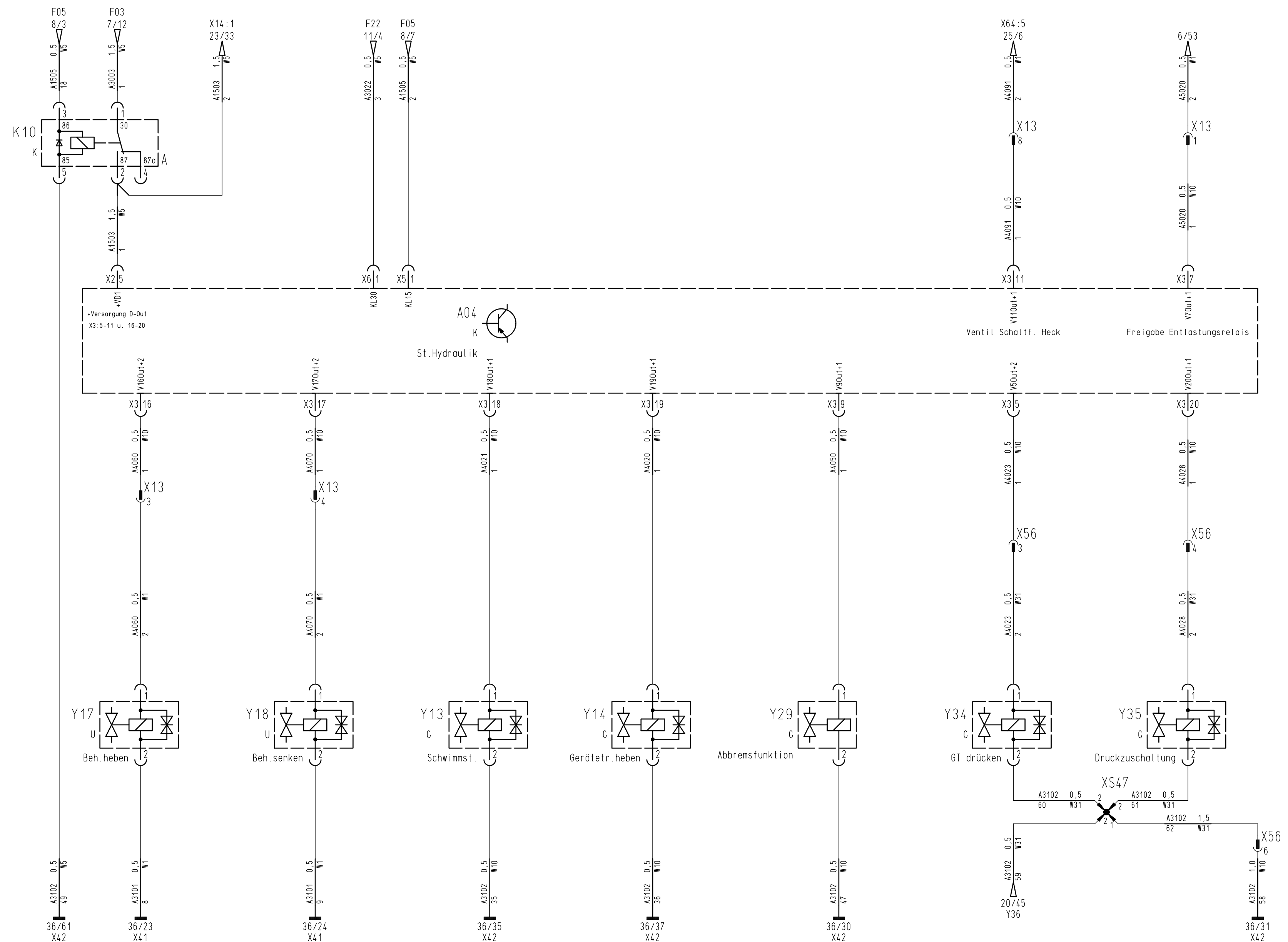


1						2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	Hako GmbH D-23840 Bad Odesloe	Drawing Number					
						Drawn by	24.04.	DK					91039958					
A2		No. Number appears	Change No.	Date	Name	Standard	Replacem. for same no.		Change No.	4105-11		For this drawing we reserve all rights (acc. DIN ISO 16016)		KAB1 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 20

Legende

- A04 controller hydraulic
- K10 relay release
- X13 connector 8 pole (W1<->W10)
- X56 connector 6 pole (W10<->W31)
- XS47 butt joint (W31)

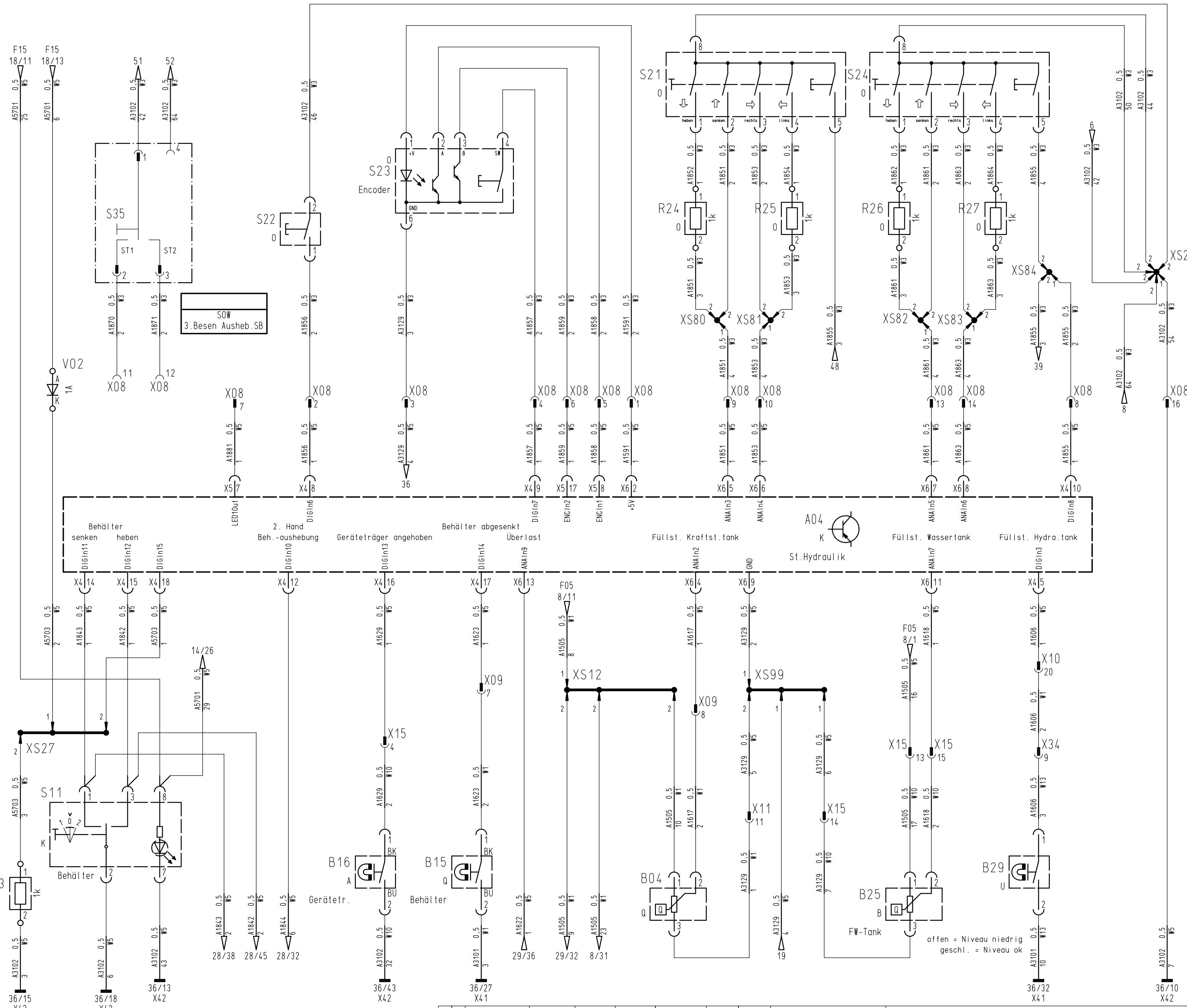
- Y13 hydr.valve front carrier released
- Y14 hydraulic valve front carrier up
- Y17 hydraulic valve hopper up
- Y18 hydraulic valve hopper down
- Y29 hydraulic valve stop func. front attachment
- Y34 hydraulic valve front attachment press
- Y35 hydraulic valve pressure switched on



1	.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number		
A2	No. Number appears	Change No.	Date	Name	Standard	Verified	DK	Replacem. for same no.	Schaltplan / circuit diagram		91039958		
Change No. 4105-11										For this drawing we reserve all rights (acc. DIN ISO 16016)		No. of Sh. 46	
										KAB1 472	Type 1491	Dep. DS	Sheet 21

Legende

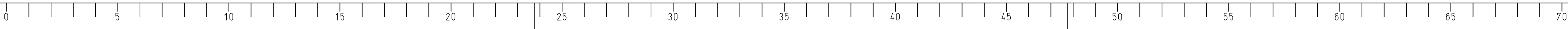
- A04 controller hydraulic
- B04 fuel level sensor
- B15 hopper reed sensor
- B16 carrier reed sensor
- B25 level sensor water tank
- B29 level sensor hydraulic oil tank
- R24 resistor 1kOhm
- R25 resistor 1kOhm
- R26 resistor 1kOhm
- R27 resistor 1kOhm
- R103 resistor 1k
- S11 push-button switch hopper up/down
- S21 joystick switch left hydraulics
- S22 push-button switch working mode
- S23 encoder switch with push-button
- S24 joystick switch right hydraulics
- S35 push-button lift side broom left/right (SOW)
- V02 diode 1A
- X08 connector 16 pole (W3<->W5)
- X09 connector 8 pole (W1<->W5)
- X10 connector 22 pole (W1<->W5)
- X11 connector 14 pole (W1<->W5)
- X15 connector 20 pole (W5<->W10)
- X34 connector 12 pole (W1<->W13)
- XS12 ussp (W1)
- XS26 ussp (W3)
- XS27 ussp (W5)
- XS80 ussp (W3)
- XS81 ussp (W3)
- XS82 ussp (W3)
- XS83 ussp (W3)
- XS84 ussp (W3)
- XS99 ussp (W5)



Stellung
 1 Wippe unten = Senken (1-2 geschl.)
 2 Wippe oben = Heben (2-3 geschl.)

1	./.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Hako GmbH D-23840 Bad Oldesloe	Drawing Number					
					Drawn by	24.04.	DK	Replacem. for same no.	Schaltplan / circuit diagram			91039958				
A2		No. Number appears	Change No.	Date	Name	Standard	Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)			KAB1 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 22

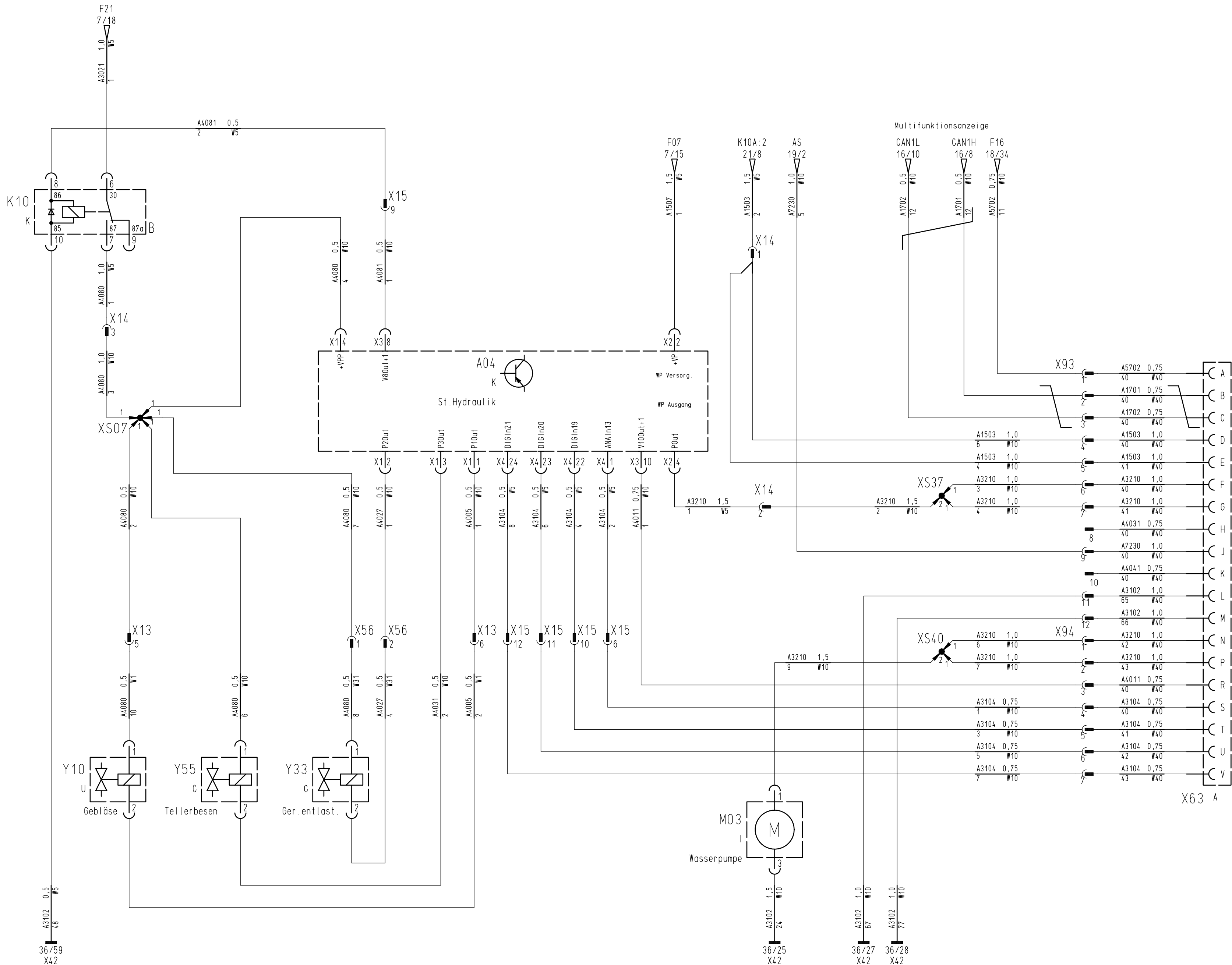




Legende

- A04 controller hydraulic
- K10 relay voltage + prop.valve
- M03 spraying pump
- X13 connector 8 pole (W1<->W10)
- X14 connector 3 pole (W5<->W10)
- X15 connector 20 pole (W5<->W10)
- X56 connector 6 pole (W10<->W31)
- X63 socket 19 pole front attachment
- X93 connector 12 pole (W10<->W40)
- X94 connector 8 pole (W10<->W40)
- XS07 ussp (W10)
- XS37 ussp (W10)
- XS40 ussp (W10)

- Y10 prop.valve fan
- Y33 prop. valve front attachment dispress.
- Y55 prop.valve rotation speed broom



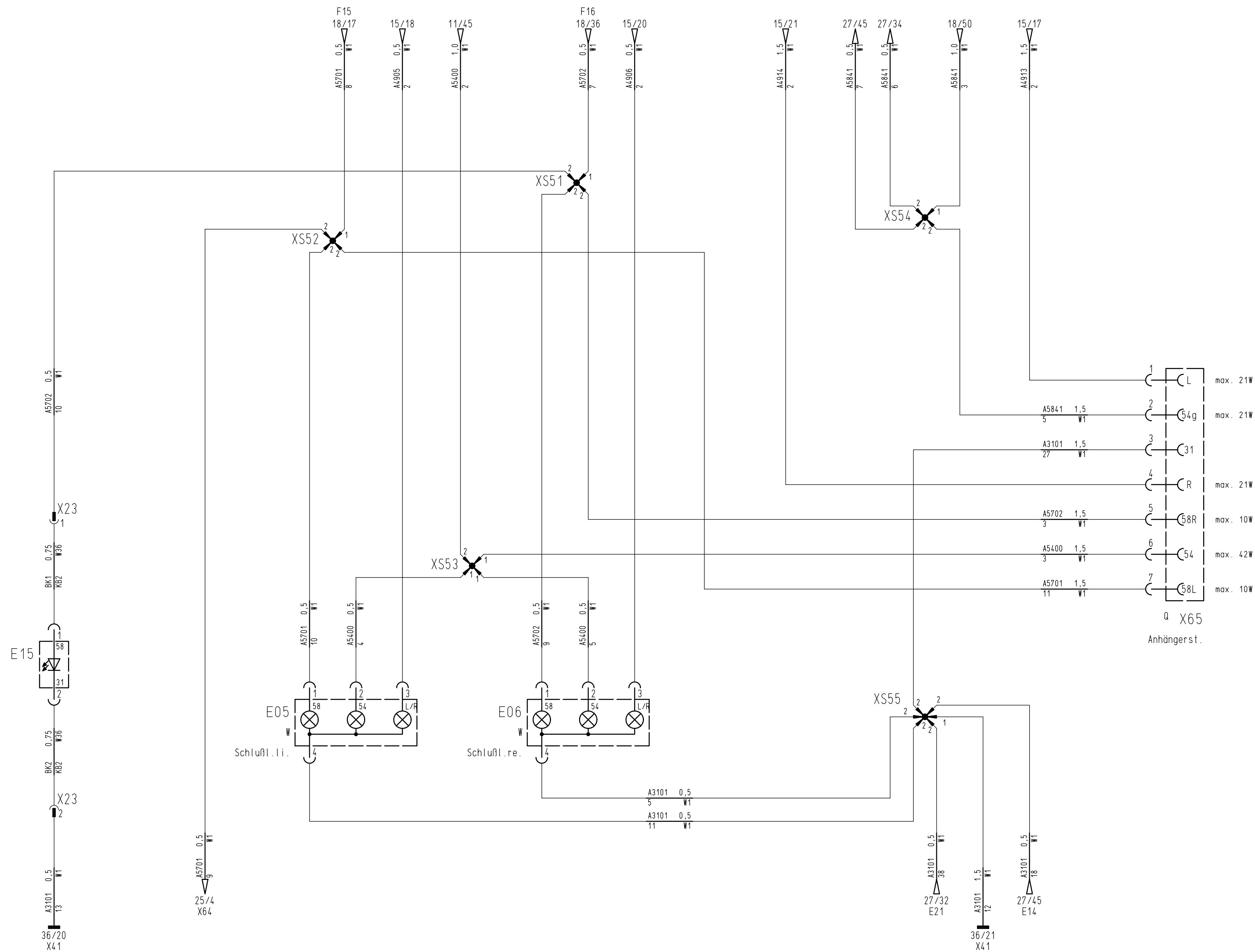
1								2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	Drawing Number	91039958
								4105-30	16.12.19	DK					
A2		No. Number appears	Change No.	Date	Name	Standard	Change No.	4105-11							



Legende

- E05 tail light left
- E06 tail light right
- E15 license plate light

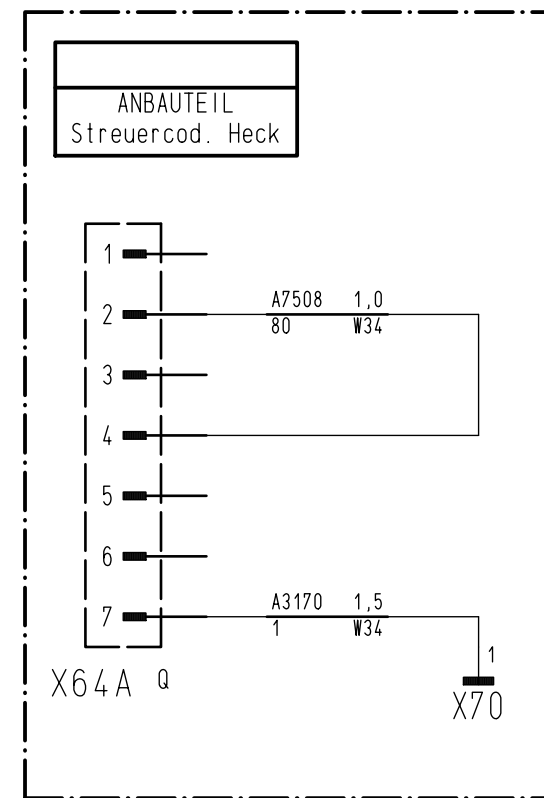
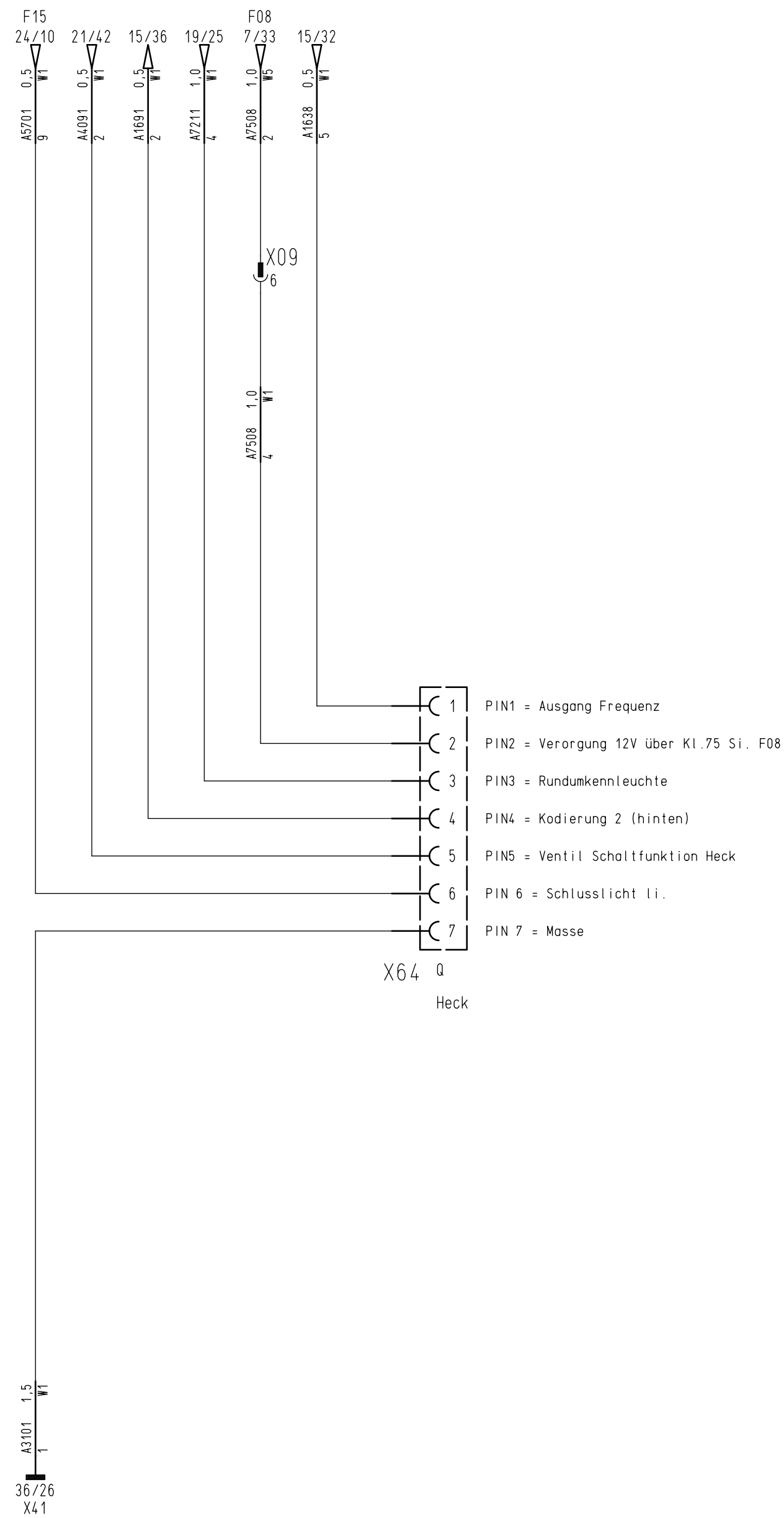
- X23 connector 2 pole (W1<->W36)
- X65 trailer socket 7 pole
- XS51 ussp (W1)
- XS52 ussp (W1)
- XS53 ussp (W1)
- XS54 ussp (W1)
- XS55 ussp (W1)



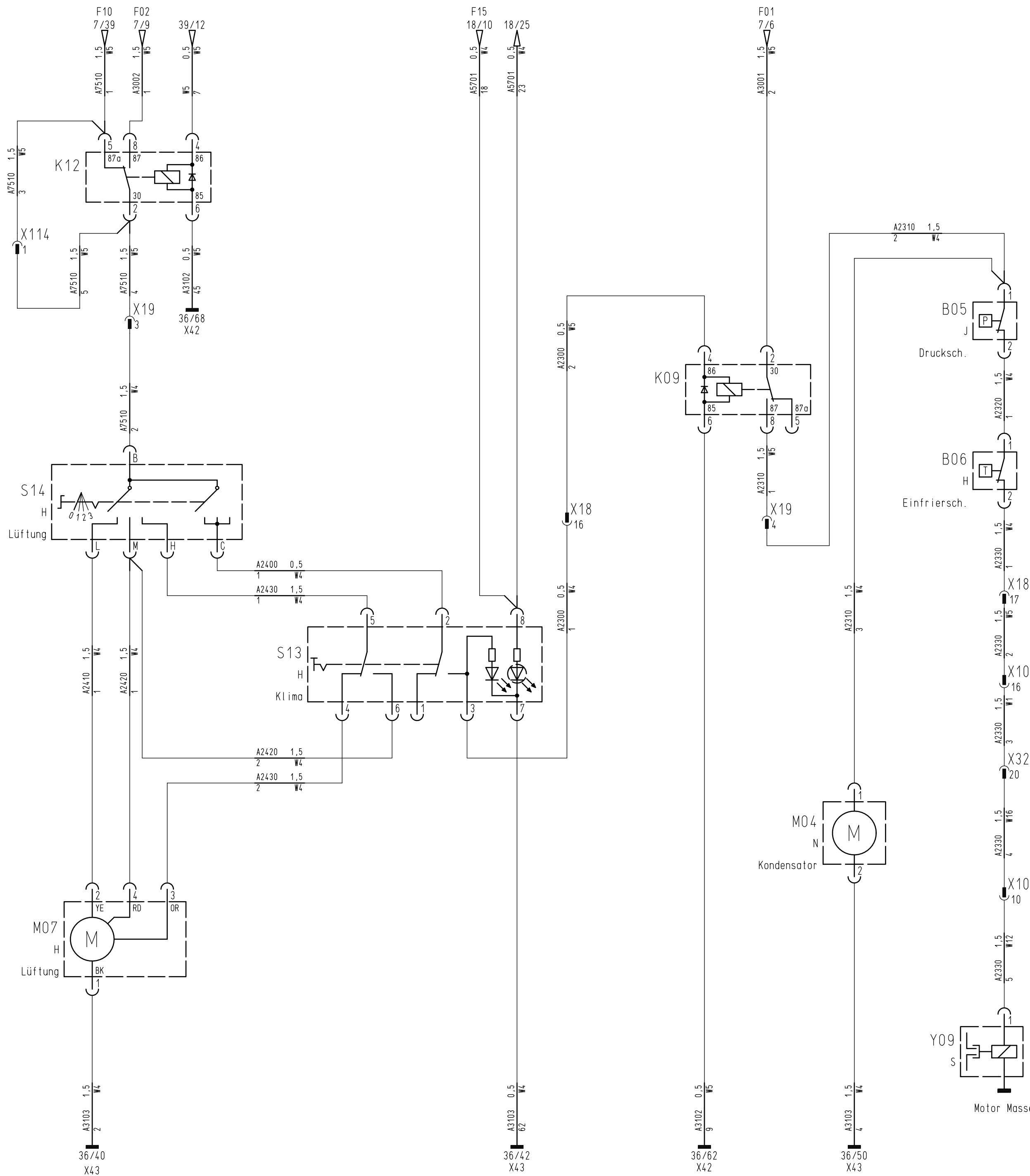
1	./.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number			
					Drawn by	24.04.	DK					91039958			
No. Number appears					Change No.	Date	Name	Standard	Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)				
											KAB1 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 24

Legende

- X09 connector 8 pole (W1<->W5)
- X64 socket 7 pole rear
- X64A plug 7 pole coding spreader rear
- X70 ground bolt M6 coding spreader rear



1	./.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number			
					Drawn by	24.04.	DK					Replacem. for same no.	91039958		
A2	No. Number appears	Change No.	Date	Name	Standard			Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)	KABl 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 25



Legende

- B05 pressure switch AC
- B06 freeze switch AC

- K09 relay AC system
- K12 relay auxiliary heating system

- M04 condensor fan
- M07 heating fan

- S13 switch AC
- S14 rotary switch heating fan

- X10 connector 22 pole (W1<->W5)
- X18 connector 24 pole (W4<->W5)
- X19 connector 6 pole (W4<->W5)
- X32 connector 22 pole (W1<->W16)
- X102 connector 12 pole (W12<->W16)
- X114 connector 1 pole (W5<->W5)

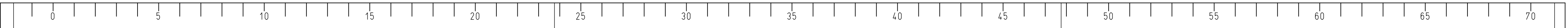
- Y09 clutch compressor AC



1		4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name
									Schaltplan / circuit diagram
								Replacem. for same no.	
								Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)



Drawing Number	91039958
No. of Sh. 46	Sheet 26

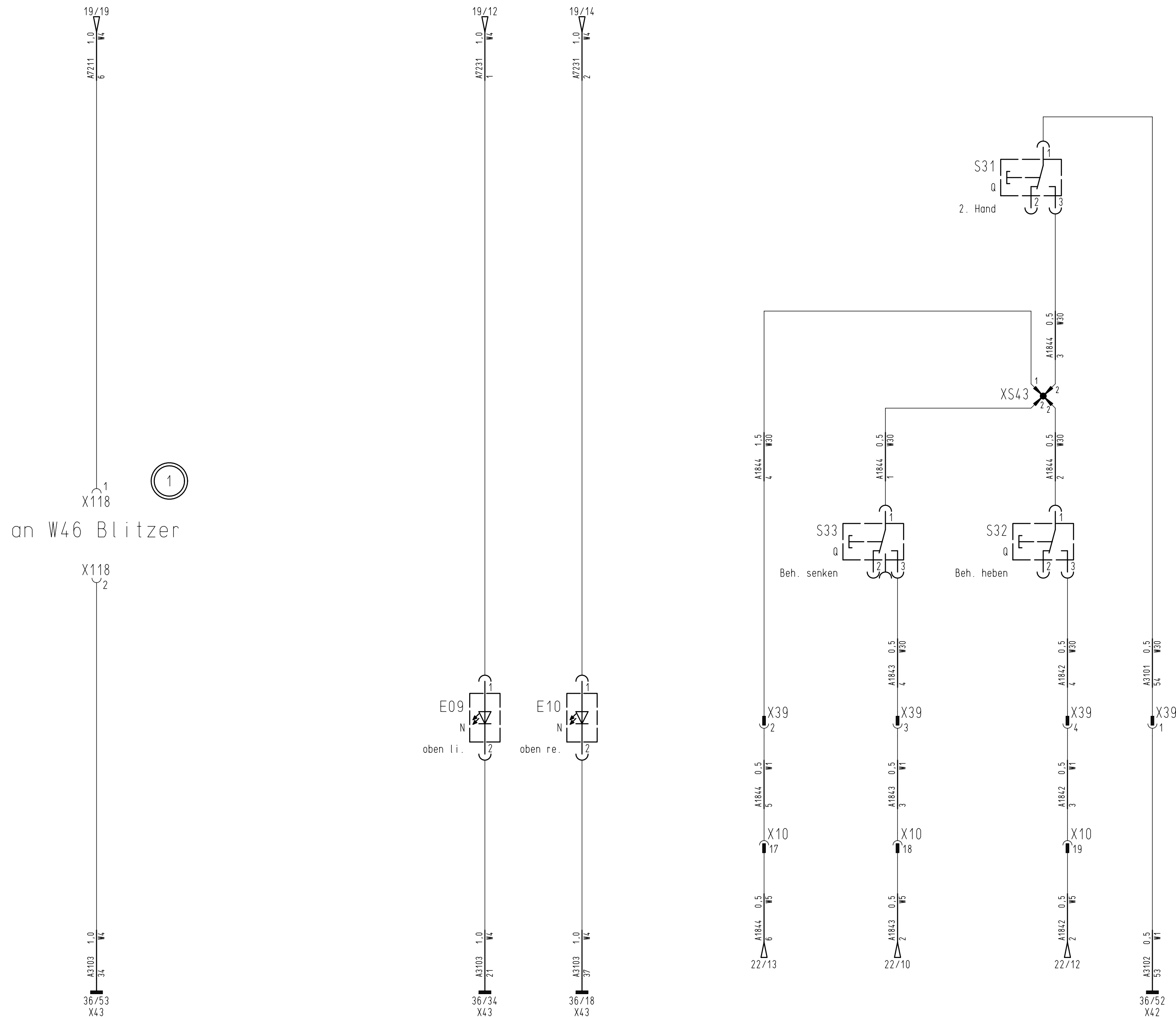


Legende

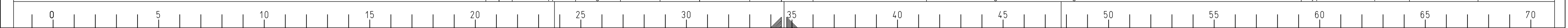
- E09 work lamp top left
- E10 work lamp top right

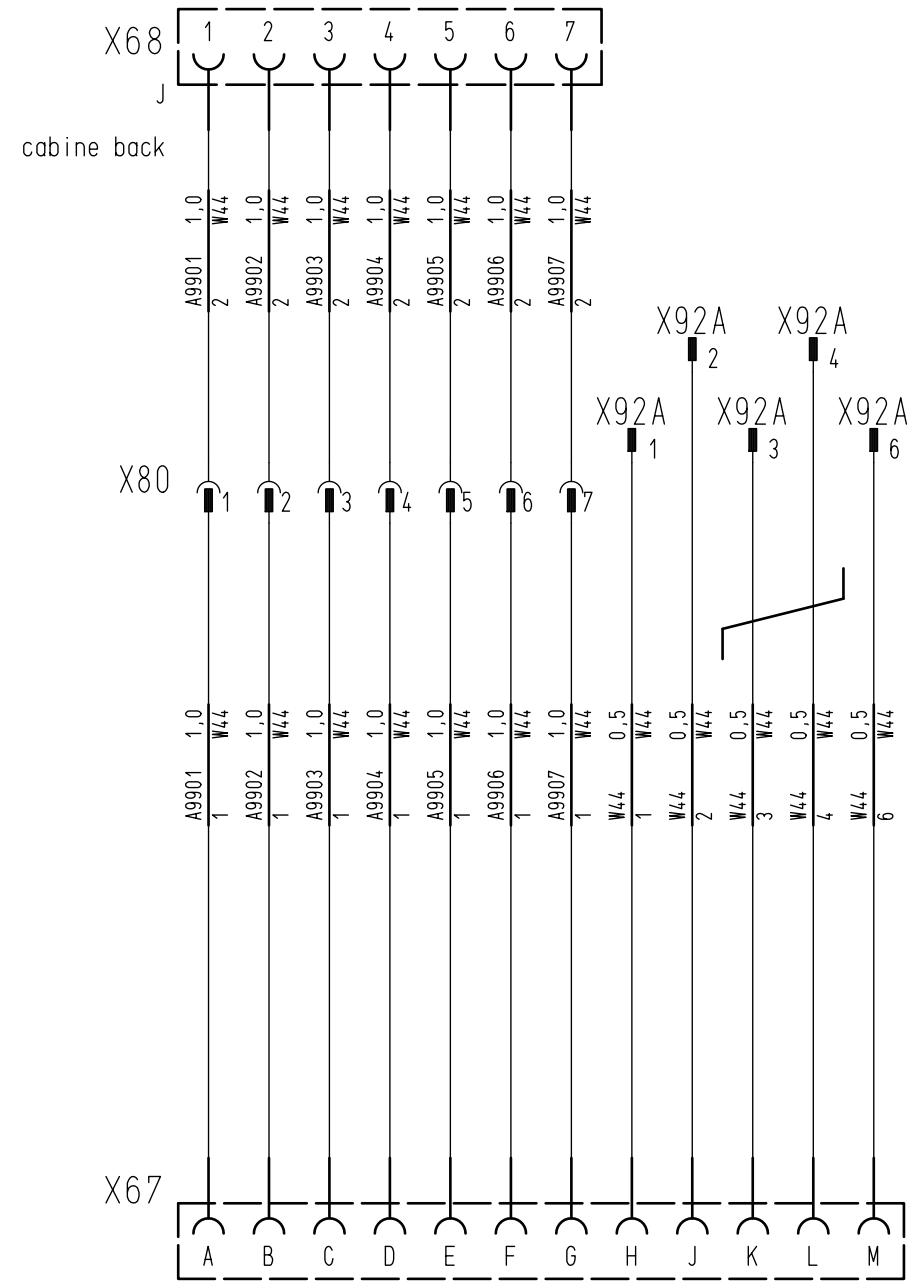
- S31 push-button container 2'nd hand
- S32 push-button hopper up
- S33 push-button hopper down (opt.)

- X10 connector 22 pole (W1<->W5)
- X39 connector 4 pole (W1<->W30)
- X118 connector 2 pole (W4<->W46)
- XS43 butt joint (W30)



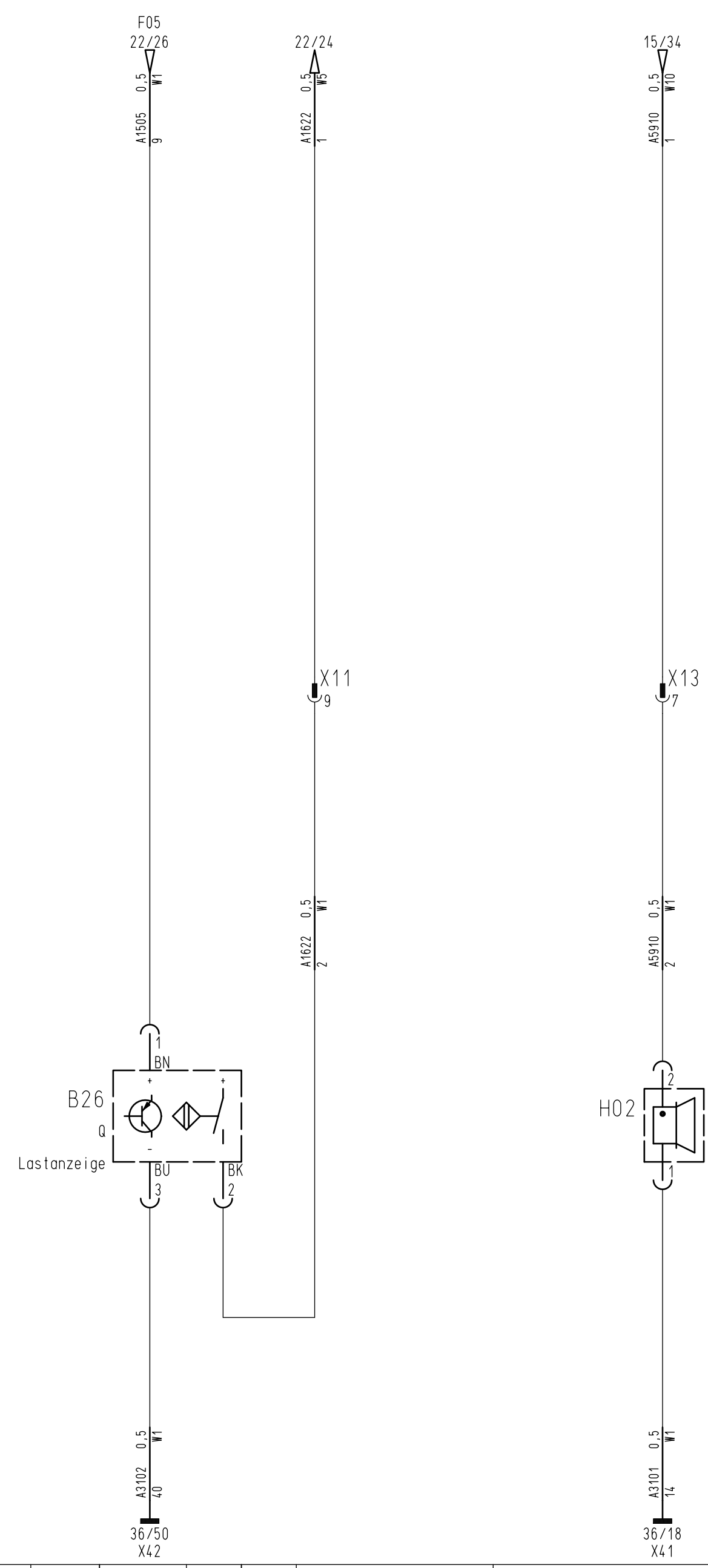
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					Drawn by	24.04.	DK					91039958	
					Verified			Replacem. for same no.	For this drawing we reserve all rights (acc. DIN ISO 16016)			No. of Sh. 46	Sheet 28
A2	No. Number appears	Change No.	Date	Name	Standard			Change No. 4105-11	KAB1 472	Type 1491	Dep. DS		





H = F31(30)
 J = F29(15)
 K = Bus
 L = Bus
 M = Masse

- ### Legende
- B26 proximity sensor hopper
 - H02 buzzer
 - X11 connector 14 pole (W1<->W5)
 - X13 connector 8 pole (W1<->W10)
 - X67 connector 12 pole spreader steering pillar
 - X68 connector 7 pole spreader cabine back
 - X80 connector 8 pole (W44<->W44)
 - X92A connector 6 pole (W77/W79<->W44)



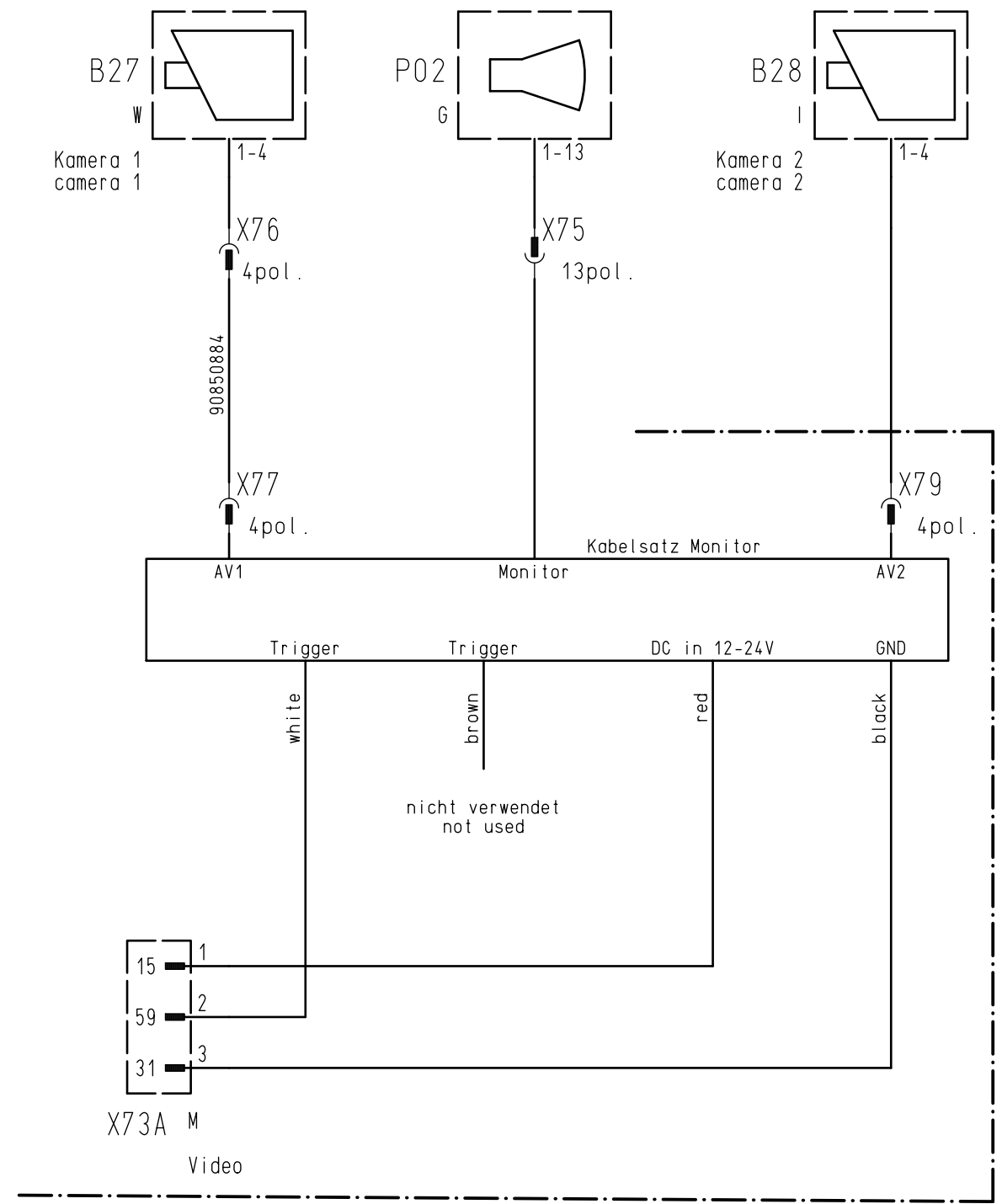
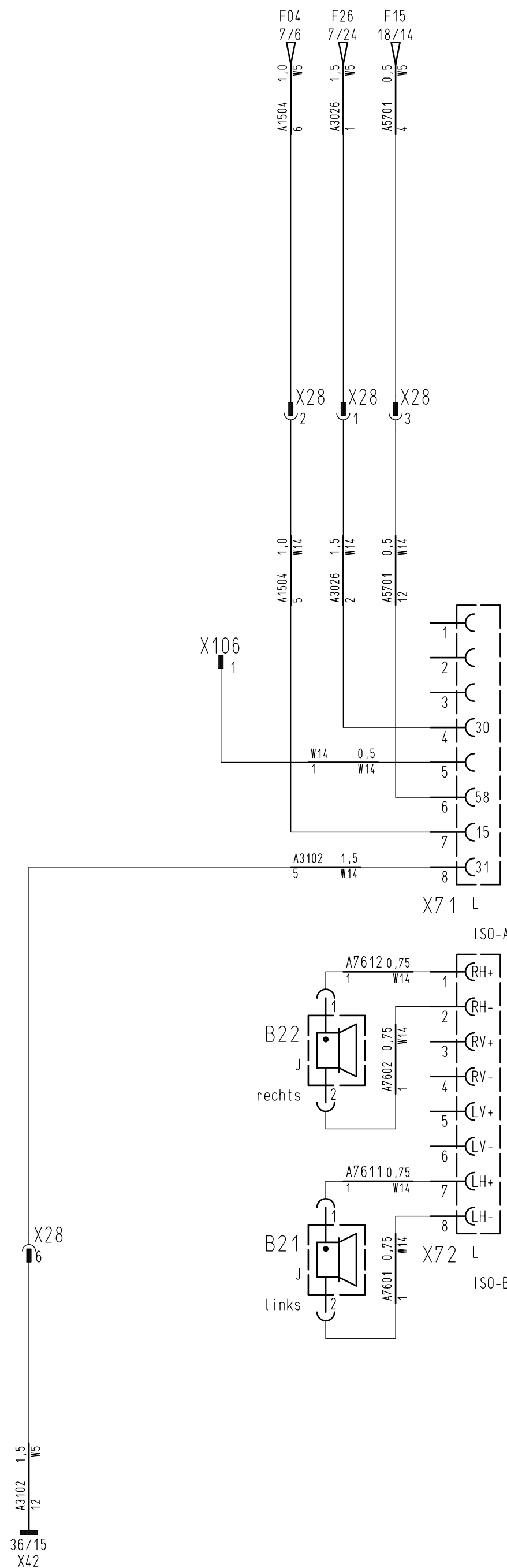
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					Drawn by	24.04.	DK					91039958			
A2		No. Number appears	Change No.	Date	Name	Standard		Replacem. for same no.	For this drawing we reserve all rights (acc. DIN ISO 16016)		KAB1 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 29

Legende

- B21 loudspeaker left
- B22 loudspeaker right
- B27 reverse drive camera
- B28 additional camera

- P02 display

- X28 connector 6 pole (W5<->W14)
- X71 connector 8 pole radio ISO-A (W14)
- X72 connector 8 pole radio ISO-B (W14)
- X73A connector 3 pole video
- X75 connector 13 pole Bildschirm
- X76 connector 4 pole camera 1
- X77 connector 4 pole camera 1
- X79 connector 4 pole camera 2
- X106 connector 1 pole (W14)

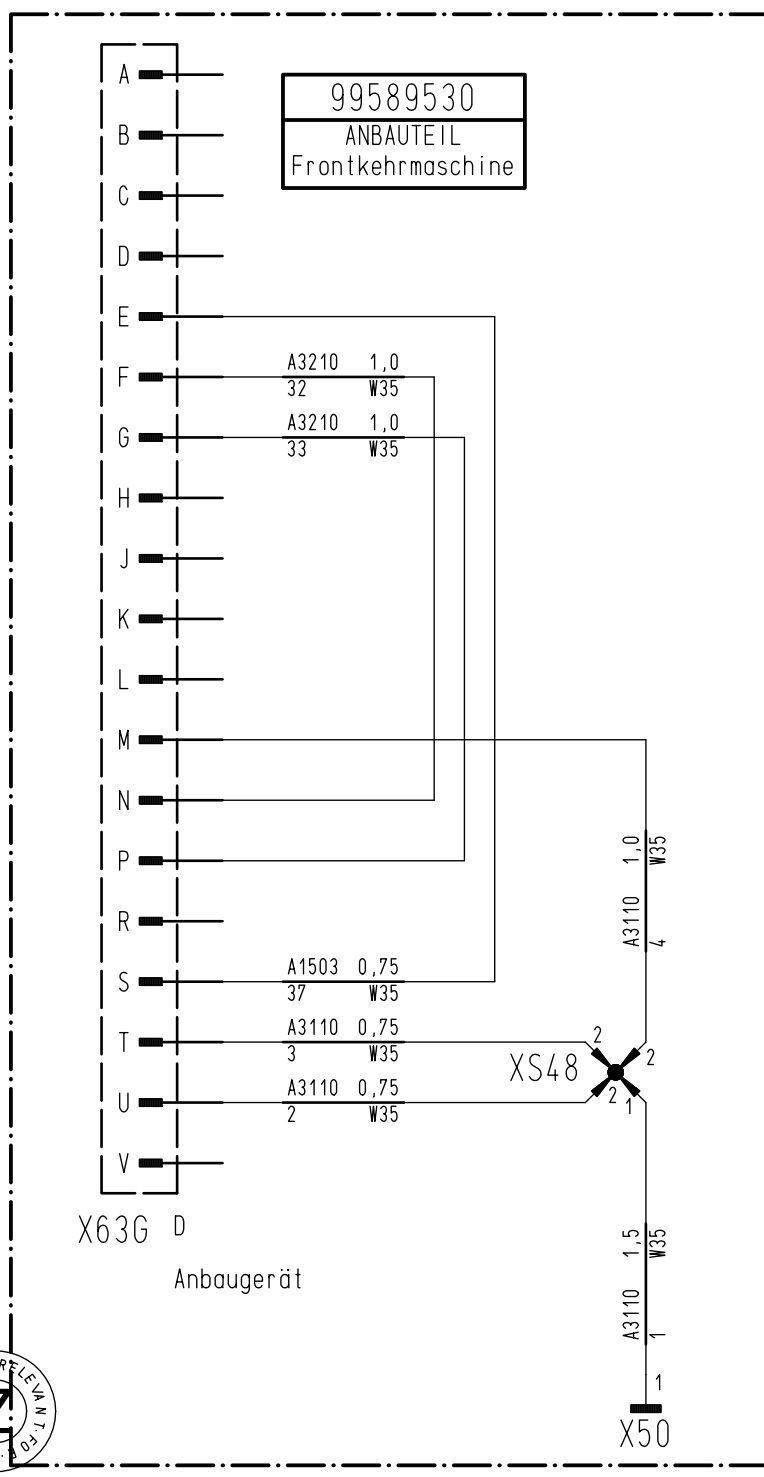
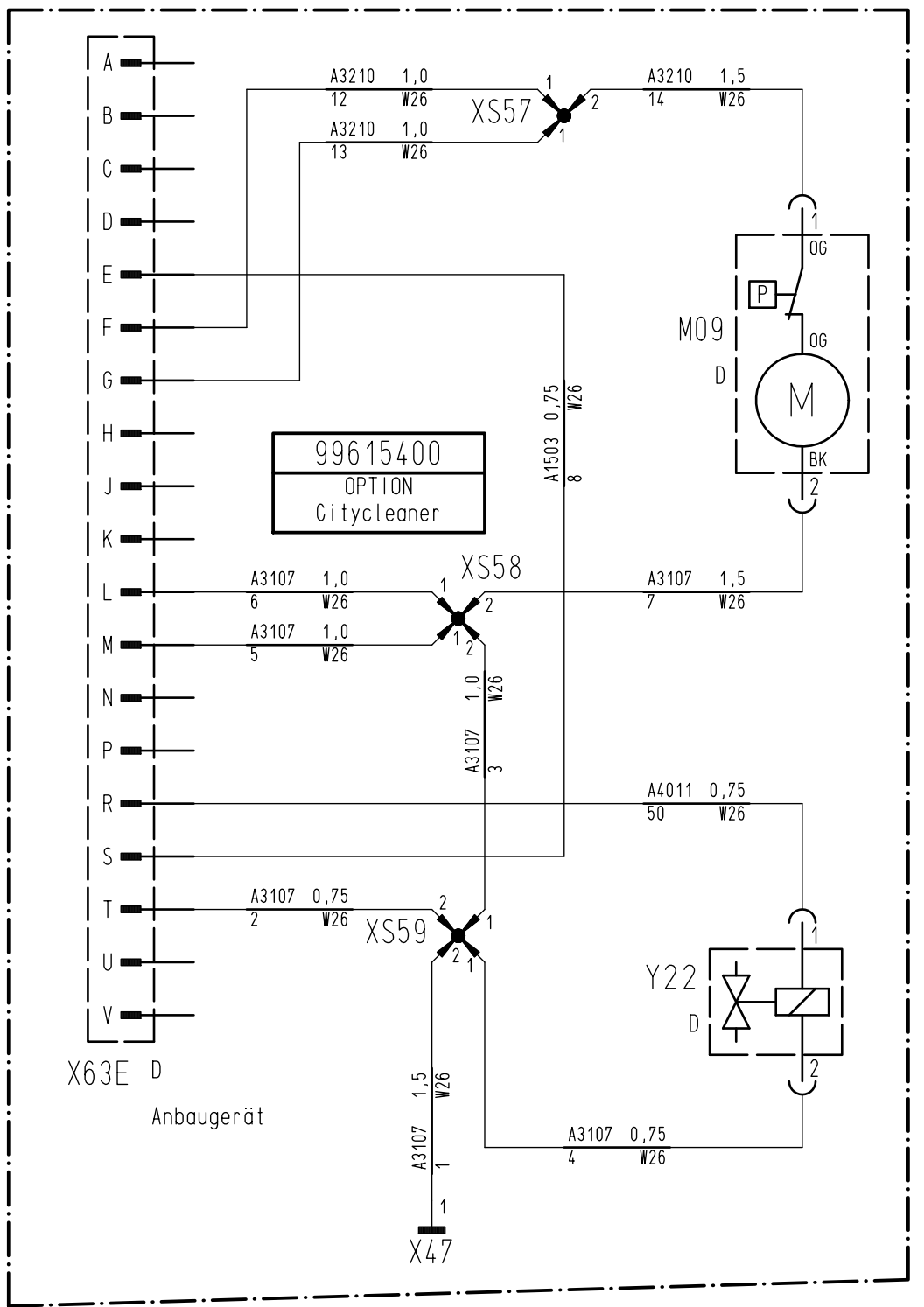
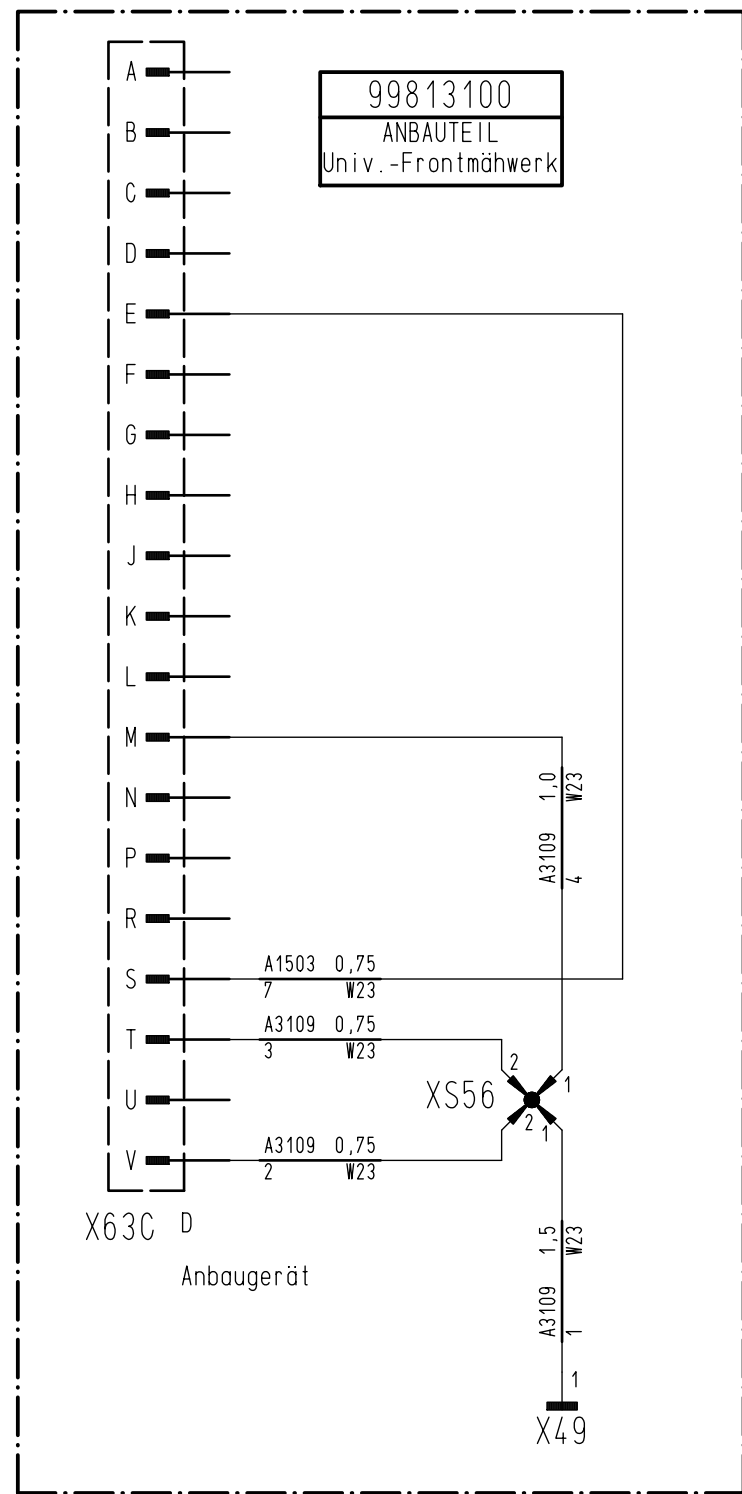
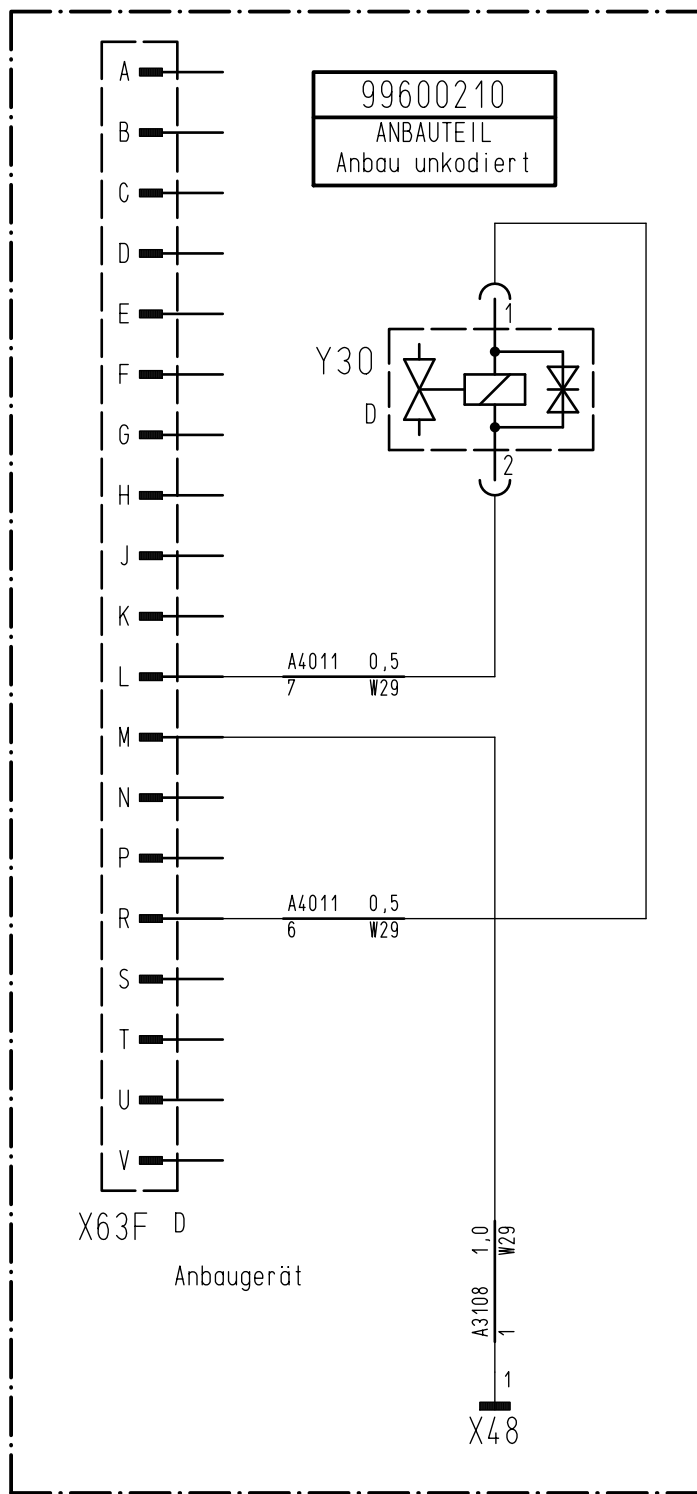
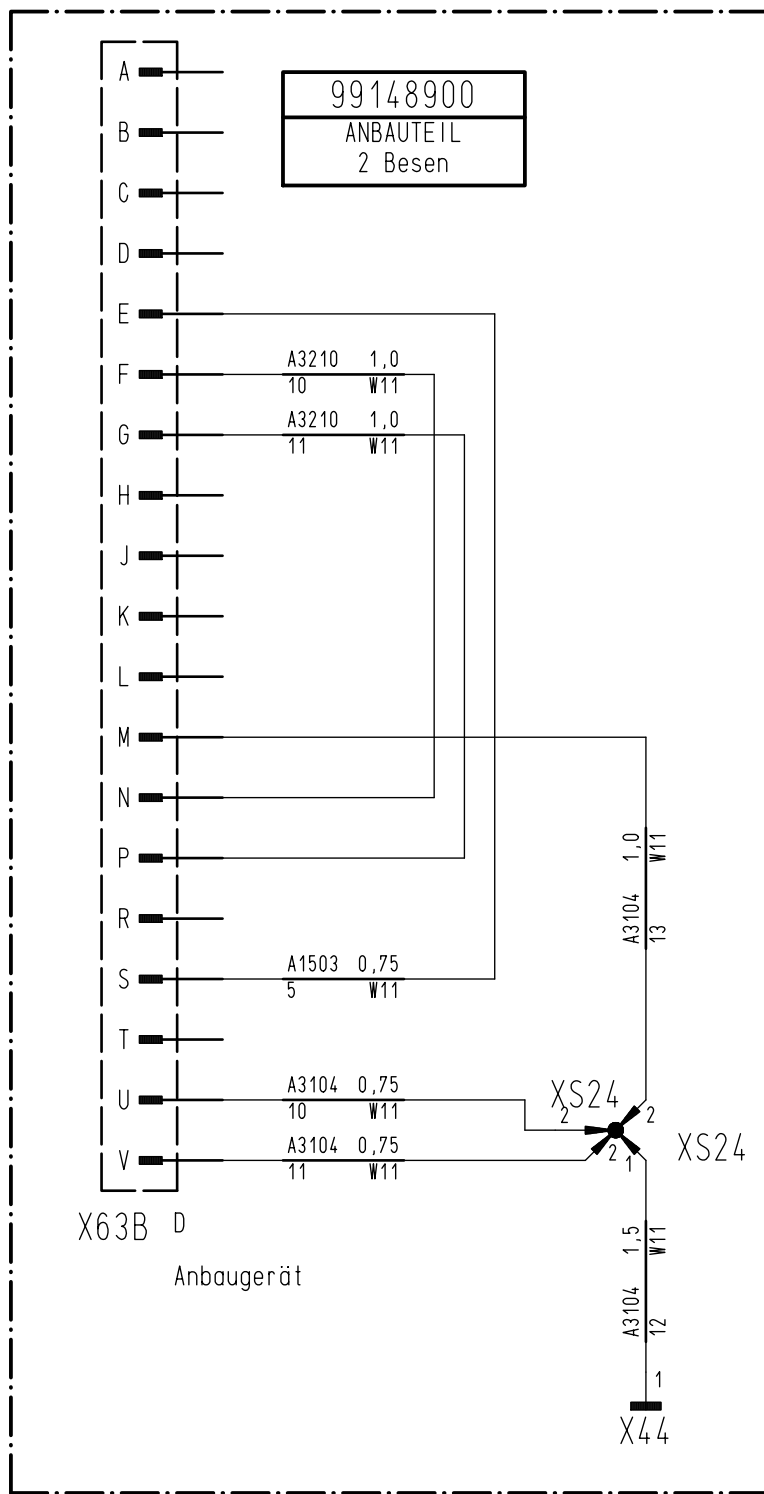


Funktionshinweis:
 Option Rückfahrkamera
 wahlweise Daueranzeige oder Einschaltung bei Rückwärtsfahrt.
 zusätzlich Option mit Zusatzkamera
 Zusatzkamera m. automatischer Umschaltung bei Rückwärtsfahrt

Function note:
 Option reverse drive camera
 Optional permanent display or intervention when reversing.
 Additional option with additional camera
 Additional camera with automatic switch reversing.

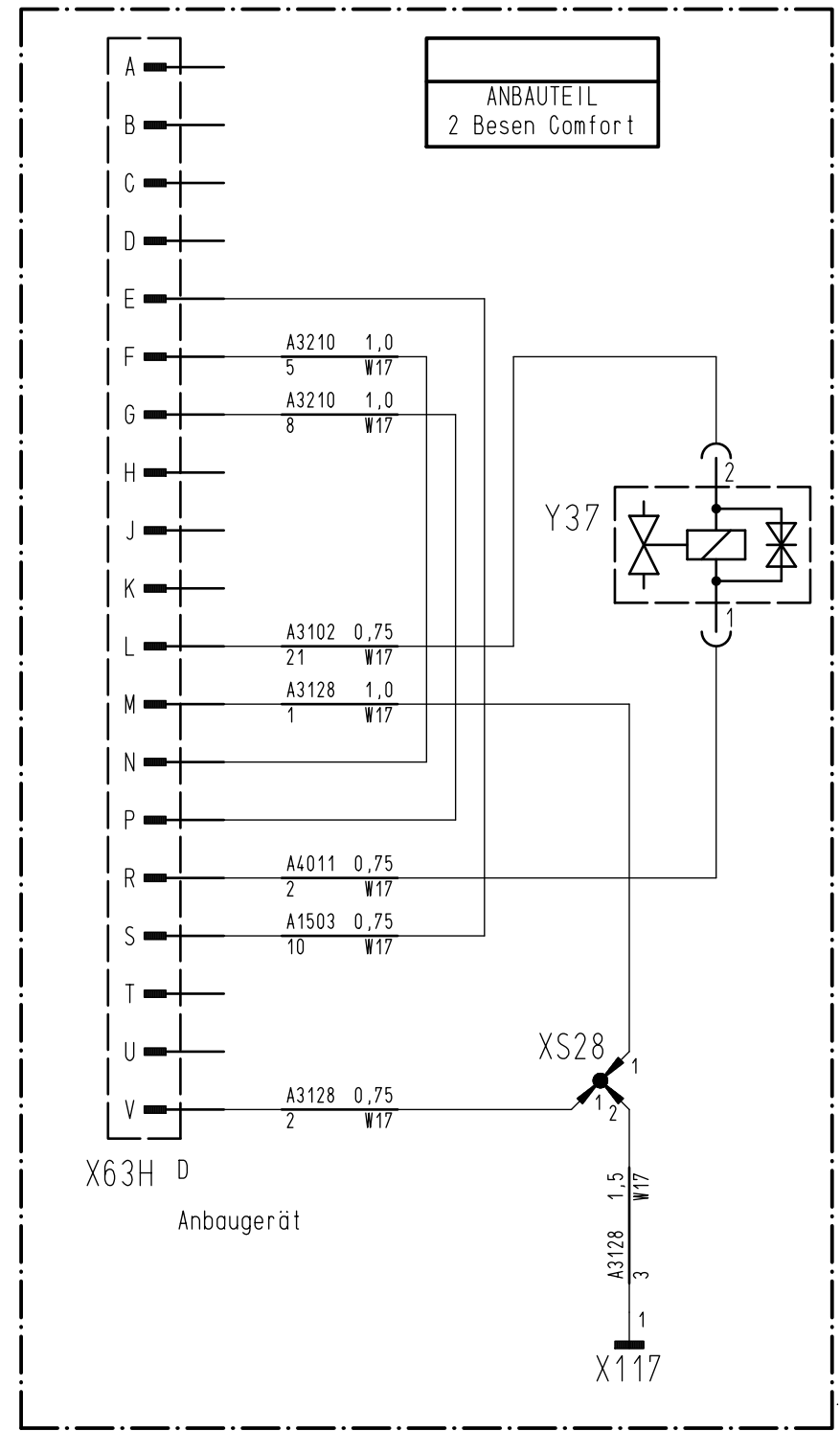


1	/.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Hako Hako GmbH D-23840 Bad Oldesloe	Drawing Number				
					Drawn by	24.04.	DK				91039958				
					Standard			Replacem. for same no.	Schaltplan / circuit diagram						
					Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)				KAB1 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 30

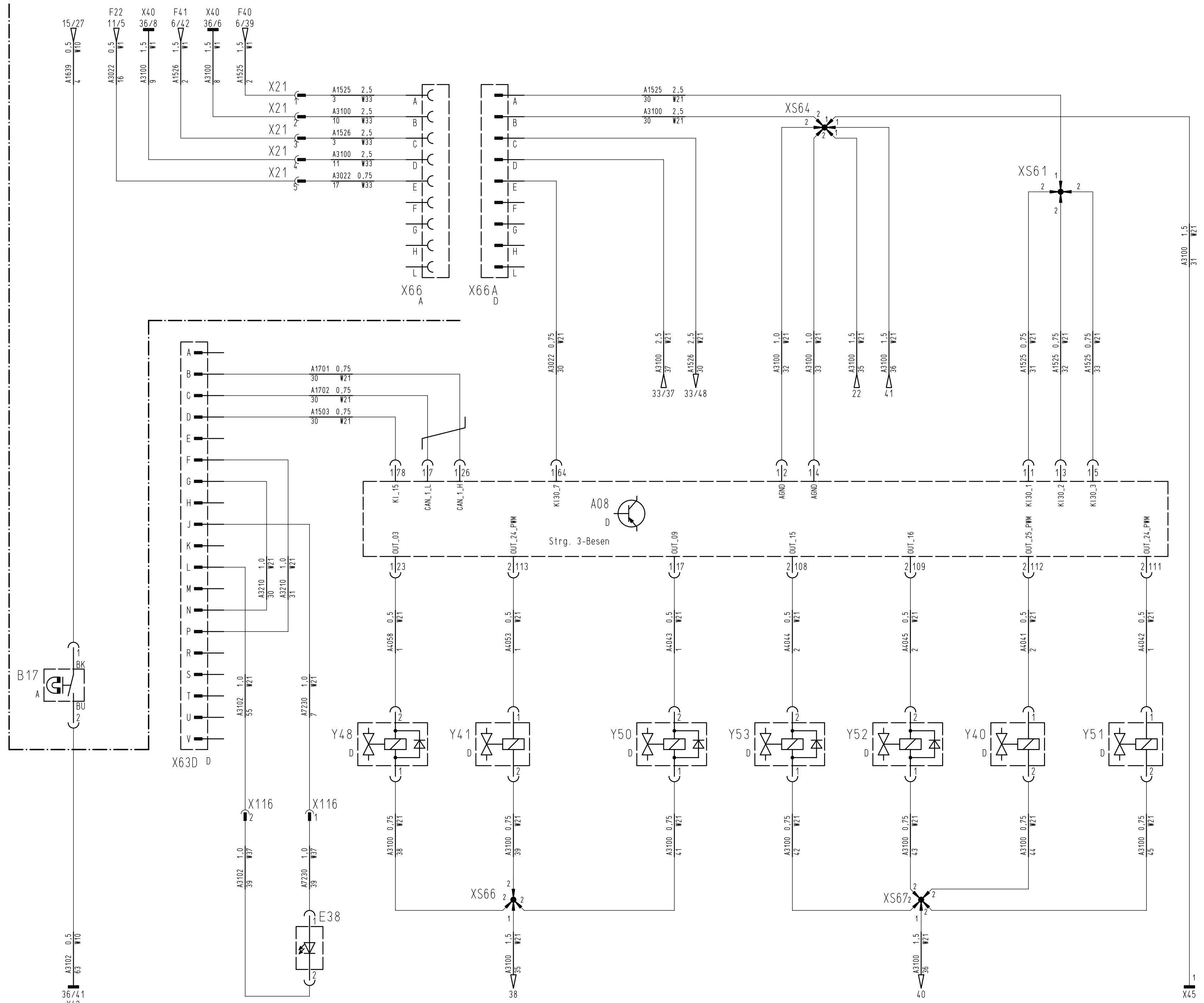


Legende

- M09 water pump
- X44 ground bolt M6 sweeper
- X47 ground bolt M6 citycleaner
- X48 ground bolt M6 attachment uncoded
- X49 ground bolt M6 mower suction
- X50 ground bolt M6 hydr. driven comb.sweeper
- X63B plug 19 pole 2-brooms
- X63C plug 19 pole mower suction
- X63E plug 19 pole citycleaner
- X63F plug 19 pole attachment uncoded
- X63G plug 19 pole hydr. driven comb.sweeper
- X63H plug 19 pole 2-brooms comfort
- X117 ground bolt M6 2-brooms comfort
- XS24 butt joint (W11)
- XS28 ussp (W17)
- XS48 butt joint (W35)
- XS56 butt joint (W23)
- XS57 butt joint (W26)
- XS58 butt joint (W26)
- XS59 butt joint (W26)
- Y22 water valve fresh/sloppy water
- Y30 hydraulic valve switching function
- Y37 hydraulic valve broom right displacement



1	.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number				
Replacem. for same no.					24.04.	DK						91039958				
A2	No. Number appears	Change No.	Date	Name	Standard			Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)			KABI 470	Type 1491	Dep. DS	No. of Sh. 46	Sheet 31

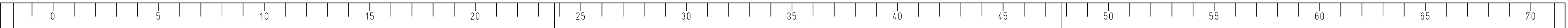


- ### Legende
- A08 controller 3-brooms
 - B17 suction hood lifted reed sensor
 - E38 working light 3-brooms unit
 - X21 connector 6 pole (W1<->W33)
 - X45 ground bolt M6 sweeper attachm. 3 brooms
 - X63D plug 19 pole 3-brooms
 - X66 socket 9 pole front attachment
 - X66A plug 9 pole 3-brooms
 - X116 connector 2 pole (W21<->W37)
 - XS61 ussp (W21)
 - XS64 ussp (W21)
 - XS66 ussp (W21)
 - XS67 ussp (W21)
 - Y40 prop. valve speed rear brooms
 - Y41 prop. valve speed front broom
 - Y48 hydraulic valve front arm swing left
 - Y50 hydraulic valve side brooms floating position
 - Y51 prop. valve side brooms dispress./up
 - Y52 hydraulic valve front arm swing right
 - Y53 hydraulic valve front arm swing left



1	.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number	91039958
A2	No. Number appears	Change No.	Date	Name	Standard	24.04.	DK	Replacem. for same no.	Schaltplan / circuit diagram		No. of Sh. 46	

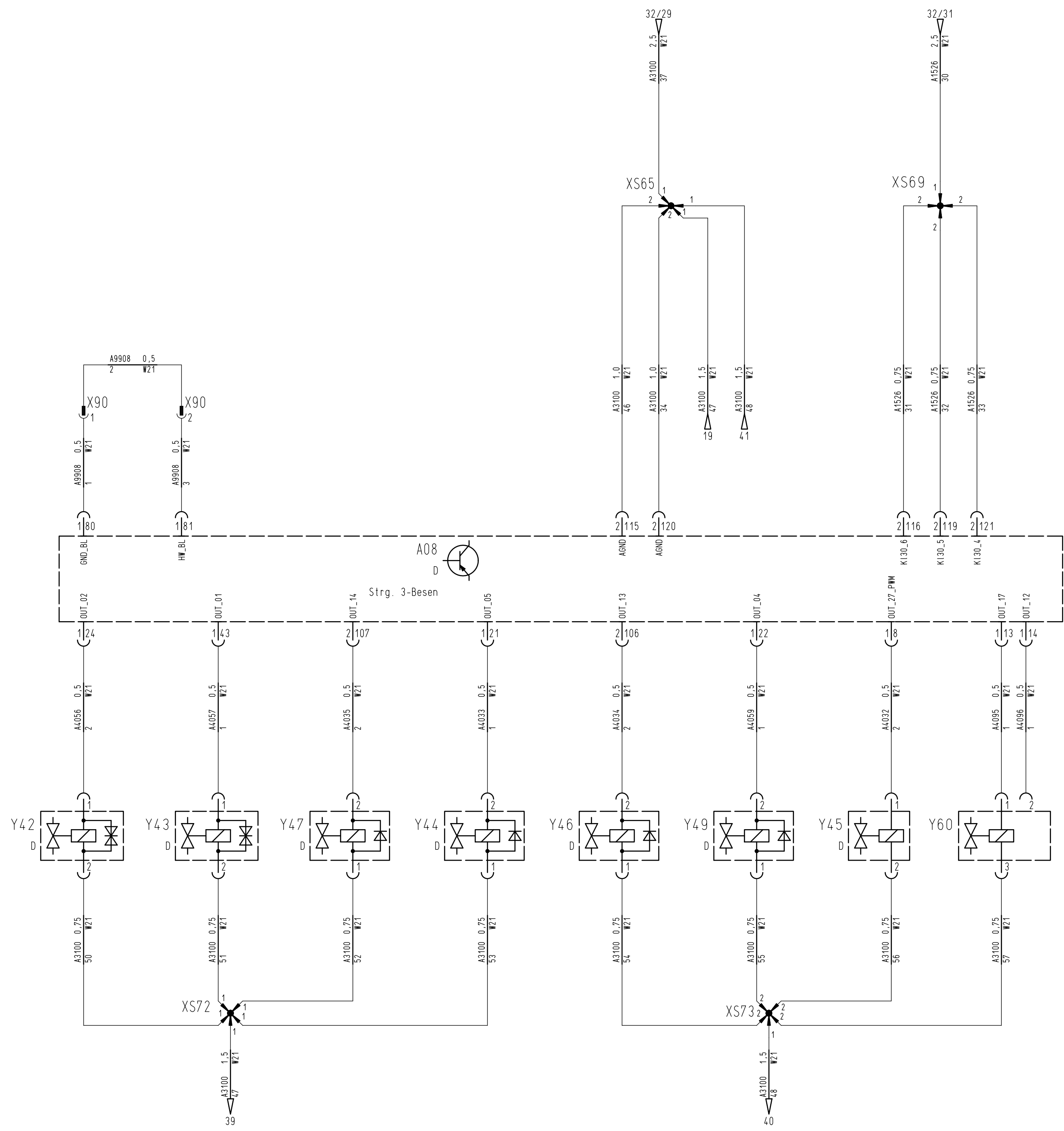
Change No. 4105-11 For this drawing we reserve all rights (acc. DIN ISO 16016) KABI 472 Type 1491 Dep. DS



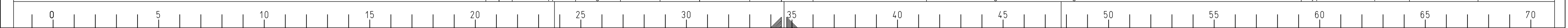
Legende

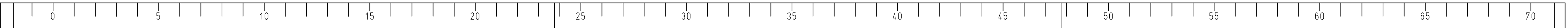
- A08 controller 3-brooms
- X90 connector 2 pole (W21<->W21)
- XS65 ussp (W21)
- XS69 ussp (W21)
- XS72 ussp (W21)
- XS73 ussp (W21)

- Y42 hydra. valve driv. dir. front broom left
- Y43 hydra. valve driv. dir. front broom right
- Y44 hydra. valve front broom floating position
- Y45 prop. valve front broom dispressure/up
- Y46 hydraulic valve main arm swing left
- Y47 hydraulic valve main arm swing right
- Y49 hydraulic valve front arm swing right
- Y60 watervalue 3-brooms



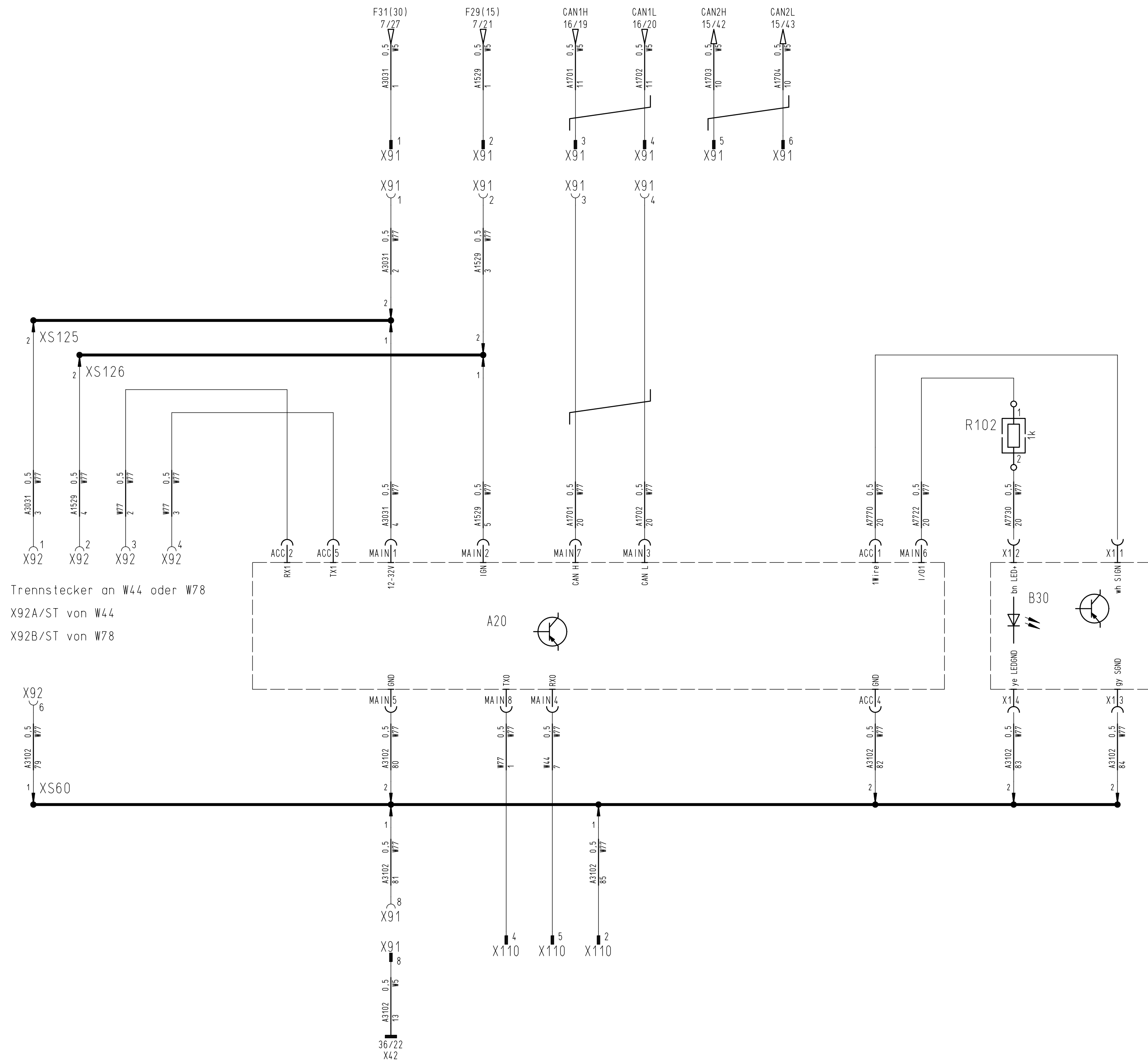
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A2	No. Number appears	Change No.	Date	Name	Standard			Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)	No. of Sh. 46 Sheet 33





Legende

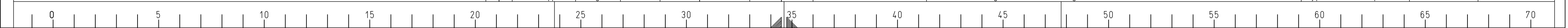
- A20 fleetrecorder
- B30 i-button-reader
- R102 resistor 1k
- X91 connector 8 pole (W5<->W77)
- X92 connector 6 pole (W5<->W44)
- X110 diagnosis socket 6 pole Fleet
- XS60 ussp (W77)
- XS125 ussp (W77)
- XS126 ussp (W77)

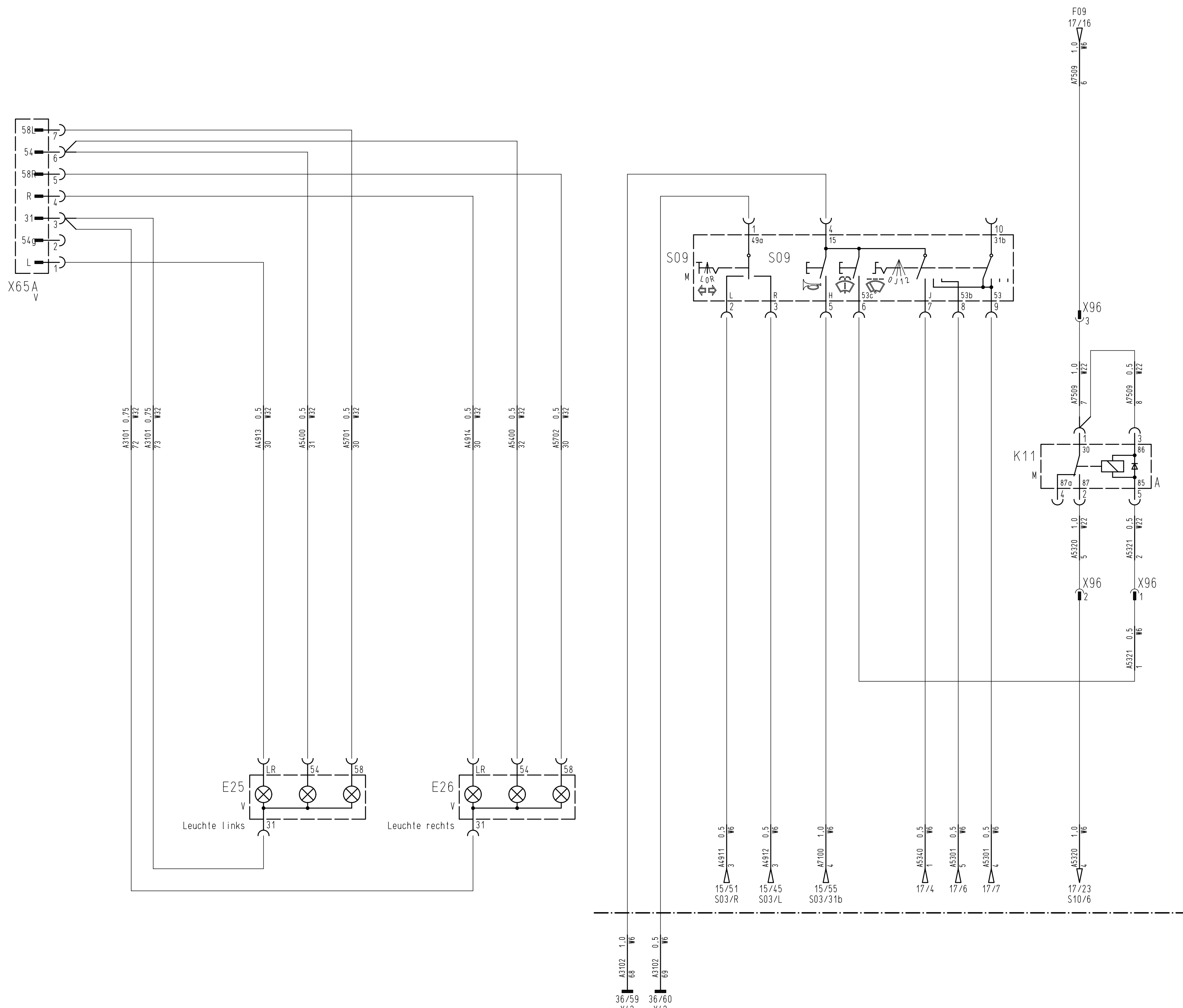


Trennstecker an W44 oder W78
 X92A/ST von W44
 X92B/ST von W78



1	./.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	 <small>Hako GmbH D-23840 Bad Odesloe</small>	Drawing Number						
					Drawn by	24.04.	DK				91039958						
					Replacem. for same no.		Schaltplan / circuit diagram										
A2 No. Number appears					Change No.	Date	Name	Standard	Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)			KAB1 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 34



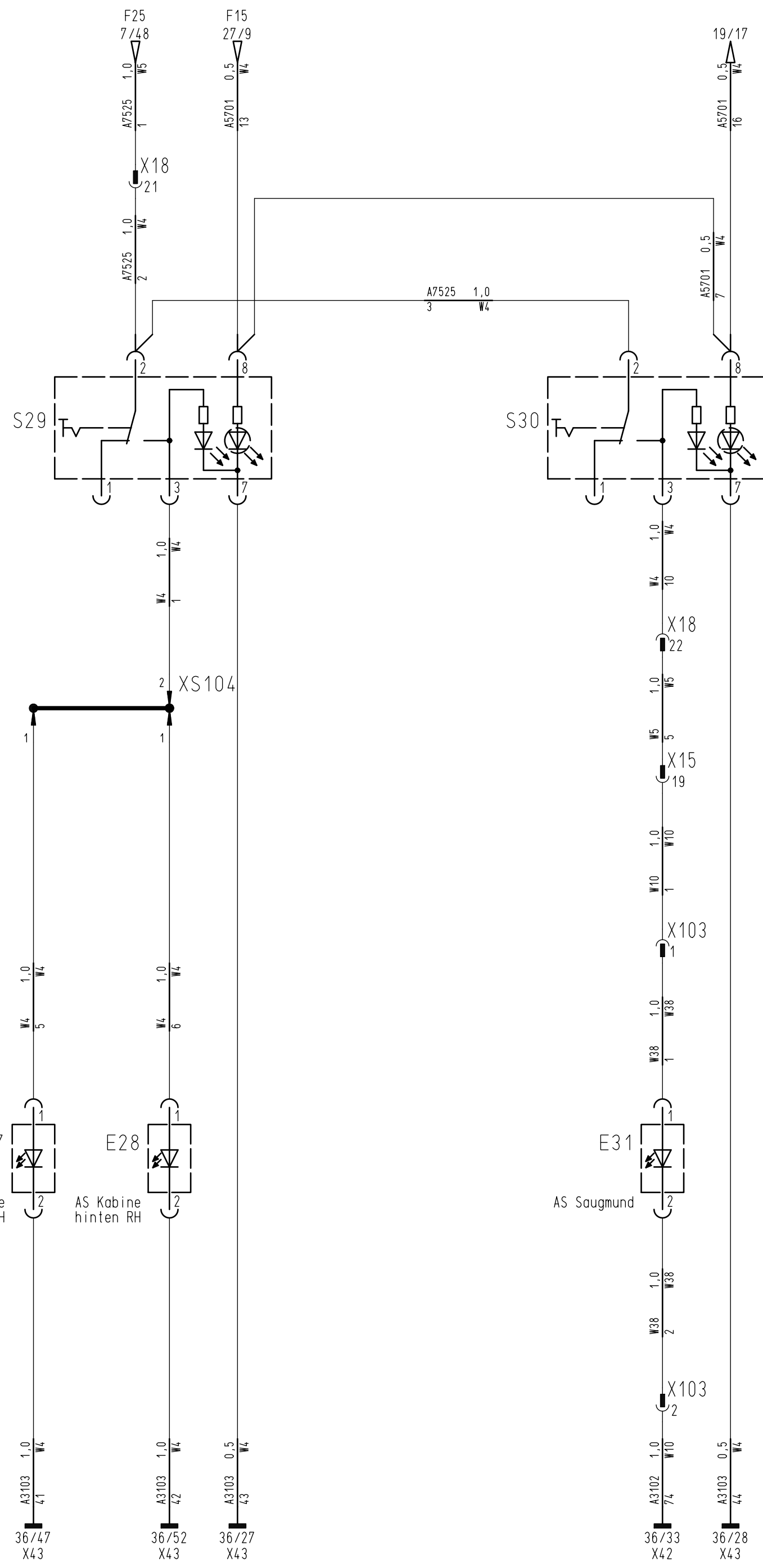
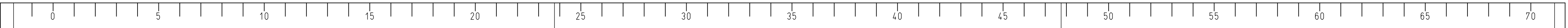


Legende

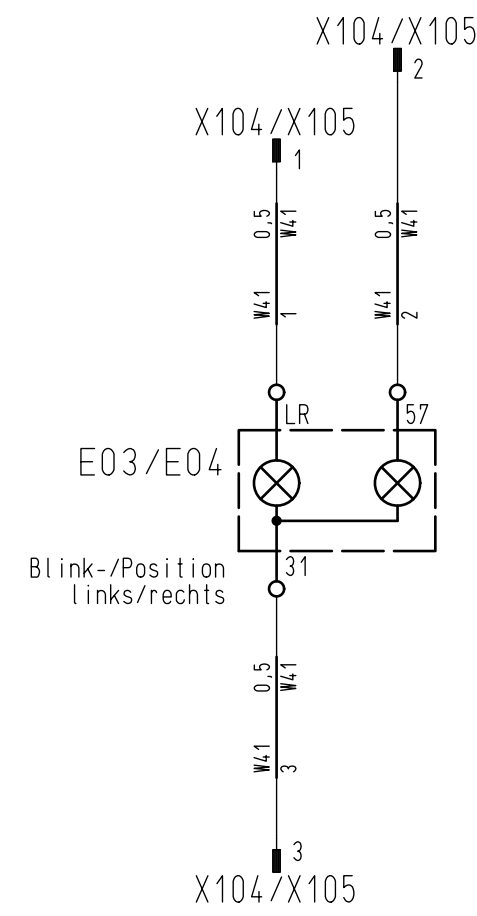
- E25 tail light left
- E26 tail light right
- K11 relay A windscreen washer pump (opt.)
- S09 steering wheel switch comfort
- X65A socket 7 pole lighting weight holder
- X96 connector 4 pole (W6<->W22)



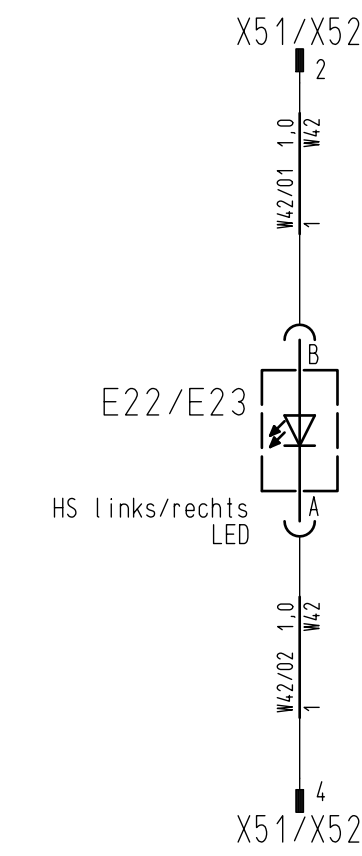
1	/.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Hako Hako GmbH D-23840 Bad Odesloe	Drawing Number				
					Drawn by	24.04.	DK				91039958				
A2		No. Number appears	Change No.	Date	Name	Standard	Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)		KABI 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 35



Blink-/Positionsleuchte Std.



Abblendlichtscheinwerfer LED



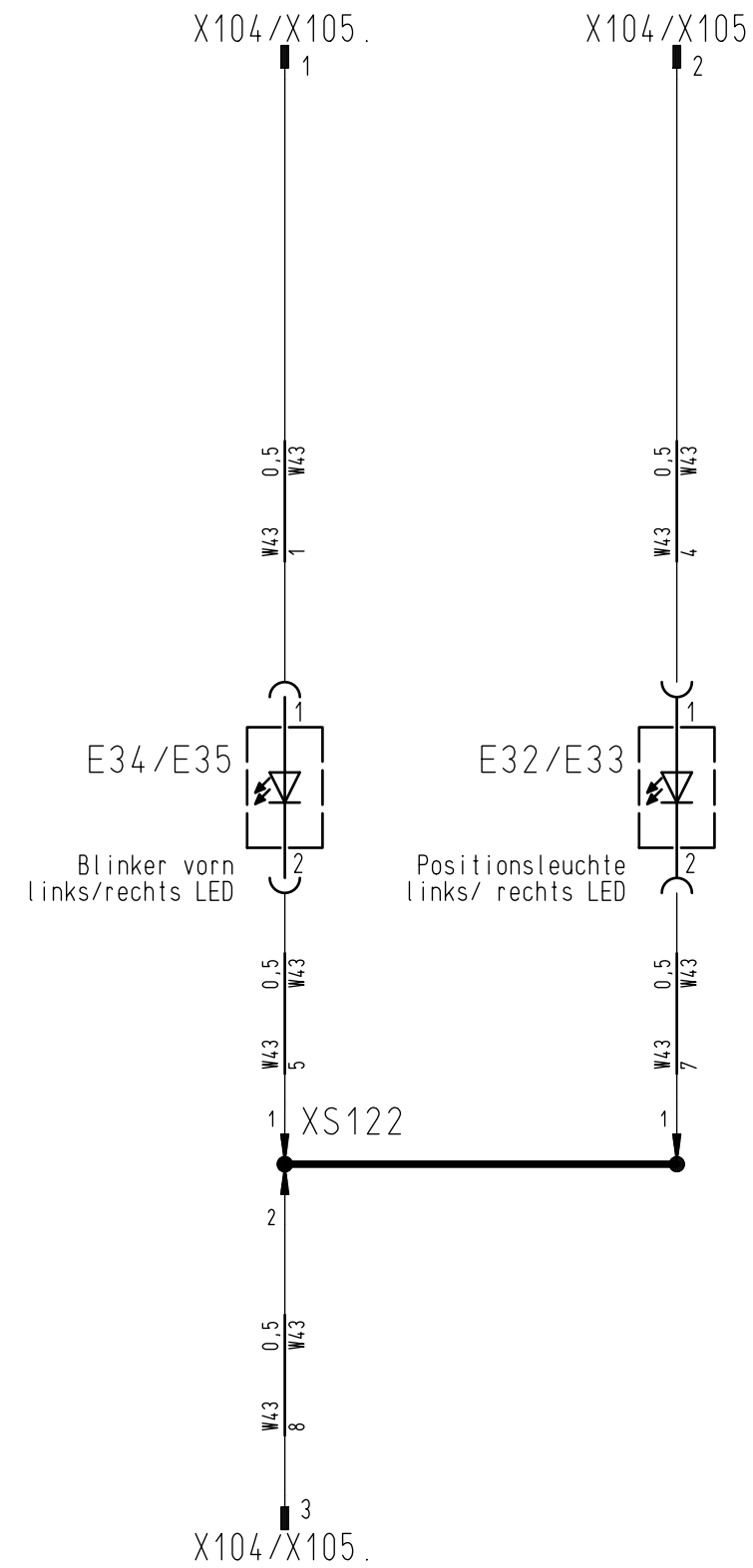
Legende

- E03/E04 front indicator/position LH/RH
- E11/E12 work lamps A-pillar LH/RH
- E22/E23 headlight LED LH/RH
- E27 working light cabin back left
- E28 working light cabin back right
- E31 working light suction mouth
- E32/E33 navigation lights LED LH/RH
- E34/E35 indicator lamps front LED LH/RH

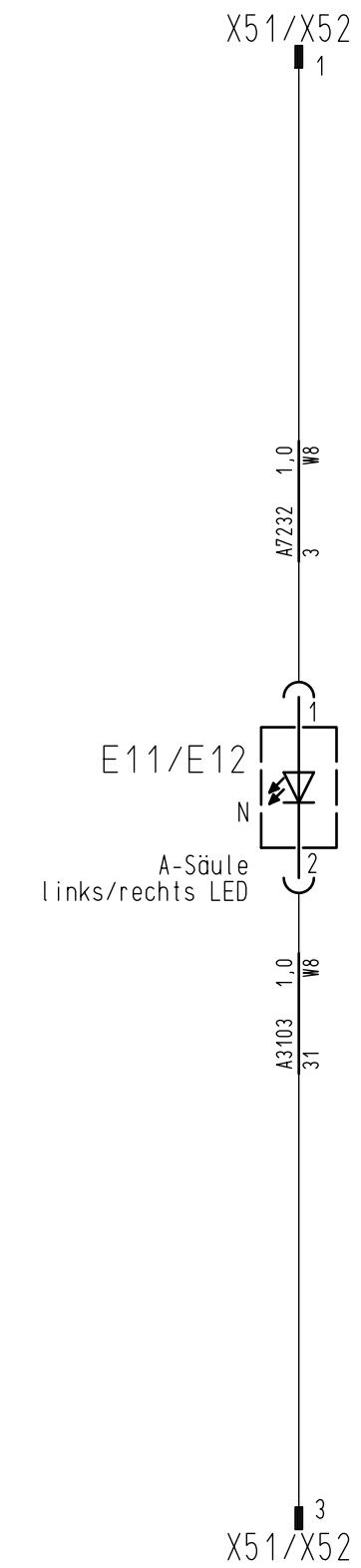
- S29 switch working lights cabin back
- S30 switch working light suction mouth

- X15 connector 20 pole (W5<->W10)
- X18 connector 24 pole (W4<->W5)
- X51/X52 connector 4 pole (W4<->W8/W42)
- X51/X52. connector 4 pole (W4<->W8/W42)
- X103 connector 2 pole (W10<->W38)
- X104/X105 connector 3 pole (W4<->W41/W43)
- X104/X105. connector 3 pole (W4<->W41/W43)
- XS104 ussp (W4)
- XS122 ussp (W43)

Blink- /Positionsleuchte LED



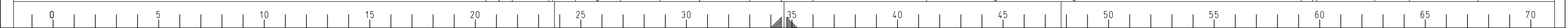
Arbeitscheinwerfer A-Säule LED



next Sheet 39

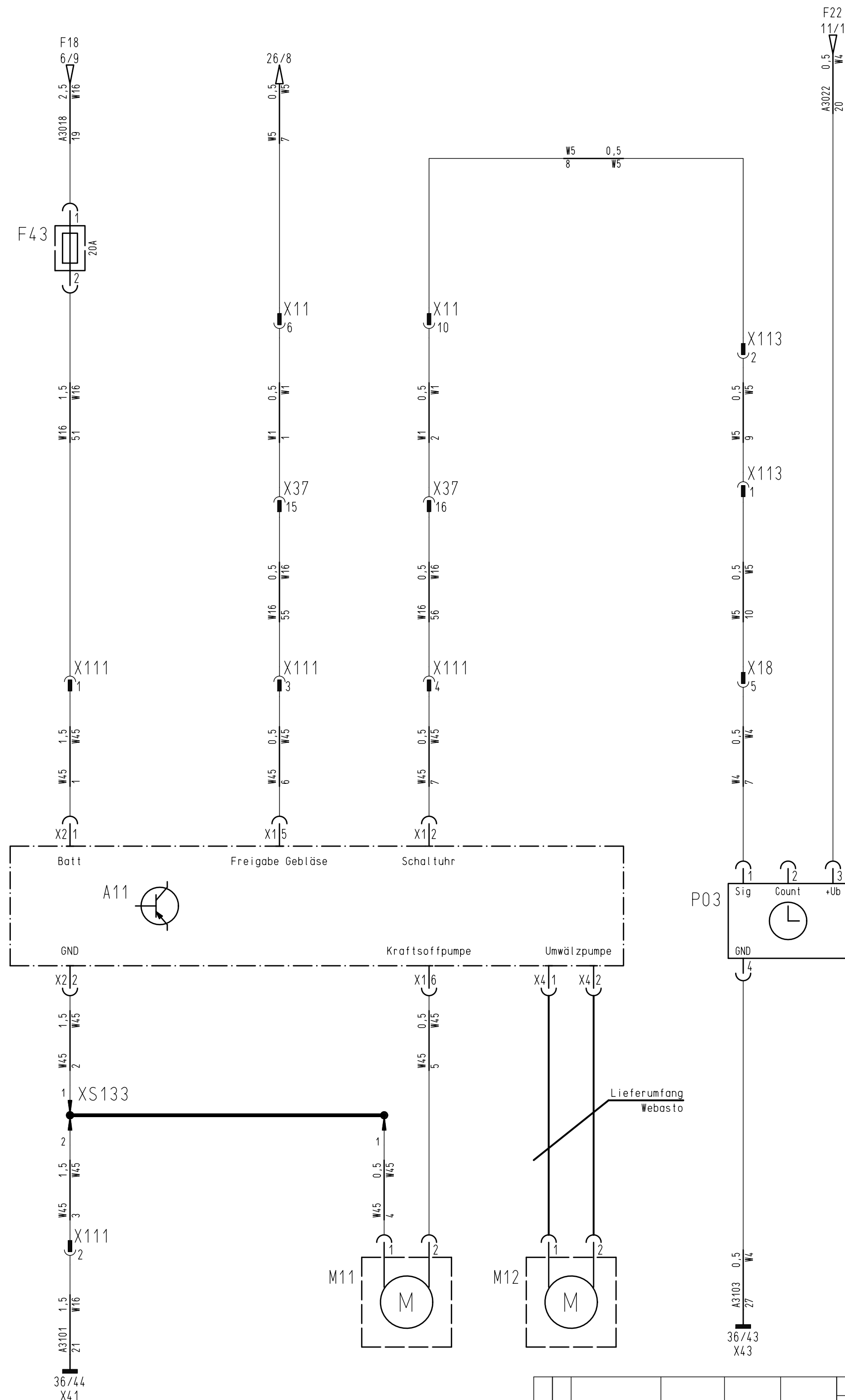


1	./.	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Hako Hako GmbH D-23840 Bad Oldesloe	Drawing Number 91039958				
					Drawn by	24.04.	DK					Replacem. for same no.	Schaltplan / circuit diagram		
A2	No. Number appears	Change No.	Date	Name	Standard	Change No.	4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)			KAB1 472	Type 1491		Dep. DS	No. of Sh. 46



Legende

- A11 auxiliary heating system
- F43 fuse 20A
- M11 metering pump auxiliary heating system
- M12 circulation pump auxiliary heating system
- P03 operating unit auxiliary heating system
- X11 connector 14 pole (W1<->W5)
- X18 connector 24 pole (W4<->W5)
- X37 connector 16 pole (W1<->W16)
- X111 connector 4 pole (W16<->W45)
- X113 connector 2 pole (W5<->W5)
- XS133 ussp (W45)



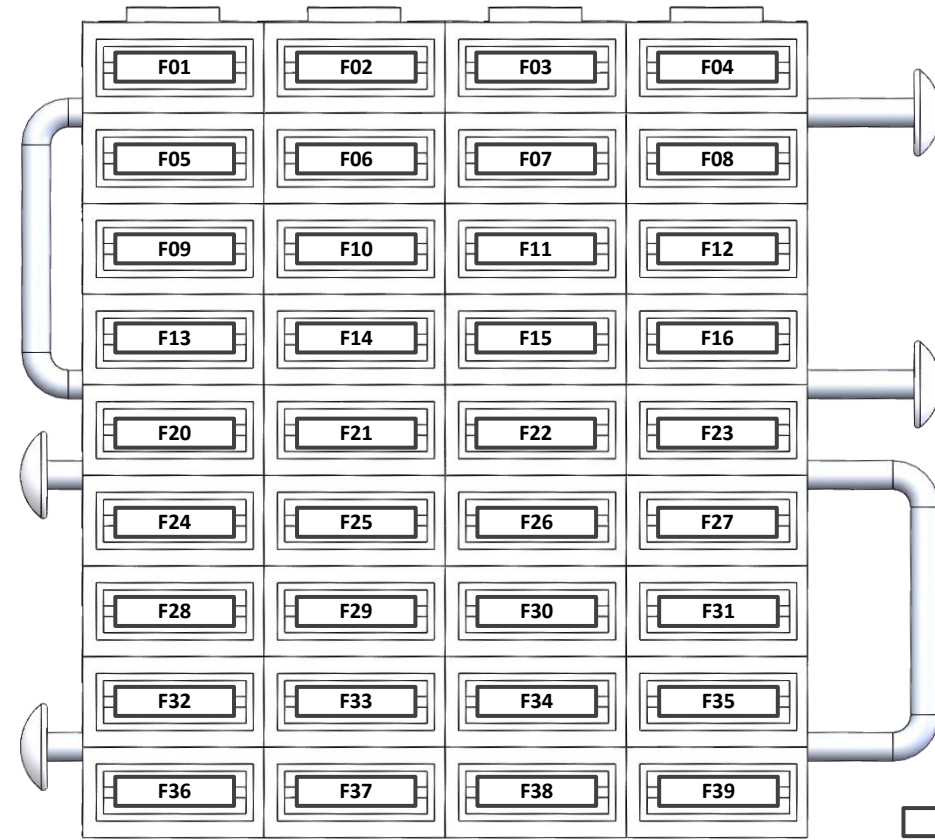
next Sheet 40

1	/	4105-30	16.12.19	DK	2018	Date	Name	CM1650	Name	Schaltplan / circuit diagram	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number				
					Drawn by	24.04.	DK					Replacem. for same no.	91039958			
A2	No. Number appears	Change No.	Date	Name	Standard			Change No. 4105-11	For this drawing we reserve all rights (acc. DIN ISO 16016)			KAB1 472	Type 1491	Dep. DS	No. of Sh. 46	Sheet 39



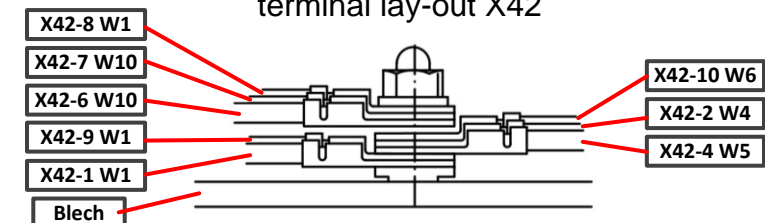
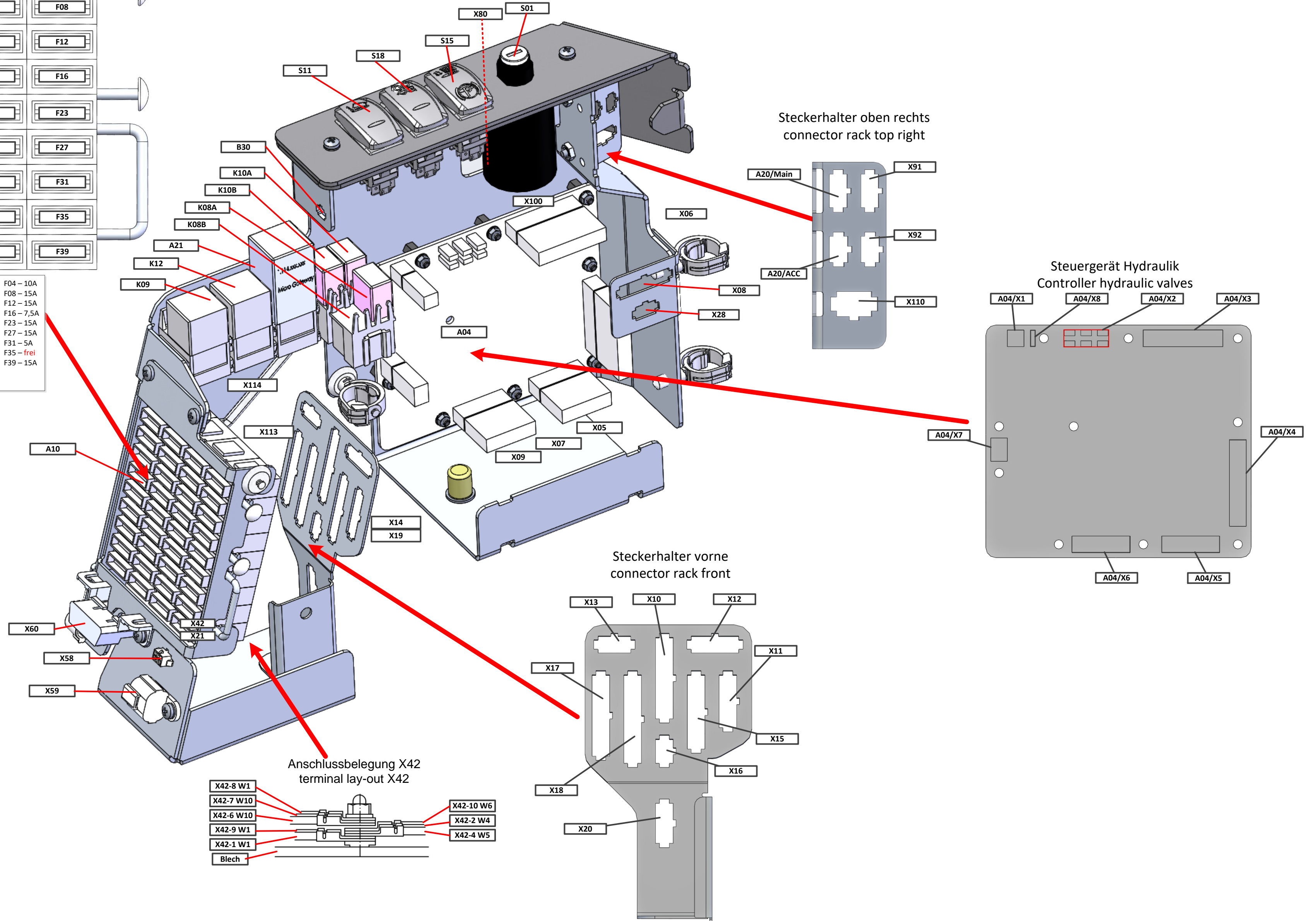
Seitenkonsole rechts side console right

Sicherungskasten
fuse box
Sicht von vorne (Sicherungsseite)
front view (fuses)



F01 - 20A	F02 - 15A	F03 - 20A	F04 - 10A
F05 - 5A	F06 - 10A	F07 - 15A	F08 - 15A
F09 - 10A	F10 - 15A	F11 - 15A	F12 - 15A
F13 - 10A	F14 - 15A	F15 - 7,5A	F16 - 7,5A
F20 - 7,5A	F21 - 10A	F22 - 5A	F23 - 15A
F24 - 5A	F25 - 10A	F26 - 15A	F27 - 15A
F28 - 10A	F29 - 5A	F30 - 10A	F31 - 5A
F32 - frei	F33 - frei	F34 - frei	F35 - frei
F36 - 5A	F37 - 7,5A	F38 - 10A	F39 - 15A

F32 - F35 SOW



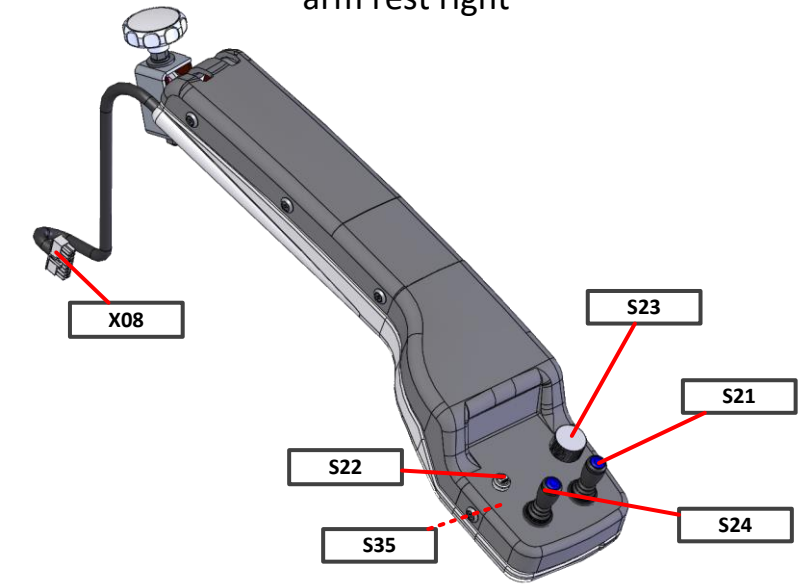
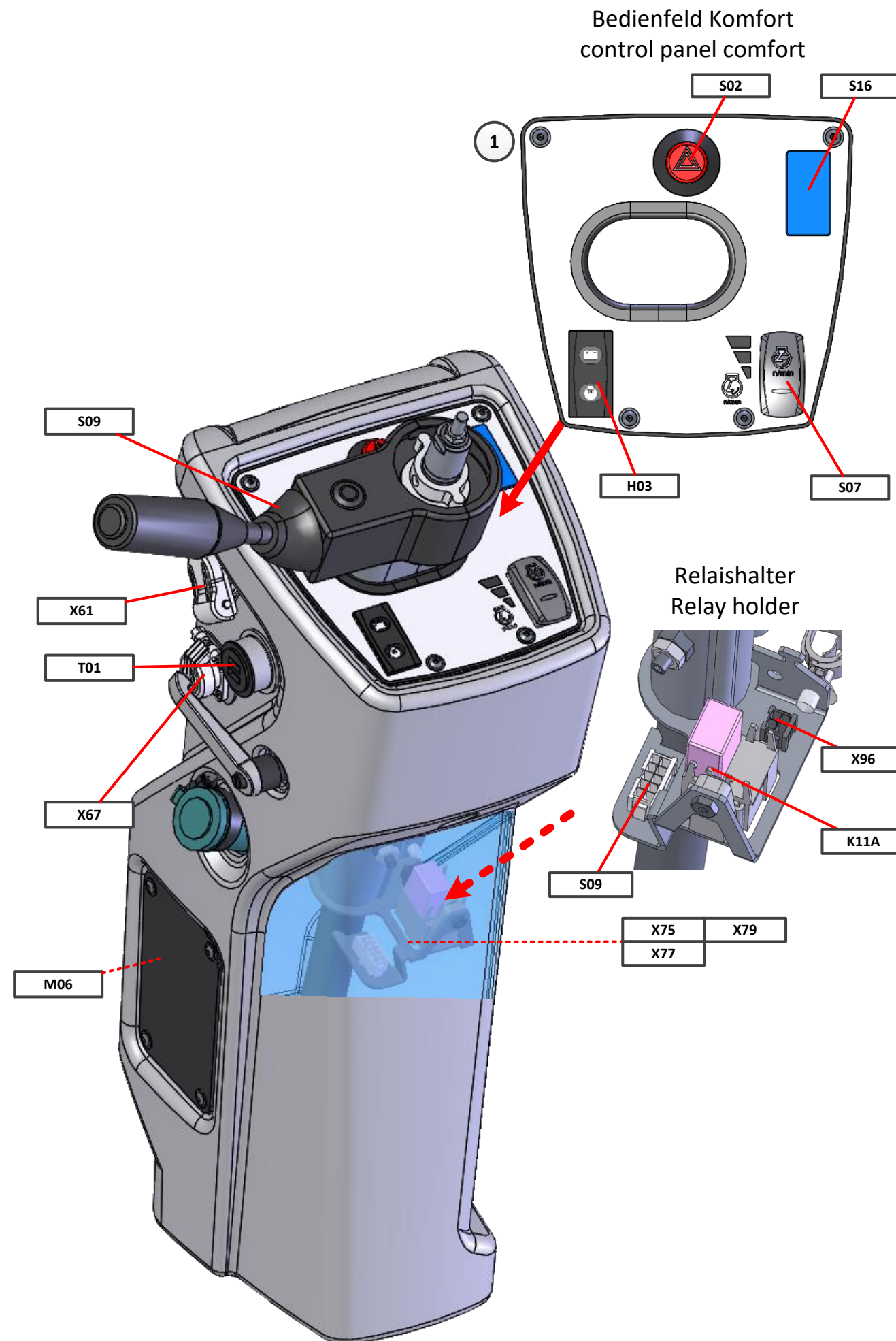
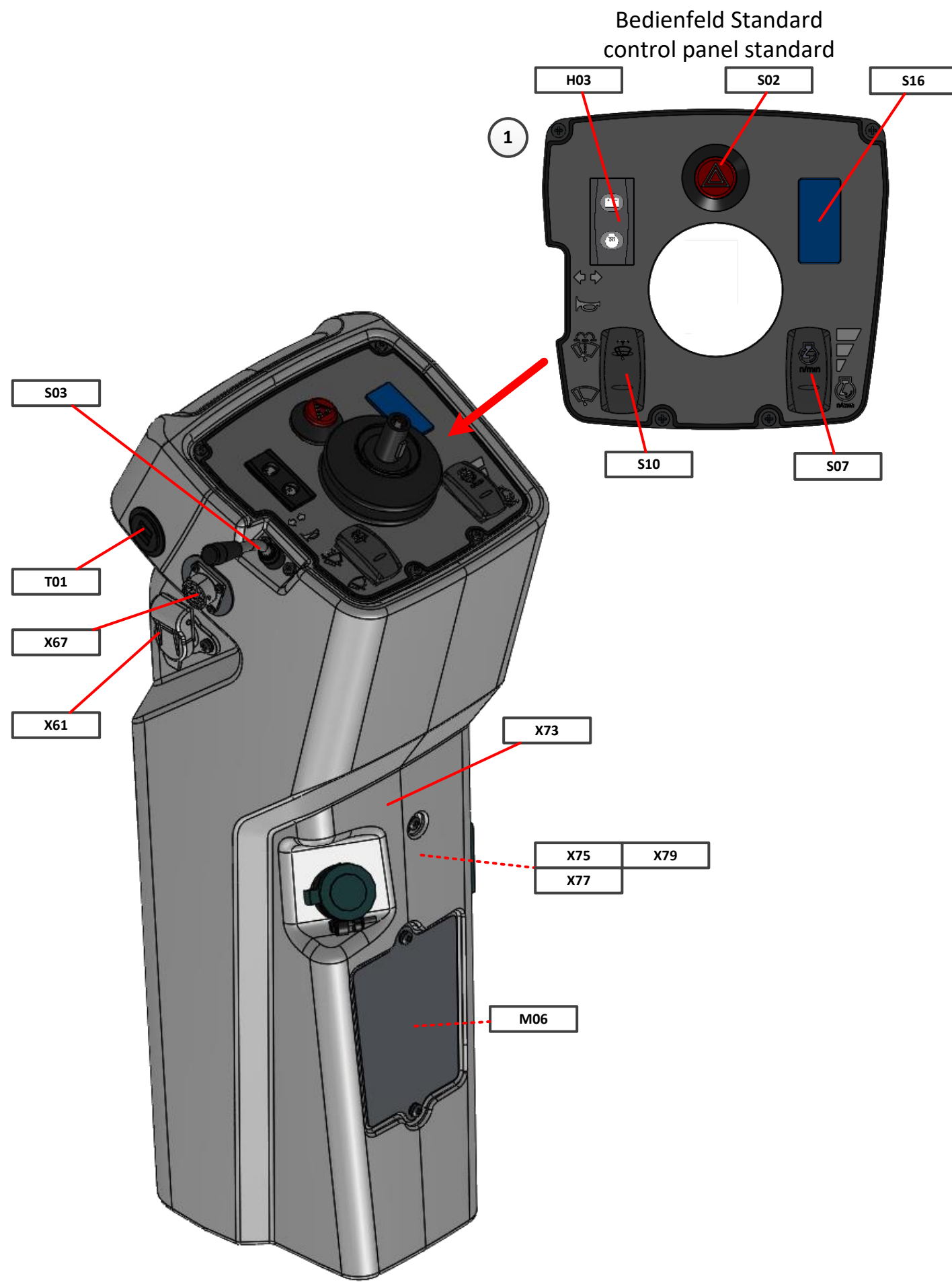
Lenksäule Standard steering columns standard

Lenksäule Komfort steering columns comfort

Bedienfeld Standard
control panel standard

Bedienfeld Komfort
control panel comfort

Armlehne rechts
arm rest right

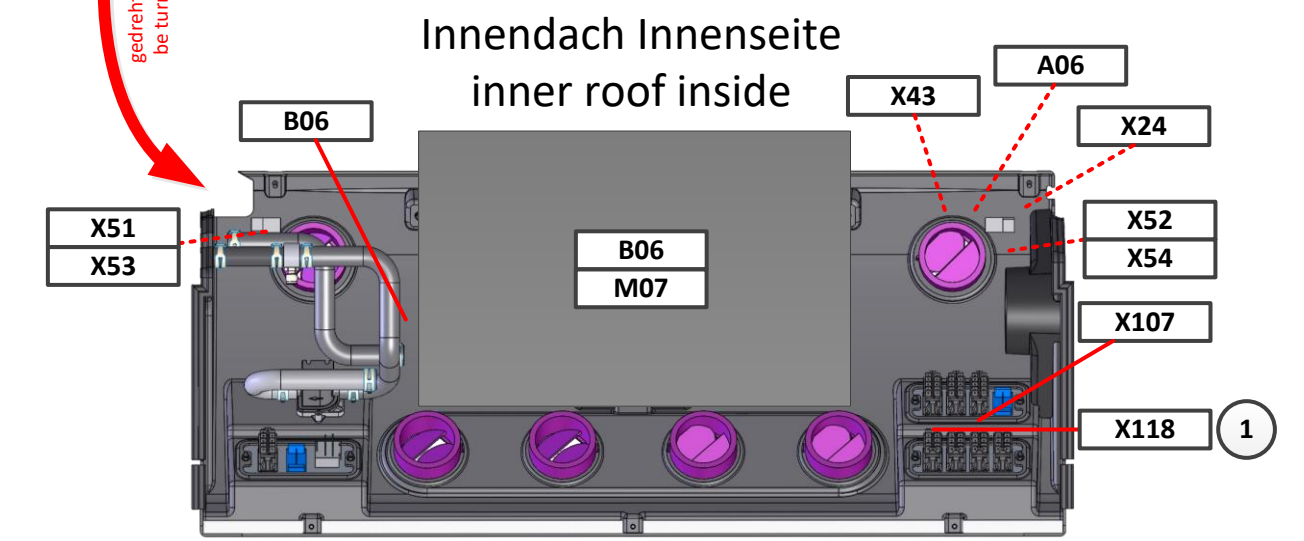
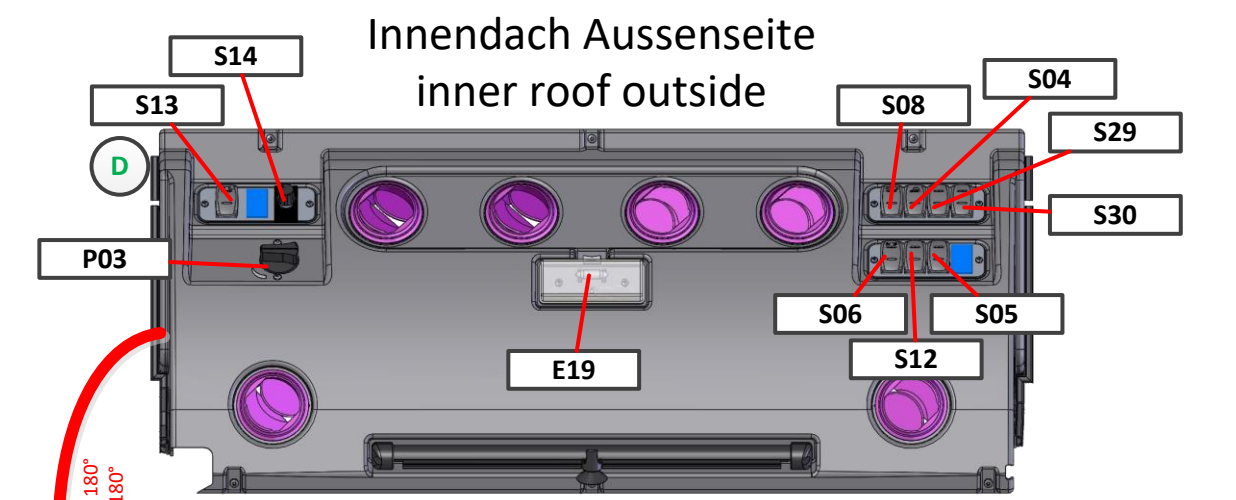
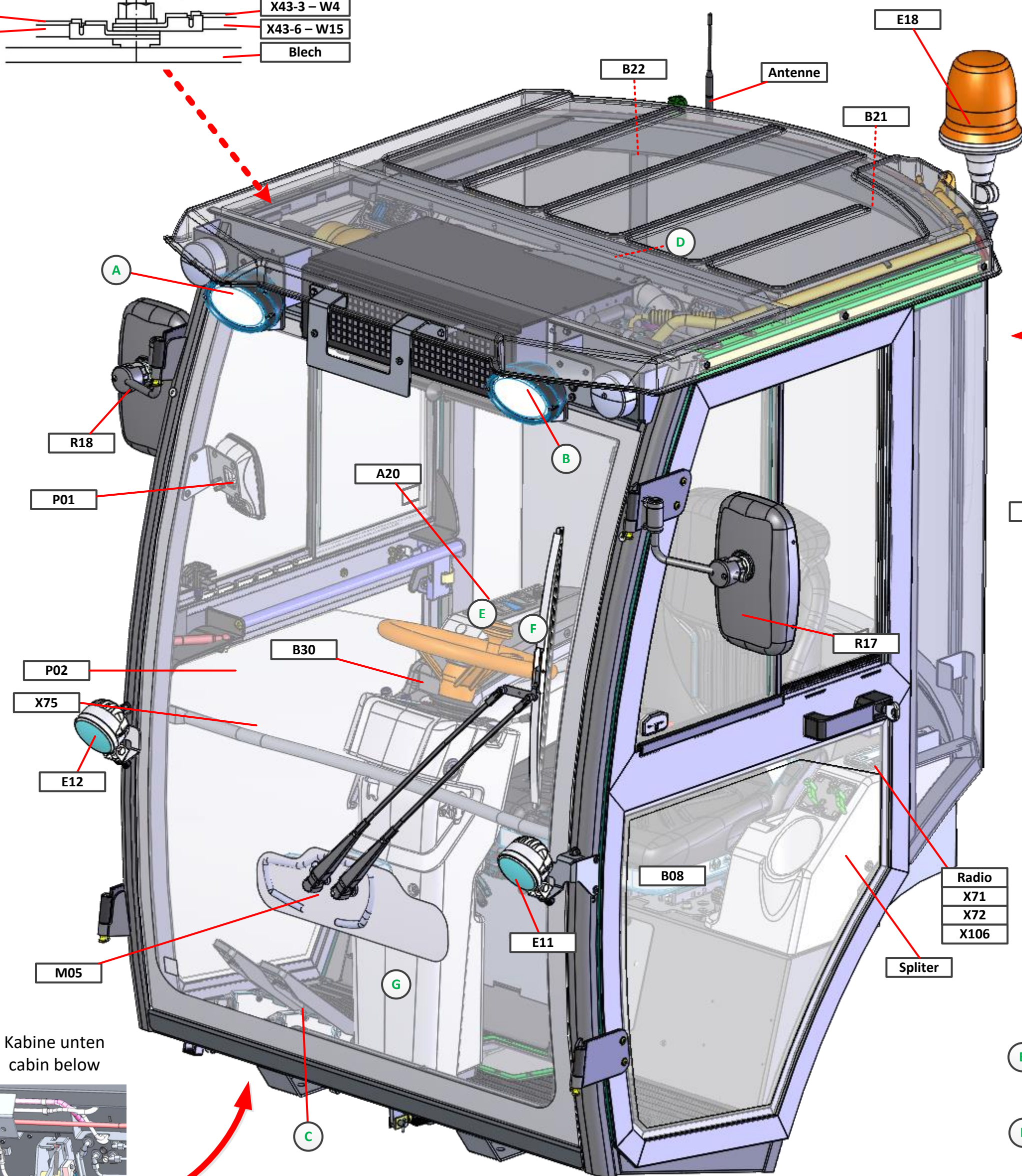
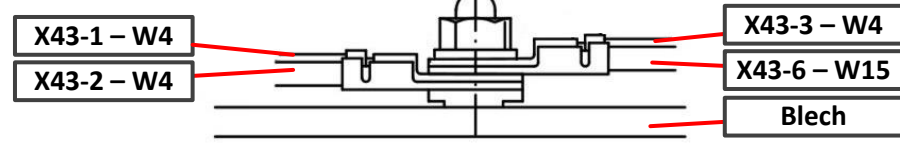


Freigabevermerk:				A2 1 2x		4105-30	16.12.2019	LK/DK	Date	Name	CM1650	Name	Schaltplan		Drawing Number				
				No. Number appears		Change No.	Date	Name	Standard	Drawn	31.07.2019	LK	circuit diagram		91039958				
										Verified		Replacem. for	For this drawing we reserve all rights (acc. DIN ISO 16016)		Engineering Base 6.8.2	Type 1491	Dept.DS	No of Sheets 57	Sheet 48

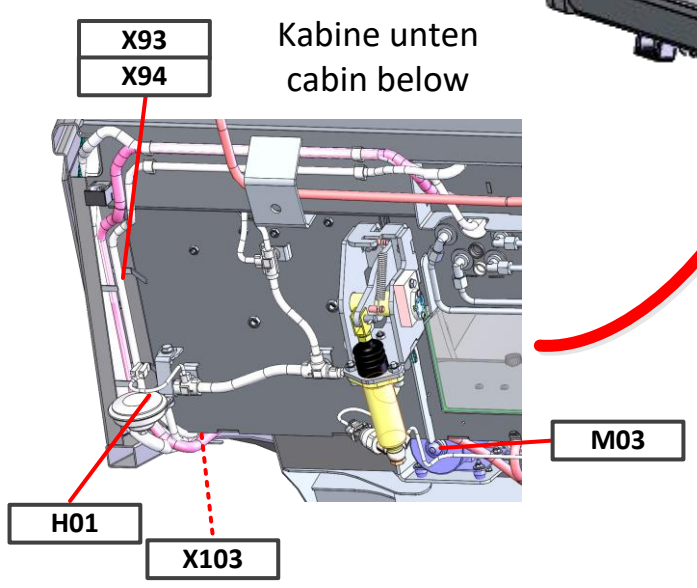
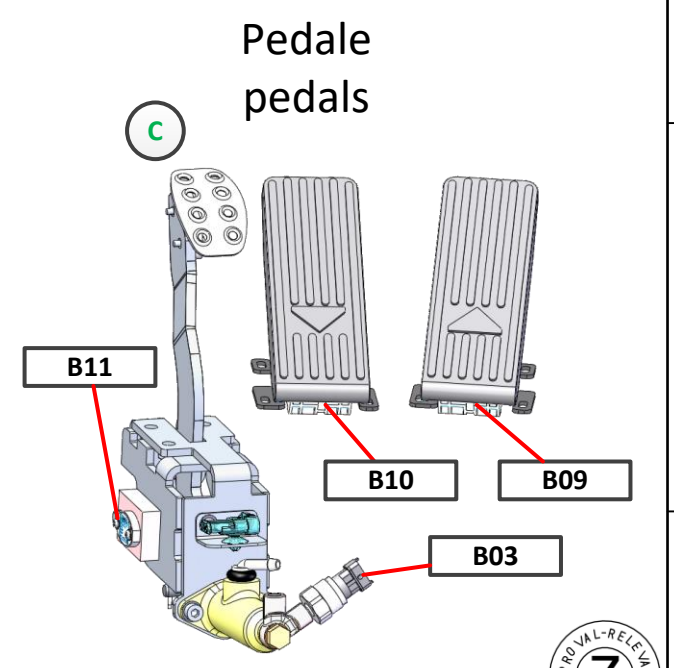
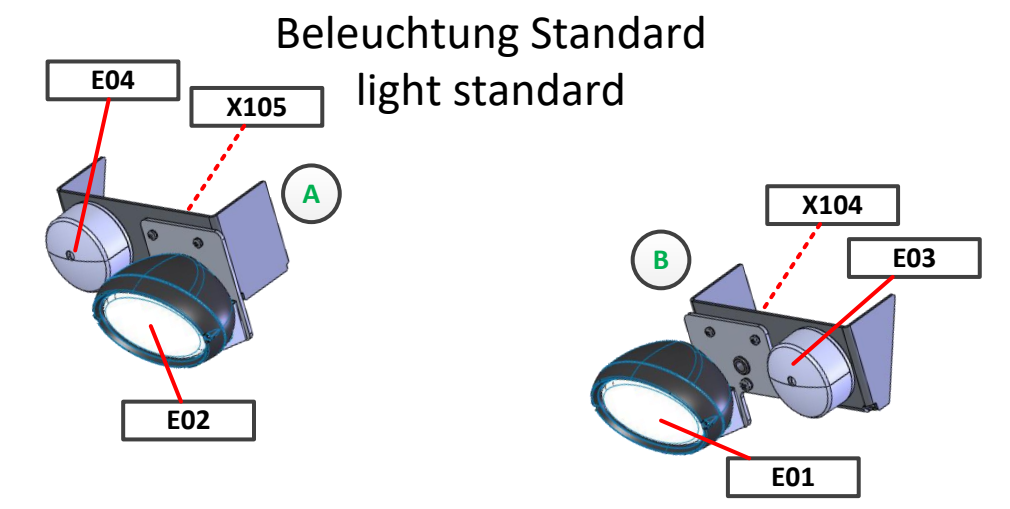
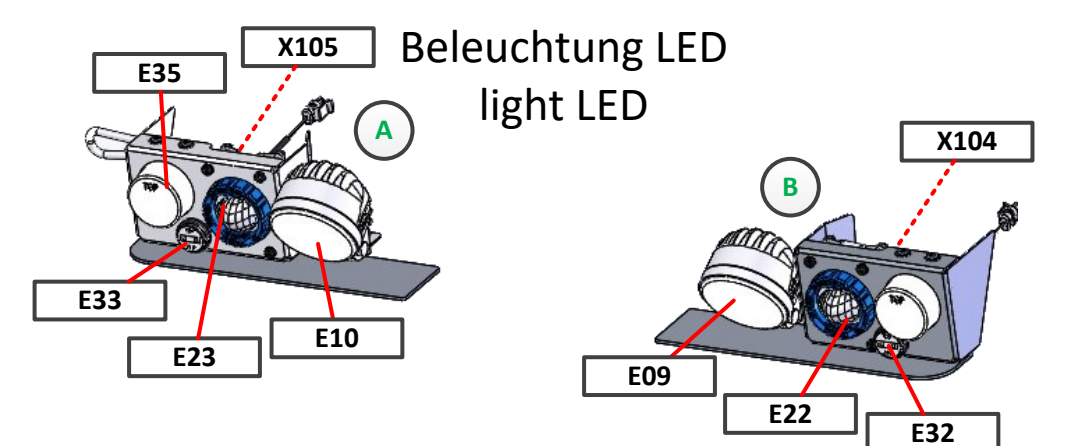
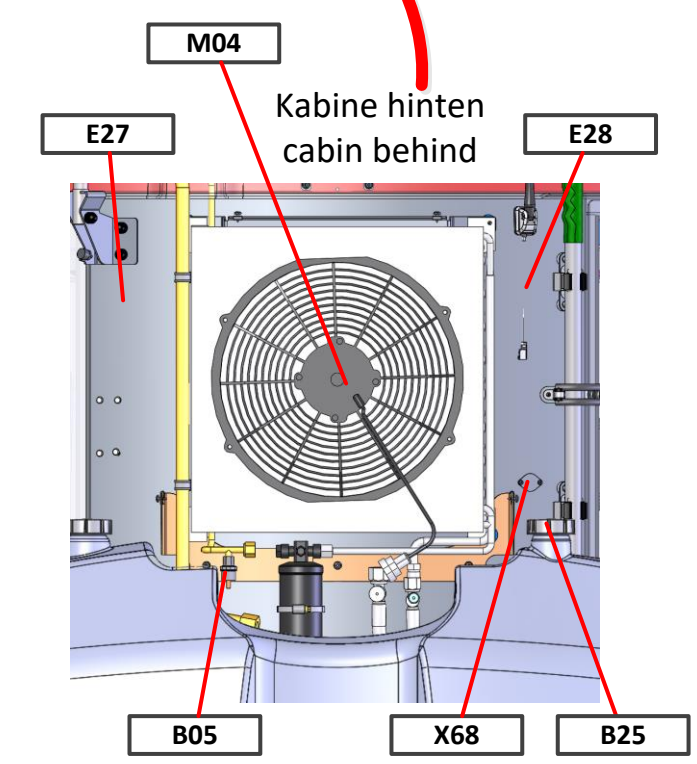


Kabine komplett
Cabin complete

Anschlussbelegung X43
terminal lay-out X43



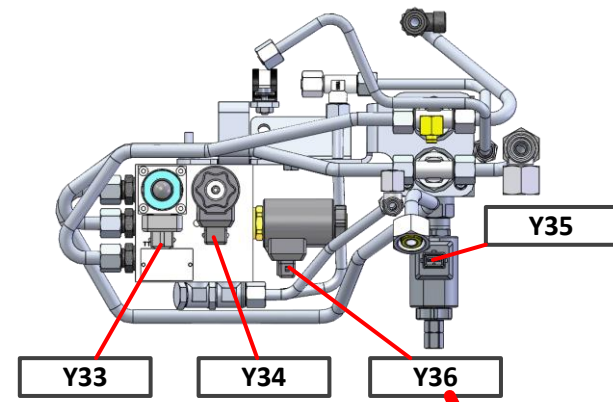
gedreht um 180°
be turned 180°



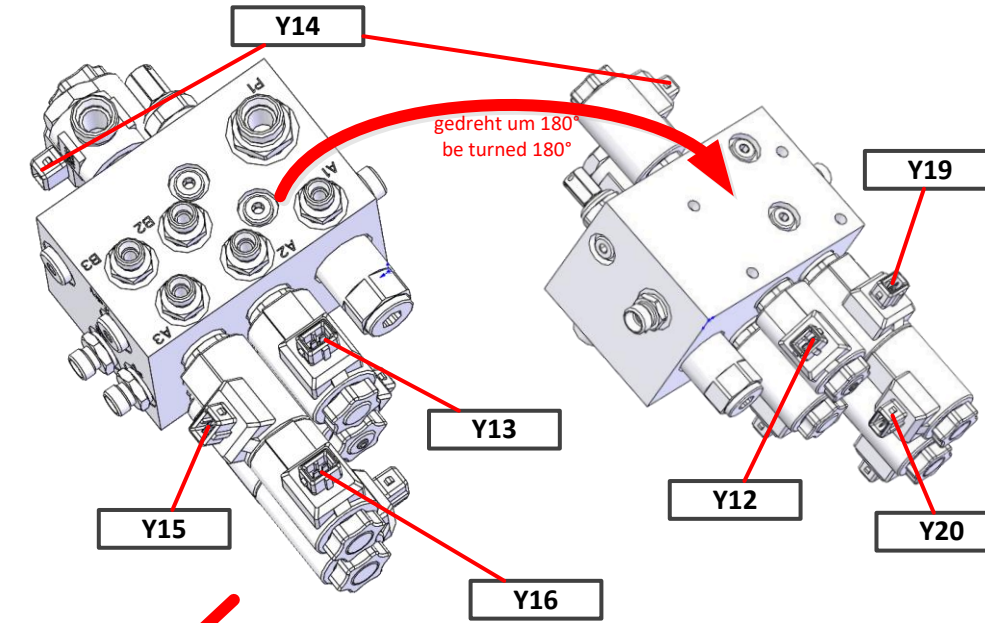
- (E) Siehe: Seitenkonsole rechts
show: side console right
- (F) Siehe: Armlehne
show: arm rest
- (G) Siehe: Lenksäule
show: steering columns

Freigabevermerk:		A2 1 1x		4105-30	16.12.2019	LK/DK	Drawn 31.07.2019 LK	Date Name Standard	CM1650	Replacem. for Change No. 4105-11	Name Schaltplan circuit diagram			Drawing Number 91039958		
For this drawing we reserve all rights (acc. DIN ISO 16016)												Engineering Base 6.8.2	Type 1491	Dept.DS	No of Sheets 57	Sheet 49

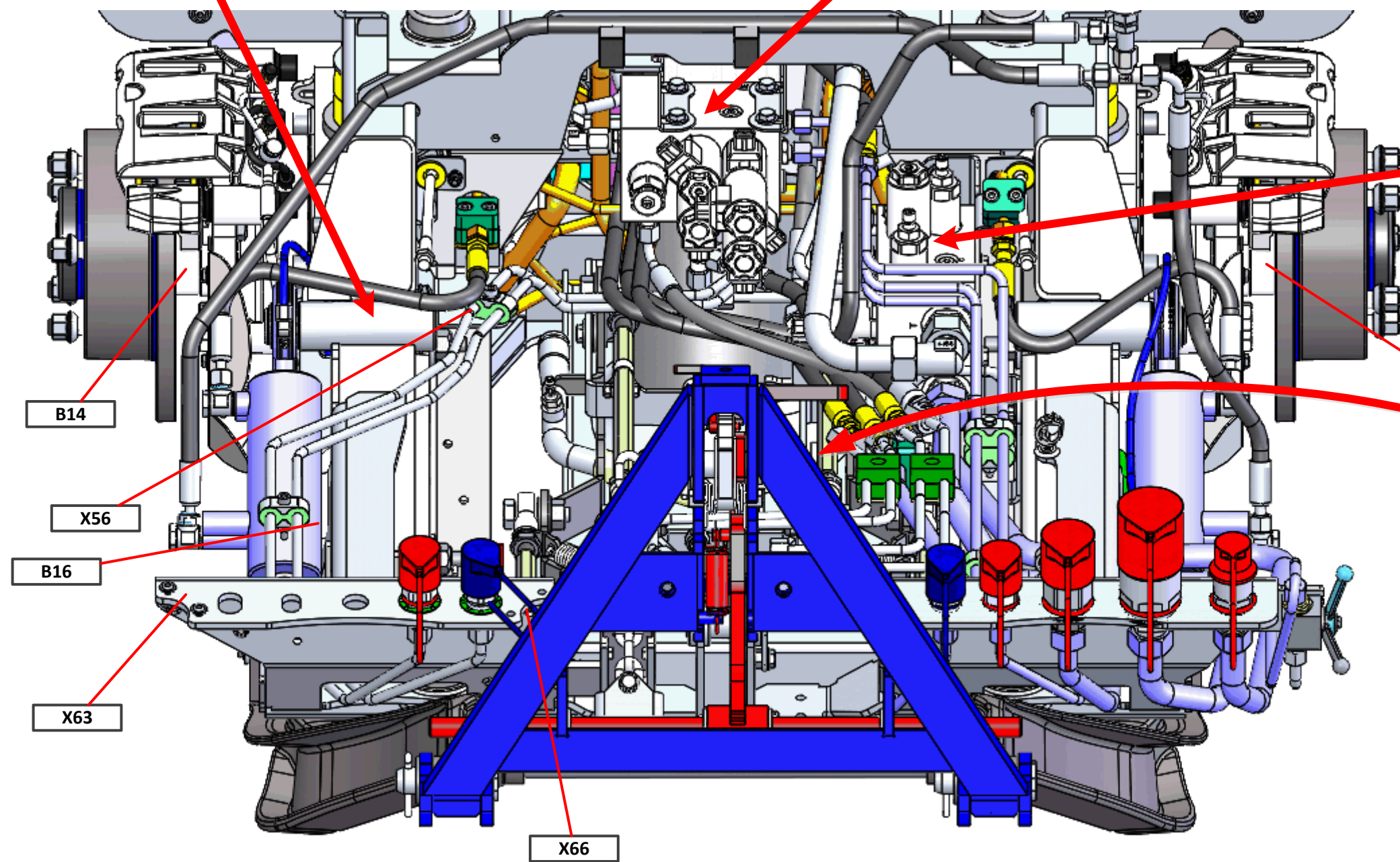
Hydraulik Anbaugeräte Entlastung (Option)
hydraulic attachments discharge (option)



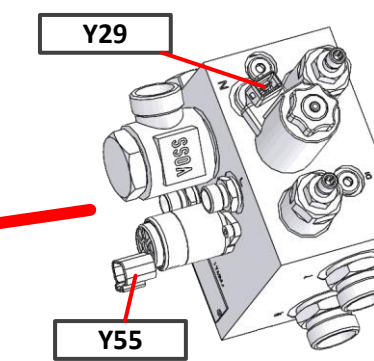
Hydraulik Steuerblockvorderwagen
hydraulic control block front vehicle



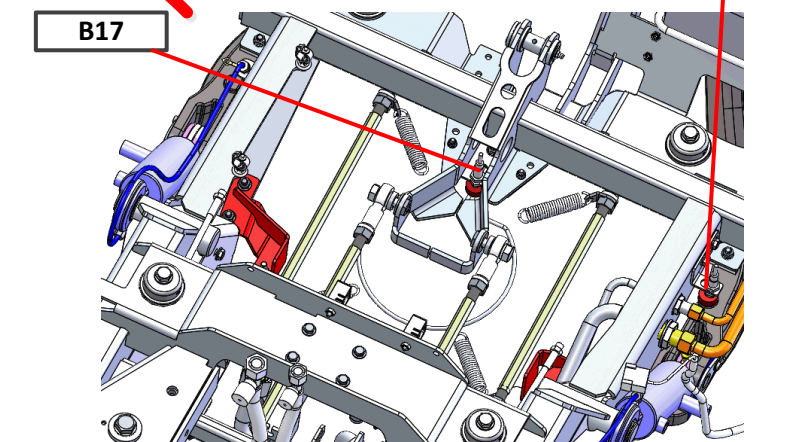
Vorderwagen
front vehicle



Hydraulik rotatorisch Front
hydraulic rotatory front



Saugmundaufnahme
nozzle absorption

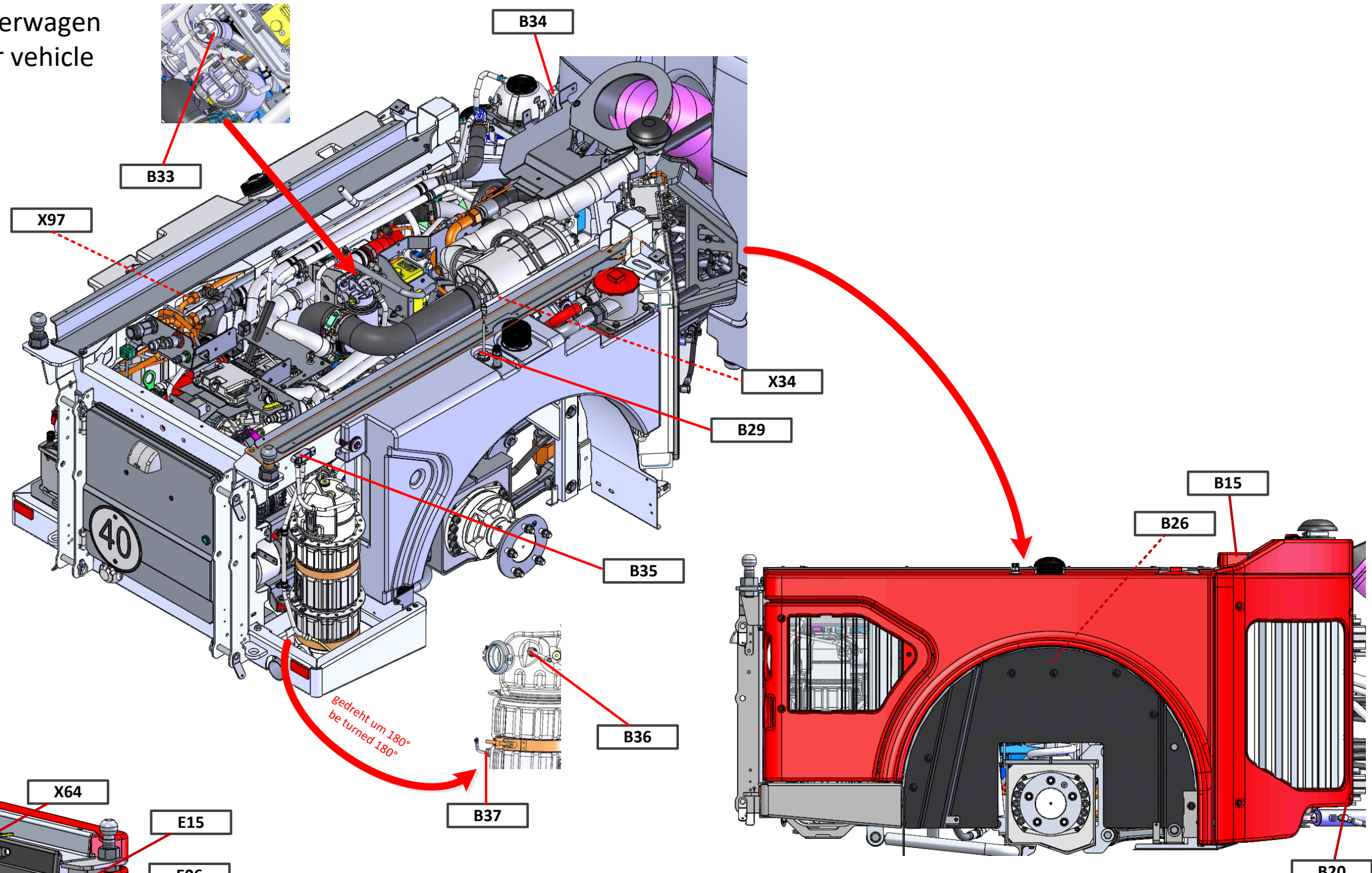
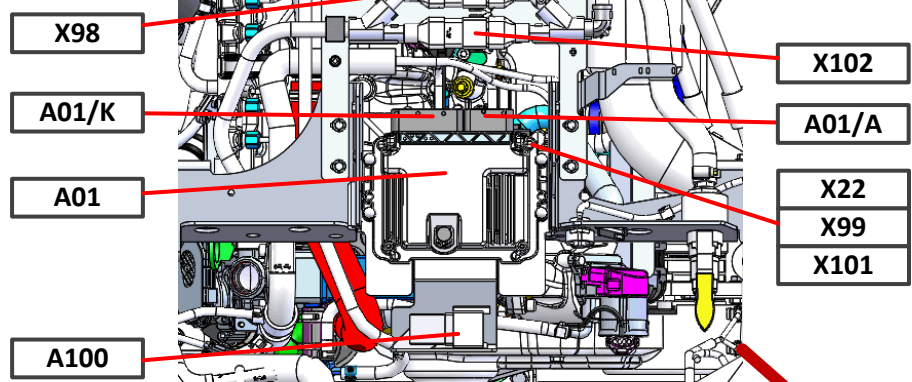


Freigabevermerk:				Date		Name		CM1650		Name		Drawing Number	
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No. Number appears				Change No.		Date		Name		For this drawing we reserve all rights (acc. DIN ISO 16016)		Sheet 50	
										Engineering Base 6.8.2		Type 1491 Dept.DS	

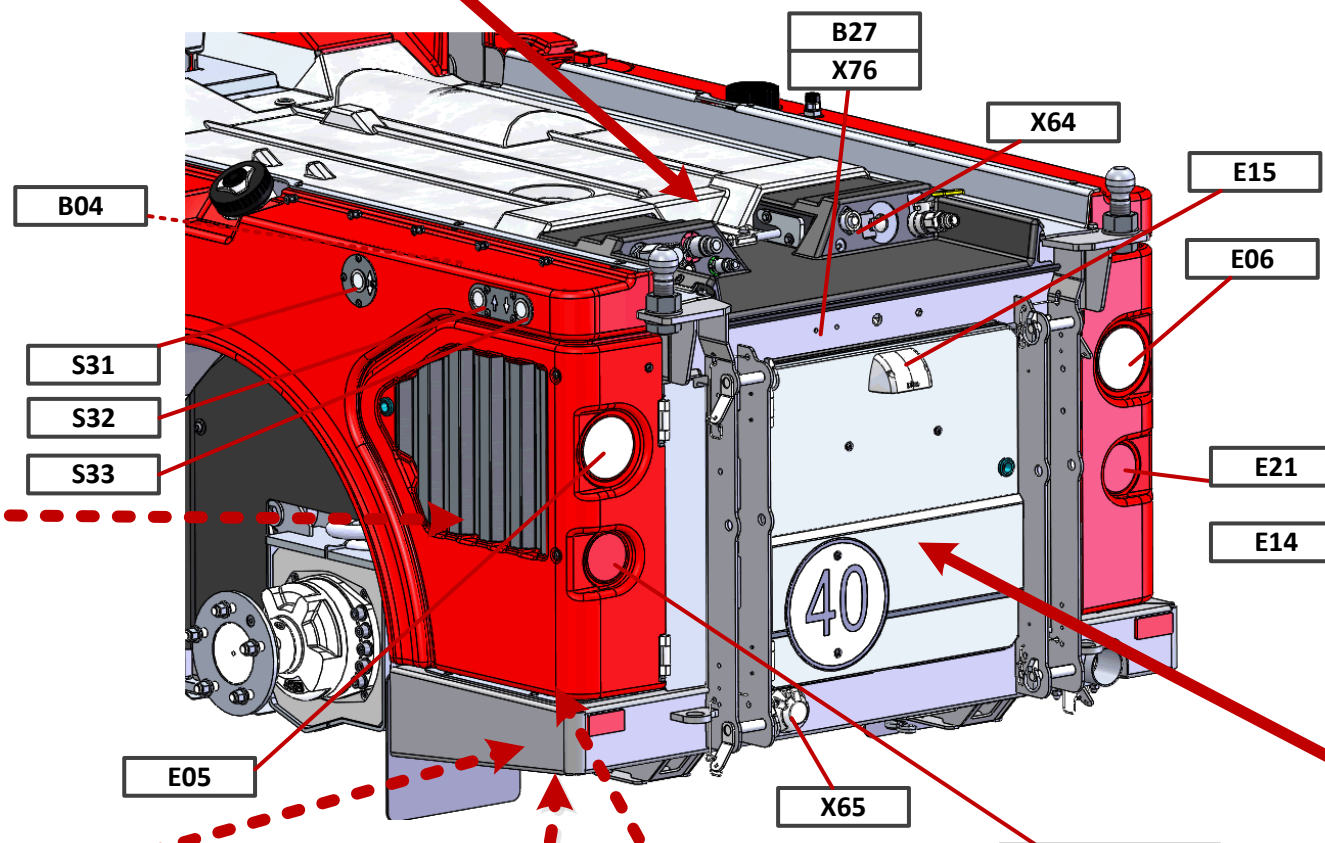
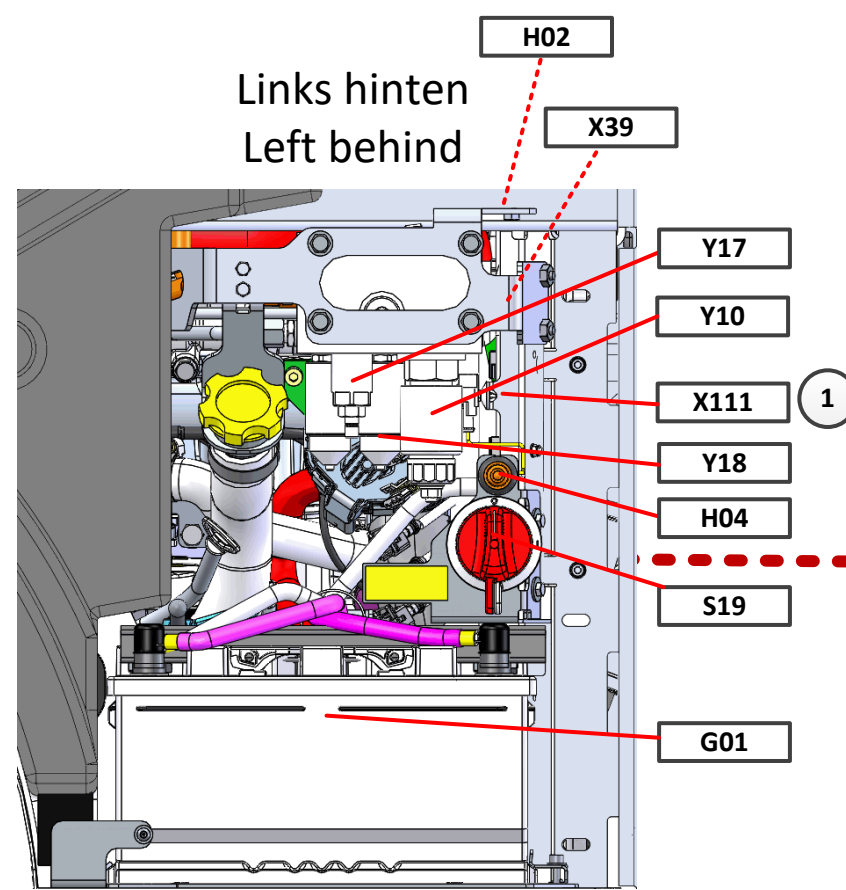


Hinterwagen
rear vehicle

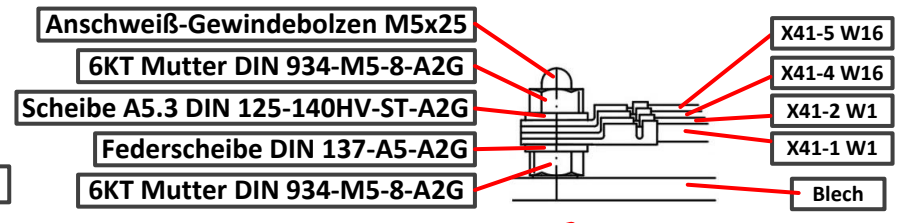
Motorsteuergerät
engine control unit



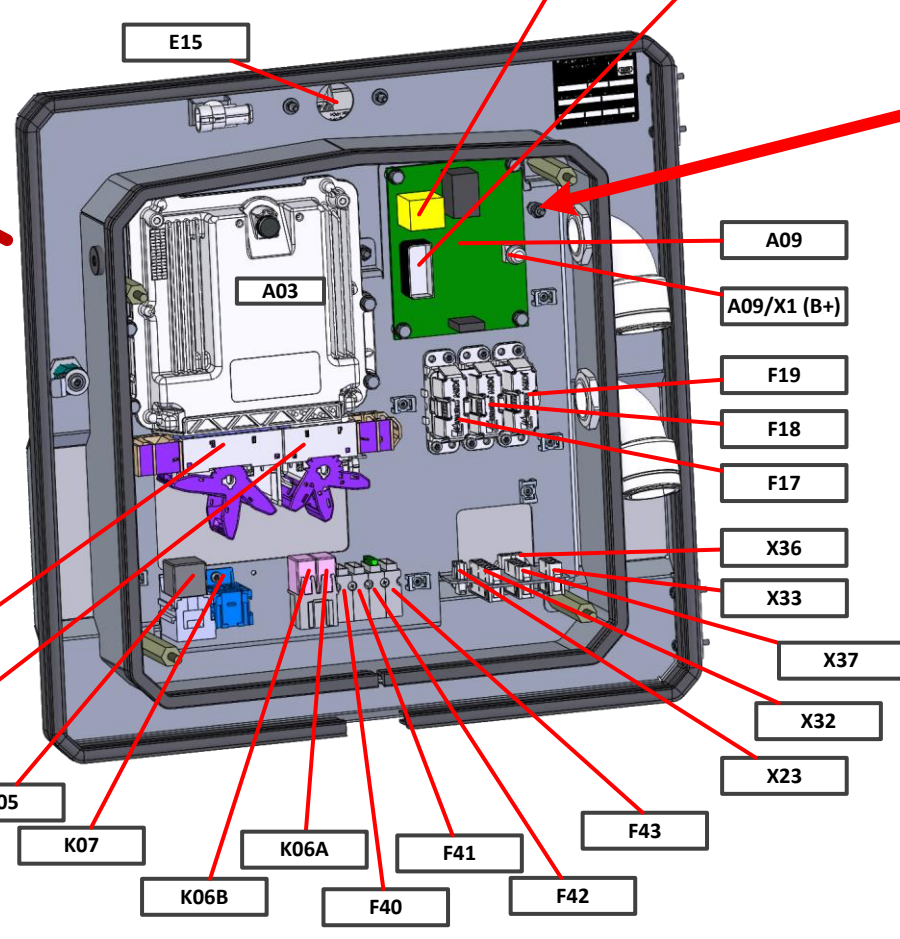
Links hinten
Left behind



Anschlussbelegung X41
terminal lay-out X41

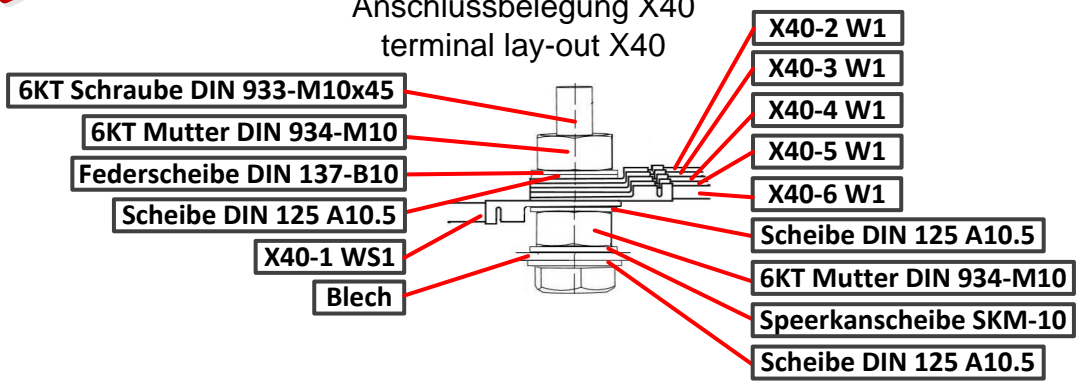


E-Kasten
e-box



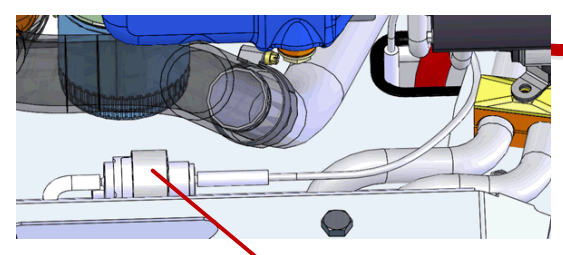
E14 Rechtsverkehr
right-hand traffic
E21 Linksverkehr
left-hand traffic

Anschlussbelegung X40
terminal lay-out X40



1

M12 A11



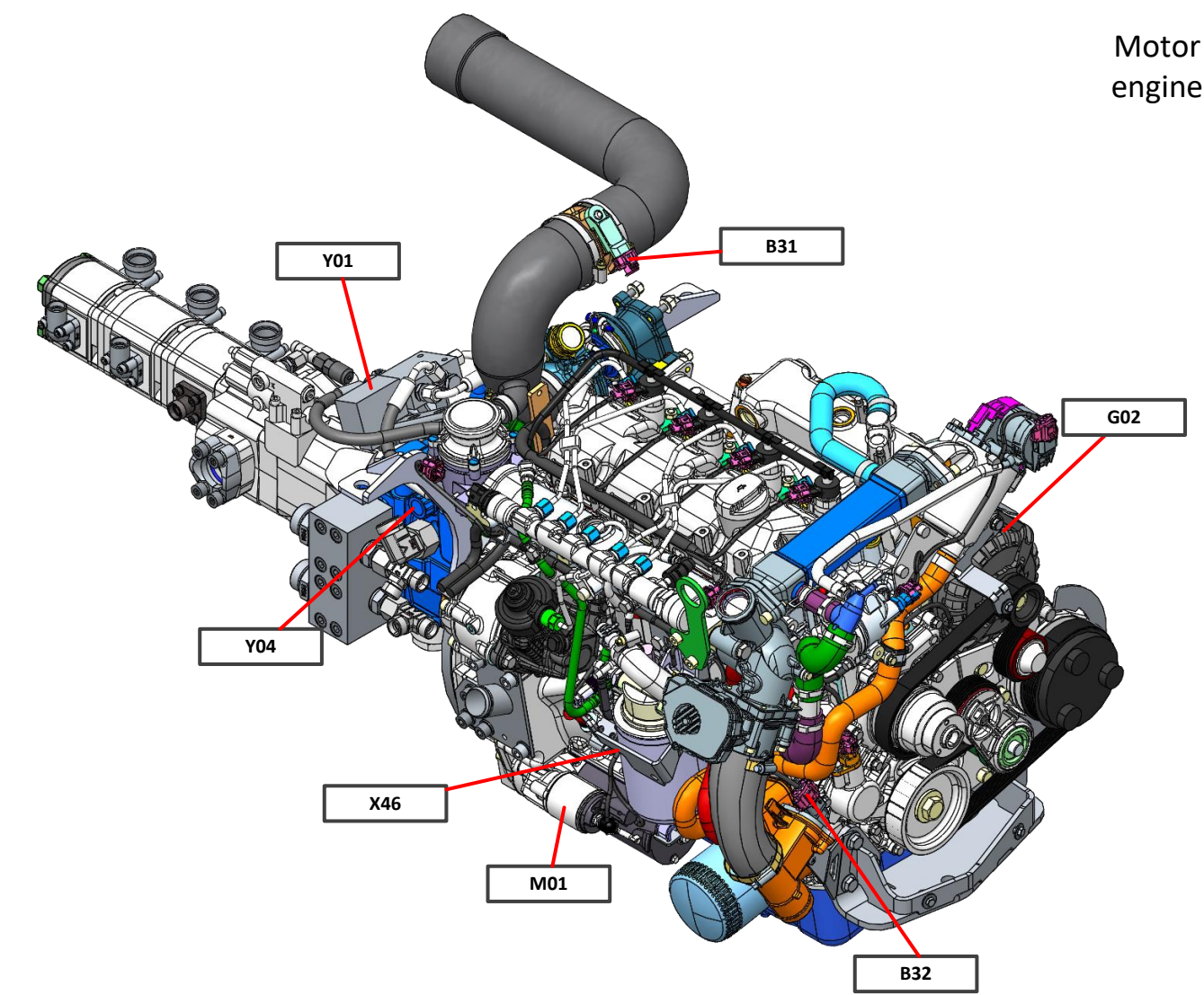
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Freigabevermerk:

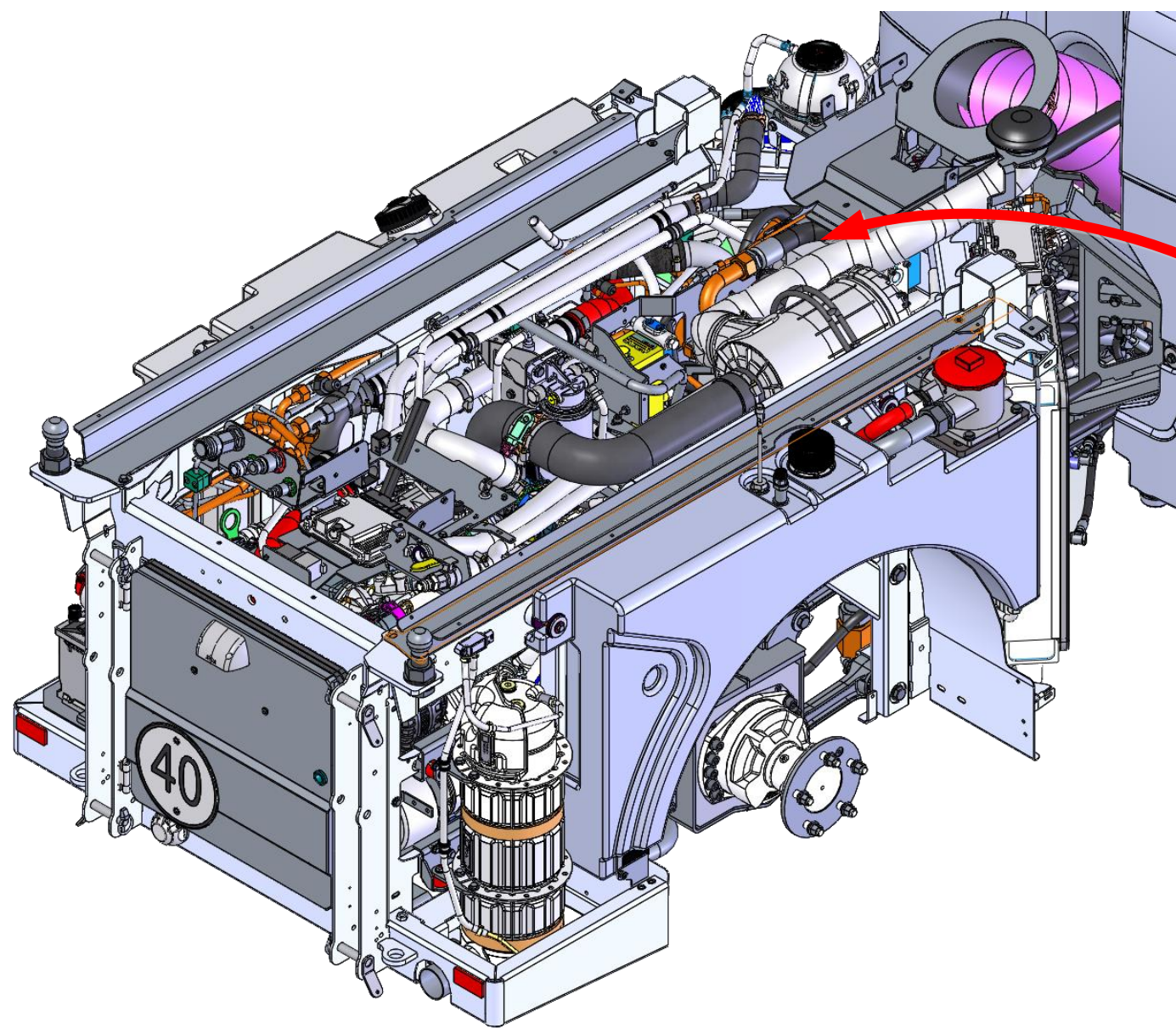
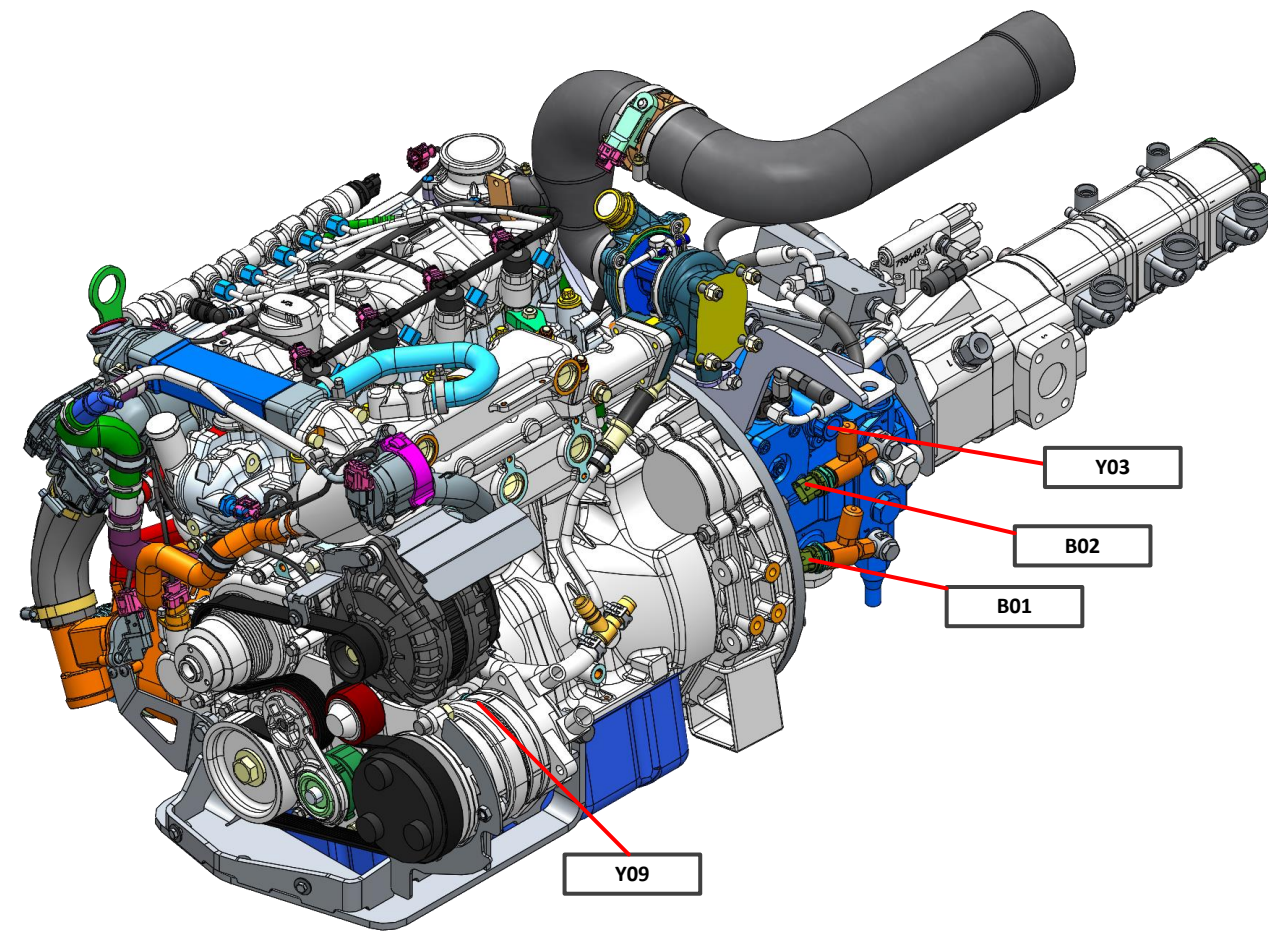
A2	1	2x	4105-30	16.12.2019	LK/DK	Drawn	Date	Name	CM1650
						Verified			Replacem. for
									Change No. 4105-11

Name Schaltplan circuit diagram		Hako Hako GmbH D-23840 Bad Dilsdorf		Drawing Number 91039958	
For this drawing we reserve all rights (acc. DIN ISO 16016)		Engineering Base 6.8.2		Type 1491 Dept.DS	
		No of Sheets 57		Sheet 51	

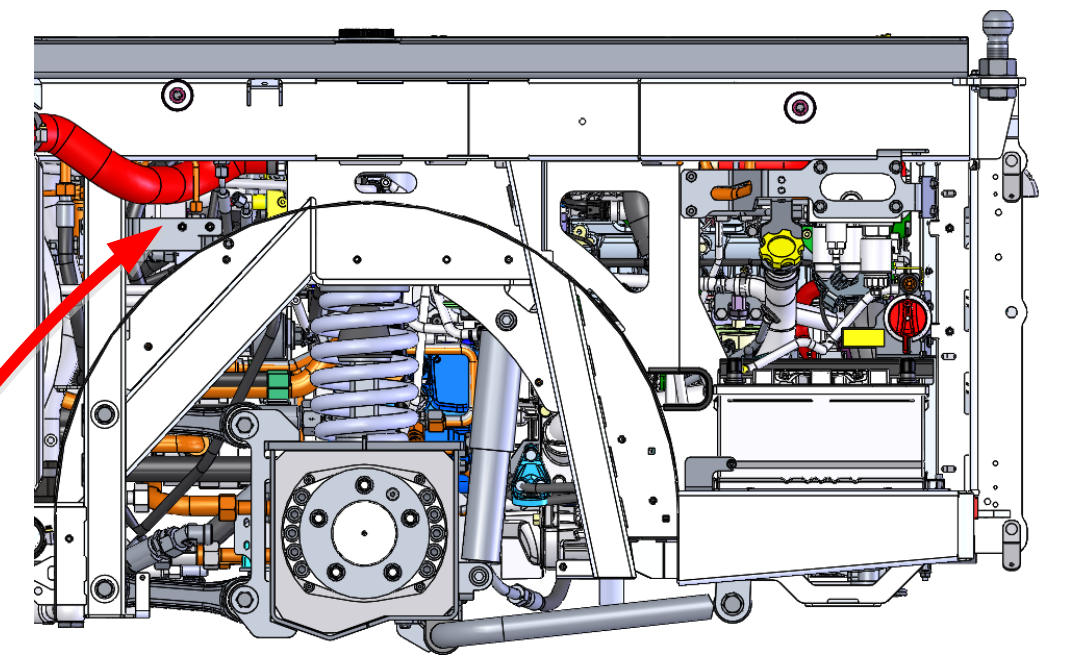
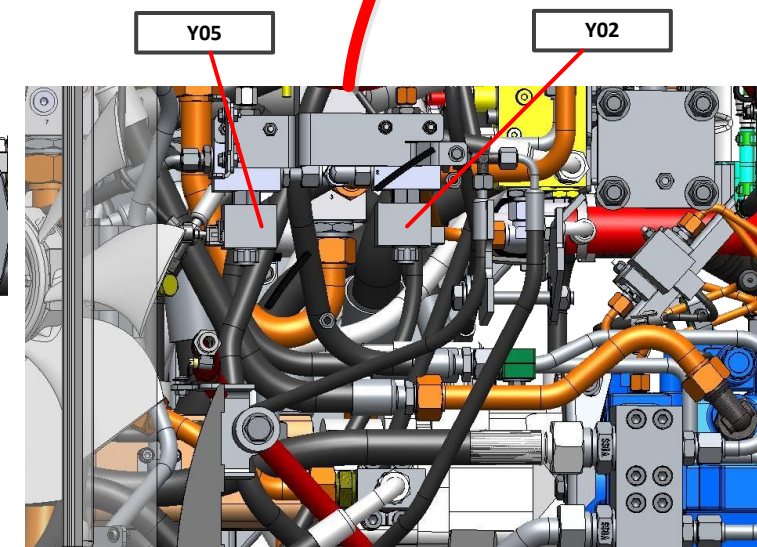
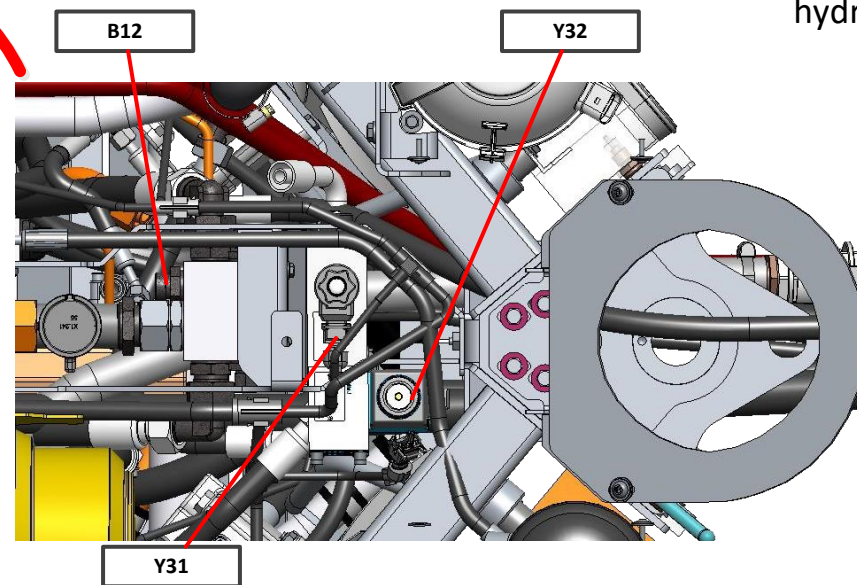




Motor engine



Hydraulik hydraulic



Freigabevermerk:				Date		Name		Name		Drawing Number	
A2	1	J.	4105-30	16.12.2019	LK/DK	Drawn	31.07.2019	LK	CM1650	Schaltplan	
				Date		Name		Replacem. for		circuit diagram	
No. Number appears				Change No.		Standard		Change No. 4105-11		For this drawing we reserve all rights (acc. DIN ISO 16016)	
				Date		Name		Engineering Base 6.8.2		Type 1491 Dept.DS	
										No of Sheets 57	
										Sheet 52	



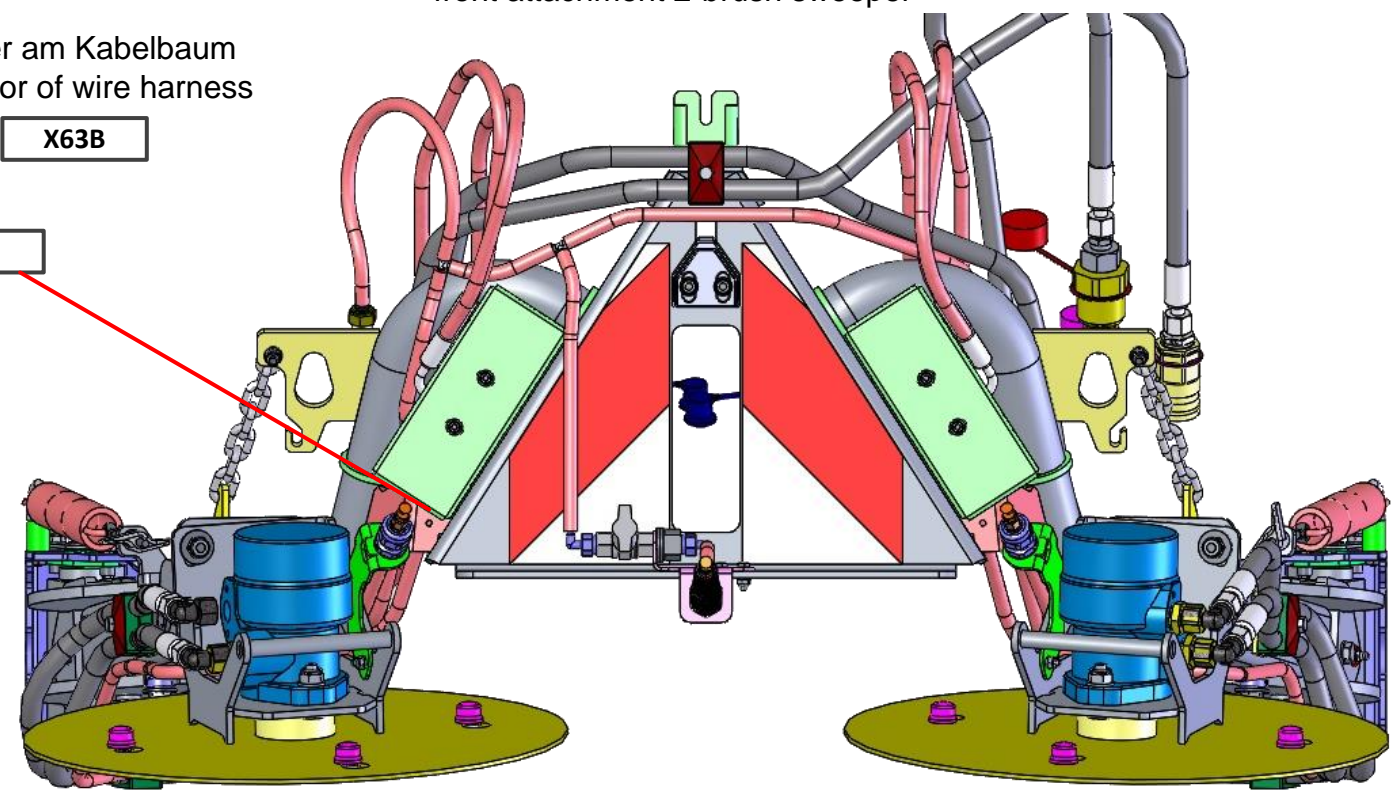
91039958

Frontaggregat 2-Besen Kehrvorsatz
front attachment 2-brush sweeper

Stecker am Kabelbaum
connector of wire harness

X63B

X44

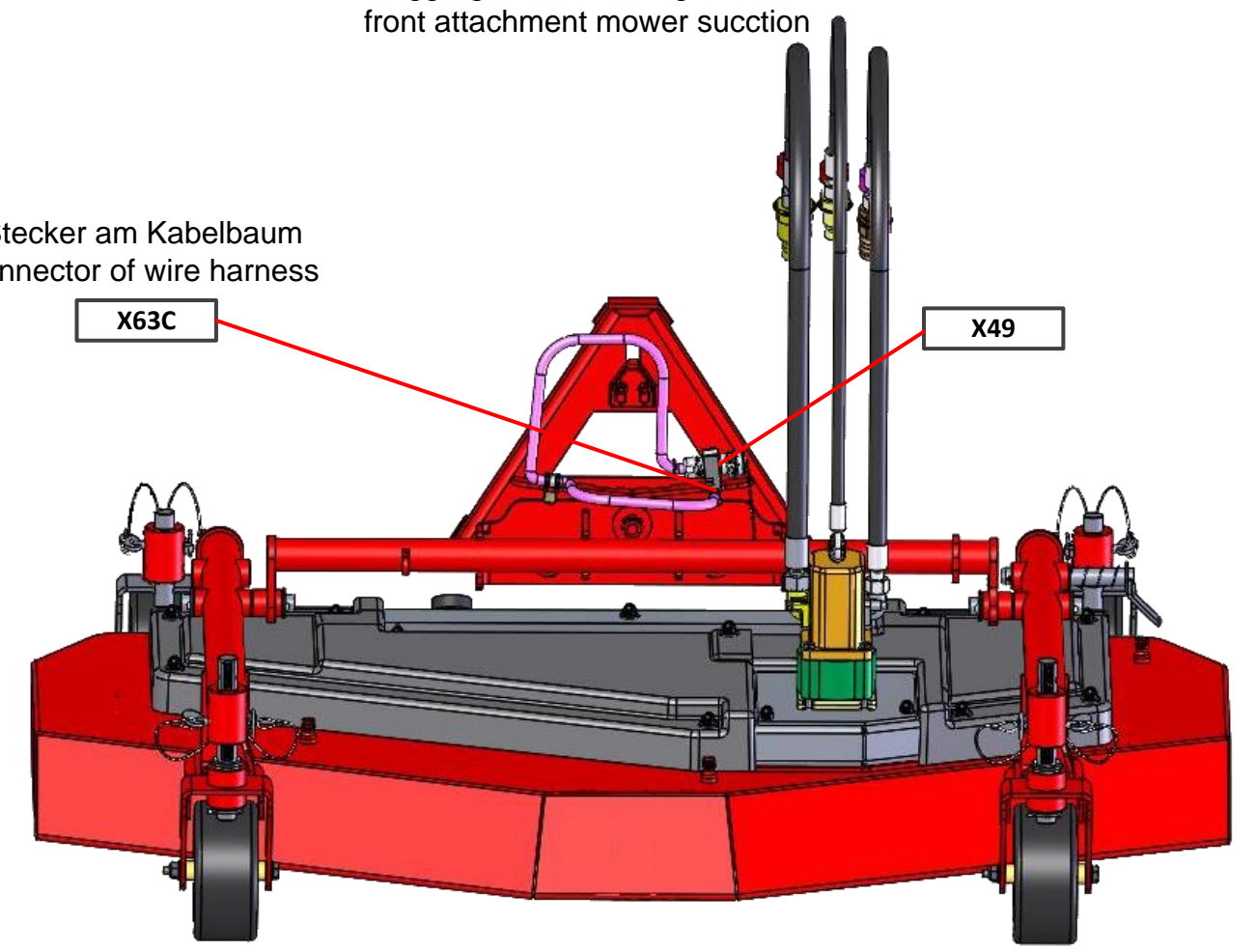


Frontaggregat Mäher-Saugkombination
front attachment mower suction

Stecker am Kabelbaum
connector of wire harness

X63C

X49



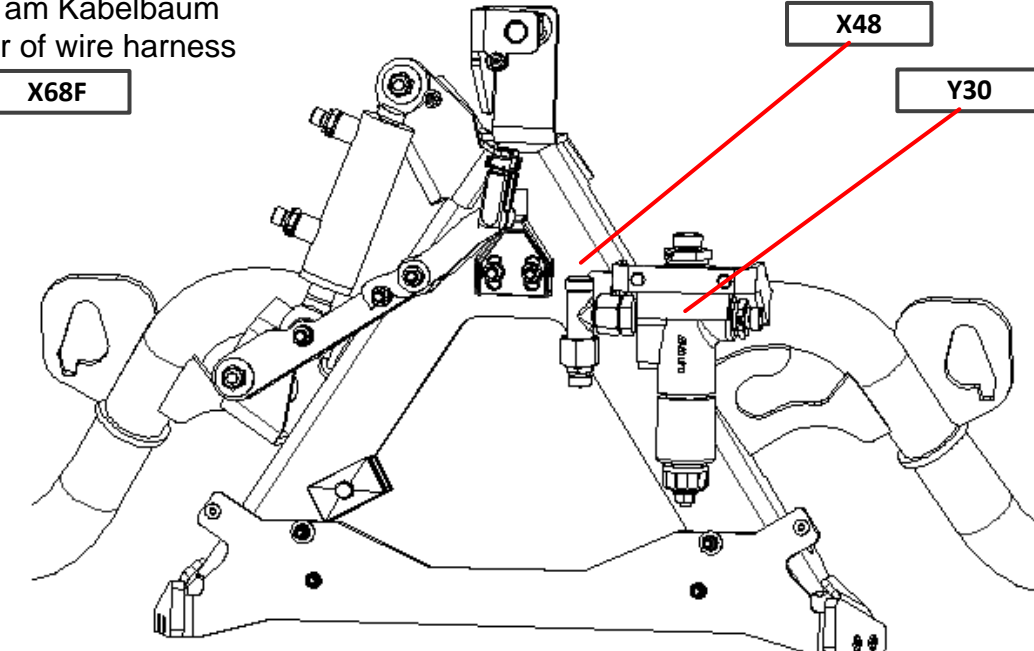
Frontaggregat unkodiert
front attachment uncoded

Stecker am Kabelbaum
connector of wire harness

X68F

X48

Y30



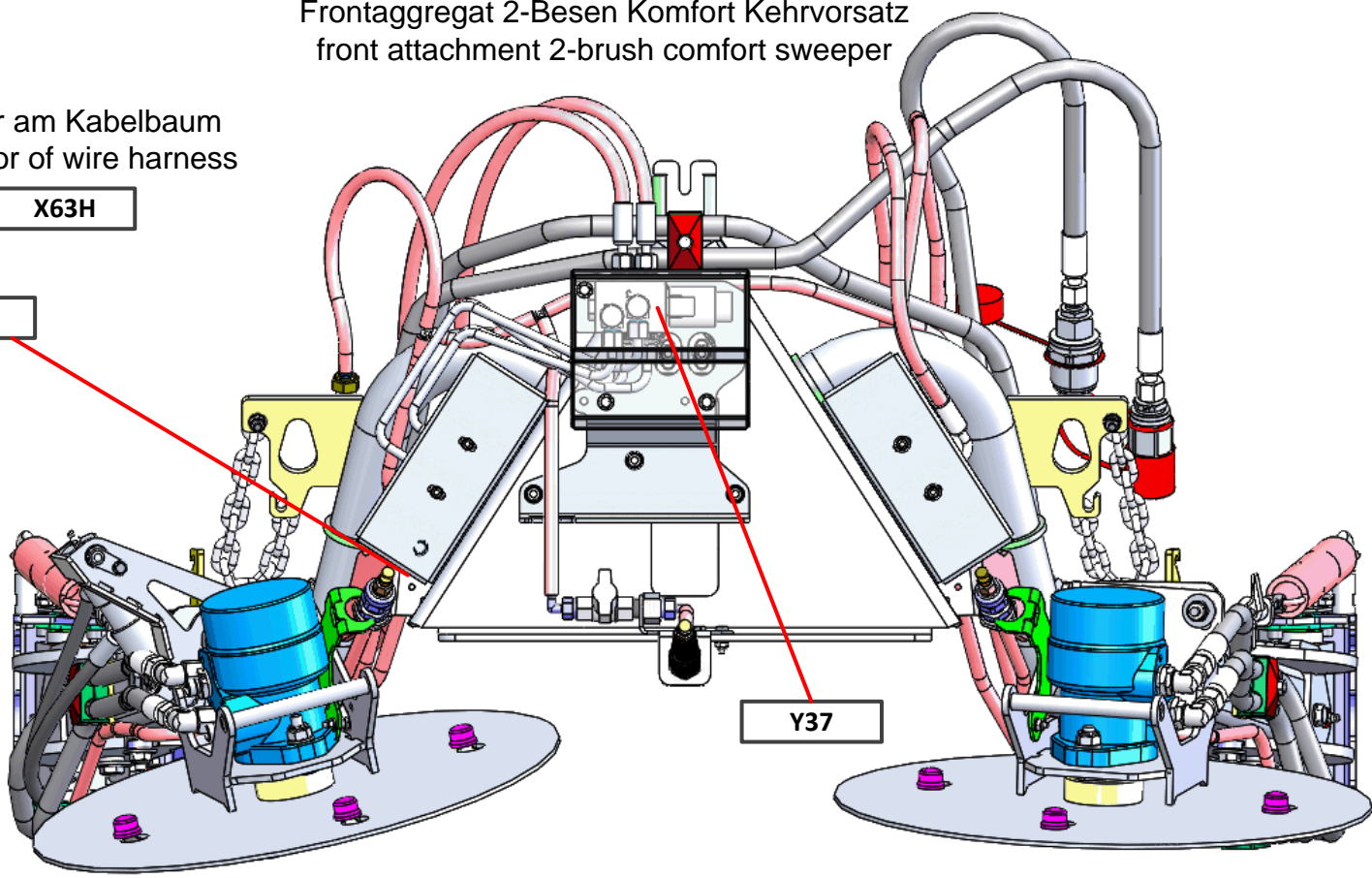
Frontaggregat 2-Besen Komfort Kehrvorsatz
front attachment 2-brush comfort sweeper

Stecker am Kabelbaum
connector of wire harness

X63H

X117

Y37

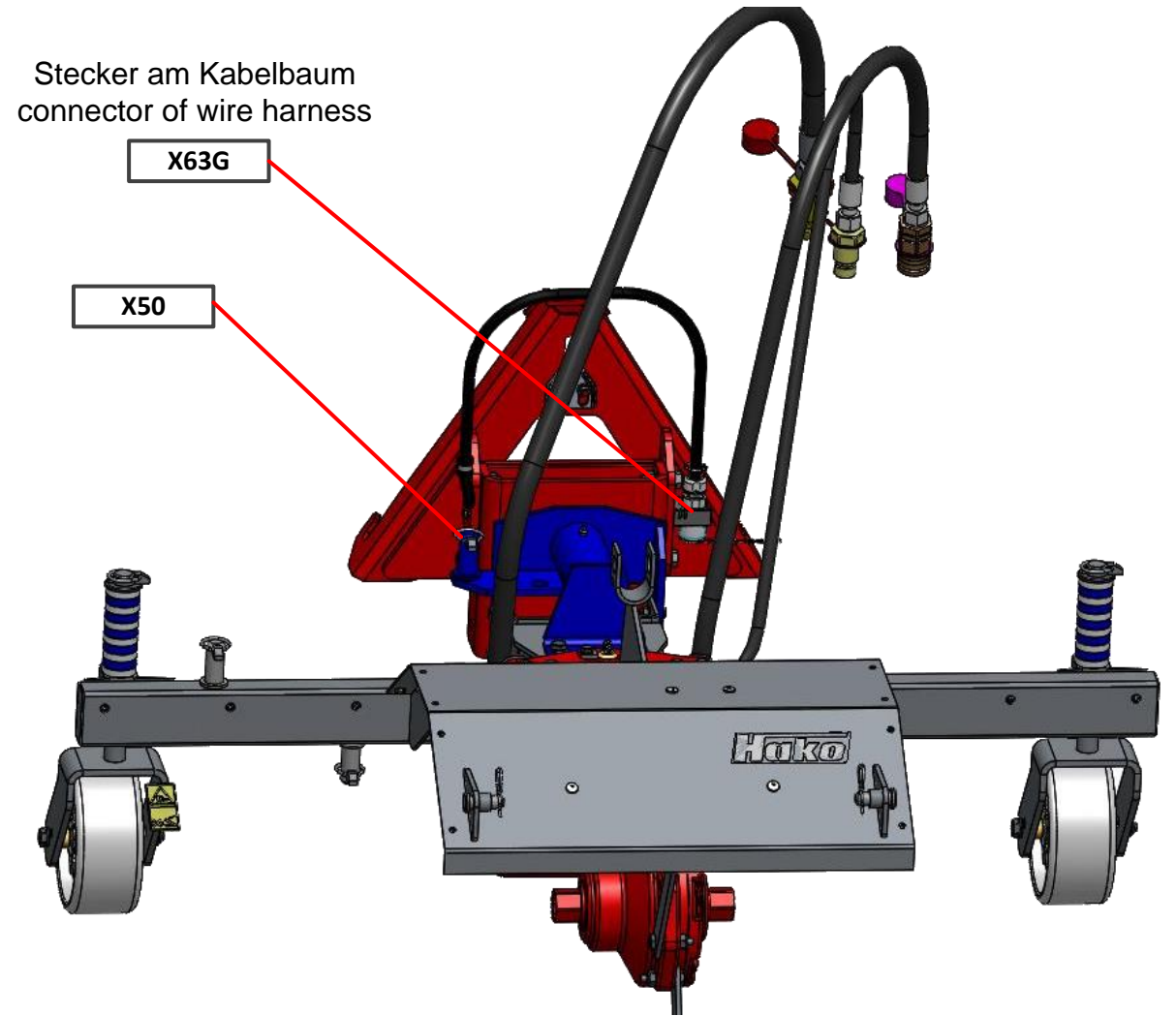


Frontaggregat Kombination-Kehreinheit
front attachment hydraulic driven combination sweeper

Stecker am Kabelbaum
connector of wire harness

X63G

X50



Freigabevermerk:

A2	1	J.	4105-30	16.12.2019	LK/DK	Drawn	Date	Name	CM1650
						Verified	31.07.2019	LK	Replacem. for
No	Number appears	Change No.	Date	Name	Standard				Change No. 4105-11

Name Schaltplan circuit diagram		Drawing Number 91039958	
For this drawing we reserve all rights (acc. DIN ISO 16016)		No of Sheets 57	
Engineering Base 6.8.2		Sheet 53	

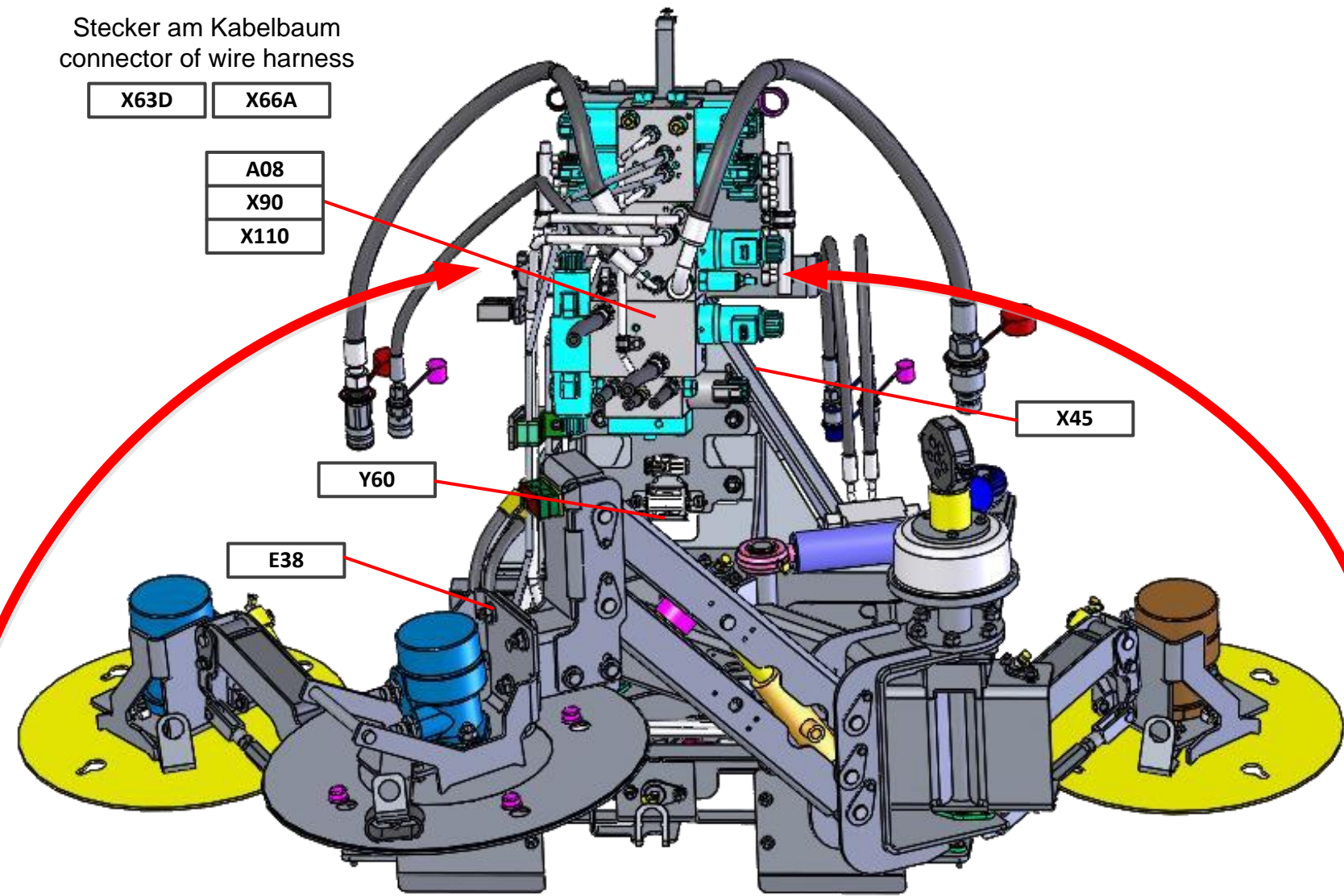


Frontaggregat 3-Besen Kehrvorsatz
front attachment 3-brush sweeper

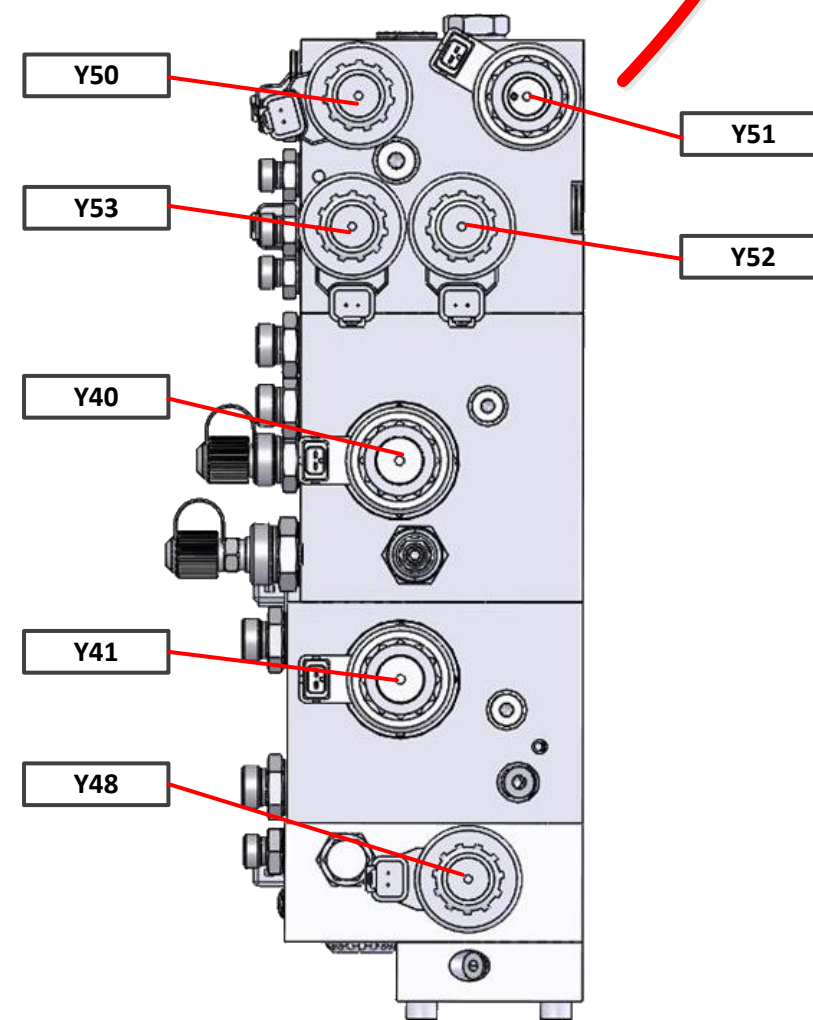
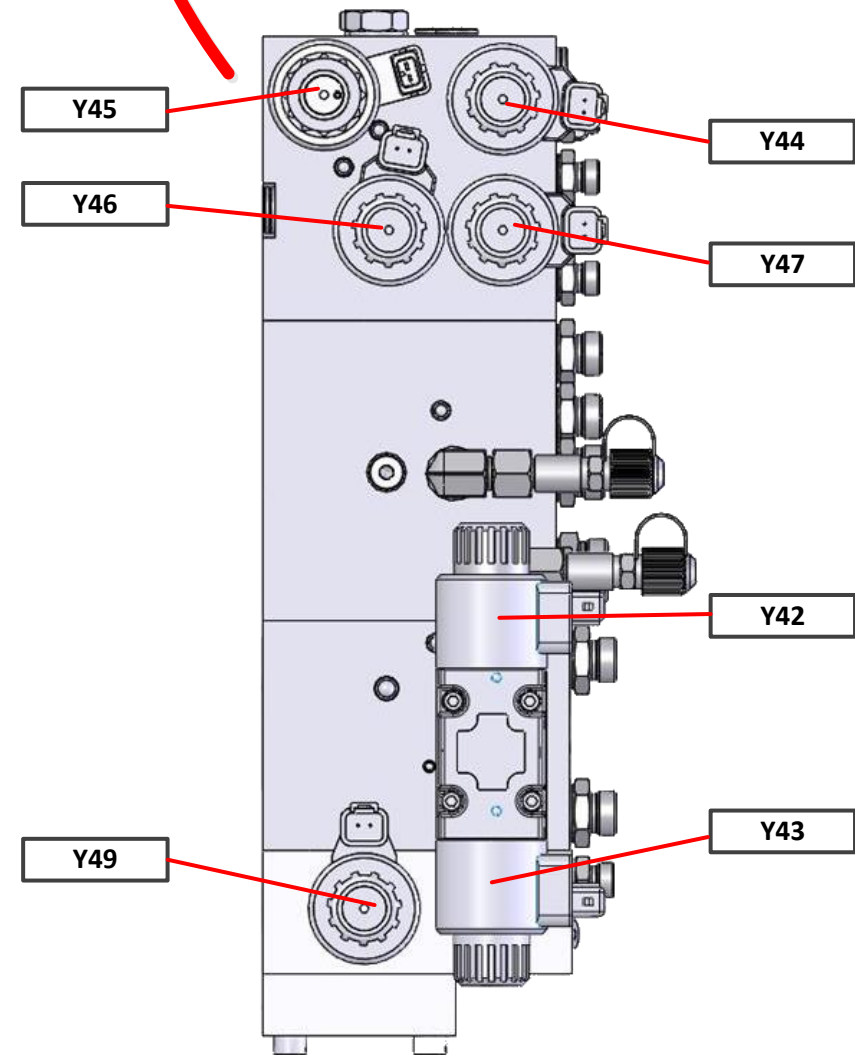
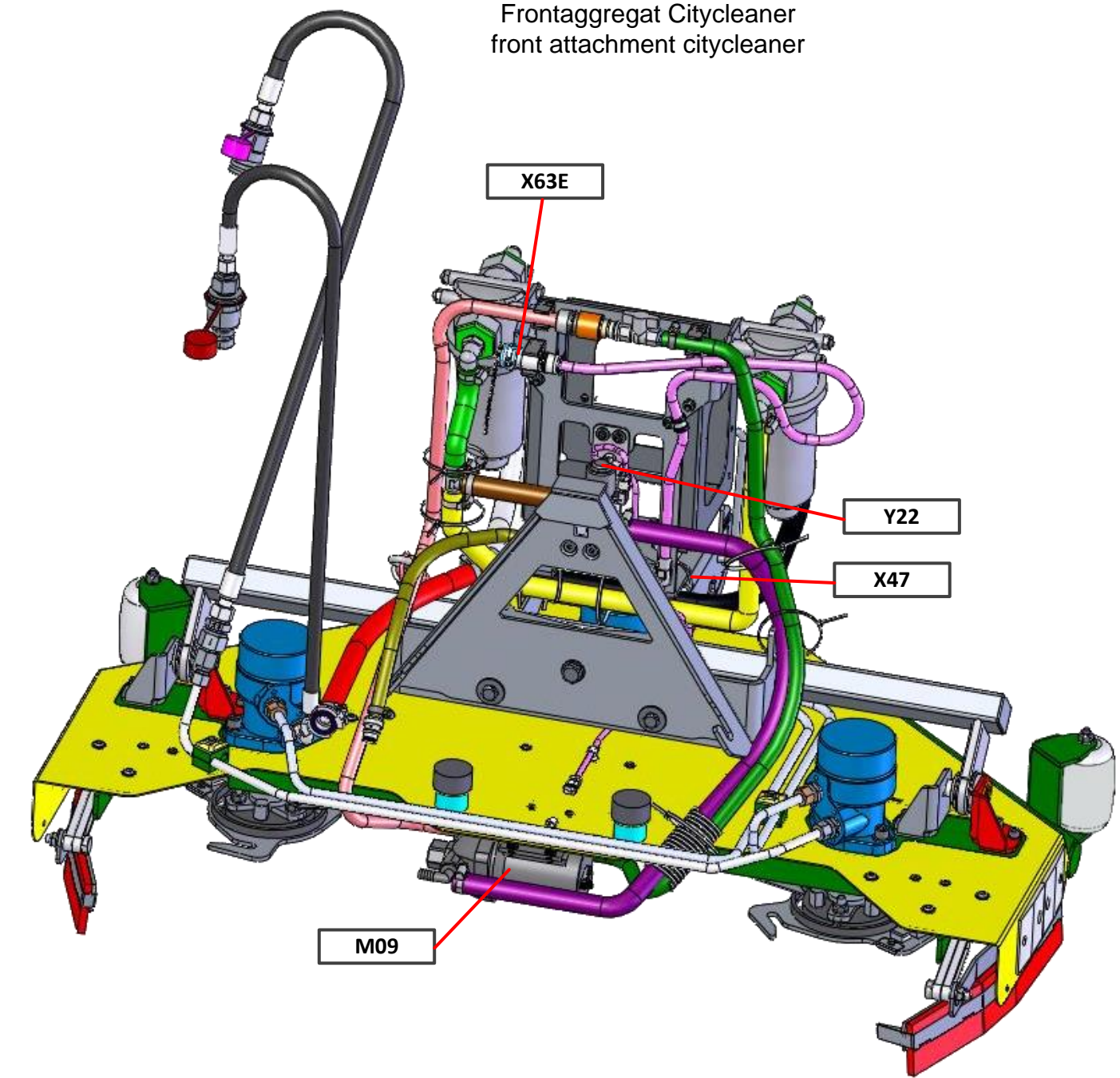
Stecker am Kabelbaum
connector of wire harness

X63D X66A

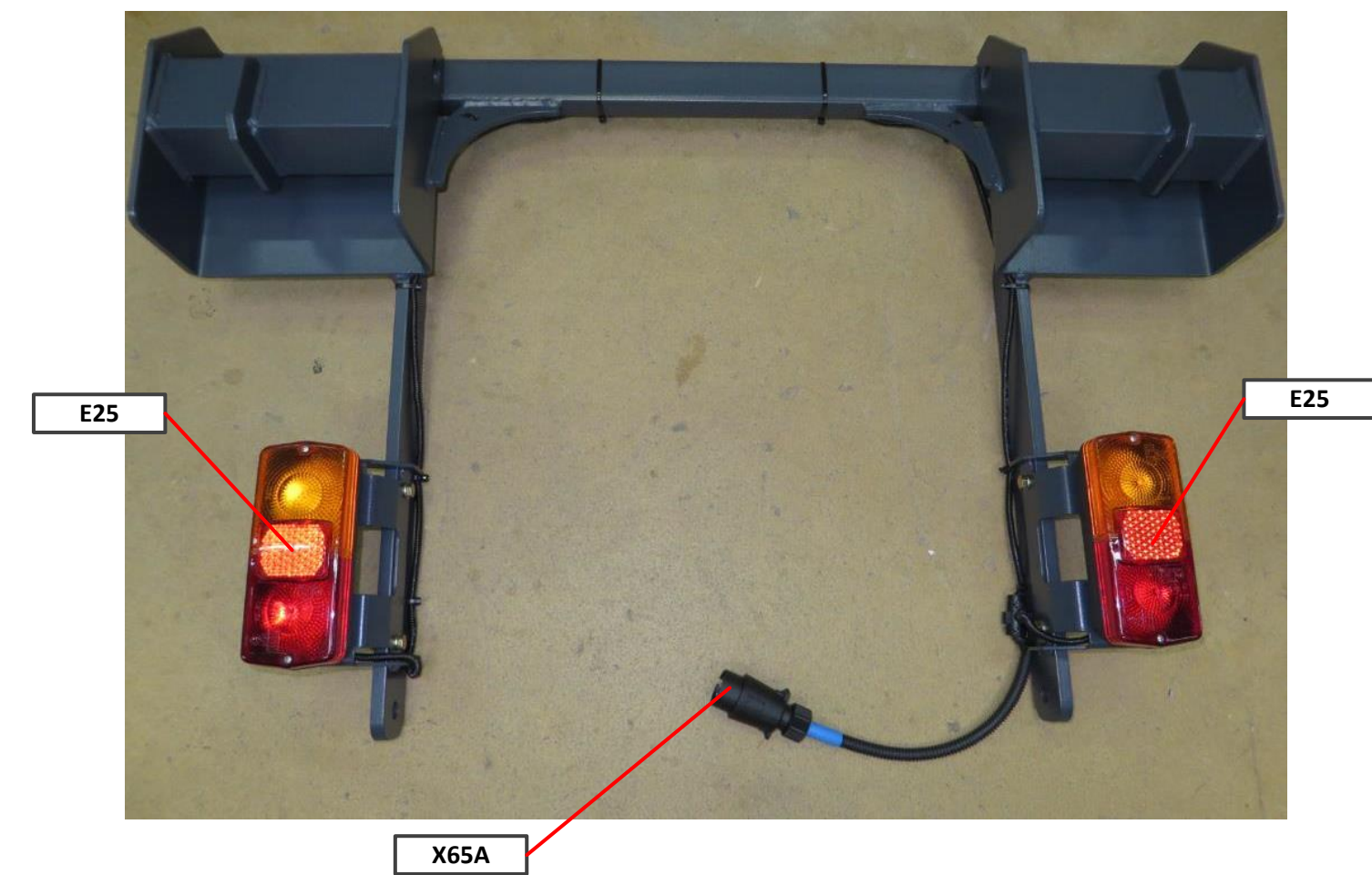
A08
X90
X110



Frontaggregat Citycleaner
front attachment citycleaner



Gewichtshalter Heck
weight holder tail



Freigabevermerk:

A2	1	J.	4105-30	16.12.2019	LK/DK	Drawn	Date	Name	CM1650
						Verified	31.07.2019	LK	Replacem. for
No	Number appears	Change No.	Date	Name	Standard				Change No. 4105-11

Name
Schaltplan
circuit diagram



Drawing Number
91039958

For this drawing we reserve all rights (acc. DIN ISO 16016) Engineering Base 6.8.2 Type 1491 Dept.DS No of Sheets57 Sheet 54

