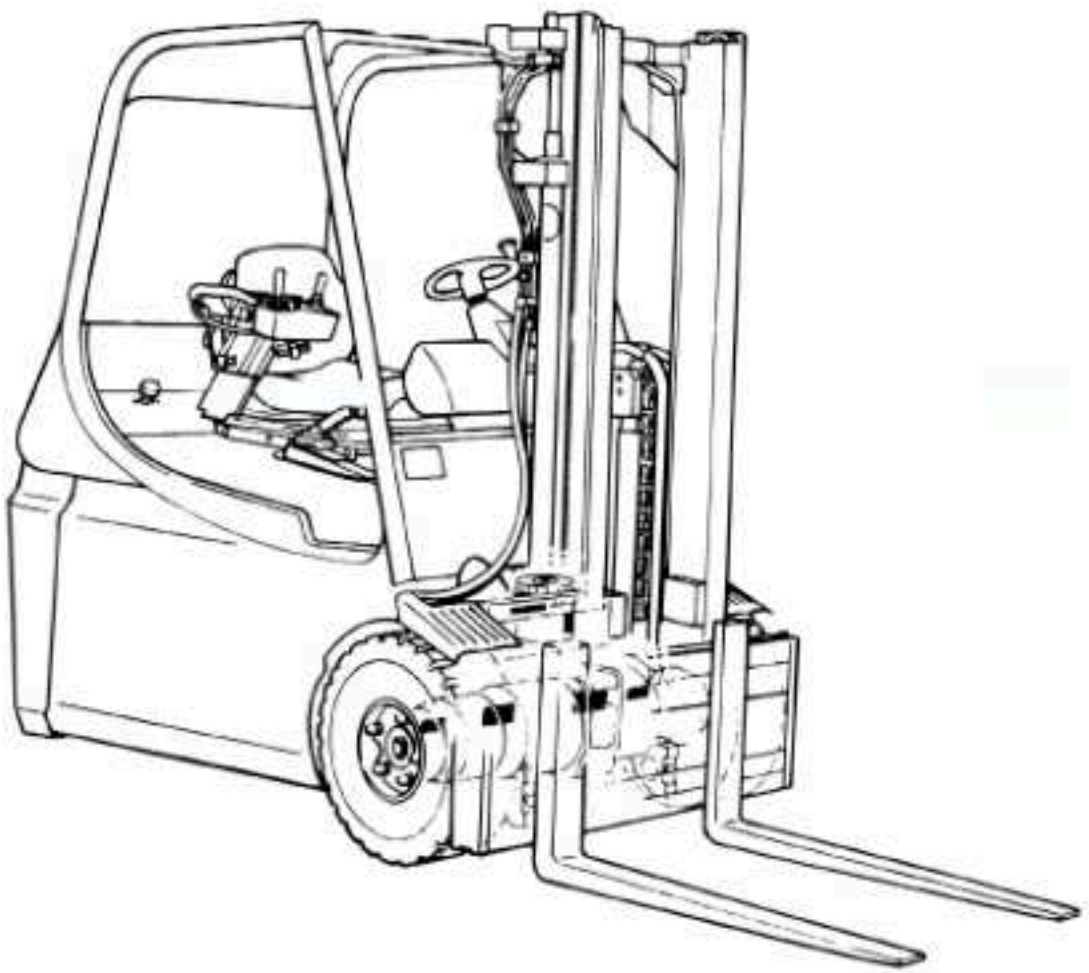
Service Training

Linde Electric Lift Truck
E 14 - E 20 with shunt drive and LLC
Series 335 -02

LDC Software Versions 1.3 / 1.4
LLC Software Version 1.10



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Linde electric lift truck E 14 - E 20 with shunt drive and LLC, series **335 -02**

TABLE OF CONTENTS

6	Electrical system	1
6.1	Control unit for LDC traction drive unit	1
6.1.1	Operating principle	2
6.1.1.1	Components of the electrical system	4
6.1.1.2	Control current fuses	5
6.1.1.3	Position of the plugs in the truck	6
6.1.2	Power units	8
6.1.2.1	Power unit A1	9
6.1.2.2	Power unit 1A1	11
6.1.3	Main current unit	12
6.1.3.1	Switching on and charging the intermediate circuit capacitors	12
6.1.3.2	Discharging the intermediate circuit capacitors	13
6.1.3.3	Forward direction of travel	14
6.1.3.4	Backward direction of travel	14
6.1.3.5	Free-wheel circuit	15
6.1.3.6	Regenerative braking	15
6.1.4	Control circuit	16
6.1.4.1	Drive electronics 1A2	16
6.1.4.2	Power supply	21
6.1.4.3	Main contactor K1	21
6.1.5.4	Release signal	21
6.1.4.5	Accelerator	21
6.1.4.6	Direction of travel switch, single pedal operation	23
6.1.4.7	Monitoring the r.p.m. speed of the traction motors	23
6.1.4.8	Curve signal	24
6.1.4.9	Emergency off microswitch	24
6.1.4.10	Temperature signal for the traction motors	25
6.1.4.11	Hand brake switch	25
6.1.4.12	Brake pedal switch	25
6.1.4.13	Discharge relay K2	25
6.1.4.14	Fans	25
6.1.4.15	Switch-controlled speed reduction (from SW 1.4 and up)	25
6.1.5	LDC (Linde Digital Control) diagnostic system	26

E2 / Register 5
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6.1.5.1	Window 1 - status information of the truck	30
6.1.5.2	Window 2 - information and fault messages	30
6.1.5.3	Window 3 - stored fault messages	49
6.1.5.4	Window 31 - acknowledge fault messages in memory	49
6.1.5.5	Window 32 - delete fault messages in memory (only master version)	50
6.1.5.6	Window 4 - switch inputs	51
6.1.5.7	Window 5 - switch outputs	52
6.1.5.8	Window 6 - analog signals not related to the motors	52
6.1.5.9	Windows 61 and 62 - analog signals related to the drive motors	53
6.1.5.10	Window 63 - temperature signals for the power units	53
6.1.5.11	Window 7 - setting general parameters for the truck	54
6.1.5.12	Window 71 - standard settings for the parameters in window 7	55
6.1.5.13	Window 72 - setting special parameters for the truck	55
6.1.5.14	Window 73 - standard setting for the parameters in windows 7 and 72	56
6.1.5.15	Window 74 - display of UPA designs	56
6.1.5.16	Window 8 - programming the neutral pedal setting	57
6.1.5.17	Window 81 - programming the steering stops	58
6.2	Control system for the working and steering hydraulics of the LLC	59
6.2.1	Control circuit	61
6.2.1.1	Power supply	61
6.2.1.2	Release signal	61
6.2.1.3	Joysticks	61
6.2.1.4	Activation of the solenoid valves	62
6.2.1.5	Speed sensor 2B3	63
6.2.1.6	Monitoring the motor temperature and the battery charge level	63
6.2.1.7	Monitoring the temperature in the power unit	64
6.2.1.8	General monitoring of the power unit	64
6.2.2	LLC diagnostic system	66
6.2.2.1	Window 1 - status information	70
6.2.2.2	Window 2 - current information and fault messages	70
6.2.2.3	Window 3 - stored fault messages	85
6.2.2.4	Window 31 - acknowledge fault messages in memory	85
6.2.2.5	Window 32 - delete fault messages in memory (only master version)	86
6.2.2.6	Window 4 - switch inputs	87
6.2.2.7	Window 5 - switch outputs	88
6.2.2.8	Window 6 - analog signals	89
6.2.2.9	Window 61-64 - joystick signals	90

E2 / Register 5
335 804 2411.0700

MidWestTech | Linde E 14, E 20 with shunt drive & LLC Series 335 -02 Electric Forklift... Order the manual at mid-west-tech.com >

6.2.2.10	Window 7 - setting parameters for additional hydraulics		91
6.2.2.11	Window 71 - standard settings for the parameters in window 7		91
6.2.2.12	Window 72 - setting special parameters for the working hydraulics		92
6.2.2.13	Window 73 - standard settings for the parameters in windows 7 and 72		92
6.2.2.14	Window 8 - general alignment for the joystick		93
6.2.2.15	Window 81 - joystick alignment for additional hydraulics		93
6.2.2.16	Window 82 - selection of steering axle		94
6.3	Circuit diagram		96
6.4	Additional functions		98
6.4.1	Activation of the brake light		98
6.4.2	Activation of the warning light		98
6.4.3	Activation of the flashing pilot light		98
6.4.4	Activation of the operating hours counter while driving and with the pump motor running		99
6.5	AMP-Saab connector		100
7	Working hydraulics		1
7.1	Valve block		2
7.1.1	Single additional hydraulics until 09/98		2
7.1.2	Double additional hydraulics until 09/98		3
7.1.3	Single additional hydraulics from 10/98		4
7.1.4	Double additional hydraulics from10/98		5
7.2	Emergency functions, control valve		6
7.2.1	Emergency functions, control valve until 09/98		6
7.2.2	Emergency functions, control valve from 10/98		8
7.3	Hydraulics plan		10
7.3.1	Hydraulics plan until 09/98		10
7.3.2	Hydraulics plan from 10/98		12
9	Optional equipment series 335 -02	07.00	1
9.1	Optional equipment Console	07.00	2
9.2	Voltage converter	07.00	3
9.3	Fuses	07.00	5
9.4	Wiring diagram (optional equipment)	07.00	6

E2 / Register 5
335 804 2411.0700

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6.1.1.3 POSITIONS OF THE PLUGS IN THE TRUCK

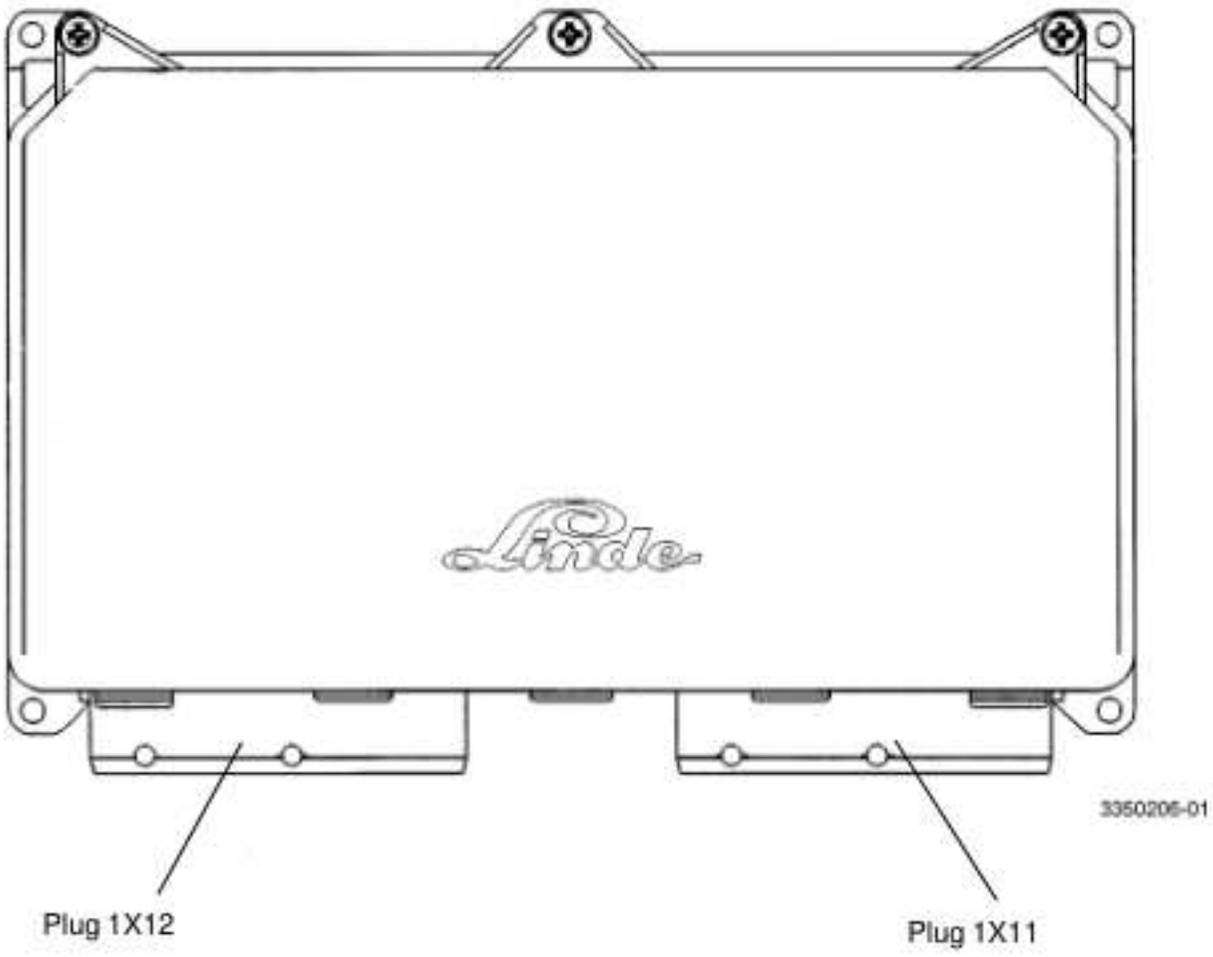
X1	Plug connector, 42 pin	connecting plug, main/end cable loom	in the counterweight, electric installation on left
X2	Plug connector, 10 pin	connecting plug, main/end cable loom	in the counterweight, electric installation on left
X3	Plug connector, 2 pin	connector plug, microswitch, S2, emergency off	in the counterweight, electric installation underneath the drive electronics
X4	Plug connector, 2 pin	connector plug, contactor coil K1	in the counterweight, electric installation underneath the drive electronics
X5	Plug connector, 2 pin	connector plug, reed contact switch 3S1, steering	on the steering control valve
X7	Plug connector, 4 pin	connector plug, steering potentiometer 3B1	in the counterweight, electric installation underneath the drive electronics
X8	Plug connector, 6 pin	connector plug, voltage transformer U1	in the counterweight, electric installation on the left
X9	Plug connector, 3 pin	connector plug, overhead guard switch S4	driver's overhead guard, behind steering column covering
X10	Battery plug		in the counterweight, electric installation on the right
X11	Plug connector, 29 pin	connector plug, drive electronics, power unit A1	in the counterweight, electric installation on the left
X12	Plug connector, 6 pin	connector plug, charge/discharge circuit	in the counterweight, electric installation underneath the drive electronics
X31	Battery negative point	central battery negative point, conductor rail	conductor rail between power units A1 and 1A1
1X1	Plug connector, 4 pin	connector plug, r.p.m. speed sensor 1B1	fastening plate on right traction motor
1X2	Plug connector, 4 pin	diagnostic plug, drive electronics	behind switch covering to the left of the steering column
1X3	Plug connector, 4 pin	connector plug, r.p.m. speed sensor 1B2	fastening plate on the left traction motor
1X4	Plug connector, 3 pin	connector plug, hand brake switch 1S4	above control valve, working hydraulics
1X5	Plug connector, 3 pin	connector plug, brake pedal switch 1S5	underneath bottom plate, driver's overhead guard
1X6	Plug connector, 2 pin	connector plug, seat switch S3	at the back, on the right, on the driver's seat
1X7	Plug connector, 4 pin	connector plug, right traction motor 1M1	fastening plate on the right traction motor
1X8	Plug connector, 4 pin	connector plug, left traction motor 1M2	fastening plate on the left traction motor
1X10	Plug connector, 4 pin	connector plug, accelerator 1A4	underneath bottom plate, driver's overhead guard
1X11	Plug connector, 42 pin	connector plug, drive electronics 1A2	in the counterweight, electric installation in the middle
1X12	Plug connector, 42 pin	connector plug, drive electronics 1A2	in the counterweight, electric installation in the middle
1X13	Plug connector, 16 pin	connector plug, power section 1A1	in the counterweight, electric installation on the right
2X1	Plug connector, 42 pin	connector plug LLC 2A1	in the counterweight, electric installation on the left
2X2	Plug connector, 4 pin	connector plug, r.p.m. speed sensor 2B8	on the fastening plate, pump motor
2X3	Plug connector, 6 pin	connector plug, joystick 2B1	underneath the joystick arm rest
2X4	Plug connector, 6 pin	connector plug, joystick 2B2	underneath the joystick arm rest
2X5	Plug connector, 4 pin	diagnostic plug LLC	behind switch covering to the left of the steering column
2X6	Plug connector, 4 pin	connector plug, pump motor 2M1	on the fastening plate, pump motor
4X1	Plug connector, 2 pin	connector plug, horn switch 4S1	behind switch cover on the right of the steering column
5X13	Plug connector, 3 pin	connector plug, flashing pilot indicator	behind switch cover on the right of the steering column
6X1	Plug connector, 4 pin	diagnostic plug, instrument cluster	behind switch cover on the left of the steering column
6X9	Plug connector, 36 pin	connector plug, instrument cluster 6P2	to the right of the steering column on the instrument cluster
9X7	Plug connector, 4 pin	connector plug, power supply SA	at the back on the right, underneath driver's overhead guard
9X8	Plug connector, 6 pin	connector plug, single pedal direction switch 1S13	behind switch cover to the left of the steering column
9X10	Plug connector, 2 pin	connector plug, ventilator 9M1	fastening plate on the right traction motor
9X11	Plug connector, 2 pin	connector plug, ventilator 9M2	fastening plate on the left traction motor
9X12	Plug connector, 2 pin	connector plug, ventilator 9M3	on the fastening plate, pump motor

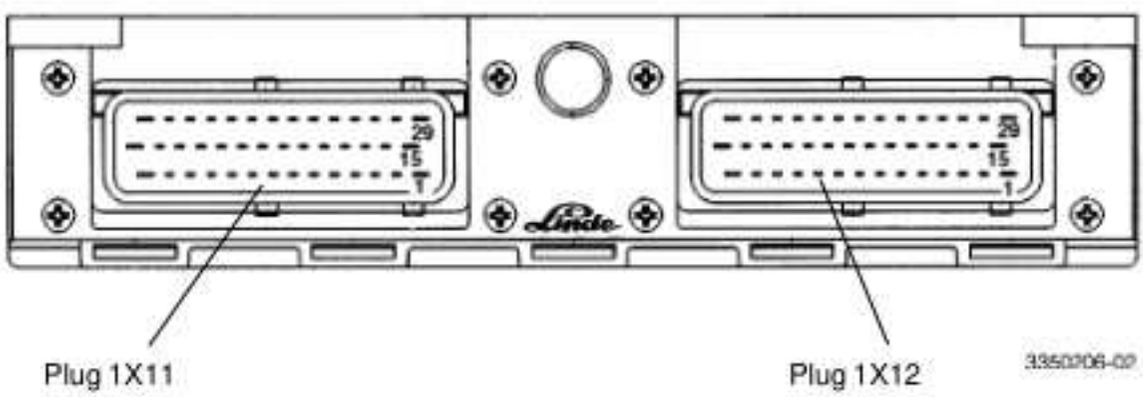
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6.1.4 CONTROL CIRCUIT

6.1.4.1 DRIVE ELECTRONICS 1A2

The drive electronics are fitted on a plate above the two power units, together with the lift electronics. Two 42-pin plugs are connected with the truck's main cable tree.



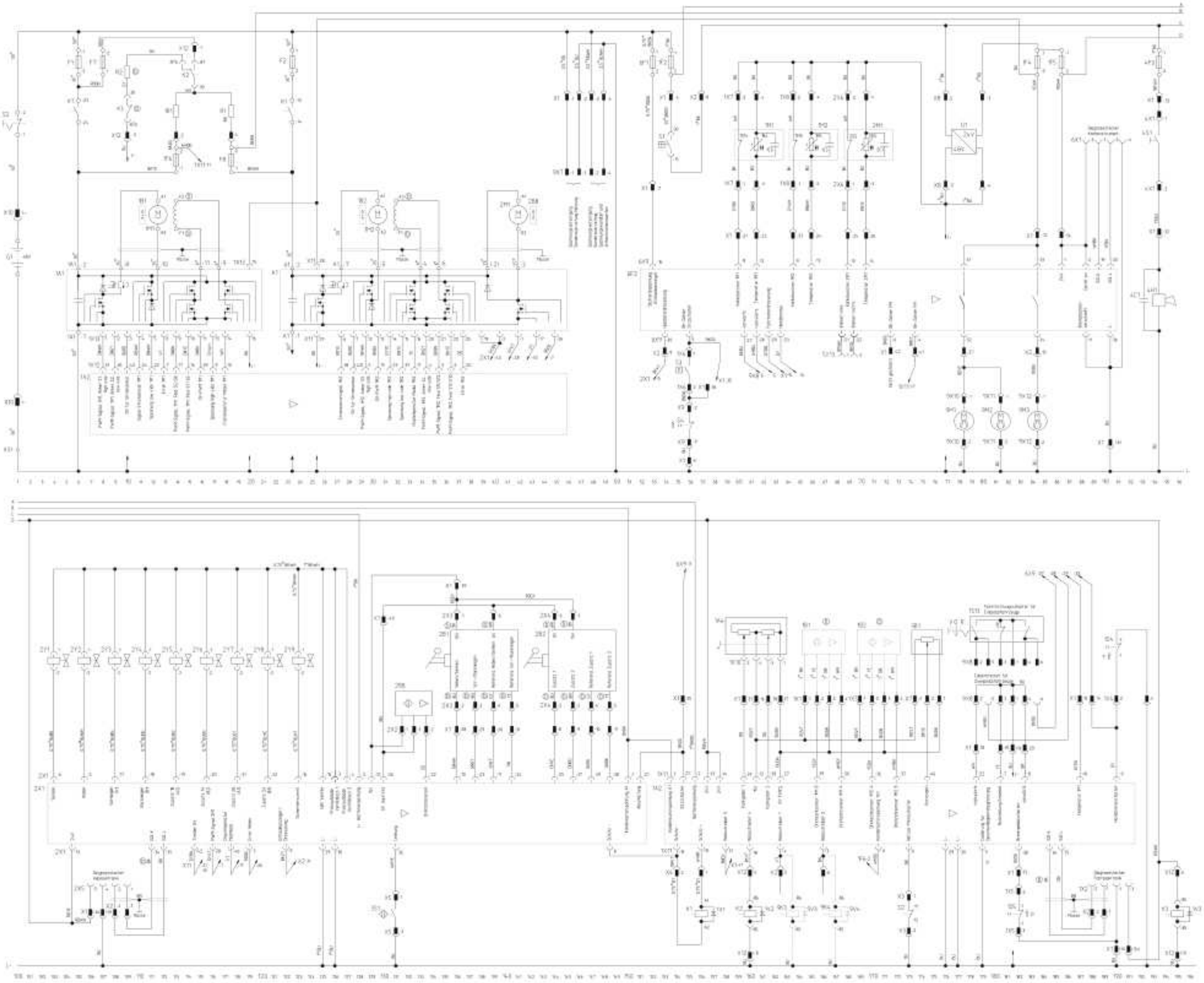


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No.	Observed Problem / Comments	Fault Condition in Controller	Possible Causes
60	With pump motor operating, the speed sensor output is 0 r.p.m Result: controlled speed up to max. 50 %	Window (6): nm 0 when pump motor is operating	Speed sensor faulty or Fault in path 2X1:22 - 2X2:2 - 2B8 or Fault in path 2X1:12 - 2X2:1 - 2B8 or Fault in path 2X1:26 - 2X2:3 - 2B8
67	Like fault / message 2, except joysticks are more than 2s outside the zero position Result: no lift function	Like fault / message 2	Like fault / message 2

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