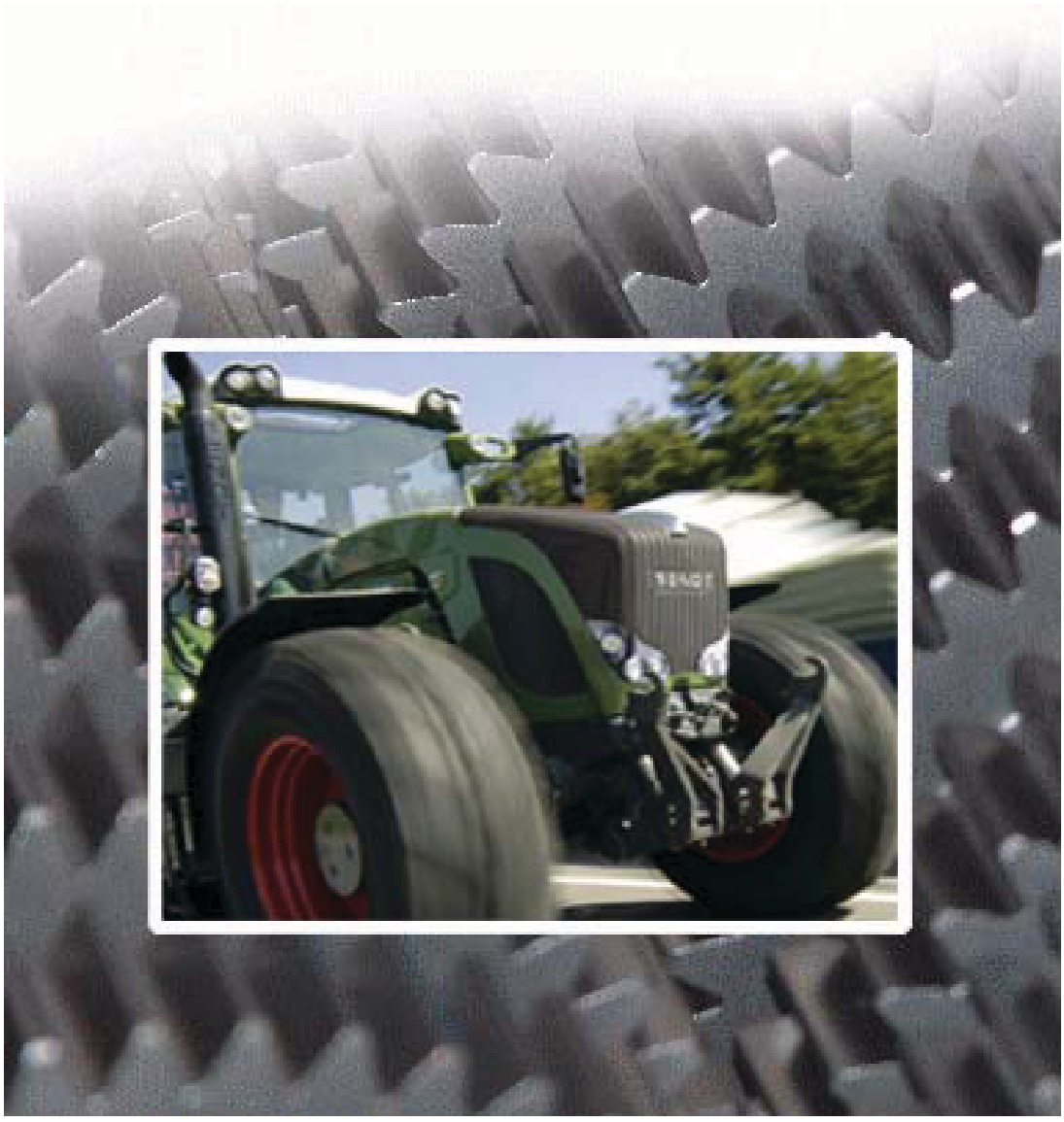
Workshop Service Manual

FENDT 900 Vario - COM III

919 .. 0101-1000
919 .. 1001-
922 .. 0101-1000
922 .. 1001-
925 .. 0101-1000
925 .. 1001-
928 .. 0101-1000
928 .. 1001-
931 .. 0101-1000
931 .. 1001-
934 .. 0101-1000
934 .. 1001-



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English

FENDT

Volume 4

All relevant accident prevention regulations and all generally accepted safety, health and road traffic regulations must be strictly observed. The manufacturer does not accept liability for damage resulting from unauthorised modifications.

Changes and additions reserved**!**

FENDT 900 Vario - COM III

Unkt Id 0

0000 Overall system/tractor
1005 Overall system/transmission
1010 Transmission/differential
1015 Transmission/axle drive
1050 Transmission/housing
1070 Transmission / Brake system
1080 Transmission/drive train
1200 Transmission/front PTO
1220 Transmission / Live PTO
1320 Transmission/front wheel drive
2000 Overall system/engine
2010 Engine/cylinder head
2050 Engine/cooling
2060 Engine/fuel system
2210 Engine/crankcase
2312 Engine/lubrication
2400 Engine/exhaust system
2712 Engine/injectors
3000 Overall system/front axle
3120 Front axle/steering cylinder
3180 Front axle/cardan shaft

Unkt Id 1

4000 Overall system/steering
4090 Steering system / hydraulic steering unit
5030 Vehicle layout/operator's seat
5500 Overall system/air conditioning system
8100 Overall system/cab
8610 Power lift/EPC electro-hydraulic control
8631 Power lift/hydraulic lift
8800 Overall system/compressed air system

Unkt Id 2

9000 Overall system/electrical system
9015 Electrical system/starter lockout

Unkt Id 3

9410 Hydraulic pump installation/LS pump
9430 Hydraulic pump installation/steering pump
9534 Hydraulic piping/"Rüfa"reverse operation
9600 Overall system/hydraulic equipment
9605 Hydraulic equipment/hydraulic connections
9610 Hydraulic equipment/central control block (ZSB)
9620 Hydraulic equipment/valve fitting
9700 Overall system/electronics
9920 Service/special tools
9975 Service/SERDIA - Deutz engine diagnostics program

A	General
B	Faults
C	Documents and Diagrams
D	Component location
E	Testing
F	Setting and Calibration
G	Repair
H	Service – Info

9410

Hydraulic pump installation/LS pump

9410 Hydraulic pump installation/LS pump

G Repair 5

G Repair

1 Removing the LS pump 7
2 Installing the LS pump 13

1 Removing the LS pump

Preliminary work:

- Drain fuel
- Remove battery
- Remove fuel tank, right
- Remove fuel hand pump and hydraulic hand pump

Drain hydraulic oil.



Fig. 1. I001690

Loosen tank plate bolts and remove right tank plate.



Fig. 2. I001707

Remove cable clip.



Fig. 3. I001688

Loosen earth cable on engine.



Fig. 4. I001692

Pull earth cable through to bracket.



Fig. 5. I001724

Remove screws of bracket.

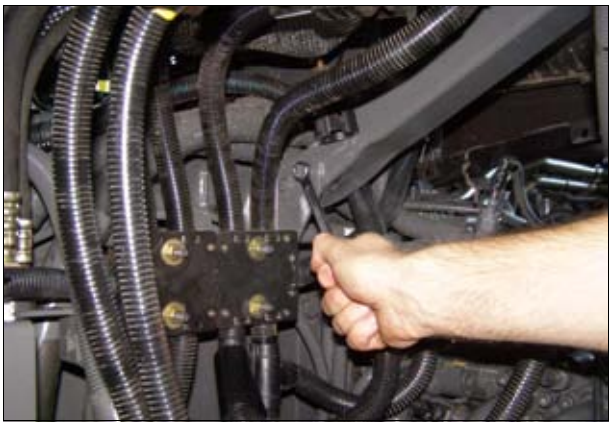


Fig. 6. I001691

Fix cable bracket and cable in place so that cover is easily accessible.

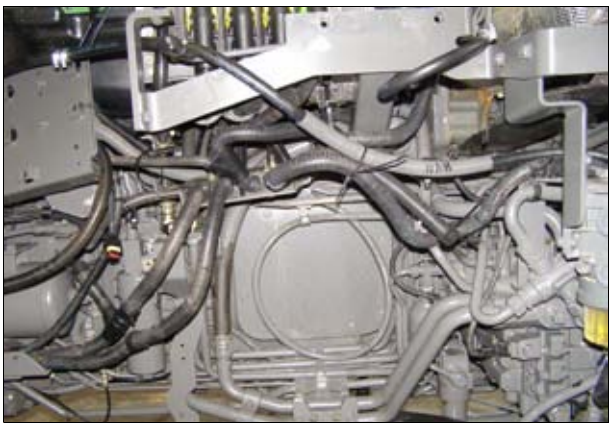


Fig. 7. I001693

Separate LS line from housing and close lines, preventing dirt from entering.



Fig. 8. I001689

Loosen bolts of cover.



Fig. 9. I001694

Remove cover of hydraulic oil tank.



Fig. 10. I001695

Remove silencer from line flange.



Fig. 11. I001696

Loosen hexagon socket head screws from flange.

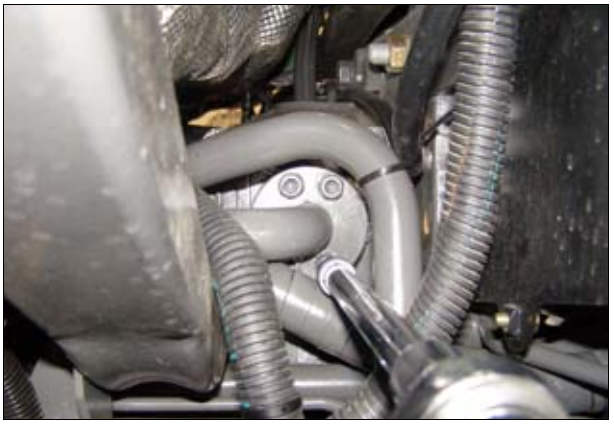


Fig. 12. I001697

Hold on to crescent-shaped hardware when loosening flange screws.



Fig. 13. I001698

Fix pump hose in place on side.

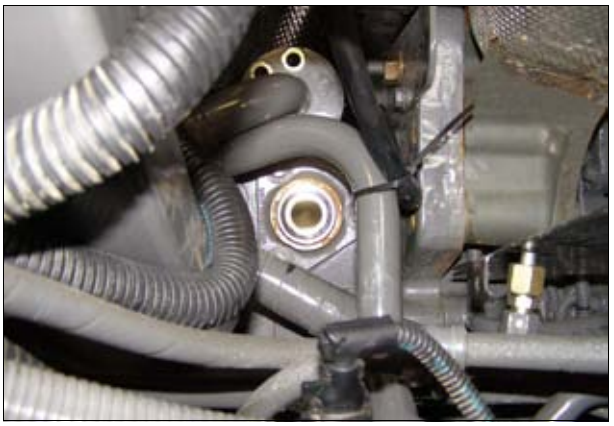


Fig. 14. I001699

Remove flange of pump line.



Fig. 15. I001700

Loosen screws of line flange.



Fig. 16. I001701

Remove pump pressure line.



Fig. 17. I001702

Remove pump intake line.

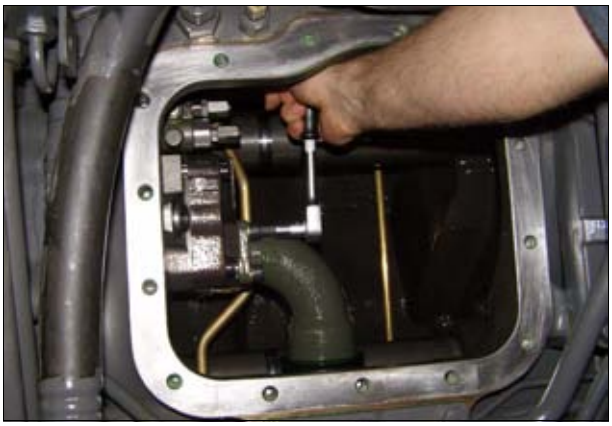


Fig. 18. I001703

Remove hydraulic lines that are in the way when the pump is removed.



Fig. 19. I001704

Remove bolts from LS pump.



Fig. 20. I001705

Remove pump through opening.

NOTE: *The pump is relatively heavy, so be careful when you lift it out. Risk of injury!*



Fig. 21. I001706

2 Installing the LS pump

Preliminary work:

– Clean sealing surfaces of hydraulic oil tank and hydraulic oil tank cover

Mount oil drain plug with new seal ring.



Fig. 22. I001690

Mount new pump flange seal.



Fig. 23. I001708

Mount pump through opening.



Fig. 24. I001706

Tighten bolts of pump with a tightening torque of 85 Nm.



Fig. 25. I001705

Mount removed hydraulic lines.

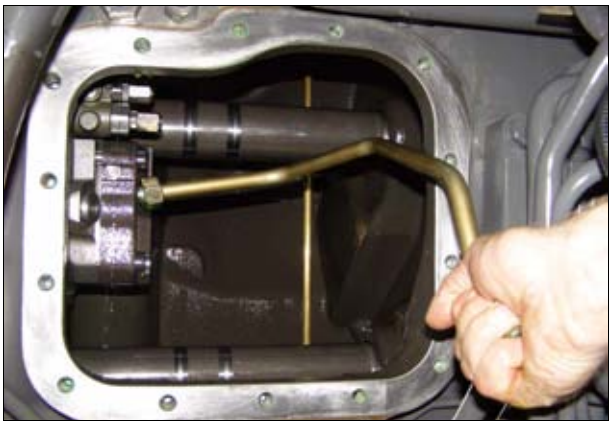


Fig. 26. I001704

Insert new O-rings in the suction flange applying a little grease.



Fig. 27. I001710

Mount intake line with suction filter on pump.

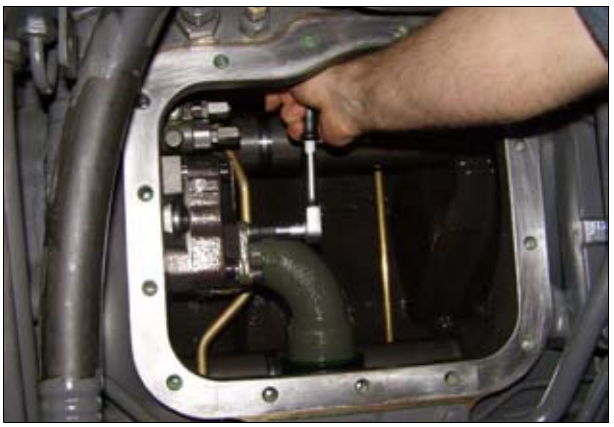


Fig. 28. I001703

Insert new O-rings (arrowed) in pump line applying a little grease.

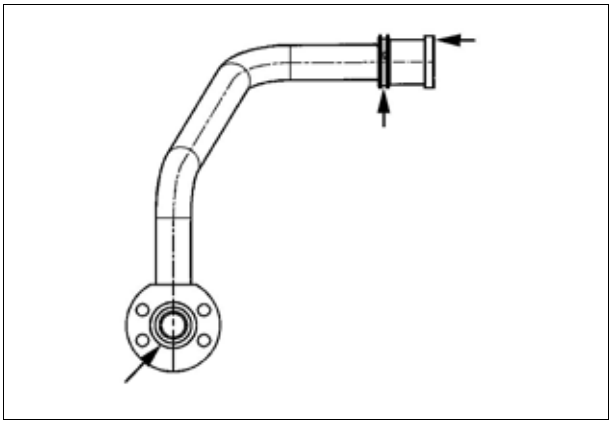


Fig. 29. I001709

Thread pump pressure line through opening.



Fig. 30. I001702

Tighten screws of line flange by hand.



Fig. 31. I001701

Centre flange on pump line to prevent causing strain and tighten screws by hand.



Fig. 32. I001700

Slightly loosen screws of line flange to align it and then tighten with the prescribed tightening torque.



Fig. 33. I001701

Slightly loosen screws of flange to align it and then tighten the screws.



Fig. 34. I001700

Flange pump hose to pump line and fasten through crescent-shaped hardware.



Fig. 35. I001698

Tighten hexagon socket head screws.



Fig. 36. I001697

Mount silencer.



Fig. 37. I001696

Apply X903.050.074 sealant on sealing surfaces and mount cover.



Fig. 38. I001695

Tighten screws of tank cover with a tightening torque of 120 Nm



Fig. 39. I001694

Mount LS line.



Fig. 40. I001689

Mount cable bracket.

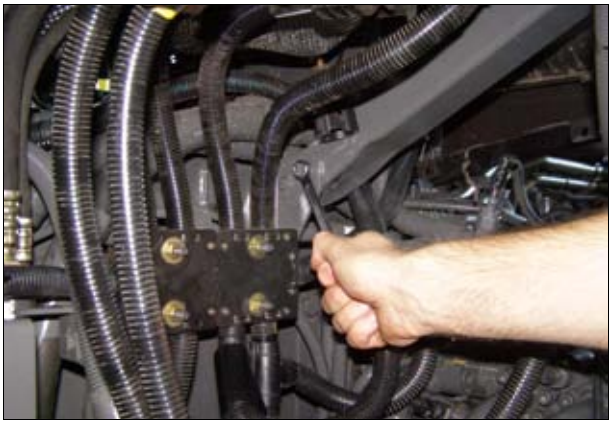


Fig. 41. I001691

Attach earth cable to engine earth pin.



Fig. 42. I001692

Mount cable clip.



Fig. 43. I001688

Mount tank plate with bolts.



Fig. 44. I001707

Final procedures:

– Mount fuel hand pump and hydraulic oil hand pump
– Fill up hydraulic oil (change hydraulic oil filter and hydraulic oil depending on hours and contamination)
– Mount fuel tank on right
– Mount battery
– Fill up fuel

A	General
B	Faults
C	Documents and Diagrams
D	Component location
E	Testing
F	Setting and Calibration
G	Repair
H	Service – Info

9430

Hydraulic pump installation/steering pump

9430 Hydraulic pump installation/steering pump

G Repair 5

G Repair

1 Removing the wheel-driven emergency steering pump 7
2 Installing the wheel-driven emergency steering pump 11

1 Removing the wheel-driven emergency steering pump

Preliminary work:

– Drain fuel
– Remove fuel tank, right
– Remove battery
– Remove fuel hand pump and hydraulic hand pump

Drain hydraulic oil.



Fig. 1. I001690

Drain transmission oil.

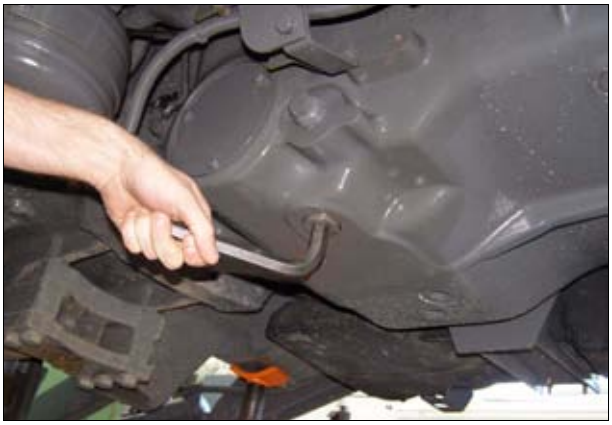


Fig. 2. I001718

Loosen tank plate bolts and remove right tank plate.



Fig. 3. I001707

Remove cable clip.



Fig. 4. I001688

Loosen earth cable on engine.



Fig. 5. I001692

Pull earth cable through to bracket.



Fig. 6. I001724

Remove cable bracket bolts.

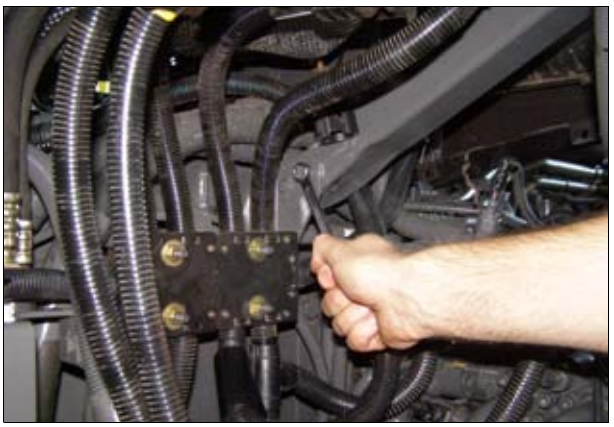


Fig. 7. I001691

Fix cable bracket and cable in place so that cover is easily accessible.

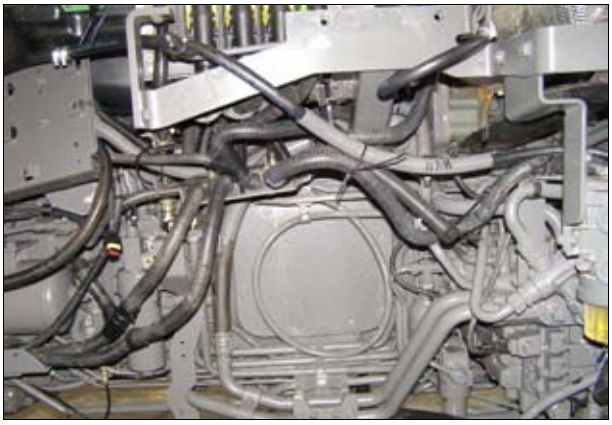


Fig. 8. I001693

Separate LS line from housing and close lines, preventing dirt from entering.



Fig. 9. I001689

Loosen bolts of cover.



Fig. 10. I001694

Remove cover.



Fig. 11. I001695

Remove intake line with suction filter of LS pump.



Fig. 12. I001703

Remove pressure line from emergency steering pump.

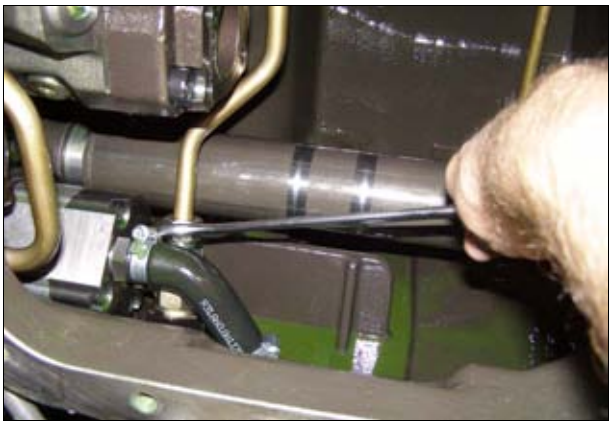


Fig. 13. I001719

Loosen emergency steering pump bolts.



Fig. 14. I001720

Remove emergency steering pump through opening.



Fig. 15. I001721

2 Installing the wheel-driven emergency steering pump

Preliminary work:

– Clean sealing surfaces of housing and cover.

Insert new O-ring on emergency steering pump applying a little grease.



Fig. 16. I001722

Mount emergency steering pump.



Fig. 17. I001721

Tighten bolt with a tightening torque of 70 Nm.



Fig. 18. I001720

Mount pressure line of emergency steering pump.

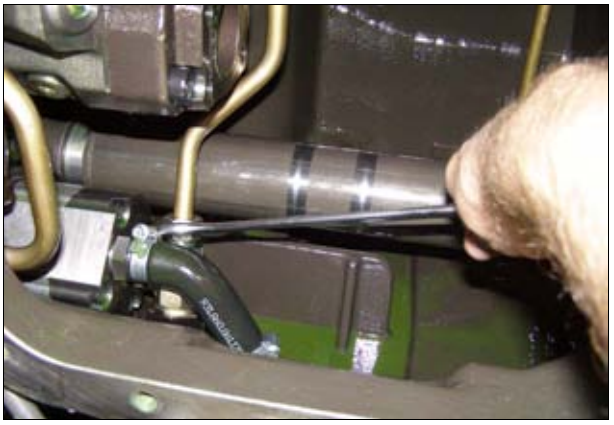


Fig. 19. I001719

Mount intake line with suction filter of LS pump.

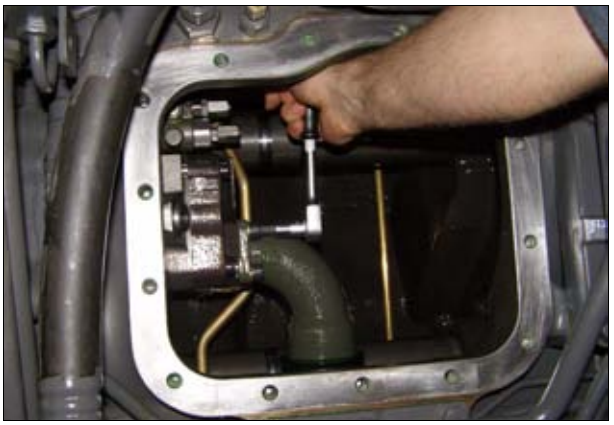


Fig. 20. I001703

Apply X903.050.074 sealant on sealing surfaces and mount cover.



Fig. 21. I001695

Tighten screws of tank cover with a tightening torque of 120 Nm



Fig. 22. I001694

Mount LS line.



Fig. 23. I001689

Mount cable bracket.

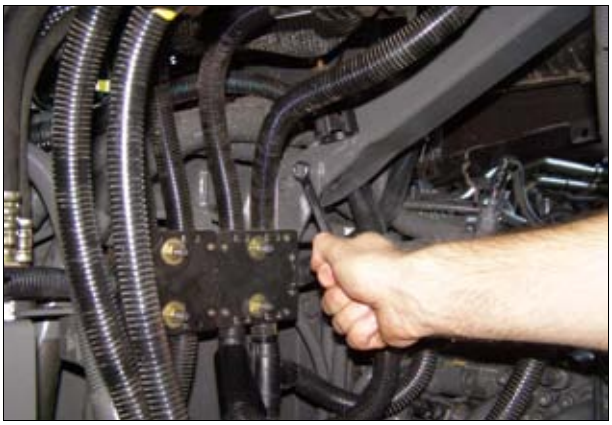


Fig. 24. I001691

Attach earth cable to engine earth pin.



Fig. 25. I001692

Mount cable clip.



Fig. 26. I001688

Mount tank plate with bolts.



Fig. 27. I001707

Mount hydraulic oil drain plug with new seal ring.



Fig. 28. I001690

Tighten transmission oil drain plug.

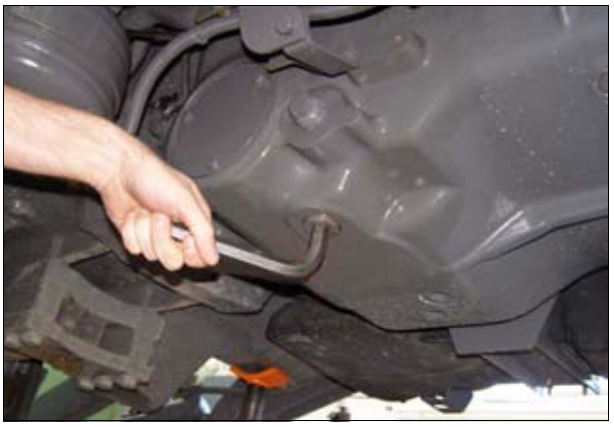


Fig. 29. I001718

Final procedures:

- Mount fuel hand pump and hydraulic oil hand pump
- Fill up hydraulic oil (change hydraulic oil filter and hydraulic oil depending on hours and contamination)
- Fill up transmission oil (change transmission oil filter and transmission oil depending on hours and contamination)
- Mount fuel tank on right
- Reconnect battery
- Fill up fuel

A	General	**9534**	
B	Faults	Hydraulic piping/"Rüfa"reverse operation	
C	Documents and Diagrams		
D	Component location		
E	Testing		
F	Setting and Calibration		
G	Repair		
H	Service – Info		

9534 Hydraulic piping/"Rüfa"reverse operation

C Documents and diagrams 5

G Repair. 13

C Documents and diagrams

1 Technical drawing of rotary feedthrough (Rüfa) 7

1 Technical drawing of rotary feedthrough (Rüfa)

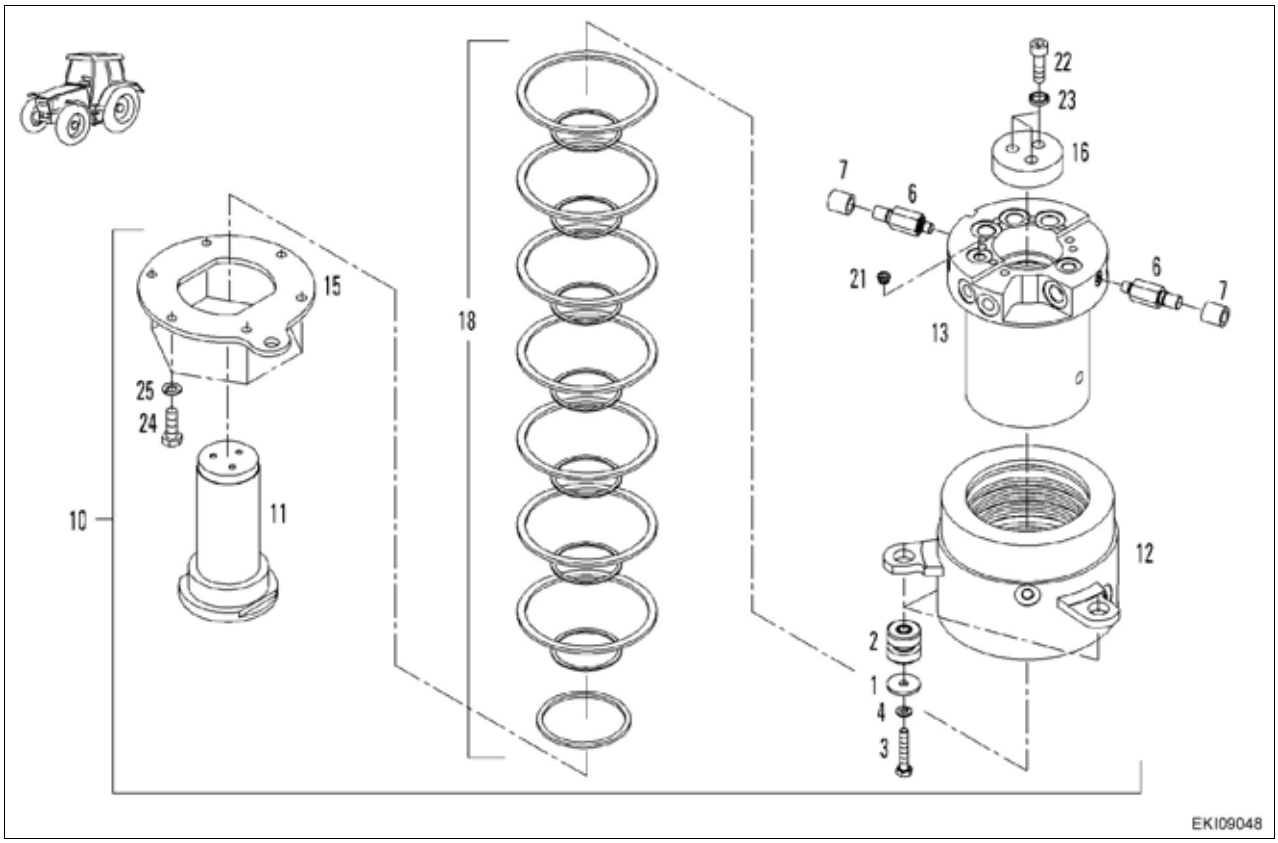


Fig. 1. I003770

Item	Designation	Item	Designation
1	Washer	13	Rotor (not available individually)
2	Bearing	15	Ring (not available individually)
3	Hex screw	16	Shim (not available individually)
4	Spring washer	18	Seal set
6	Carrier	21	Thread insert (not available individually)
7	Pressure hose	22	Socket head cap screw
10	Rotary feedthrough (complete)	23	Seal ring
11	Stator (not available individually)	24	Hex screw
12	Stator (not available individually)	25	Spring washer

Cross-section of rotary feedthrough

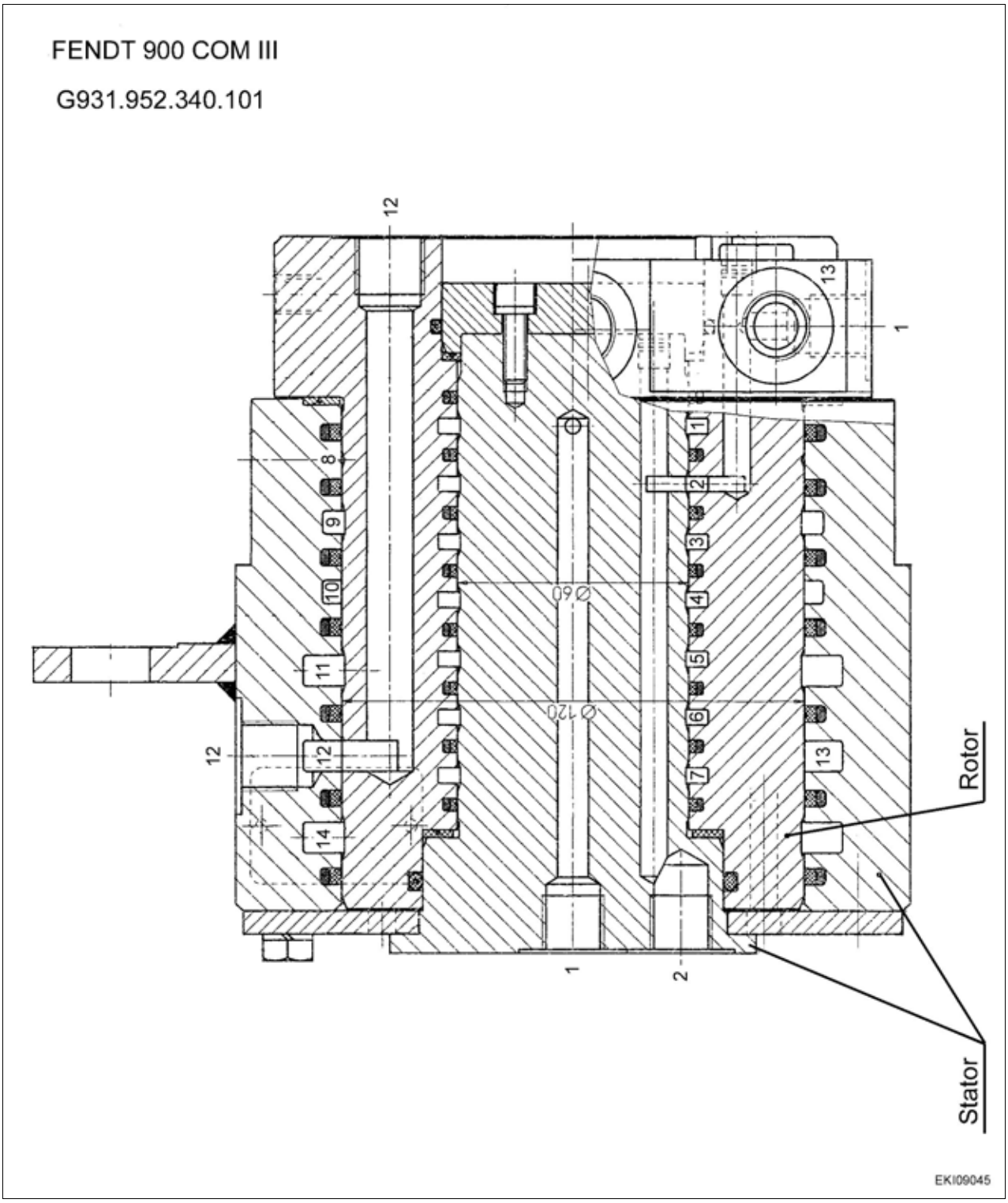


Fig. 2. I003767

Underside view

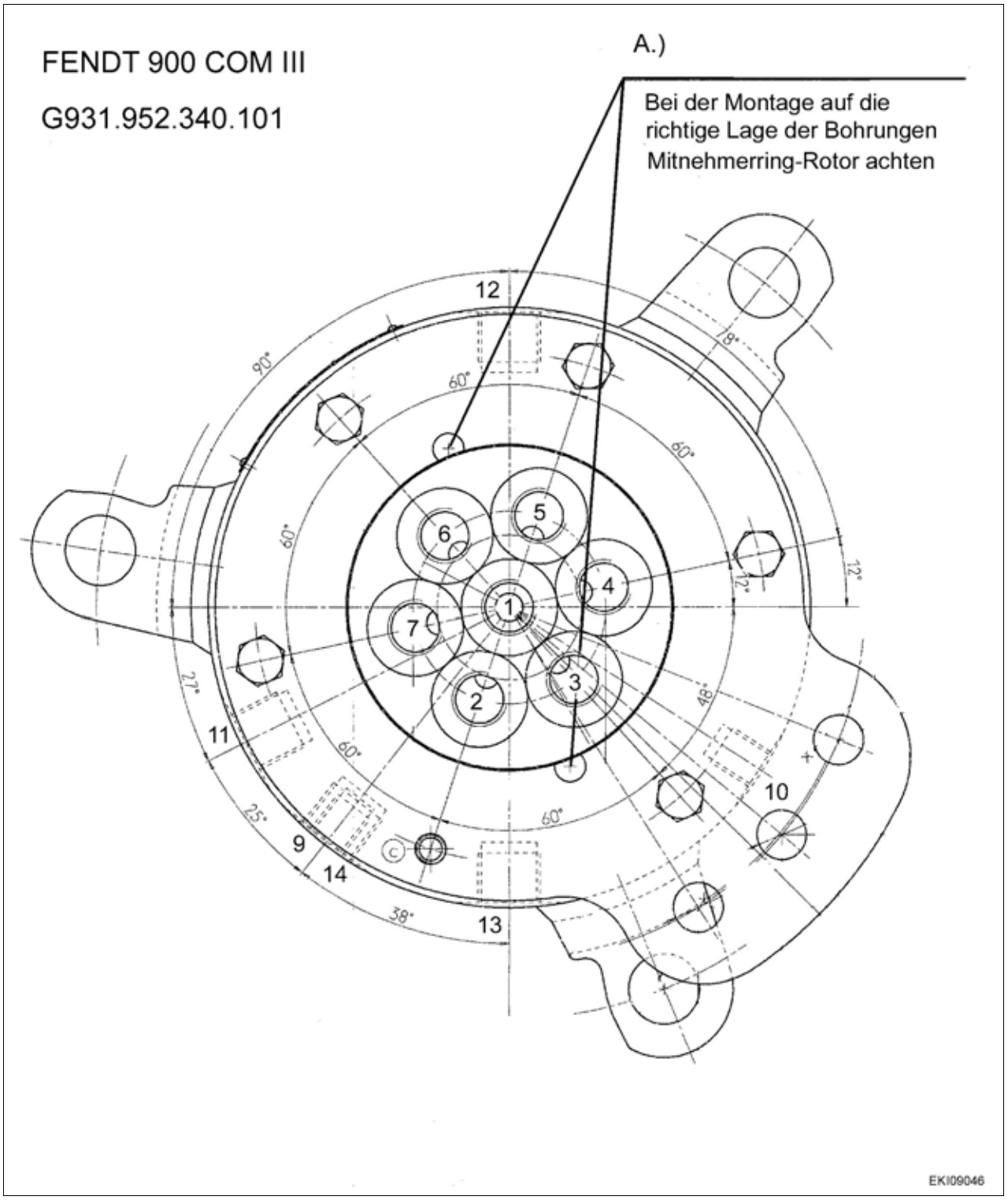


Fig. 3. I003768

A.) Ensure the correct positioning of the bores on the carrier ring rotor during installation.

Top view

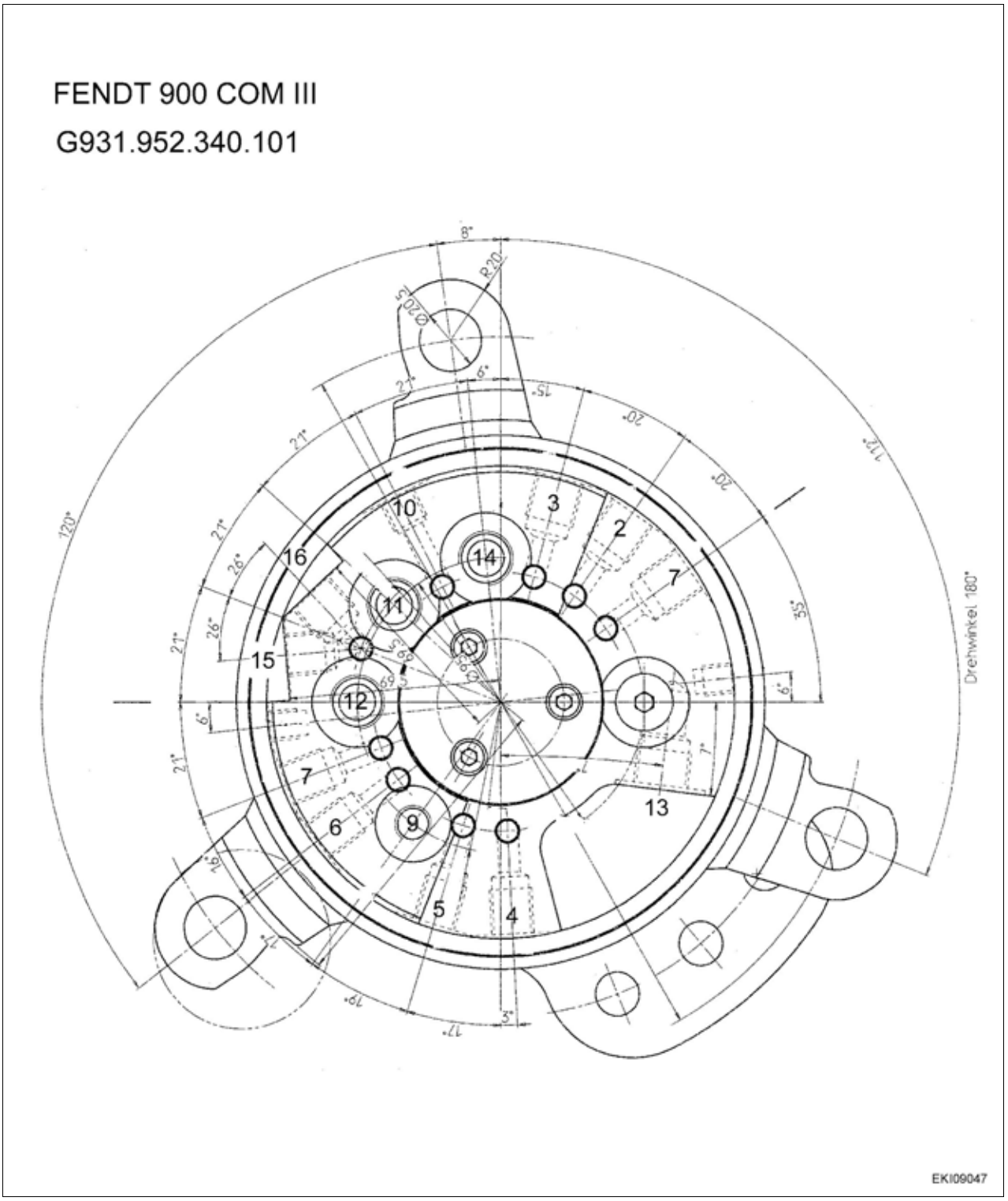


Fig. 4.

I003769

Ports on the rotary feedthrough

Serial No.	NW	Ports		Max. pres-sure	Max. flow rate	Medium	Function
		Rotor	Stator	(bar)	(l/min)		
1	6	M16 x 1.5	M16 x 1.5	8.5	-	Compressed air	Hand brake
2	6	M16 x 1.5	M16 x 1.5	8.5	-	Compressed air	Hand brake
3	6	M16 x 1.5	M16 x 1.5	8.5	-	Compressed air	Hand brake
4	8	M14 x 1.5	M16 x 1.5	8.5	-	Compressed air	Tank, right
5	8	M14 x 1.5	M16 x 1.5	8.5	-	Compressed air	Brake, front axle
6	8	M14 x 1.5	M16 x 1.5	8.5		Compressed air	Brake, rear axle
7	8	M14 x 1.5	M16 x 1.5	8.5	-	Compressed air	Tank, left
8	Internal connection channel with 14				-	-	-
9	6	M12 x 1.5	M12 x 1.5	210	1	Hydraulic oil	Load sensing (LS)
10	6	M12 x 1.5	M12 x 1.5	30	3	Pentosin (X902.011.622)	Clutch
11	12	M18 x 1.5	M18 x 1.5	210	50	Hydraulic oil	Pump pressure (p)
12	12	M18 x 1.5	M18 x 1.5	210	50	Hydraulic oil	Steering, right
13	12	M18 x 1.5	M18 x 1.5	210	50	Hydraulic oil	Steering, left
14	12	M18 x 1.5	M18 x 1.5	3	5	Hydraulic oil	Return (R)
15	8	M14 x 1.5	-	-	-	Air	Outlet air, hand-brake
16	8	M16 x 1.5	-	-	-	Air	Outlet air, hand-brake

Piping for the rotary feedthrough (rotor)

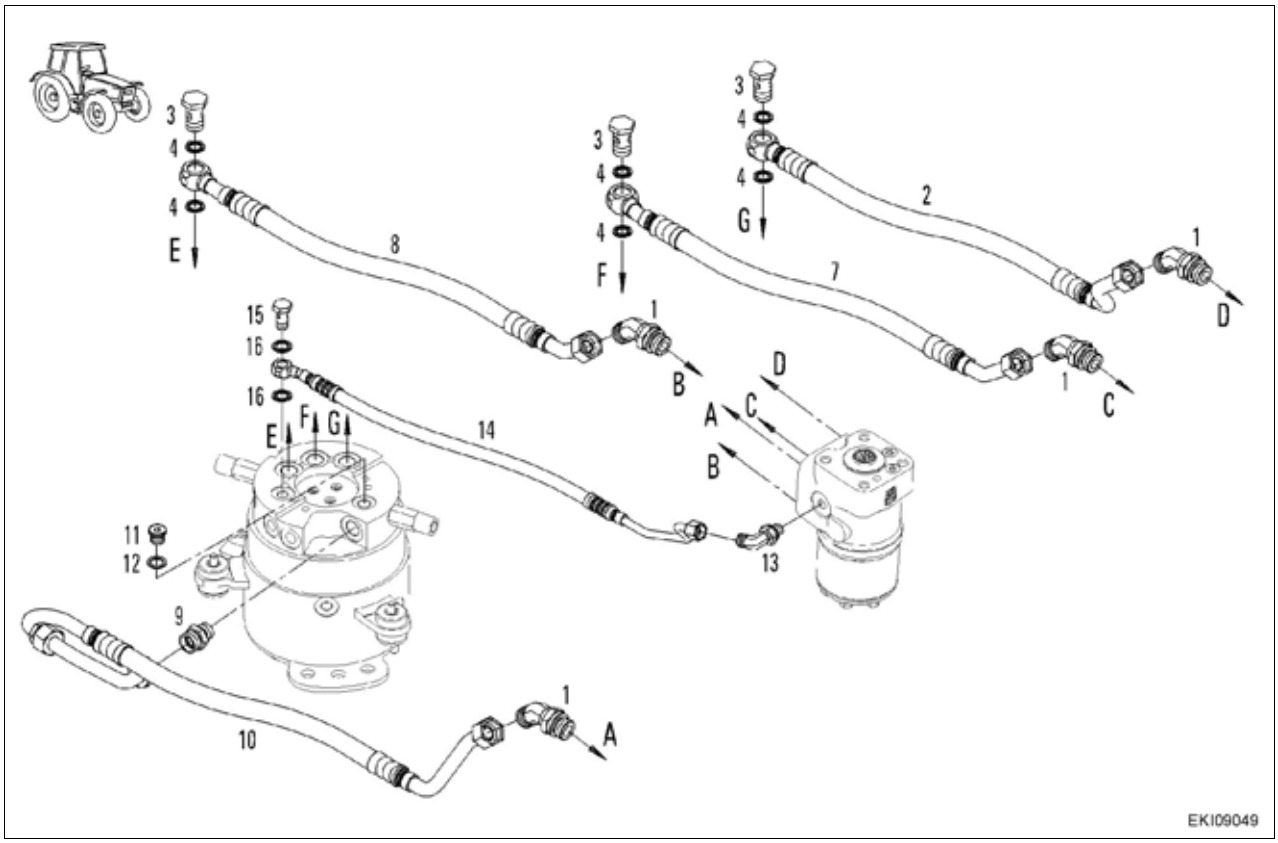


Fig. 5.

I003771

Piping for the rotary feedthrough (stator)

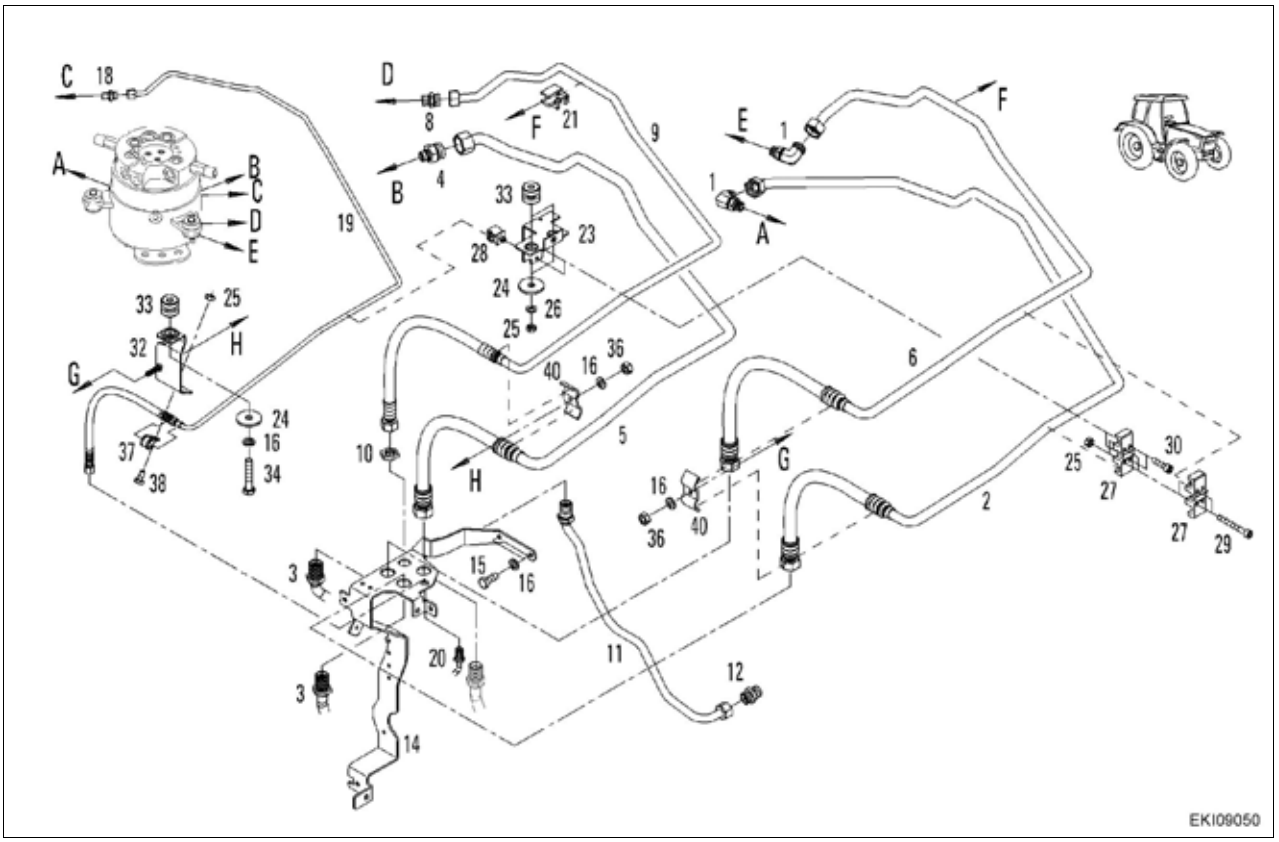


Fig. 6. I003772

G Repair

1 Sealing the rotary feedthrough 15

1 Sealing the rotary feedthrough

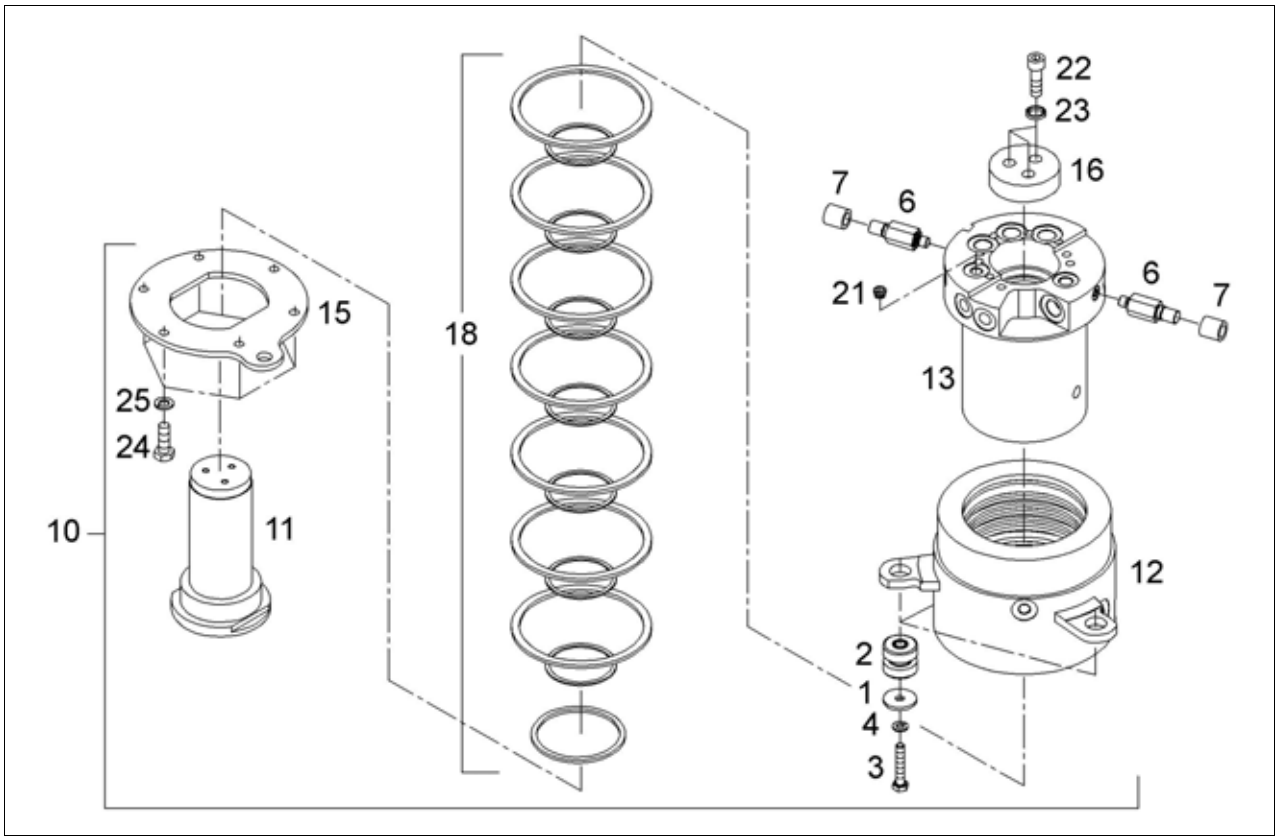


Fig. 1. I007993

Item	Designation	Item	Designation
1	Washer	13	Rotor (not available individually)
2	Bearing	15	Ring (not available individually)
3	Hex screw	16	Shim (not available individually)
4	Spring washer	18	Seal set
6	Carrier	21	Thread insert (not available individually)
7	Pressure hose	22	Socket head cap screw
10	Rotary feedthrough (complete)	23	Seal ring
11	Stator (not available individually)	24	Hex screw
12	Stator (not available individually)	25	Spring washer

Loosen cap screws (22) by about three turns



Fig. 2. I007965

Place wood underneath the three lugs, so that there is a gap between the working surface and the front end of the rotary feedthrough; using a rubber mallet, tap the screw head thus moving stator (11) downwards and then remove cap screws (22)



Fig. 3. I007966

Turn rotary feedthrough and remove hex bolts (24)



Fig. 4. I007968

Disassemble stator (11) and ring (15) using a mounting lever



Fig. 5. I007967

Remove stator (11) and ring (15)



Fig. 6. I007969

Disassemble ring (16)



Fig. 7. I007970

Push rotor (13) out of stator (12), use the 3 lugs on stator (12) as a supporting surface

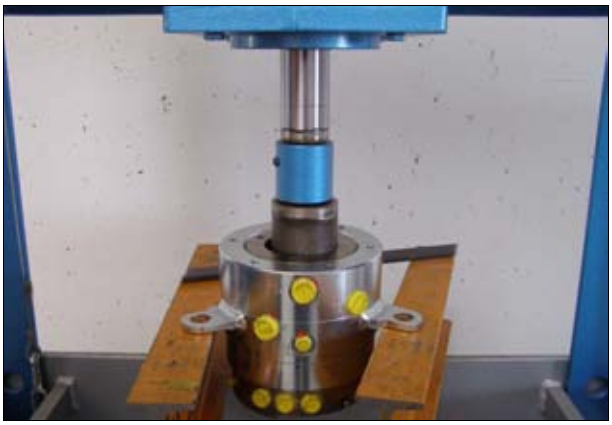


Fig. 8. I007971

Hold rotor (13) while pushing it out



Fig. 9. I007972

Take the seal ring and O-ring out of rotor (13)

NOTE: *A bent welding wire can be used as an aid here*



Fig. 10. I007973

Take the seal ring and O-ring out of stator (12)

NOTE: *A bent welding wire can be used as an aid here*

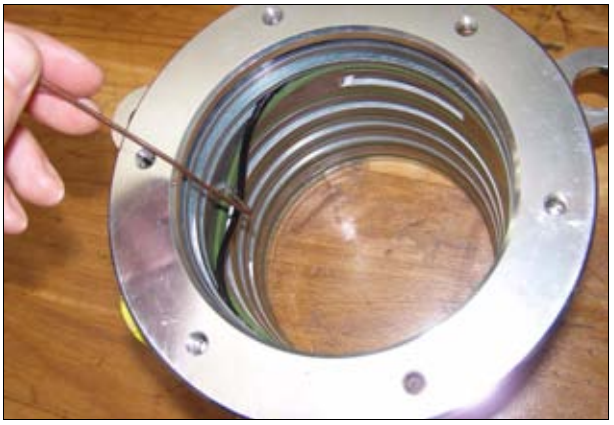


Fig. 11. I007974

NOTE: *Check all surfaces and grooves for damage and wear*

Lightly spray all seals with oil



Fig. 12. I007977

Fit O-rings in stator (12)

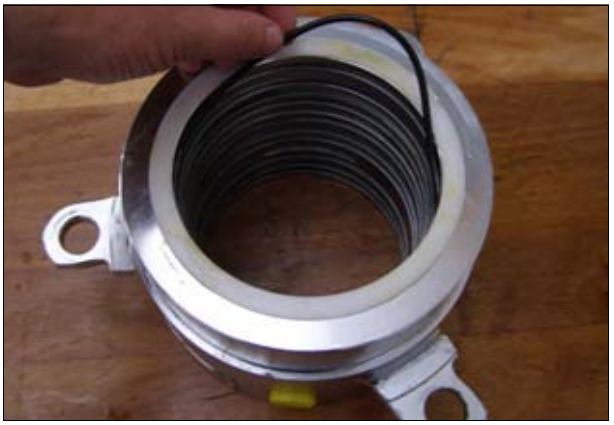


Fig. 13. I007976

Fit seal rings in stator (12), while pressing the seal ring in a crescent shape

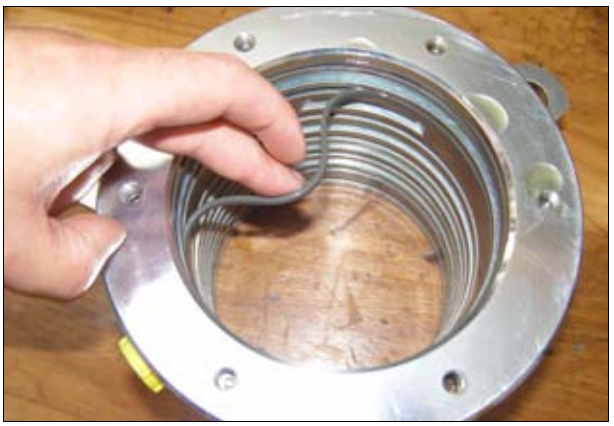


Fig. 14. I007980

Fit O-rings in rotor (13)

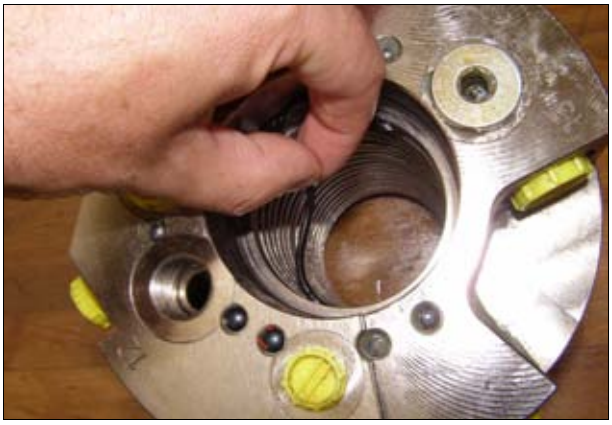


Fig. 15. I007981

Fit seal rings in rotor (13), while pressing the seal ring in a crescent shape



Fig. 16. I007982

Lubricate the sealing washer and place on stator (12)



Fig. 17. I007975

Insert rotor (13) in stator (12)



Fig. 18. I007983

Push rotor (13) into stator (12)

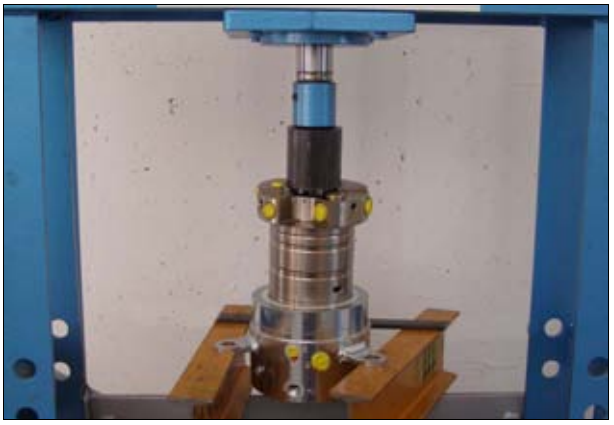


Fig. 19. I007989

Mount ring (15) using hex bolts (24), turn rotor (13) such that the bore (arrow) of the rotor and of the ring are directly above one another



Fig. 20. I007984

Lubricate the sealing washer and fit to stator (11)



Fig. 21. I007985

Press in stator (11)



Fig. 22. I007990

Lubricate the sealing washer and place on washer (16)



Fig. 23. I007986

Fit washer (16)



Fig. 24. I007988

Fit cap screws with seal ring (22, 23)
Tightening torque: 9 Nm



Fig. 25. I007965

Check for leaks: Charge every port on the rotary feedthrough in succession with compressed air (own provision), close each outlet and then listen and feel whether air is escaping from a different outlet

NOTE: *see §1*



Fig. 26. I007987

A	General
B	Faults
C	Documents and Diagrams
D	Component location
E	Testing
F	Setting and Calibration
G	Repair
H	Service – Info

9600

Overall system/hydraulic equipment

9600 Overall system/hydraulic equipment

A General. 5

C Documents and diagrams 17

E Measuring and testing 25

A General

1 Pressure regulation – PR (LS pump) 7
2 Hydraulic comparison: FENDT 900 COM III to FENDT 900 COM II 10
3 Technical specification: working and steering hydraulics 11
4 Overview of pressure measuring points 13
5 External pressure rise (Power Beyond) 15

1 Pressure regulation – PR (LS pump)

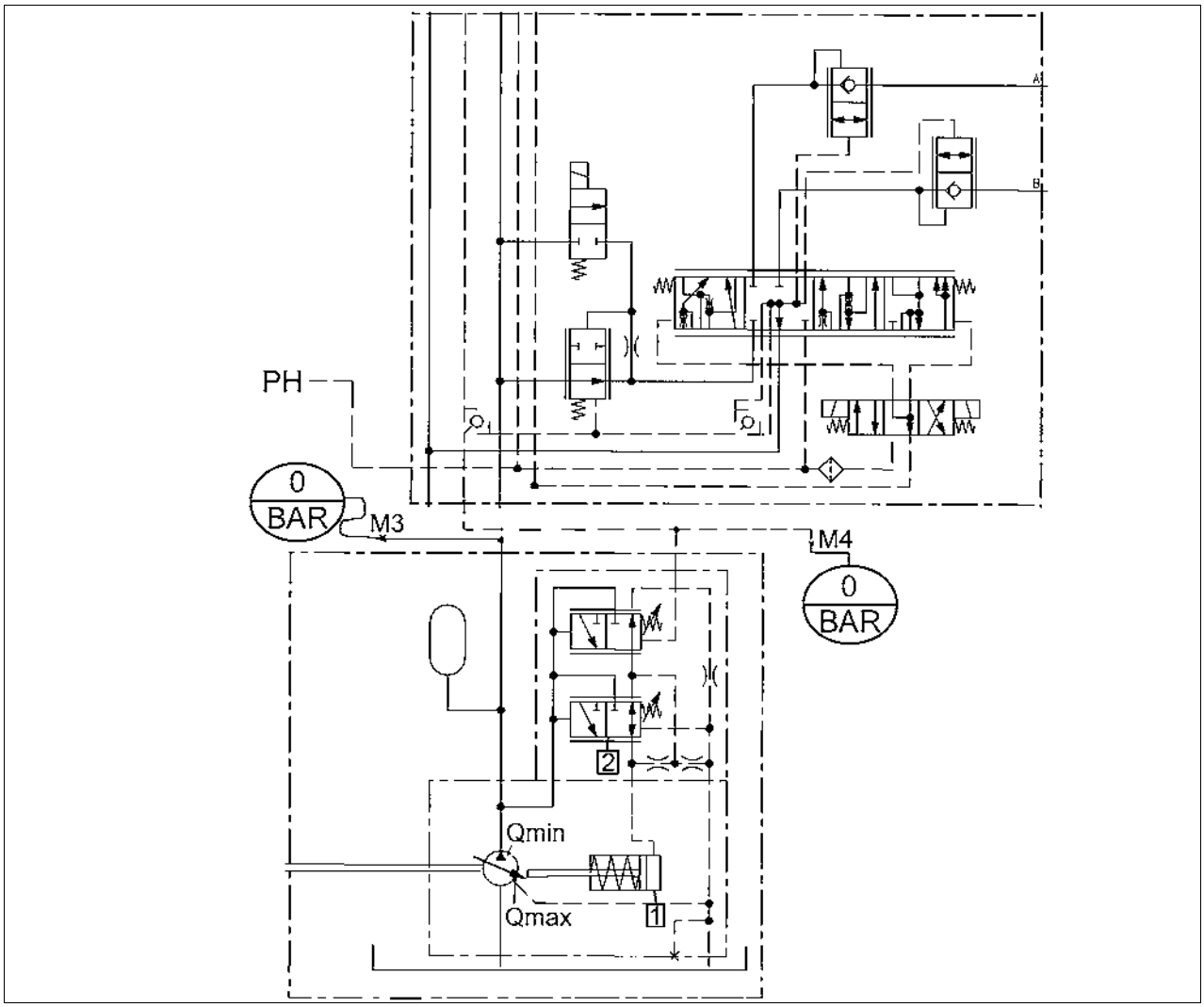


Fig. 1. I001331

The LS pump is not driven

The variable displacement piston (1) is brought into contact with the "Q max. stop" by spring force and the pump is stationary in maximum swivel angle position (max. volume flow 163 l/min or 215 l/min).
At the same time, the spring pushes the pressure cut-off valve (2) into the position shown.
The large variable displacement piston chamber is connected to the tank connection via the control line.
The stationary pump is not supplying any oil, so no pressure builds up.

The pump is driven at a constant speed.

The pump generates a volume flow from the suction point to the consumer.
Pressure rises in the high-pressure pipe according to the load resistance of the consumer.
At the same time, this working pressure acts on the measuring surface of the control valve (2).
As long as the working pressure does not reach the set value (Pmax), the force of the spring prevails over the control piston of the control valve (2).
The control piston remains in its position, and the pump remains in maximum swivel angle position accordingly (Q max).
The consumer is moved at maximum speed.

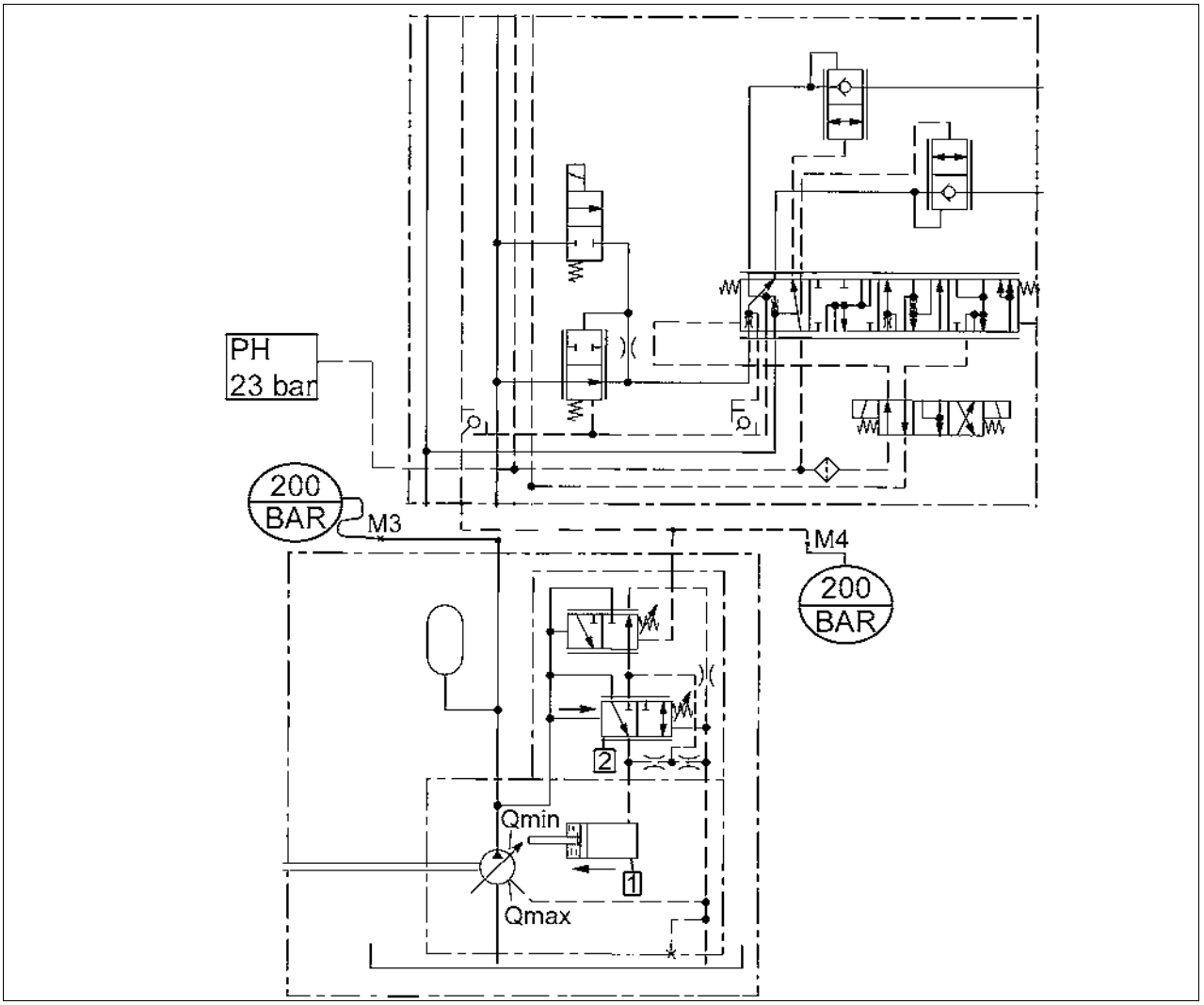


Fig. 2. I001332

As the working pressure increases, the pressure on the measuring surface of the control valve (2) increases accordingly.
The hydraulic force prevails over the set spring force, and the control valve (2) moves to the right and opens the valve.
The pressure in the large variable displacement chamber of the variable displacement piston (1) increases.
If this pressure increases to exceed the counter pressure built up by the spring force and the pressure in the small chamber, the variable displacement piston moves to the left.

This process denotes the start of control.

A further increase in working pressure creates a larger opening of the control valve (2) and increased pressure in the large variable displacement chamber (1).
The pump swivels towards zero (Q min) and keeps the working pressure at a constant.
Absolute zero is not reached by this swivel process; "zero" position means that no axial piston movement takes place and therefore oil is no longer supplied.
However, there may be internal leaking, at the pump itself and at the stationary consumer and the valves.
The pump needs to compensate for this to maintain the pressure.
The pump provides a permanent supply of oil to do this.
The pump remains in a "quasi-zero position".

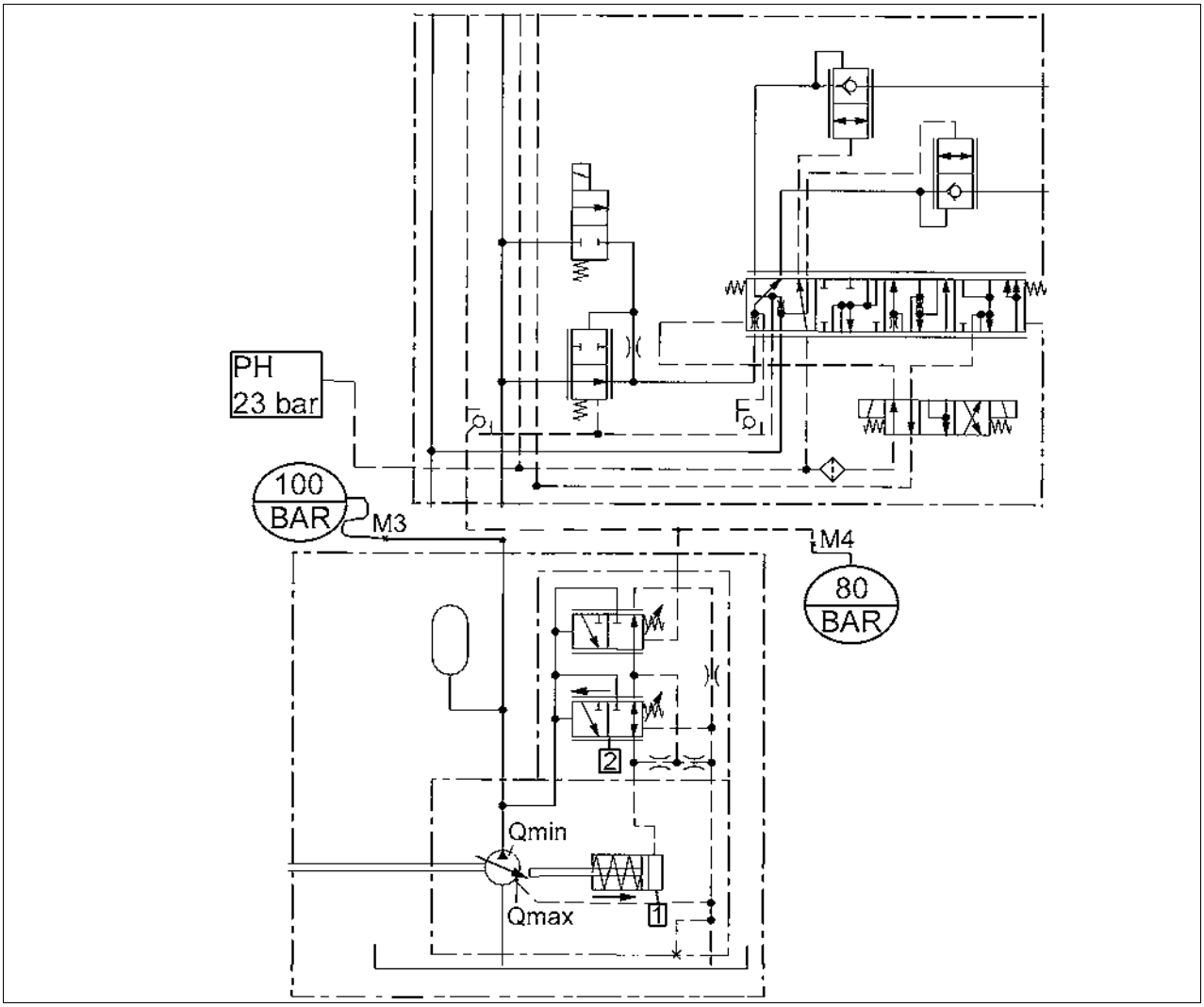


Fig. 3. I001333

The working pressure at the pressure connection falls (e.g. by actuating a directional control valve).
The pressure on the measuring surface of the control valve (2) falls under the spring pressure and the control piston is moved to the left by the spring force.
The large variable displacement chamber (1) is relieved by the control line to the tank.
The spring force causes the variable displacement piston to swivel out, thus reaching the axial piston pump.
The maximum volume flow (Q max) of the pump is available for the directional control valve.

2 Hydraulic comparison: FENDT 900 COM III to FENDT 900 COM II

Summary and comparison of hydraulic systems

Component	FENDT 900 COM III	FENDT 900 COM II
LS pump	Inclined disc axial-flow piston pump with pressure and flow rate control	Inclined disc axial-flow piston pump with pressure and flow rate control
Minimum standby pressure (valves locked)	22 bar	22 bar
Minimum standby pressure (valves unlocked)	22 bar	42 to 45 bar
Flow rate	163 l/min (optional 215 l/min)	110 l/min (163 l/min, optional from 10/2004)
Pump drive	1¼ inch	1 inch from 10/2004 (previously 7/8 inch)
Control pressure differential	20 bar	20 bar
Max. working pressure	200 bar	200 bar
Control pressure	23 bar from the **auxiliary pump**	23 bar from the **LS pump**
Auxiliary pump	Gear pump	Gear pump
Flow rate	22.5 cc/r - 55l/min ---> 1-circuit brake system without front PTO	11 cc/r - 34 l/min
	22.5 cc/r + 8 cc/r ---> 1-circuit brake system with front PTO	
	22.5 cc/r + 16 cc/r ---> 2-circuit brake system	
Connection condition	When the pilot pressure is released or the LS pump is exhausted	LS pump exhausted or steering sluggish
Max. pressure	200 bar	190 bar
Wheel-driven emergency steering pump	Wheel-driven gear pump	----------
Flow rate	8 cc/r	----------
Control valves	SB 23 LS-EHS 2	SB 23 LS-EHS
Max. flow rate	100 l/min (optional 140 l/min - only Pos. 4 possible)	80 l/min
Measuring and testing - pressure measuring points		
M1	Emergency steering pump pressure (wheel-driven)	Not present
M2	Auxiliary pump pressure	Auxiliary pump pressure
M3	LS pump pressure	LS pump pressure
M4	LS pressure	LS pressure
M5	Control pressure	Control pressure

3 Technical specification: working and steering hydraulics

Component	Specifications
Working and steering hydraulics	Load sensing hydraulics
LS pump PR	Inclined disc axial flow piston pump with pressure and flow rate regulation
Pump (series): flow rate at rated engine speed = 2200 rpm	163 l/min
Pump (optional): flow rate at rated engine speed = 2200 rpm	215 l/min
Max. working pressure	200 bar
Control pressure differential	20 bar
Transmission ratio (diesel engine: pump)	0.869
Auxiliary pump PH	Gear pump
Flow rate/revolution for 1-circuit braking system without front PTO	22.5 cc/rev. – single pump
Flow rate/revolution for 1-circuit braking system with front PTO	22.5 cc/rev + 8 cc/rev tandem pump at 25 bar DBV
Flow rate/revolution for 2-circuit braking system with/without front PTO	22.5 cc/rev + 16 cc/rev tandem pump at 25 bar DBV
Transmission ratio (diesel engine: pump)	0.896
Flow rate at rated engine speed = 2200 rpm	55 l/min
Max. pressure	190 bar
Drive	Flange-mounted to air compressor
Emergency steering pump PNL	8 cc wheel-driven gear pump
Flow rate at 60 km/h	36 l/min
Flow rate at 10 km/h	6 l/min
Drive	via 4WD
Auxiliary control valves	SB 23 LS-EHS 2
Max. flow rate	100 l/min (optional 140 l/min - only Pos. 4 possible)
Auxiliary control valves (standard)	4 valves, rear: 1.1 "yellow", 1.2 "blue", 1.3 "red", 1.4 "green"
Auxiliary control valves (optional)	Max. 6 valves, **rear**: 1.5 "brown", 1.6 "purple" + 2 valves, **front**: 2.1 "olive", 2.2 "grey"
Actuation system	Electro-hydraulic via CAN bus (daisy chain)
Rear power lift (Power)	EPC 23 C - SA
Rear power lift (Professional)	EPC 23 C - SA/DA
Front power lift (Standard)	Hydac valve SA
Front power lift (Enhanced control)	EPC 23 C - SA/DA
Hydraulic trailer brake valve	Optional

1.1	Yellow valve (standard)
1.2	Blue valve (standard)
1.3	Red valve (standard)
1.4	Green valve (standard)
1.5	Brown valve
1.6	Violet valve
CD	Overflow oil line (Case Drain)
Hy. ABV	Hydraulic trailer brake valve
LS	LS control line (load sensing)
P	Pump pressure line
RH	Return line, rear

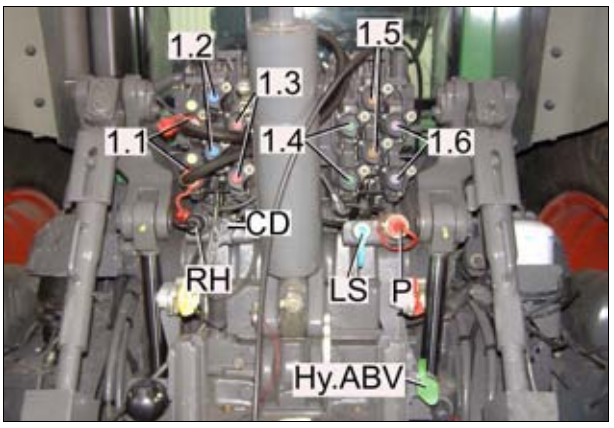


Fig. 4. I004435

2.1	Olive valve
2.2	Grey valve
RF	Return line, front

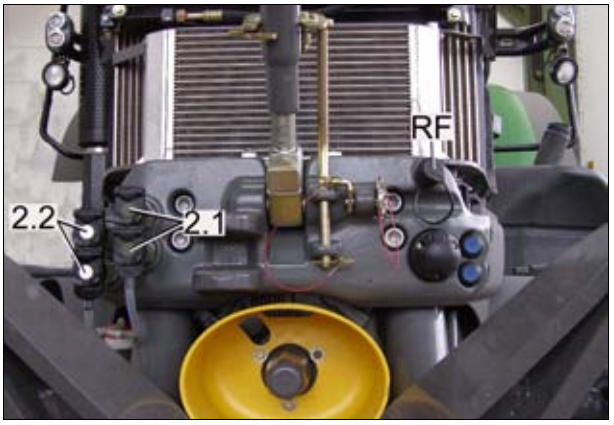


Fig. 5. I000956

4 Overview of pressure measuring points

M1 Measuring point, emergency steering pump
M2 Measuring point, auxiliary pump
M3 Measuring point, LS pump
M4 Measuring point, LS pressure
M5 Measuring point, control pressure

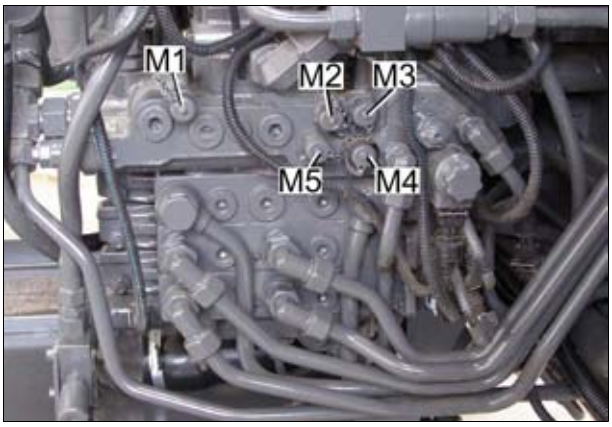


Fig. 6. I001210

M1	pPNL	Emergency steering pump pressure - Since it is flange-mounted to the 4WD, the pump operates only during travel
M2	pPH	- Auxiliary pump pressure - Standby pressure for control pressure - As needed and at a steering lock of 190 bar (Need scenario exists only if the LS pump is fully "occupied" with current oil demand, can no longer meet demand, and pressure requirement from steering system is higher than current working pressure)
M3	pPR	All LS pump pressures - Min. standby pressure - Current working pressure - Max. standby pressure Other functions (engine speed/cold-start/warm-start) are also active when engine is started.
M4	pLS	Control pressure (=command/signal) to the LS pump
M5	pSt	Control pressure is required to activate control valves 1…8 and also for the EPC valves

M6 Rear return flow reference pressure measuring point

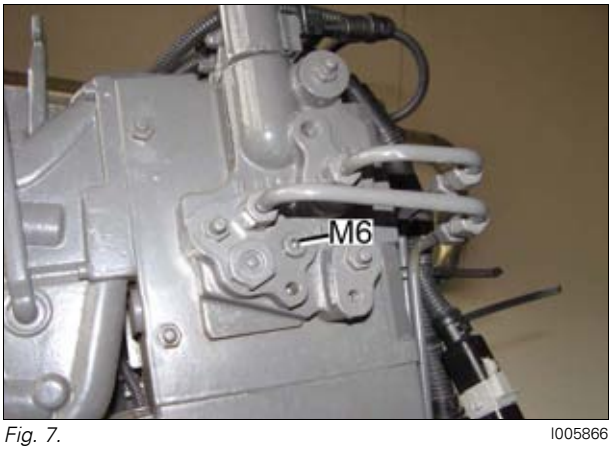


Fig. 7. I005866

M6	RREF rear	Pressure in the rear return flow - is measured in the rear end plate

M7 Front return flow reference pressure measuring point



Fig. 8. I005867

M7	RREF front	Pressure in the front return flow - is measured in the middle end plate

5 External pressure rise (Power Beyond)

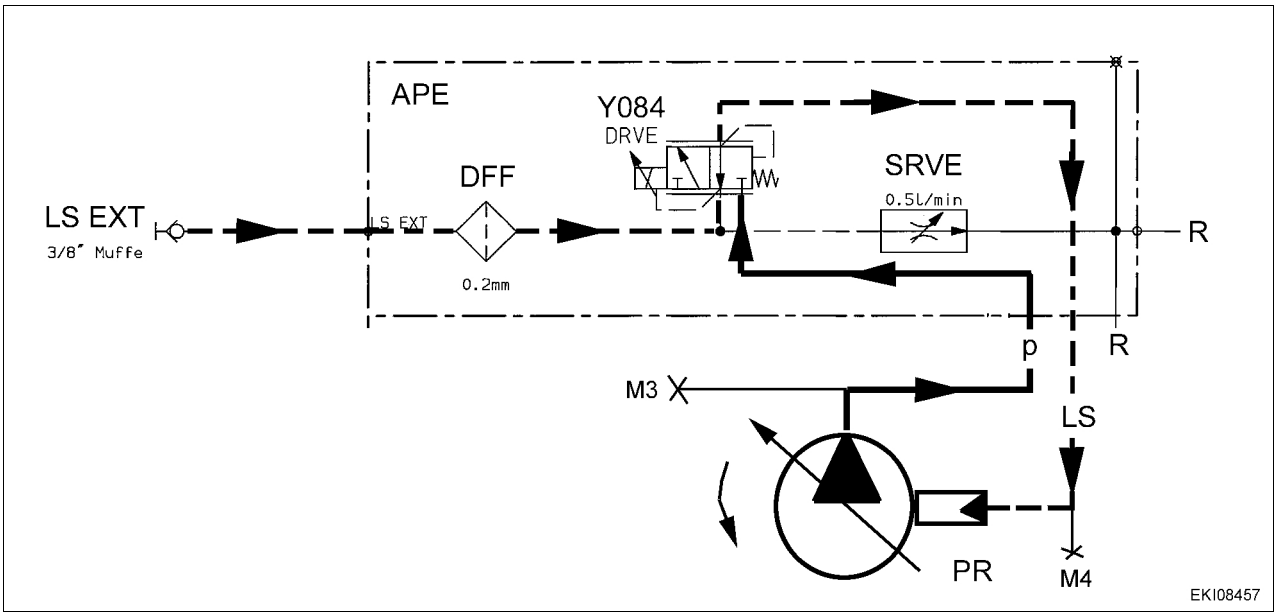


Fig. 9. I002113

Item	Designation	Item	Designation
PR	LS pump	p	Pump pressure
Y084	Control pressure increase solenoid valve (DRVE)	R	Return flow
DFF	Pressure filter	LS	Load sensing pressure
LS ext	External load sensing connection	M3	Measuring point: pump pressure p
SRVE	Flow cut-off valve, external load sensing relief	M4	Measuring point: load sensing pressure LS

Implements with hydraulic consumers that are operated on the tractor often have very long supply lines, which pose the risk of pressure loss. Hence, the 22 bar of control pressure is not always reached.
The control pressure increase is set and activated via the terminal. This in turn energises the pressure cut-off valve, external LS, reinforcement (DRVE), in dependence of the set value. The wider the pressure cut-off valve opens, the higher the volume of oil fed by the pressure line (P) to the LS line, which raises the LS pressure.
If additional pressure is present in the external LS line, the control line pressure pushes the pressure cut-off valve further to the right and the LS pressure is raised.
The flow cut-off valve, external LS relief (SRVE) is required to allow a small volume of oil to flow to the tank (T), thus relieving the LS line.
The pressure filter, external LS (DFE) protects the system from impurities that penetrate the system via the external LS line.

C Documents and diagrams

1 Hydraulic circuit diagram with legend 19

1 Hydraulic circuit diagram with legend

Item	Designation	DIN	Item	Designation	DIN
APE - Entry plate for external pressure supply			**MVKFS [Y022]** - Lowering solenoid valve (standard front power lift)		Y022
ASP1 - Accumulator, suspension 1			**MVKH [Y055]** - Rear pressure compensator lock valve (SA/DA)		
ASP2 - Accumulator, suspension 2			**MVL [Y012]** - Solenoid valve, charge function (suspension, oil pre-heater)		Y012
AVF1 - Lock valve, suspension 1			**MVP [Y032]** - Solenoid valve, pilot pressure		Y032
AVF2 - Lock valve, suspension 2			**MVUL [Y082]** - Solenoid valve, lower link stabiliser lock		Y082
BF - Ventilation filter			**MVVH [Y060]** - Solenoid valve, rear pre-heater		Y060
DBV1 - Main pressure-limiting valve			**MVVM [Y061]** - Solenoid valve, central pre-heater		Y061
DBVF1 - Pressure-limiting valve, suspension 1			**OETR** - Oil temperature regulator		
DBVF2 - Pressure-limiting valve, suspension 2			**PH** - Auxiliary pump		
DBVKF [Y022] - Field pressure valve, DA front power lift enhanced control			**PNL** - Emergency steering pump		
DBVKH [Y062] - Field pressure valve, DA rear power lift			**PR** - LS pump		
DBV-L - Pressure-limiting valve, 175 bar steering			**PVL** - Priority valve, steering		
DFE - Pressure filter, external LS			**RLF** - Return line filter		
DFP - Pressure filter, pilot pressure			**RVF1** - Non-return valve, suspension 1		
DFWH - Flow monitor, auxiliary pump			**RVFH** - Non-return valve, raise suspension		
DRVE [Y084] - Pressure cut-off valve, Power Beyond			**RVFS** - Non-return valve, lower suspension		
DRVF [Y013] - Suspension load pressure/lower			**RVL1-3** - Non-return valve, steering 1-3		
DRVP - Pressure cut-off valve, pilot pressure			**RVN** - Non-return valve, emergency steering pump		
DS1 - Pressure switch, LS pump monitor			**SFH** - Auxiliary pump suction filter		
DSF [B063] - Pressure switch, filter monitor		B063	**SFN1+2** - Suction filter, emergency steering pump 1+2		
DWKF - Pressure compensator, front power lift, SA			**SFR** - Suction filter, LS pump		
DWL - Pressure compensator, steering			**SRVE** - Flow cut-off valve, external LS relief		
DWP - Pressure compensator, pilot pressure			**SVUL [Y083]** - Solenoid valve, lower link stabiliser release		Y083
EPH - End plate, rear valve block			**TG [B013]** - Temperature sensor		B013
EPM - End plate, centre			**VBF** - Valve block, suspension		
FKH - Front power lift			**VBL** - Valve block, steering		
FSP - Front power lift accumulator			**VBP** - Valve block, pilot pressure supply		
FSS [B084] - Level switch		B084	**WV1** - LS shuttle valve 1		
GDR - Silencer, LS pump			**WVP** - Shuttle valve, pilot pressure		
HKH - Rear power lift			**ZF1** - Federungszylinder 1		
HP - Hand pump, pilot pressure – emergency supply			**ZL** - Steering cylinder		
Hy.ABV - Hydraulic trailer brake			**ZSB** - Central control block		

Item	Designation	DIN	Item	Designation	DIN
K - Hydraulic oil cooler			**ZSP** - Auxiliary accumulator, suspension		
LE - Steering unit			**Autoguide**		
M1 - Measuring point, emergency pumps			**APLE** - Connection plate for el.-hyd. steering system		
M2 - Measuring point, auxiliary pumps			**DRVLE** - Pilot pressure cut-off valve, el.-hyd. steering system		
M3 - Measuring point, LS pump			**MVLE1 [Y085]** - Solenoid valve, pilot pressure/switch-off (Auto-Guide)		
M4 - Measuring point, LS pressure			**MVLE2 [Y086]** - Solenoid valve, steering disconnect (Auto-Guide)		
M5 - Measuring point, control pressure			**PVLE** - Proportional valve, el.-hyd. steering system		
MVFF [Y067] - Solenoid valve, lock suspension		Y067	**VBLE1** - Valve block, el.-hyd. steering system 1		
MVFH [Y065] - Solenoid valve, raise suspension		Y065	**VBLE2** - Valve block, el.-hyd. steering system 2		
MVFW [Y063] - Solenoid valve, wobble stabiliser		Y063	**VLE1** - LE priority valve (oversteering valve)		
MVKF [Y021] - Front pressure compensator lock valve (SA/DA)		Y021	**VLE2+3** - LE switch off 1 + 2 valves		
MVKFH [Y021] - Lifting solenoid valve (standard front power lift)		Y021	**WVLE** - LS shuttle valve, el.-hyd. steering system		

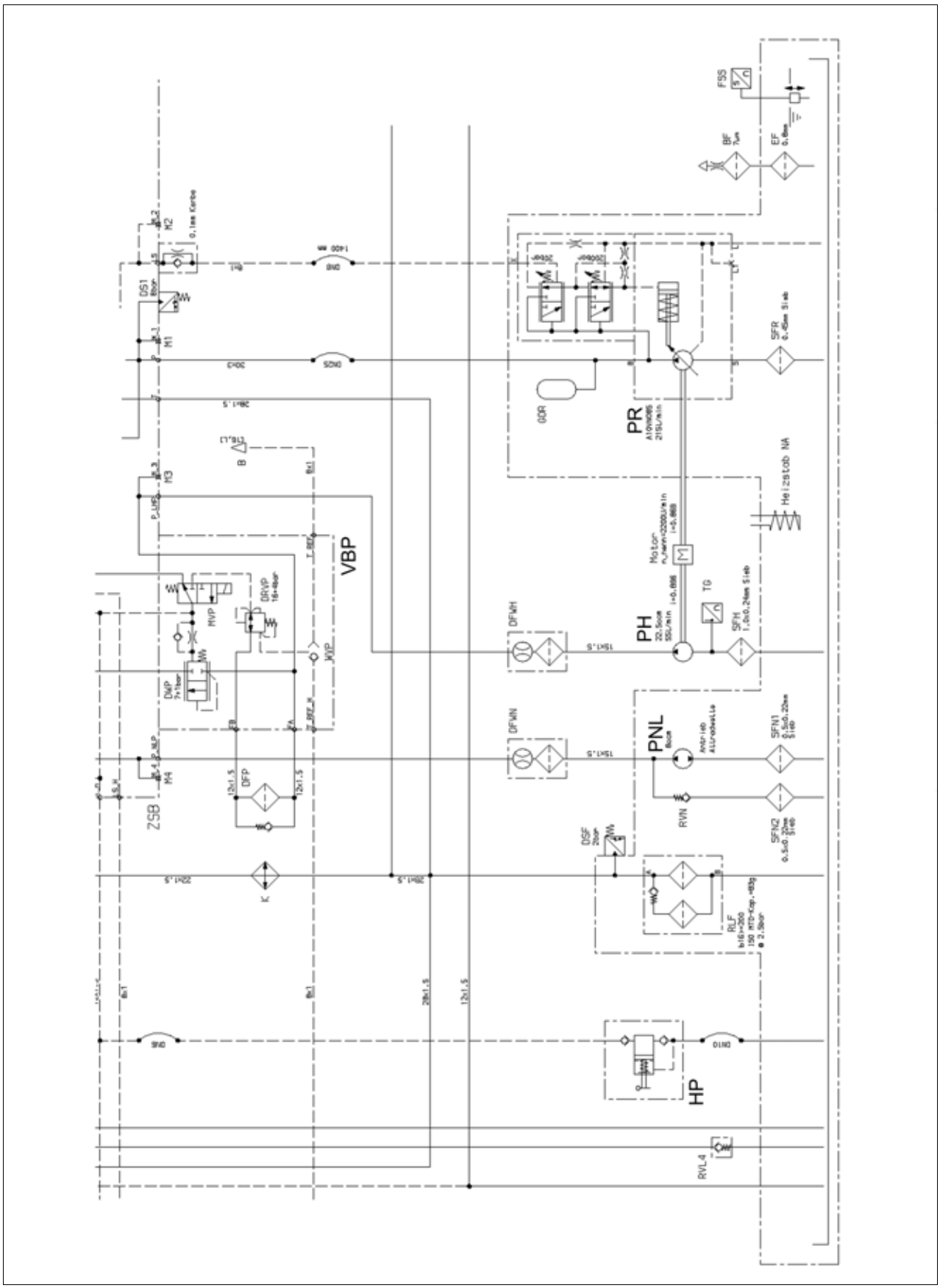


Fig. 1. Pumps

I000962

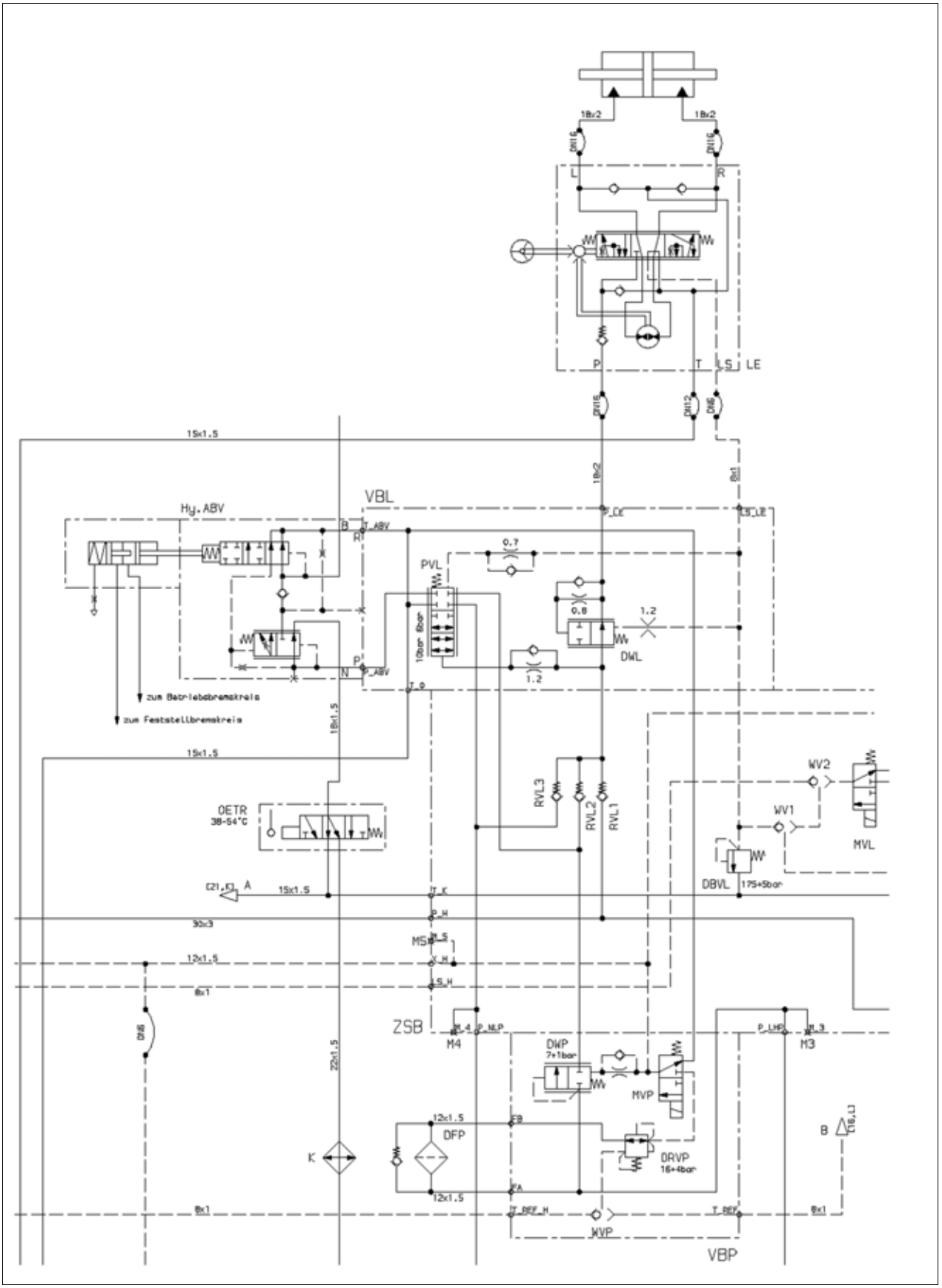


Fig. 2. Central control block and steering

I000937

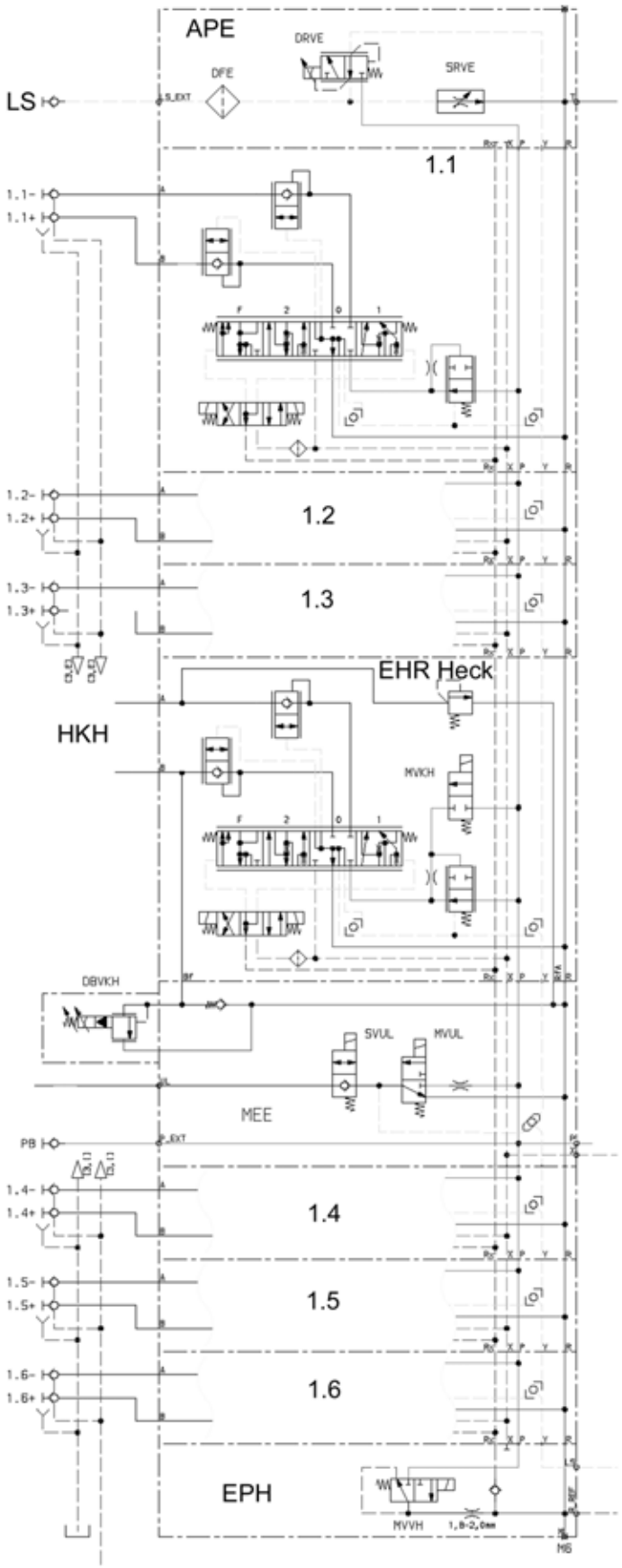


Fig. 3. Rear valve block

I000968

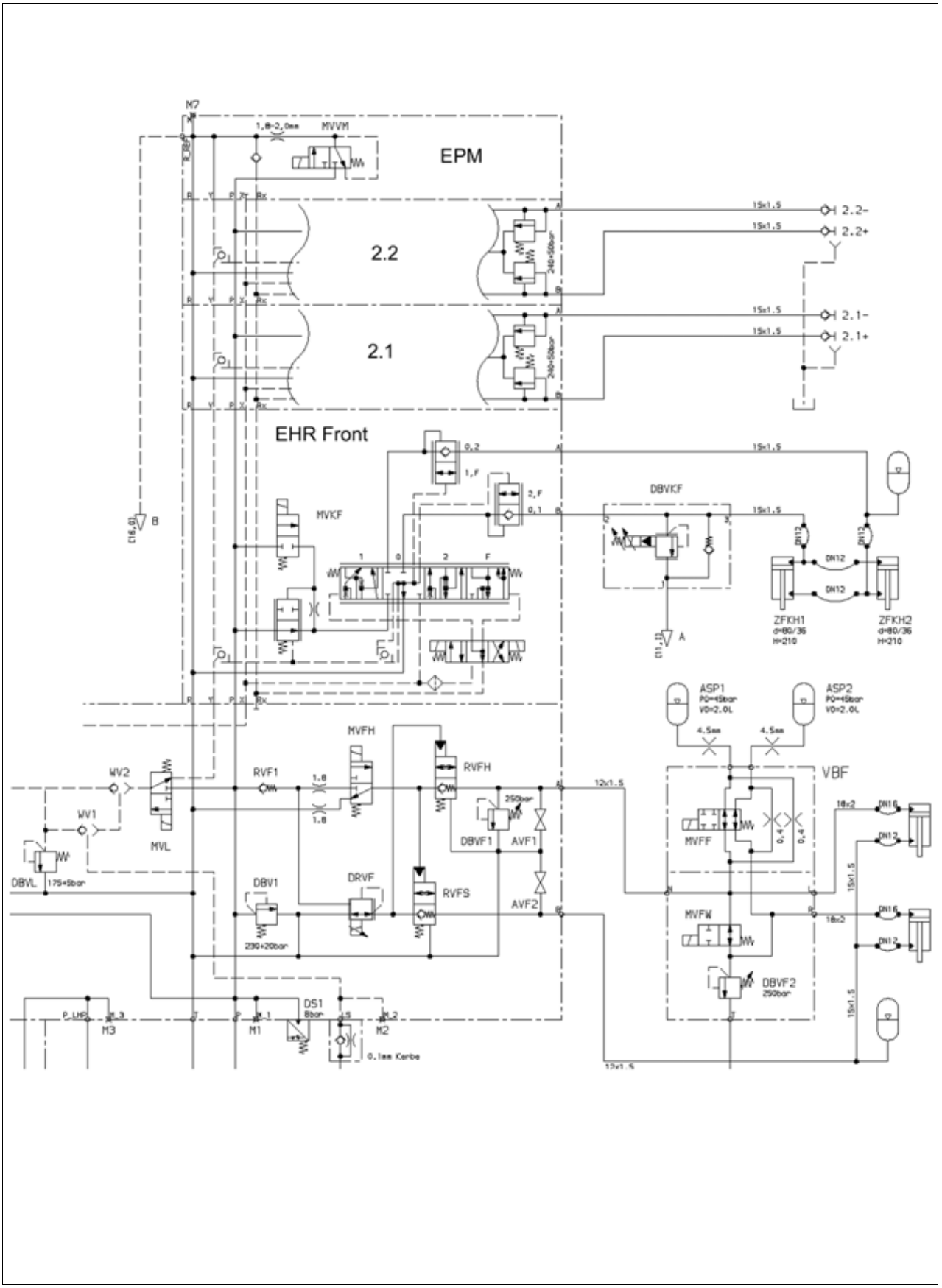


Fig. 4. Central valve block

I000969

E Measuring and testing

1 Test report, fax template 27

1 Test report, fax template

Pressure testing

FENDT				Measurement no.
Chassis no.:	Op. hrs. reading:	Keyword:	Name:	Date:

NOTE: *Initial condition of tractor for all measurements:*

- *Engine in idle (800 rpm)*
- *Valves and EPC are locked*
- *No steering*
- *In tractors with hydraulic trailer brakes, release the pressure with the trailer brake button while the handbrake is applied*
- *Oil temperature 40-50°C*

	LS pump test [PR]	M2 (bar)	M3 (bar)	M4 (bar)	M5 (bar)	Oil temperature
A		SETPOINT ACTUAL	SETPOINT ACTUAL	SETPOINT ACTUAL	SETPOINT ACTUAL	
A1	Minimum standby pressure (Valves locked)	12-18	20-24	0	0	
A2	Minimum standby pressure (Valves unlocked)	34-40	20-24	0	22-25	
A3	Free steering when stationary To left/right (Valves unlocked)	34-40 /	Depending on resistance /	Depending on resistance /	22-25	
A4	Turn steering to stop To left/right (Valves unlocked)	34-40 /	195-200 /	170-180 /	22-25	
A5	Yellow control valve Raise/lower	34-40 /	198-210 /	198-210 /	22-25	
A6	Blue control valve Raise/lower	34-40 /	198-210 /	198-210 /	22-25	
A7	Red control valve Raise/lower	34-40 /	198-210 /	198-210 /	22-25	
A8	Green control valve Raise/lower	34-40 /	198-210 /	198-210 /	22-25	
A9	Brown control valve Raise/lower	34-40 /	198-210 /	198-210 /	22-25	
A10	Violet control valve Raise/lower	34-40 /	198-210 /	198-210 /	22-25	
A11	Olive control valve Raise/lower	34-40 /	198-210 /	198-210 /	22-25	
A12	Grey control valve Raise/lower	34-40 /	198-210 /	198-210 /	22-25	
A13	Rear EPC with external pushbutton to stop	34-40	198-210	198-210	22-25	
A14	Front power lift with external pushbutton to stop	34-40	198-210	198-210	22-25	
A15	Suspension ON or during raising (Valves unlocked)	34-40	198-210	198-210	22-25	

	Auxiliary pump test [PH]	M2 (bar)	M3 (bar)	M4 (bar)	M5 (bar)	Oil temperature
B	Connect the short circuit hose to a control valve and use the terminal to set the valve to max. flow rate and deflect or – Short circuit hose from pressure connection, external to return line, rear	SETPOINT ACTUAL	SETPOINT ACTUAL	SETPOINT ACTUAL	SETPOINT ACTUAL	
B1	Free steering when stationary (Valves unlocked)	Depending on resistance	Depending on resistance	Depending on resistance	22-25	
B2	Steering at stop to left/right (Valves unlocked)	190 - 200	Depending on resistance	175 - 185	22-25	
B3						

	Wheel-driven steering pump test	M1 (bar)	M1 (bar)	Oil temperature
C	**[PNL] - only when driving forwards**	SETPOINT	ACTUAL	
C1	10 km/h	0.4		
C2	40 km/h	1.5		
C3				

	Further measurements	M1 (bar)	M2 (bar)	M3 (bar)	M4 (bar)	M5 (bar)	Oil temperature
D	special conditions/combinations/sequences/settings/implements	SET-POINT ACTUAL	SET-POINT ACTUAL	SET-POINT ACTUAL	SET-POINT ACTUAL	SET-POINT ACTUAL	
D1							
D2							
D3							
D4							

Measuring leak oil volume at LS pump

NOTE: *Do not perform measurement, unless:*

– *There are genuine doubts about the pump volume*

– *The overall hydraulic function has already been checked*

Preparation:

Direct the leak oil line of the LS pump into a receptacle with a litre scale.

Starting condition of tractor

– Oil temperature 50°C

– With a maximum standby pressure of 200 bar and zero delivery

– Engine speed 1500 rpm

Pump status	Leak oil
New	Approx. 5 l/min
Permissible, normal state	Up to 12 l/min
Worn	From 12 l/min

A	General
B	Faults
C	Documents and Diagrams
D	Component location
E	Testing
F	Setting and Calibration
G	Repair
H	Service – Info

9605

Hydraulic equipment/hydraulic connections

9605 Hydraulic equipment/hydraulic connections

G Repair 5

G Repair

1 Removing rear hydraulic quick-release coupler 7
2 Installing rear hydraulic quick-release coupler 10

1 Removing rear hydraulic quick-release coupler

NOTE: *The coupler housing does not have to be removed if only the quick-release coupling inserts are removed.*

For greater clarity, the work was performed with the control valve removed.

Loosen coupler housing bolts and remove housing (when the control valve is installed, a long Allen key is required).



Fig. 1. I001740

Remove protective cap of coupler.



Fig. 2. I001741

Remove circlip from coupler insert.



Fig. 3. I001742

Operate release lever to push out and remove coupler.



Fig. 4. I001743

Remove pressure sleeve with circlip pliers.



Fig. 5. I001744

Remove circlip from release lever.



Fig. 6. I001745

Remove release lever.



Fig. 7. I001746

Remove plastic cover and pressure lever.



Fig. 8. I001747

2 Installing rear hydraulic quick-release coupler

Prepare cleaned parts of hydraulic coupler for assembly.



Fig. 9. I001748

Insert new support rings and O-rings.



Fig. 10. I001749

Insert release rocker in coupler housing, ensure that the marking points to the release lever.



Fig. 11. I001747

Insert release lever in bore.



Fig. 12. I001746

Mount release lever circlip.



Fig. 13. I001745

Insert pressure sleeve using circlip pliers.



Fig. 14. I001744

Press coupler insert into housing bore.



Fig. 15. I001743

Mount coupler insert circlip.



Fig. 16. I001742

Mount protective caps.



Fig. 17. I001741

Mount coupler housing on control valve and tighten bolts.

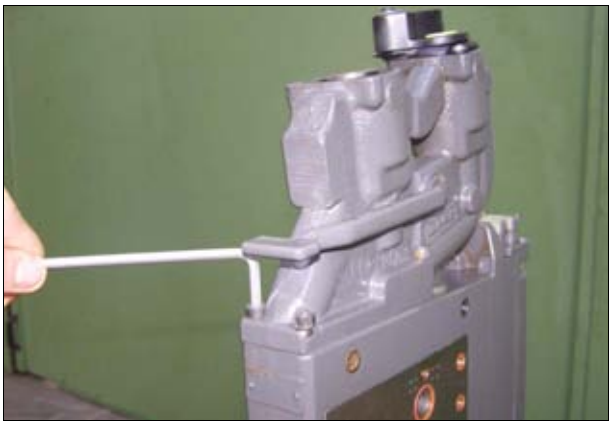


Fig. 18. I001740

A	General
B	Faults
C	Documents and Diagrams
D	Component location
E	Testing
F	Setting and Calibration
G	Repair
H	Service – Info

9610

Hydraulic equipment/central control block (ZSB)

9610 Hydraulic equipment/central control block (ZSB)

A General. 5

A General

1 Central control block. 7

1 Central control block

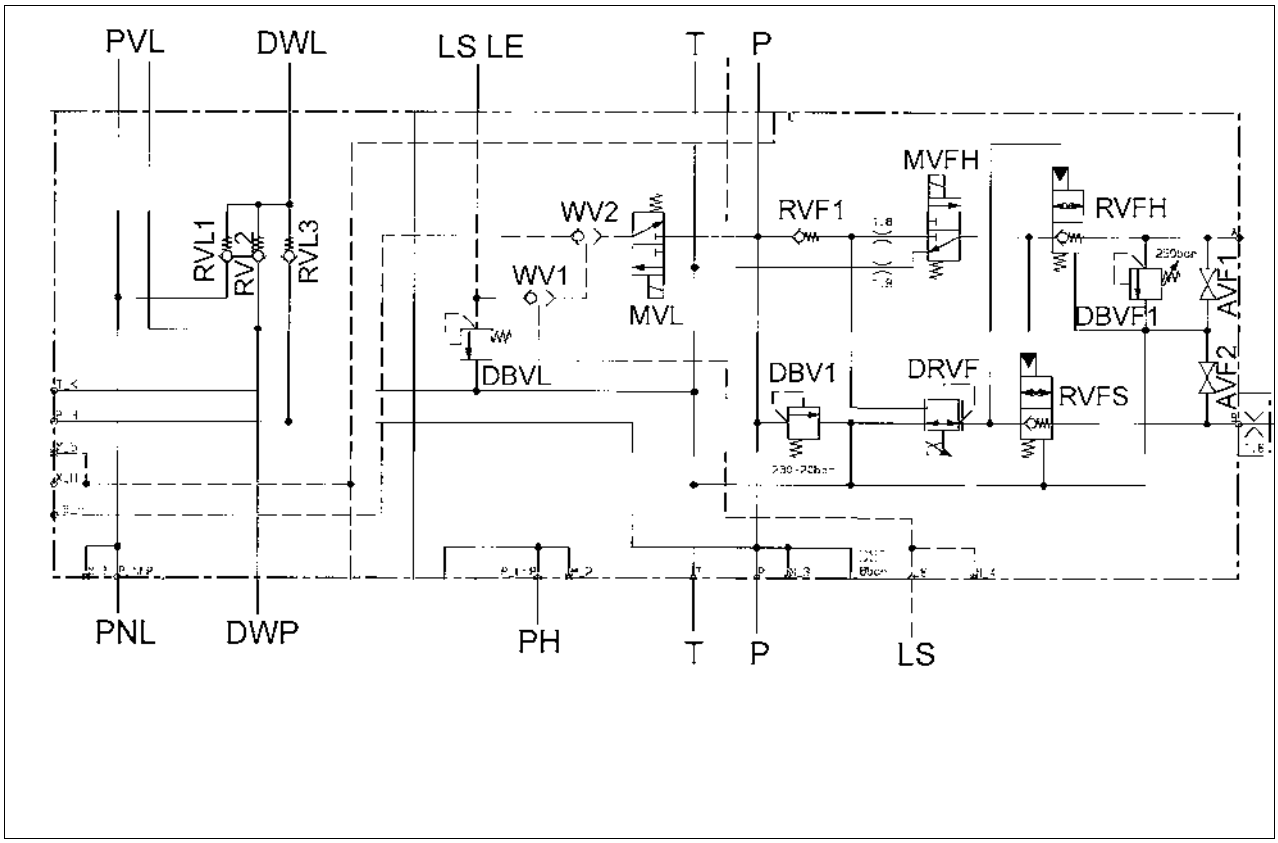


Fig. 1. I001343

Vital hydraulic functions are integrated into the central control block. This keeps the number of hydraulic line connections to a minimum.
The central control block accommodates the following components:

- Non-return valves 1-3, steering (RVL1-3)
- Pressure-limiting valve, steering (DBVL)
- Shuttle valves 1+2 (WV1+2)
- Solenoid valve, charge function (MVL)
- Main pressure-limiting valve (DBV1)
- Non-return valve, suspension 1 (RVF1)
- Solenoid valve, raise suspension (MVFH)
- Pressure cut-off valve, suspension (DRVF)
- Non-return valves, raise/lower suspension (RVFH, RVFS)
- Pressure-limiting valve, suspension 1 (DBVF1)
- Stop valves, suspension 1+2 (AVF1 + AVF2)

The following components are flange-mounted to the central control block:

- Measuring connections 1-5 (M1-M5)
- Valve block, pilot pressure supply (VBP)
- Valve block, steering (VBL)
- EPC cut-off valve, front
- Control units SB 23 LS-EHS 2 for front connections
- End plate, centre (EPM)

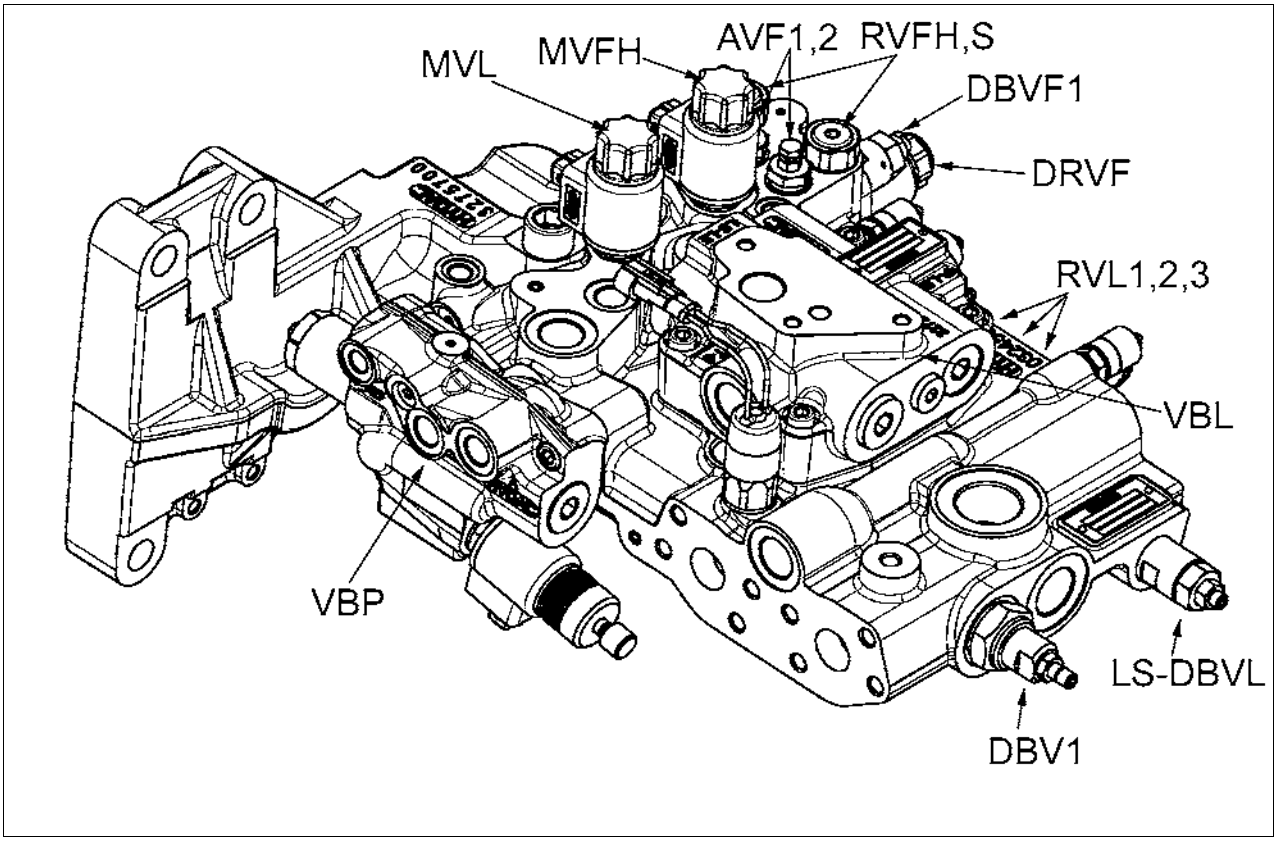


Fig. 2. I001344

A	General
B	Faults
C	Documents and Diagrams
D	Component location
E	Testing
F	Setting and Calibration
G	Repair
H	Service – Info

9620

Hydraulic equipment/valve fitting

9620 Hydraulic equipment/valve fitting

A General. 5
C Documents and diagrams 13
F Setting and calibrating 17
G Repair. 25

A General

1 Control valves SB 23 LS-EHS 2/Emergency mode 7
2 Control pressure 10
3 Oil pre-heater 11

1 Control valves SB 23 LS-EHS 2/Emergency mode

Manual mode:

In the event of electronic failure, the individual valves can also be operated manually.

– Detach the cover plate (A) from the rear control valves or
– detach the panel from the central control valve
– Actuate the valve with a spanner (size 13)

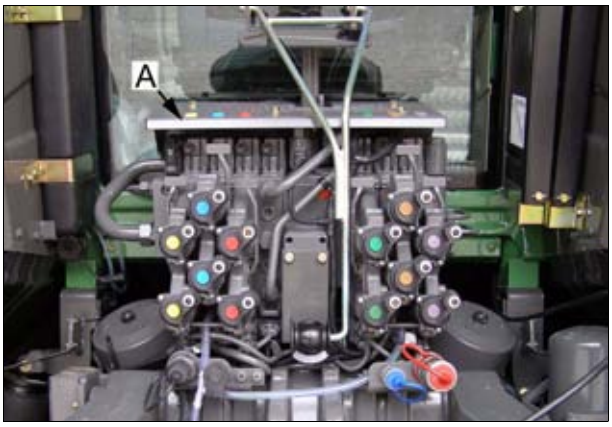


Fig. 1. I001312

Actuation directions:

A	Raise
B	Lower
C	Floating position

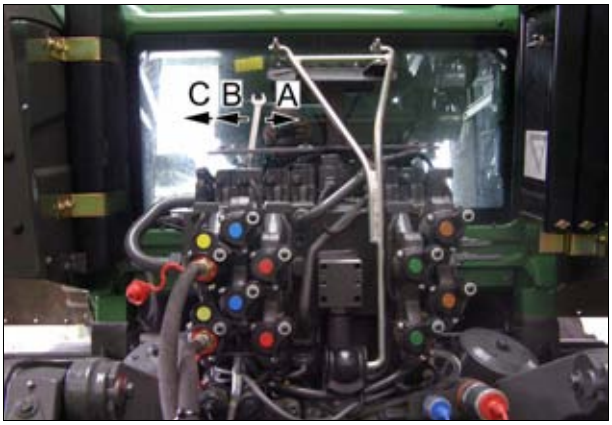


Fig. 2. I001313

NOTE: *Always actuate valves on side "A" with the spanner. If the valves are actuated on the opposite side, the valve setting may be altered.*

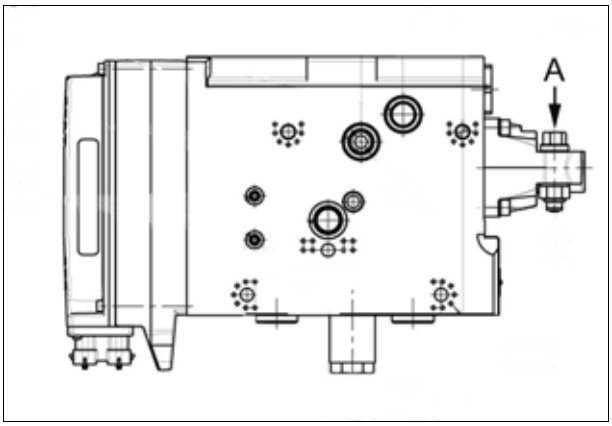


Fig. 3. I001314

Manual operation in the event of hydraulic failure

In the event of hydraulics failure (e.g. engine damage), pilot pressure can be generated using the hand pump, which in turn enables the valves to be deflected.

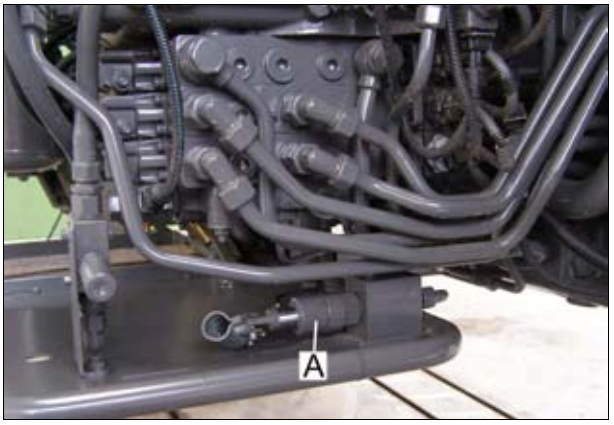


Fig. 4. I001316

Procedure:

– Screw in screw "A" on the pilot valve to manually set it to flow

– Actuate hand pump whilst manually deflecting the valve (two-person operation)

NOTE: *The hand pump generates pilot pressure that is needed to deflect the valves. This enables mounted implements to lower under their own weight. Lifting in this way is not possible.*

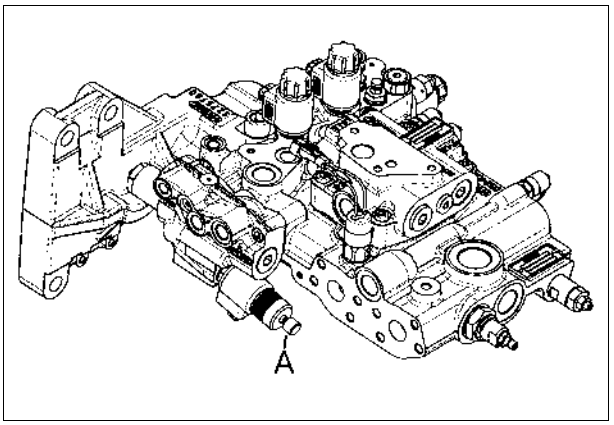


Fig. 5. I001317

Shut down control valve

Electronic problems or a mechanical defect in a control valve causes **all** control valves to lock.

Work through the following steps in the event of control valve failure:

Establish which valve has failed	Read-off and clear error code
Lower implement	Manual mode (see above)
Hydraulically flush control valve	Manual mode (see above)
If the fault recurs and the control valves lock	Shut down control valve

Shutting down control valve:

These control valves are connected like a daisy chain. This means that the valves are connected in series, i.e. one is connected to the other.
If one control valve has to be shut down, a valve is "skipped"

Diagram for valve shut down

If a valve has to be shut down, it is removed from the chain. If, for example, valve 2 has a problem and has to be shut down, valve 1 is connected to valve 3.

IMPORTANT: *Control valves that have been shut down must remain in neutral when the engine is started.*

If not:

– *The hydraulic circuit may heat up*

– *Pump noise*

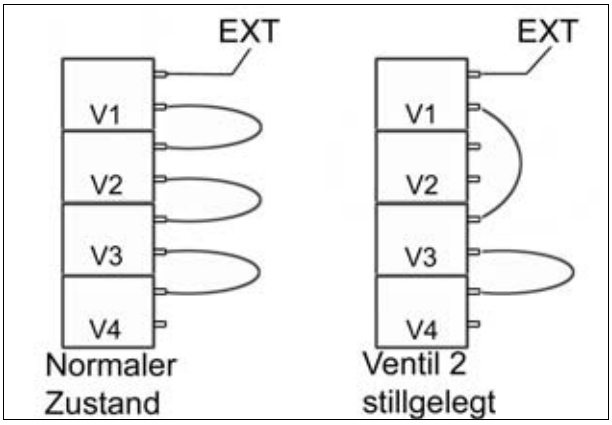
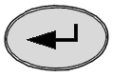


Fig. 6. I001318



Press enter to clear the error message.
Each stored fault message must be cleared individually. Cancelling a fault message does not remove the fault; it is simply no longer displayed.
The message will be displayed again the next time the tractor is started up.

2 Control pressure

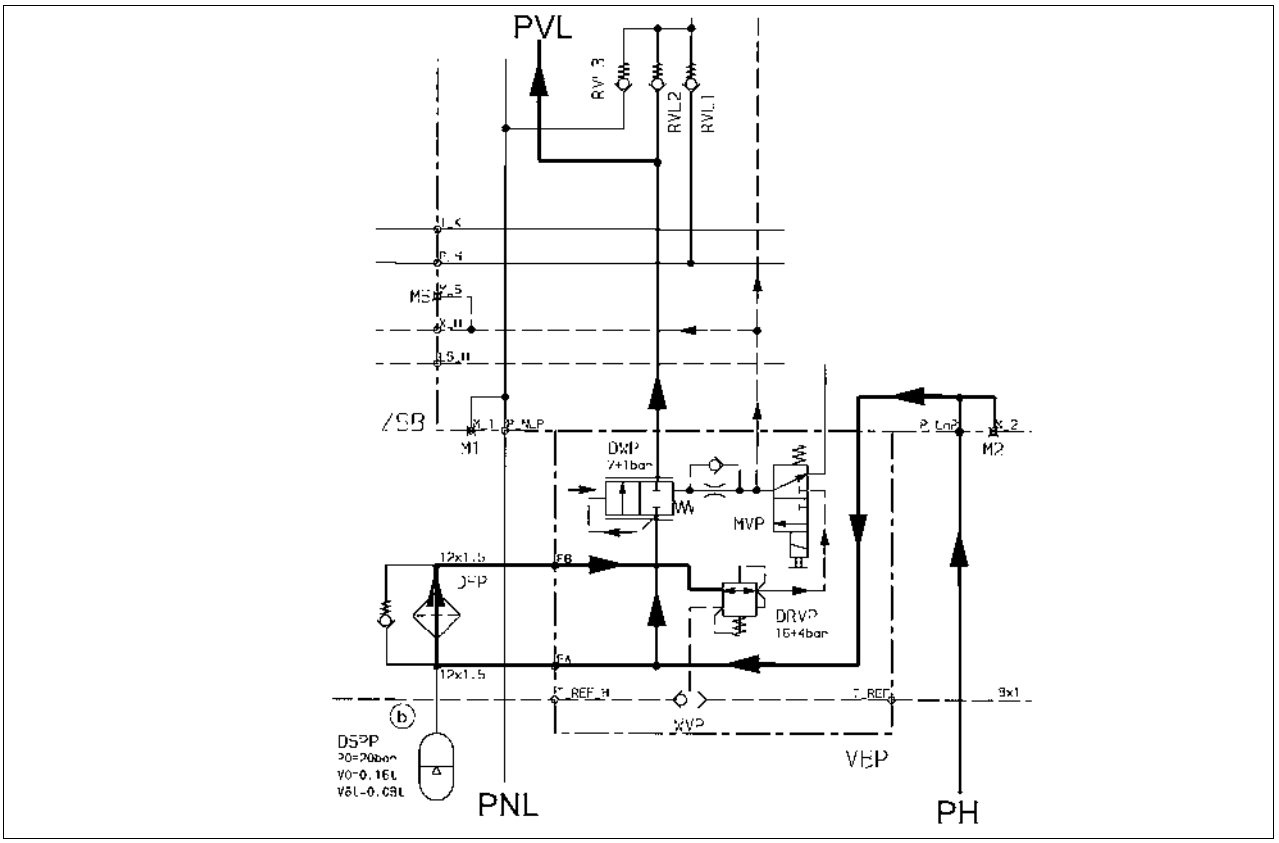


Fig. 7. I001339

Once the diesel engine has started, oil flows from the auxiliary pump to the pilot control pressure compensator (DWP) and via the pilot control pressure filter (DFP) to the pilot pressure cut-off valve (DRVP).

The pilot control pressure compensator (DWP) is closed by the spring force. If a pressure of 7 +1 bar is applied to the pressure compensator, this hydraulic force acts on the control line and pushes the pressure compensator against the spring force to the right. The pressure compensator opens and oil is allowed to flow to the non-return valve, steering 2 (RVL2) and to the steering priority valve (PVL).

The pressure is regulated at 16 + 4 bar at the pilot pressure cut-off valve (DRVP) and applied to the pilot control solenoid valve (MVP).

The pilot control solenoid valve opens on actuation and the pilot pressure is applied to the pilot control valves. The pilot pressure is also applied to the right side of the pressure compensator and, together with the spring force, pushes it to the left.

This increases the pressure before the pressure compensator (control line) until it exceeds the sum of the spring force and pilot pressure together and pushes the pressure compensator further to the right until it opens.

3 Oil pre-heater

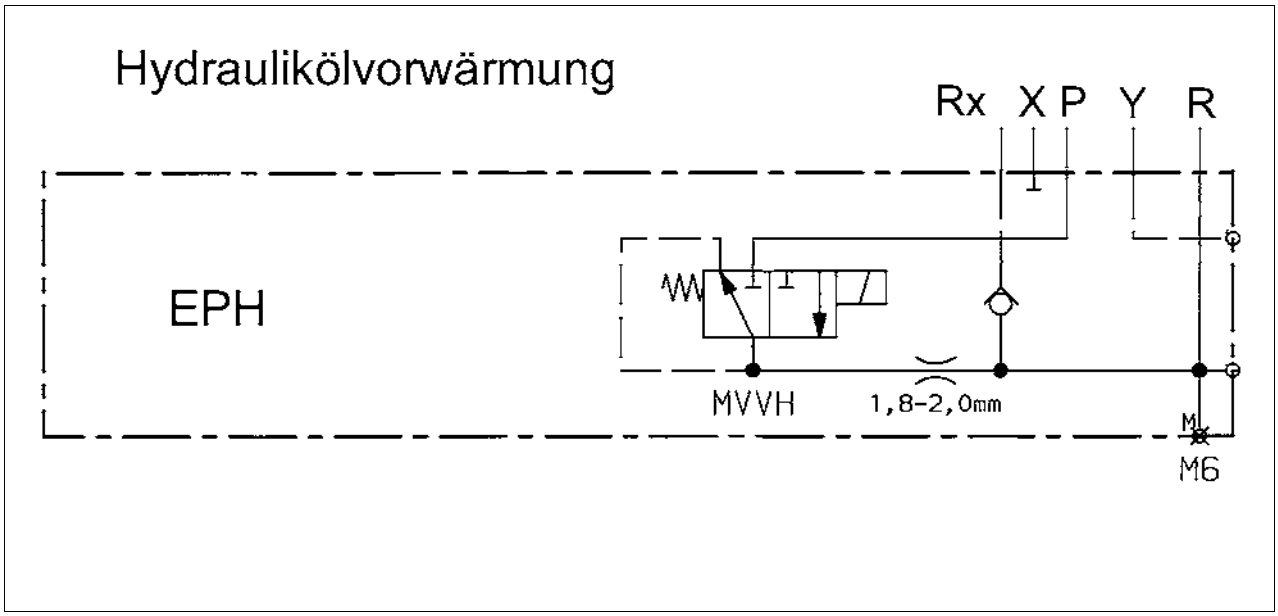


Fig. 8. I001354

To heat up the hydraulic oil more quickly at cold temperatures and hence minimise frictional loss, solenoid valves for oil pre-heating are installed in the end plates.
As standard, the rear end plate (EPH) accommodates the solenoid valve, rear pre-heater (MVVH).
The solenoid valve, central pre-heater (MVVM) is fitted into the end plate, centre (EPM) only if a valve (control valve or EPC valve) is also fitted.
At oil temperatures below 0°C, the solenoid valves, pre-heater (MVVH & MVVM) are energised and the oil flows from the pressure side (P) via the aperture to the return line (R). The aperture's narrow diameter (1.8-2.0 mm) causes the oil to heat up more quickly and therefore become thinner.
At temperatures above 30°C, the solenoid valves are de-energised and the pre-heater operation switched off.
The oil temperature is measured by the sensor, hydraulic oil temperature (B013, TG).

C Documents and diagrams

1 Control valves SB 23 LS-EHS 2 15

1 Control valves SB 23 LS-EHS 2

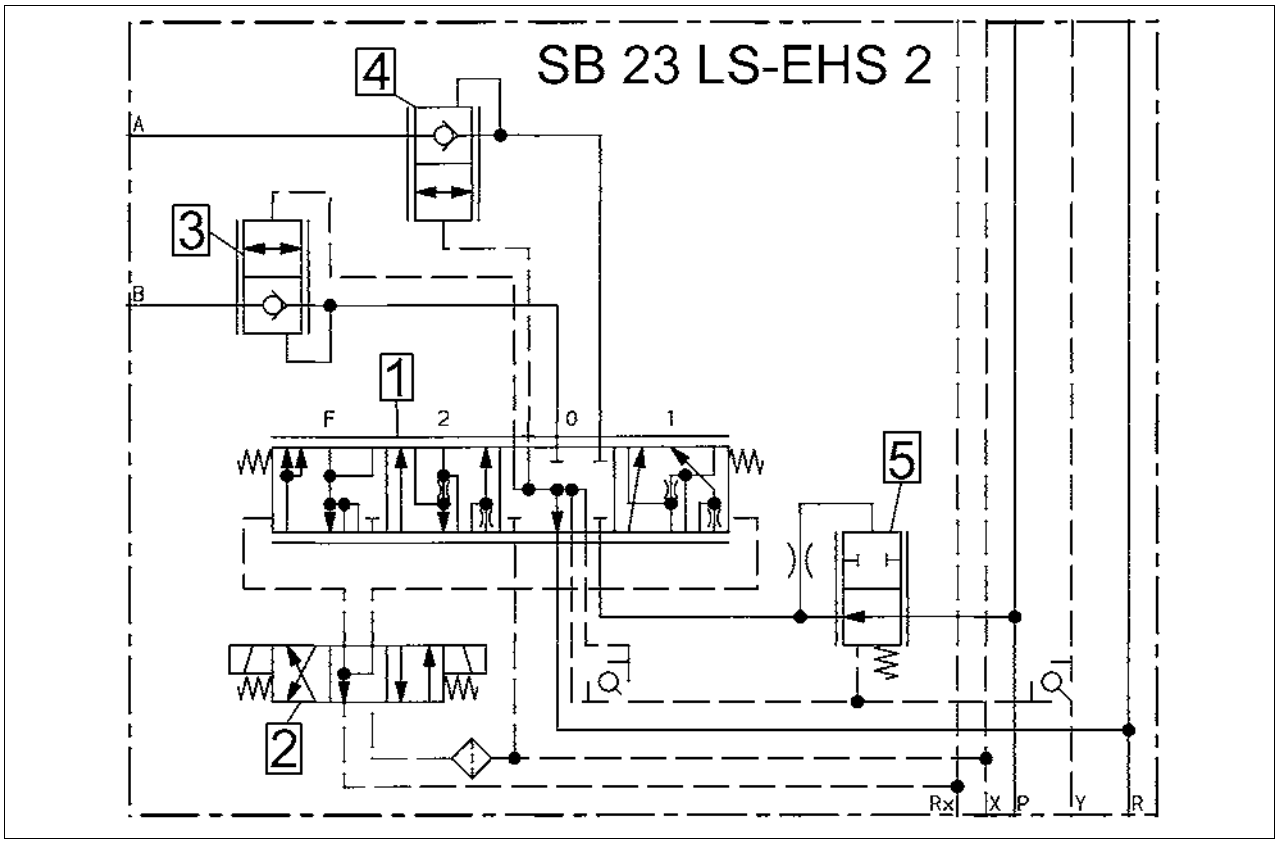


Fig. 1. I001348

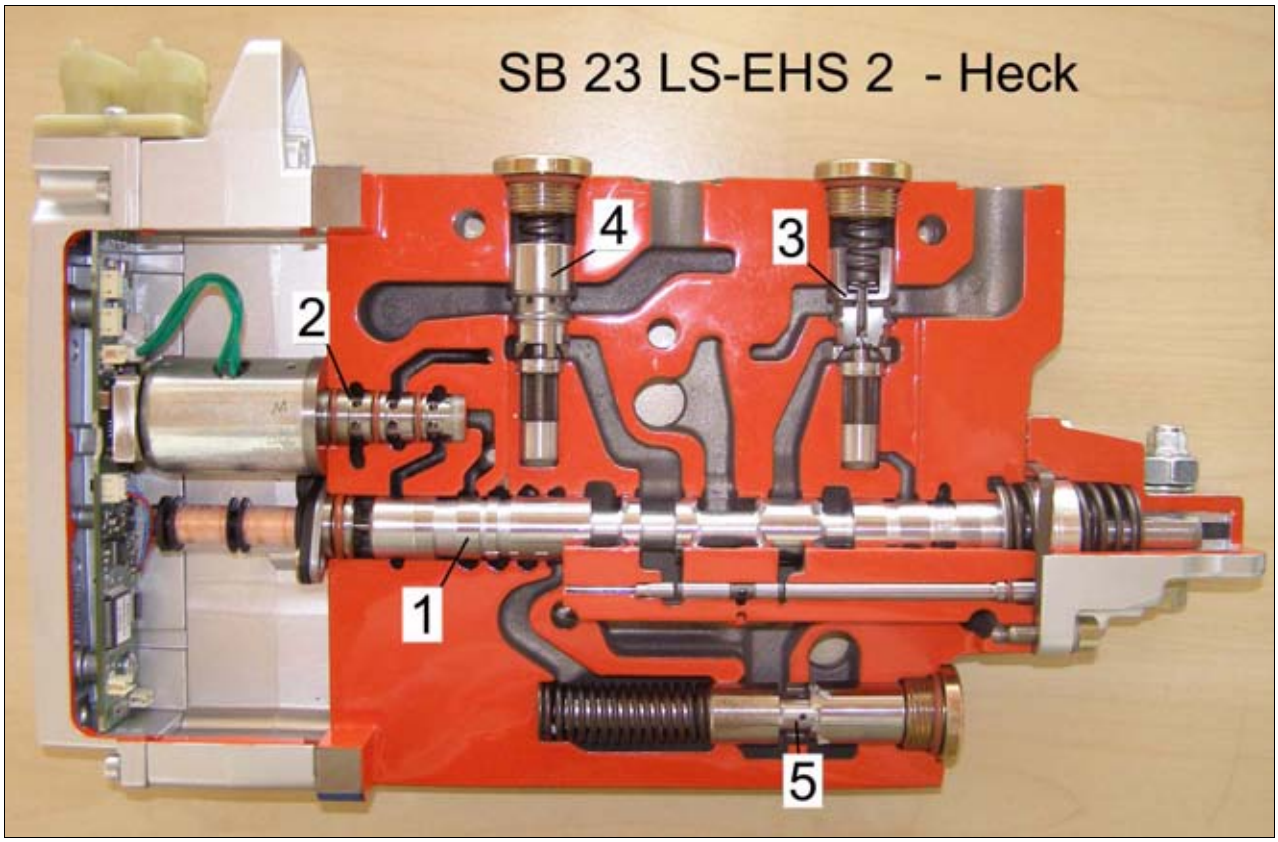


Fig. 2. I001346

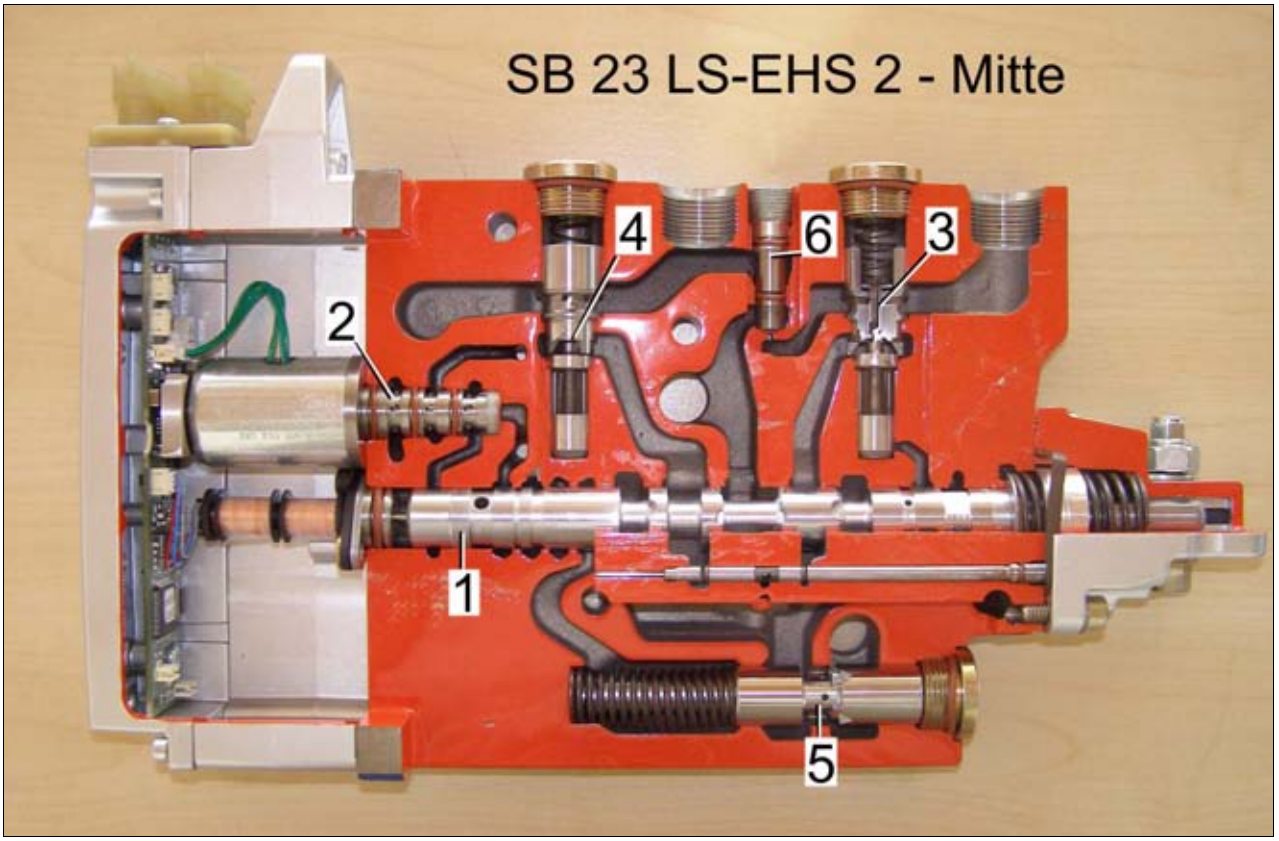


Fig. 3. I001347

Item	Designation
1	Valve slide
2	Pilot valve
3	Non-return valve, output B
4	Non-return valve, output A
5	Pressure compensator
6	Thermal pressure-limiting valve

NOTE: *Rear and central control valves SB 23 LS-EHS 2 cannot be interchanged.*
The central control valves have an internal thread at output A and B for inserting the hydraulic screw connections. In the rear control valves, the coupler housing is flange-mounted to the face end of outputs A and B and therefore has no internal thread.
The central valves also have a thermal pressure-limiting valve, which is not fitted into the rear valves.

F Setting and calibrating

1 Setting valves 19

1 Setting valves

Start Fendias via link
Can AS card or USB adapter has been connected to the laptop

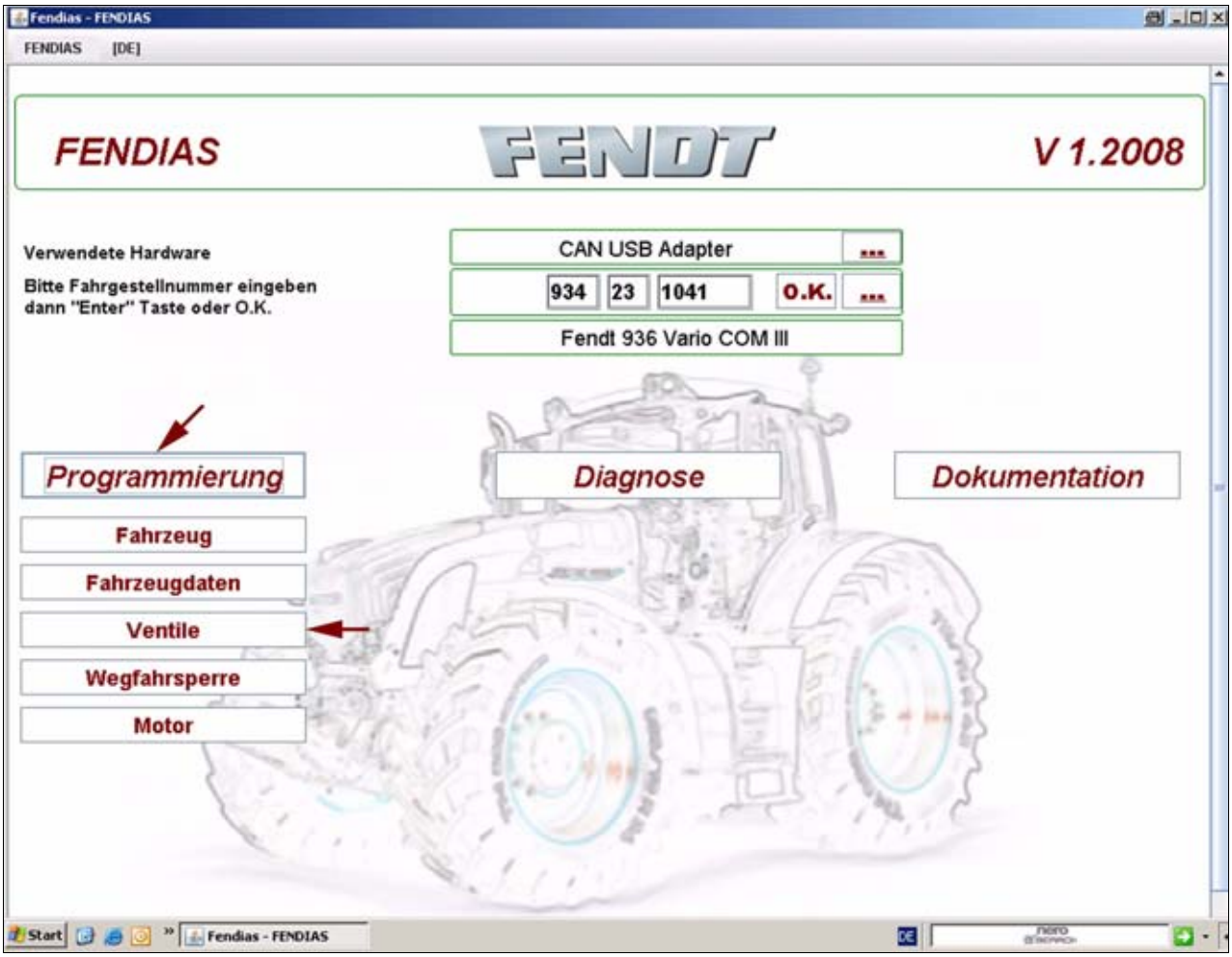


Fig. 1. I007149

Enter full chassis number and click on OK.
The tractor type will be recognised. The various program points will be displayed.
Open **Programming** and then select **Valves**.

Check Chassis Range!

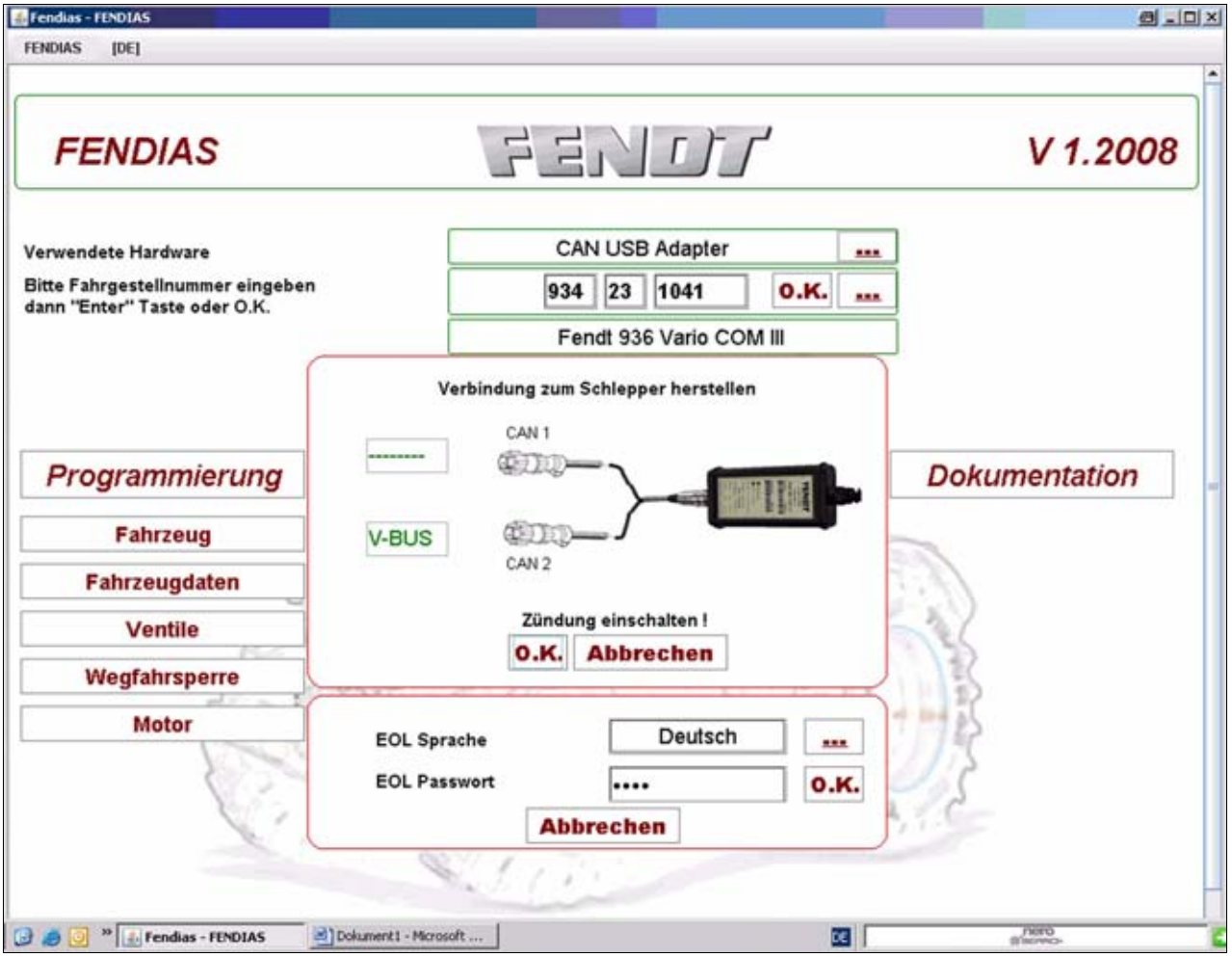


Fig. 2. I007097

This will show which CAN bus the CAN cable needs to be connected to.
Switch ignition ON.
Enter password and click on OK.
The following screen appears.

Check Chassis Range!

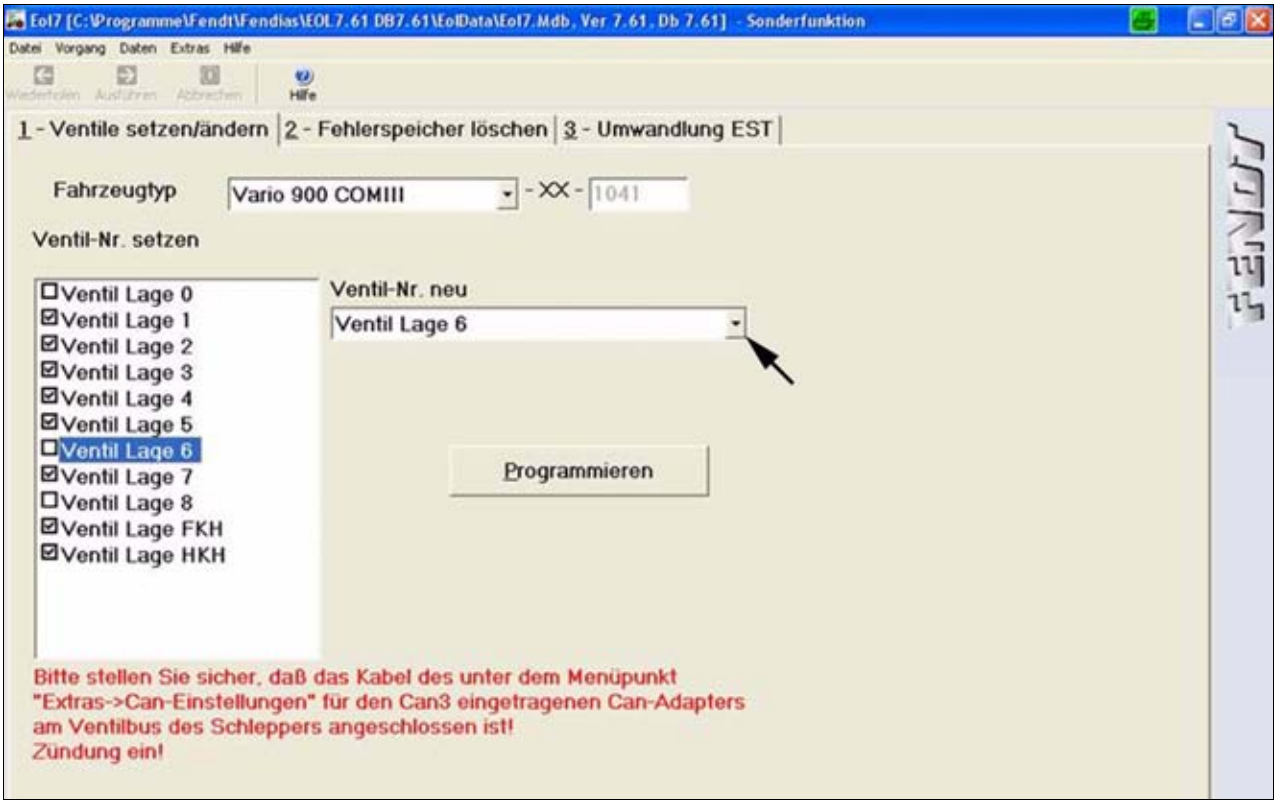


Fig. 3. I007098

The check marks indicate which valves have already been set and are recognised by the valve bus.
The desired valve position can be selected by clicking on the arrow under **Program valve**, e.g. **valve position 6**.
Confirm your selection with the **"Program"** button. The following screen appears:



Fig. 4. I007105

The valve that is to be set must be now be deflected by hand within 60 seconds (see display).

Deflect valve on emergency actuation in one direction.

Actuation directions:

A	Raise
B	Lower
C	Floating position

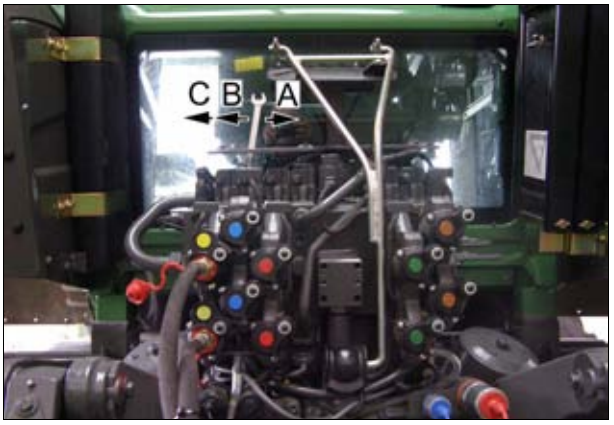


Fig. 5. I001313

IMPORTANT: *Always actuate valves on side "A" with the spanner. If the valves are actuated on the opposite side, the valve setting may be altered.*

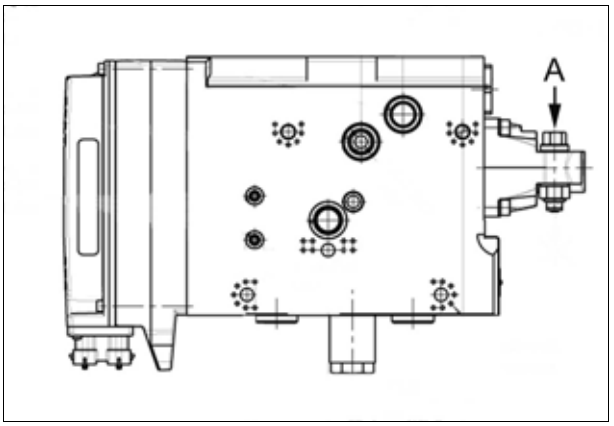


Fig. 6. I001314

If a movement is detected via the position sensor, this valve is set with the selected address.
If programming has been successful, the following screen appears.

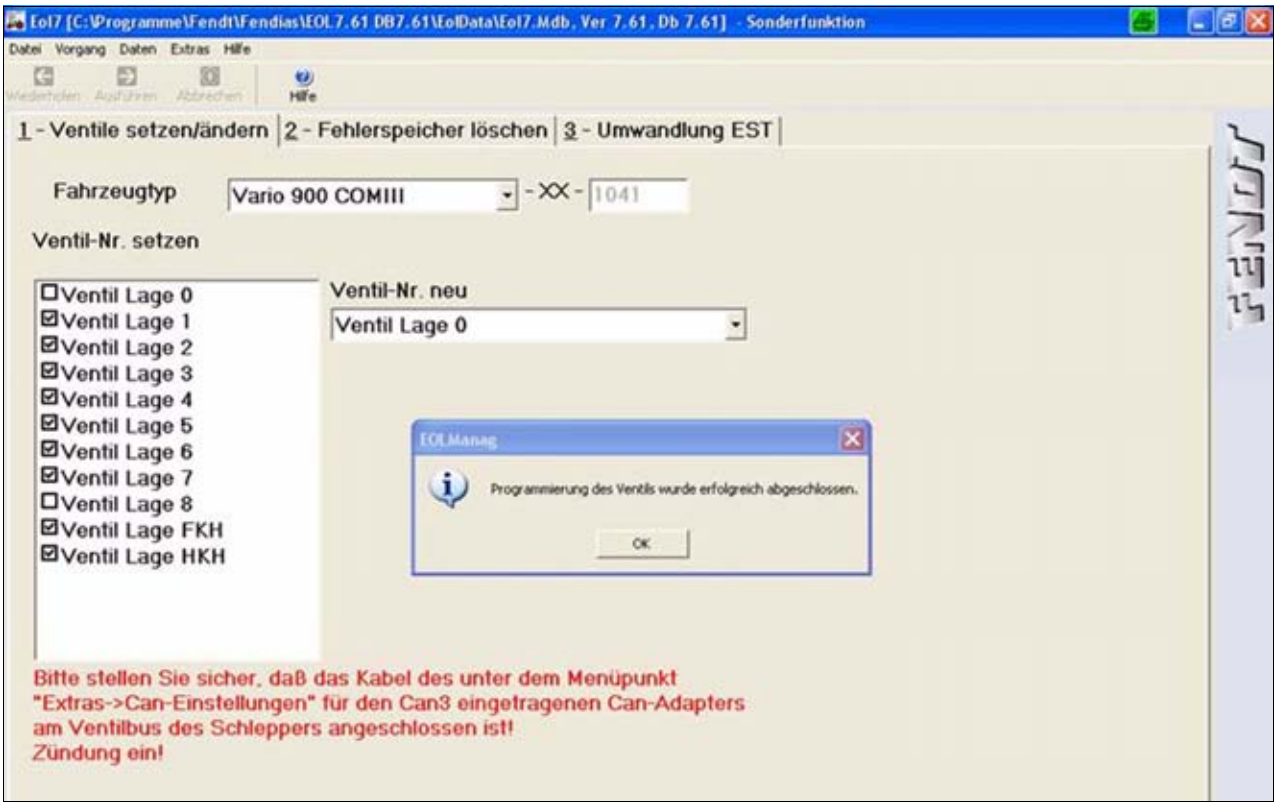


Fig. 7. I007106

Confirm the message.

Sequence of valve positions.

Rear of tractor, valve pillar
The valve position must be set as shown in the picture.

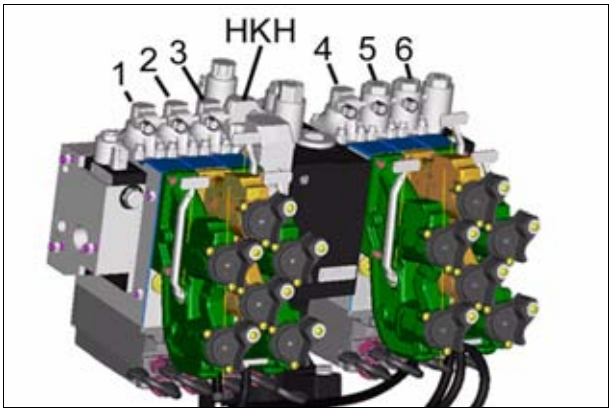


Fig. 8. I007099

Centre of tractor, valve pillar
The valve position must be set as shown in the picture.

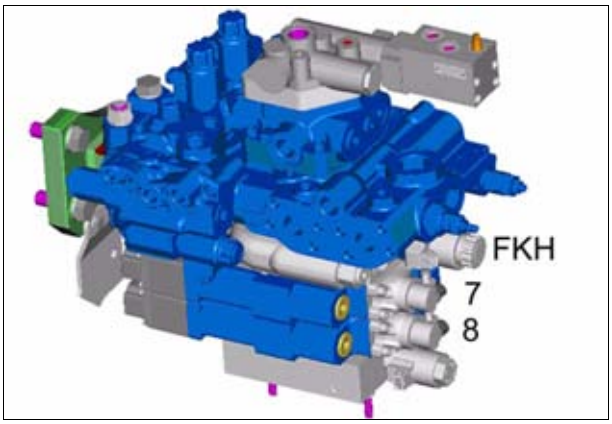


Fig. 9. I007100

Valve position	Colour	Hydr. designation	Elect. Designation
Valve position 1	yellow	1.1	Y074
Valve position 2	blue	1.2	Y075
Valve position 3	red	1.3	Y076
Valve position 4	green	1.4	Y078
Valve position 5	brown	1.5	Y079
Valve position 6	violet	1.6	Y080
Valve position 7	olive	2.1	Y071
Valve position 8	grey	2.2	Y072
Valve position front power lift	Enhanced control front power lift	Front EPC	Y070
Valve position rear power lift	Rear power lift	Rear EPC	Y077

Check Chassis Range!

G Repair

1 Removing rear control valve 27
2 Installing rear control valve 33
3 Removing central control valve 37
4 Installing the central control valve 41
5 Dismantling rear entry plate 46
6 Reassembling rear entry plate 48
7 Dismantling rear end plate 50
8 Reassembling rear end plate 51

Check Chassis Range!

1 Removing rear control valve

Preliminary work:

– Remove cover plate
– If necessary, remove retainers
– Place an oil pad or drip tray underneath the valve block

Valves on the left side = 1.1 yellow, 1.2 blue, 1.3 red

Unplug the control valve "daisy chain" connection.



Fig. 1. I001571

Remove the hydraulic lines from the entry plate.



Fig. 2. I001572

Remove the LS lines from the entry plate, close them off in a clean condition and affix them to the cab.



Fig. 3. I001573

Unplug the Power Beyond connector from the entry plate.



Fig. 4. I001575

Loosen the tie bolt nuts in accordance with the numbered sequence in the diagram.

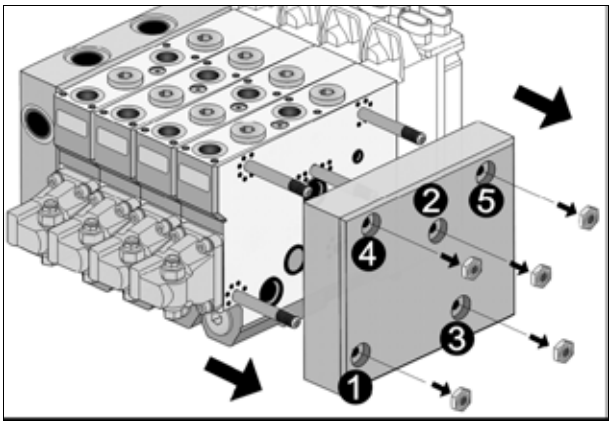


Fig. 5. I001675

Remove nuts on the three long tie bolts from the entry plate.

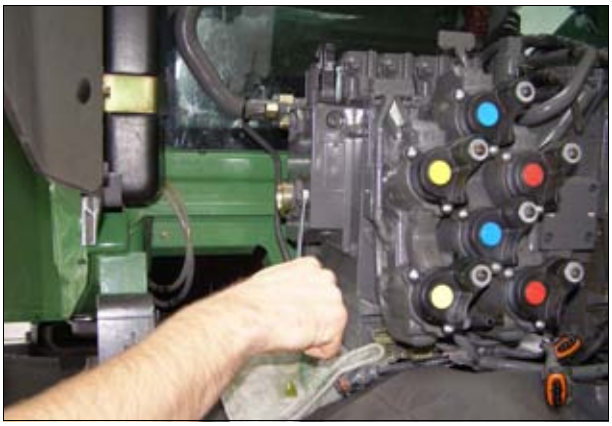


Fig. 6. I002128

Remove the entry plate sideways.



Fig. 7. I001577

Remove the three long tie bolts.



Fig. 8. I001579

Remove the nuts from the two short tie bolts.



Fig. 9. I001578

Remove control valves to the side up to the corresponding valve.

IMPORTANT: *When dismantling the valve, ensure that the shuttle valve does not fall out.*

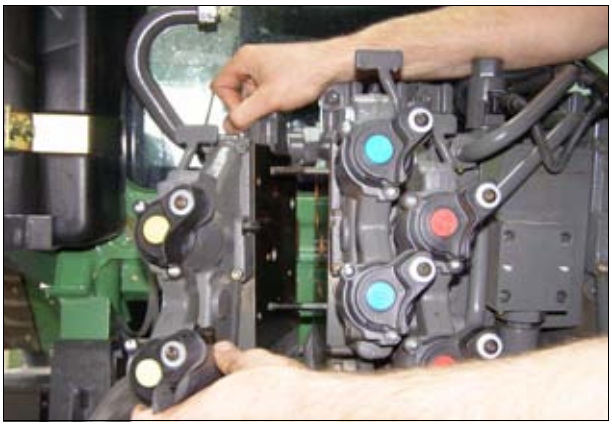


Fig. 10. I001580

Valves on the right side = 1.4 green, 1.5 brown, 1.6 purple

Unplug the control valve "daisy chain" connector.

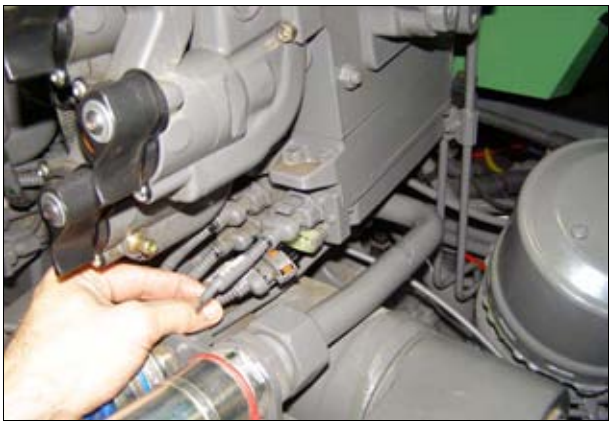


Fig. 11. I001589

If maximum equipment is not available, remove the oil leak hoses.



Fig. 12. I001596

Remove hydraulic lines from the end plate.



Fig. 13. I001587

Swing hydraulic lines towards the cab and seal to prevent dirt from entering.



Fig. 14. I001588

Remove the rear hydraulic oil pre-heater connector.



Fig. 15. I001590

Loosen the tie bolt nuts in accordance with the numbered sequence in the diagram.

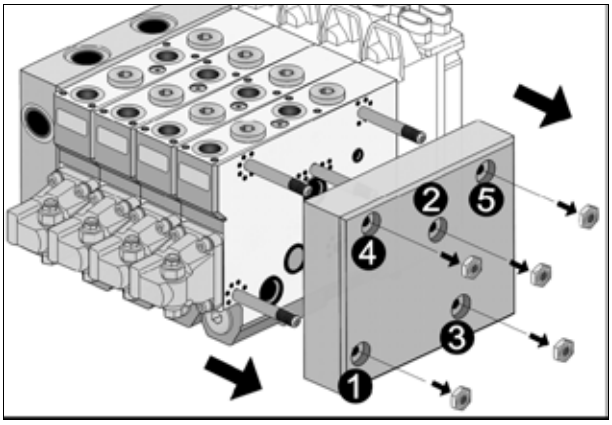


Fig. 16. I001675

Remove nuts on the three long tie bolts from the end plate.



Fig. 17. I001591

Take end plate out to the side.

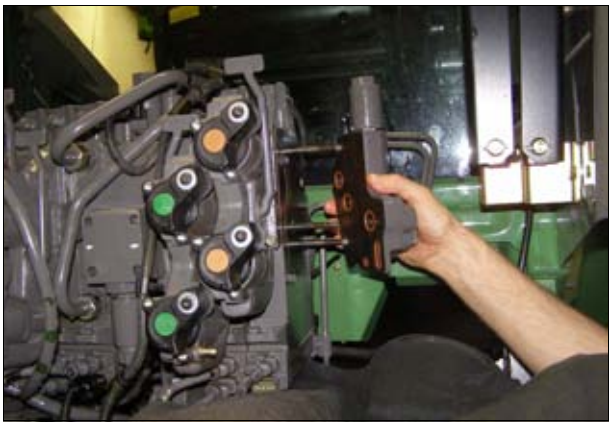


Fig. 18. I001592

If six rear control valves are fitted: remove the three long tie bolts.

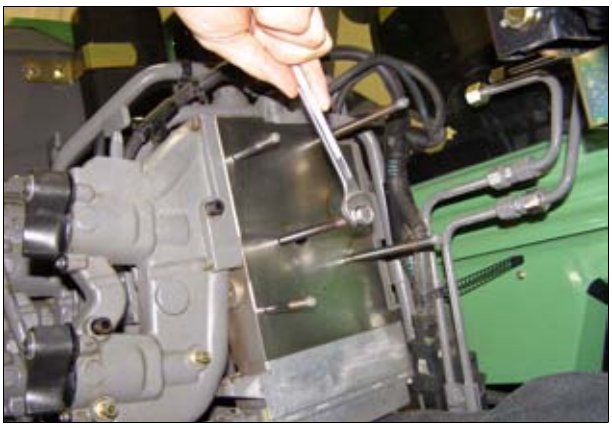


Fig. 19. I001594

Remove the nuts from the two short tie bolts.

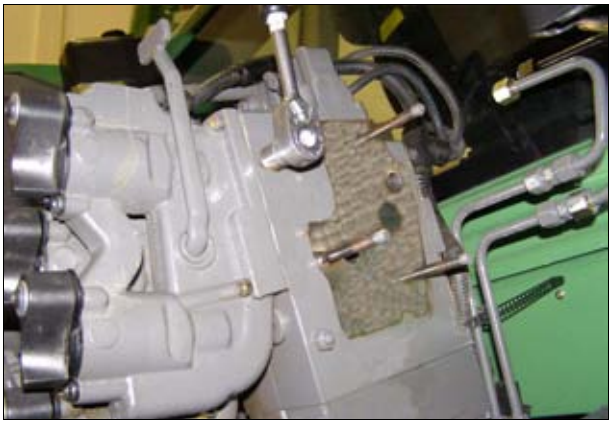


Fig. 20. I001593

Remove control valves to the side up to the corresponding valve.

IMPORTANT: *When dismantling the valve, ensure that the shuttle valve does not fall out.*



Fig. 21. I001595

2 Installing rear control valve

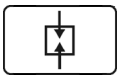
NOTE: *In order to prevent leaks, the O-rings on all valves should be replaced.*

NOTE: *When working on hydraulic systems, cleanliness is of paramount importance. Even the slightest amount of dirt can lead to control valves seizing.*

Preliminary work:

– The flange surfaces of the valves should be polished with a carborundum rubbing stone

– The polished flange surfaces should be wiped clean with an oil-soaked cloth



Insert the shuttle valve into the control valve, applying a little grease.

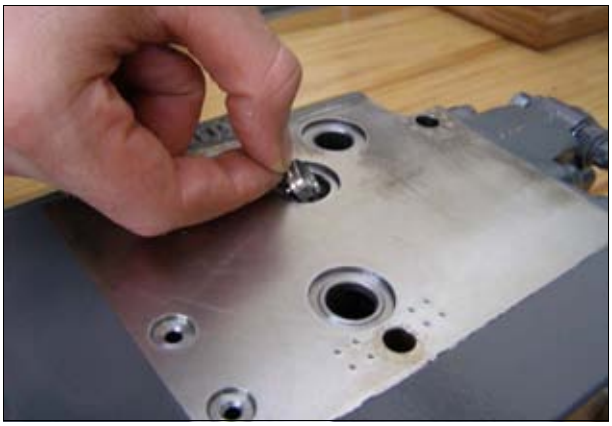
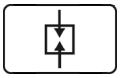


Fig. 22. I001684



Check the dimension of 0.5 mm.

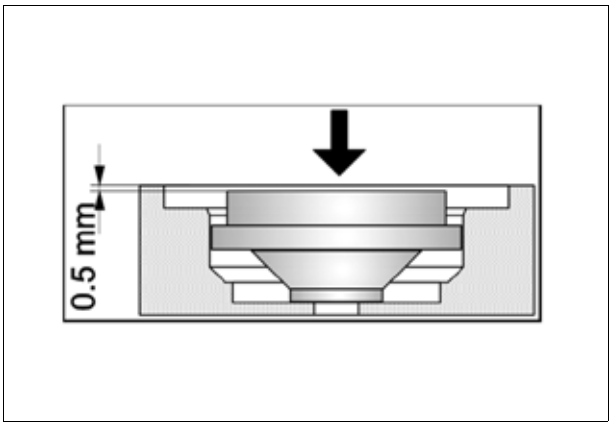
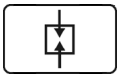


Fig. 23. I001671



Fit the new support rings in accordance with the diagram.

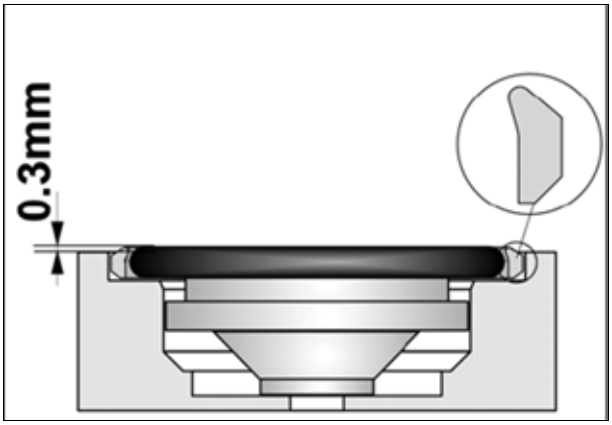


Fig. 24. I001672

Use a small amount of grease to seat the O-rings.

For each valve there are:

– 2 x item 1 + 2: support ring and O-ring
– 1 x item 3: large O-ring
– 2 x item 5: small O-ring

Ensure that the O-rings protrude 0.3 mm beyond the flange surface.

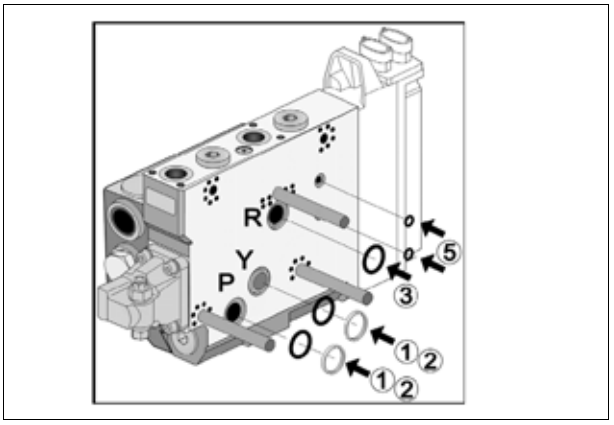


Fig. 25. I001686

Place the control valve onto the two short tie bolts and hand-tighten the nuts so that the shuttle valves do not fall out.

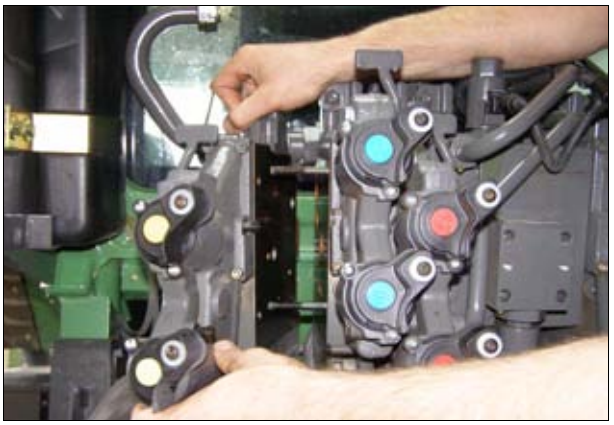


Fig. 26. I001580

Screw in the three long tie bolts.



Fig. 27. I001579

Fit the entry plate onto the tie bolts and hand-tighten the nuts.



Fig. 28. I001577

Align the valve plates with each other and tighten to a torque of 25.5 + 2.5 Nm, following the numbered sequence in the diagram.

NOTE: *The quoted tightening torque of 25.5 + 2.5 Nm applies to oiled tie bolts and nuts.*

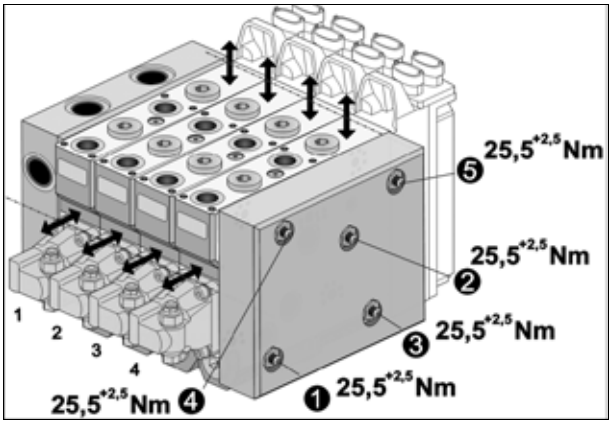


Fig. 29. I001674

Plug in the external pressure rise connector.



Fig. 30. I001575

Connect the LS line to the entry plate and tighten.



Fig. 31. I001573

Connect the hydraulic line to the entry plate and tighten.



Fig. 32. I001572

Plug in the "daisy chain" connector (note the coding).

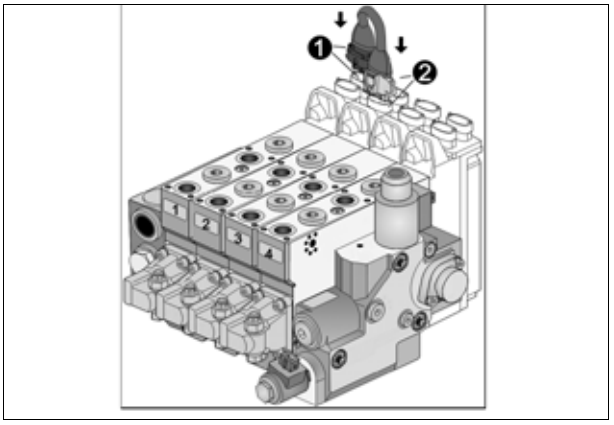


Fig. 33. I001680

Grey connector top, black connector bottom.



Fig. 34. I001571

3 Removing central control valve

NOTE: *To provide a better view, the work was carried out with the right-hand fuel tank removed.*

Essential preliminary work:

– Place an oil pad or oil sump under the valve block

Remove the hydraulic hand-pump bolts and secure the hand pump to the side.



Fig. 35. I001652

Remove the fuel hand-pump bolts and secure the hand pump to the side.



Fig. 36. I001653

Unplug the connector of the central pre-heater solenoid valve.



Fig. 37. I001660

Unplug the daisy chain connector as far as the required valve.



Fig. 38. I001661

Loosen the pilot pressure hydraulic lines on the end plate.



Fig. 39. I001654

Loosen and remove the pilot pressure line on the pilot pressure valve block.



Fig. 40. I001658

Loosen but do not remove the hydraulic lines for the control valves as far as the faulty valve.



Fig. 41. I001657

Secure the control valves to the ZBS above (e.g. with cable ties).

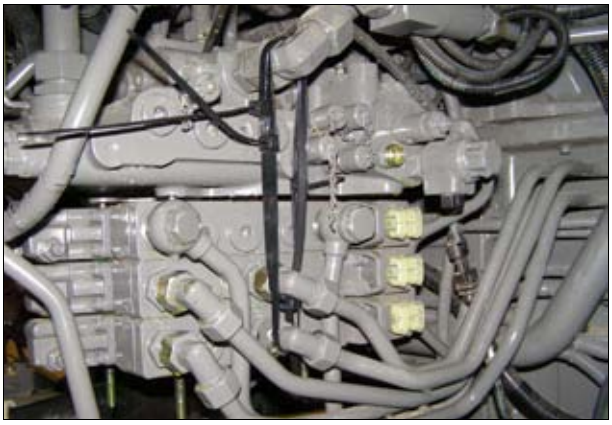


Fig. 42. I001666

Loosen nuts on the studs following the numbering in the diagram

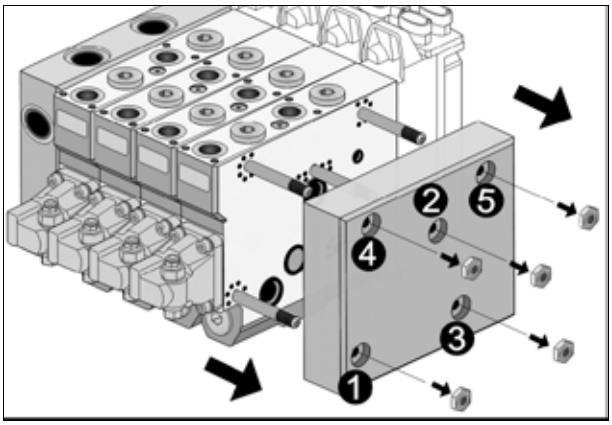


Fig. 43. I001675

Remove the nuts from the stud bolts, whilst keeping the end plate raised.



Fig. 44. I001659

Remove the end plate.



Fig. 45. I001662

Remove the control valve fixings and the hydraulic lines, and remove the valve downwards.

IMPORTANT: *When detaching the valves, take care that the shuttle valve does not fall out*



Fig. 46. I001664

4 Installing the central control valve

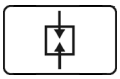
NOTE: *In order to prevent leaks, the O-rings on all valves should be replaced.*

NOTE: *When working on hydraulic systems, cleanliness is of paramount importance. Even the slightest amount of dirt may lead to control valves seizing.*

Preliminary work:

– The flange surfaces of the valves should be polished with a carborundum rubbing stone

– The polished flange surfaces should be wiped clean with an oil-soaked cloth



Insert the shuttle valve into the control valve, applying a little grease.

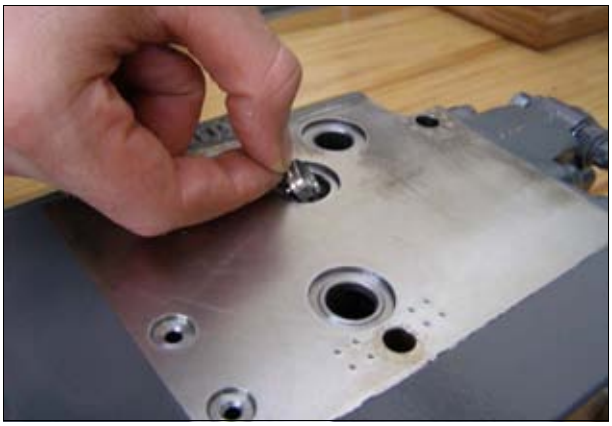
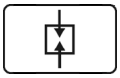


Fig. 47. I001684



Check the stand-off distance of 0.5 mm.

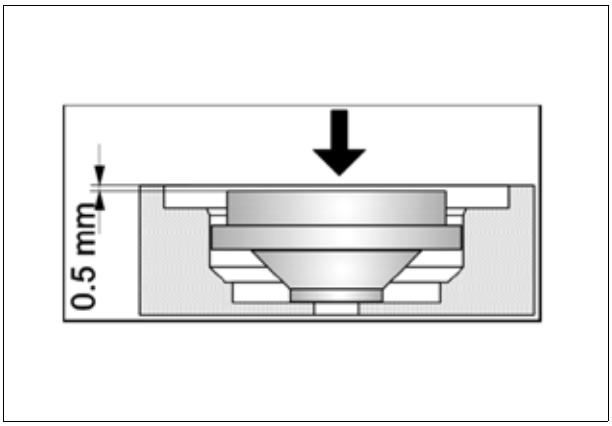
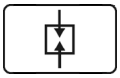


Fig. 48. I001671



Mount the support rings in accordance with the diagram.

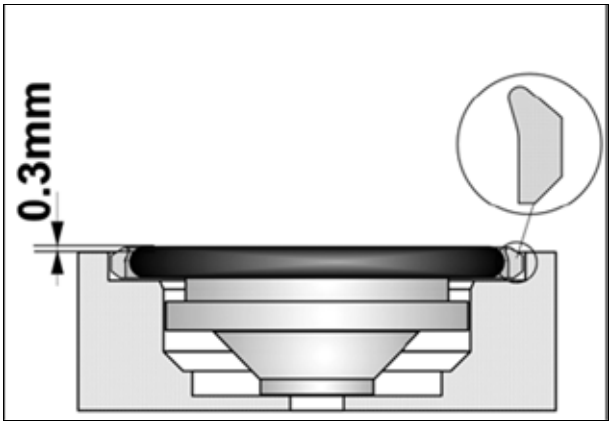


Fig. 49. I001672

Use a small amount of grease to seat the O-rings.

For each valve there are:

– 2 x item 1 + 2: support ring and O-ring
– 1 x item 3: large O-ring
– 2 x item 5: small O-ring

Ensure that the O-rings protrude 0.3 mm beyond the flange surface.

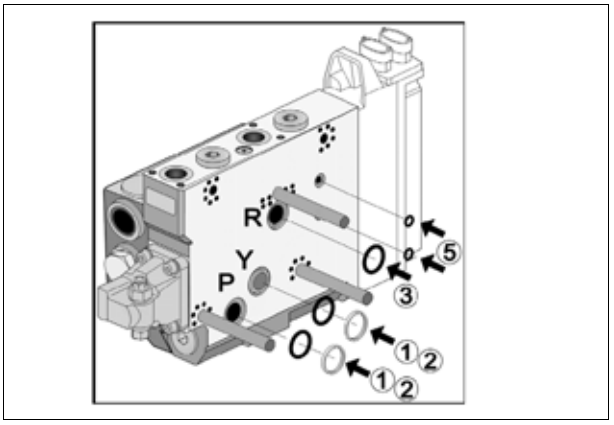


Fig. 50. I001686

Mount the control valve upwards onto the tie bolts, ensuring that the shuttle valve does not fall out.



Fig. 51. I001664

Hand-tighten the hydraulic lines and secure the control valves to the ZBS above (e.g. with cable ties).

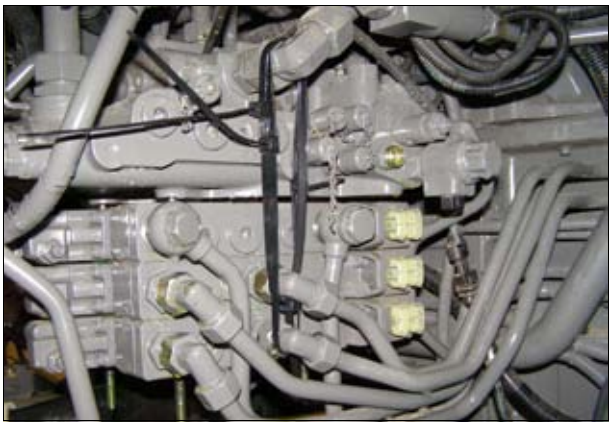


Fig. 52. I001666

Mount the end plate onto the tie bolts and hand-tighten the nuts.



Fig. 53. I001662

Align the valve plates with each other and tighten to a torque of 25.5 + 2.5 Nm, following the numbered sequence in the diagram.

NOTE: *The quoted tightening torque of 25.5 + 2.5 Nm applies to oiled tie bolts and nuts.*

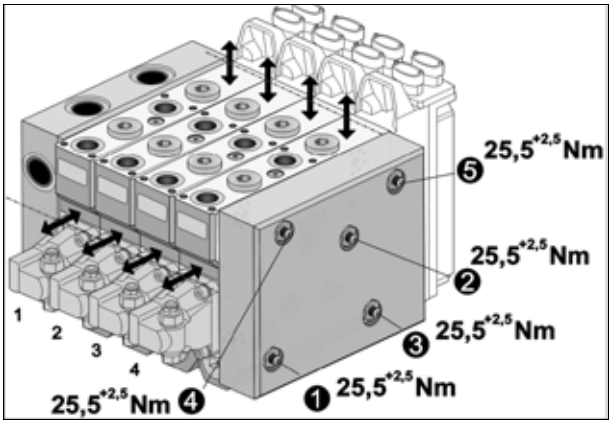


Fig. 54. I001674

Tighten the control valve hydraulic lines.



Fig. 55. I001657

Mount the pilot pressure line from the pilot pressure valve block to the end plate.



Fig. 56. I001658

Tighten the pilot pressure line onto the end plate.

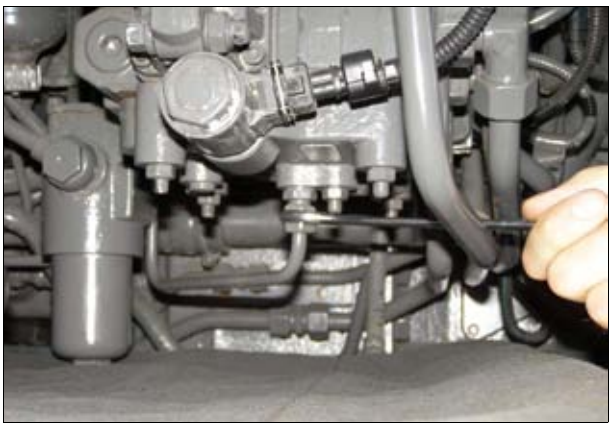


Fig. 57. I001654

Plug in the connector of the central hydraulic oil pre-heater solenoid valve.



Fig. 58. I001660

Plug in the "daisy chain" connector (note the coding).

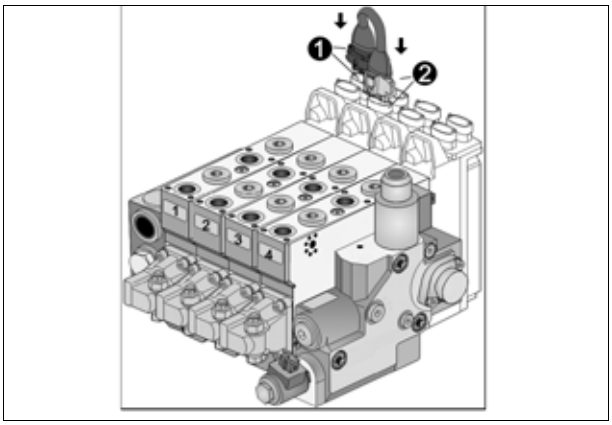


Fig. 59. I001680

1 Grey connector
2 Black connector

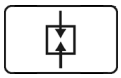


Fig. 60. I001752

Mount the fuel hand-pump.



Fig. 61. I001653



Mount the hydraulic hand-pump.



Fig. 62. I001652

5 Dismantling rear entry plate

Remove the nut on the coil and remove the, remove the pressure cut-off valve.



Fig. 63. I001753

Remove the flow cut-off valve.



Fig. 64. I001754

Remove the LS line screw coupling.



Fig. 65. I001755

Loosen the LS line filter.



Fig. 66. I001756

Remove the LS line filter.



Fig. 67. I001757

If necessary, remove the plug and screw couplings.



Fig. 68. I001759

6 Reassembling rear entry plate

Mount the plug and screw couplings.



Fig. 69. I001759

Insert the LS line filter into the screw coupling.



Fig. 70. I001757

Tighten LS line filter to a torque of 10 Nm.

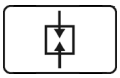


Fig. 71. I001756

Mount the LS line screw coupling and tighten to a torque of 50 Nm.



Fig. 72. I001755



Install the entry plate flow cut-off valve and tighten to a torque of 20 -25 Nm

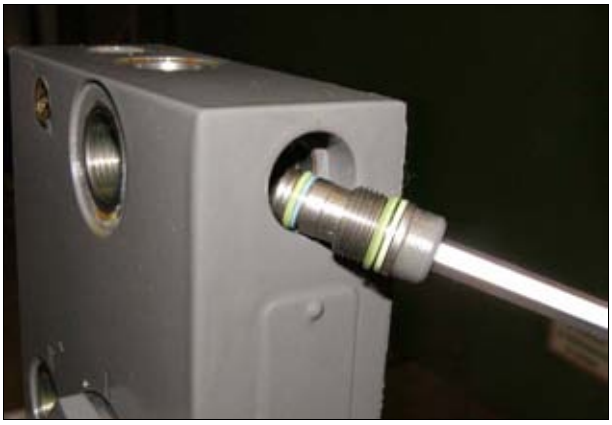
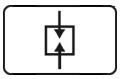


Fig. 73. I001754



Screw in pressure cut-off valve and tighten to a torque of 27 Nm, mount coil and nut.



Fig. 74. I001753

7 Dismantling rear end plate

Dismount the nut on the solenoid coil and remove the coil, remove the rear pre-heater solenoid valve.



Fig. 75. I001761

Remove the end plate non-return valve.



Fig. 76. I001762

If necessary, remove the plug and screw couplings.



Fig. 77. I001763

8 Reassembling rear end plate

Mount the plug and screw couplings.



Fig. 78. I001763

Mount the end-plate non-return valve and tighten to a torque of 30 Nm.



Fig. 79. I001762

Screw in the rear pre-heater solenoid valve and tighten to a torque of30 Nm Mount the solenoid coil and tighten the clamp nut to a torque of 8 Nm



Fig. 80. I001761

A	General
B	Faults
C	Documents and Diagrams
D	Component location
E	Testing
F	Setting and Calibration
G	Repair
H	Service – Info

9700

Overall system/electronics

9700 Overall system/electronics

A General. 5

A General

1 Electronics concept for FENDT 900 Vario COM III 7
2 Control bus 15
3 Transmission bus 17
4 ISO bus 18
5 Valve bus 20
6 Functional description of the A050 ECU, basic control unit 22
7 Hall sensor operation 26
8 Position sensor operation 29
9 Button functionality 32

1 Electronics concept for FENDT 900 Vario COM III

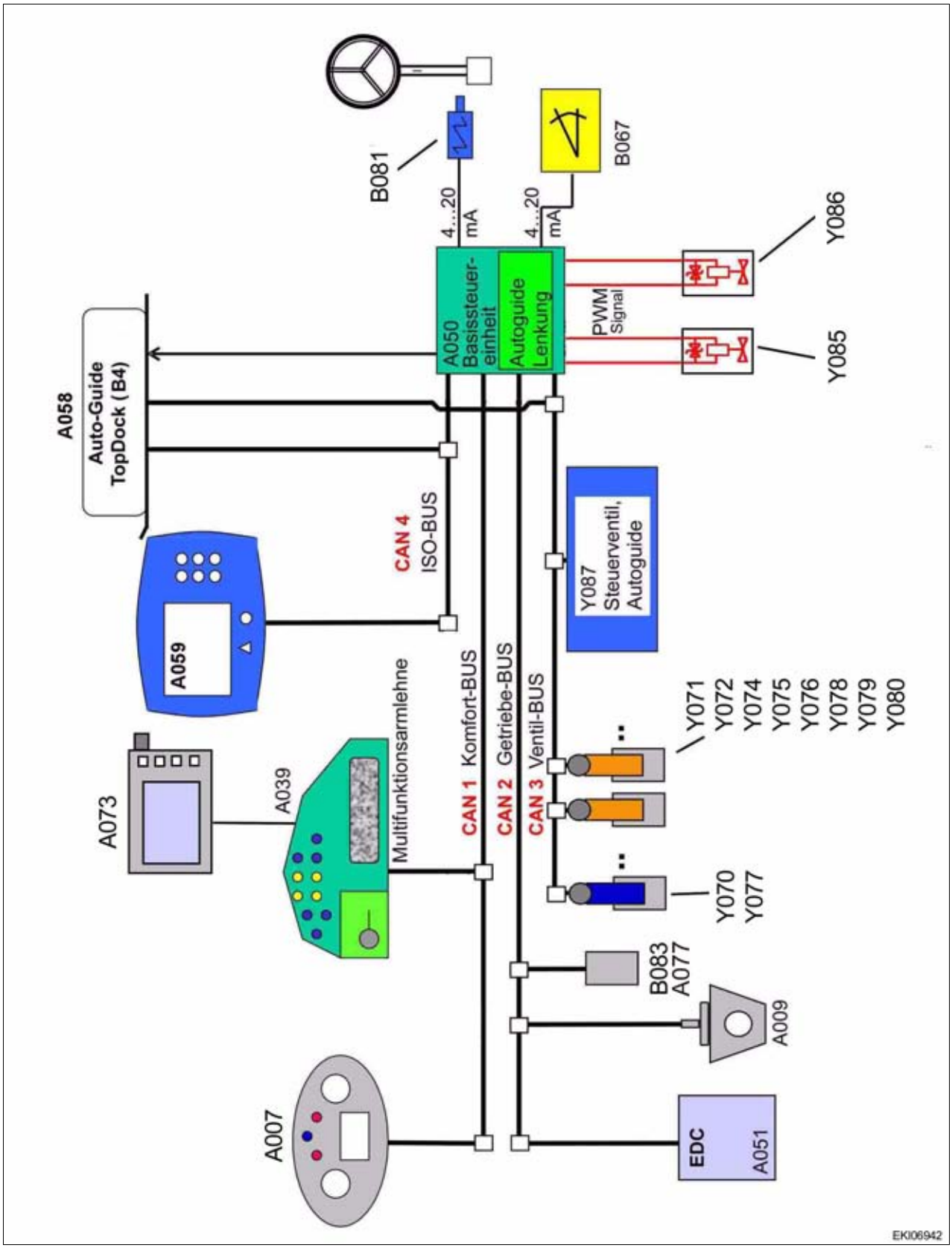


Fig. 1. For a description of individual CAN buses, see detailed drawings

I013635

Check Chassis Range!

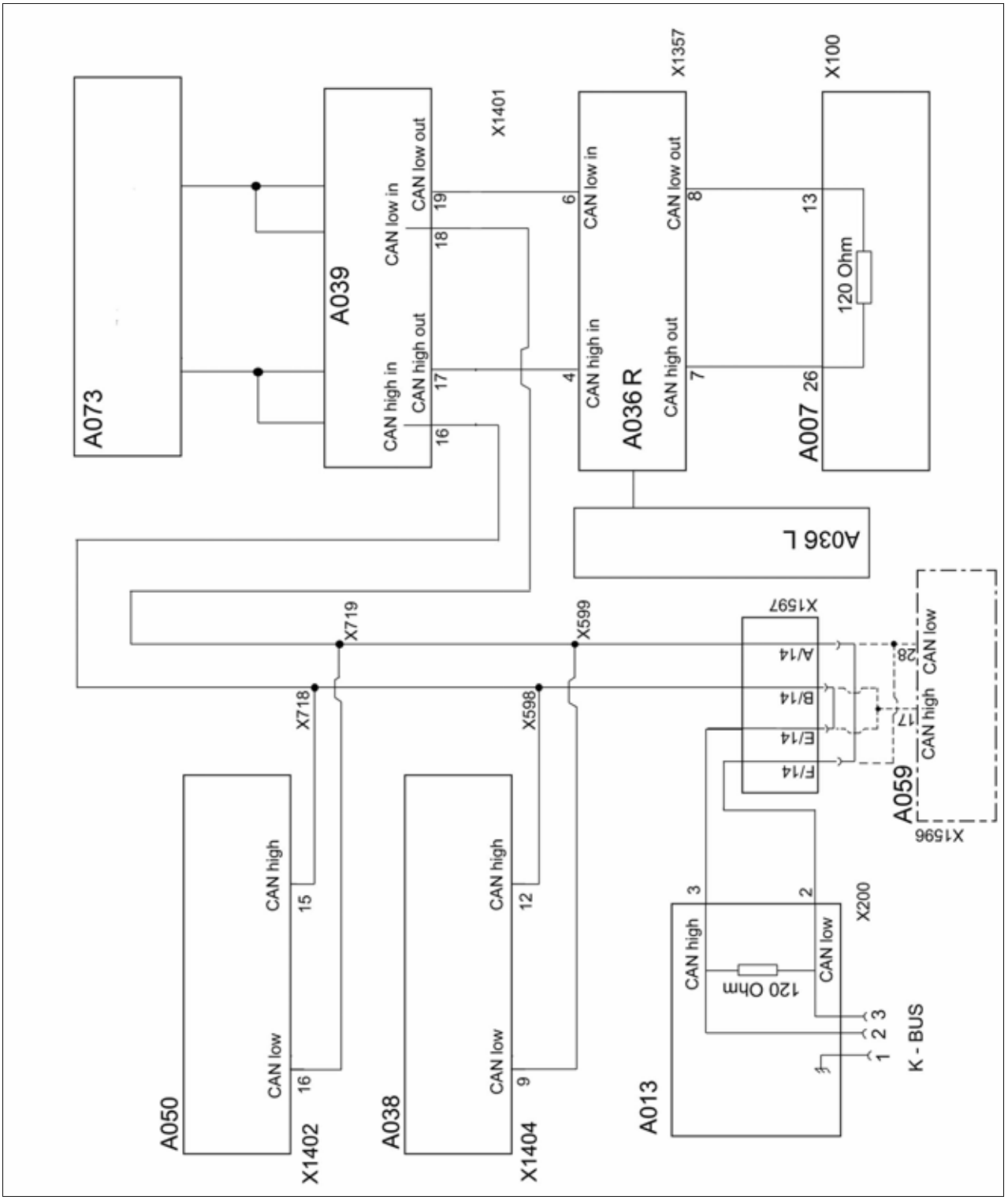


Fig. 2. I007393

Check Chassis Range!

K bus (control bus)
A007 - Instrument panel
A013 - PCB, microfuses
A036 - Control panel, dashboard left
A038 - ECU, central electrical system
A039 - MFA, multifunction armrest
A050 - ECU, basic control unit
A059 - Terminal (Auto-Guide)
A073 - Terminal (A4)
X1597 - Cable coupling A059 (not present with additional terminal, e.g. Auto-Guide)

NOTE: ***Procedure for checking the bus system (passive bus)***

Passive bus means that the bus ends are sealed off with terminating resistors.

– Check the supply voltage to the bus consumers (positive and earth)

– Test total resistance **60 Ohm.**
(total resistance 120 Ohm = wiring break, defective terminating resistor)

– Check the voltage level of CAN High/CAN Low.
0 VDC = earth connection, 4 VDC and higher = short circuit to +UB

NOTE: *In tractors up to chassis number 9XX/2X/1701, an additional terminating resistor of 120 ohms was installed in the* ***A038*** *- ECU, central electrical system.*

On these tractors, the **total resistance is 40 Ohm**

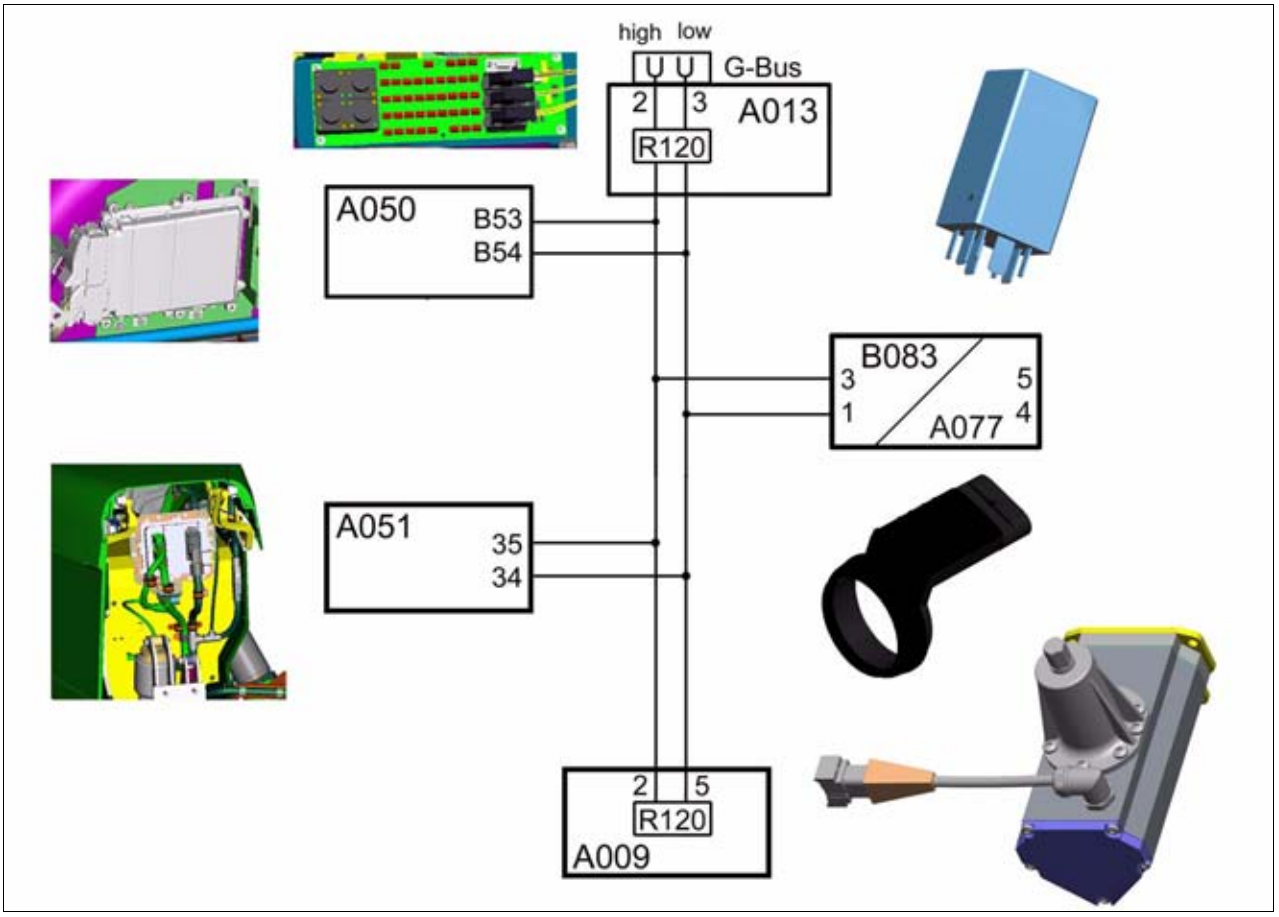


Fig. 3. I013633

G bus (transmission bus)
A009 - Actuator unit
A013 - PCB, microfuses
A050 - ECU, basic control unit
A051 - ECU, engine control unit (EDC 7).
A077 - Immobiliser ECU
B083 - Immobiliser control

NOTE: ***A077*** *- Immobiliser ECU is installed from the following chassis number: 919/../1847; 922/../2004; 925/../2054; 928/../2291; 931/../1908; 934/../2790. The only replacement is the new version U931.970.110.000*

NOTE: ***Procedure for checking the bus system (passive bus)***

Passive bus means that the bus ends are sealed off with terminating resistors.

– Check the supply voltage to the bus consumers (positive and earth)
– Test total resistance **60 Ohm.**
(total resistance 120 Ohm = wiring break, defective terminating resistor)
– Check the voltage level of CAN High/CAN Low.
0 VDC = earth connection, 4 VDC and higher = short circuit to +UB

Check Chassis Range!

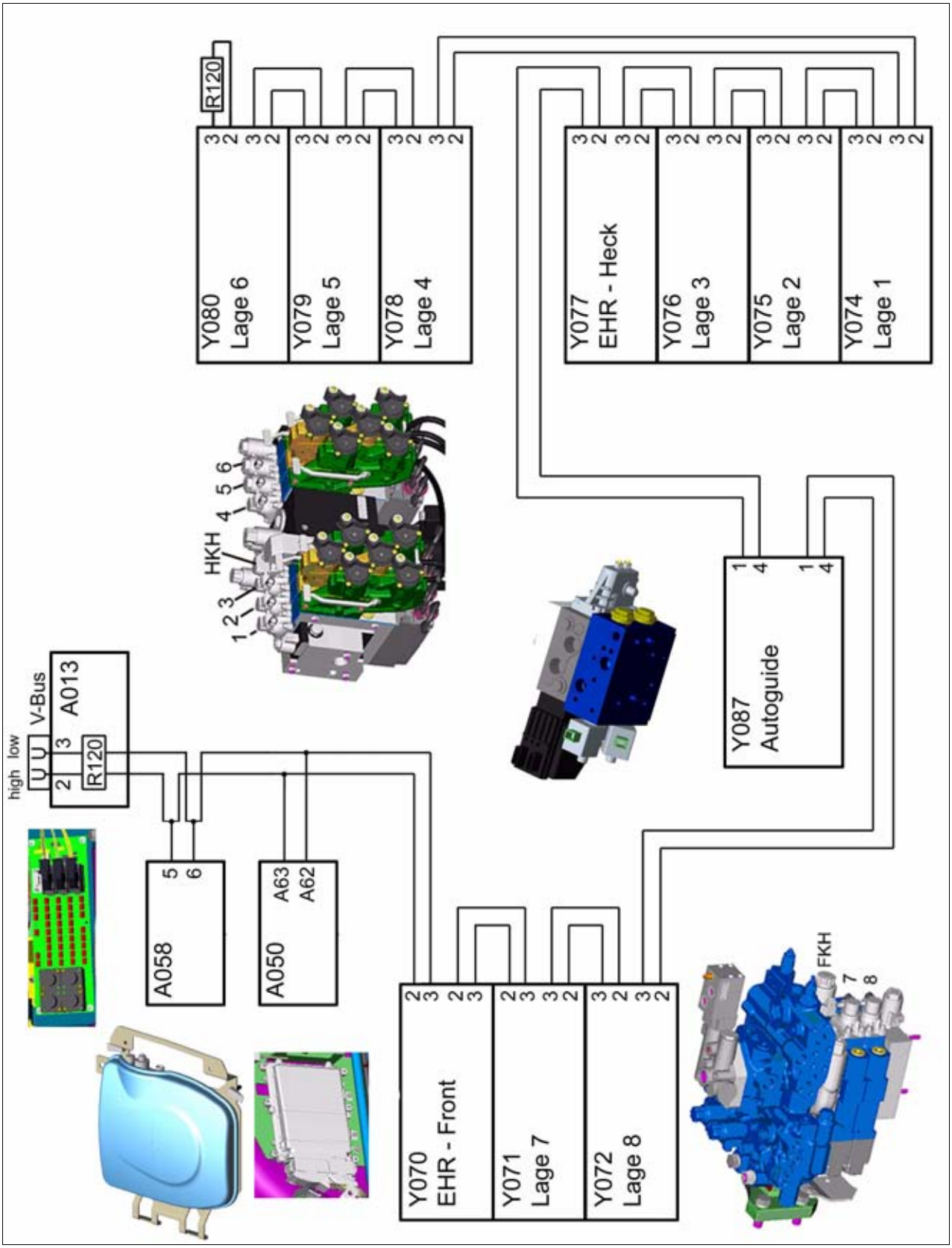


Fig. 4.

I007096

Check Chassis Range!

V bus (valve bus)
A013 - PCB, microfuses
A050 - ECU, basic control unit
A058 - TopDock (Auto-Guide)
Y070 [FKH] - Cut-off valve, front power lift enhanced control Valve position **FKH**
Y071 [2.1] - Auxiliary control valve (olive) Valve position **7**
Y072 [2.2] - Auxiliary control valve (grey) Valve position **8**
Y074 [1.1] - Auxiliary control valve (yellow) Valve position **1**
Y075 [1.2] - Auxiliary control valve (blue) Valve position **2**
Y076 [1.3] - Auxiliary control valve (red) Valve position **3**
Y077 [HKH] - Cut-off valve, rear EPC Valve position **HKH**
Y078 [1.4] - Auxiliary control valve (green) Valve position **4**
Y079 [1.5] - Auxiliary control valve (brown) Valve position **5**
Y080 [1.6] - Auxiliary control valve (violet) Valve position **6**
Y087 - Steering valve block, Auto-Guide

NOTE: ***Procedure for checking the bus system (passive bus)***

Passive bus means that the bus ends are sealed off with terminating resistors.

– Check the supply voltage to the bus consumers (positive and earth)
– Test total resistance **60 Ohm.**
(total resistance 120 Ohm = wiring break, defective terminating resistor)
– Check the voltage level of CAN High/CAN Low.
0 VDC = earth connection, 4 VDC and higher = short circuit to +UB

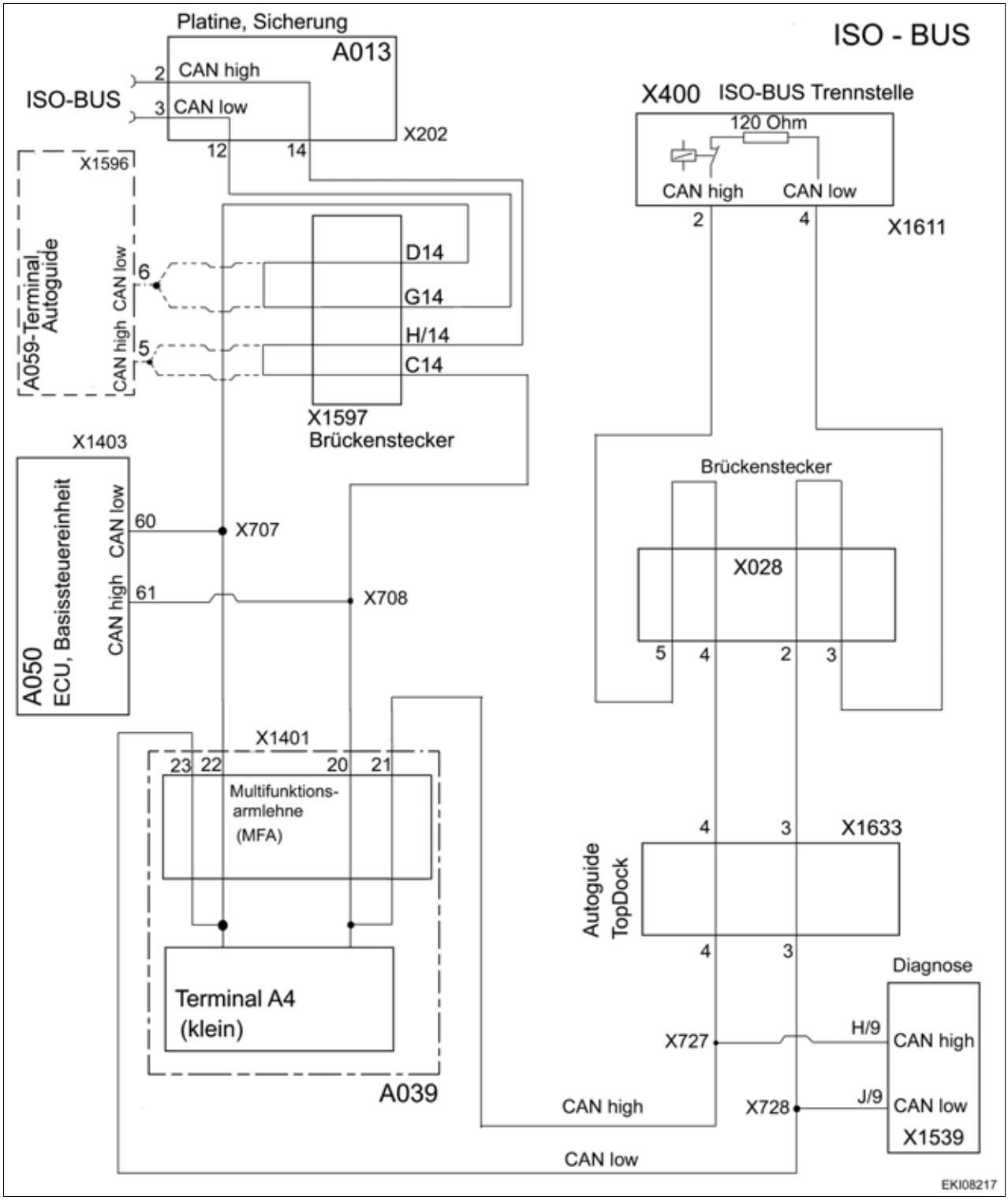


Fig. 5. I001189

Check Chassis Range!

ISO bus
A013 - PCB, microfuses
A039 - MFA, multifunction armrest
A050 - ECU, basic control unit
A058 - TopDock (Auto-Guide)
A059 - Terminal (Auto-Guide)
A073 - Terminal (A4)
X028 - ISO socket (cab)
X400 - Rear ISO implement socket
X1539 - ISO bus diagnostics socket
X1597 - Cable coupling A059 (not present with additional terminal, e.g. Auto-Guide)
X1633 - Separation point, Auto-Guide TopDock

NOTE: ***Procedure for checking the bus system (active bus)***

Active bus means that the bus ends are pre-tensioned via networks.

– Check the supply voltage to the bus consumers (positive and earth)

– Check bus voltage **High= 1.5 - 2.5 VDC**.
Check bus voltage **Low= 2.5 - 3.5 VDC**.
Voltage level of CAN High/CAN Low
0 VDC = earth connection, **4 VDC and higher** = short circuit to +UB

Check Chassis Range!

2 Control bus

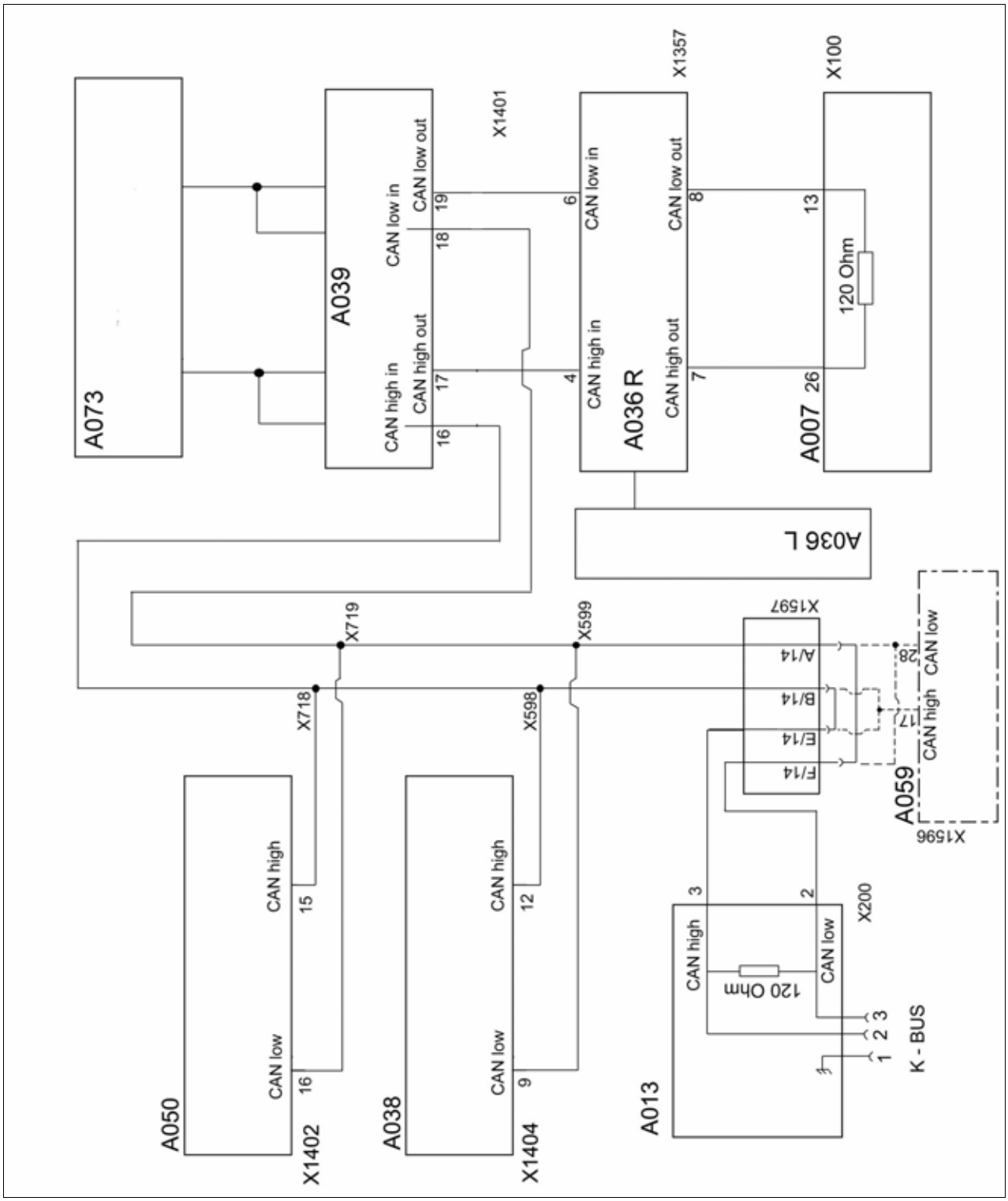


Fig. 6. I007393

NOTE: *Procedure for checking the bus system (passive bus)*

Passive bus means that the bus ends are sealed off with terminating resistors.

– Check the supply voltage to the bus consumers (positive and earth)
– Test total resistance 60 Ohm.
(total resistance 120 Ohm = wiring break, defective terminating resistor)
– Check the voltage level of CAN High/CAN Low.
0 VDC = earth connection, 4 VDC and higher = short circuit to +UB

NOTE: *The A038 central electrical system was installed with an additional terminating resistance of 120 ohms in tractors up to chassis number 9XX/2X/1701.*
The total resistance on these tractors is 40 ohms.

3 Transmission bus

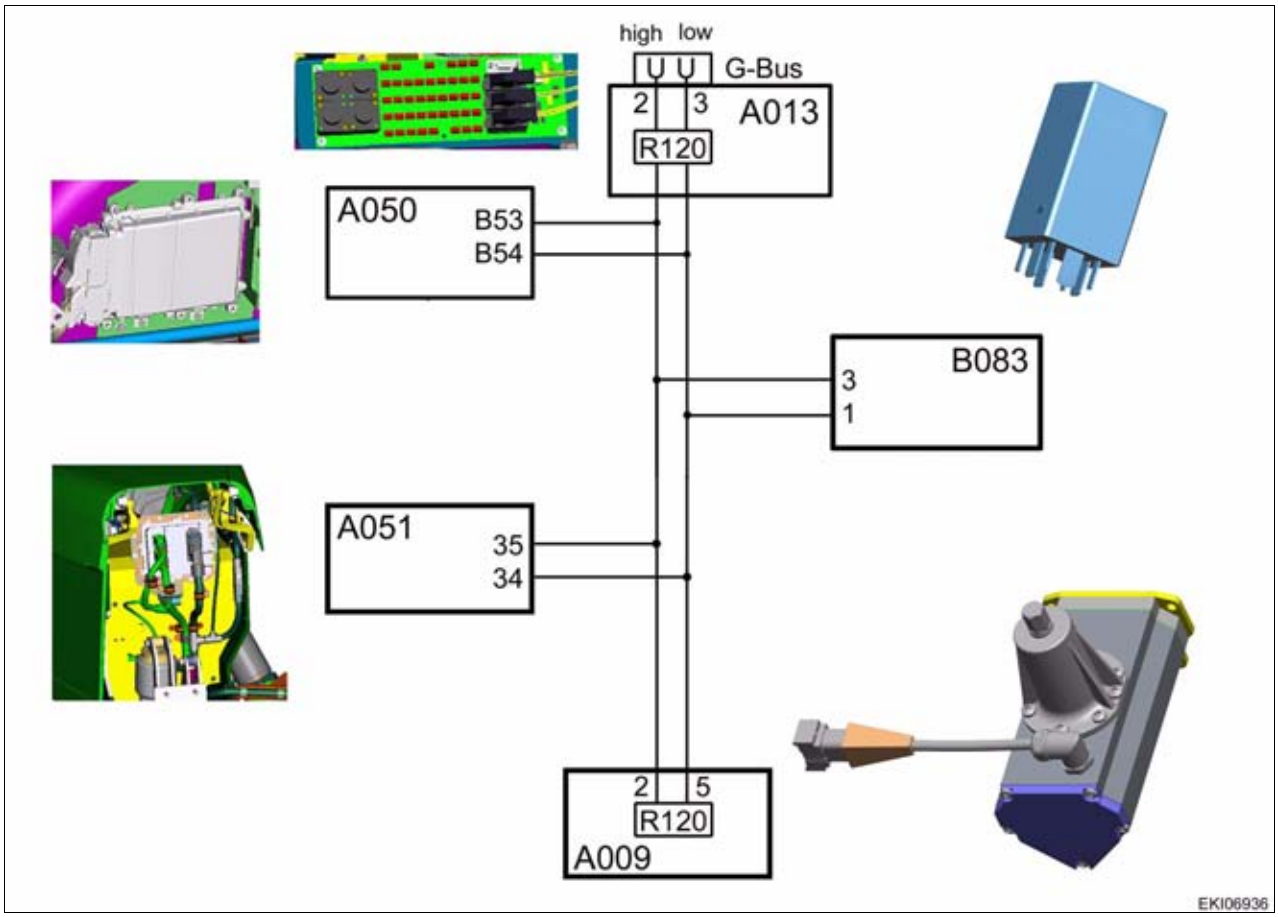


Fig. 7. I007787

DIN	Designation
A009 - Actuator unit	
A013 - PCB, microfuses	
A050 - ECU, basic control unit	
A051 - ECU, engine control unit (EDC 7).	
B083 - Immobiliser control	

NOTE: *Procedure for checking the bus system (passive bus)*

Passive bus means that the bus ends are sealed off with terminating resistors.

– Check the supply voltage to the bus consumers (positive and earth)

– Test total resistance 60 Ohm.
(total resistance 120 Ohm = wiring break, defective terminating resistor)

– Check the voltage level of CAN High/CAN Low.
0 VDC = earth connection, 4 VDC and higher = short circuit to +UB

4 ISO bus

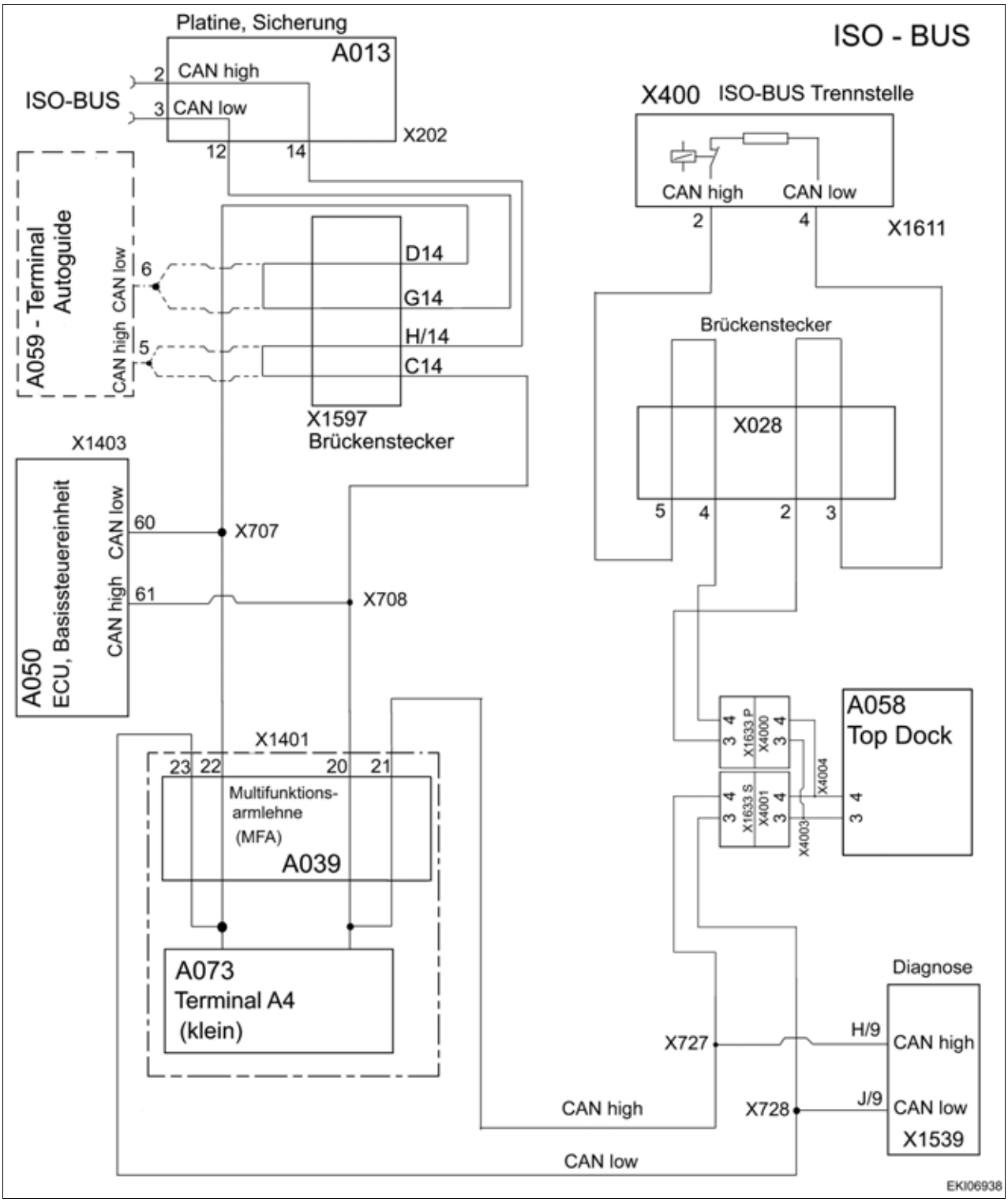


Fig. 8. I007788

NOTE: ***Procedure for checking the bus system (active bus)***

Active bus means that the bus ends are pre-tensioned via networks.

– Check the supply voltage to the bus consumers (positive and earth)

– Check bus voltage **High= 1.5 - 2.5 VDC**.
  Check bus voltage **Low= 2.5 - 3.5 VDC**.
  Voltage level of CAN High/CAN Low
  0 VDC = earth connection, **4 VDC and higher** = short circuit to +UB

5 Valve bus

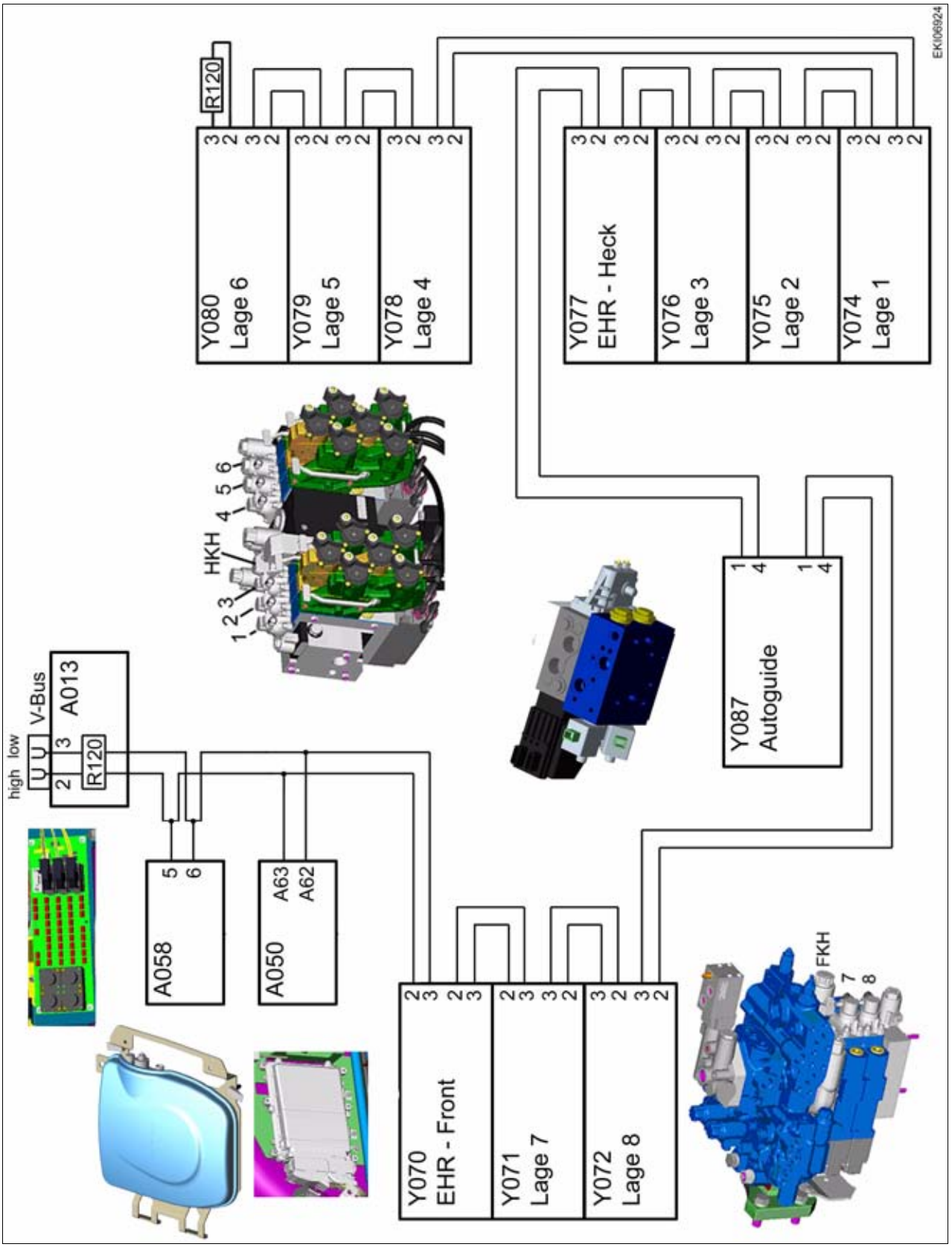


Fig. 9. I004837

DIN	Designation	Hydr.	Position	Colour
A013 - PCB, microfuses				
A050 - ECU, basic control unit				
A058 - TopDock (Auto-Guide)				
Y070 [FKH] - Cut-off valve, front power lift enhanced control		Front EPC	FKH	
Y071 [2.1] - Auxiliary control valve (olive)		2.1	7	olive
Y072 [2.2] - Auxiliary control valve (grey)		2.2	8	grey
Y074 [1.1] - Auxiliary control valve (yellow)		1.1	1	yellow
Y075 [1.2] - Auxiliary control valve (blue)		1.2	2	blue
Y076 [1.3] - Auxiliary control valve (red)		1.3	3	red
Y077 [HKH] - Cut-off valve, rear EPC		Rear EPC	HKH	
Y078 [1.4] - Auxiliary control valve (green)		1.4	4	green
Y079 [1.5] - Auxiliary control valve (brown)		1.5	5	brown
Y080 [1.6] - Auxiliary control valve (violet)		1.6	6	violet

NOTE: *Procedure for checking the bus system (passive bus)*

Passive bus means that the bus ends are sealed off with terminating resistors.

– Check the supply voltage to the bus consumers (positive and earth)

– Test total resistance 60 Ohm.
(total resistance 120 Ohm = wiring break, defective terminating resistor)

– Check the voltage level of CAN High/CAN Low.
0 VDC = earth connection, 4 VDC and higher = short circuit to +UB

6 Functional description of the A050 ECU, basic control unit

Functional description of components with current inputs at the **A050** - ECU, basic control unit

Sensors with current inputs

DIN	Designation	Pin at A050
B008 - Sensor, high-pressure 1		A67
B016 - Sensor, travel range detection		A69
B017 - Sensor, clutch pedal		B29
B039 - Sensor, high-pressure 2		A70
B040 - Sensor, front power lift position		A38
B055 - Sensor, foot throttle		B18
B066 - Sensor, wheel position (left)		A66
B067 - Sensor, steering angle		A65
B068 - Sensor, wheel position (right)		A64
B081 - Steering wheel sensor (360°)		B17

The **A050** - ECU, basic control unit receives a signal strength of **4–20 mA** from the sensor depending on the position or pressure of the sensor.
The signal strength of **4 - 20 mA** produces a signal voltage of 0.6 - 4.2 V.
The **A050** - ECU, basic control unit receives signals from these sensors e.g. for the high pressure in the transmission or the current foot throttle position (engine target speed).

Functional description of components with voltage inputs at the **A050** - ECU, basic control unit

Sensors with voltage inputs

DIN	Designation	Pin at A050
B030 - Sensor, rear power lift position		A21
B031 - Sensor, draft sensing pin, right		A17
B032 - Sensor, draft sensing pin, left		B16
-	Sensor, external position (X015)	A18

The **A050** - ECU, basic control unit receives a signal voltage of **2.0–7.6 VDC** from the sensor depending on the position or pressure of the sensor.
Through these sensors, e.g. B030 rear power lift position sensor, the **A050** - ECU, basic control unit receives the lifting height of the power lift.

Functional description of components with frequency inputs at the **A050** - ECU, basic control unit

Sensors with frequency inputs

DIN	Designation	Pin at A050
A011 - Radar sensor		A12
B002 - Sensor, front PTO speed		A08
B010 - Sensor, engine speed		A11
B014 - Sensor, collecting shaft (speed)		A13
B015 - Sensor, bevel pinion (speed)		A09
B020 - Sensor, rear PTO speed (stub shaft)		A10
B021 - Sensor, rear PTO speed (clutch)		A33

The **A050** - ECU, basic control unit supplies a basic signal voltage of **6.3 VDC**
The basic signal voltage **must** come from the **A050** - ECU, basic control unit.
When a Hall sensor is connected, this basic signal voltage is reduced by the resistance circuits inside the Hall sensor:

from **4.6 VDC to 1.0 VDC** (depending on ratchet wheel position).
The **A050** - ECU, basic control unit calculates the rotational frequency of the shaft (rotational speed) from the number of voltage levels (4.6 VDC and 1.0 VDC).

Functional description of components with digital inputs at the **A050** - ECU, basic control unit

Switches with digital inputs

DIN	Designation	Pin at A050
A009 - Actuator unit Reference F/R		A58
A039 - MFA, multifunction armrestSeat switch		B14
B009 - Discharge temperature sensor		B23
B014 - Sensor, collecting shaft (rotational direction)		A59
B015 - Sensor, bevel pinion (rotational direction)		A57
B063 - Pressure switch, filter contamination (hydraulic circuit)		A42
S005 - Switch, right brake		B11
S006 - Switch, left brake		B24
S017 - Filter contamination switch		A34
S019 - Button, rear PTO, external left		B36
S020 - Button, rear PTO, external right		B50
S021 - Button, front power lift, external raise		A37
S022 - Button, front power lift, external lower		A36
S025 - Switch, LS pump pressure monitor		A35
S026 - Switch, steering pump flow controller		A48
S027 - Button, rear power lift, right-hand external raise		B37
S028 - Button, rear power lift, right-hand external lower		B12
S029 - Button, rear power lift, left-hand external raise		B39
S030 - Button, rear power lift, left-hand external lower		B48
S045 - Switch, reversing driver stand		B09
S067 - Button, valve actuation, external raise		B35
S068 - Button, valve actuation, external lower		B47
S075 - Switch, guard rail pump flow monitor		A43
S079 - Switch, steering column		B10
S080 - Switch, hand brake		B34
S086 - Switch, brake wearing, right		B51
S087 - Switch, brake wearing, left		B25

The **A050** - ECU, basic control unit supplies a basic signal voltage of **6.0 VDC**
The basic signal voltage must come from the **A050** - ECU, basic control unit.
Depending on the position of the switch, the basic signal voltage from the ECU is reduced:
Switch open to **3.7 VDC** (internal resistance of component 510 Ohm) or
Switch closed to **1.7 VDC** (internal resistance of component 121 Ohm).
The desired function is carried out in the ECU based on the voltage level.

Functional description of components with digital output at the **A050** - ECU, basic control unit

Switches with digital outputs

DIN	Designation	Pin at A050
A009 - Actuator unit		A15
H009 - Blip signal, reversing		B42
-	ISO bus	B43
K061 - ISO bus disconnect relay		A14
K061 - ISO bus disconnect relay		B56
S019 - Button, rear PTO, external left LED		B41
S020 - Button, rear PTO, external right LED		B041
Y002 - Solenoid valve, travel range I		A92
Y003 - Solenoid valve, travel range II		A91
Y009 - Solenoid valve, 4WD		A89
Y010 - Solenoid valve, differential lock		A90
Y012 - Oil pre-heater/load suspension solenoid valve		A87
Y060 - Hydraulic oil pre-heater solenoid valve (rear)		A88
Y065 - Raise suspension solenoid valve		A93
Y067 - Lock suspension solenoid valve		A95
Y082 - Solenoid valve, lower link stabiliser, lock		A96
Y083 - Solenoid valve, lower link stabiliser, release		A72

The **A050** - ECU, basic control unit supplies a voltage for energising the solenoid valves:
of **0 VDC or 12 VDC** (black - white) switching.
The **A050** - ECU, basic control unit is capable of having diagnostics run at the outputs; this means that if a break in wiring or a short circuit occurs, this output is switched off and an error code is output.

Functional description of components with pulse width output **A050** - ECU, basic control unit

Actuators with pulse width outputs

DIN	Designation	Pin at A050
Y004 - Solenoid valve, turbo-clutch		B21
Y005 - Solenoid valve, speed governor		A75
Y008 - Solenoid valve, rear PTO (clutch)		A77
Y011 - Front PTO solenoid valve (clutch)		A86
Y021 - Lifting solenoid valve (standard front power lift)		A49
Y021 - Front pressure compensator lock valve		
Y022 - Lowering solenoid valve (standard front power lift)		A73
Y022 - Field pressure control solenoid valve (front),		
Y026 - Solenoid valve, rear PTO, stage I		A54
Y027 - Solenoid valve, rear PTO, stage II		A53
Y032 - Control pressure solenoid valve		A52
Y053 - Active hold function solenoid valve (High)		A04
Y053 - Active hold function solenoid valve (Low)		A81
Y055 - Rear pressure compensator lock valve		A31
Y061 - hydraulic oil pre-heater solenoid valve (middle)		A74
Y062 - Solenoid valve, field pressure control (rear)		A56
Y063 - Wobble stabiliser solenoid valve		A01
Y064 - Suspension load pressure/lowering solenoid valve		A26
Y084 - Solenoid valve, Power Beyond		A50
Y085 - Pilot pressure/switch-off solenoid valve (Auto-Guide) (High)		A07
Y085 - Pilot pressure/switch-off solenoid valve (Auto-Guide) (Low)		A78
Y086 - Solenoid valve, steering disconnect (Auto-Guide) (High)		A06
Y086 - Solenoid valve, steering disconnect (Auto-Guide) (Low)		A79
Y088 - Solenoid valve, release trailer brake (High)		A02
Y088 - Solenoid valve, release trailer brake (Low)		A85

The **A050** - ECU, basic control unit supplies a voltage of **0 VDC to 12 VDC** for energising the solenoid valves
The voltage increase to 12 VDC or the voltage shutoff to 0 VDC is proportionally controlled.
The **A050** - ECU, basic control unit is capable of having diagnostics run at the outputs; this means that if a break in wiring or a short circuit occurs, this output is switched off and an error code is output.

NOTE: *A pulse width output can also be programmed to a given current value, e.g. Y005 speed limiter solenoid valve 800 mA.*

7 Hall sensor operation

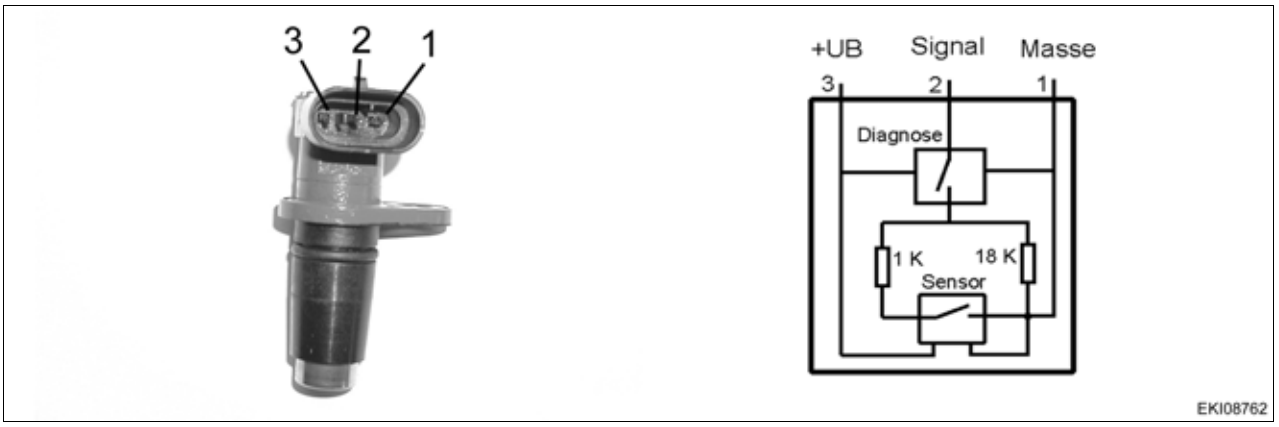


Fig. 10. I007041

Hall sensor pin assignment
1 = earth
2 = signal
3 = +supply

Signal voltage, measure at pin 2 and pin 1
The A050 ECU, basic control unit delivers a basic signal voltage of approx. **6.3 VDC** to pin 2, only possible when the Hall sensor is disconnected.
Ratchet wheel position A
Sensor switch open signal voltage = approx. **4.6 VDC**, resistance 18 kOhm
Ratchet wheel position B
Sensor switch closed signal voltage = approx. **1.0 VDC**, total resistance (parallel circuit) from 18 kOhm and 1 kOhm

+ supply, measure at pin 3 and pin 1
Voltage = **12 to 14 VDC** (depending on on-board voltage)

*Tractor with **A002** - ECU, enhanced control e.g.: FENDT 900 COM II:*

Supply	Switch I (Diagnostics)	Switch II (Sensor)	Signal voltage	Fault code
0 VDC				
12 VDC				

*Tractor with **A050** - ECU, basic control unit e.g.: FENDT 900 COM III:*

Supply	Switch I (Diagnostics)	Switch II (Sensor)	Signal voltage	Fault code
0 VDC				
12 VDC				

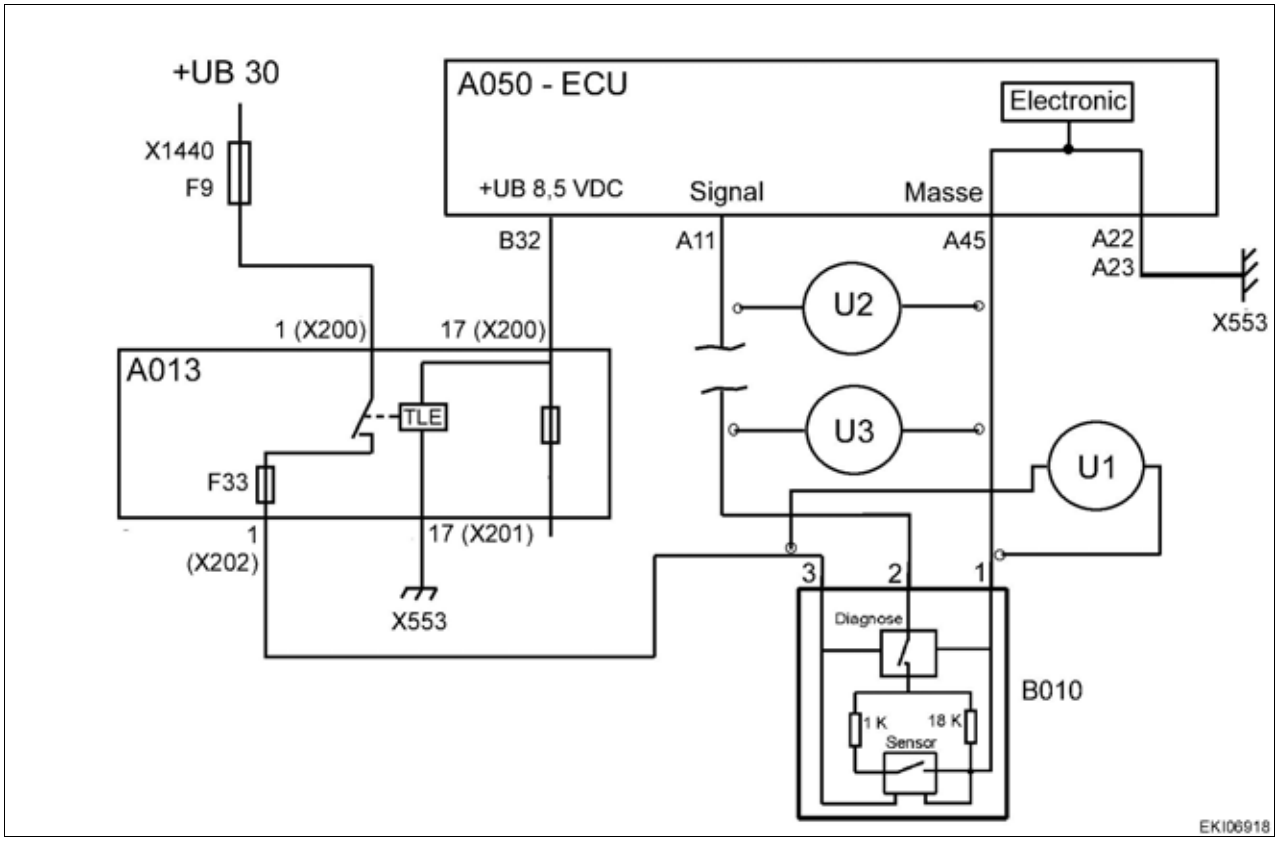


Fig. 11. I007790

Voltage	A002 (COM II)	A050 (COM III)	Note
U1			
U2			
U3			

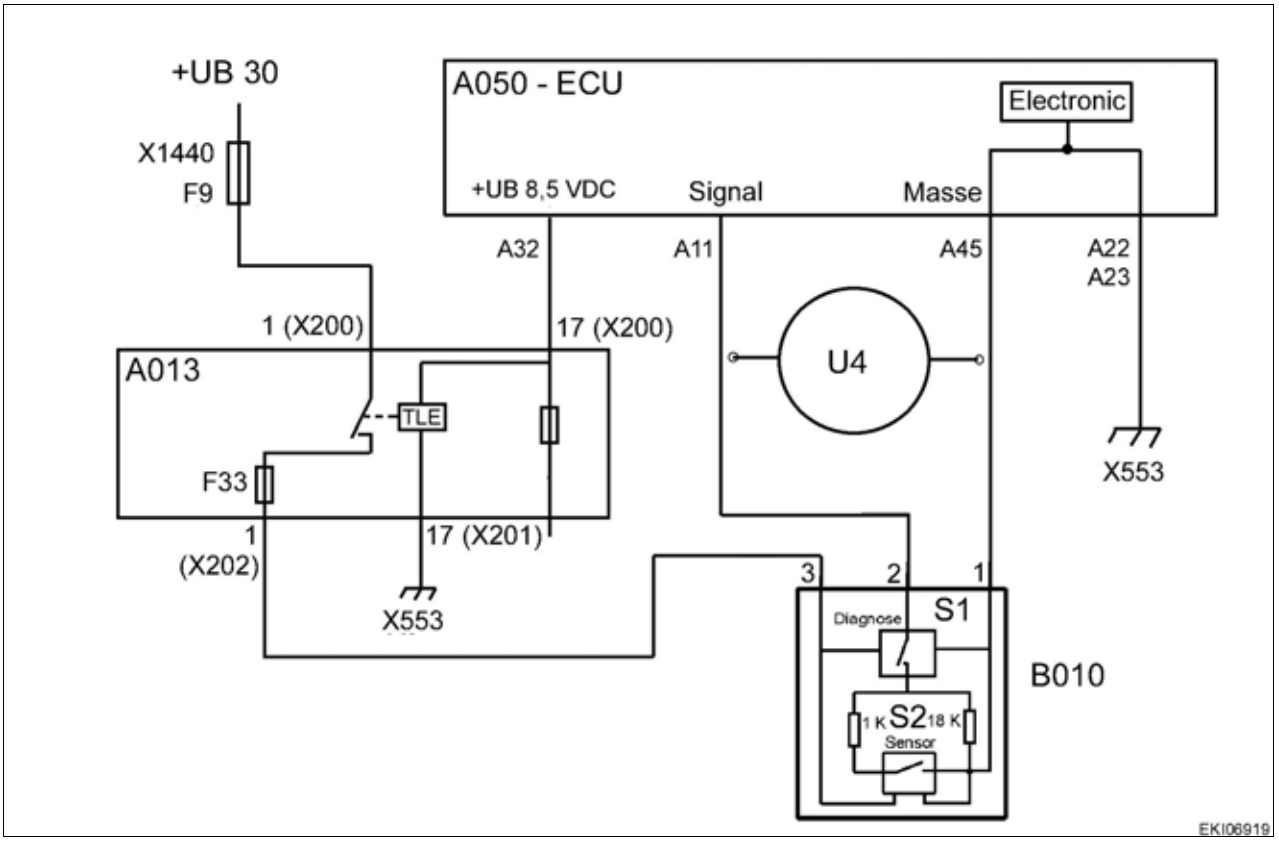


Fig. 12. I007791

Voltage	S1	S2	A002 (COM II)	A050 (COM III)
U4	CLOSED	OPEN		
	CLOSED	CLOSED		

Other Hall sensors fitted on the tractor:

DIN	Designation	Note
A011 - Radar sensor		
B002 - Sensor, front PTO speed		
B010 - Sensor, engine speed		
B014 - Sensor, collecting shaft (speed)		
B015 - Sensor, bevel pinion (speed)		
B020 - Sensor, rear PTO speed (stub shaft)		
B021 - Sensor, rear PTO speed (clutch)		

8 Position sensor operation

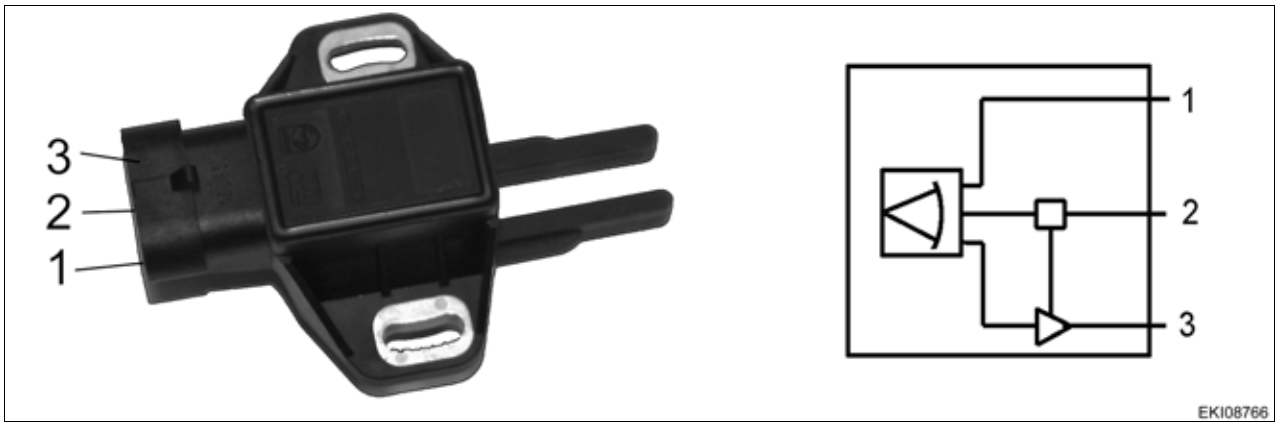


Fig. 13. I007046

Position sensor (angle/current) pin assignment
1 = earth
2 = +supply
3 = signal

Functional description of position sensor (angle/current)

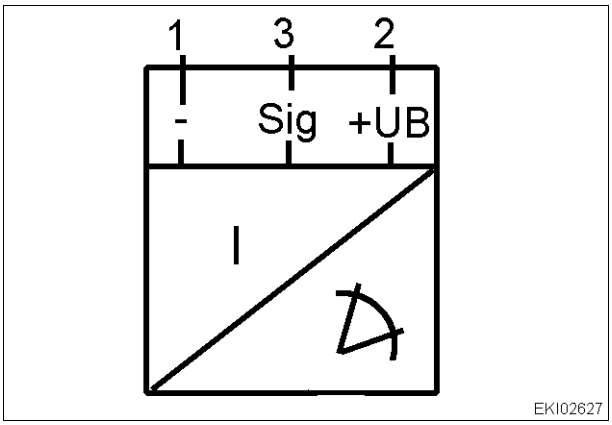


Fig. 14. I006985

The position sensor is used to detect angles.
The **earth** of the position sensor goes to ECU pins A45 and A46 (sensor system earth).
It is supplied by the **A013** - PCB, microfuses with **8.5 VDC**.
The position sensor is equipped with an **electronic current divider**, which sends a signal current of **4 - 20 mA** to the ECU depending on the angle position.
Measured with the adapter cable, a signal voltage of **0.6 - 4.2 VDC** is generated.

Position sensor (angle/current)

DIN	Designation	Note
B016 - Sensor, travel range detection		
B017 - Sensor, clutch pedal		
B040 - Sensor, front power lift position		
B055 - Sensor, foot throttle		
B066 - Sensor, wheel position (left)		
B067 - Sensor, steering angle		
B068 - Sensor, wheel position (right)		

To compensate for mechanical and electrical tolerances in sensors, the sensor must be calibrated.

High pressure sensor (pressure/current (I))

DIN	Designation	Note
B008 - Sensor, high-pressure 1		
B039 - Sensor, high-pressure 2		

Functional description of position sensor (angle/voltage)

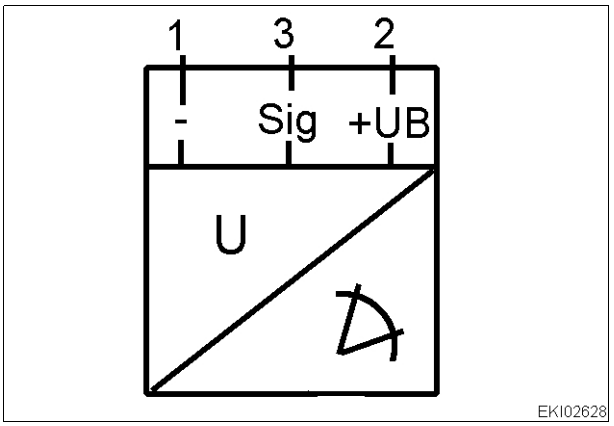


Fig. 15. I006986

The position sensor is used to detect angles
The position sensor is supplied from the ECU.
The earth of the position sensor goes to ECU pins A45 and A46 (sensor system earth).
The position sensor is equipped with an **electronic voltage divider**, which reports a signal voltage to the ECU reflecting the angular position.

Position sensor (angle/voltage)

DIN	Designation	Note
B030 - Sensor, rear power lift position		
	Sensor, external position (X015)	
B055 - Sensor, foot throttle		

To compensate for mechanical and electrical tolerances in sensors, the sensor must be calibrated.

NOTE: *Chapter 0000 Reg. F - Setting and calibrating*
Chapter 9000 Reg. E - Measuring and testing electrical components.

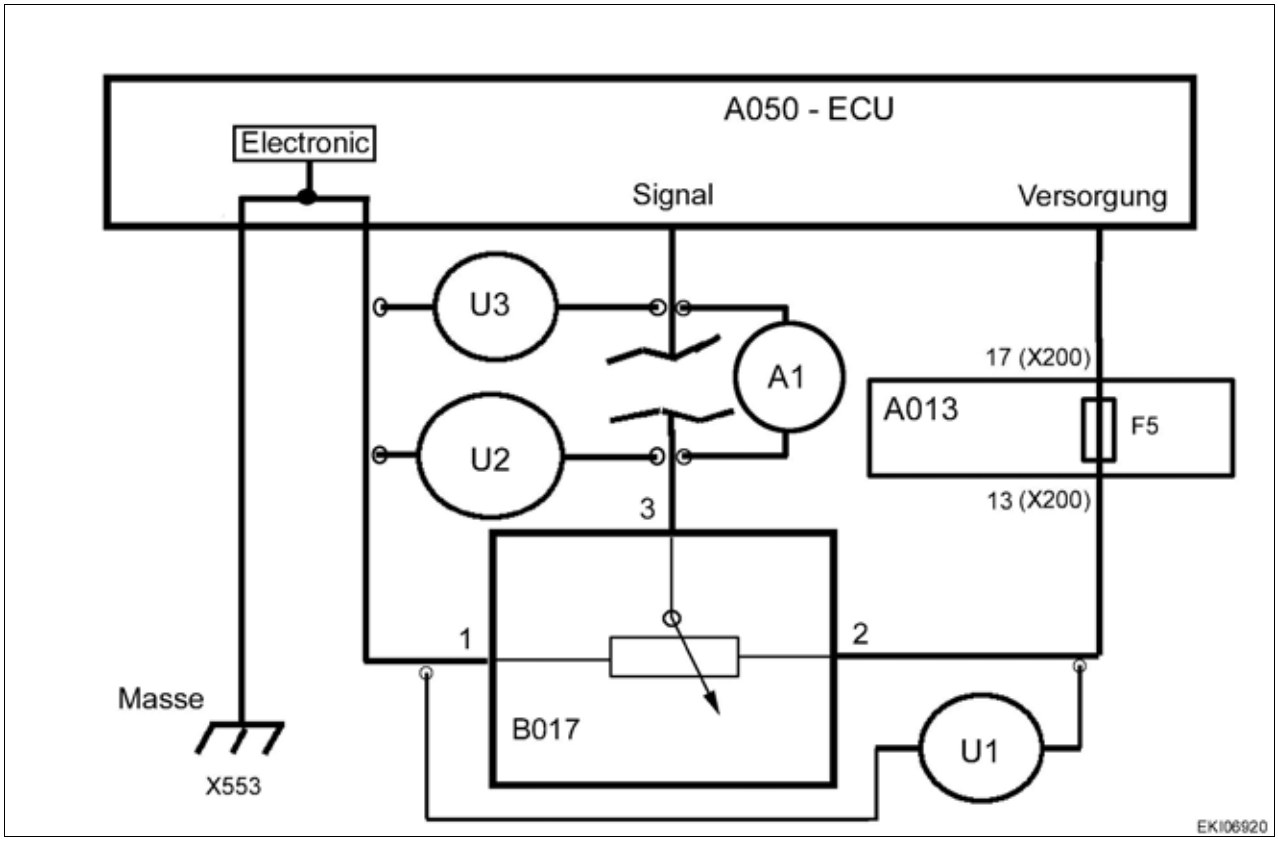


Fig. 16. I007792

A013 - PCB, microfuses	**B017** - Sensor, clutch pedal
A050 - ECU, basic control unit	

Voltage	Conditions	Reading	Note
U1			
U2			
U3			
U3	Connected		
A1			

If the supply voltage at the position sensor is OK, the sensor sends a signal of **4 - 20 mA** to the ECU reflecting the angular position.
If the supply (positive or earth) is not OK, no signal is transmitted; an error code appears. **The signal comes from the position sensor.**

9 Button functionality

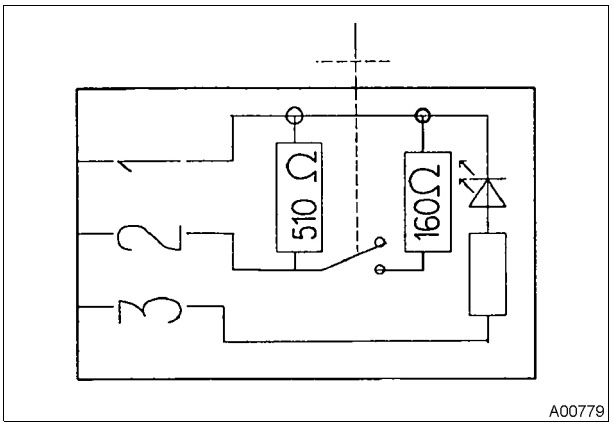


Fig. 17. I007044

Pin assignment button
1 = earth
2 = signal (on/off)
3 = lights ON/OFF button

Measure the signal voltage at pin 2 and pin 1
The **A050** - ECU, basic control unit sends a basic signal voltage of **6.0 VDC** to pin 2, not possible unless the button is disconnected.
The basic signal voltage must come from the **A050** - ECU, basic control unit.
Switch open
Resistance R = 510 Ohm => signal voltage = **3.7 VDC**
Switch closed
Resistance R = 121 Ohm => signal voltage = **1.7 VDC**

Measure the resistance at pin 2 and pin 1
Switch open
Resistance R = **510 Ohm**
Switch closed
Resistance R = 1 / (1/510 + 1/160) = **121 Ohm**

Measure "lights button" voltage at pin 3 and pin 1
Voltage = 0 VDC or 12 VDC (depending on switch position message from the ECU)

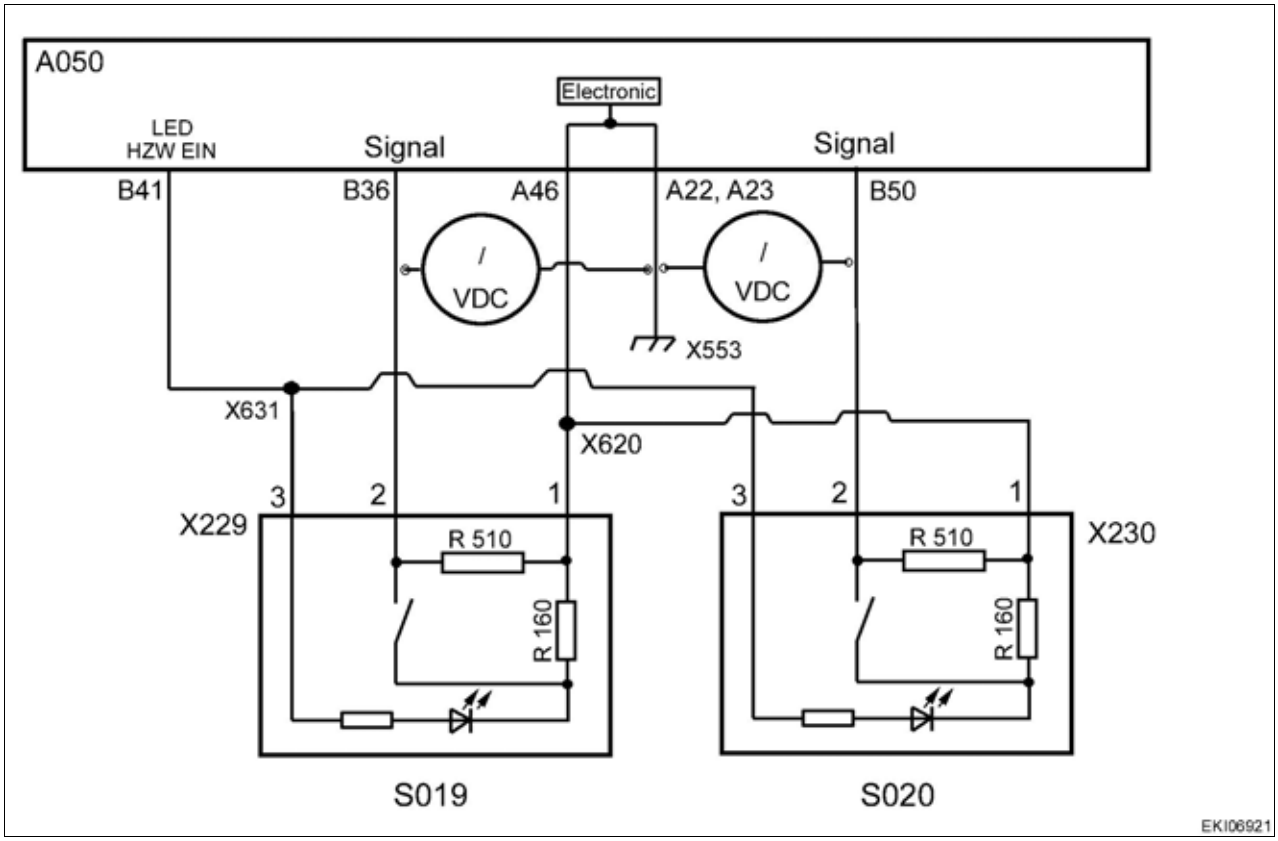


Fig. 18. I007793

A013 - PCB, microfuses	**S019** - Button, rear PTO, external left
A050 - ECU, basic control unit	**S020** - Button, rear PTO, external right

Switch	A002 (COM II)	A050 (COM III)	Resistance	Note
Open				
Closed				

Other buttons/switches fitted on the tractor:

DIN	Designation	Pin at A050
A009	- Actuator unit	A58
A039	- MFA, multifunction armrest	B14
B009	- Discharge temperature sensor	B23
B014	- Sensor, collecting shaft	A59
B015	- Sensor, bevel pinion	A57
B063	- Pressure switch, filter contamination (hydraulic circuit)	A42
S005	- Switch, right brake	B11
S006	- Switch, left brake	B24
S017	- Filter contamination switch	A34
S019	- Button, rear PTO, external left	B36
S020	- Button, rear PTO, external right	B50
S021	- Button, front power lift, external raise	A37
S022	- Button, front power lift, external lower	A36
S025	- Switch, LS pump pressure monitor	A35
S027	- Button, rear power lift, right-hand external raise	B37
S028	- Button, rear power lift, right-hand external lower	B12
S029	- Button, rear power lift, left-hand external raise	B39
S030	- Button, rear power lift, left-hand external lower	B48
S045	- Switch, reversing driver stand	B09
S067	- Button, valve actuation, external raise	B35
S068	- Button, valve actuation, external lower	B47
S079	- Switch, steering column	B10
S080	- Switch, hand brake	B34
S086	- Switch, brake wearing, right	B51
S087	- Switch, brake wearing, left	B25

Switches for which no diagnostics are available, in the event of cable breaks:
Measure the signal voltage at pin 2 and pin 1

Switch open
Resistance R = infinite => signal voltage **= 6.0 VDC**
Switch closed
Resistance R = approx. 0 ohms => signal voltage **= 0 VDC**

DIN	Designation	Pin at A050
S026	- Switch, steering pump flow controller	A48
S075	- Switch, guard rail pump flow monitor	A43

NOTE: *see §6*
Electrical circuit diagrams - Chapter 9000 Reg. C
Electrical/electronic components - Measuring and testing - Chapter 9000 Reg. E

A	General
B	Faults
C	Documents and Diagrams
D	Component location
E	Testing
F	Setting and Calibration
G	Repair
H	Service – Info

9920

Service/special tools

9920 Service/special tools

A General. 5

A General

1 Special tools 7
2 Special tools for Common Rail 10
3 X899.980.316.000 - "Auto-Guide COM III" tool box 12
4 Special tool for Auto-Guide system F 900 COM III 14

1 Special tools

X899.980.246.208
Adapter cable (6-pin)
for testing B055 foot throttle sensor.

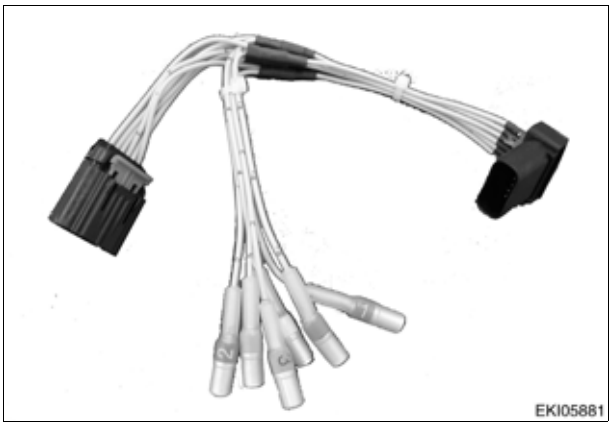


Fig. 1. I002527

X899.980.259.102
Adapter cable (4-pin)

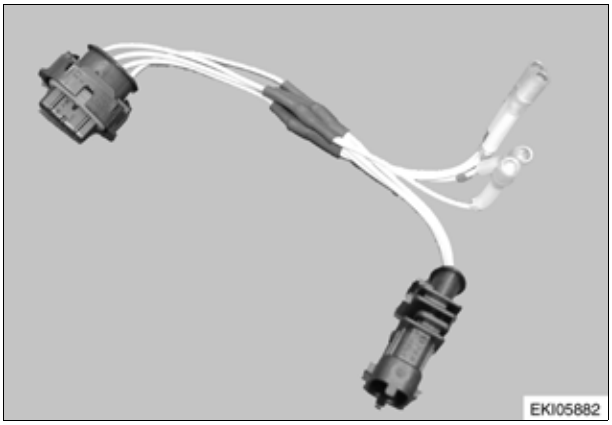


Fig. 2. I002529

X899.980.259.104
Adapter cable (2-pin)

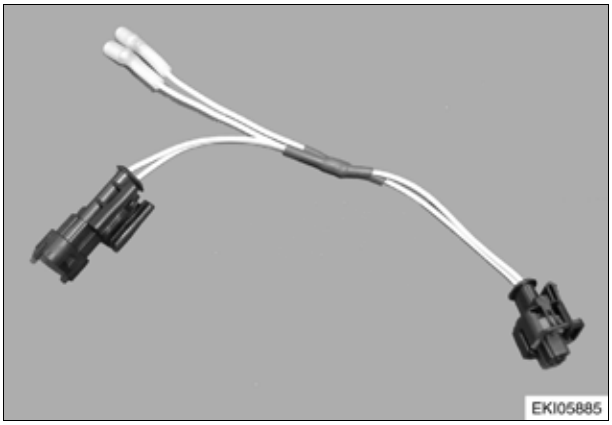


Fig. 3. I002528

X899.980.304.000
Adapter box (160-pin)
for universal testing of electrical and electronic systems.



Fig. 4. I002521

X899.980.304.201
Adapter cable (96/58/4x41-pin)
for testing the **A050 ECU, basic control unit.**



Fig. 5. I002522

X899.980.304.202
Adapter cable (36/16/89/4x41-pin)
for testing the **A051 ECU, engine control unit.**



Fig. 6. I002523

X899.980.304.203
Adapter cable (21/41-pin)
for testing the **A038 ECU, central electrical system.**



Fig. 7. I002524

X899.980.304.204
Adapter cable (68/2x41-pin)
Adapter for all adapter cables with a 68-pin separation point.



Fig. 8. I002525

X899.980.304.400
Support for X899.980.304.000 adapter box.



Fig. 9. I002526

2 Special tools for Common Rail

Special spanner (SW 17), assembling and disassembling high pressure lines
X 899.980.238 V

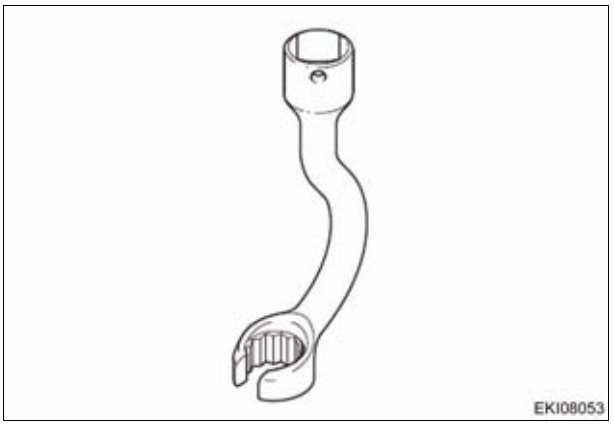


Fig. 10. I003737

Please order the following special tools at the following address:

Firma Wilbaer
Wilhelm Baecker GmbH & Co.KG
Postbox 14 05 80
42826 Remscheid
Germany
Telephone: +49 (0) 21 91 - 9339 - 200
Fax: +49 (0) 21 91 - 9339 - 0
E-mail: info@wilbaer.de
Internet: http://www.deutz-tools.com

Disassembling device for the removal of the pressure pipe coupling
Order number: 110 630

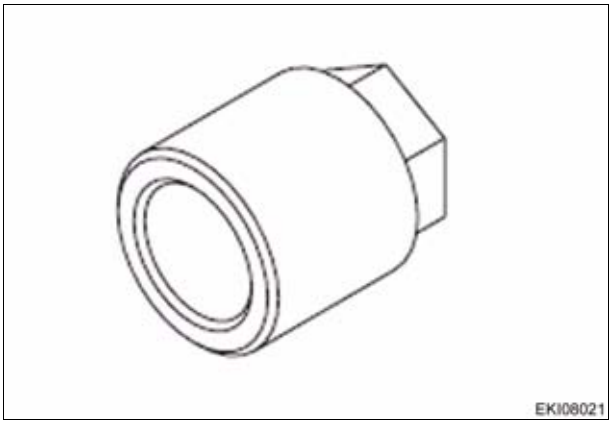


Fig. 11. I003738

Lever for removal of injectors
Order number: 110 620

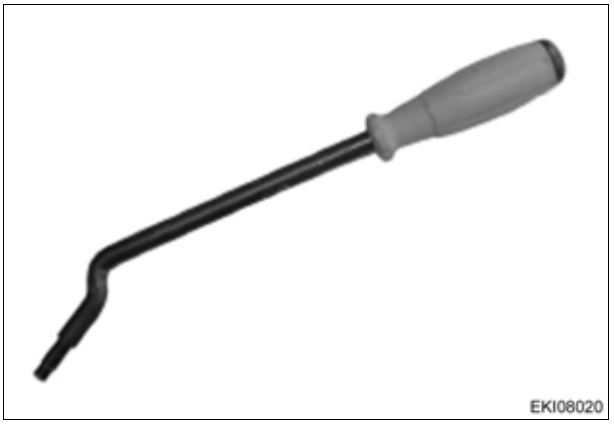


Fig. 12. I003736

Assembly pliers
Order number: 8024

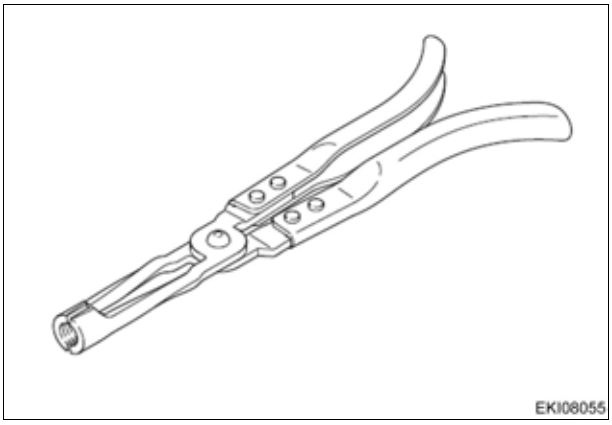


Fig. 13. I003739

Removal device for the removal of a tight injector seal ring
Order number: 120 680
In combination with slide hammer 150 800

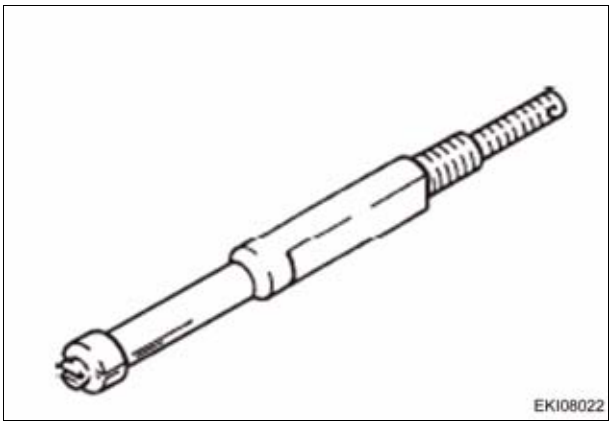


Fig. 14. I003740

Slide hammer
Order number: 150 800
In combination with detaching device 120 680

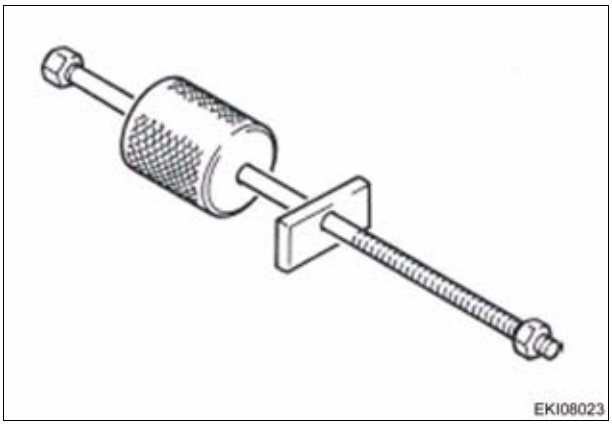


Fig. 15. I003741

Assembly case (fitting and removing O-ring seals)
Case complete with:
Disassembling tool 110 901and three assembling sleeves with guide

- High-pressure pump (diameter 36 mm), 110 902
- Injector 2V engine (diameter 16 mm), 110903
- Injector 4V engine (diameter 23 mm), 110904

Order number: 110 900



Fig. 16. I003742

3 X899.980.316.000 - "Auto-Guide COM III" tool box

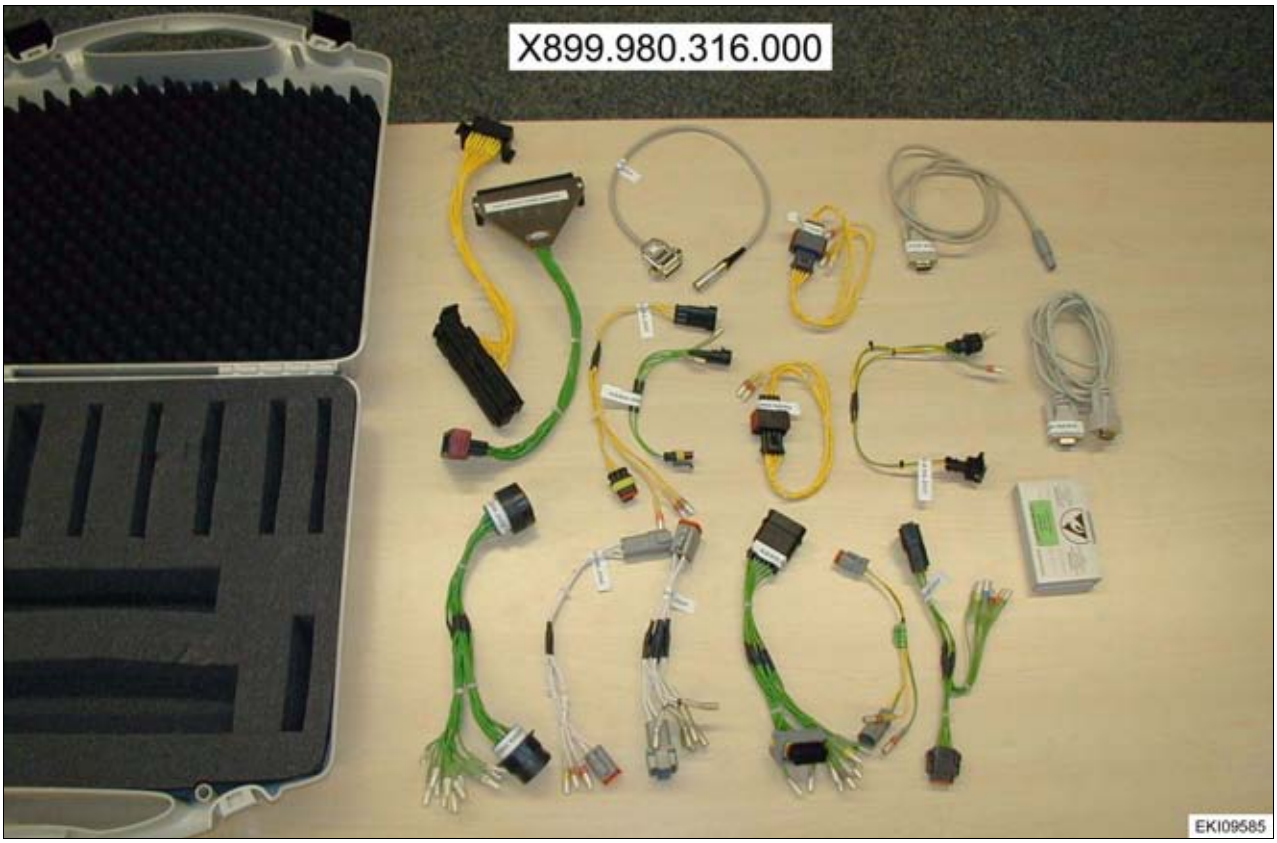


Fig. 17. I007492

X899.980.316.000 Tool box - Auto-Guide COM III			
Adapter cable	**Adapter cable for:**	**FENDT 700/800 COM III**	**FENDT 900 COM III**
X899.980.288.200	Box without tools	-	-
X899.980.208.220	A057 ECU, steering controller	**X**	-
X899.980.246.201	Y099 solenoid valve	**X**	**-**
	Y085 solenoid valve	-	**X**
X899.980.246.204	S088 pressure switch	**X**	**-**
X899.980.246.205	B081 steering wheel sensor	-	**X**
	B087 steering angle sensor	-	X
X899.980.246.207	A059 Auto-Guide terminal	**X**	-
X899.980.288.201	PCMCIA card (for programming the Auto-Guide system)	**X**	**X**
X899.980.288.202	Programming the Auto-Guide system with the A059 Auto-Guide terminal	**X**	**X**
X899.980.288.206	A058 Auto-Guide TopDock (B3/B4)	**X**	**-**
	Y086 solenoid valve	-	**X**
X899.980.288.207	A058 Auto-Guide TopDock (B3/B4)	**X**	**-**

X899.980.316.000 Tool box - Auto-Guide COM III			
Adapter cable	**Adapter cable for:**	**FENDT 700/800 COM III**	**FENDT 900 COM III**
X899.980.288.208	A058 Auto-Guide TopDock (B4) Setting the radio frequency of the radio module (base station)	**X**	**X**
X899.980.316.201	Y087 Auto-Guide control valve	**X**	**X**
X899.980.316.202	Y087 Auto-Guide control valve	**X**	**X**
X899.980.316.203	A059 Auto-Guide terminal	-	**X**
X899.980.316.204	A058 Auto-Guide TopDock (B4)	-	**X**
X899.980.316.205	Programming the Auto-Guide system with the Auto-Guide Service Tool (laptop)	**X**	**X**
X899.980.316.206	S089 switch, Auto-Guide activation	**X**	**-**

NOTE: *For Auto-Guide system diagnostics, see also:*
X990.005.462.000 - FENDT 700/800 Vario COM III (Auto-Guide) training documentation
X990.005.459.000 - FENDT 900 Vario COM III (Auto-Guide) training documentation

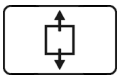
4 Special tool for Auto-Guide system F 900 COM III

For checking A050 ECU, basic control unit

A050 ECU, basic control unit



On right mudguard.



Remove panel.



Fig. 18. I001030

X899.980.304.201
Adapter cable (96/58/4x41-pin)
for testing the **A050 ECU, basic control unit.**



Fig. 19. I002522

X899.980.304.000
Adapter box (160-pin) for universal checking of electrics/electronics



Fig. 20. I002521

X899.980.304.400
Support for X899.980.304.000 adapter box.

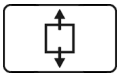


Fig. 21. I007229

For checking Y087 Auto-Guide control valve

Y087 Auto-Guide control valve


On right side of tractor


Remove right rear wheel and panel.

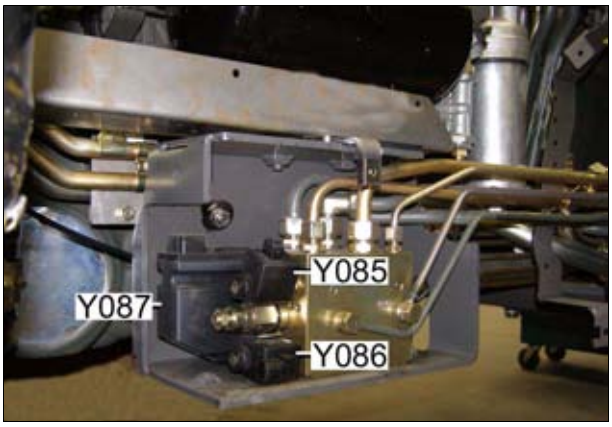


Fig. 22. I001987

Separation points on Y087 Auto-Guide control valve

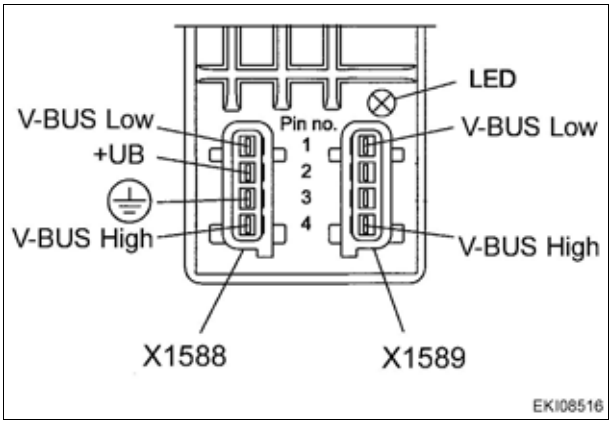


Fig. 23. I002198

X899.980.316.201 adapter cable (grey)
X899.980.316.202 adapter cable (black)



Fig. 24. I007227

For checking A058 Auto-Guide TopDock (B4)

A058 Auto-Guide TopDock (B4)



At top in cab

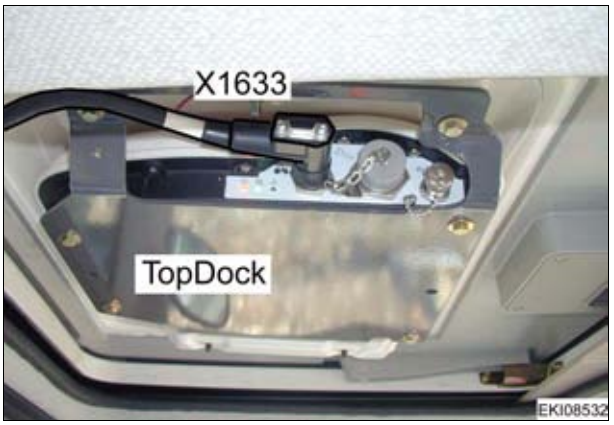
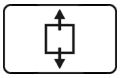


Fig. 25. I002345



At front in cab, behind right loudspeaker



Remove right loudspeaker.

X1633 separation point on A058 Auto-Guide TopDock

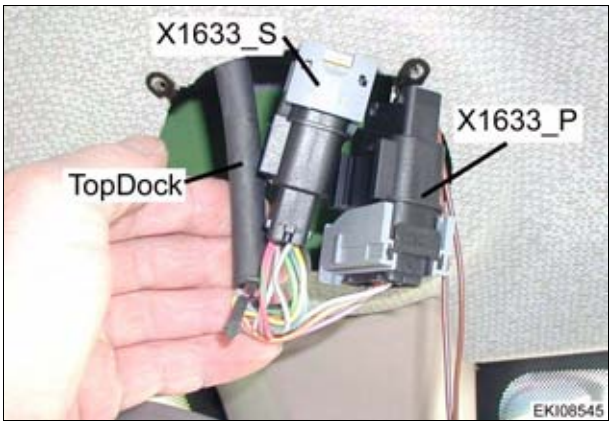


Fig. 26. I002351

X899.980.316.204 adapter cable



Fig. 27. I007237

For checking A059 Auto-Guide terminal

A059 Auto-Guide terminal

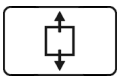


Fig. 28. I001366

X1597 separation point for A059 Auto-Guide terminal



On right mudguard.



Remove panel.



Fig. 29. I002347

X899.980.316.203 adapter cable



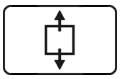
Fig. 30. I007228

For checking Y085/Y086 solenoid valve

Y085/Y086 solenoid valve



On right side of tractor



Remove right rear wheel and panel.

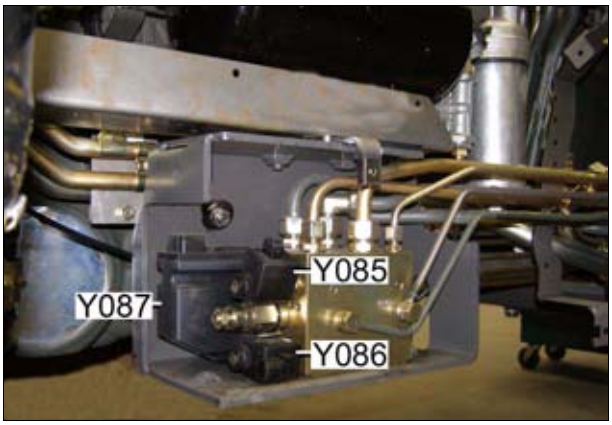


Fig. 31. I001987

For the Y085 solenoid valve:
X899.980.246.201 adapter cable

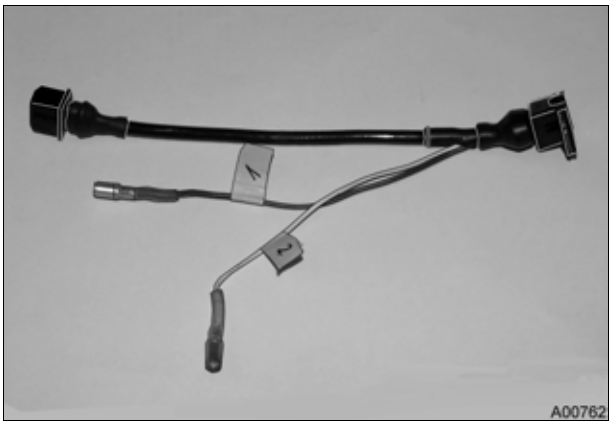


Fig. 32. I007147

For the Y086 solenoid valve:
X899.980.288.206 adapter cable

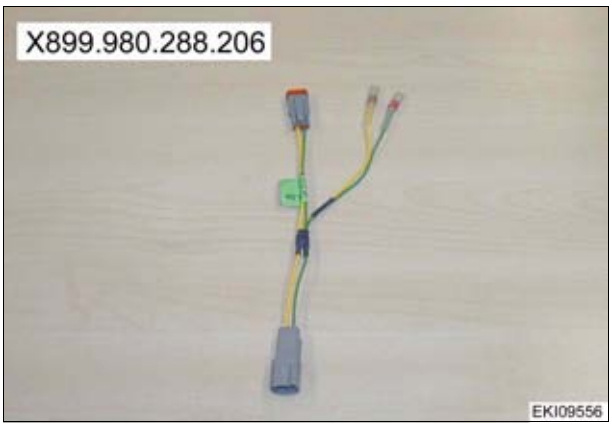


Fig. 33. I007238

For checking B067 / B081 - sensor

B067 steering angle sensor



Right-hand side, on front axle

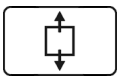


Fig. 34. I001081

B081 steering wheel sensor



In the cab



Remove panel on steering servo unit



Fig. 35. I006663

X899.980.246.205 adapter cable

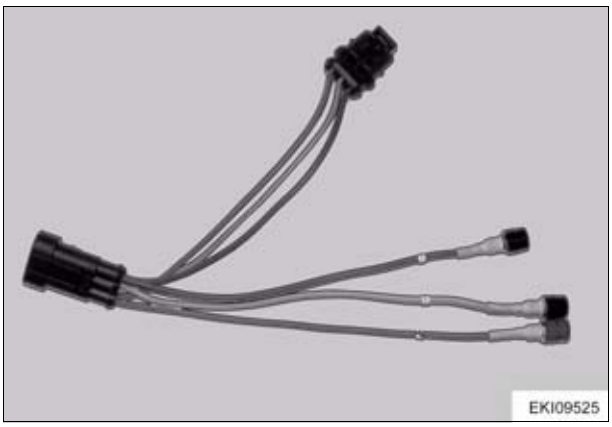


Fig. 36. I006875

Set radio frequency on radio module (transmitter) of base station

When operating a base station:
The radio module (transmitter) of the base station must be set to a valid radio frequency.
The radio frequency is set using the A058 Auto-Guide TopDock



Fig. 37. I006171

X899.980.288.208 - adapter cable



Fig. 38. I007490

For programming: A058 Auto-Guide TopDock and A059 Auto-Guide terminal

X899.980.288.201 - PCMCIA card

- Download software from AGCO NET
- The A058 Auto-Guide TopDock is programmed via the A059 Auto-Guide terminal.



Fig. 39. I003065

For programming the A058 Auto-Guide TopDock:
Programming with the A059 Auto-Guide terminal

X899.980.288.202 - programming cable



Fig. 40. I003082

Alternatively, the A058 Auto-Guide TopDock can be programmed using the Auto-Guide Service Tool (laptop).

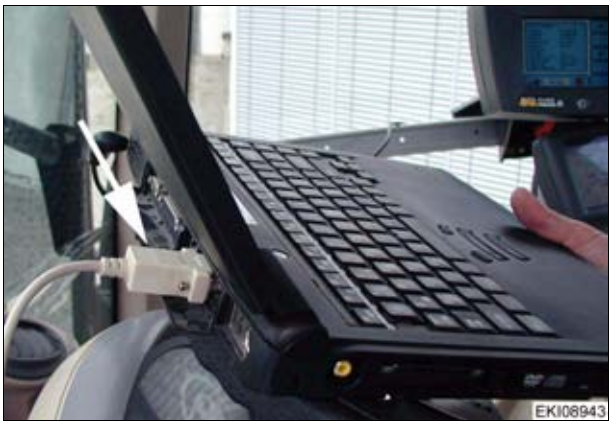


Fig. 41. I003345

For programming the A058 Auto-Guide TopDock:
Programming with the Auto-Guide Service Tool (laptop)

X899.980.316.205 - programming cable (serial)



Fig. 42. I007493

A	General
B	Faults
C	Documents and Diagrams
D	Component location
E	Testing
F	Setting and Calibration
G	Repair
H	Service – Info

9975

Service/SERDIA - Deutz engine diagnostics program

9975 Service/SERDIA - Deutz engine diagnostics program

A General. 5

A General

1 Engine diagnostics using the Deutz diagnostics program (SERDIA) 7

1 Engine diagnostics using the Deutz diagnostics program (SERDIA)

Principle: Common Rail injection

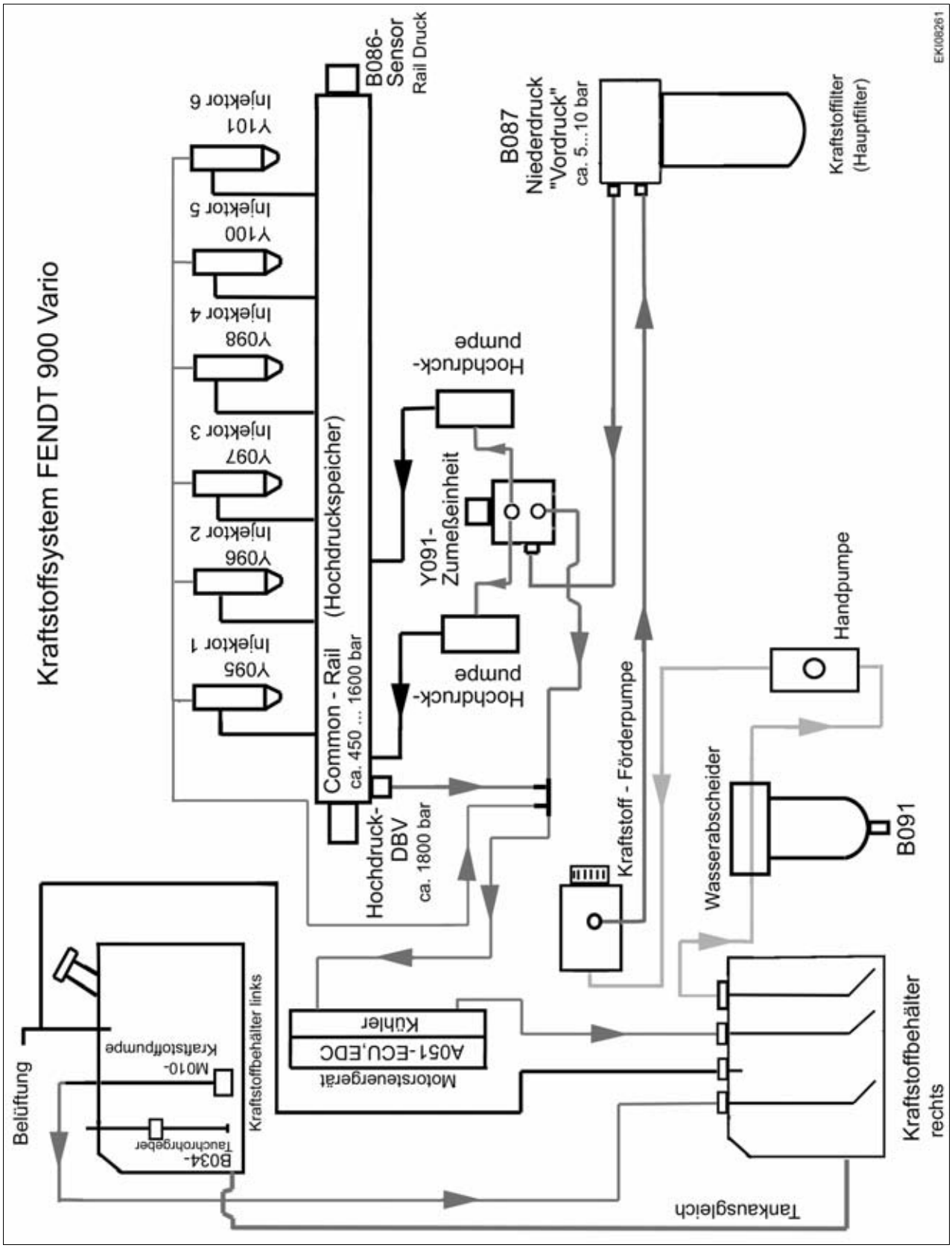


Fig. 1. I002008

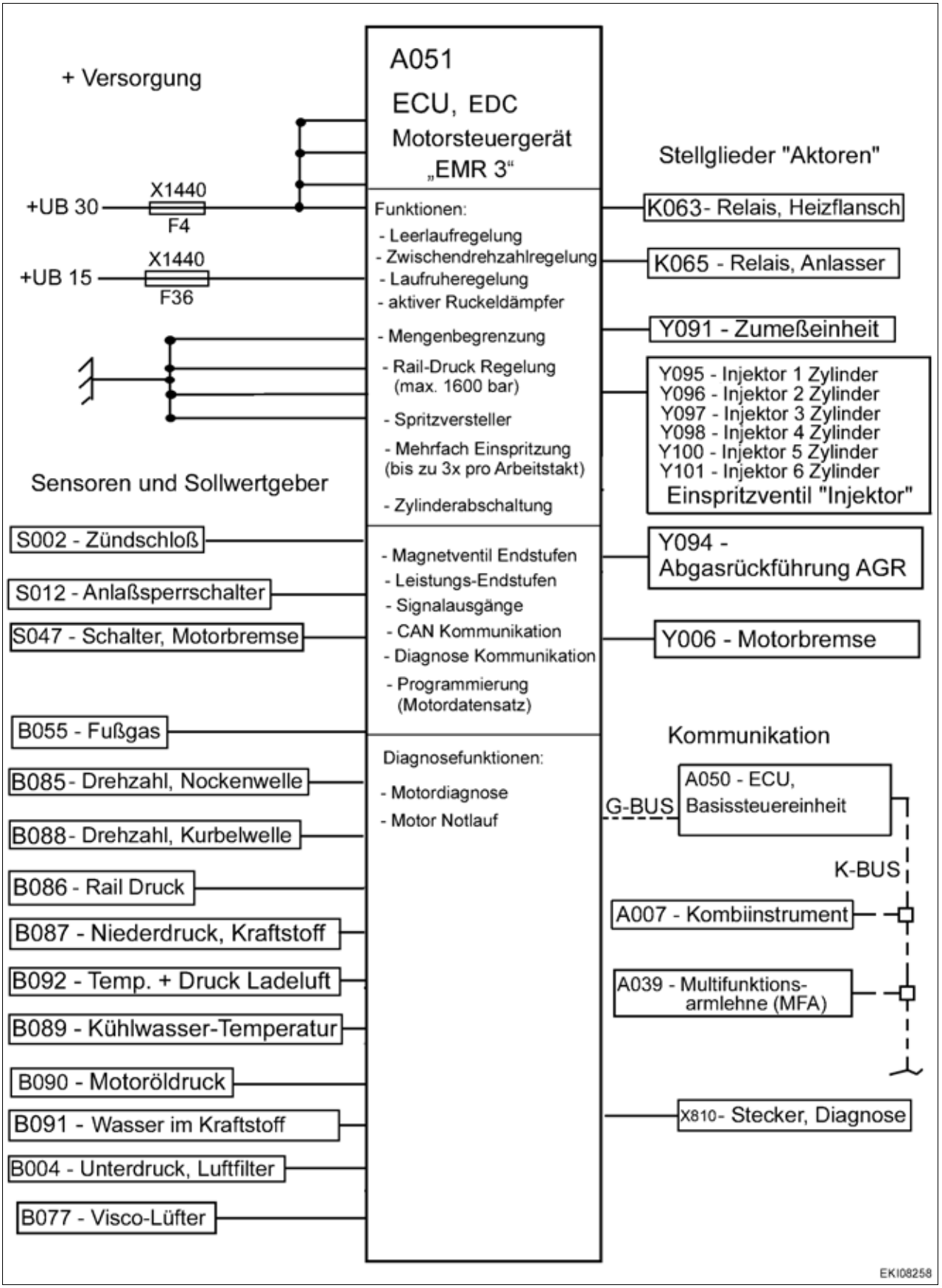
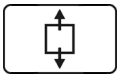


Fig. 2. I002007

A051 - ECU, engine control unit (EDC 7).



at the bulkhead, between engine and cab



Open bonnet.

NOTE: *See also:*
Chapter 9000 Reg. E – Measuring and testing the A051- ECU, EDC engine control unit



Fig. 3. I001150

Engine control

- **Engine horsepower** (speed and injection quantity)
- **All speed control** (the speed set on the foot throttle, hand throttle, memory keys or via TMS is kept constant.
- **Torque restriction** (maximum injection quantity, engine cut-off speed)
- **Boost-pressure-dependent regulator end stop "LDA-Function"** (if the boost pressure falls, the injection quantity is limited, avoiding smoke formation)
- **Altitude correction** (avoidance of smoke plumes at low air density). At high altitudes (e.g. Andes, the Himalayas) the maximum engine horsepower is restricted
- **Engine start** (release of the injection quantity, see also: **B083** - Immobiliser control)
- **Engine stop** (zero delivery, **Y091** - Dispensing unit (fuel) and Y injector "injector valve"
- **Actuation of the starter** (**M001** - starter.)
- **Actuation of the cold-start system** (**R002** - Heater flange)
- **Actuation of the exhaust gas recirculation** (**Y094** - Actuator unit, AGR (exhaust gas recirculation))
- **Actuation of the engine brake** (**Y006** - Solenoid valve, engine brake)
- **Actuation of the tractor cooling** (**B077** - Engine fan (speed sensor/magnetic clutch))

Engine monitoring

The **A051** - ECU, engine control unit (EDC 7). monitors the diesel engine.

- **Fault code output** (see also: Chapter 0000 Reg. B – Confirming, triggering, deleting fault codes)
- **Motor emergency running** (reduced output or stopping of the motor after approx. 4 minutes of emergency running)
- **Motor diagnostics with the Deutz diagnostic program (SERDIA)**

The settings (engine power, engine cut-off speed, governor behaviour, engine configuration etc.) have been saved in the engine software (engine data record and operating software).
The engine software is installed on the **A051** - ECU, engine control unit (EDC 7)..

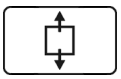
NOTE: *See also:*
Chapter 2000 Reg. A – A051 ECU, EDC engine control unit (saving engine software, installing engine software)

Motor diagnostics with the Deutz diagnostic program (SERDIA)

Connect the SERDIA adapter (level 3) to the X810 diagnostics socket



Cab, on the right mudguard



Remove cover.



Fig. 4. I003168

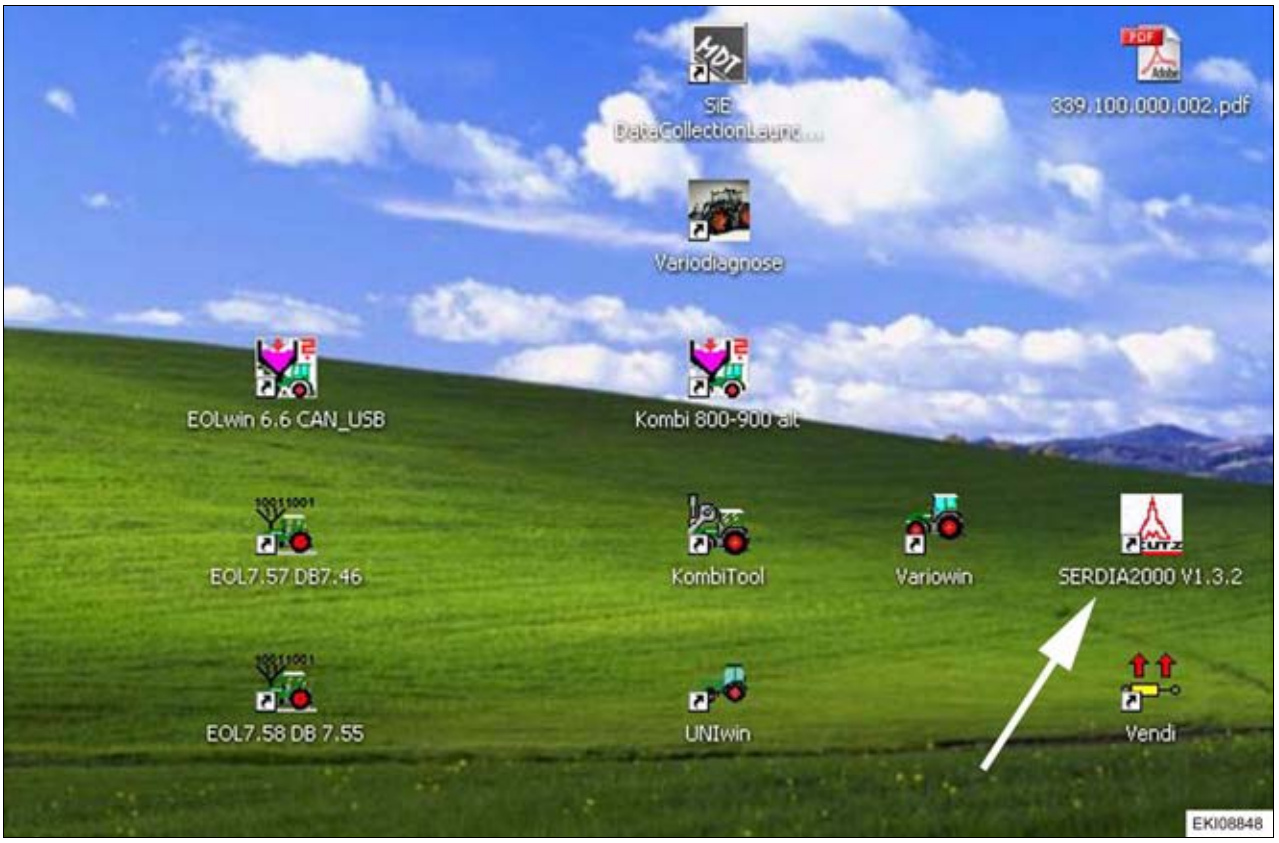


Fig. 5. I003156

Open the Serdia diagnostics program

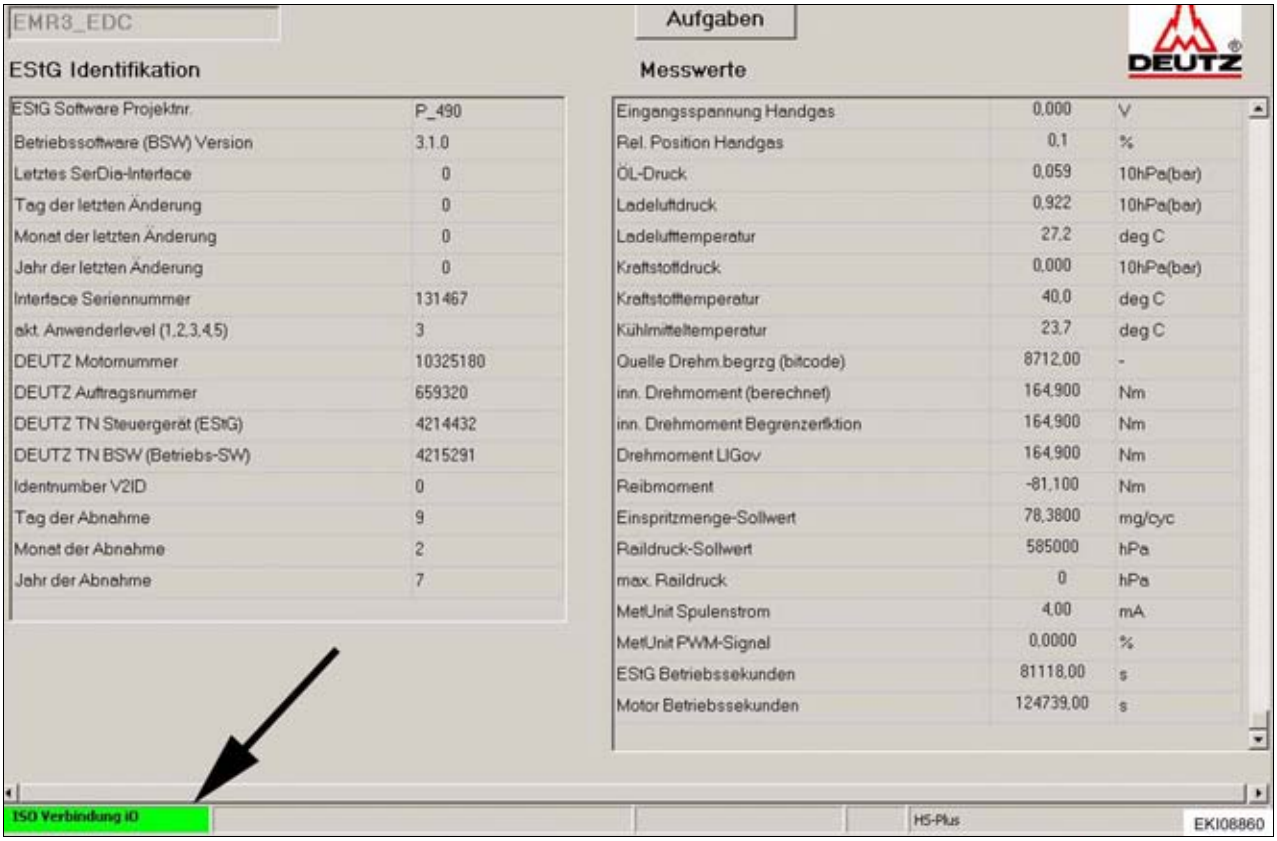


Fig. 6. I003157

Green bar = a connection has been established between **A051** - ECU, engine control unit (EDC 7). and the laptop
Red bar = no connection has been established between the **A051** - ECU, engine control unit (EDC 7)., engine control unit and the laptop

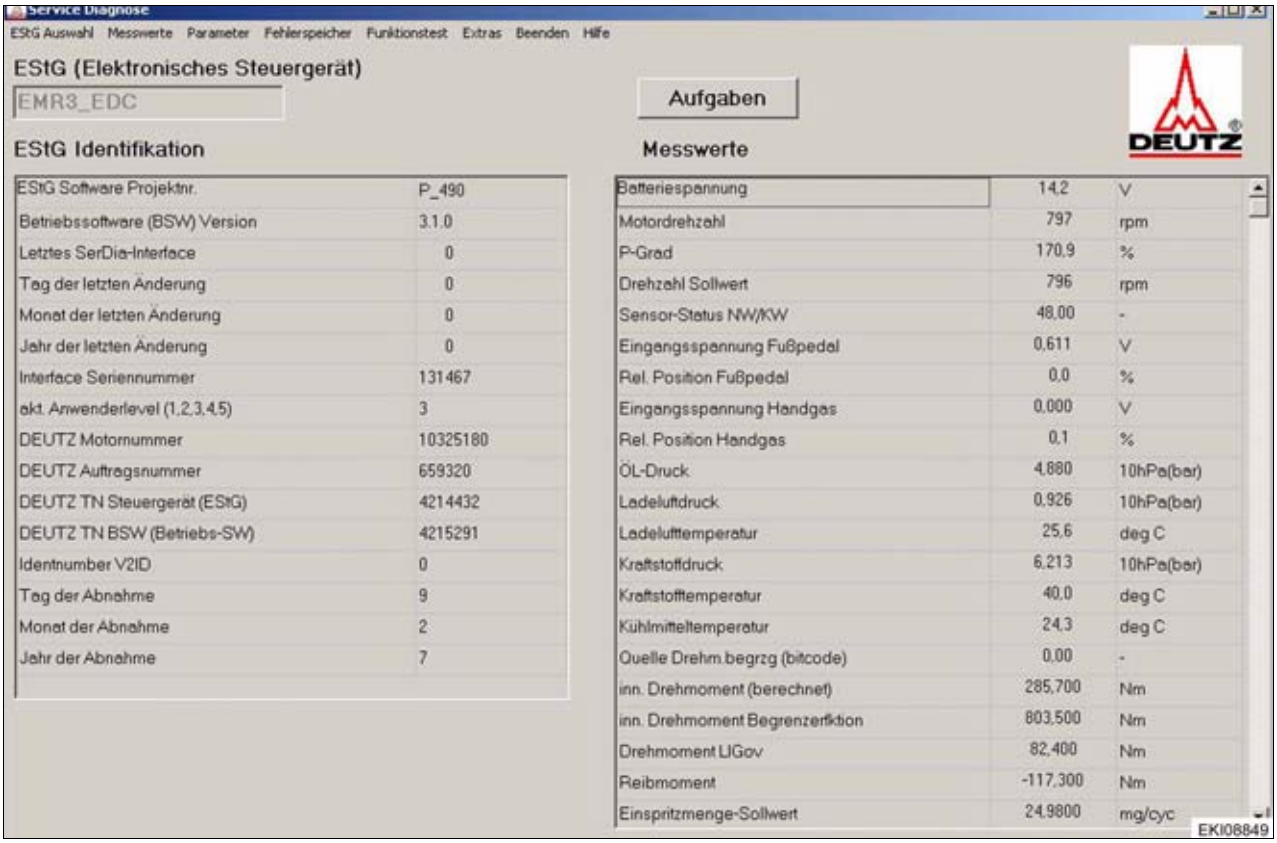


Fig. 7. I003158

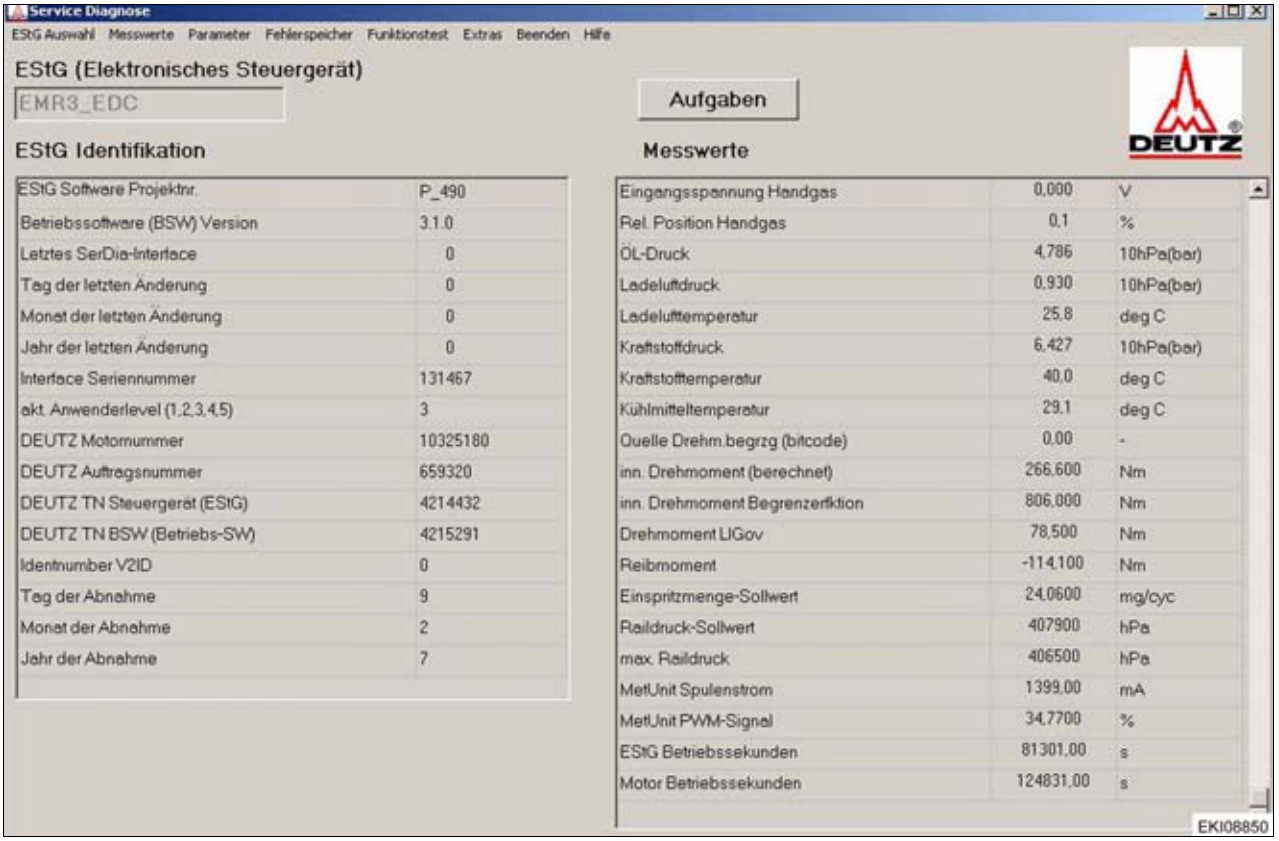


Fig. 8. I003159

Designation (Deutz - SERDIA)	Sensor (FENDT)	Note
See also: Chapter 9000 Reg. E - Measuring and testing electric/electronic components		
Battery voltage	**G001** - Battery 1	Ignition ON, engine OFF approx. 12.8 VDC = battery charged approx. 12.0 VDC = battery 1/2 charged approx. 11.5 VDC = battery flat Ignition ON, engine running Approx. 14 VDC
Motor speed (actual value)	**B088** - Crankshaft speed sensor	approx. 800 rpm (idle speed) approx. 2200 rpm (rated engine speed) approx. 2350 rpm (rated engine speed)
Speed (target value)	**A051** - ECU, engine control unit (EDC 7).	**Signal path (hand throttle, speed storage):** Speed setting on A039 multifunction armrest Control bus (K bus) A050 ECU, basic control unit Transmission bus (G bus), A051-ECU, engine control unit, the A051 ECU, engine control unit regulates the injection quantity via the Y injector. **Signal path (foot throttle) "normal operation":** Speed setting on the B055 foot throttle sensor, A050 ECU, basic control unit Transmission bus (G bus), A051-ECU, engine control unit, the A051 ECU, engine control unit regulates the injection quantity via the Y injector. **Signal path (foot throttle) "emergency mode"** **Emergency mode (e.g. interruption of the transmission bus)** B055 foot throttle sensor, A051-ECU, engine control unit, the A051 ECU, engine control unit regulates the injection quantity via the Y injector. **Signal path (TMS "Tractor Management System")** A050 ECU, basic control unit (sets the engine speed and the gear ratio), Transmission bus (G bus), A051-ECU, engine control unit, the A051 ECU, engine control unit regulates the injection quantity via the Y injector.

Designation (Deutz - SERDIA)	Sensor (FENDT)	Note
See also: Chapter 9000 Reg. E - Measuring and testing electric/electronic components		
Foot pedal input voltage Signal (speed setting)	**B055** - Sensor, foot throttle Pin 5 (+supply 5.0 VDC) Pin 6 (signal) Pin 4 (earth)	**Signal path (foot throttle) "emergency mode"** **Emergency mode (e.g. interruption of the transmission bus)** A051-ECU, engine control unit, the A051 ECU, engine control unit regulates the injection quantity via the Y injector.
Foot pedal relay position	**B055** - Sensor, foot throttle Pin 5 (+supply 5.0 VDC) Pin 6 (signal) Pin 4 (earth) Deflection of the pedal	0% = pedal not actuated 100% = pedal actuated
Oil pressure	**B090** - Sensor, oil pressure	Minimum engine oil pressure: 800 rpm = approx. 0,9 bar 1300 rpm = approx. 1,5 bar From 1900 rpm = approx. 2,0 bar If the specified pressures are not reached at the respective engine speeds, the A007 instrument panel issues an error message.
Charge air pressure	**B092** - Sensor, charge air pressure/temperature	Max. boost pressure = approx. 1.6 bar Place engine under maximum load using the dynamometric brake.
Charge air temperature	**B092** - Sensor, charge air pressure/temperature	Above approx. 110°C a warning message will be issued on the A007 instrument panel.
Fuel pressure	**B087** - Fuel low pressure sensor (Fuel pressure after the fuel filter)	Fuel low pressure: approx. 6 bar (irrespective of engine speed)
Coolant temperature	**B089** - Engine temperature sensor (Deutz)	Coolant water temperature Green range up to approx. 110 °C Red range from approx. 110 °C

Designation (Deutz - SERDIA)	Sensor (FENDT)	Note
See also: Chapter 9000 Reg. E - Measuring and testing electric/electronic components		
Rail pressure target value	**A051** - ECU, engine control unit (EDC 7).	The A051 ECU, engine control unit regulates the rail pressure in dependence on the engine load. **Regulation of the rail pressure (high pressure)** The A051 ECU, engine control unit sets the target value. The A051 ECU, engine control unit regulates the fuel quantity via the Y091 dispensing unit to the high-pressure pumps. The rail pressure (high pressure) builds in the rail. The B086 rail pressure sensor detects the high pressure (actual value) and sends the pressure to the A051 ECU, engine control unit.
Max. rail pressure (actual value)	**B086** - Rail pressure sensor	Rail pressure (high pressure): The rail pressure is set in dependence on the engine load approx. 400 bar (engine in idle; not loaded) approx. 1600 bar (engine under full load) approx. 1800 bar (DBV opens) approx. 700 bar (DBV has opened) "holding pressure in the rail"
Met unit coil current	**Y091** - Dispensing unit (fuel)	Coil resistance approx. 3.6 ohms Voltage level (engine not under load) approx. 4.3 VDC Power consumption (engine not under load) approx. 1.2 ADC +/- 15%

Check **Y094** - Actuator unit, AGR (exhaust gas recirculation) using the Deutz diagnostics program (SERDIA)

WARNING: Motor stationary!

Y094 Exhaust gas recirculation actuator motor
X1674 Separation point on Y094
A Exhaust flap open
Z Exhaust flap closed

On left side of engine.

After ignition ON, the **Y094** - Actuator unit, AGR (exhaust gas recirculation) moves to the exhaust flap stops. Within the stops, the **A051** - ECU, engine control unit (EDC 7). controls the position of the exhaust flap depending on the engine load.

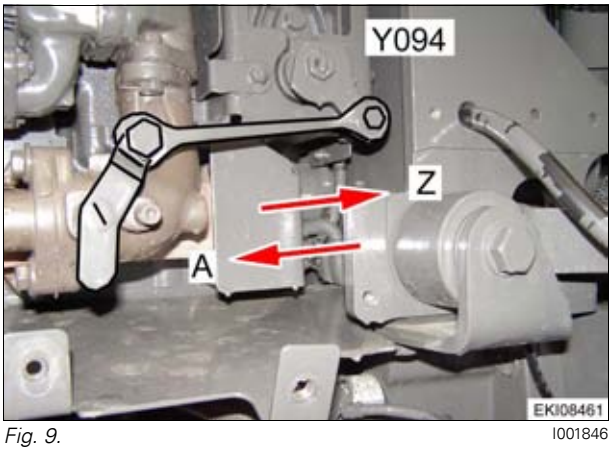


Fig. 9. I001846

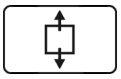
NOTE: *If the **Y094** - Actuator unit, AGR (exhaust gas recirculation) is replaced:*
*First hook the mechanical linkage onto the **Y094** - Actuator unit, AGR (exhaust gas recirculation),*
*then switch the ignition ON so that **Y094** - Actuator unit, AGR (exhaust gas recirculation) calibrates the exhaust flap stops.*
(

WARNING: If the ignition is turned on when the linkage is not attached, the calibration will be carried out incorrectly. The incorrect calibration can not be reset!

Connect the SERDIA adapter (level 3) to the X810 diagnostics socket



Cab, on the right mudguard



Remove cover.



Fig. 10. I003168

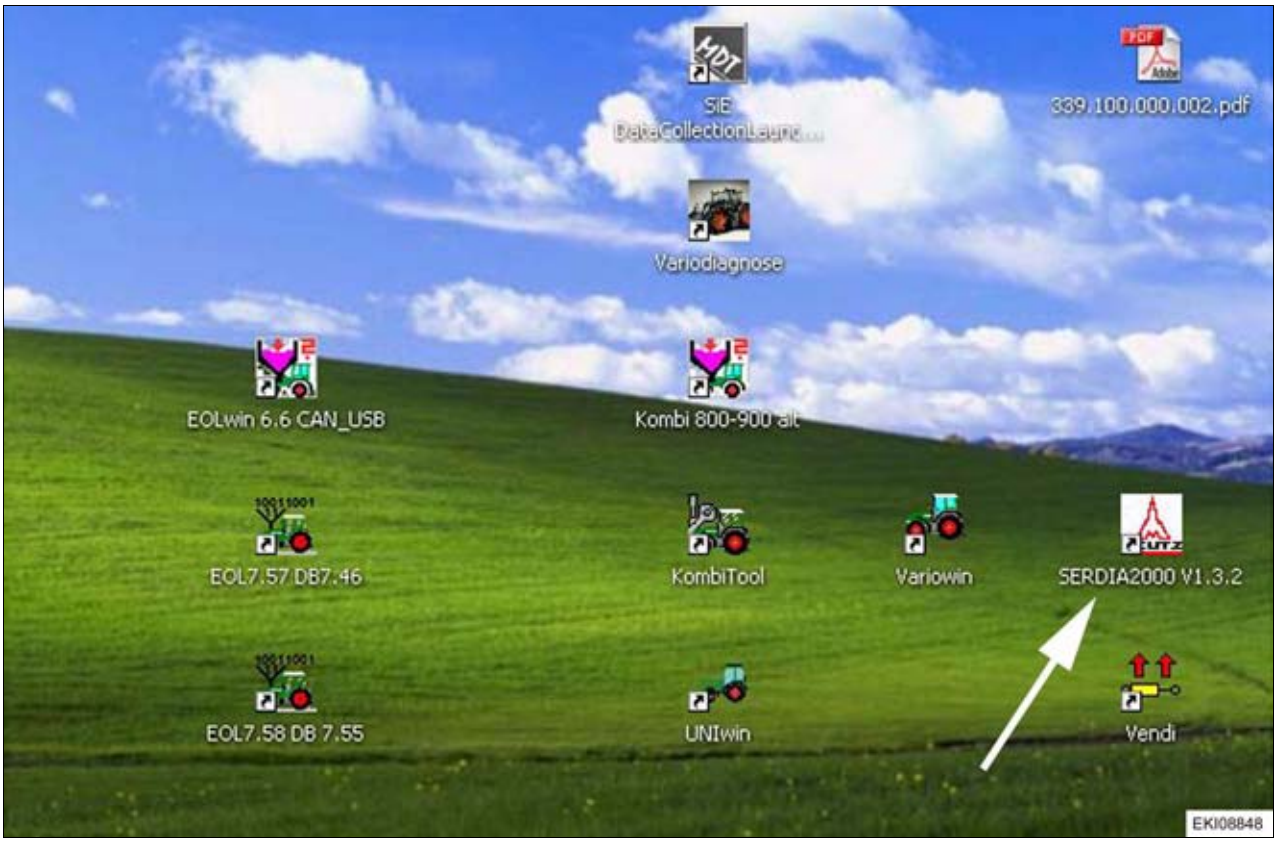


Fig. 11. I003156

Open the Serdia diagnostics program

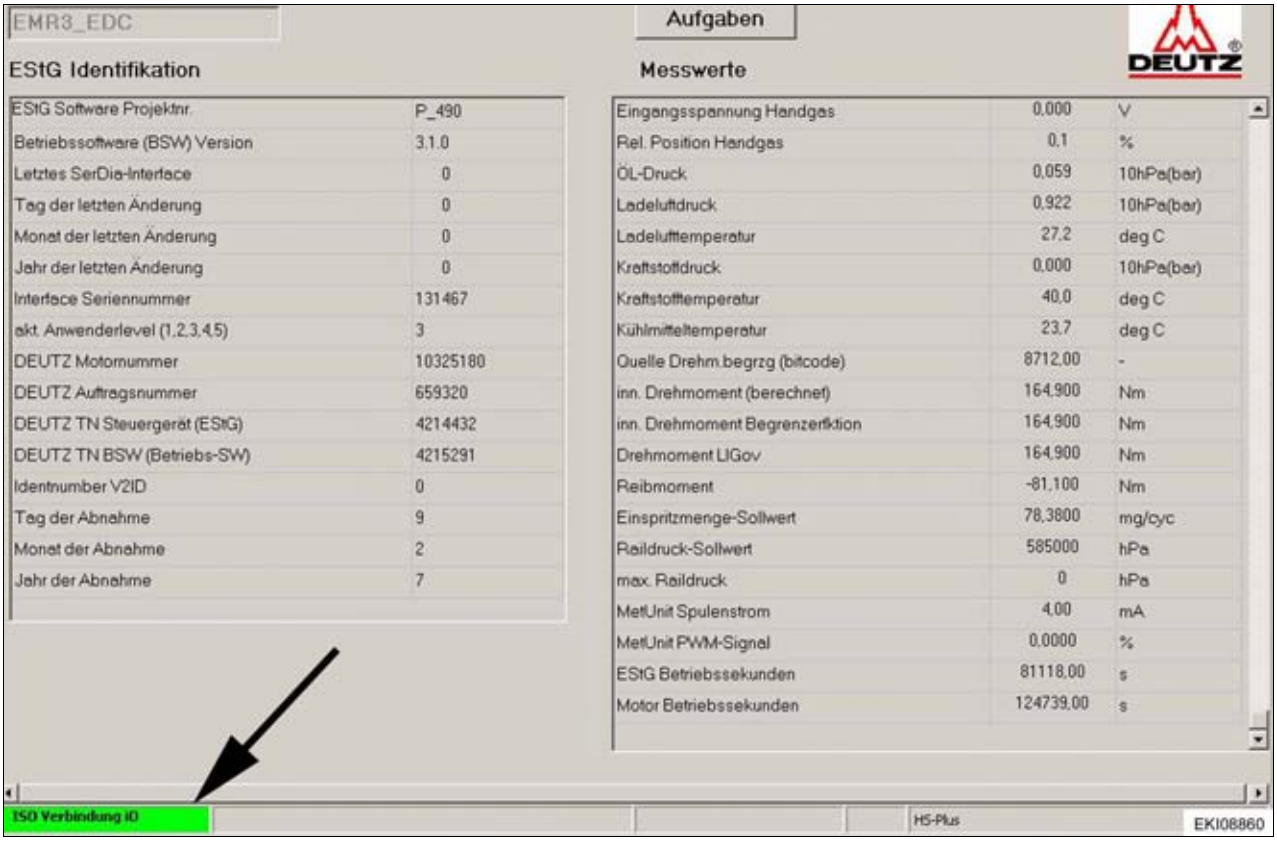


Fig. 12. I003157

Green bar = connection established between A051 ECU, engine control unit and laptop
Red bar = a connection has not been established between the A051 ECU, engine control unit and the laptop

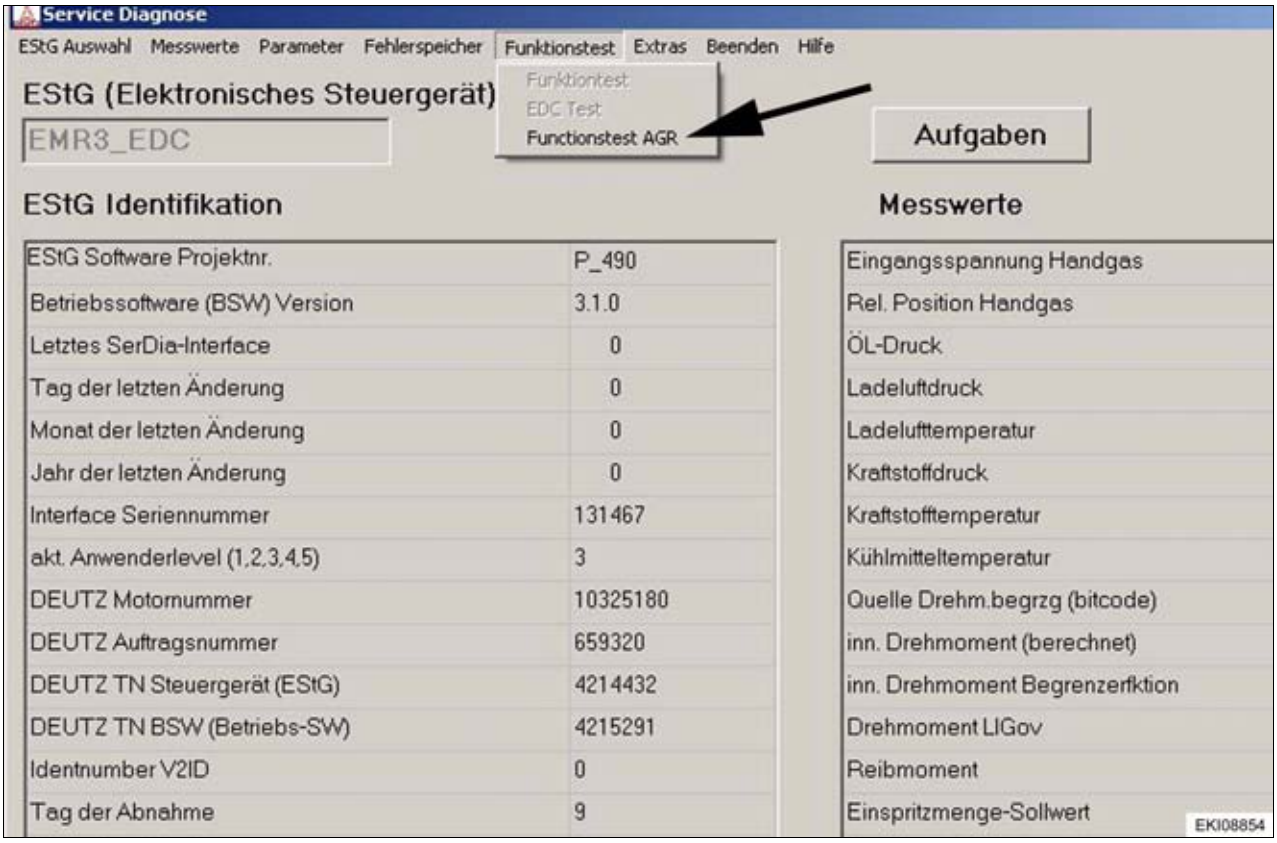


Fig. 13. I003171

Select the function test AGR (exhaust gas recirculation) in the sub-menu function test.

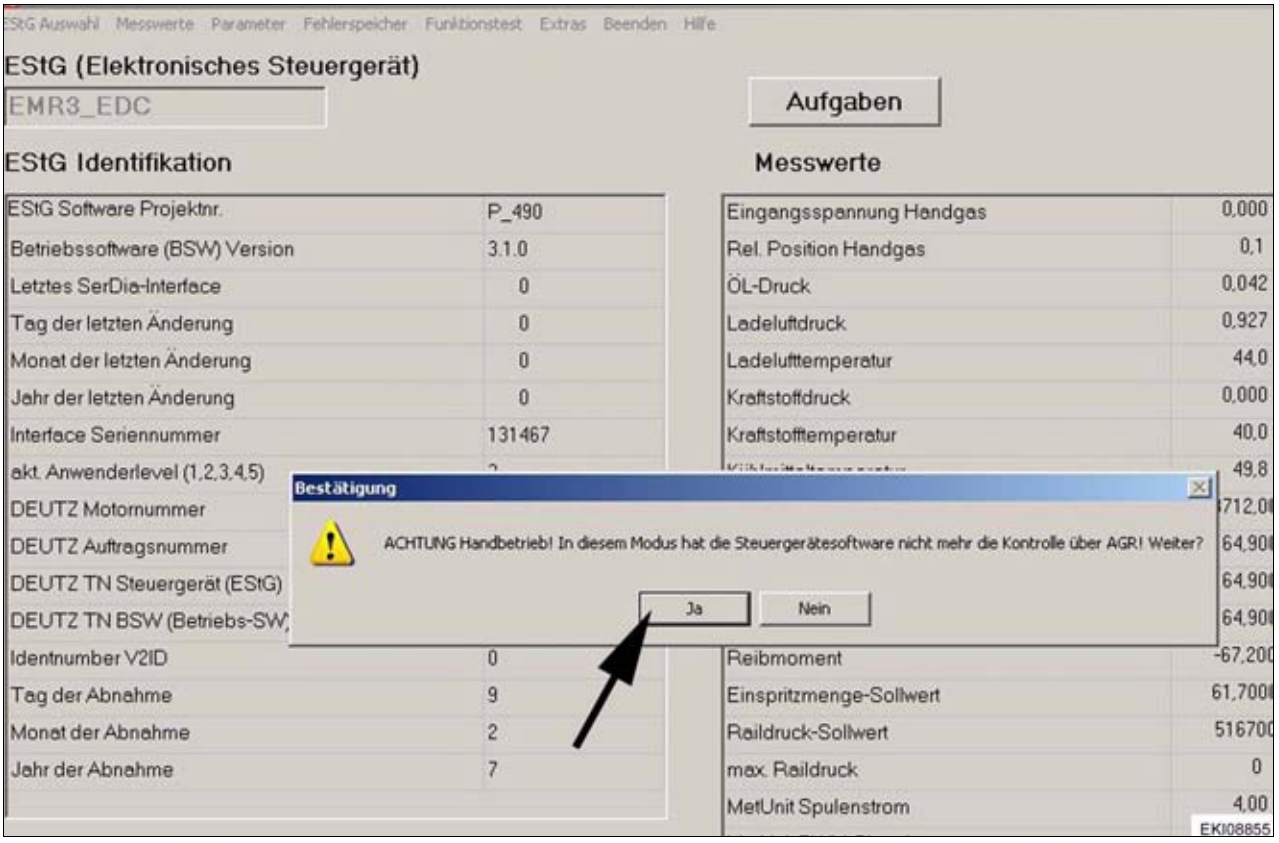


Fig. 14. I003172

Note: In this mode, the control unit software no longer has control over the AGR! Further ?
Confirm with **Yes**

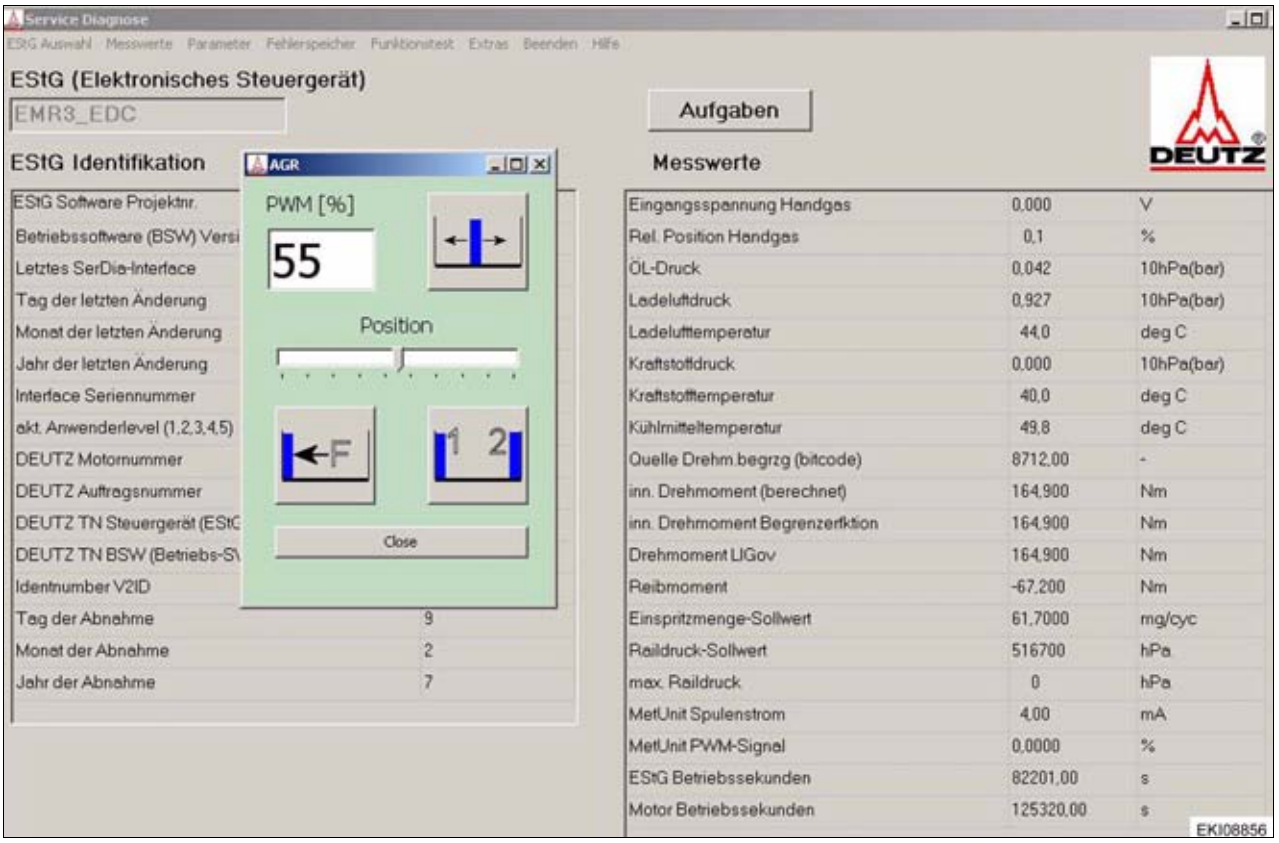


Fig. 15. I003173

The test for the
Y094 - Actuator unit, AGR (exhaust gas recirculation) is displayed.

Set the power consumption percentage (PWM signal) in the Deutz diagnostic program (Serdia).
Observe the opening angle on **Y094** - Actuator unit, AGR (exhaust gas recirculation).

Z = closed
A = open

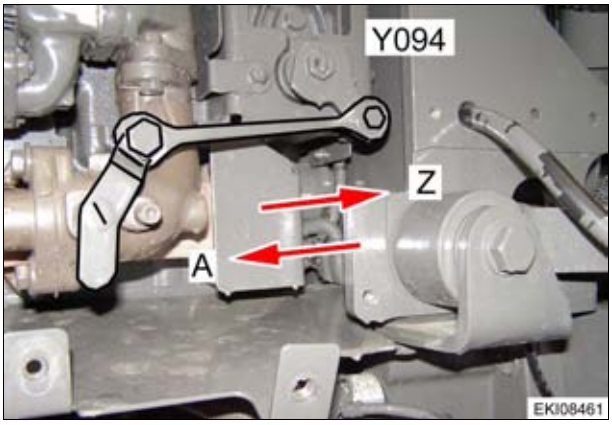


Fig. 16. I001846

Key (Deutz diagnostic program "Serdia")	Power consumption (target value) of the Y094 actuator motor	Position of the Y094 actuator motor
F	2.5 %	completely closed (Z)
1_2	97.5%	completely opened (A)
slowly adjust the position regulator	97.5% ... 5%	open ... closed

3 Checking the A038 ECU, central electrical system



Fig. 7. I007509

Adapter cable X899.980.304.203 for connection to **A038** - ECU, central electrical system

Left front end, at connector (S1)
YELLOW adapter cable connection
(Measurement: cabling to component)

Right front end, at connector (S2)
GREEN adapter cable connection
(Measurement: to electronics box)

NOTE: *Check the connector coding when connecting the adapter cable.*

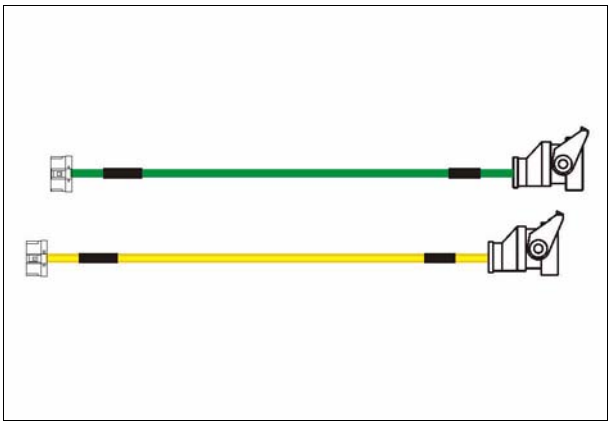


Fig. 8. I007521

IMPORTANT: *Check the adapter box pin range*

X1404 = pins 1 - 21 - connector designation **A**
X1405 = pins 1 - 21 connector designation **B**
X1406 = pins 1 - 21 - connector designation **C**
X1407 = pins 1 - 21 - connector designation **D**
X1408 = pins 1 - 21 - connector designation **E**
X1409 = pins 1 - 21 - connector designation **F** on wiring diagram
See the adapter box measuring range area outlined in **RED**.

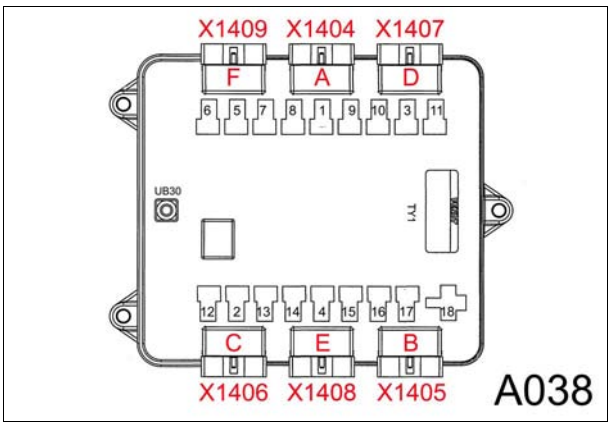


Fig. 9. I007524

NOTE: *see also §7, Page 8 "Various measurement possibilities using the adapter box (160-pin)"*

4 Checking the A039 - MFA, multifunction armrest



Fig. 10. I007527

Intermediate adapter cable (A) X899.980.304.204 and adapter cable (B) X899.980.208.205 for connection to **A039** - MFA, multifunction armrest

Left front end, at connector (S1)
YELLOW adapter cable connection
(Measurement: cabling to component)

Right front end, at connector (S2)
GREEN adapter cable connection
(Measurement: to electronics box)

NOTE: *Check the connector coding when connecting the adapter cable.*

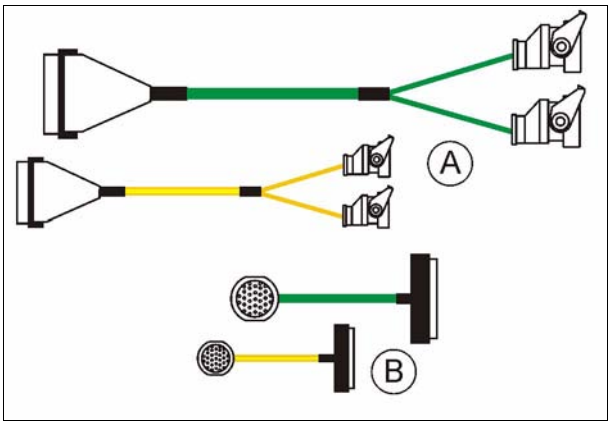


Fig. 11. I007526

IMPORTANT: *Check the adapter box pin range*

X1401 = pins 1-29

See the adapter box measuring range area outlined in **BLUE**.

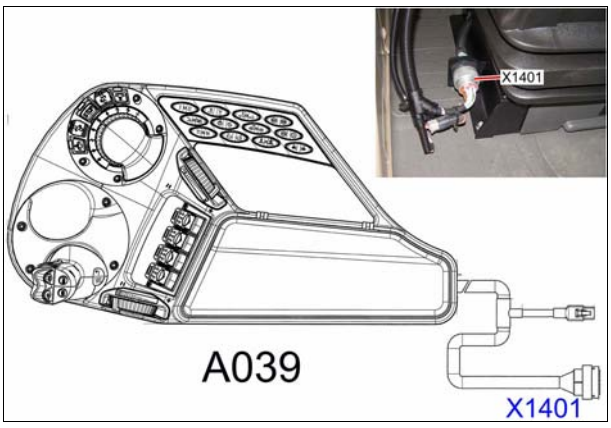


Fig. 12. I007531

NOTE: *see also §7, Page 8 "Various measurement possibilities using the adapter box (160-pin)"*

5 Checking the A050 ECU, basic control unit

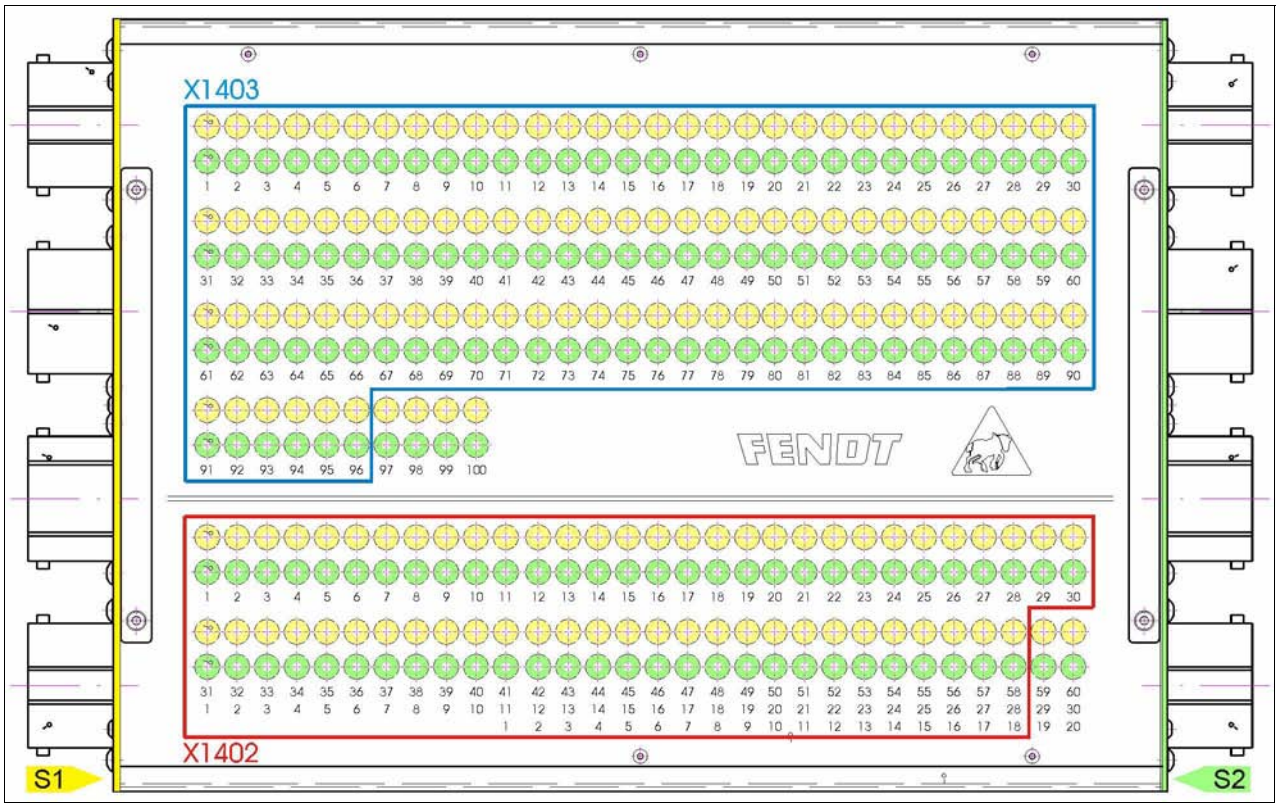


Fig. 13. I007438

Adapter cable X899.980.304.201 for connection to **A050** - ECU, basic control unit

Left front end (S1)
YELLOW adapter cable connection
(Measurement: cabling to component)

Right front end (S2)
GREEN adapter cable connection
(Measurement: to electronics box)

NOTE: *Check the connector coding when connecting the adapter cable.*

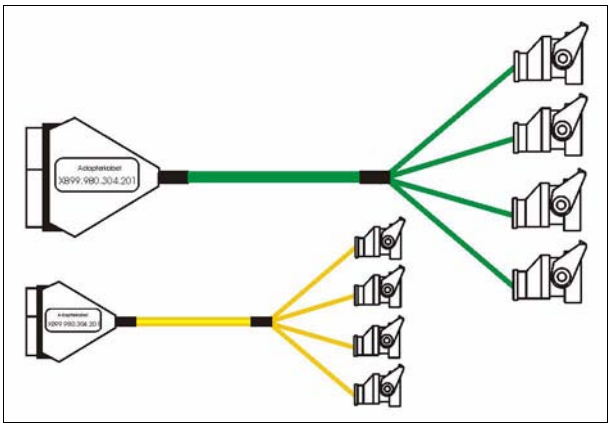


Fig. 14. I007447

IMPORTANT: *Check the adapter box pin range*

X1403 = pins 1-96
See the adapter box measuring range outlined in **BLUE** — pin designation **AXX** on the wiring diagram and in the Vario diagnostics

X1402 = pins 1-58
See the adapter box measuring range outlined in **RED** — pin designation **BXX** on the wiring diagram and in the Vario diagnostics

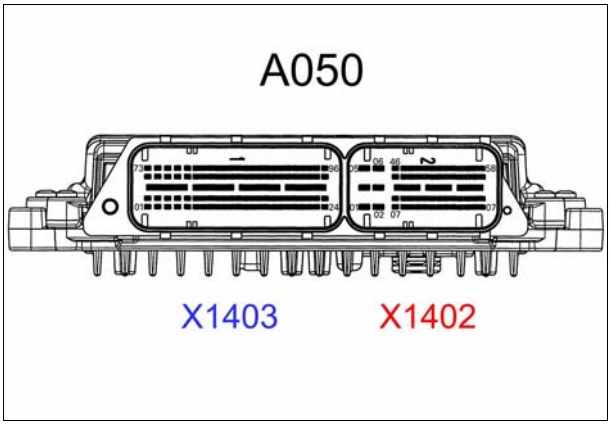


Fig. 15. I007431

NOTE: *see also §7, Page 8 "Various measurement possibilities using the adapter box (160-pin)"*

6 Checking the A051 ECU, engine control unit (EDC 7)

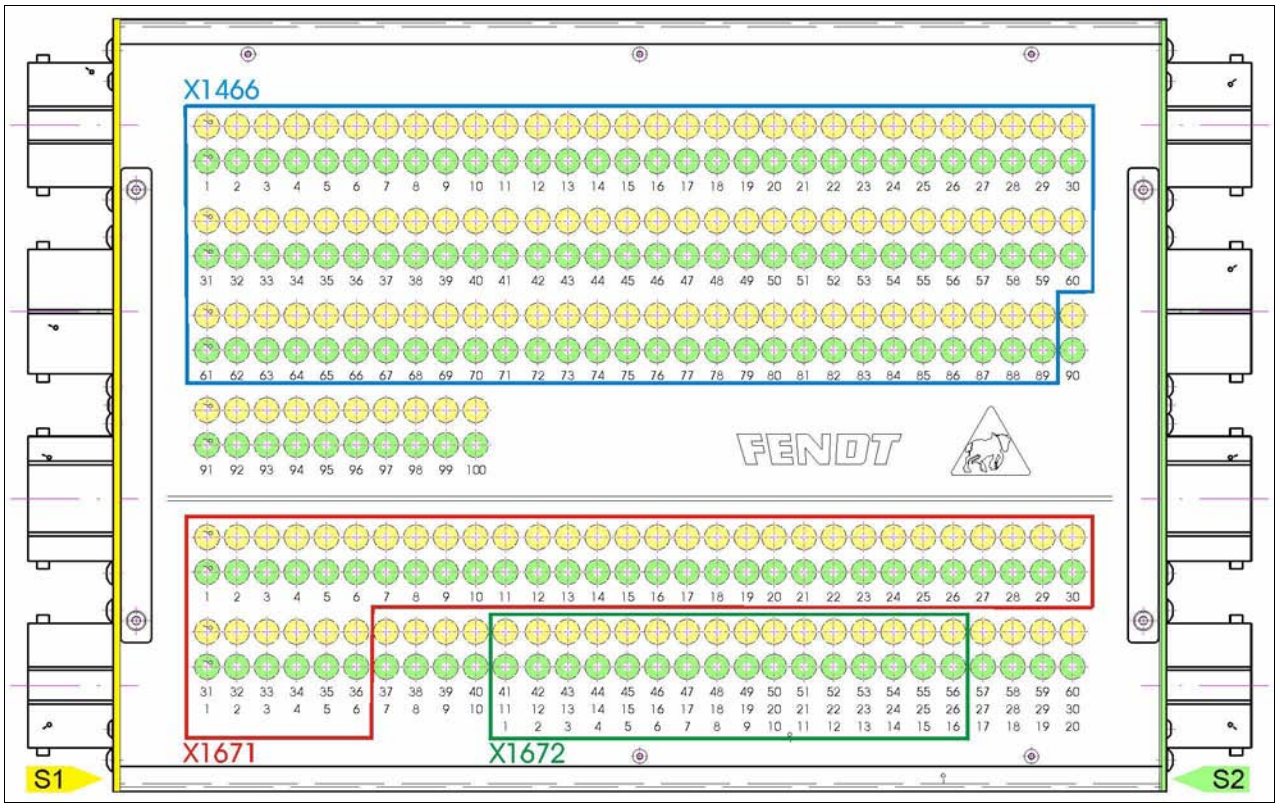


Fig. 16. I007496

Adapter cable X899.980.304.202 for connection to **A051** - ECU, engine control unit (EDC 7).

Left front end (S1)
YELLOW adapter cable connection
(Measurement: cabling to component)

Right front end (S2)
GREEN adapter cable connection
(Measurement: to electronics box)

NOTE: *Check the connector coding when connecting the adapter cable.*

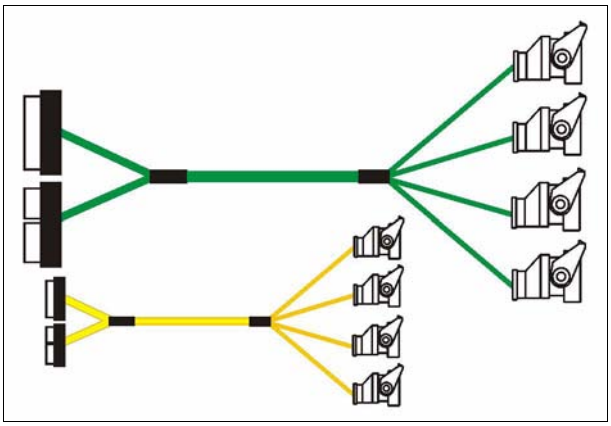


Fig. 17. I007497

IMPORTANT: *Check the adapter box pin range*

X1466 = pins 1-89
See the adapter box measuring range area outlined in **BLUE**.

X1671 = pins 1-36
See the adapter box measuring range area outlined in **RED**.

X1672 = pins 1-16
See the adapter box measuring range area outlined in **GREEN**.

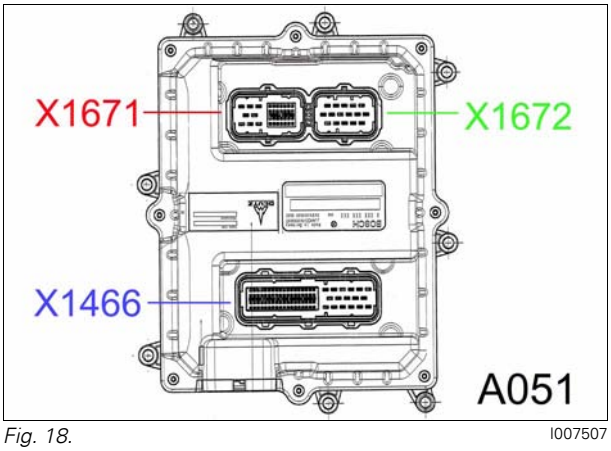


Fig. 18. I007507

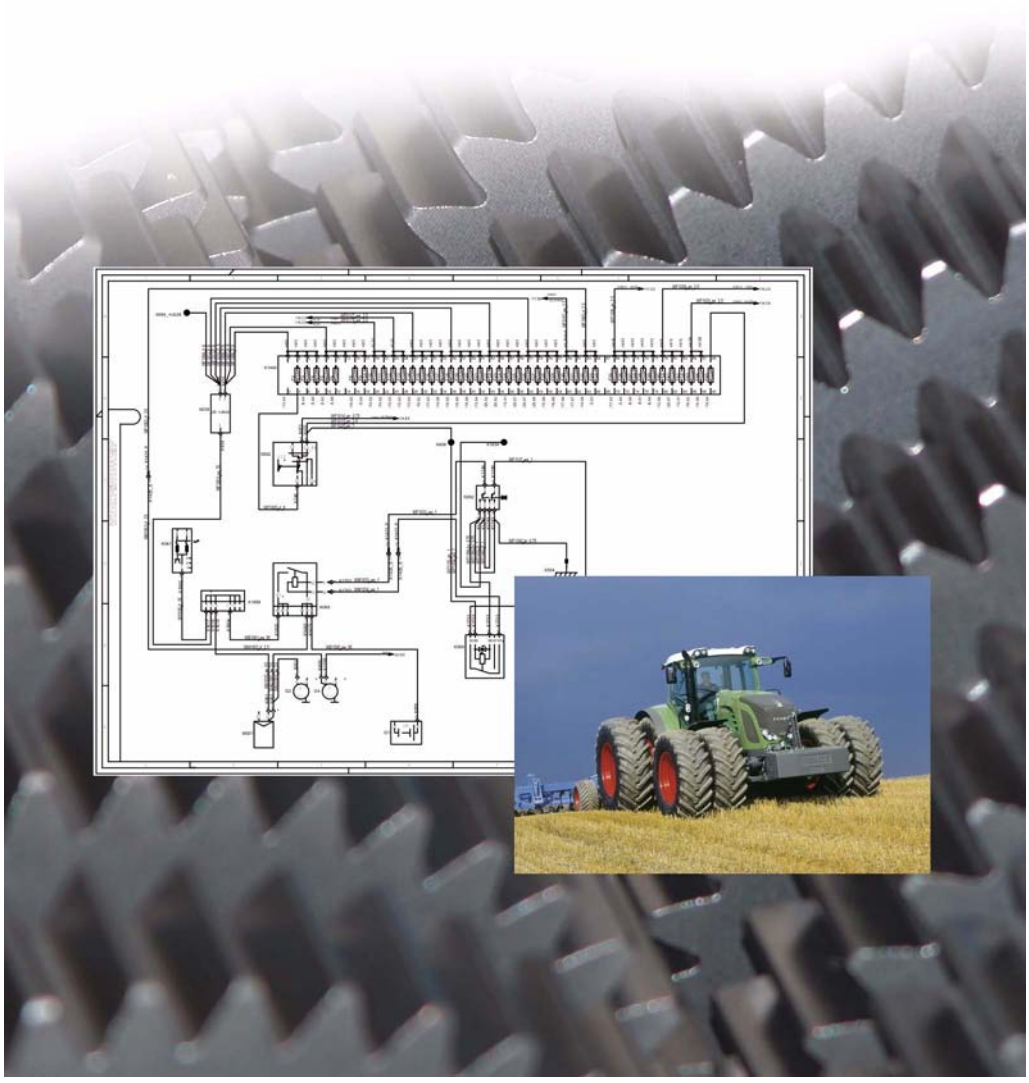
NOTE: *see also §7, Page 8 "Various measurement possibilities using the adapter box (160-pin)"*

Service Training

Electrical and hydraulic circuit diagrams

FENDT 900 Vario COM III

919 .. 1001 - 1846
922 .. 1001 - 2003
925 .. 1001 - 2053
928 .. 1001 - 2290
931 .. 1001 - 1907
934 .. 1001 - 2789



M000300

X990.005.452.012 - Englisch

FENDT Service-Training Dokumentation

Issue
05/2009

3395 G - en
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FENDT

9000 - OVERALL SYSTEM/ELECTRICAL SYSTEM

C - Documents and diagrams

Fuse assignment ... 3
Component list for circuit diagram set 931.901.000.003_b ... 7

9000 - ELECTRICAL SYSTEM/OVERALL SYSTEM

C - Documents and diagrams

Overview of instrument panel/actuator unit/keyboard/A4 terminal/multifunction armrest (MFA) - Sheet 2 ... 27
Overview of microfuse - Sheet 3 ... 29
Overview of central electrical system - Sheet 4 ... 31
Overview of EXT - Sheet 5 ... 33
Overview of EDC/Vario-Doc/air conditioning/B4 TopDock/Auto-Guide terminal - Sheet 6 ... 35
Supply - Sheet 7 ... 37
Electronics supply - Sheet 8 ... 39
Earth layout - Sheet 9 ... 41
G bus/K bus/V bus/ISO bus - Sheet 10 ... 43
Transmission control system - Sheet 11 ... 45
Hydraulics - Sheet 12 ... 47
Hydraulics/Auto-Guide - Sheet 13 ... 49
Suspension/Auto-Guide - Sheet 14 ... 51
PTO - Sheet 15 ... 53
Trailer brake - Sheet 16 ... 55
Instrument panel/ABS/driver seat - Sheet 17 ... 57
STVZO/corner light/4th hydraulic circuit - Sheet 18 ... 59
STVZO/work light/reversing system - Sheet 19 ... 61
STVZO/work light/air conditioning - Sheet 20 ... 63
Wipers/work light - Sheet 21 ... 65
Work light/wipers/emergency mode - Sheet 22 ... 67
Air conditioning/mirror/3rd hydraulic circuit - Sheet 23 ... 69
Radio/Auto-Guide terminal - Sheet 24 ... 71
ISO bus/load sockets - Sheet 25 ... 73
EDC engine control - Sheet 26 ... 75
KHD engine control - Sheet 27 ... 77
Immobiliser/Vario-Doc/Auto-Guide - Sheet 28 ... 79
Hands-free device - Sheet 29 ... 81

1005 - TRANSMISSION/TRANSMISSION CONTROL SYSTEM

C - Documents and diagrams

Transmission hydraulic system diagram - 931.100.000.002 ... 83

9600 - OVERALL SYSTEM/HYDRAULIC EQUIPMENT

C - Documents and diagrams

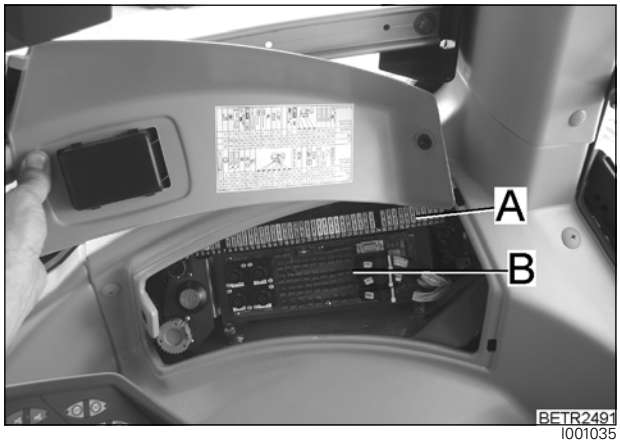
Hydraulic circuit diagram - 931.952.000.002 ... 85
Hydraulic circuit diagram (Auto-Guide) - 931.952.000.002 ... 91

OVERALL SYSTEM/ELECTRICAL SYSTEM

Fuse assignment

C

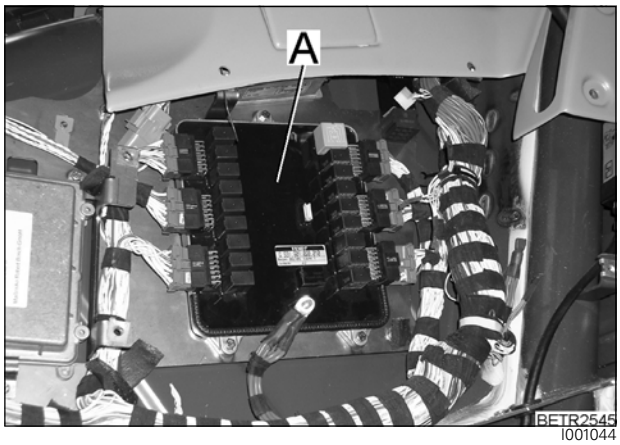
DANGER:
Use only genuine fuses! The use of over-rated fuses will destroy the electrical unit! Fire hazard!



I001035

X1440 - Fuse holder **(A)**
A013 - PCB, microfuses **(B)**

Remove panel from right side of cab



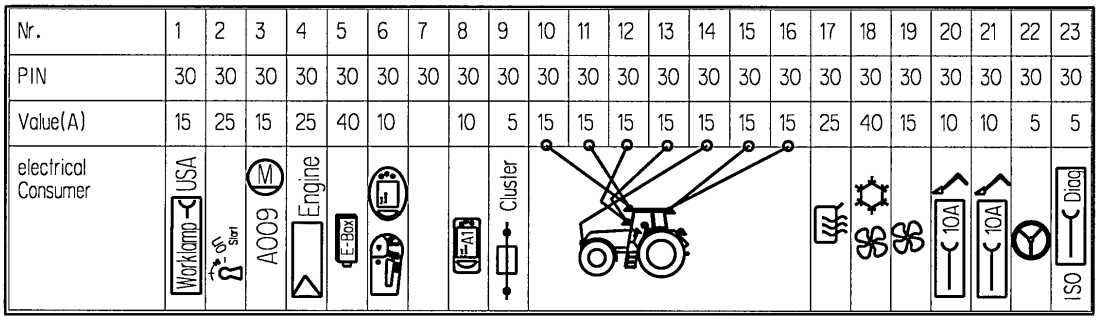
I001044

A038 - ECU, central electrical system

Remove panel from right side of cab

NOTE:
When working on the
A038 - ECU, central electrical system
Disconnect the battery

X1440 - Fuse holder (Fuse nos 1-23)



BETR2496
I001045

Fuse no.	PIN	Value (A)	Consumer
1	-	-	-
2	30	25	Ignition switch
3	30	15	Transmission control unit
4	30	25	Engine control unit
5	30	40	EXT supply (E-box)
6	30	10	Multifunction armrest supply, Terminal

Service Training

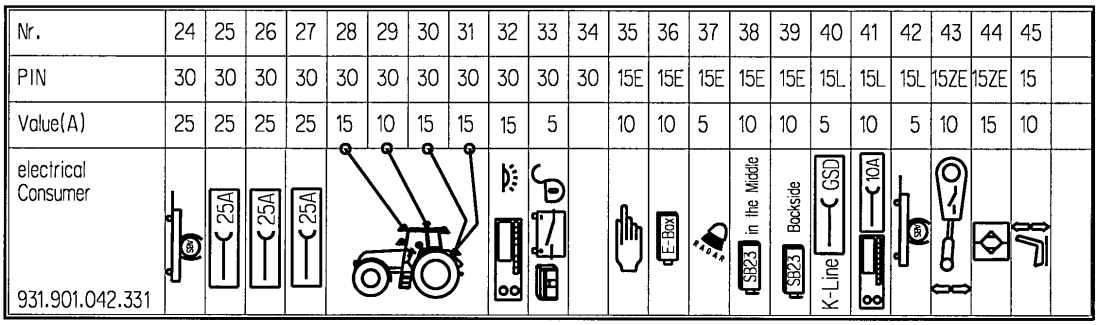
OVERALL SYSTEM/ELECTRICAL SYSTEM

Fuse assignment

C

Fuse no.	PIN	Value (A)	Consumer
7	-	-	-
8	30	10	Terminal A1
9	30	5	Microfuse board supply, electrics control panel
10	30	15	External work light, front roof
11	30	15	Internal work light, front roof
12	30	15	Work light, A pillar
13	30	15	Work light, A pillar
14	30	15	Work light, corner light
15	30	15	External work light, rear roof
16	30	15	Internal work light, rear roof
17	30	25	Heated rear windscreen
18	30	15	Air conditioning system (fan)
19	30	15	Primary fan, air conditioning system
20	30	10	3. Hydraulic circuit
21	30	10	4. Hydraulic circuit
22	30	5	Autoguide
23	30	5	ISO socket (cab)(X028) and ISO diagnostics (X1539)

X1440 - Fuse holder (Fuse nos 24-45)



BETR2497
I001110

Fuse no.	PIN	Value (A)	Consumer
24	30	25	ABS socket
25	30	25	25 A socket
26	30	25	25 A socket
27	30	25	25 A socket
28	30	15	Internal work light, front roof
29	30	10	Rotating beacons
30	30	15	Work light, rear lamp
31	30	15	Work light, rear lamp
32	30	15	Cab light, radio
33	30	5	Instrument panel supply, disconnect relay ON
34	-	-	-
35	15E	10	Transmission emergency actuation
36	15E	10	Electronics supply, Terminal 15 ON
37	15E	5	Radar sensor
38	15E	10	Electrical valves (SB23 centre connection)

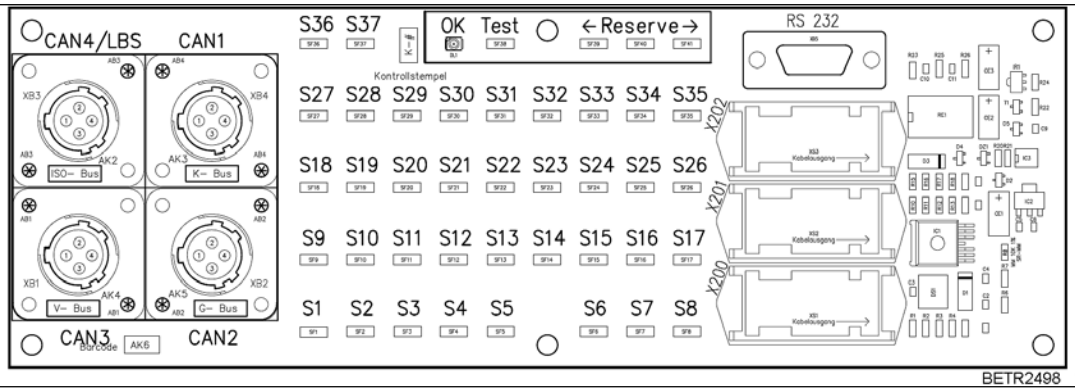
OVERALL SYSTEM/ELECTRICAL SYSTEM

Fuse assignment

C

Fuse no.	PIN	Value (A)	Consumer
39	15E	10	Electrical valves (SB23 rear connection)
40	15L	5	Implement socket (GSD), ISO socket (cab)
41	15L	10	10A socket, radio
42	15L	5	ABS socket
43	15ZE	10	Steering column switch supply
44	15ZE	10	Compressed air dryer
45	15ZSS	15	Seat, electric mirror adjustment

A013 - PCB, microfuses



I001049

Fuse no.	Connector/PIN	Component
S4	X200/14	**X015** - External control socket (Contact 58 R)
S5	X200/13	**B017** - Sensor, clutch pedal
S6	X200/12	**B016** - Sensor, travel range detection
S7	X200/11	**B014** - Sensor, collecting shaft
S8	X200/10	**B015** - Sensor, bevel pinion
S9	X201/1	**B068** - Sensor, wheel position (right)
S12	X200/7	**B040** - Sensor, front power lift position
S13	X200/6	**B032** - Sensor, draft sensing pin, left
S14	X200/5	**B031** - Sensor, draft sensing pin, right
S15	X200/4	**B030** - Sensor, rear power lift position
S16	X201/4	**B067** - Sensor, steering angle
S17	X201/5	**B066** - Sensor, wheel position (left)
S19	X201/7	**B055** - Sensor, foot throttle
S29	X202 / 7	**B081** - Steering wheel sensor (360°)
S31	X202/5	**B039** - Sensor, high-pressure 2
S32	X202/4	**B008** - Sensor, high-pressure 1
S33	X202/1	**B010** - Sensor, engine speed
S35	X202/10	**B020** - Sensor, rear PTO speed (stub shaft)
S36	X202/8	**B002** - Sensor, front PTO speed
S34	X202/11	**B021** - Sensor, rear PTO speed (clutch)

NOTE:

Unlisted fuses in A013 - PCB, microfuses not currently assigned

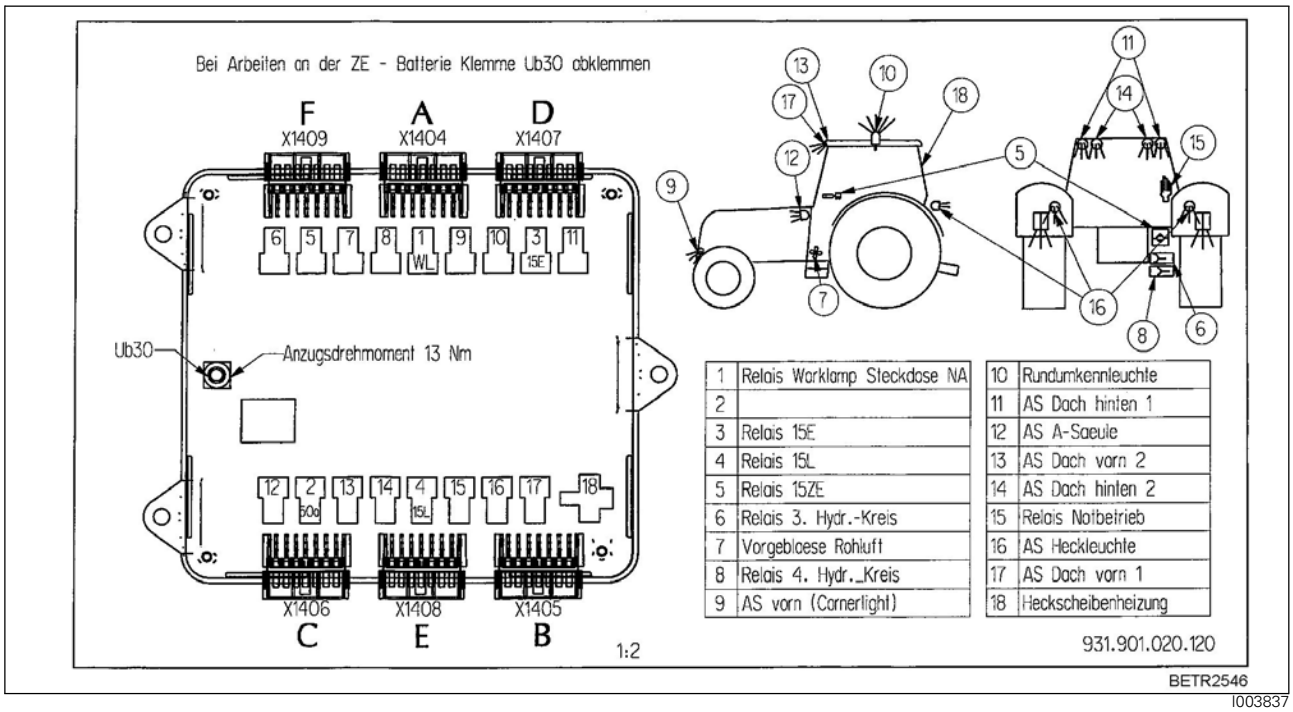
Service Training

OVERALL SYSTEM/ELECTRICAL SYSTEM

Fuse assignment

C

Central electrical system - relay assignment



I003837

Relay	Consumer	Relay	Consumer
1	Relay socket NA	10	Rotating beacon
2		11	Work light, rear roof 1 (external)
3	Relay 15E	12	Work light, A pillar
4	Relay 15L	13	Work light, front roof 2 (internal)
5	Relay 15ZE	14	Work light, rear roof 2 (internal)
6	3rd hydraulic circuit relay	15	Relay, emergency operation
7	Primary fan, intake air	16	Work light, rear lamp
8	4th hydraulic circuit relay	17	Work light, front roof 1 (external)
9	Front work light	18	Rear window heater

NOTE:

For details on testing the relay supply voltage, please refer to workshop manual chapter 9000 Reg. E Measuring and testing A038 - ECU, central electrical system

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Separation point	Circuit diagram sheet no.
A007 - Instrument panel	X100 X101	2, 8, 9, 10, 17
A009 - Actuator unit	X037	2, 10, 11
A011 - Radar sensor	X479	13
A013 - PCB, microfuses	X200 X201 X202	3, 8, 9, 10, 11, 12, 14, 15
A015 - Radio	X1315 X1316 X1768	24, 29
A036 - Control panel, dashboard right/left	X1357	2, 8, 9, 10, 17
A038 - ECU, central electrical system	X454 X455 X456 X1404 X1405 X1406 X1407 X1408 X1409	4, 7, 18, 19, 20, 21, 22, 23
A039 - MFA, multifunction armrest	X1401	2, 8, 9, 10, 11, 17, 23
A050 - ECU, basic control unit	X1402 X1403	5, 8, 9, 10, 11, 12, 14, 15, 16, 26
A051 - ECU, engine control unit (EDC 7).	X1466 X1671 X1672	6, 8, 9, 10, 26, 27
A053 - ECU, air conditioning control	X920 X921	6, 20, 23
A055 - ECU, data transfer	X1411	6, 8, 28
A058 - TopDock (Auto-Guide)	X1728	6, 28
A059 - Terminal (Auto-Guide)	X1732	6, 24
A060 - Hands-free device	X1765	29
A073 - Terminal (A4)	X1830	2, 8, 9, 10

DIN component designation	Separation point	Circuit diagram sheet no.
B002 - Sensor, front PTO speed	X151	15
B004 - Vacuum switch (air filter)	X153	26
B008 - Sensor, high-pressure 1	X157	11
B009 - Discharge temperature sensor	X158	11
B010 - Sensor, engine speed	X159	11
B013 - Sensor, hydraulic oil temperature	X162	17
B014 - Sensor, collecting shaft	X163	11
B015 - Sensor, bevel pinion	X164	11
B016 - Sensor, travel range detection	X165	11
B017 - Sensor, clutch pedal	X166	11

Service Training

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Separation point	Circuit diagram sheet no.
B019 - Sensor, compressed air supply (circuit 2)	X168	17
B020 - Sensor, rear PTO speed (stub shaft)	X169	15
B021 - Sensor, rear PTO speed (clutch)	X170	15
B030 - Sensor, rear power lift position	X178	12
B031 - Sensor, draft sensing pin, right	X179	12
B032 - Sensor, draft sensing pin, left	X180	12
B034 - Immersed tube sensor (fuel)	X182	17
B039 - Sensor, high-pressure 2	X177	11
B040 - Sensor, front power lift position	X188	12
B050 - Loudspeaker, left	X289 X290	24
B051 - Loudspeaker, right	X311 X312	24
B055 - Sensor, foot throttle	X898	26
B060 - Compressed air supply sensor (circuit 1)	X1410	17
B061 - Loudspeaker	X1620 X1621	24
B062 - Loudspeaker	X1622 X1623	24
B063 - Pressure switch, filter contamination (hydraulic circuit)	X1500	12
B066 - Sensor, wheel position (left)	X1509	14
B067 - Sensor, steering angle	X1508	14
B068 - Sensor, wheel position (right)	X1507	14
B071 - Sensor, output temperature	X1536	20
B073 - Sensor, solar (irradiation)	X1535	20
B074 - Sensor, internal temperature	X1545	20
B076 - Sensor, external temperature	X1538	20
B077 - Engine fan (speed sensor/magnetic clutch)	X1532	26
B081 - Steering wheel sensor (360°)	X1519	14
B083 - Immobiliser control	X1494	28
B084 - Sensor, hydraulic oil level	X214	17
B085 - Camshaft speed sensor	X1654	27
B086 - Rail pressure sensor	X1655	27
B087 - Fuel low pressure sensor	X1656	27
B088 - Crankshaft speed sensor	X1657	27
B089 - Engine temperature sensor (Deutz)	X1658	27
B090 - Sensor, oil pressure	X1659	27
B091 - Sensor, water in fuel	X1660	27
B092 - Sensor, charge air pressure/temperature	X1661	27
B095 - Microphone	X1766	29

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Separation point	Circuit diagram sheet no.
E003 - H4 additional headlight, right	X352	18
E004 - H4 additional headlight, left	X353	18
E009 - Licence plate lighting, right	X374 X375	19
E010 - Licence plate lighting, left	X376 X377	19
E019 - Lighting, cab	X308 X309 X310	19
E020 - Lighting (EPC)	X842 X843 X844	19
E021 - Rotating beacon, right	X346	21
E022 - Rotating beacon, left	X345	21
E023 - Rear window heater	X259 X260	19
E050 - Work lights, front left roof, internal	X798	20
E051 - Work lights, front right roof, internal	X799	20
E054 - Wide vehicle marker lights, right	X896	19
E055 - Wide vehicle marker lights, left	X897	19
E063 - Heater element, air dryer (temperature-controlled)	X1556	23
E064 - Rear direction indicator, left	X916	21
E065 - Rear direction indicator, right	X917	21
E066 - Brake and tail light left	X918	18, 19
E067 - Brake and tail light right	X919	18, 19
E070 - Work lights, front right roof, external	X1291	19
E071 - Work lights, front left roof, external	X1292	19
E074 - Work light, right (cornerlight)	X1289	18
E075 - Work light, left (cornerlight)	X1290	18
E078 - Work light, rear right mudguard (optional Xenon)	X1285	22
E079 - Work light, rear left mudguard (optional Xenon)	X1286	22
E082 - Work light, rear right external (roof)	X1561 X1562	21
E083 - Work light, rear right internal (roof)	X1570 X1571	22
E084 - Work light, rear left internal (roof)	X1572 X1573	22
E085 - Work light, rear left external (roof)	X1563 X1564	21
E086 - Side lamp, front right	X1685 X1686	19
E087 - Side lamp, front left	X1687 X1688	19
E088 - Direction direction indicator, front right	X1689 X1690	20
E089 - Direction direction indicator, front left	X1691 X1692	20

Service Training

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Separation point	Circuit diagram sheet no.
E098 - Drive headlight (main beam), right	X1603	18
E099 - Drive headlight (dipped beam), right	X1604	18
E100 - Drive headlight (main beam), left	X1605	18
E101 - Drive headlight (dipped beam), left	X1606	18
E106 - Exterior mirror (adjustment/heater), right	X868	23
E107 - Exterior mirror (adjustment/heater), left	X869	23
E108 - Work light, right A pillar (optional Xenon)	X1613	20
E109 - Work light, left A pillar (optional Xenon)	X1614	20
E116 - Work lights, Xenon front right roof, external	X1802	19
E117 - Work lights, Xenon front left roof, external	X1802	19

DIN component designation	Separation point	Circuit diagram sheet no.
G001 - Battery 1	X058 X059 X060 X066	7, 9
G002 - Alternator 1	X062 X064	7, 17
G004 - Alternator 2	X449 X450	7, 17

DIN component designation	Separation point	Circuit diagram sheet no.
H005 - Horn	X998 X999	22
H006 - Audio warning signal	X204	17
H009 - Blip signal, reversing	X1544	11

DIN component designation	Separation point	Circuit diagram sheet no.
K061 - ISO bus disconnect relay	X1592 X1593 X1594 X1595	7, 8, 25
K063 - Heater flange relay	X1663 X1664 X1665	27
K065 - Starter relay	X1648	26
K068 - Relay, battery disconnect (impulse)	X1679 X1680 X1805	7
K069 - Relay, safety function (battery disconnect)	X1753	7

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Separation point	Circuit diagram sheet no.
M001 - starter.	X057 X061	7, 26
M002 - Front wiper motor	X347	21
M003 - Wiper pump, front	X301	22
M004 - Rear wiper motor	X258	21
M005 - Wiper pump, rear	X303	22
M010 - Fuel pump	X300	22
M015 - Actuator motor, top/middle air flap	X1546	23
M016 - Servomotor, bottom air valve	X1547	23
M017 - Primary fan	X1555	23

DIN component designation	Separation point	Circuit diagram sheet no.
R002 - Heater flange	X991	27

DIN component designation	Separation point	Circuit diagram sheet no.
S002 - Switch, ignition	X072 X246	7, 26
S005 - Switch, right brake	X217	11
S006 - Switch, left brake	X218	11
S012 - Switch, starter lockout	X082	22, 26
S013 - Emergency mode button	X224	22
S017 - Filter contamination switch	X228	11
S019 - Button, rear PTO, external left	X229	15
S020 - Button, rear PTO, external right	X230	15
S021 - Button, front power lift, external raise	X231	12
S022 - Button, front power lift, external lower	X232	12
S025 - Switch, LS pump pressure monitor	X235	12
S026 - Switch, steering pump flow controller	X236	12
S027 - Button, rear power lift, right-hand external raise	X237	12
S028 - Button, rear power lift, right-hand external lower	X238	12
S029 - Button, rear power lift, left-hand external raise	X239	12
S030 - Button, rear power lift, left-hand external lower	X240	12
S032 - Switch, left door contact	X299	19
S034 - Switch, coolant level	X244	26
S035 - Switch, high-pressure/low-pressure (air conditioning system)	X341	23
S045 - Switch, reversing driver stand	X213	11
S047 - Switch, engine brake	X140	26
S067 - Button, valve actuation, external raise	X1114	12
S068 - Button, valve actuation, external lower	X1115	12
S075 - Switch, guard rail pump flow monitor	X1499	12

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Separation point	Circuit diagram sheet no.
S076 - Switch, clutch fluid	X1542 X1543	17
S079 - Switch, steering column	X1590 X1591	11, 21, 22
S080 - Switch, hand brake	X1467	11
S085 - Switch, reverse operation (RÜFA) actuation	X1650	19
S086 - Switch, brake wearing, right	X1651	16
S087 - Switch, brake wearing, left	X1652	16
S092 - Battery disconnect switch	X1749	7

DIN component designation	Separation point	Circuit diagram sheet no.
U001 - Immobiliser aerial	X1693	28
U002 - Radio aerial	X1669 X1670	24

DIN component designation	Circuit diagram sheet no.
X007 - Implement socket	17
X008 - Socket, on-board computer counter input	12
X015 - External control socket	12, 18, 23
X017 - Front socket	19
X018 - Rear socket	18, 19
X028 - ISO socket (cab)	25
X037 - Separation point on A009	10, 11
X057 - Separation point on M001	7
X058 - Battery terminal (+ UB 30)	7
X059 - Separation point on G001	9
X060 - Separation point on G001	9
X061 - Separation point on M001	7
X062 - Separation point on G002	7
X064 - Separation point on G002	17
X066 - Separation point on G001	9
X072 - Separation point on S002	7, 26
X082 - Separation point on S012	22, 26
X086 - Separation point on Y006	27
X100 [blau] - Separation point on A007	10, 17
X101 [gelb] - Separation point on A007	8, 9, 17
X140 - Separation point on S047	26
X151 - Separation point on B002	15
X153 - Separation point on B004	26
X157 - Separation point on B008	11
X158 - Separation point on B009	11
X159 - Separation point on B010	11
X162 - Separation point on B013	17

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Circuit diagram sheet no.
X163 - Separation point on B014	11
X164 - Separation point on B015	11
X165 - Separation point on B016	11
X166 - Separation point on B017	11
X168 - Separation point on B019	17
X169 - Separation point on B020	15
X170 - Separation point on B021	15
X177 - Separation point on B039	11
X178 - Separation point on B030	12
X179 - Separation point on B031	12
X180 - Separation point on B032	12
X182 - Separation point on B034	17
X188 - Separation point on B040	12
X200 - Separation point on A013	8, 10, 11, 12
X201 - Separation point on A013	8, 9, 10, 14
X202 - Separation point on A013	10, 11, 14, 15
X204 - Separation point on H006	17
X213 - Separation point on S045	11
X214 - Separation point on B084	17
X217 - Separation point on S005	11
X218 - Separation point on S006	11
X224 - Separation point on S013	22
X228 - Separation point on S017	11
X229 - Separation point on S019	15
X230 - Separation point on S020	15
X231 - Separation point on S021	12
X232 - Separation point on S022	12
X235 - Separation point on S025	12
X236 - Separation point on S026	12
X237 - Separation point on S027	12
X238 - Separation point on S028	12
X239 - Separation point on S029	12
X240 - Separation point on S030	12
X244 - Separation point on S034	26
X246 - Separation point on S002	7
X254 - 10 amp socket	25
X255 - 25 A socket (+ UB 30)	25
X256 - 25 amp socket (earth)	25
X258 - Separation point on M004	21
X259 - Separation point on E023	19
X260 - Separation point on E023	19
X289 - Separation point on B051	24
X290 - Separation point on B051	24
X299 - Separation point on S032	19
X300 - Separation point on M010	22
X301 - Separation point on M003	22
X303 - Separation point on M005	22

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Circuit diagram sheet no.
X308 - Separation point on E019	19
X309 - Separation point on E019	19
X310 - Separation point on E019	19
X311 - Separation point on B050	24
X312 - Separation point on B050	24
X315 - Separation point on Y002	11
X316 - Separation point on Y003	11
X317 - Separation point on Y004	22
X318 - Separation point on Y005	11
X319 - Separation point on Y008	15
X320 - Separation point on Y009	11
X321 - Separation point on Y010	11
X322 - Separation point on Y011	15
X323 - Separation point on Y012	12
X332 - Separation point on Y021	12
X333 - Separation point on Y022	12
X336 - Separation point on Y032	12
X341 - Separation point on S035	23
X342 - Separation point on Y024	23
X345 - Separation point on E022	21
X346 - Separation point on E021	21
X347 - Separation point on M002	21
X352 - Separation point on E003	18
X353 - Separation point on E004	18
X360 - Separation point on Y026	15
X361 - Separation point on Y027	15
X374 - Separation point on E009	19
X375 - Separation point on E009	19
X376 - Separation point on E010	19
X377 - Separation point on E010	19
X400 - Rear ISO implement socket	25
X449 - Separation point on G004	17
X450 - Separation point on G004	7
X454 - Separation point on A038	7
X455 - Separation point on A038	7
X456 - Separation point on A038	7
X479 - Separation point on A011	13
X497 - Separation point, ISO preparation	25
X510 - Earth pin, engine left	9, 12, 13
X511 - Earth pin, engine	8, 9, 14, 15
X512 - Earth pin, engine	9
X513 - Earth pin, engine	9, 13, 19, 22
X520 - Earth pin, oil sump right	9, 18
X521 - Earth pin, engine	9
X532 - Earth pin, cab body	9, 18, 19, 20, 21
X533 - Earth pin, cab body	9, 12, 17, 19, 24, 25
X534 - Earth pin, cab body	9, 19, 21, 22, 25

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Circuit diagram sheet no.
X550 - Earth pin, operator platform right	9
X551 - Earth pin, operator platform right	9, 17, 19, 22
X552 - Earth pin, operator platform	9, 20, 21, 23
X553 - Earth pin, operator platform	9, 24, 25, 26
X554 - Earth pin, operator platform	7, 8, 9, 11, 19, 25, 28
X558 - Earth pin, transmission	9, 17
X559 - Earth pin, transmission	9, 25
X570 - Earth pin, transmission	9, 12, 15, 19, 22
X571 - Earth pin, transmission	9, 11, 13
X572 - Earth pin, transmission	9, 12, 14, 18, 23
X573 - Earth pin, transmission	9
X574 - Earth pin, transmission	9, 19, 21
X596 - Connector, earth (X1048 socket, ABS)	17
X598 - Connector, K bus_High	10, 18
X599 - Connector, K bus_Low	10, 18
X608 - Connector, + UB 15	7, 21, 22
X619 - Connector, electronics earth	9
X620 - Connector, sensor system earth	9, 12, 14
X621 - Connector, sensor system earth	9, 11
X627 - Connector, electronics earth	9, 11, 12
X629 - Connector, + UB 30	8
X631 - Connector, rear PTO LED ON	15
X635 - Connector, sensor system earth (instrument panel)	17
X643 - Connector, instrument panel earth	9
X650 - Connector, headlight 56b (dipped beam)	18
X651 - Connector, headlight 56a (main beam)	18
X657 - Connector, auxiliary lighting 56a (main beam)	18
X658 - Connector, auxiliary lighting 56b (dipped beam)	18
X659 - Connector, work light (cornerlight)	18
X660 - Connector, sensor system earth	9, 11, 26
X661 - Connector, electronics earth	9, 18, 19
X668 - Connector, sensor system earth	9, 12
X669 - Connector, sensor system earth	9, 14, 15
X671 - Connector, sensor system earth	9, 11, 12
X672 - Connector, sensor system earth	9, 11
X673 - Connector, sensor system earth	9, 11, 12
X674 - Connector, sensor system earth	9, 15, 16
X678 - Connector, sensor system earth	17
X684 - Connector, ISO socket earth	25
X692 - Connector, +UB 30 (A051)	8
X694 - Connector, +UB 30 (A038)	7, 19, 20, 21, 22, 23
X698 - Connector, sensor system earth	17
X707 - Connector, ISO bus_Low	10
X708 - Connector, ISO bus_High	10
X711 - Connector, V bus_High	10, 13
X712 - Connector, V bus_Low	10, 13
X714 - Connector, G bus_Low	10

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Circuit diagram sheet no.
X715 - Connector, G bus_High	10
X718 - Connector, K bus_Low	10
X719 - Connector, K bus_High	10
X725 - Connector, K bus_High	10, 25
X726 - Connector, K bus_Low	10, 25
X727 - Connector, ISO bus_High	25
X728 - Connector, ISO bus_Low	25
X738 - Connector, serial RXD	10, 24
X739 - Connector, serial TXD	10, 24
X760 - Connector, earth	19, 21, 22
X761 - Connector, earth	19, 21, 22
X762 - Connector, + UB 15	21
X766 - Connector, air conditioning earth	18, 20
X769 - Connector, signal (E021/E022)	21
X789 - Connector, signal (E083/E084)	22
X793 - Connector, signal (E082/E085)	21
X794 - Connector, earth (A051)	9
X796 - Cable coupling (M002)	20, 21, 23
X797 - Connector, air conditioning coupler signal	23
X798 - Separation point on E050	20
X799 - Separation point on E051	20
X810 - EDC diagnostics socket (engine control unit)	26
X814 - Connector, +UB30 (X1048 socket, ABS)	17
X834 - Separation point on E070	19
X835 - Separation point on E071	19
X836 - Separation point on E0116 / E117	19
X837 - Separation point on X1048 socket, ABS	17
X838 - Separation point on X015 socket, external control	12, 18, 23
X842 - Separation point on E020	19
X843 - Separation point on E020	19
X844 - Separation point on E020	19
X845 - 25 A socket (+ UB 30)	25
X846 - 25 amp socket (earth)	25
X847 - 25 A socket (+ UB 30)	25
X848 - 25 amp socket (earth)	25
X868 - Separation point on E106	23
X869 - Separation point on E107	23
X896 - Separation point on E054	19
X897 - Separation point on E055	19
X898 - Separation point on B055	26
X899 - Connector, earth	18
X916 - Separation point on E064	21
X917 - Separation point on E065	21
X918 - Separation point on E066	18, 19
X919 - Separation point on E067	18, 19
X920 - Separation point on A053	20, 23
X921 - Separation point on A053	23

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Circuit diagram sheet no.
X991 - Separation point on R002	27
X998 - Separation point on H005	22
X999 - Separation point on H005	22
X1041 - Separation point on Y053	11
X1048 - Socket ABS	17
X1114 - Separation point on S067	12
X1115 - Separation point on S068	12
X1153 - Separation point on Y088	16
X1285 - Separation point on E078	22
X1286 - Separation point on E079	22
X1289 - Separation point on E074	18
X1290 - Separation point on E075	18
X1291 - Separation point on E070	19
X1292 - Separation point on E071	19
X1315 - Separation point on radio (compact plug)	24
X1316 - Separation point on radio (compact plug)	24
X1343 - Connector, G bus_High	10, 28
X1344 - Connector, G bus_Low	10, 28
X1357 [weiß] - Separation point on A036	8, 9, 10, 17
X1401 - Separation point on A039	8, 9, 10, 11, 17, 23,
X1402 [B] - Separation point on A050	8, 10, 11, 12, 14, 15, 16, 26
X1403 [A] - Separation point on A050	8, 9, 10, 11, 12, 14, 15, 16,
X1404 [A] - Separation point on A038	18
X1405 [B] - Separation point on A038	19
X1406 [C] - Separation point on A038	20
X1407 [D] - Separation point on A038	21
X1408 [E] - Separation point on A038	22
X1409 [F] - Separation point on A038	23
X1410 - Separation point on B060	17
X1411 - Separation point on A055	8, 28
X1417 - Cable coupling, operator platform/cab	10, 18, 19, 25
X1418 - Cable coupling, operator platform/transmission	11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23
X1419 - Cab cable coupling	12, 17, 23, 25
X1420 - Cab cable coupling	19, 20, 21, 22, 24, 25
X1421 - Cable coupling, operator platform	12, 15, 18, 19, 21, 22
X1422 - Cable coupling, mudguard	12, 15, 18, 19, 21, 22
X1423 - Cable coupling, operator platform/transmission	9, 10, 11, 12, 13, 15, 17, 18, 23
X1424 - Cable coupling, operator platform	10, 13, 14, 15, 16, 17, 19, 20, 25, 26
X1425 - Cable coupling, operator platform	7, 8, 9, 11, 12, 18, 22, 23
X1436 - Cable coupling, tractor bonnet (drive light, cornerlight)	18
X1440 - Fuse holder	7, 8, 11, 13, 17, 18, 19, 20, 21, 22, 23, 24, 25
X1459 - Separation point on Y055	12
X1461 - Connector, sensor system earth (left mudguard)	12, 15

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Circuit diagram sheet no.
X1462 - Connector, sensor system earth (right mudguard)	12, 15
X1463 - Connector, G bus_High	10
X1464 - Connector, G bus_Low	10
X1466 - Separation point on A051	8, 9, 10, 26
X1467 - Separation point on S080	11
X1470 - Separation point, control valve	13
X1471 - Separation point, control valve	13
X1472 - Separation point, control valve	13
X1473 - Separation point, control valve	13
X1474 - Separation point, control valve	13
X1477 - Separation point, control valve	13
X1478 - Separation point, control valve	13
X1479 - Separation point, control valve	13
X1480 - Separation point, control valve	13
X1481 - Separation point, control valve	13
X1482 - Separation point, control valve	13
X1483 - Separation point, control valve	13
X1484 - Separation point, control valve	13
X1485 - Separation point, control valve	13
X1486 - Separation point, control valve	13
X1487 - Separation point, control valve	13
X1488 - Separation point, control valve	13
X1489 - Separation point, control valve	13
X1490 - Separation point, control valve	13
X1494 - Separation point on B083	28
X1497 - Separation point on Y060	12
X1498 - Separation point on Y061	12
X1499 - Separation point on S075	12
X1500 - Separation point on B063	12
X1501 - Separation point on Y062	12
X1502 - Separation point on Y084	12
X1503 - Separation point on Y063	14
X1504 - Separation point on Y064	14
X1507 - Separation point on B068	14
X1508 - Separation point on B067	14
X1509 - Separation point on B066	14
X1510 - Separation point on Y065	14
X1512 - Separation point on Y067	14
X1513 - Separation point on Y085	14
X1514 - Separation point on Y086	14
X1517 - Separation point on Y082	14
X1518 - Separation point on Y083	14
X1519 - Separation point on B081	14
X1525 - Connector, sensor + UB (from instrument panel)	17
X1528 - Connector, sensor system supply	26
X1532 - Separation point on B077	26
X1535 - Separation point on B073	20

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Circuit diagram sheet no.
X1536 - Separation point on B071	20
X1538 - Separation point on B076	20
X1539 - ISO bus diagnostics socket	25
X1542 - Separation point on S076	17
X1543 - Separation point on S076	17
X1544 - Separation point on H009	11
X1545 - Separation point on B074	20
X1546 - Separation point on M015	23
X1547 - Separation point on M016	23
X1555 - Separation point on M017	23
X1556 - Separation point on E063	23
X1561 - Separation point on E082	21
X1562 - Separation point on E082	21
X1563 - Separation point on E085	21
X1564 - Separation point on E085	21
X1565 - Connector, position light	19
X1570 - Separation point on E083	22
X1571 - Separation point on E083	22
X1572 - Separation point on E084	22
X1573 - Separation point on E084	22
X1578 - Connector, + UB 15	8, 18, 24
X1586 - V bus cable coupling (Auto-Guide)	13
X1587 - Cable coupling, Y087	13
X1588 - Separation point on Y087	13
X1589 - Separation point on Y087	13
X1590 - Separation point on S079	11, 21
X1591 - Separation point on S079	21, 22
X1592 - Separation point on K061	8
X1593 - Separation point on K061	7
X1594 - Separation point on K061	25
X1595 - Separation point on K061	25
X1597 - Cable coupling A059	10, 24
X1600 - Cable coupling, to rear work lights (roof)	19, 20, 23
X1603 - Separation point on E098	18
X1604 - Separation point on E099	18
X1605 - Separation point on E100	18
X1606 - Separation point on E101	18
X1611 - Separation point on X400 PCB, ISO (bus terminal)	25
X1612 - Separation point on X400 PCB, ISO (bus terminal)	25
X1613 - Separation point on E108	20
X1614 - Separation point on E109	20
X1616 - Separation point on X1806 - +UB 30 distributor	7
X1617 - Separation point on X1806 - +UB 30 distributor	7
X1618 - Separation point on X1806 - +UB 30 distributor	7
X1620 - Separation point on B061	24
X1621 - Separation point on B061	24
X1622 - Separation point on B062	24

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Circuit diagram sheet no.
X1623 - Separation point on B062	24
X1624 - Cable coupling to front position lights	19, 20
X1633 - Separation point, Auto-Guide TopDock	25
X1634 - Connector (+ UB 30)	7, 8, 28
X1635 - Cable coupling, operator platform	8, 10
X1636 - Vario-Doc cable coupling	8, 28
X1637 - Connector, ISO bus_Low (A055 Vario-Doc)	28
X1638 - Connector, ISO bus_High (A055 Vario-Doc)	28
X1639 - Connector, K bus_High	28
X1640 - Connector, K bus_Low	28
X1648 - Separation point on K065	26
X1649 - Separation point, 10 amp socket	25
X1650 - Separation point on S085	19
X1651 - Separation point on S086	16
X1652 - Separation point on S087	16
X1654 - Separation point on B085	27
X1655 - Separation point on B086	27
X1656 - Separation point on B087	27
X1657 - Separation point on B088	27
X1658 - Separation point on B089	27
X1659 - Separation point on B090	27
X1660 - Separation point on B091	27
X1661 - Separation point on B092	27
X1662 - Separation point on Y091	27
X1663 - Separation point on K063	27
X1664 - Separation point on K063	27
X1665 - Separation point on K063	27
X1667 - Separation point on Y092	21
X1668 - Separation point on Y093	19
X1669 - Separation point on U002	24
X1670 - Separation point on U002	24
X1671 - Separation point on A051	27
X1672 - Separation point on A051	27
X1673 - Cylinder head cable coupling (injectors)	27
X1674 - Separation point on Y094	27
X1675 - Connector, earth	27
X1676 - Connector + UB 12 VDC	27
X1677 - Cylinder head cable coupling (injectors)	27
X1678 - Connector, front work light	20
X1679 - Separation point on K068	7
X1680 - Separation point on K068	7
X1681 - Cable coupling, E051	20
X1682 - Cable coupling, E050	20
X1683 - Cable coupling, camera socket	24
X1685 - Separation point on E086	19
X1686 - Separation point on E086	19
X1687 - Separation point on E087	19

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Circuit diagram sheet no.
X1688 - Separation point on E087	19
X1689 - Separation point on E088	20
X1690 - Separation point on E088	20
X1691 - Separation point on E089	20
X1692 - Separation point on E089	20
X1693 - Separation point on U001	28
X1700 - Separation point on K063	27
X1702 - Separation point on K063	27
X1703 - Separation point on G004	7
X1728 - Separation point on A058	28
X1729 - Connector, ISO bus_Low	24
X1730 - Connector, ISO bus_Low	24
X1731 - Connector, ISO bus_High	24
X1732 - Separation point on A059	24
X1734 - Connector, ISO bus_High	24
X1735 - Connector, earth (Auto-Guide)	24
X1740 - Connector, Auto-Guide (+UB 15)	24
X1742 - Connector, Auto-Guide (+UB 30)	24
X1749 - Separation point on S092	7
X1751 - Separation point, left frame earth point	11, 22
X1752 - Separation point on K068	7
X1753 - Separation point on K069	7
X1765 - Separation point on A060	29
X1766 - Separation point on B095	29
X1767 - Separation point on radio to B050/B051	29
X1768 - Separation point on radio from A060	29
X1787 - Connector, + UB 15	8, 28
X1802 - Separation point on E116 / E117	19
X1804 - Separation point on X1806	7
X1805 - Separation point on K068	7
X1806 - +UB 30 distributor	7
X1830 - Separation point on A073	10
X4000 - Separation point on X1633_ P	28
X4001 - Separation point on X1633_ S	28
X4002 - Auto-Guide diagnostics socket	28
X4003 - Connector, ISO bus_Low	28
X4004 - Connector, ISO bus_High	28
X4005 - Connector, V bus_Low	28
X4006 - Connector, V bus_High	28
X4024 - Connector, earth E020	19

DIN component designation	Separation point	Circuit diagram sheet no.
Y002 - Solenoid valve, travel range I	X315	11
Y003 - Solenoid valve, travel range II	X316	11

Service Training

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Separation point	Circuit diagram sheet no.
Y004 - Solenoid valve, turbo-clutch	X317	22
Y005 - Solenoid valve, speed governor	X318	11
Y006 - Solenoid valve, engine brake	X086	27
Y008 - Solenoid valve, rear PTO (clutch)	X319	15
Y009 - Solenoid valve, 4WD	X320	11
Y010 - Solenoid valve, differential lock	X321	11
Y011 - Front PTO solenoid valve (clutch)	X322	15
Y012 - Oil pre-heater/load suspension solenoid valve	X323	12
Y021 - Lifting solenoid valve (standard front power lift)	X332	12
Y021 - Front pressure compensator lock valve	X332	12
Y022 - Lowering solenoid valve (standard front power lift)	X333	12
Y022 - Field pressure control solenoid valve (front),	X333	12
Y024 - Magnetic clutch, air conditioning compressor	X342	23
Y026 - Solenoid valve, rear PTO, stage I	X360	15
Y027 - Solenoid valve, rear PTO, stage II	X361	15
Y032 - Control pressure solenoid valve	X336	12
Y053 - Active hold function solenoid valve	X1041	11
Y055 - Rear pressure compensator lock valve	X1459	12
Y060 - Hydraulic oil pre-heater solenoid valve (rear)	X1497	12
Y061 - hydraulic oil pre-heater solenoid valve (middle)	X1498	12
Y062 - Solenoid valve, field pressure control (rear)	X1501	12
Y063 - Wobble stabiliser solenoid valve	X1503	14
Y064 - Suspension load pressure/lowering solenoid valve	X1504	14
Y065 - Raise suspension solenoid valve	X1510	14
Y067 - Lock suspension solenoid valve	X1512	14
Y070 [FKH] - Cut-off valve, front power lift enhanced control	X1470 X1471	13
Y071 [2.1] - Auxiliary control valve (olive)	X1472 X1473	13
Y072 [2.2] - Auxiliary control valve (grey)	X1474 X1477	13
Y074 [1.1] - Auxiliary control valve (yellow)	X1478 X1479	13
Y075 [1.2] - Auxiliary control valve (blue)	X1480 X1481	13
Y076 [1.3] - Auxiliary control valve (red)	X1482 X1483	13
Y077 [HKH] - Cut-off valve, rear EPC	X1484 X1485	13
Y078 [1.4] - Auxiliary control valve (green)	X1486 X1487	13
Y079 [1.5] - Auxiliary control valve (brown)	X1488 X1489	13
Y080 [1.6] - Auxiliary control valve (violet)	X1490	13
Y082 - Solenoid valve, lower link stabiliser, lock	X1517	14
Y083 - Solenoid valve, lower link stabiliser, release	X1518	14
Y084 - Solenoid valve, Power Beyond	X1502	12

OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

DIN component designation	Separation point	Circuit diagram sheet no.
Y085 - Pilot pressure/switch-off solenoid valve (Auto-Guide)	X1513	14
Y086 - Solenoid valve, steering disconnect (Auto-Guide)	X1514	14
Y087 - Steering valve block, Auto-Guide	X1588 X1589	13
Y088 - Solenoid valve, release trailer brake	X1153	16
Y091 - Dispensing unit (fuel)	X1662	27
Y092 - Solenoid valve, reverse operation (RÜFA), rotate to left	X1667	21
Y093 - Solenoid valve, reverse operation (RÜFA), rotate to right	X1668	19
Y094 - Actuator unit, AGR (exhaust gas recirculation)	X1674	27
Y095 - Injector valve 1 (injector)	-	27
Y096 - Injector valve 2 (injector)	-	27
Y097 - Injector valve 3 (injector)	-	27
Y098 - Injector valve 4 (injector)	-	27
Y100 - Injector valve 5 (injector)	-	27
Y101 - Injector valve 6 (injector)	-	27

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OVERALL SYSTEM/ELECTRICAL SYSTEM

Component list for circuit diagram set 931.901.000.003_b

C

Overview of instrument panel/actuator unit/keyboard/A4 terminal/multifunction armrest (MFA) - Sheet 2 27
Overview of microfuse - Sheet 3 29
Overview of central electrical system - Sheet 4 31
Overview of EXT - Sheet 5 33
Overview of EDC/Vario-Doc/air conditioning/B4 TopDock/Auto-Guide terminal - Sheet 6 35
Supply - Sheet 7 37
Electronics supply - Sheet 8 39
Earth layout - Sheet 9 41
G bus/K bus/V bus/ISO bus - Sheet 10 43
Transmission control system - Sheet 11 45
Hydraulics - Sheet 12 47
Hydraulics/Auto-Guide - Sheet 13 49
Suspension/Auto-Guide - Sheet 14 51
PTO - Sheet 15 53
Trailer brake - Sheet 16 55
Instrument panel/ABS/driver seat - Sheet 17 57
STVZO/corner light/4th hydraulic circuit - Sheet 18 59
STVZO/work light/reversing system - Sheet 19 61
STVZO/work light/air conditioning - Sheet 20 63
Wipers/work light - Sheet 21 65
Work light/wipers/emergency mode - Sheet 22 67
Air conditioning/mirror/3rd hydraulic circuit - Sheet 23 69
Radio/Auto-Guide terminal - Sheet 24 71
ISO bus/load sockets - Sheet 25 73
EDC engine control - Sheet 26 75
KHD engine control - Sheet 27 77
Immobiliser/Vario-Doc/Auto-Guide - Sheet 28 79
Hands-free device - Sheet 29 81

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A007 – Yellow instrument panel

/17.A6	1	Enter key	
/17.A7	2	ESC key	
/17.A7	3	UP arrow key	
/17.A7	4	DOWN arrow key	
/17.A6	5	Sensor system earth	
	6		
	7		
/8.G5	8	UB 30	
/8.G5	9	UB 15	
/17.A7	10	58	
/9.A5	11	Earth 31	
/9.A5	12	Electronics earth	
/17.A6	13	UB sensors	
	14		
	15		
	16		
	17		
	18		
	19		
/17.A6	20	Sensor system earth	
/17.A6	21	Fuel supply sensor	
/17.A6	22	Hydraulic oil supply sensor	
	23		
/17.A6	24	Compressed air supply sensor 1	
	25		
	26		

A007 – Blue instrument panel

	1		
	2		
	3		
/17.A4	4	Alternator 1 LED	
	5		
	6		
	7		
/17.A4	8	Loud buzzer	
/17.A4	9	Quiet buzzer	
/17.A4	10	PTO speed signal	
/17.A4	11	Theoretical speed signal	
/17.A4	12	Actual speed signal	
/10.A3	13	Control bus_Low	
	14		
/17.A4	15	Linkage position signal	
/17.A4	16	Hydraulic oil temp. sensor	
	17		
/17.A4	18	Compressed air supply sensor 2	
/17.A4	19	Brake fluid switch	
	20		
/17.A4	21	ABS LED	
/17.A4	22	Linkage position signal	
	23		
/17.A4	24	Alternator 2 LED	
	25		
/10.A3	26	Control bus_High	

A036 – Keypad

/8.B7	1	UB 30	
/8.B7	2	UB 15	
/9.B4	3	Earth	
/10.B3	4	Control bus_High In	
/9.B4	5	Electronics earth	
/10.B3	6	Control bus_Low In	
/10.B3	7	Control bus_High Out	
/10.B3	8	Control bus_Low Out	
	9		
/17.B8	10	Enter key	
/17.B8	11	ESC key	
/17.B8	12	UP arrow key	
/17.B8	13	DOWN arrow key	
	14		
	15		
	16		
	17		
	18		

A009 – Actuator unit

	+			
	+ 1			
/10.F8	+ 2	sw 1		Transmission bus_High
/11.G5	+ 3	sw 1		Actuator unit reference F/R
/11.G5	+ 4	sw 1		UB 30
/10.F8	+ 5	sw 1		Transmission bus_Low
/11.G5	+ 6	sw 1		UB actuator unit
/11.G5	+ 7	sw 1		Electronics earth
/11.G6	8	sw 1		Earth

A039 – MFA

	1	ws_0.5		
/11.D4	1	ws_0.5		Driver seat switch
/11.D4	2	ws_0.75		Driver seat switch
	3	ws_0.75		
/23.A3	4	ws_0.75		Right/left horizontal mirror
/23.A3	5	ws_0.75		Right/left vertical mirror
/23.A3	6	ws_0.75		Right horizontal mirror
/23.A3	7	ws_0.75		Left horizontal mirror
/23.A3	8	ws_0.75		Right vertical mirror
/23.A3	9	gn_0.75		Left vertical mirror
/23.A3	10	br_0.75		UB 15
/9.C6	11	br_1		Earth 31
/17.F2	12	gn_1		Earth 31
/17.F3	13	ws_0.5		UB 15
/10.B2	14	ws_0.5		Serial Tx
/10.B2	15	ws_0.5		Serial Rx
/10.B2	16	ws_0.5		Control bus_High In
/10.B2	17	ws_0.5		Control bus_High Out
/10.B2	18	ws_0.5		Control bus_Low In
/10.B2	19	ws_0.5		Control bus_Low Out
/10.B2	20	ws_0.5		ISO bus_High In
/10.B2	21	ws_0.5		ISO bus_High Out
/10.B2	22	ws_0.5		ISO bus_Low In
/10.B2	23			ISO bus_Low Out
	24			
/8.F5	25	gn_1.5		UB 15E
/8.F5	26	br_ws_0.75		UB 30E
/9.C5	27	br_ge_0.5		Electronics earth
/9.C6	28	br_1.5		Serial earth
/9.C6	29			Earth 31
	30			
	31			

A073 – Terminal A4

	1		
/10.B1	2	Serial Tx	
/10.B1	3	Serial Rx	
/10.B1	4	Control bus_High	
/10.B1	5	Control bus_Low	
/10.B1	6	ISO bus_High	
/10.B1	7	ISO bus_Low	
	8		
/8.F5	9	UB 15	
/8.F5	10	UB 30	
/9.B5	11	Electronics earth	
/9.B6	12	Serial earth	
/9.B6		Earth 31	

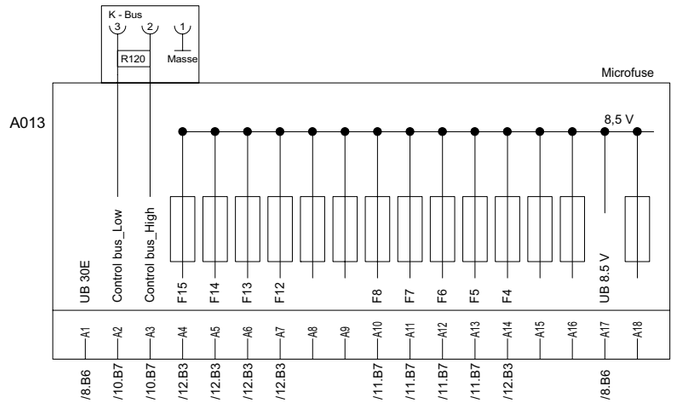
Overview of instrument panel/actuator unit/keyboard/A4 terminal/multifunction armrest (MFA) Sheet 2

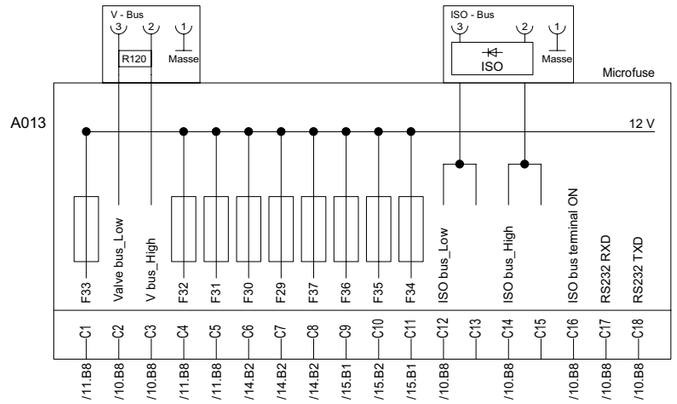
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

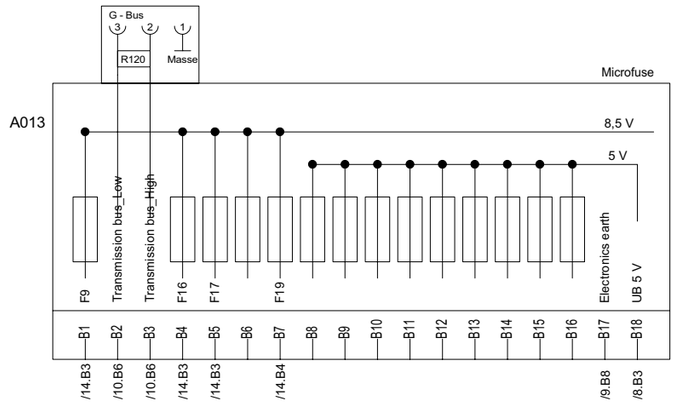
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Overview of microfuse

Sheet 3

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A038 ZE

/20.B5	C1	–	Work light indic. relay (30)
/20.B5	C2	–	Front RH direction indicator
/20.B5	C3	–	Work light indic. relay (87)
	C4	–	
/20.B5	C5	–	Front LH direction indicator
	C6	–	
	C7	–	
/20.B6	C8	–	Evaporator temperature sensor
/20.B6	C9	–	Solar sensor 1
/20.B6	C10	–	Internal temperature sensor
/20.B6	C11	–	Output temperature sensor
	C12	–	
	C13	–	
/20.B6	C14	–	UB stepper motor
/20.B6	C15	–	High/low pressure switch
	C16	–	
/20.B6	C17	–	External temperature sensor
/20.B6	C18	–	Door contact switch
/20.B6	C19	–	Rel., F int. wk lts, roof (30)
/20.B6	C20	–	Solar sensor 2
/20.B6	C21	–	Rel., F int. wk lts, roof (87)

A038 ZE

/19.B5	B1	–	Reverse op. (turning right)
/19.B5	B2	–	Rev.op. (steer. col. straight)
/19.B5	B3	–	Right indicator socket
/19.B5	B4	–	Socket 58R
/19.B5	B5	–	Left indicator socket
/19.B6	B6	–	Main beam/dipped beam switch
/19.B5	B7	–	Socket 58L
/19.B5	B8	–	Position light 58
/19.B6	B9	–	Fan diagnostics
/19.B6	B10	–	Rel., F ext. wk lts, roof (30)
/19.B6	B11	–	Left tail light
/19.B6	B12	–	Rel., F ext. wk lts, roof (87)
/19.B6	B13	–	Right tail light
/19.B6	B14	–	LH wide load (NA indicator 2)
/19.B6	B15	–	RH wide load (NA indicator 2)
/19.B6	B16	–	Rear window heater relay (30)
/19.B6	B17	–	Rear window heater relay (30)
/19.B5	B18	–	Lighting, cab
/19.B5	B19	–	Rear window heater relay (87)
/19.B5	B20	–	Rear window heater relay (87)
/19.B6	B21	–	Earth 31

A038 ZE

/18.B6	A1	–	Wk light corner light rel.(87)
/18.B6	A2	–	Electronics earth
/18.B6	A3	–	Wk light corner light rel.(30)
	A4	–	
/18.B6	A5	–	Right brake light
/18.B6	A6	–	Left brake light
/18.B6	A7	–	Work light relay (NA) (30)
/18.B6	A8	–	Socket 54
/18.B6	A9	–	Control bus_Low
/18.B6	A10	–	Headlight 56b
/18.B6	A11	–	Additional headlight 56a
/18.B6	A12	–	Control bus_High
/18.B6	A13	–	Work light relay (NA) (87)
/18.B6	A14	–	Air conditioning earth
/18.B7	A15	–	UB 15
	A16	–	
/18.B6	A17	–	Headlight 56a
/18.B7	A18	–	UB 5 V air conditioning
/18.B6	A19	–	4th hydr. circuit relay (87)
/18.B6	A20	–	Additional headlight 56b
/18.B6	A21	–	4th hydr. circuit relay (30)

A038 ZE

/23.B6	F1	–	Primary fan relay (30)
/23.B5	F2	–	Stepper motor earth
/23.B5	F3	–	Primary fan relay (87)
	F4	–	
/23.B6	F5	–	Internal fan temp. signal
/23.B5	F6	–	Stepper motor earth
/23.B5	F7	–	15ZE relay (30)
/23.B5	F8	–	Fan governor
/23.B6	F9	–	Fuel pump
/23.B5	F10	–	Stepper motor earth
	F11	–	
/23.B5	F12	–	Stepper motor earth
/23.B6	F13	–	15ZE relay (87)
	F14	–	
/23.B6	F15	–	Lower air conditioning flap
	F16	–	
/23.B5	F17	–	Middle/upper air con flap
/23.B6	F18	–	Middle/upper air con flap
/23.B6	F19	–	3rd hydr. circuit relay (30)
/23.B6	F20	–	Lower air conditioning flap
/23.B6	F21	–	3rd hydr. circuit relay (87)

A038 ZE

/22.B4	E1	–	Rel., R int. wk lts, roof (30)
/22.B5	E2	–	Air con magnetic clutch
/22.B4	E3	–	Rel., R int. wk lts, roof (87)
	E4	–	
	E5	–	
/22.B5	E6	–	Exterior mirror heater
/22.B4	E7	–	15E relay (30)
/22.B5	E8	–	50a
/22.B4	E9	–	Left indicator switch
/22.B4	E10	–	15E relay (86)
/22.B4	E11	–	Right indicator switch
/22.B4	E12	–	Rear washer system
/22.B4	E13	–	15E relay (87)
/22.B4	E14	–	Main light flash switch
/22.B4	E15	–	Front washer system
/22.B4	E16	–	Emergency actuation relay (86)
/22.B4	E17	–	Emergency actuation relay (86)
/22.B4	E18	–	Emergency actuation relay (87)
/22.B4	E19	–	Emergency actuation relay (30)
/22.B4	E20	–	Rr mudguard wk light rel. (87)
/22.B4	E21	–	Rr mudguard wk light rel. (30)

A038 ZE

/21.B4	D1	–	Rel, R ext. wk lts, roof (30)
/21.B5	D2	–	Reverse op. (turning left)
/21.B4	D3	–	Rel., R ext. wk lts, roof (87)
	D4	–	
/21.B5	D5	–	Front wiper 53
	D6	–	
/21.B4	D7	–	Relay 15L (30)
/21.B5	D8	–	Rear wiper 53
/21.B5	D9	–	Front wiper 31b
/21.B5	D10	–	Front washer ON
/21.B4	D11	–	Rear wiper 31B
	D12	–	
/21.B4	D13	–	Relay 15L (87)
/21.B5	D14	–	Front wiper ON
/21.B5	D15	–	Front wiper intermittent
/21.B4	D16	–	Relay 15L (86)
/21.B4	D17	–	Rear left direction indicator
	D18	–	
/21.B4	D19	–	Rotating beacon relay (30)
/21.B4	D20	–	Rear right direction indicator
/21.B4	D21	–	Rotating beacon relay (87)

Overview of central electrical system ZE — Sheet 4

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A050 EXT

/8.B2	B1	UB 30
/9.B3	B2	Earth 31
/8.B2	B3	UB 30
/8.B2	B4	UB 30
/8.B2	B5	UB 30
/8.B2	B6	UB 30
/9.B3	B7	Earth 31
	B8	
/11.B3	B9	Reverse operation positioning
/11.B3	B10	Quick reverse switch R
/11.B3	B11	Right brake switch
/12.B4	B12	Ext. RH rr power lift low. btn
/12.B4	B13	Event counter
/11.B3	B14	Driver seat switch
/10.B5	B15	Control bus_High
/10.B5	B16	Control bus_Low
/14.B2	B17	Steering wheel sensor
/26.B7	B18	Foot throttle sensor
/8.B2	B19	UB 5 V
/9.B3	B20	Earth 31
/11.B3	B21	Emergency actuation ON signal
/11.B3	B22	Quick reverse switch F
/11.B3	B23	Discharge temperature sensor
/11.B3	B24	Left brake switch
/16.B4	B25	Left brake pad wear switch
	B26	
/16.B4	B27	Hand brake sensor
	B28	
/11.B3	B29	Clutch pedal sensor
	B30	
	B31	
/8.B2	B32	UB 8.5 V
/9.B3	B33	Earth 31
/11.B3	B34	Hand brake switch
/12.B4	B35	External raise valve button
/15.B5	B36	Left external rear PTO button
/12.B4	B37	Ext. RH raise rr pwr lift btn
	B38	
/12.B4	B39	Ext. LH raise rr pwr lift btn
/8.B2	B40	UB 15
/15.B5	B41	Rear PTO LED on
/11.B3	B42	Reverse warning signal
/10.B5	B43	ISO bus terminal ON
/14.B2	B44	Auto-Guide activation
/8.B2	B45	UB electronics
/9.B3	B46	Earth 31
/12.B4	B47	External lower valve button
/12.B4	B48	Ext. LH rr power lift low. btn
	B49	
/15.B5	B50	External right rear PTO button
/16.B4	B51	Right brake pad wear switch
	B52	
/10.B5	B53	Transmission bus_High
/10.B5	B54	Transmission bus_Low
	B55	
/8.B2	B56	ISO disconnect relay ON
	B57	
/8.B2	B58	UB electronics

A050 EXT

/14.B6	A1	Wobble stabiliser SV
/16.B3	A2	Hyd. tr. brake release SV_High
/16.B3	A3	Hydr. trailer brake 2 SV_High
/11.B6	A4	Active hold function SV
	A5	
/14.B6	A6	Pilot pressure SV_High
/14.B6	A7	Steering switch off SV_High
/15.B2	A8	Front PTO sensor
/11.B5	A9	Bevel pinion speed sensor
/15.B3	A10	Rear PTO sensor
/11.B6	A11	Engine speed sensor
/12.B1	A12	Radar sensor
/11.B5	A13	Collector speed sensor
/8.B1	A14	ISO disconnect relay ON
/11.B6	A15	UB actuator unit
/12.B2	A16	LH draught sensing pin sens.
/12.B2	A17	RH draught sensing pin sens.
/12.B2	A18	Ext. rear power lift sensor
	A19	
	A20	
/12.B2	A21	Rear power lift pos. sensor
/9.B2	A22	Earth 31
/9.B2	A23	Earth 31
/9.B2	A24	Earth 31
	A25	
/14.B6	A26	Suspension load pressure SV
	A27	
	A28	
	A29	
	A30	
/12.B2	A31	Rear pressure compens. lock SV
	A32	
/15.B3	A33	Rear PTO clutch speed sensor
/11.B5	A34	Filter contamination switch
/12.B1	A35	LS pump pressure switch
/12.B2	A36	Ext. front power lift low. btn
/12.B2	A37	Ext. front power lift rai. btn
/12.B2	A38	Front power lift pos. sensor
/16.B3	A39	Brake pressure sensor
	A40	
	A41	
/12.B1	A42	Filter monitor switch
/12.B1	A43	Guard rail pump flow switch
	A44	
/9.B2	A45	Sensor system earth
/9.B2	A46	Sensor system earth
	A47	
/12.B2	A48	Constant pump flow switch
/12.B2	A49	Raise/lock FKH press. comp. SV
/12.B2	A50	POWER BEYOND solenoid valve
/11.B5	A51	Neutral/TC solenoid valve
/12.B2	A52	Control pressure SV
/15.B3	A53	Rear PTO level 2 SV
/15.B3	A54	Rear PTO level 1 SV.
	A55	
/12.B2	A56	Rear power lift field pres. SV
/11.B5	A57	Bevel pinion direction sensor
/11.B5	A58	Actuator unit reference F/R
/11.B5	A59	Collector direction sensor
/10.B4	A60	ISO bus_Low
/10.B4	A61	ISO bus_High
/10.B4	A62	Valve bus_Low
/10.B4	A63	V bus_High
/14.B6	A64	Right wheel position sensor
/14.B6	A65	Steering angle sensor
/14.B6	A66	Left wheel position sensor
/11.B5	A67	High pressure 1 sensor
	A68	
/11.B5	A69	Travel range detection sensor
/11.B5	A70	High pressure 2 sensor
	A71	
/14.B6	A72	Lower link stabil. release SV
/12.B2	A73	Lower FPL/FPL field pres. SV
/12.B2	A74	Front pre-heater SV
/11.B6	A75	Speed governor solenoid valve
	A76	
/15.B3	A77	Rear PTO clutch solenoid valve
/14.B6	A78	Steering wheel off SV_Low
/14.B6	A79	Pilot pressure SV_Low
	A80	
/11.B6	A81	Active hold function earth SV
	A82	
/16.B3	A83	Hydr. trailer brake 2 SV_Low
	A84	
/16.B3	A85	Hydr. tr. brake release SV_Low
/15.B3	A86	Front PTO clutch SV
/12.B2	A87	Load suspension solenoid valve
/12.B2	A88	Rear pre-heater solenoid valve
/11.B6	A89	4WD solenoid valve
/11.B6	A90	Diff. solenoid valve
/11.B6	A91	Travel range 2 solenoid valve
/11.B6	A92	Travel range 1 solenoid valve
/14.B6	A93	Raise susp. solenoid valve
	A94	
/14.B6	A95	Suspension lock solenoid valve
/14.B6	A96	Lower link stabiliser lock SV

Overview of EXT

Sheet 5

FENDT 922 / 924 / 927 Vario COM III

FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

Service-Training Dokumentation

08/2008

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A053 — Air conditioning

/23.E5	1	Stepper pin 1
/20.E6	2	Stepper pins 2 and 5
/23.E5	3	Stepper pin 3
/23.E5	4	Stepper pin 4
	5	
/23.E5	6	Stepper pin 6
/20.E6	7	Evaporator temperature sensor
/20.E6	8	Sensor system earth

A053 — Air conditioning

/23.E4	1	UB 12 V
/23.E4	2	Fan governor
/23.E4	3	Fan diagnostics
/23.E4	4	Earth 31

A051 — EDC

	1	
	2	
/27.A3	3	UB actuators
	4	
/27.A3	5	AGR earth
/27.A3	6	Engine brake solenoid valve
/27.A3	7	Heater flange relay
/27.A3	8	Pre-heating sensor switch
/27.A4	9	Camshaft speed sensor
/27.A4	10	Camshaft speed sensor earth
/27.A3	11	AGR solenoid valve
/27.A4	12	Rail sensor earth
/27.A4	13	UB rail sensor
/27.A4	14	Rail sensor
/27.A4	15	Coolant temp. sensor
/27.A4	16	UB fuel low pressure sensor
	17	
/27.A4	18	Fuel low pressure sensor earth
/27.A4	19	Crankshaft speed sensor earth
	20	
	21	
/27.A4	22	Fuel low pressure sensor
/27.A4	23	Crankshaft speed sensor
/27.A4	24	Oil pressure sensor earth
/27.A4	25	Charge air pres. sensor earth
/27.A4	26	Coolant temp. sensor earth
/27.A4	27	Oil pressure sensor
/27.A4	28	Water in fuel sensor
	29	
	30	
	31	
/27.A4	32	UB oil pressure sensor
/27.A4	33	UB charge air pressure sensor
/27.A4	34	Charge air pressure sensor
	35	
/27.A5	36	Charge air temperature sensor

A051 — EDC

	1	
/8.F7	2	UB 30
/8.F7	3	UB 30
	4	
/9.A1	5	Earth 31
/9.A1	6	Earth 31
	7	
/8.F7	8	UB 30
/8.F7	9	UB 30
/9.A1	10	Earth 31
/9.A1	11	Earth 31
	12	
	13	
/26.A2	14	Fan solenoid valve (86)
/26.A2	15	Fan solenoid valve (85)
	16	
/26.A3	17	Start relay
	18	
	19	
	20	
/26.A3	21	UB sensors
	22	
	23	
	24	
	25	
	26	
	27	
	28	
/26.A2	29	Electronics earth
	30	
	31	
	32	
	33	
/10.G1	34	Transmission bus_Low
/10.G1	35	Transmission bus_High
	36	
/26.A3	37	Start relay
	38	
	39	
/8.F6	40	UB 15
	41	
/26.A2	42	Vacuum switch
	43	
	44	
	45	
	46	
/26.A3	47	Engine brake switch
	48	
	49	
	50	
	51	
	52	
	53	
	54	
/26.A2	55	Coolant level sensor
	56	
	57	
	58	
	59	
	60	
	61	
	62	
	63	
	64	
	65	
/26.A3	66	Starter lockout switch
/26.A2	67	Fan earth
/26.A2	68	UB fan
/26.A2	69	Fan speed sensor
	70	
	71	
	72	
	73	
/26.A3	74	50a
	75	
	76	
/26.A3	77	UB 5 V foot throttle
/26.A3	78	Foot throttle earth
/26.A3	79	Foot throttle sensor
	80	
	81	
	82	
	83	
	84	
	85	
	86	
	87	
	88	
/26.A3	89	ISO characteristic curve

A058 — TopDock B4

/28.F1	1	UB 30
/28.F1	2	UB 30
/28.F1	3	ISO bus_Low
/28.F1	4	ISO bus_High
/28.F1	5	Valve bus_Low
/28.F1	6	V bus_High
/28.F2	7	Serial earth
/28.F1	8	Earth
/28.F2	9	Earth
/28.F2	10	Auto-Guide activation
/28.F2	11	Serial Tx
/28.F2	12	Serial Rx
	13	

A051 — EDC

	1	
	2	
/27.A7	3	Injectors 4, 5 and 6 High
/27.A7	4	Injectors 1, 2 and 3 High
	5	
/27.A7	6	Injector 3 Low
	7	
	8	
/27.A7	9	Dispensing unit_High
/27.A7	10	Dispensing unit_Low
	11	
/27.A7	12	Injector 2 Low
/27.A7	13	Injector 1 Low
/27.A7	14	Injector 6 Low
/27.A7	15	Injector 5 Low
/27.A7	16	Injector 4 Low

A059 — Auto-Guide terminal

/24.B1	1	UB 30
	2	
	3	
/24.B1	4	Earth
/24.B1	5	ISO bus_High
/24.B2	6	ISO bus_Low
/24.B1	7	UB 15

A055 — Vario-Doc

/28.B7	1	Control bus_High
/28.B7	2	Control bus_Low
/8.F3	3	UB 15
	4	
	5	
	6	
/28.B7	7	ISO bus_High
/28.B7	8	ISO bus_Low
/8.F3	9	UB 30
	10	
/8.F3	11	Earth
	12	
	13	
	14	
	15	
	16	

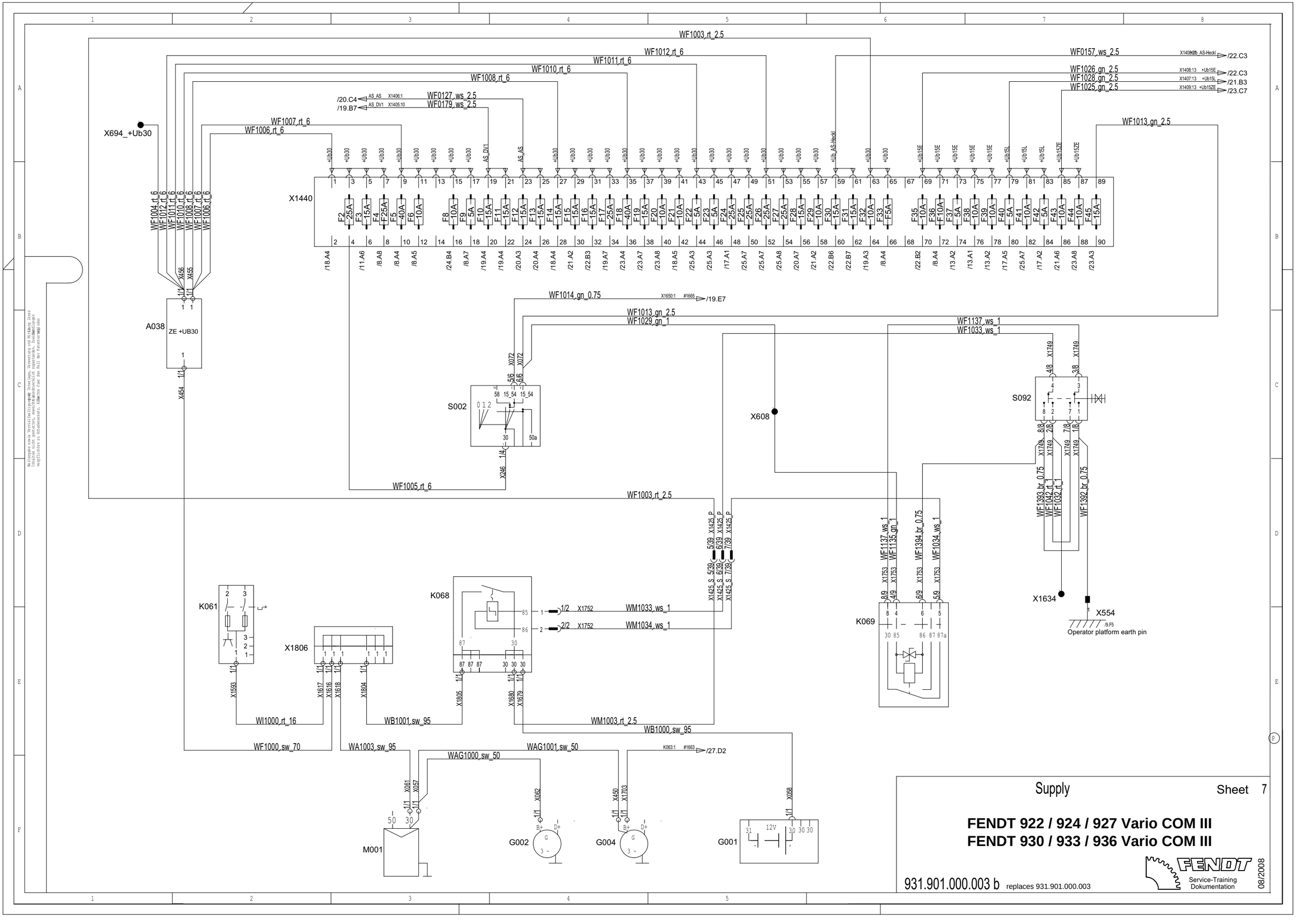
Overview of EDC/Vario-Doc/air conditioning/B4 TopDock/Auto-Guide terminal — Sheet 6

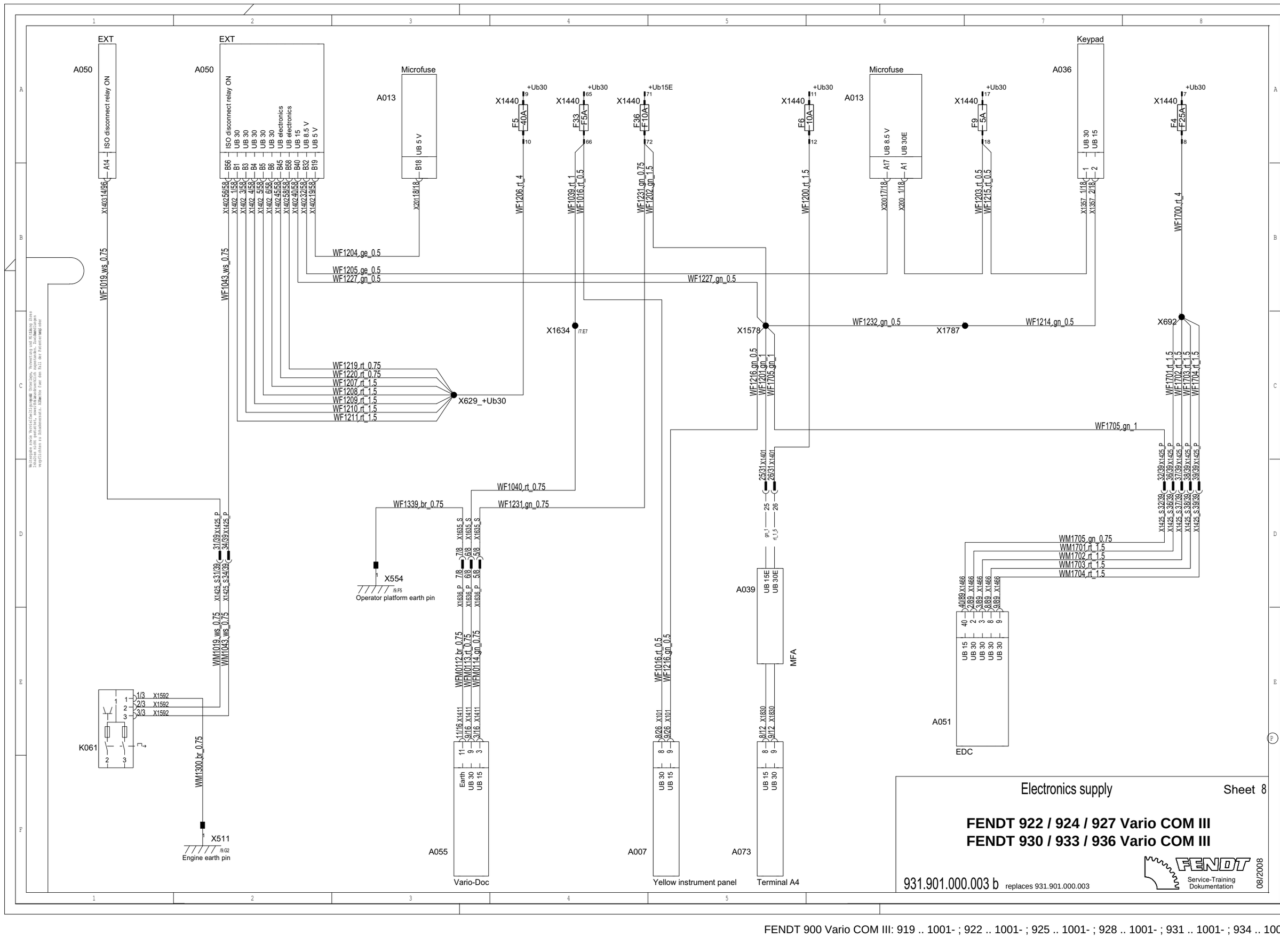
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FENDT 930 / 933 / 936 Vario COM III

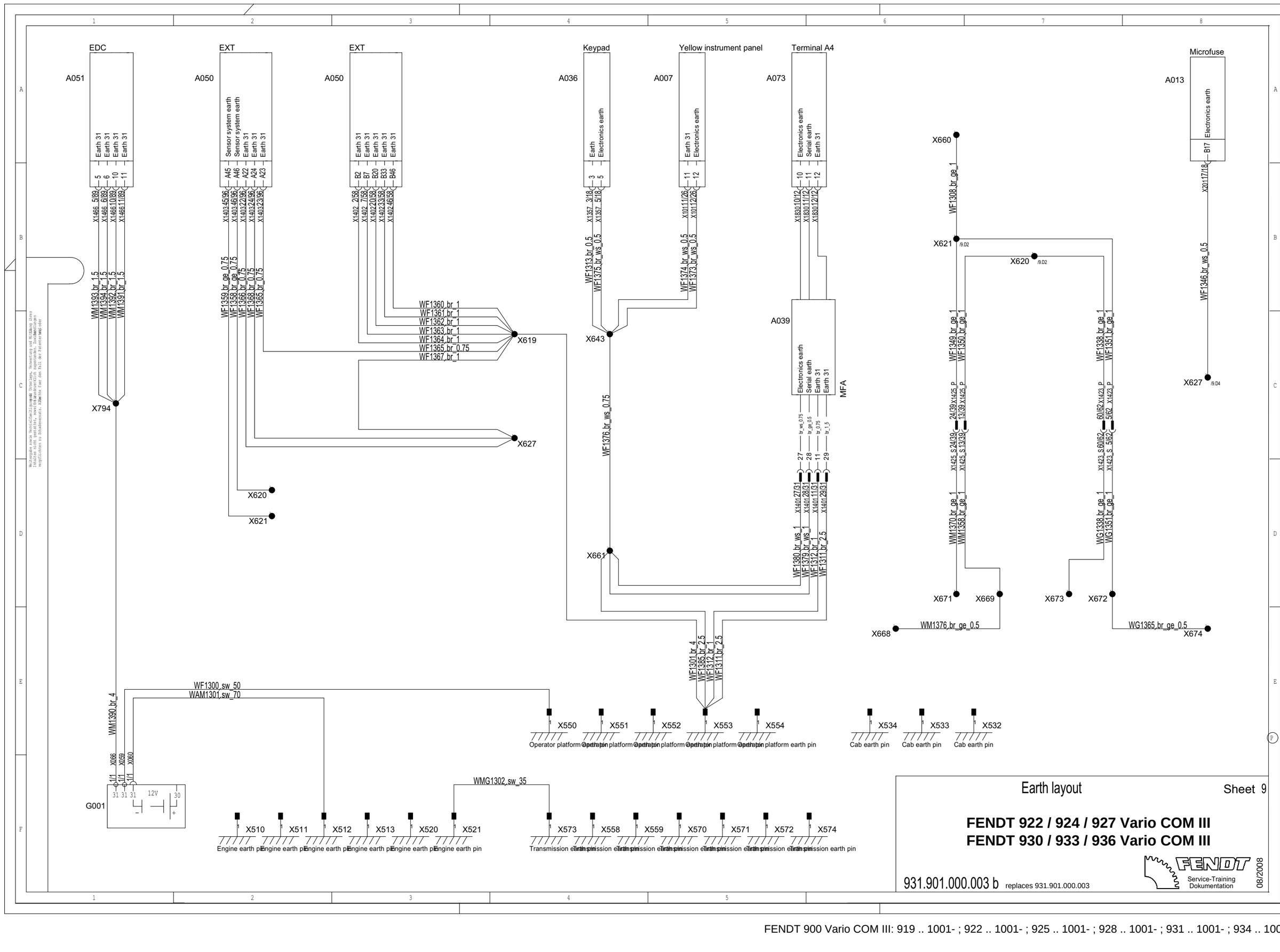
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08/2008

Service-Training Dokumentation


WF1003,rt_2.5
WF1012,rt_6
WF1011,rt_6
WF1010,rt_6
WF1008,rt_6
WF1007,rt_6
WF1006,rt_6
WF1004,rt_6
X694_+Ub30
/20.C4 AS_AS X1406:1
/19.B7 AS_DV1 X1405:10
WF0127,ws_2.5
WF0179,ws_2.5
WF0157,ws_2.5
X1408:2 b AS-Heckl
/22.C3
WF1026,gn_2.5
X1408:13 +Ub15E
/22.C3
WF1028,gn_2.5
X1407:13 +Ub15L
/21.B3
WF1025,gn_2.5
X1409:13 +Ub15ZE
/23.C7
WF1013,gn_2.5
X1440
A038
ZE +UB30
WF1014,gn_0.75
X1650:1 #1665
/19.E7
WF1029,gn_1
WF1137,ws_1
WF1033,ws_1
S002
S092
X608
WF1005,rt_6
WF1135,gn_1
WF1394,br_0.75
WF1034,ws_1
WF1393,br_0.75
WF1042,rt_1
WF1032,rt_1
WF1392,br_0.75
K061
K068
K069
X1806
X1634
X554
Operator platform earth pin
WM1033,ws_1
WM1034,ws_1
WI1000,rt_16
WB1001,sw_95
WM1003,rt_2.5
WB1000,sw_95
WF1000,sw_70
WA1003,sw_95
WAG1000,sw_50
WAG1001,sw_50
K063:1 #1663
/27.D2
M001
G002
G004
G001
Supply
Sheet 7
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III
931.901.000.003 b replaces 931.901.000.003
Service-Training Dokumentation
08/2008


EXT
A050
ISO disconnect relay ON
A14
X1403 14/96
WF1019 ws 0.75
EXT
A050
ISO disconnect relay ON
UB 30
UB 30
UB 30
UB 30
UB electronics
UB electronics
UB 15
UB 8.5 V
UB 5 V
B66
B1
B3
B4
B5
B6
B45
B58
B40
B32
B19
X1402 56/58
X1402 1/58
X1402 3/58
X1402 4/58
X1402 5/58
X1402 6/58
X1402 45/58
X1402 58/58
X1402 40/58
X1402 32/58
X1402 19/58
WF1043 ws 0.75
Microfuse
A013
UB 5 V
B18
X2001 18/18
WF1204 ge 0.5
WF1205 ge 0.5
WF1227 gn 0.5
+Ub30
X1440 9
F5 40A
10
WF1206 rt 4
+Ub30
X1440 65
F33 F5A
66
WF1039 rt 1
WF1016 rt 0.5
+Ub15E
X1440 71
F36 F10A
72
WF1231 gn 0.75
WF1202 gn 1.5
+Ub30
X1440 11
F6 10A
12
WF1200 rt 1.5
Microfuse
A013
UB 8.5 V
UB 30E
A17
A1
X2001 7/18
X2001 1/18
+Ub30
X1440 17
F9 5A
18
WF1203 rt 0.5
WF1215 rt 0.5
Keypad
A036
UB 30
UB 15
1
2
X1357 1/18
X1357 2/18
+Ub30
X1440 7
F4 F25A
8
WF1700 rt 4
X1634 IT.ET
X1578
WF1232 gn 0.5
X1787
WF1214 gn 0.5
X692
WF1219 rt 0.75
WF1220 rt 0.75
WF1207 rt 1.5
WF1208 rt 1.5
WF1209 rt 1.5
WF1210 rt 1.5
WF1211 rt 1.5
X629 +Ub30
WF1216 gn 0.5
WF1201 gn 1
WF1705 gn 1
WF1705 gn 1
WF1040 rt 0.75
WF1339 br 0.75
WF1231 gn 0.75
25/31 X1401
26/31 X1401
25
26
gn 1
rt 1.5
WF1701 rt 1.5
WF1702 rt 1.5
WF1703 rt 1.5
WF1704 rt 1.5
32/39 X1425_P
36/39 X1425_P
37/39 X1425_P
38/39 X1425_P
39/39 X1425_P
X1425_S 32/39
X1425_S 36/39
X1425_S 37/39
X1425_S 38/39
X1425_S 39/39
WM1705 gn 0.75
WM1701 rt 1.5
WM1702 rt 1.5
WM1703 rt 1.5
WM1704 rt 1.5
31/39 X1425_P
34/39 X1425_P
X1425_S 31/39
X1425_S 34/39
WM1019 ws 0.75
WM1043 ws 0.75
X554
/9.F5
Operator platform earth pin
7/8 X1635_S
6/8 X1635_S
5/8 X1635_S
X1636_P 7/8
X1636_P 6/8
X1636_P 5/8
WFM0112 br 0.75
WFM0113 rt 0.75
WFM0114 gn 0.75
WF1016 rt 0.5
WF1216 gn 0.5
A039
UB 15E
UB 30E
MFA
40/89 X1466
2/89 X1466
3/89 X1466
8/89 X1466
9/89 X1466
40
2
3
8
9
UB 15
UB 30
UB 30
UB 30
UB 30
A051
EDC
1/3 X1592
2/3 X1592
3/3 X1592
K061
WM1300 br 0.75
X511
/9.G2
Engine earth pin
11/16 X1411
9/16 X1411
3/16 X1411
Earth
UB 30
UB 15
A055
Vario-Doc
8/26 X101
9/26 X101
UB 30
UB 15
A007
Yellow instrument panel
8/12 X1830
9/12 X1830
UB 15
UB 30
A073
Terminal A4
Electronics supply
Sheet 8
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III
931.901.000.003 b
replaces 931.901.000.003
FENDT
Service-Training
Dokumentation
08/2008


EDC
A051
Earth 31
Earth 31
Earth 31
Earth 31
X1466 5/69
X1466 6/69
X1466 10/69
X1466 11/69
WM1393 br_1.5
WM1394 br_1.5
WM1392 br_1.5
WM1391 br_1.5
X794
EXT
A050
Sensor system earth
Sensor system earth
Earth 31
Earth 31
Earth 31
A45
A46
A22
A24
A23
X1403 45/96
X1403 46/96
X1403 22/96
X1403 24/96
X1403 23/96
WF1359 br_ge_0.75
WF1358 br_ge_0.75
WF1366 br_0.75
WF1368 br_0.75
WF1365 br_0.75
X620
X621
EXT
A050
Earth 31
Earth 31
Earth 31
Earth 31
Earth 31
B2
B7
B20
B33
B46
X1402 2/58
X1402 7/58
X1402 20/58
X1402 33/58
X1402 46/58
WF1360 br_1
WF1361 br_1
WF1362 br_1
WF1363 br_1
WF1364 br_1
WF1365 br_0.75
WF1367 br_1
X619
X627
Keypad
A036
Earth
Electronics earth
3
5
X1357 3/118
X1357 5/118
WF1313 br_0.5
WF1375 br_ws_0.5
X643
WF1376 br_ws_0.75
X661
Yellow instrument panel
A007
Earth 31
Electronics earth
11
12
X1011 1/26
X1011 2/26
WF1374 br_ws_0.5
WF1373 br_ws_0.5
Terminal A4
A073
Electronics earth
Serial earth
Earth 31
10
11
12
X1830 10/12
X1830 11/12
X1830 12/12
A039
MFA
Electronics earth
Serial earth
Earth 31
Earth 31
br_ws_0.75
br_ge_0.5
br_0.75
br_1.5
27
28
11
29
X1401 27/31
X1401 28/31
X1401 11/31
X1401 29/31
WF1380 br_ws_1
WF1379 br_ws_1
WF1312 br_1
WF1311 br_2.5
WF1301 br_4
WF1385 br_2.5
WF1312 br_1
WF1311 br_2.5
Microfuse
A013
Electronics earth
B17
X20117/18
WF1346 br_ws_0.5
X627
/9.D4
X660
WF1308 br_ge_1
X621
/9.D2
X620
/9.D2
WF1349 br_ge_1
WF1350 br_ge_1
24/39 X1425_P
13/39 X1425_P
X1425_S 24/39
X1425_S 13/39
WM1370 br_ge_1
WM1358 br_ge_1
WF1338 br_ge_1
WF1351 br_ge_1
60/62 X1423_P
5/62 X1423_P
X1423_S 60/62
X1423_S 5/62
WG1338 br_ge_1
WG1351 br_ge_1
X671
X669
X673
X672
WM1376 br_ge_0.5
WG1365 br_ge_0.5
X668
X674
WF1300 sw_50
WAM1301 sw_70
WM1390 br_4
X066
X039
X060
1/1
1/1
1/1
G001
31 31 31
12V
30
WMG1302 sw_35
X510
X511
X512
X513
X520
X521
Engine earth pin
Engine earth pin
Engine earth pin
Engine earth pin
Engine earth pin
Engine earth pin
X550
X551
X552
X553
X554
Operator platform earth pin
Operator platform earth pin
Operator platform earth pin
Operator platform earth pin
Operator platform earth pin
X534
X533
X532
Cab earth pin
Cab earth pin
Cab earth pin
X573
X558
X559
X570
X571
X572
X574
Transmission earth pin
Transmission earth pin
Transmission earth pin
Transmission earth pin
Transmission earth pin
Transmission earth pin
Transmission earth pin
Earth layout
Sheet 9
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III
931.901.000.003 b
replaces 931.901.000.003
FENDT
Service-Training
Dokumentation
08/2008

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A073
Terminal A4
Control bus_High
Control bus_Low
Serial Rx
Serial Tx
ISO bus_Low
ISO bus_High

A039
MFA
ISO bus_High Out
ISO bus_Low Out
Serial Tx
Serial Rx
Control bus_Low In
Control bus_High In
ISO bus_High In
ISO bus_Low In
Control bus_Low Out
Control bus_High Out

A036
Keypad
Control bus_High In
Control bus_Low In
Control bus_High Out
Control bus_Low Out

A007
Blue instrument panel
R120
Control bus_Low
Control bus_High

A050
EXT
ISO bus_Low
ISO bus_High
Valve bus_Low
V bus_High

A050
EXT
Control bus_High
Control bus_Low
Transmission bus_High
Transmission bus_Low
ISO bus terminal ON

A013
Microfuse
G - Bus
R120
Masse
Transmission bus_Low
Transmission bus_High

A013
Microfuse
K - Bus
R 120
Masse
Control bus_Low
Control bus_High

A013
Microfuse
ISO - Bus
ISO
Masse
V - Bus
R 120
Masse
ISO bus_Low
ISO bus_High
ISO bus terminal ON
Valve bus_Low
V bus_High
RS232 RXD
RS232 TXD

A051
EDC
Transmission bus_High
Transmission bus_Low

A009
Actuator unit
Transmission bus_High
Transmission bus_Low

Bridge connector

X714
X715
X707
X708
X718
X719
X712
X711
X1343
X1344
X725
X726
X598
X599
X738
X739
X1463
X1464

G bus / K bus / V bus / ISO bus — Sheet 10

FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

Service-Training Dokumentation 08/2008

Transmission control system

Sheet 11

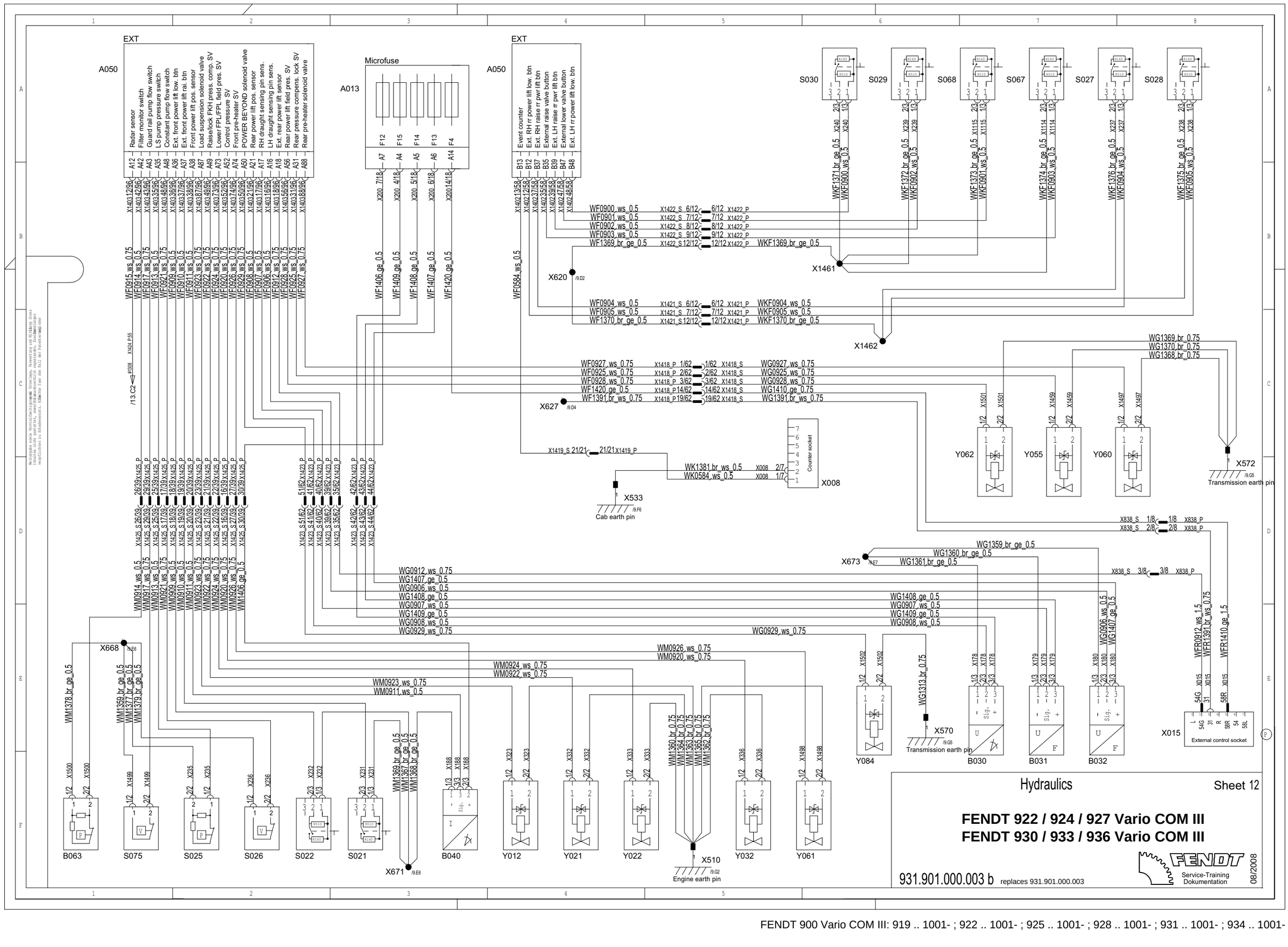
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

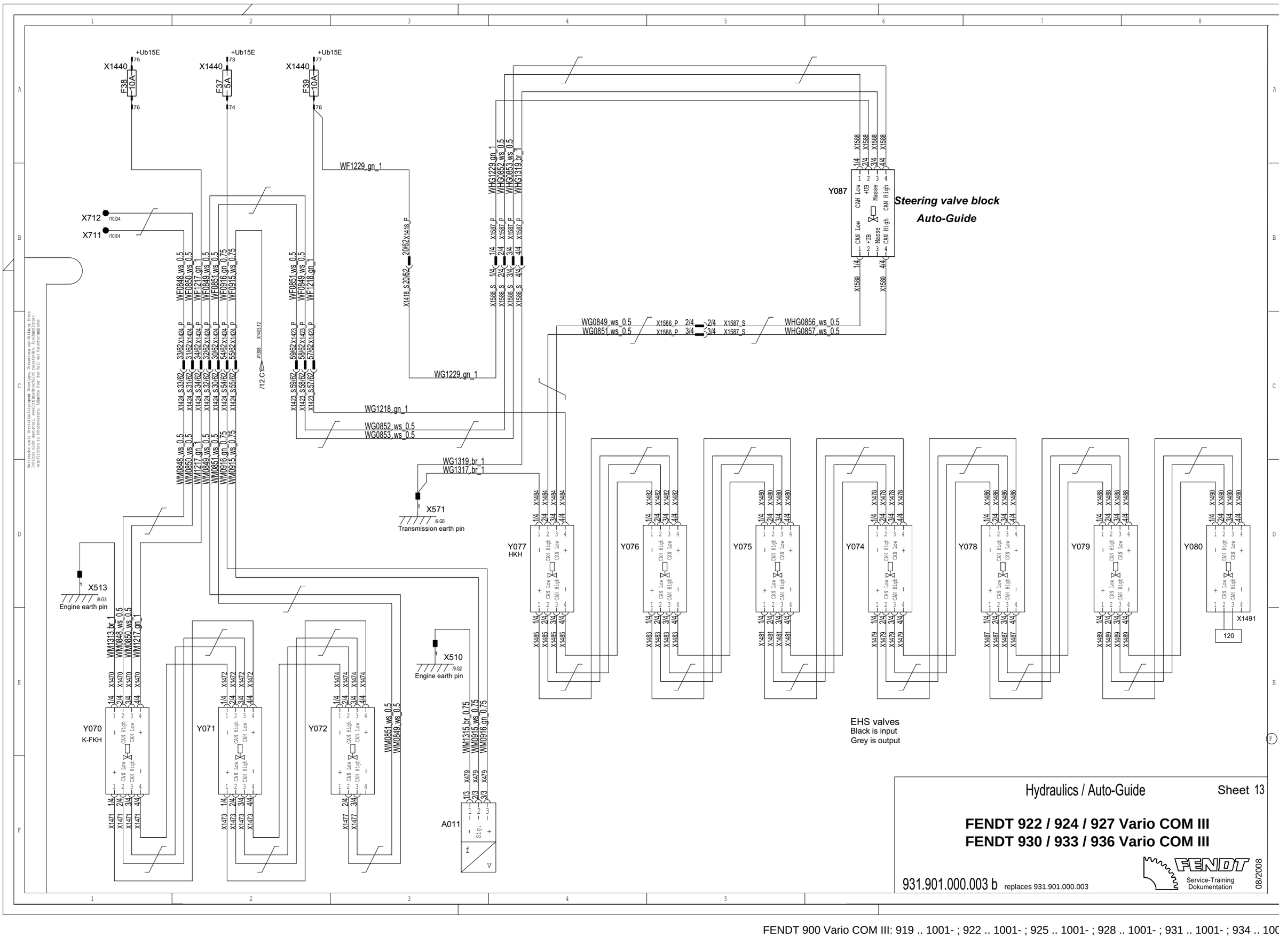
FENDT Service-Training Dokumentation

08/2008

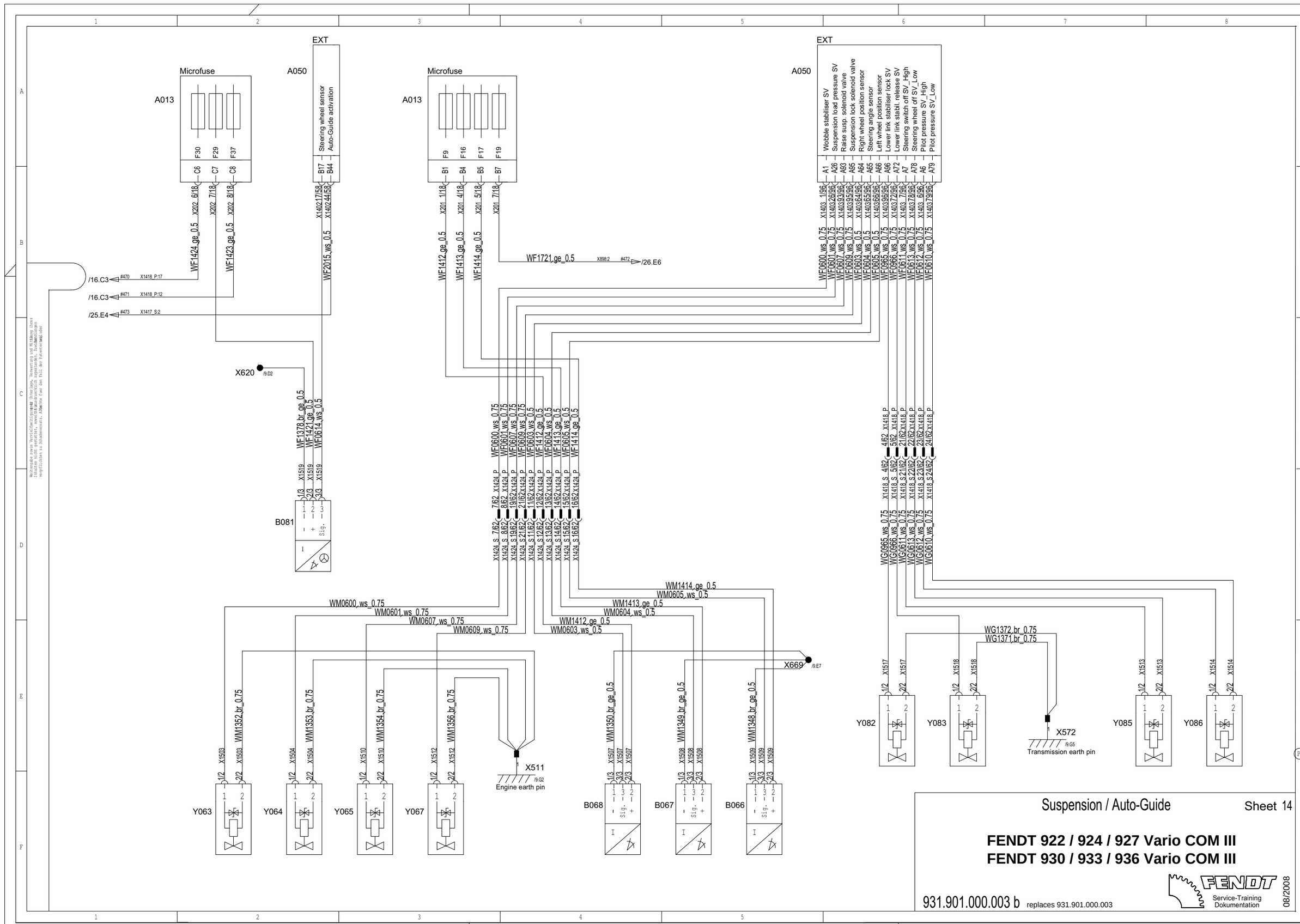
FENDT 900 Vario COM III: 919 .. 1001- ; 922 .. 1001- ; 925 .. 1001- ; 928 .. 1001- ; 931 .. 1001- ; 934 .. 1001-

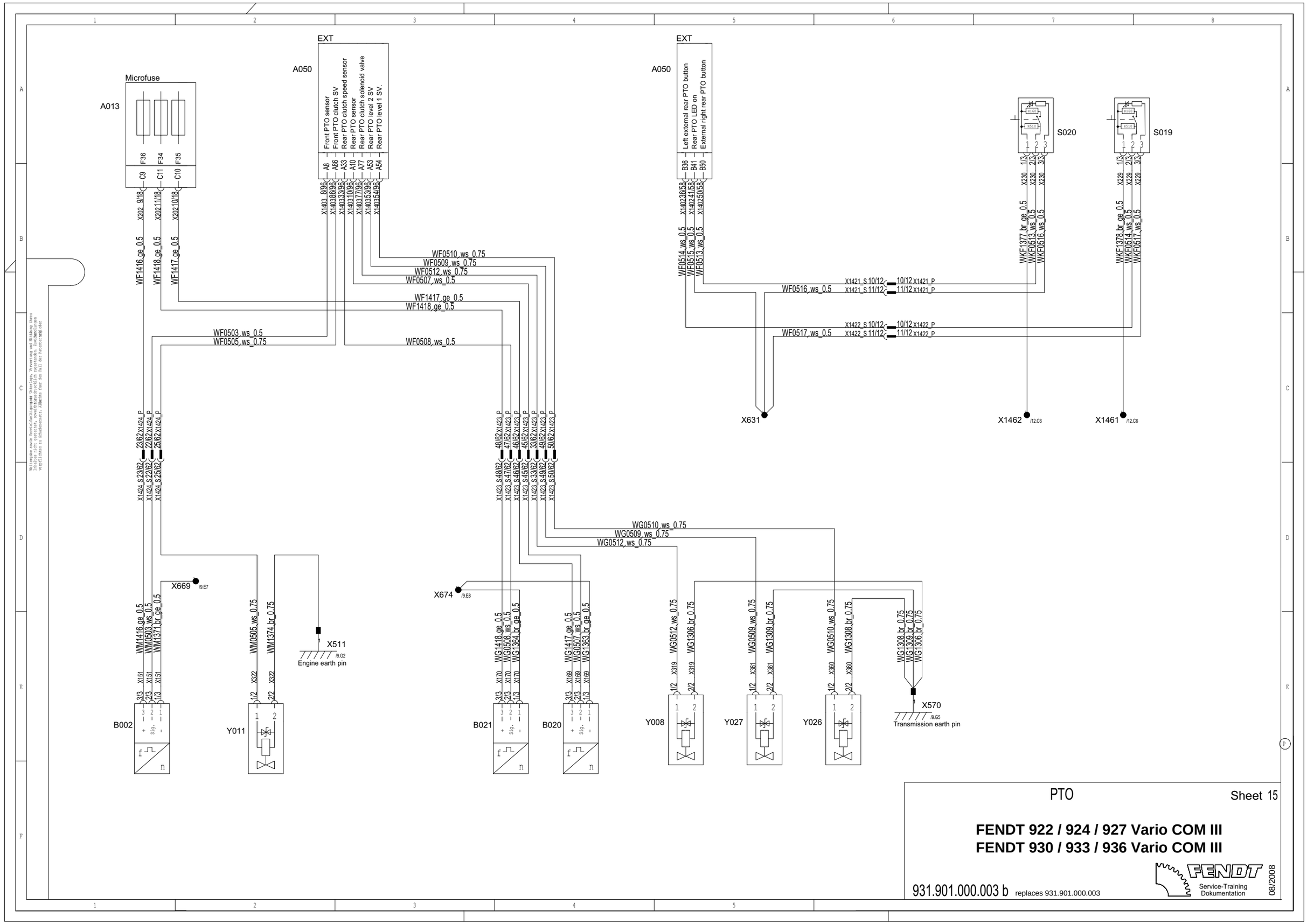


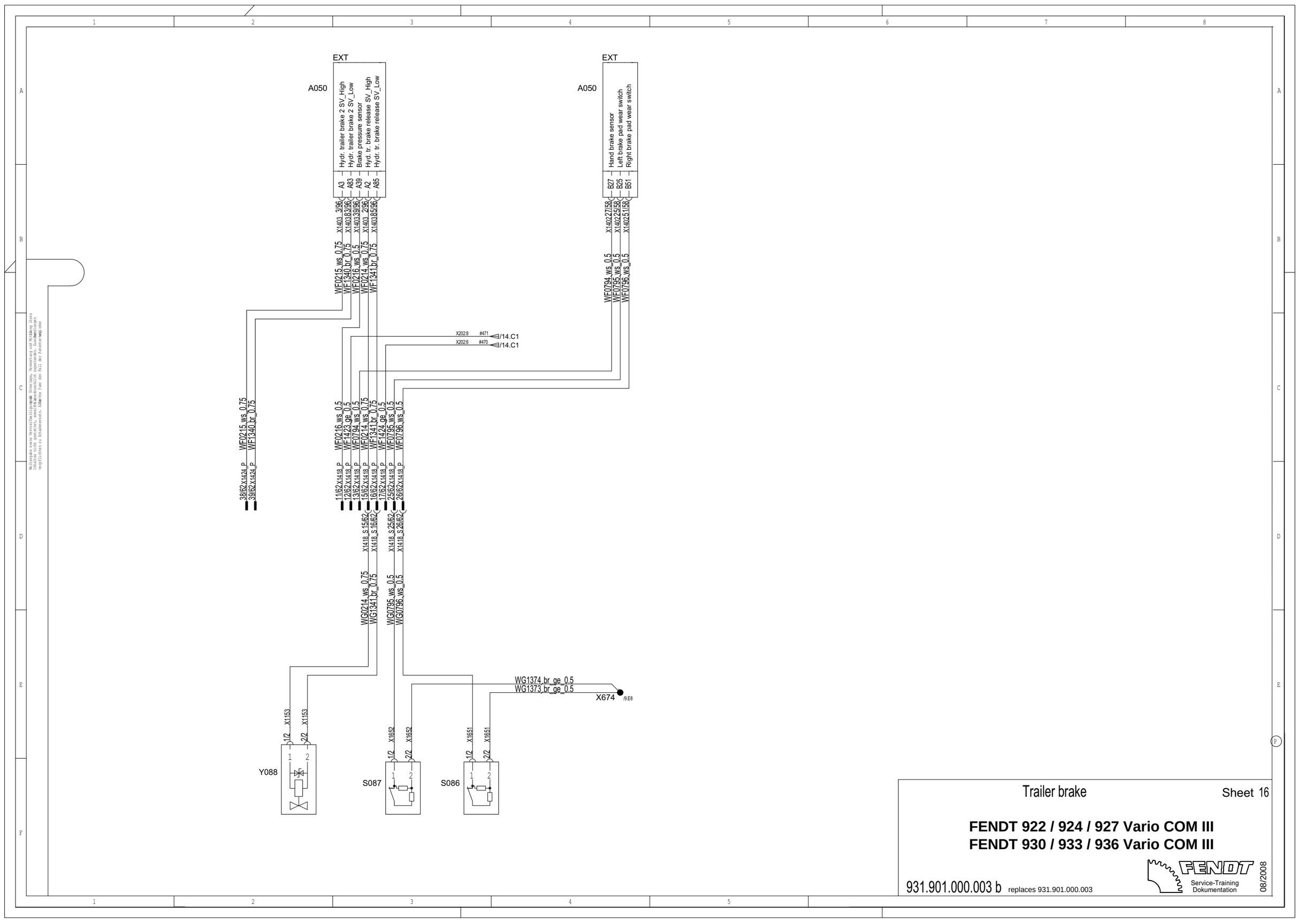
FENDT 900 Vario COM III: 919 .. 1001- ; 922 .. 1001- ; 925 .. 1001- ; 928 .. 1001- ; 931 .. 1001- ; 934 .. 1001-



FENDT 900 Vario COM III: 919 .. 1001- ; 922 .. 1001- ; 925 .. 1001- ; 928 .. 1001- ; 931 .. 1001- ; 934 .. 1001-


EXT
A050
Steering wheel sensor
Auto-Guide activation
B17
B44
X140217/58
X140244/58
WF2015_ws_0.5
Microfuse
A013
F30
F29
F37
C6
C7
C8
X202 6/18
X202 7/18
X202 8/18
WF1424_ge_0.5
WF1423_ge_0.5
/16.C3 #470 X1418 P:17
/16.C3 #471 X1418 P:12
/25.E4 #473 X1417 S:2
X620 /9.D2
WF1378_br_ge_0.5
WF1421_ge_0.5
WF0614_ws_0.5
B081
1/3 X1519
2/3 X1519
3/3 X1519
Microfuse
A013
F9
F16
F17
F19
B1
B4
B5
B7
X201 1/18
X201 4/18
X201 5/18
X201 7/18
WF1412_ge_0.5
WF1413_ge_0.5
WF1414_ge_0.5
WF1721_ge_0.5
X898:2 #472 /26.E6
EXT
A050
A1 Wobble stabiliser SV
A26 Suspension load pressure SV
A93 Raise susp. solenoid valve
A95 Suspension lock solenoid valve
A64 Right wheel position sensor
A65 Steering angle sensor
A66 Left wheel position sensor
A96 Lower link stabiliser lock SV
A72 Lower link stabil. release SV
A7 Steering switch off SV_High
A78 Steering wheel off SV_Low
A6 Pilot pressure SV_High
A79 Pilot pressure SV_Low
X1403 1/96
X1403 2/96
X1403 3/96
X1403 4/96
X1403 5/96
X1403 6/96
X1403 7/96
X1403 8/96
WF0600_ws_0.75
WF0601_ws_0.75
WF0607_ws_0.75
WF0609_ws_0.75
WF0603_ws_0.5
WF0604_ws_0.5
WF0605_ws_0.5
WF0965_ws_0.75
WF0966_ws_0.75
WF0611_ws_0.75
WF0613_ws_0.75
WF0612_ws_0.75
WF0610_ws_0.75
WF0600_ws_0.75
WF0601_ws_0.75
WF0607_ws_0.75
WF0609_ws_0.75
WF0603_ws_0.5
WF0604_ws_0.5
WF1412_ge_0.5
WF1413_ge_0.5
WF0605_ws_0.5
WF1414_ge_0.5
7/62 X1424_P
8/62 X1424_P
19/62 X1424_P
21/62 X1424_P
11/62 X1424_P
12/62 X1424_P
13/62 X1424_P
14/62 X1424_P
15/62 X1424_P
16/62 X1424_P
X1424_S 7/62
X1424_S 8/62
X1424_S 19/62
X1424_S 21/62
X1424_S 11/62
X1424_S 12/62
X1424_S 13/62
X1424_S 14/62
X1424_S 15/62
X1424_S 16/62
4/62 X1418_P
5/62 X1418_P
21/62 X1418_P
22/62 X1418_P
23/62 X1418_P
24/62 X1418_P
X1418_S 4/62
X1418_S 5/62
X1418_S 21/62
X1418_S 22/62
X1418_S 23/62
X1418_S 24/62
WM0600_ws_0.75
WM0601_ws_0.75
WM0607_ws_0.75
WM0609_ws_0.75
WM0603_ws_0.5
WM1412_ge_0.5
WM0604_ws_0.5
WM1413_ge_0.5
WM0605_ws_0.5
WM1414_ge_0.5
X669 /9.E7
WG1372_br_0.75
WG1371_br_0.75
X1517
X1518
X1513
X1514
Y082
Y083
Y085
Y086
X572 /9.G5
Transmission earth pin
WM1352_br_0.75
WM1353_br_0.75
WM1354_br_0.75
WM1356_br_0.75
X1503
X1504
X1510
X1512
Y063
Y064
Y065
Y067
X511 /9.G2
Engine earth pin
WM1350_br_ge_0.5
WM1349_br_ge_0.5
WM1348_br_ge_0.5
X1507
X1508
X1509
B068
B067
B066
Sig.
Suspension / Auto-Guide
Sheet 14
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III
931.901.000.003 b replaces 931.901.000.003
FENDT
Service-Training
Dokumentation
08/2008


Microfuse
A013
F36
F34
F35
C9
C11
C10
X202 9/18
X202 11/18
X202 10/18
WF1416 ge 0.5
WF1418 ge 0.5
WF1417 ge 0.5
EXT
A050
Front PTO sensor
Front PTO clutch SV
Rear PTO clutch speed sensor
Rear PTO sensor
Rear PTO clutch solenoid valve
Rear PTO level 2 SV
Rear PTO level 1 SV.
A8
A86
A33
A10
A77
A53
A54
X1403 8/96
X1403 86/96
X1403 33/96
X1403 10/96
X1403 77/96
X1403 53/96
X1403 54/96
WF0510 ws 0.75
WF0509 ws 0.75
WF0512 ws 0.75
WF0507 ws 0.5
WF1417 ge 0.5
WF1418 ge 0.5
WF0503 ws 0.5
WF0505 ws 0.75
WF0508 ws 0.5
X1424 S 23/62
X1424 S 22/62
X1424 S 25/62
X1423 S 48/62
X1423 S 47/62
X1423 S 46/62
X1423 S 45/62
X1423 S 33/62
X1423 S 49/62
X1423 S 50/62
WG0510 ws 0.75
WG0509 ws 0.75
WG0512 ws 0.75
X669 /9.E7
X674 /9.E8
WM1416 ge 0.5
WM0503 ws 0.5
WM1371 br ge 0.5
WM0505 ws 0.75
WM1374 br 0.75
WG1418 ge 0.5
WG0508 ws 0.5
WG1364 br ge 0.5
WG1417 ge 0.5
WG0507 ws 0.5
WG1363 br ge 0.5
X511
/9.G2
Engine earth pin
B002
Y011
B021
B020
X151
X322
X170
X169
WG0512 ws 0.75
WG1306 br 0.75
WG0509 ws 0.75
WG1309 br 0.75
WG0510 ws 0.75
WG1308 br 0.75
WG1308 br 0.75
WG1309 br 0.75
WG1306 br 0.75
X319
X361
X360
Y008
Y027
Y026
X570
/9.G5
Transmission earth pin
EXT
A050
Left external rear PTO button
Rear PTO LED on
External right rear PTO button
B36
B41
B50
X1402 36/58
X1402 41/58
X1402 50/58
WF0514 ws 0.5
WF0515 ws 0.5
WF0513 ws 0.5
X1421_S 10/12
X1421_S 11/12
10/12 X1421_P
11/12 X1421_P
WF0516 ws 0.5
X1422_S 10/12
X1422_S 11/12
10/12 X1422_P
11/12 X1422_P
WF0517 ws 0.5
S020
S019
X230
X229
WKF1377 br ge 0.5
WKF0513 ws 0.5
WKF0516 ws 0.5
WKF1378 br ge 0.5
WKF0514 ws 0.5
WKF0517 ws 0.5
X631
X1462 /12.C6
X1461 /12.C6
PTO
Sheet 15
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III
931.901.000.003 b replaces 931.901.000.003
Service-Training
Dokumentation
08/2008


EXT
A050
A3 Hydr. trailer brake 2 SV_High
A83 Hydr. trailer brake 2 SV_Low
A39 Brake pressure sensor
A2 Hyd. tr. brake release SV_High
A65 Hydr. tr. brake release SV_Low
X1403_3/96
X1403_83/96
X1403_39/96
X1403_2/96
X1403_65/96
WF0215_ws_0.75
WF1340_br_0.75
WF0216_ws_0.5
WF0214_ws_0.75
WF1341_br_0.75
EXT
A050
B27 Hand brake sensor
B25 Left brake pad wear switch
B51 Right brake pad wear switch
X1402_27/58
X1402_25/58
X1402_51/58
WF0794_ws_0.5
WF0795_ws_0.5
WF0796_ws_0.5
X202:8 #471 /14.C1
X202:6 #470 /14.C1
38/62 X1424_P WF0215_ws_0.75
39/62 X1424_P WF1340_br_0.75
11/62 X1418_P WF0216_ws_0.5
12/62 X1418_P WF1423_ge_0.5
13/62 X1418_P WF0794_ws_0.5
15/62 X1418_P WF0214_ws_0.75
16/62 X1418_P WF1341_br_0.75
17/62 X1418_P WF1424_ge_0.5
25/62 X1418_P WF0795_ws_0.5
26/62 X1418_P WF0796_ws_0.5
X1418_S15/62 WG0214_ws_0.75
X1418_S16/62 WG1341_br_0.75
X1418_S25/62 WG0795_ws_0.5
X1418_S26/62 WG0796_ws_0.5
WG1374_br_ge_0.5
WG1373_br_ge_0.5
X674 /9.E8
Y088 X1153 1/2 2/2
S087 X1652 1/2 2/2
S086 X1651 1/2 2/2
Trailer brake
Sheet 16
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III
931.901.000.003 b replaces 931.901.000.003
FENDT Service-Training Dokumentation
08/2008

Blue instrument panel

A007

ABS LED
Brake fluid switch
Quiet buzzer
Loud buzzer
Actual speed signal
Theoretical speed signal
PTO speed signal
Linkage position signal
Linkage position signal
Alternator 2 LED
Alternator 1 LED
Hydraulic oil temp. sensor
Compressed air supply sensor 2

Yellow instrument panel

A007

Fuel supply sensor
Hydraulic oil supply sensor
Sensor system earth
Sensor system earth
UB sensors
Compressed air supply sensor 1
Enter key
ESC key
UP arrow key
DOWN arrow key

Keypad

A036

DOWN arrow key
UP arrow key
ESC key
Enter key

+Ub30 X1440 47 F24 25A 48
+Ub15L X1440 83 F42 5A 84
+Ub15L X1440 79 F40 5A 80

WF0260_rt_2.5
WF0261_rt_2.5
WF0262_gn_1.5
WF0263_ws_0.5
WF0222_ge_0.75
WF1745_gn_0.75

#1672 /26.E5

WF0190_ws_0.5 X1565 /19.D3
WF0563_ws_0.5
WF0562_ws_0.5
WF0561_ws_0.5
WF0560_ws_0.5

WF0572_ws_0.5
WF1419_ge_0.5
WF1383_br_ge_0.5 X635
WF1386_br_ge_0.5

WF0571_ws_0.5
WF0548_ws_0.5
WF0162_ws_0.5
WF0163_ws_0.5

WG0260_rt_2.5 X1418_S:61/62 61/62 X1418_P
WG0261_rt_2.5 X1418_S:60/62 60/62 X1418_P
WG0262_gn_1.5 X1418_S:58/62 58/62 X1418_P
WG0263_ws_1.5 X1418_S:59/62 59/62 X1418_P

X551 /8.F4
Operator platform earth pin

WF1318_br_ws_0.5 X1543 1/1
WF0554_ws_0.5 X1542 1/1
S076

WF1377_br_ws_0.5 X204 1/3
WF0559_ws_0.5 X204 2/3
WF0558_ws_0.5 X204 3/3
H006

X1683_S:1 #1672 /24.F3

WF0552_ws_0.5
WF0551_ws_0.5
WF0963_ws_0.5
WF0553_ws_0.5
WF0964_ws_0.5
WF1222_ge_0.75
WF1224_gn_0.75

X1419_S 3/21
X1419_S 4/21
X1419_S 5/21
X1419_S 2/21
X1419_S 1/21
X1419_S 6/21
X1419_P 3/21
X1419_P 4/21
X1419_P 5/21
X1419_P 2/21
X1419_P 1/21
X1419_P 6/21

WK2001_ge_0.75

#1672 /25.B5

WK0552_ws_0.5
WK0551_ws_0.5
WK0963_ws_0.5
WK0553_ws_0.5
WK0964_ws_0.5
WK1222_ge_0.75
WK1318_br_0.5

X007 1/7 2/7 3/7 4/7 5/7 6/7 7/7
Implement socket

X533 /9.F6
Cab earth pin

X1424_S 27/62 27/62 X1424_P
X1424_S 29/62 29/62 X1424_P
X1424_S 35/62 35/62 X1424_P
X1424_S 26/62 26/62 X1424_P
X1424_S 28/62 28/62 X1424_P
X1424_S 36/62 36/62 X1424_P

X1423_S 56/62 56/62 X1423_P
X1423_S 54/62 54/62 X1423_P

X1418_S 7/62 7/62 X1418_P
X1418_S 8/62 8/62 X1418_P

WM1383_br_ge_0.5
X678

WG1421_ge_0.5 X1525
WG1386_br_ge_0.5 X698

WABS0260_rt_2.5 X837_P 1/8 1/8 X837_S
WABS0261_rt_2.5 X837_P 2/8 2/8 X837_S
WABS0262_gn_1.5 X837_P 3/8 3/8 X837_S
WABS0266_br_1.5 X837_P 4/8 4/8 X837_S
WABS0265_br_4 X837_P 5/8 5/8 X837_S
WABS0263_ws_1.5 X837_P 6/8 6/8 X837_S
WABS0268_br_2.5 X837_P 7/8 7/8 X837_S
WABS0267_br_2.5

X814
X596

X1048 1 2 3 4 5 6 7
ABS socket

WG0265_br_2.5
WG0264_br_2.5
WG0266_br_1.5

X558 /9.G4
Transmission earth pin

WF1315_br_1.5 12/31 X1401
WF1024_gn_1.5 13/31 X1401

A039 /2.E7

WM0163_ws_1 X449 1/1
WM0162_ws_1 X064 1/1

G004
G002

WM0548_ws_0.5 X162 1/2
WM1384_br_ge_0.5 X162 2/2
B013

WM0546_ws_0.5 X182 1/3
WM1366_br_ge_0.5 X182 3/3
B034

WM0582_ws_0.5 X214 1/2
WM1388_br_ge_0.5 X214 2/2
B084
12 Steps

WG1420_ge_0.5 X168 3/3
WG0571_ws_0.5 X168 2/3
WG1367_br_ge_0.5 X168 1/3
B019

WG1422_ge_0.5 X1410 3/3
WG0572_ws_0.5 X1410 2/3
WG1387_br_ge_0.5 X1410 1/3
B060

Instrument panel / ABS / Driver seat Sheet 17

FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

FENDT Service-Training Dokumentation 08/2008

ZE

A038

4th hydr. circuit relay (30) A21
Wk light corner light rel.(30) A3
Work light relay (NA) (30) A7
Additional headlight 56a A11
Additional headlight 56b A20
Wk light corner light rel.(87) A1
Headlight 56a A17
Headlight 56b A10
4th hydr. circuit relay (87) A19
Socket 54 A8
Work light relay (NA) (87) A13
Left brake light A6
Right brake light A5
Electronics earth A2
Control bus_Low A9
Control bus_High A12
Air conditioning earth A14
UB 15 A15
UB 5 V air conditioning A18

X1404 21/21 X1404 3/21 X1404 7/21 X1404 11/21 X1404 20/21 X1404 1/21 X1404 17/21 X1404 10/21 X1404 19/21 X1404 8/21 X1404 13/21 X1404 6/21 X1404 5/21 X1404 2/21 X1404 9/21 X1404 12/21 X1404 14/21 X1404 15/21 X1404 18/21

X1440 +Ub30 1 — F1 — 2 nur bei NA bestückt
X1440 +Ub30 27 — F14 15A — 28
X1440 +Ub30 41 — F21 10A — 42

WF0100,rt_2.5
WF0101,rt_2.5
WF0189,rt_2.5

WF0105,ws_2.5
WF0107,ws_2.5
WF0106,ws_2.5
WF0188,ws_2.5
WF0202,ws_1.5
WF0156,ws_2.5
WF0201,ws_0.75
WF0200,ws_0.75

WF0318,ws_0.5 X796_S:8 #1657 /20.C7
WF1228,gn_0.5 X1578 /8.C5
WF1372,br_ws_0.5 X766
WF0824,ws_0.5 X598 /10.D7
WF0825,ws_0.5 X599 /10.D7
WF1371,br_ws_0.5 X661 /9.E4

E003
56a/3 X352 WK0115,ws_2.5
31/3 X352 WK1323,br_2.5
56b/3 X352 WK0106,ws_2.5

E004
56a/3 X353 WK0116,ws_2.5
31/3 X353 WK1301,br_2.5
56b/3 X353 WK0107,ws_2.5

X1417_P 3/21 — 3/21 X1417_S WF0115,ws_2.5
X1417_P 4/21 — 4/21 X1417_S WF0116,ws_2.5
X1417_P 5/21 — 5/21 X1417_S WF0117,ws_2.5
X1417_P 6/21 — 6/21 X1417_S WF0118,ws_2.5

X657 WF0128,ws_2.5
X658 WF0102,ws_2.5

X532 /9.F7 Cab earth pin

X659
X651
X650

WF0104,ws_2.5
WF0172,ws_2.5
WF0175,ws_2.5
WF0174,ws_2.5
WF0176,ws_2.5
WF0173,ws_2.5

X1421_S 1/12 — 1/12 X1421_P WKF0135,ws_0.75 X919 1/3 — E067 (sw, bl, gn; 2, 3, 1; 31, 58, 54)
X1422_S 1/12 — 1/12 X1422_P WKF0136,ws_0.75 X918 1/3 — E066 (sw, bl, gn; 2, 3, 1; 31, 58, 54)

X1425_S 1/39 — 1/39 X1425_P
X1425_S 2/39 — 2/39 X1425_P
X1425_S 3/39 — 3/39 X1425_P
X1425_S 14/39 — 14/39 X1425_P
X1425_S 15/39 — 15/39 X1425_P
X1425_S 4/39 — 4/39 X1425_P

WM0104,ws_2.5
WM0105,ws_2.5
WM0106,ws_2.5
WM0107,ws_2.5
WM0108,ws_2.5
WM0109,ws_2.5

E074 1/2 X1289 WHM0104,ws_2.5; 2/2 X1289 WHM1301,br_2.5
E098 56A 31 1/2 X1603 WHM0105,ws_2.5; 2/2 X1603 WHM1302,br_2.5
E099 56B 31 1/2 X1604 WHM0106,ws_2.5; 2/2 X1604 WHM1303,br_2.5
E100 56A 31 1/2 X1605 WHM0107,ws_2.5; 2/2 X1605 WHM1310,br_2.5
E101 56B 31 1/2 X1606 WHM0108,ws_2.5; 2/2 X1606 WHM1311,br_2.5
E075 1/2 X1290 WHM0109,ws_2.5; 2/2 X1290 WHM1312,br_2.5

X1436_S 1/12 — 1/12 X1436_P
X1436_S 2/12 — 2/12 X1436_P
X1436_S 3/12 — 3/12 X1436_P
X1436_S 9/12 — 9/12 X1436_P
X1436_S 4/12 — 4/12 X1436_P
X1436_S 10/12 — 10/12 X1436_P
X1436_S 5/12 — 5/12 X1436_P
X1436_S 11/12 — 11/12 X1436_P
X1436_S 6/12 — 6/12 X1436_P
X1436_S 12/12 — 12/12 X1436_P
X1436_S 7/12 — 7/12 X1436_P
X1436_S 8/12 — 8/12 X1436_P

WM1312,br_2.5
WM1311,br_2.5
WM1310,br_2.5
WM1303,br_2.5
WM1302,br_2.5
WM1301,br_2.5

X899
WM1330,br_6
X520 /9.G3 Engine earth pin

WG1366,br_2.5
X838_S 6/8
X838_P 6/8
X572 /9.G5 Transmission earth pin

WG0188,ws_2.5
X1423_S 62/62 — 62/62 X1423_P
X838_S 7/8
X838_P 7/8
WFR1366,br_2.5
WFR0188,ws_2.5
X015 R 54G 31 R 58R 54 58L
External control socket

X1418_P 62/62
X1418_P 57/62 — 57/62 X1418_S
WG0202,ws_1.5
X018 54/7
54 54G 58L 31 R 58R
Rear socket

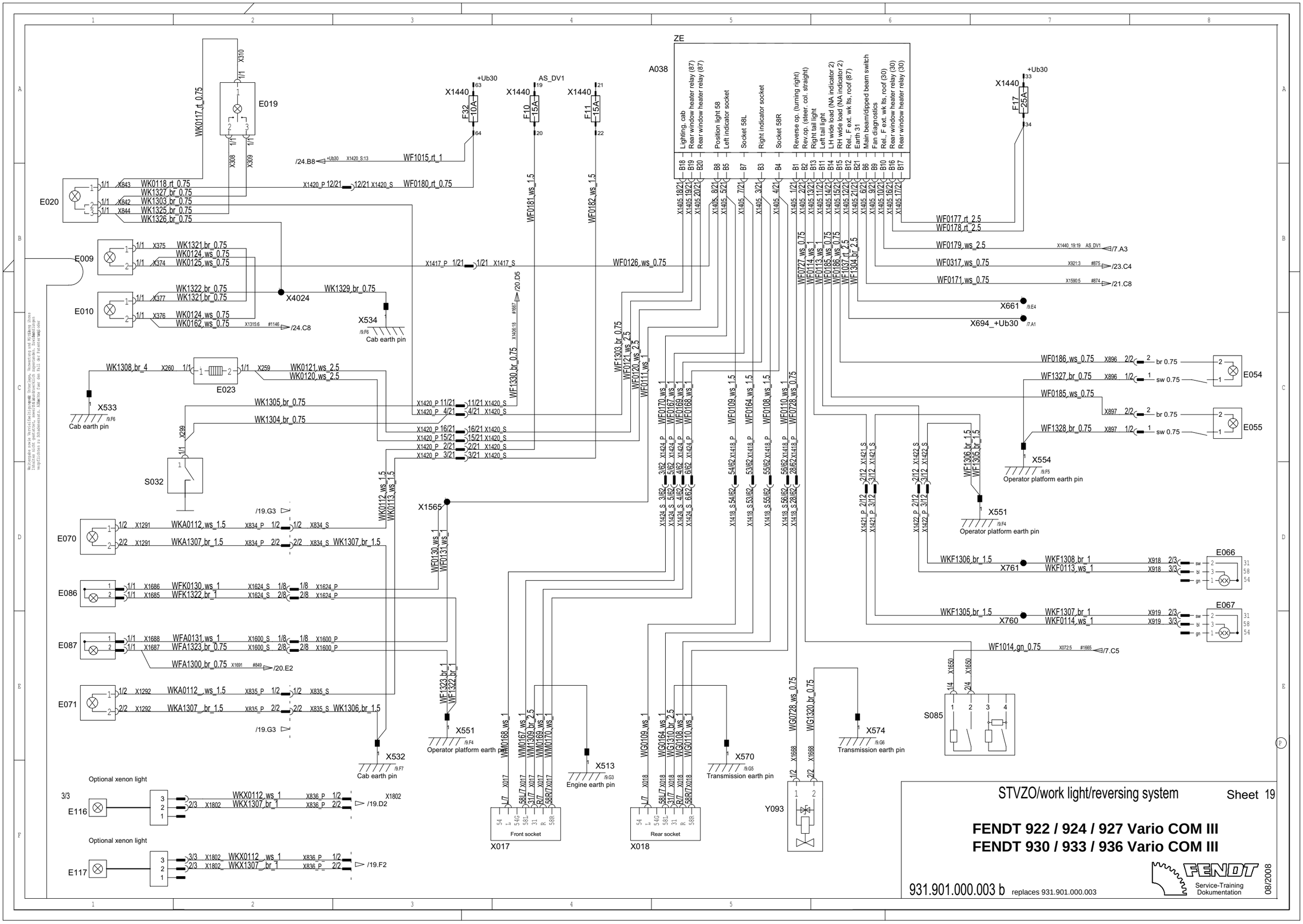
STVZO/corner light/4th hydraulic circuit Sheet 18

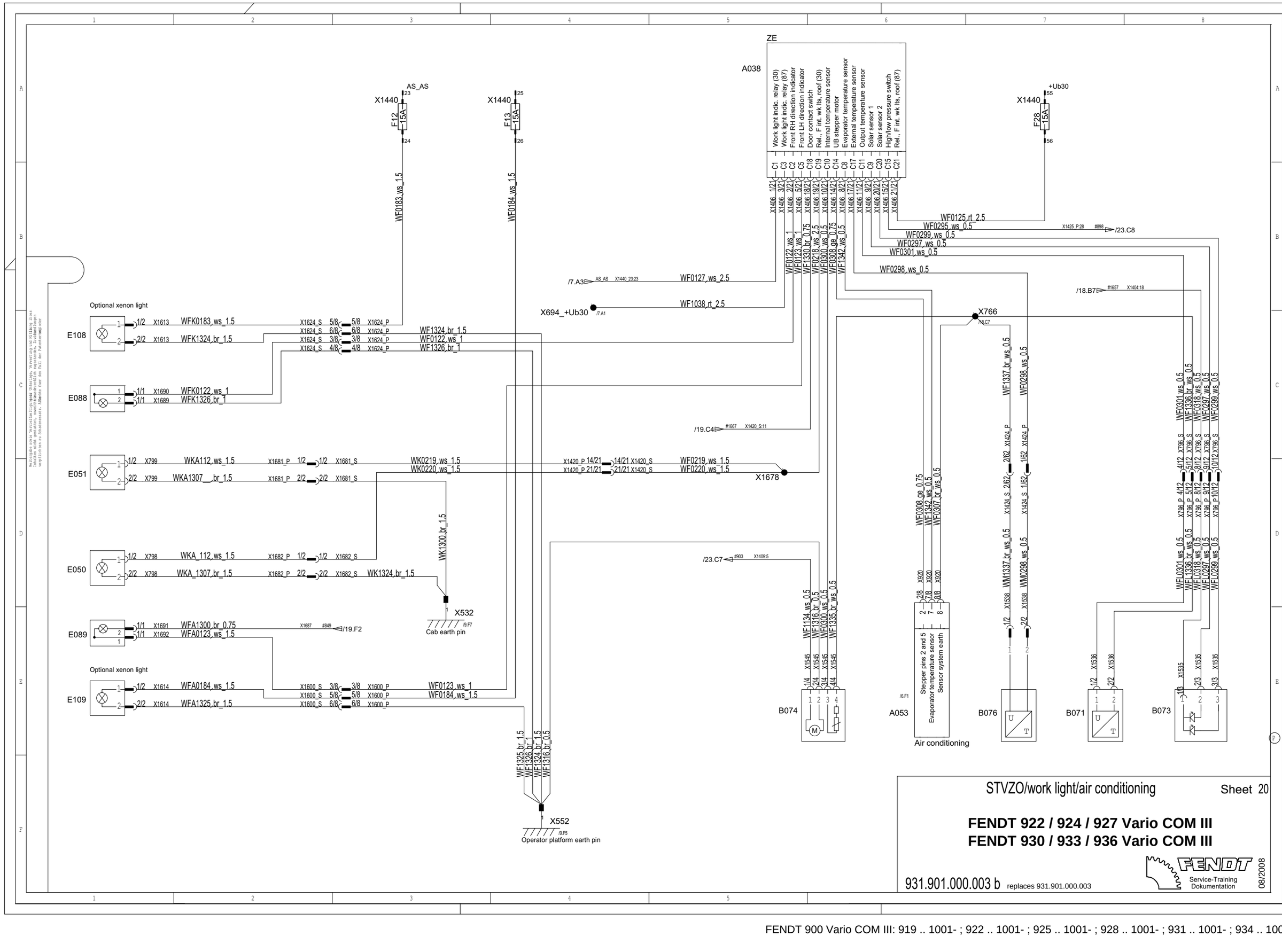
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

FENDT Service-Training Dokumentation 08/2008

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ZE
A038
Lighting, cab
Rear window heater relay (87)
Rear window heater relay (87)
Position light 58
Left indicator socket
Socket 58L
Right indicator socket
Socket 58R
Reverse op. (turning right)
Rev.op. (steer. col. straight)
Right tail light
Left tail light
LH wide load (NA indicator 2)
RH wide load (NA indicator 2)
Rel., F ext. wk lts, roof (87)
Earth 31
Main beam/dipped beam switch
Fan diagnostics
Rel., F ext. wk lts, roof (30)
Rear window heater relay (30)
Rear window heater relay (30)
+Ub30
AS_DV1
X1440
F32 10A
F10 15A
F11 15A
F17 25A
E019
E020
E009
E010
E023
E070
E086
E087
E071
E116
E117
E054
E055
E066
E067
S032
S085
X4024
X534
X533
X532
X513
X1565
X551
X554
X661
X694_+Ub30
X574
X570
X761
X760
X017
X018
Front socket
Rear socket
Cab earth pin
Engine earth pin
Operator platform earth pin
Transmission earth pin
Optional xenon light
Y093
WK0117_rt_0.75
WF1015_rt_1
WF0180_rt_0.75
WF0181_ws_1.5
WF0182_ws_1.5
WF0177_rt_2.5
WF0178_rt_2.5
WF0179_ws_2.5
WF0317_ws_0.75
WF0171_ws_0.75
WF0126_ws_0.75
WF1329_br_0.75
WF1330_br_0.75
WF1303_br_0.75
WF0121_ws_2.5
WF0120_ws_2.5
WF0111_ws_1
WF0186_ws_0.75
WF1327_br_0.75
WF0185_ws_0.75
WF1328_br_0.75
WF1306_br_1.5
WF1305_br_1.5
WF0112_ws_1.5
WF0113_ws_1.5
WF0130_ws_1
WF0131_ws_1
WF1323_br_1
WF1322_br_1
WF1014_gn_0.75
WF0727_ws_0.75
WF0114_ws_1
WF0113_ws_1
WF0185_ws_0.75
WF0186_ws_0.75
WF1037_rt_2.5
WF1304_br_2.5
WF0170_ws_1
WF0167_ws_1
WF0169_ws_1
WF0168_ws_1
WF0109_ws_1.5
WF0164_ws_1.5
WF0108_ws_1.5
WF0110_ws_1
WF0728_ws_0.75
WG0728_ws_0.75
WG1320_br_0.75
WG0109_ws_1
WG0164_ws_1
WG1310_br_2.5
WG0108_ws_1
WG0110_ws_1
WM0167_ws_1
WM1309_br_2.5
WM0169_ws_1
WM0170_ws_1
WM0168_ws_1
WK1308_br_4
WK0121_ws_2.5
WK0120_ws_2.5
WK1305_br_0.75
WK1304_br_0.75
WK0112_ws_1.5
WK1307_br_1.5
WK1306_br_1.5
WKF1306_br_1.5
WKF1308_br_1
WKF0113_ws_1
WKF1305_br_1.5
WKF1307_br_1
WKF0114_ws_1
STVZO/work light/reversing system
Sheet 19
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III
931.901.000.003 b
replaces 931.901.000.003
Service-Training Dokumentation
08/2008



FENDT 900 Vario COM III: 919 .. 1001- ; 922 .. 1001- ; 925 .. 1001- ; 928 .. 1001- ; 931 .. 1001- ; 934 .. 1001-

ZE

A038

+Ub30 X1440 29 F15 15A 30

+Ub30 X1440 57 F29 10A 58

+Ub15ZE X1440 85 F43 10A 86

Relay 15L (87) D13
Rotating beacon relay (87) D21
Rel., R ext. wk lts, roof (87) D3
Relay 15L (30) D7
Relay 15L (86) D16
Rear right direction indicator D20
Rear left direction indicator D17
Rel, R ext. wk lts, roof (30) D1
Rotating beacon relay (30) D19
Rear wiper 31B D11
Rear wiper 53 D8
Front wiper 31b D9
Front wiper 53 D5
Reverse op. (turning left) D2
Front washer ON D10
Front wiper intermittent D15
Front wiper ON D14

X1407 13/21 X1407 21/21 X1407 3/21 X1407 7/21 X1407 16/21 X1407 20/21 X1407 17/21 X1407 1/21 X1407 19/21 X1407 11/21 X1407 8/21 X1407 9/21 X1407 5/21 X1407 2/21 X1407 10/21 X1407 15/21 X1407 14/21

/7.A8 +Ub15L X1440 79:79 WF1028 gn 2.5
WF0138 rt 1.5
WF0129 rt 2.5
WF1027 rt 2.5
X694_+Ub30 /7.A1
WF1030 gn 1
X608 /7.D5

WF0140 ws 0.75
WF0139 ws 0.75
WF0141 ws 0.75
WF0132 gn 0.75

WF0312 ws 0.75
WF0311 ws 0.75
WF0137 ws 2.5
WF0160 ws 2.5
WF0143 ws 0.75
WF0142 ws 1.5
WF0144 ws 0.5
WF0145 ws 1.5
WF0729 ws 0.75

X762
WF0133 gn 0.75
WF0135 gn 0.75
WF0134 gn 0.75
WF0136 gn 0.75
WF0171 ws 0.75 X1405:6 #874 /19.C7

X1591 7/8 3/8 2/8
X1590 8/8 7/8 6/8 5/8 4/8

S079
8 7 6 5 4 3 2 1

E082 1 2 1/1 X1561 WK0137 ws 2.5 1/1 X1562 WK1311 br 2.5

E065 R 31 sw gn 2/2 X917 WKF0312 ws 0.75 1/2 X917 WKF1311 br 0.75
X760 /19.E7

E064 L 31 sw gn 2/2 X916 WKF0311 ws 0.75 1/2 X916 WKF1312 br 0.75
X761 /19.E7

X1421_S 4/12 X1422_S 4/12
X1421_P 4/12 X1422_P 4/12

X1420_S 8/21 7/21 10/21 9/21
X1420_P 8/21 7/21 10/21 9/21

WF1307 br 1.5
X552 /9.F5
Operator platform earth pin

X796_S 12/12 1/12 6/12
X796_P 12/12 1/12 6/12

X1418_S 27/62
X1418_P 27/62

E085 1 2 1/1 X1563 WK0138 ws 2.5 1/1 X1564 WK1312 br 2.5
X793
WK0135 ws 2.5
WK0160 ws 2.5

X769
WK0189 ws 1.5
WK0188 ws 1.5

X532 /9.F7
Cab earth pin

WK1313 br 1.5
X534 /9.F6
Cab earth pin

WK0143 ws 0.75
WK0142 ws 1.5
WK0144 ws 0.5
WK0145 ws 1.5

X258 2/4 3/4 1/4
X347 2/4 3/4 1/4

A

3 4
2 4 1 3 1

br 1 sw-gn 1 sw 1 ge 1

M004
M002
31 53a 31b 53 M

WG0729 ws 0.75
WG1321 br 0.75

X574 /9.G6
Transmission earth pin

X346 1/1
X345 1/1

E021
E022

Y092 X1667 1/2 2/2
1 2

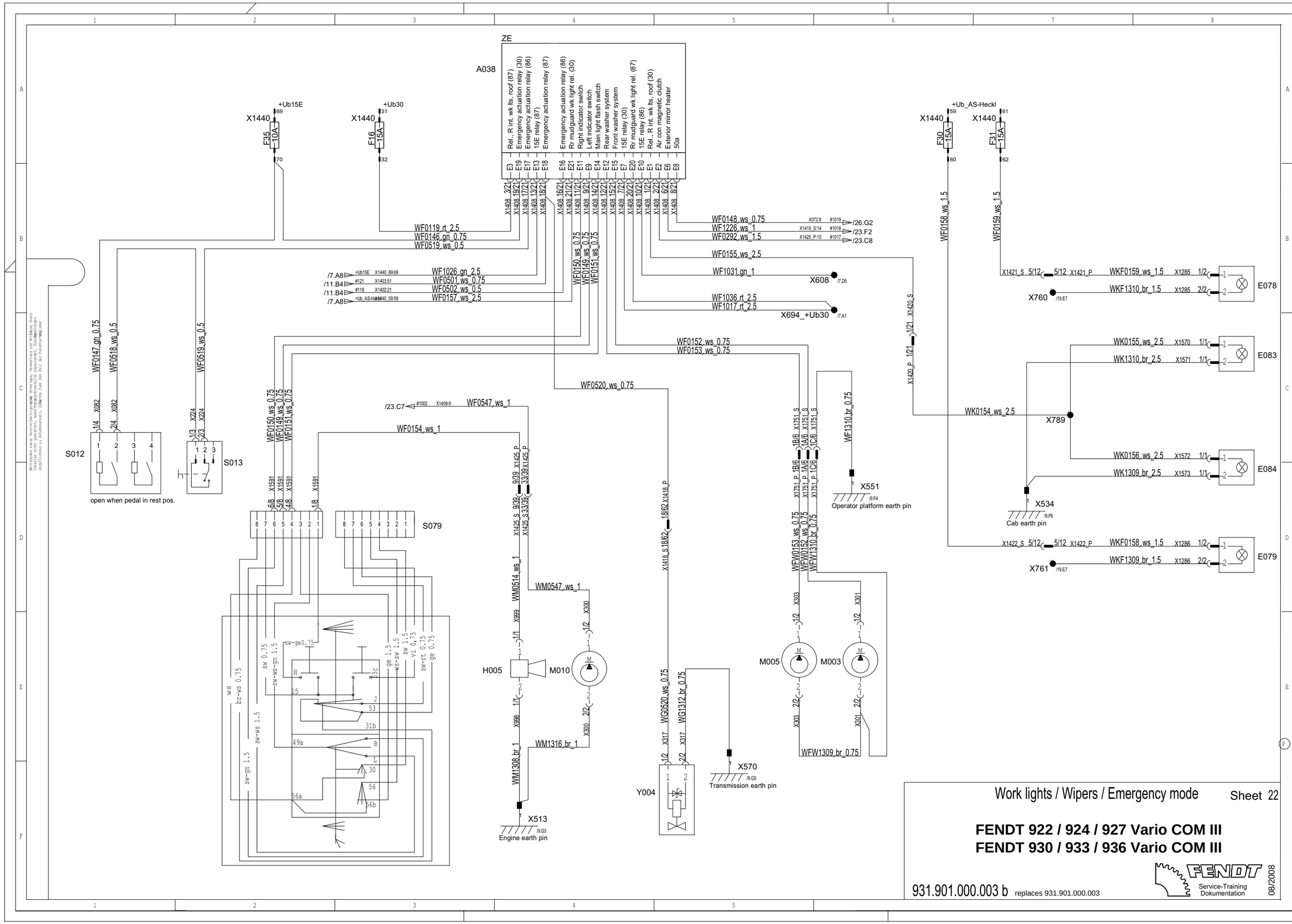
ws
br-ws 0.75
SW-WS-gn 1.5
SW-WS 1.5
SW-gn 1.5
sw-ge0.75
SW 0.75
ge 1.5
ws-sw 1.5
sw 1.5
vi 0,75
sw-rt 0.75
ge 0.75
53c
15
J
53
31b
49a
R
L
30
56
56a
56b

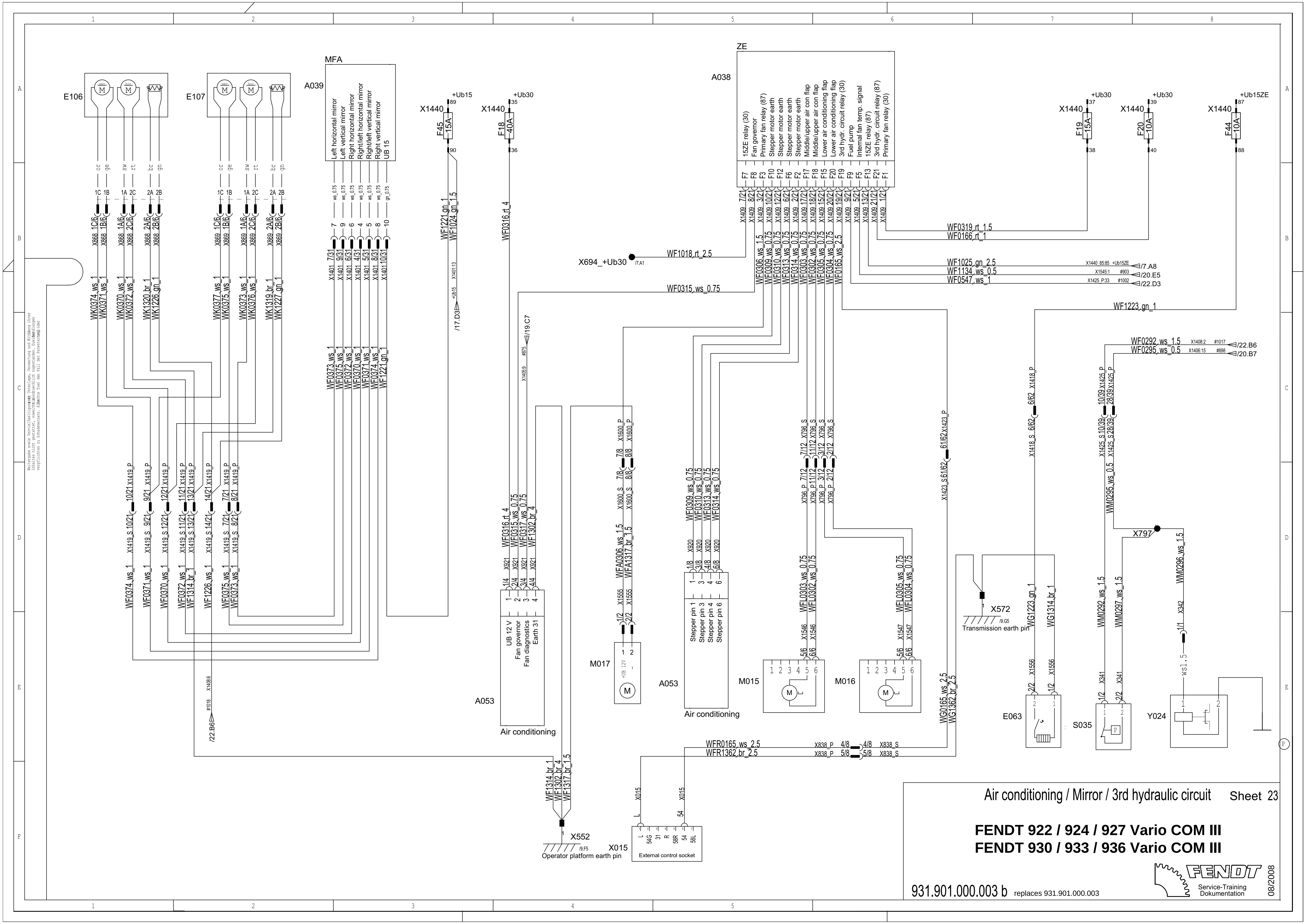
Wipers / Work lights Sheet 21

FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

FENDT Service-Training Dokumentation 08/2008


ZE
A038
Rel., R int. wk lts, roof (87)
Emergency actuation relay (30)
Emergency actuation relay (86)
15E relay (87)
Emergency actuation relay (87)
Emergency actuation relay (86)
Rr mudguard wk light rel. (30)
Right indicator switch
Left indicator switch
Main light flash switch
Rear washer system
Front washer system
15E relay (30)
Rr mudguard wk light rel. (87)
15E relay (86)
Rel., R int. wk lts, roof (30)
Air con magnetic clutch
Exterior mirror heater
50a
+Ub15E
+Ub30
+Ub_AS-Heckl
X1440
F35 10A
F16 15A
F30 15A
F31 15A
WF0119,rt_2.5
WF0146,gn_0.75
WF0519,ws_0.5
WF0148,ws_0.75
WF1226,ws_1
WF0292,ws_1.5
WF0155,ws_2.5
WF1031,gn_1
WF1036,rt_2.5
WF1017,rt_2.5
X608
X694_+Ub30
WF0147,gn_0.75
WF0518,ws_0.5
WF0519,ws_0.5
WF0150,ws_0.75
WF0149,ws_0.75
WF0151,ws_0.75
WF0152,ws_0.75
WF0153,ws_0.75
WF0520,ws_0.75
WF0547,ws_1
WF0154,ws_1
WF1310,br_0.75
WF0158,ws_1.5
WF0159,ws_1.5
WK0154,ws_2.5
X789
WK0155,ws_2.5
WK1310,br_2.5
WK0156,ws_2.5
WK1309,br_2.5
E078
E083
E084
E079
WKF0159,ws_1.5
WKF1310,br_1.5
WKF0158,ws_1.5
WKF1309,br_1.5
X760
X761
X534
X551
Operator platform earth pin
Cab earth pin
S012
S013
S079
open when pedal in rest pos.
WM0547,ws_1
WM1316,br_1
WM1308,br_1
WM0514,ws_1
H005
M010
X513
Engine earth pin
WG0520,ws_0.75
WG1312,br_0.75
Y004
X570
Transmission earth pin
M005
M003
WFW1309,br_0.75
WFW0153,ws_0.75
WFW0152,ws_0.75
WFW1310,br_0.75
Work lights / Wipers / Emergency mode
Sheet 22
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III
931.901.000.003 b
replaces 931.901.000.003
Service-Training Dokumentation
08/2008

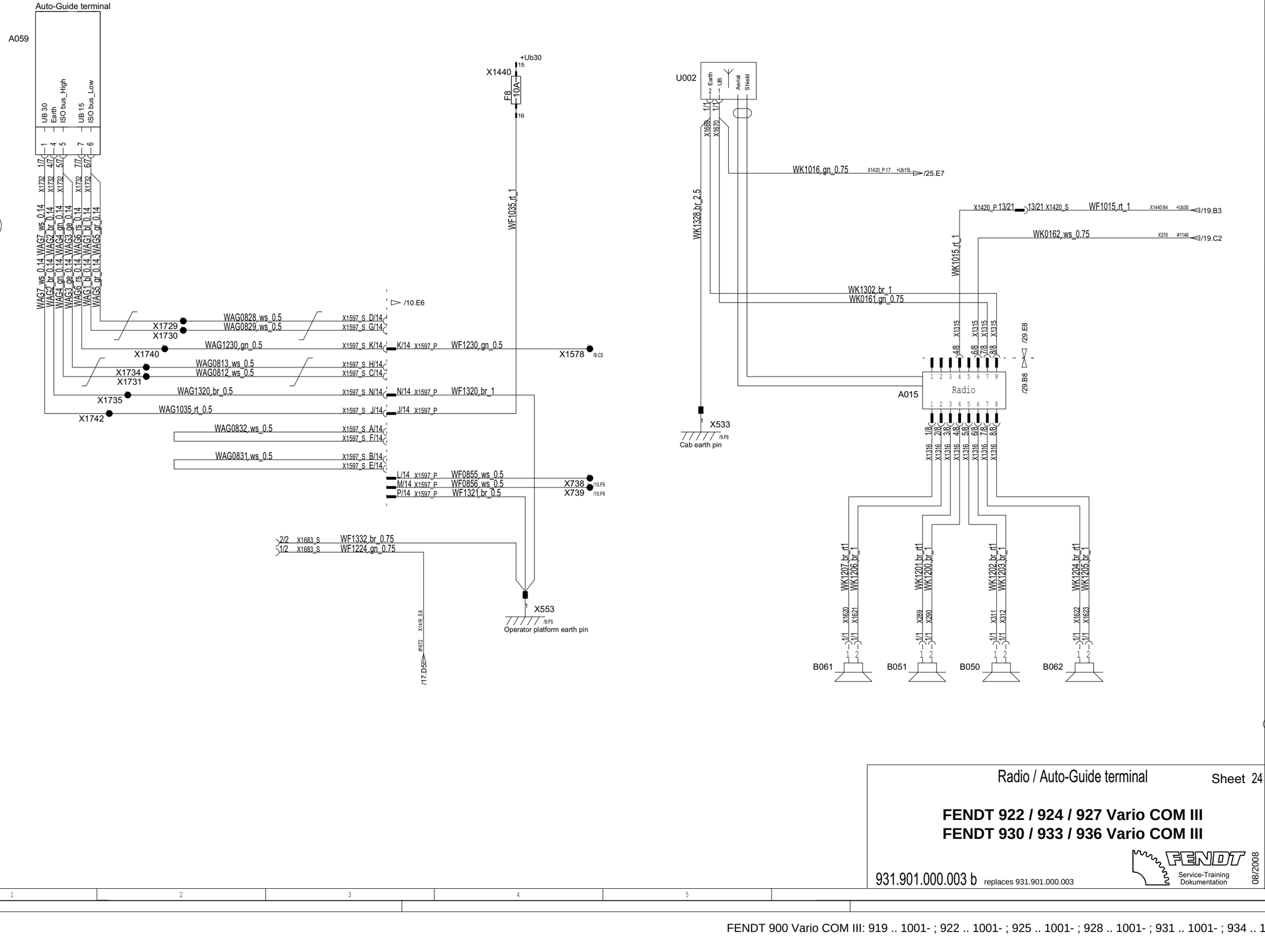


Air conditioning / Mirror / 3rd hydraulic circuit — Sheet 23

FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

FENDT Service-Training Dokumentation 08/2008



Radio / Auto-Guide terminal

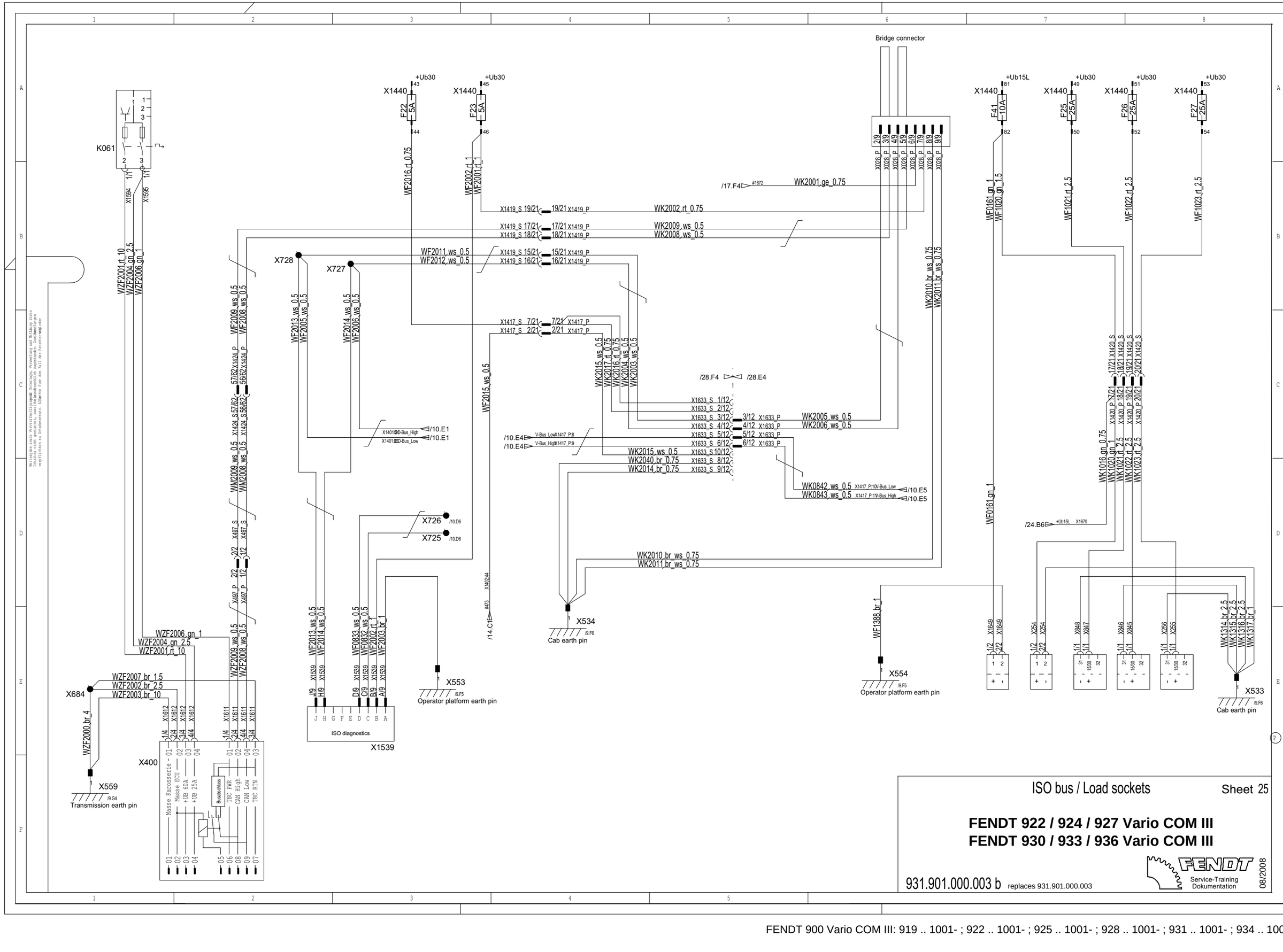
Sheet 24

FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

FENDT Service-Training Dokumentation

08/2008



ISO bus / Load sockets — Sheet 25

FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

FENDT Service-Training Dokumentation 08/2008

FENDT 900 Vario COM III: 919 .. 1001- ; 922 .. 1001- ; 925 .. 1001- ; 928 .. 1001- ; 931 .. 1001- ; 934 .. 1001-

EDC

A051

Fan speed sensor — 69 — X1466 69/89
Fan earth — 67 — X1466 67/89
Fan solenoid valve (85) — 15 — X1466 15/89
Fan solenoid valve (86) — 14 — X1466 14/89
UB fan — 68 — X1466 68/89
Electronics earth — 29 — X1466 29/89
Coolant level sensor — 55 — X1466 55/89
Vacuum switch — 42 — X1466 42/89
UB sensors — 21 — X1466 21/89
50a — 74 — X1466 74/89
Engine brake switch — 47 — X1466 47/89
Starter lockout switch — 66 — X1466 66/89
ISO characteristic curve — 89 — X1466 89/89
Foot throttle sensor — 79 — X1466 79/89
Foot throttle earth — 78 — X1466 78/89
UB 5 V foot throttle — 77 — X1466 77/89
Start relay — 37 — X1466 37/89
Start relay — 17 — X1466 17/89

EXT

A050

Foot throttle sensor — B18 — X1402 18/58

WM1721 br 0.75
WM1715 ws 0.75
WM1711 ge 0.75
WM1710 br 0.75
WM1712 ws 0.75
WM1728 ws 0.5
WM1714 ws 0.75
WM1708 ws 0.75
WM1736 ws 0.75

WM1717 ge 0.75
WM1718 ge 0.75
WM1719 ge 0.75
X1528

X1424 P41/62 — 41/62 X1424 S
X1424 P42/62 — 42/62 X1424 S
X1424 P43/62 — 43/62 X1424 S
X1424 P44/62 — 44/62 X1424 S
X1424 P45/62 — 45/62 X1424 S
X1424 P46/62 — 46/62 X1424 S
X1424 P47/62 — 47/62 X1424 S
X1424 P48/62 — 48/62 X1424 S
X1424 P49/62 — 49/62 X1424 S

WM1724 ws 0.75
WM1726 br 0.75
WM1723 br 0.75
WM1722 ws 0.75
WM1725 ws 0.75

X1532 1/5 2/5 3/5 4/5 5/5

B077 — Sig. — 85 — 86 — + — U / f

WM1716 br 0.75
WM1707 ws 0.75

X244 2/2 1/2

S034 — Q

WM1709 ws 0.75
WM1720 ge 0.75

X153 2/2 1/2

B004

WM1715 ws 0.75
WM1721 br 0.75

X1648 1/2 85
X1648 2/2 86

K065 — 87 — 30

50 — 30

M001

WF1736 ws 0.75
WF1719 ge 0.75
WF1708 ws 0.75
WF1718 ge 0.75
WF1714 ws 0.75
WF1728 ws 0.75
WF1711 ge 0.75
WF1710 br 0.75
WF1712 ws 0.75

/14.B4 #472 X201:7

X660 /9.B6

/17.C5 #1672

X553 /9.F5
Operator platform earth p

WF1745 gn 0.75
WF1746 br 0.75

X140 1/2 2/2

S047

X082 3/4 4/4

S012
open when pedal in rest pos.

X810_S
A/12 B/12 K/12
A B C D E F G H J K L M
ISO characteristic curve

WF1723 br ge 0.5
WF1721 ge 0.5
WF1713 ws 0.5

X888 1/6 2/6 3/6 4/6 5/6 6/6

B055
1 2 3 — Sig. — − + — I
4 5 6 — Sig. — − + — U

S002
58 — 15_54 — 0 1 2 — 30 — 50a

X072 8/6

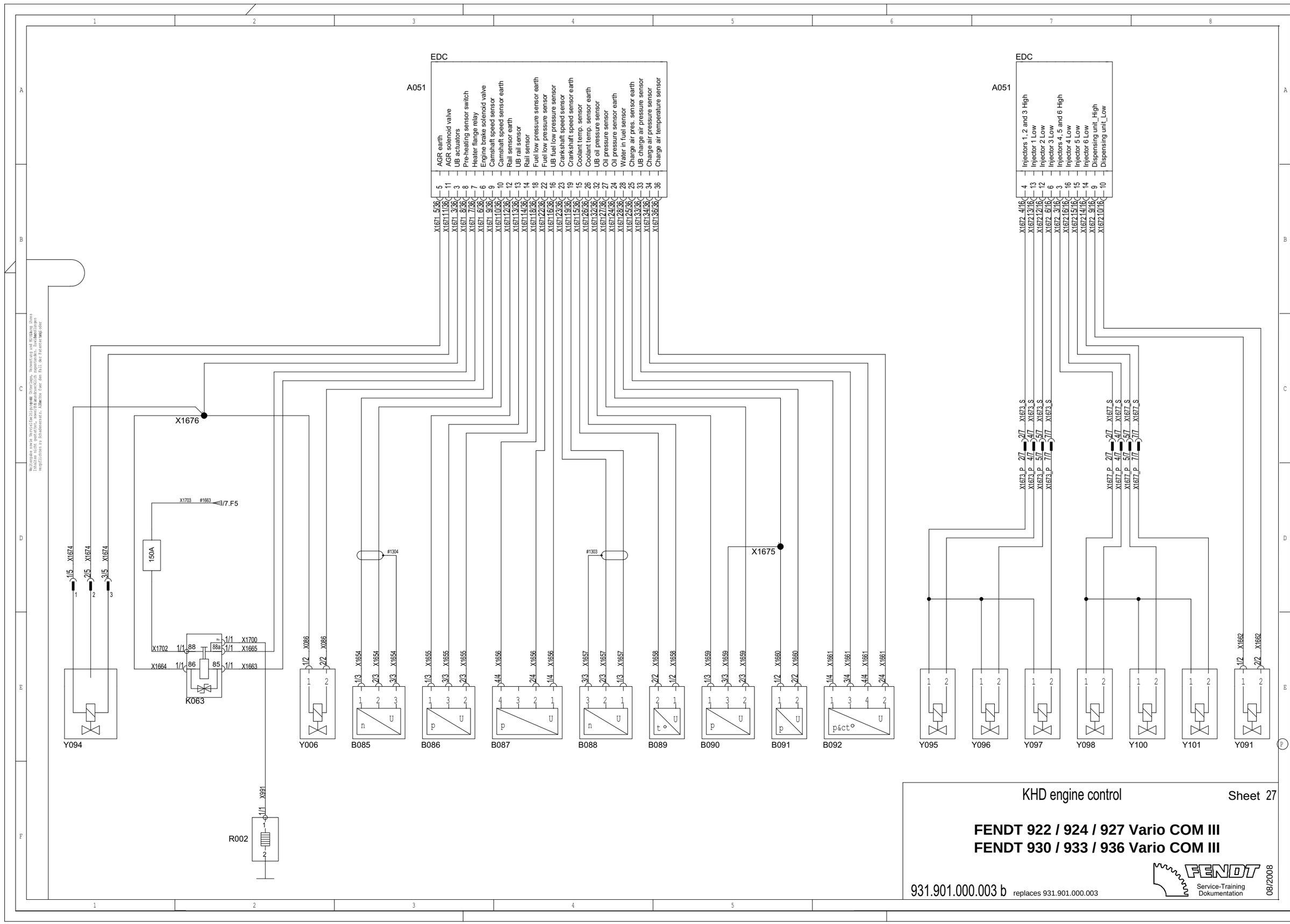
/22.B6 #1019 X1408:8 — WF0148 ws 0.75

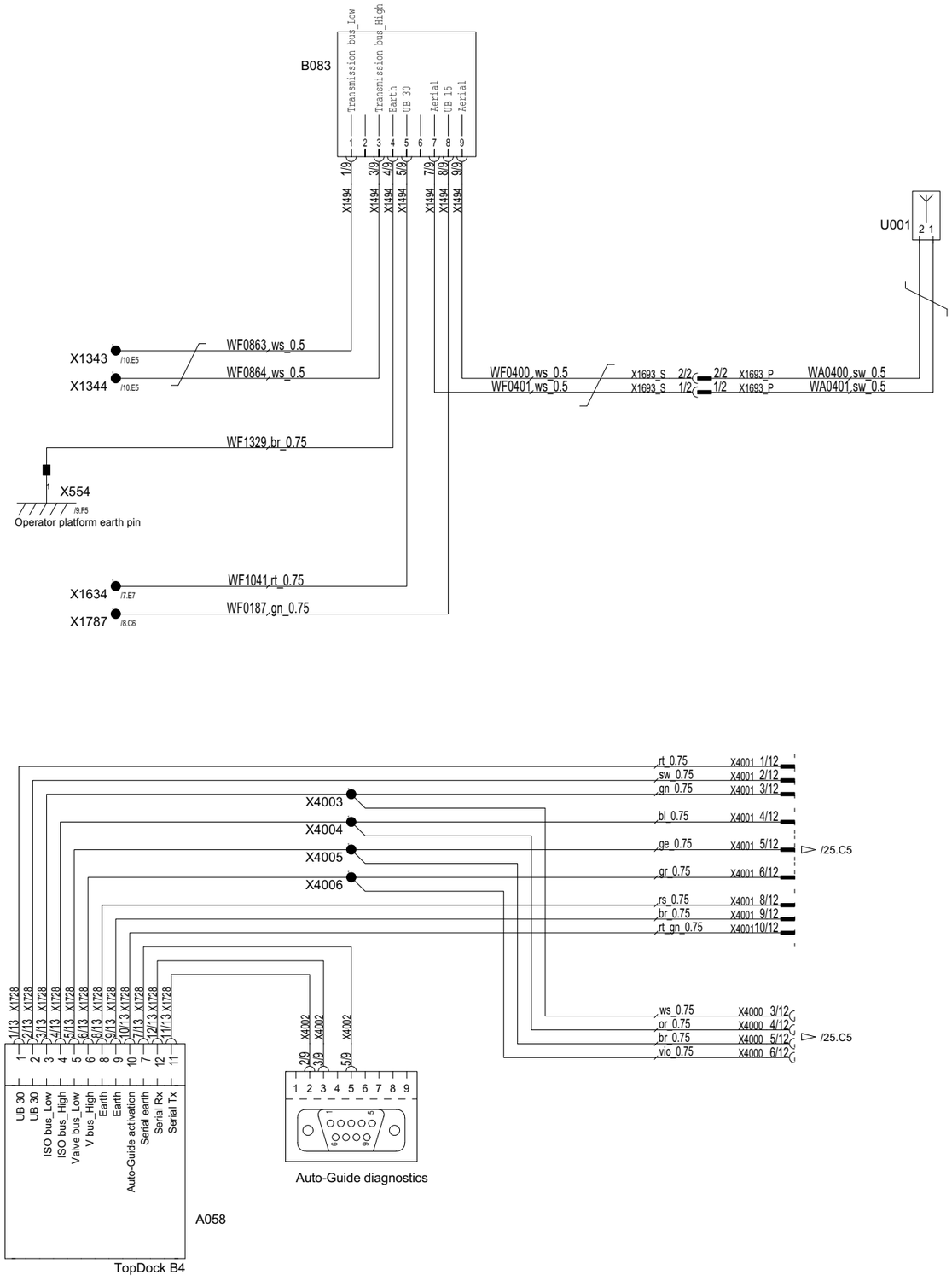
EDC engine control — Sheet 26

FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

FENDT Service-Training Dokumentation 08/2008


EDC
A051
AGR earth
AGR solenoid valve
UB actuators
Pre-heating sensor switch
Heater flange relay
Engine brake solenoid valve
Camshaft speed sensor
Camshaft speed sensor earth
Rail sensor earth
UB rail sensor
Rail sensor
Fuel low pressure sensor earth
Fuel low pressure sensor
UB fuel low pressure sensor
Crankshaft speed sensor
Crankshaft speed sensor earth
Coolant temp. sensor
Coolant temp. sensor earth
UB oil pressure sensor
Oil pressure sensor
Oil pressure sensor earth
Water in fuel sensor
Charge air pres. sensor earth
UB charge air pressure sensor
Charge air pressure sensor
Charge air temperature sensor
EDC
A051
Injectors 1, 2 and 3 High
Injector 1 Low
Injector 2 Low
Injector 3 Low
Injectors 4, 5 and 6 High
Injector 4 Low
Injector 5 Low
Injector 6 Low
Dispensing unit_High
Dispensing unit_Low
X1676
X1675
X1703 #1663 /7.F5
150A
K063
R002
Y094
Y006
B085
B086
B087
B088
B089
B090
B091
B092
Y095
Y096
Y097
Y098
Y100
Y101
Y091
KHD engine control
Sheet 27
FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III
931.901.000.003 b replaces 931.901.000.003
FENDT Service-Training Dokumentation
08/2008

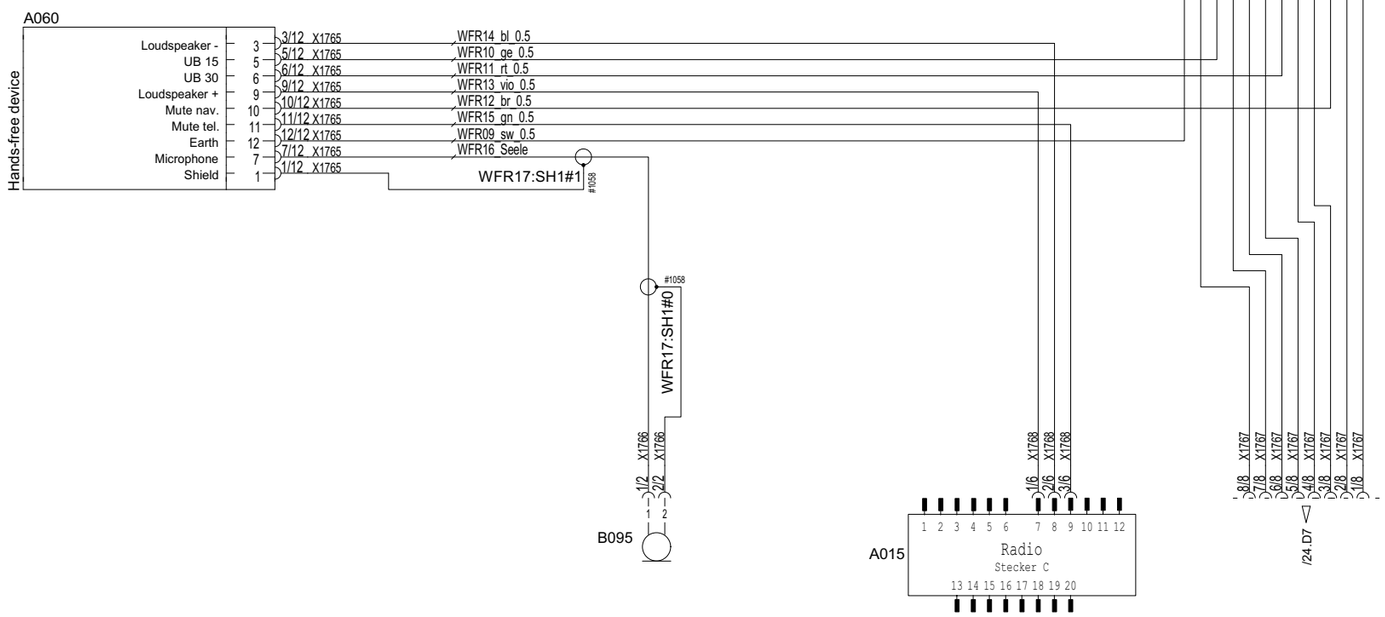


Immobiliser / Vario-Doc / Auto-Guide Sheet 28

FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

FENDT Service-Training Dokumentation 08/2008



Hands-free device Sheet 29

FENDT 922 / 924 / 927 Vario COM III
FENDT 930 / 933 / 936 Vario COM III

931.901.000.003 b replaces 931.901.000.003

FENDT Service-Training Dokumentation 08/2008

7

Frontzapfwelle:
eigener, unabhängiger
Hydraulikkreis
siehe 931.150.200

ø8x1 DSV 6A7

HA

HZW

DSH 6A5

5Z2 6A1 6A3 1000 750 6A6

6V1 6V4 6V3 6V6 6V5

5

6

M18 ZWK M11 M10 VR M14 750 M13 1000 M16 DS M15

ø15x1.5

ø12x1 ø10x1

4Z1

ø8x0.75

4Z4

Nur bei Variante RÜFA

4Z2 V=0.3 l p_0=10 bar

4S2

4S1

M9 PH M22 T M6 P PHA M7 I M8 II

4V5 4V4 4V6 4V3 4V1 4V2

p=18 bar

4Z3 ø0.3

4

ø6.4

1Z4

ø15x1.5

3Z2

ø6.4 ø8x2

3Z1 3A3

10x1

SM M2

unter Last 100 L/min
Lastlos 110 L/min
ø28x1.5

1Z3

ø28x1.5

M1 KV

1V1 Δp=3.5bar

1V2 Δp=6.5bar

1V3 Δp=6.5bar

1V6 p=25bar

1S2 Δp=7bar Δp=5bar β_{10}=75 (10µm abs)

1V5 p=50bar

1Z2

1

68 L/min

42 L/min

AS M3 ES M4 PU M5

1P2 23.4ccm/U

1V4 p=10bar

1S1

1P1 14ccm/U

1Z1 Δp=0.25bar (β_{50}≈75) 200µm 15µm nom.

ø12.7 ø12.7

3V1 3V2

ø4 ø4 ø4 ø4

3A1 3A2

3

2V4 ø1

2V1 2V2 2V6 2V3 2V5

p=0- 540bar p=0- 540bar

R(Kanal oben) Δp=7bar

V(Kanal unten)

2P1 233ccm/U

2A1 233ccm/U 2A2 233ccm/U

2

4A1

6A4 AR

Schaltplan nach ISO 1219
Bauteilbezeichnung typ-
uebergreifend.
Gueltig ab:
919/21/0101
922/21/0101
925/21/0101
928/21/0101
931/21/0101
934/21/0101

Transmission hydraulic system	931.100.000.002
- manuelle Änderung nicht zulässig -	CAD

08/2008

TRANSMISSION/TRANSMISSION CONTROL SYSTEM

Transmission hydraulic system diagram - 931.100.000.002

C

Item	DIN	Designation	Item	DIN	Designation
Switching circuits:			**Valves:**		
1		Valve block, feed/lubrication	1V1		Radiator bypass valve
2		Main circuit	1V2		Pressure-limiting valve, discharge
3		Displacement	1V3		Pressure-limiting valve, feed
4		Valve block, enhanced hydraulics	1V4		Pressure-limiting valve, lubrication
5		Brake and rear axle	1V5		Pressure-limiting valve, servo pump
6		Valve block, rear axle	1V6		Pressure-limiting valve, servo circuit
7		Front PTO	2V1		Feed valve, forward
Pumps:			2V2		Feed valve, reverse
1P1		Servo pump	2V3		High-pressure limiting valve, forward
1P2		Lubrication pump	2V4		High-pressure limiting valve, reverse
2P1		Hydraulic pump	2V5		Purge valve
Drives:			2V6		Shuttle valve
2A1		Hydraulic motor	3V1		Hydraulic pump governor
2A2		Hydraulic motor	3V2		Hydraulic motor governor
3A1		Variable displacement cylinder, hydraulic pump	4V1	Y002	Solenoid valve, travel range 1
3A2		Variable displacement cylinder, hydraulic motor	4V2	Y003	Solenoid valve, travel range 2
3A3		Speed governor, emergency mode	4V3	Y005	Solenoid valve, speed governor
4A1		Range selector	4V4	Y004	Turbo clutch solenoid valve
6A1		Clutch, rear PTO	4V5		Pressure-limiting valve, clutch
6A3		Selector cylinder, PTO 750	4V6		Pressure reducing valve, rear axle
6A4		4WD clutch	6V1	Y008	Solenoid valve, rear PTO
6A5		Differential lock, rear axle	6V3	Y026	Solenoid valve, PTO 540E
6A6		Selector cylinder, PTO 1000	6V4	Y009	4WD solenoid valve
6A7		Differential lock, front axle	6V5	Y010	Solenoid valve, differential lock
Buzzers:			6V6	Y027	Solenoid valve, PTO 1000
1S1	B009	Discharge temperature	**Measuring points:**		
1S2	S017	Transmission oil contamination switch	M1		Radiator feed
4S1	B008	Sensor, high-pressure 1	M2		Pressure lubrication
4S2	B039	Sensor, high-pressure 2	M3		Outlet pressure
Other components:			M4		Inlet pressure
1Z1		Suction filter with bypass	M5		Pressure, servo pump
1Z2		Pressure filter with bypass	M6		System pressure, transmission
1Z3		Transmission oil cooler	M7		Switching pressure, travel range 1
1Z4		Transmission lubrication	M8		Switching pressure, travel range 2
3Z1		Actuator shaft	M9		High-pressure
3Z2	A009	Actuator unit	M10		System pressure, rear axle
4Z1		Clutch pedal with sensor cylinder	M11		Pressure, PTO clutch
4Z2		Pressure accumulator	M13		Switching pressure, PTO 540E
4Z3		Strainer insert	M14		Pressure, 4WD clutch
4Z4		Rotary feedthrough RÜFA	M15		Pressure, differential lock
5Z2		Lubrication, rear PTO	M16		Switching pressure, PTO 1000
			M18		Lubrication pressure, rear axle
			M22		Clutch and turbo-clutch valve leakage

Anhängerbremse
RH
3/4" Stecker
Case Drain
LS
3/8" Muffe
APE
DRVE
DFE
0.2mm
SRVE
0.5l/min
LS_EXT
1.1
Gelb
1.1-
1.1+
Wegeventil
SB 23 LS-EHS 2
1.2
Blau
1.2-
1.2+
1.3
Rot
1.3-
1.3+
EHR Heck
MVKH
230+20bar
dw HKH
ZHKH1
d=100/40
H=272
ZHKH2
d=100/40
H=272
UL-Abstützung
DBVKH
SVUL
MVUL
MEE
PB
3/4" Muffe
P_EXT
1.4
Grün
1.4-
1.4+
1.5
Braun
1.5-
1.5+
1.6
Violett
1.6-
1.6+
EPH
MVVH
1,9mm Q=25l/min
Leckölauffang-
behälter
ZL
d=140/115
H=310
V=1.552l
QSPC400L3RH
VBL
Hy. ABV
T_ABV
P_ABV
PVL
10bar Bypr
DWL
zum Betriebsbremskreis
zum Feststellbremskreis
OETR
38-54°C
RVL3
RVL2
RVL1
MS
ZSB
M1
M2
DSPP
P0=20bar
V0=0.16L
Vgl=0.08L
DFP
DWP
10bar
MVP
DRVP
16+4bar
WVP
VBP
T_REF_H
T_REF
MVFH
RVF1
RVFH
250bar
DBVF1
AVF1
AVF2
DRF
DBV1
230+20bar
DRVF
RVFS
WV2
WV1
MVL
DBVL 175+5bar
M7
Q=10L/min
1,2mm
MVVM
EPM
Wegeventil
SB 23 LS-EHS 2
2.2
2.1
240+50bar
EHR Front
MVKF
DBVKF
Grau
2.2-
2.2+
Öliv
2.1-
2.1+
Leckölauffang-
behälter
FSP
P0=75bar
V0=0.75L
dw FKH
ZFKH1
d=80/36
H=210
ZFKH2
d=80/36
H=210
ASP1
(unten)
P0=45bar
V0=2.0L
ASP2
(oben)
P0=45bar
V0=2.0L
Federung
60 km/h-Ausf.
VBF
MVFF
MVFW
ZF1
d=80/63
H=155
ZF2
d=80/63
H=155
DBVF2
250bar
ZSP
P0=70bar
V0=1.4L
DS1
8bar
0.15mm Kerbe
RF
DFWN
DFWH
DSF
2bar
RLF
b16x200
ISO MTO-Kap.=83g
@ 2.5bar
RVN
PNL
80ccm
Antrieb
Allradwelle
SFN2
0.5x0.22mm
Sieb
SFN1
0.5x0.22mm
Sieb
HP
PH
22.5ccm
55l/min
Motor
n_nenn=2200U/min
i=0.869
i=0.896
TG
SFH
1.0x0.24mm Sieb
Heizstab
GDR
PR
A10VN085
215l/min
SFR
0.45mm Sieb
BF
7µm
EF
0.8mm
FSS
Maximale Ausstattung
mit dw EHR, dw FKH,
mit UL-Verstellung
ab Serie Dez. 2006

OVERALL SYSTEM/HYDRAULIC EQUIPMENT

Hydraulic circuit diagram - 931.952.000.002

C

1.1 [Y074] - Control valve, position 1 (yellow)	**1.2 [Y075]** - Control valve, position 2 (blue)
1.3 [Y076] - Control valve, position 3 (red)	**1.4 [Y078]** - Control valve, position 4 (green)
1.5 [Y079] - Control valve, position 5 (brown)	**1.6 [Y080]** - Control valve, position 6 (purple)
2.1 [Y071] - Control valve, position 7 (olive)	**2.2 [Y072]** - Control valve, position 8 (grey)

APE - Entry plate for external pressure supply	**ASP1** - Accumulator, suspension 1
ASP2 - Accumulator, suspension 2	**AVF1** - Lock valve, suspension 1
AVF2 - Lock valve, suspension 2	

BF - Ventilation filter	

DBV1 - Main pressure-limiting valve	**DBVF1** - Pressure-limiting valve, suspension 1
DBVF2 - Pressure-limiting valve, suspension 2	**DBVKF [Y022]** - Field pressure valve, DA front power lift enhanced control
DBVKH [Y062] - Field pressure valve, DA rear power lift	**DBV-L** - Pressure-limiting valve, 175 bar steering
DFE - Pressure filter, external LS	**DFP** - Pressure filter, pilot pressure
DFWH - Flow monitor, auxiliary pump	**DRVE [Y084]** - Pressure cut-off valve, Power Beyond
DRVF [Y064] - Suspension load pressure/lower	**DRVP** - Pressure cut-off valve, pilot pressure
DS1 - Pressure switch, LS pump monitor	**DSF [B063]** - Pressure switch, filter monitor
DWKF - Pressure compensator, front power lift, SA	**DWL** - Pressure compensator, steering
DWP - Pressure compensator, pilot pressure	

EHR Heck [Y077] - Cut-off valve, rear EPC	**EHR Front [Y070]** - Cut-off valve, front power lift enhanced control
EPH - End plate, rear valve block	**EPM** - End plate, centre

FKH - Front power lift	**FKH Standard** - Cut-off valve, standard front power lift
FSP - Front power lift accumulator	**FSS [B084]** - Level switch

GDR - Silencer, LS pump	

HKH - Rear power lift	**HP** - Hand pump, pilot pressure – emergency supply
Hy.ABV - Hydraulic trailer brake	

K - Hydraulic oil cooler	

LE - Steering unit	

OVERALL SYSTEM/HYDRAULIC EQUIPMENT

Hydraulic circuit diagram - 931.952.000.002

C

M1 - Measuring point, emergency pumps	**M2** - Measuring point, auxiliary pumps
M3 - Measuring point, LS pump	**M4** - Measuring point, LS pressure
M5 - Measuring point, control pressure	**M6** - Rear return flow reference pressure measuring point
M7 - Front return flow reference pressure measuring point	**MVFF [Y067]** - Solenoid valve, lock suspension
MVFH [Y065] - Solenoid valve, raise suspension	**MVFW [Y063]** - Solenoid valve, wobble stabiliser
MVKF [Y021] - Front pressure compensator lock valve (SA/DA)	**MVKFH [Y021]** - Lifting solenoid valve (standard front power lift)
MVKFS [Y022] - Lowering solenoid valve (standard front power lift)	**MVKH [Y055]** - Rear pressure compensator lock valve (SA/DA)
MVL [Y012] - Solenoid valve, charge function (suspension, oil pre-heater)	**MVP [Y032]** - Solenoid valve, pilot pressure
MVUL [Y082] - Solenoid valve, lower link stabiliser lock	**MVVH [Y060]** - Solenoid valve, rear pre-heater
MVVM [Y061] - Solenoid valve, central pre-heater	

OETR - Oil temperature regulator	

PH - Auxiliary pump	**PNL** - Emergency steering pump
PR - LS pump	**PVL** - Priority valve, steering

RLF - Return line filter	**RVF1** - Non-return valve, suspension 1
RVFH - Non-return valve, raise suspension	**RVFS** - Non-return valve, lower suspension
RVL1-3 - Non-return valve, steering 1-3	**RVN** - Non-return valve, emergency steering pump

SFH - Auxiliary pump suction filter	**SFN1+2** - Suction filter, emergency steering pump 1+2
SFR - Suction filter, LS pump	**SRVE** - Flow cut-off valve, external LS relief
SVUL [Y083] - Solenoid valve, lower link stabiliser release	

TG [B013] - Temperature sensor	

VBF - Valve block, suspension	**VBL** - Valve block, steering
VBP - Valve block, pilot pressure supply	

WV1 - LS shuttle valve 1	**WV2** - LS shuttle valve 2
WVP - Shuttle valve, pilot pressure	

ZF1 - Federungszylinder 1	**ZL** - Steering cylinder
ZSB - Central control block	**ZSP** - Auxiliary accumulator, suspension

RH
3/4" Stecker
28x1.5
Case Drain
12x1
LS
3/8" Muffe
APE
DFE
0.2mm
DRVE
SRVE
0.5l/min
1.1
Gelb
1.1-
1.1+
Wegeventil
SB 23 LS-EHS 2
1.2
Blau
1.2-
1.2+
1.3
Rot
1.3-
1.3+
EHR Heck
230+20bar
MVKH
dw HKH
ZHKH1
d=100/40
H=272
ZHKH2
d=100/40
H=272
DBVKH
MEE
PB
3/4" Muffe
1.4
Grün
1.4-
1.4+
1.5
Braun
1.5-
1.5+
EPH
MVVH
1,9mm Q=25l/min
Leckölauffang-
behälter
ZL
d=140/115
H=310
V=1.552L
VBL
PVL
10bar 8bar
DWL
QETR
36-54°C
RVL3
RVL2
RVL1
MS2
ZSB
DSPP
P0=20bar
V0=0.16L
V&L=0.08L
DFP
DWP
10bar
MVP
DRVP
16+4bar
VBP
WVP
DFWN
DFWH
DSF
2bar
RLF
b16x200
150 MTD-Kap.=83g
ø 2.5bar
RVN
PNL
80cm³
Antrieb
Altradwelle
HP
PH
22.5cm³
55l/min
Motor
n_Nenn=2200U/min
i=0.869
i=0.896
TG
SFH
1.0x0.24mm Sieb
SFN2
0.5x0.22mm
Sieb
SFN1
0.5x0.22mm
Sieb
Heizstab
GDR
PR
A10VN085
215l/min
SFR
0.45mm Sieb
BF
7µm
EF
0.8mm
FSS
M7
Q=10L/min
1.2mm
MVVM
EPM
Wegeventil
SB 23 LS-EHS 2
2.1
2.1-
2.1+
0Liv
Leckölauffang-
behälter
EHR Front
MVKFS
MVKFH
AVKF
DWKF
15bar
FSP
P0=75bar
V0=0.75L
ew FKH
ZFKH1
d=80/36
H=210
ZFKH2
d=80/36
H=210
MVFH
RVFH
290bar
DBVF1
AVF1
DBV1
230+20bar
DRVF
RVFS
AVF2
DRF
DS1
8bar
0.15mm Kerbe
ASP1
(unten)
P0=45bar
V0=2.0L
ASP2
(oben)
P0=45bar
V0=2.0L
Federung
60 km/h-Ausf.
VBF
MVFF
MVFW
DBVF2
250bar
ZF1
d=80/63
H=155
ZF2
d=80/63
H=155
ZSP
P0=70bar
V0=1.4L
RF
Mittlere Ausstattung
mit dw EHR, ew FKH,
ab Serie Dez. 2006
SCHALTPLAN_HYDRAULIK
_931.952.000.002

RH
3/4" Stecker
28x1.5

APH
1.1
Gelb
1.1-
1.1+
Blau
1.2-
1.2+
Wegeventil
SB 23 LS-EHS 2
1.2
Rot
1.3-
1.3+
Wegeventil
SB 23 LS-EHS 2
1.3
EHR Heck
230+20bar
15x1.5
ew HKH
ZHKH1
d=100/40
H=272
ZHKH2
d=100/40
H=272
MEE
P_EXT
Grün
1.4-
1.4+
Wegeventil
SB 23 LS-EHS 2
1.4
EPH
MVVH
1,9mm Q=25L/min
MG
Leckölauffang-
behälter

ZL
d=140/115
H=310
V=1.552L
18x2
DN15
DSP4-400LSRM
P
T
LS
LE
DN16
DN12
DN6
15x1.5
8x1
VBL
P_LE
LS_LE
T_ABV
P_ABV
PVL
150bar
0.7
0.8
DWL
1.2
18x1.5
OETR
38-54°C
RVL3
RVL2
RVL1
30x3
12x1.5
8x1
ZSB
M1
P_LHP
M2
DSPP
P0=20bar
V0=0.16L
VGL=0.08L
DWP
10bar
0.5
MVP
DFP
DRVP
16+4bar
T_REF_H
T_REF
VBP
22x1.5
28x1.5
20x1.5
DN25
DN8
1400 mm
DFWN
DFWH
15x1.5
DSF
2bar
RLF
b16>200
ISO MTD-Kap.=83g
ø 2.5bar
RVN
PNL
8ccm
Antrieb
Allradwelle
SFN2
0.5x0.22mm
Sieb
SFN1
0.5x0.22mm
Sieb
HP
DN10
PH
22.5ccm
55L/min
Motor
n_nenn=2200U/min
i=0.869
i=0.896
TG
SFH
1.0x0.24mm Sieb
PR
A10V063
163L/min
GDR
280bar
SFR
0.45mm Sieb
BF
7µm
EF
0.8mm
FSS

EPM
M7
Ø16,01
WV2
WV1
MVL
DBVL
175+5bar
RVF1
1.8
MVFH
RVFH
250bar
DBVF1
AVF1
DBV1
230+20bar
DRVF
RVF5
AVF2
1.0
DRF
M3
DS1
8bar
M4
0.15mm Kerbe
12x1.5

ASP1
(unten)
P0=45bar
V0=2.0L
4.5mm
ASP2
(oben)
P0=45bar
V0=2.0L
4.5mm
Federung
40 km/h-Ausf.
VBF
MVFF
0.4
18x2
DN16
ZF1
d=80/63
H=155
DN12
T8x2
ZF2
d=80/63
H=155
15x1.5
ZSP
P0=70bar
V0=1.4L

Minimale Ausstattung
mit ew EHR

ab Serie Dez. 2006

VBLE1 und VBLE2 nur bei Variante el-hyd.Lenkung

ZL

VBLE1

EPLE

PVLE

APLE

DRVLE
13+2bar

VLE1
25bar

0.6mm

0.8mm

MVLE1

MVLE2

1.4mm

WVLE

M1

M2

M3

M4

LS-LE

LS

P

VBLE2

L-V

R-V

L

R

VLE2

VLE3

V

L-LE

R-LE

LS-LE1

LS-LE2

DDFL

Nur bei Variante RÜFA

180°

0°

DN16 12 12 DN16

DN16 13 13 DN16

DN6 9 9 DN6

DN16 11 11 DN16

DN12 14 14 DN12

L

R

P

T

LS

LE

05PC4001LSRM

VBL

T_ABV

P_ABV

T_O

P_LE

LS_LE

0.7

PVL

10bar 6bar

0.8

1.2

DWL

1.2

HP

DN10

Varianten elektrohydraulische Lenkung
und RÜFA

ab Serie Dez. 2006

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15.2.2007 16:02:12 /martens

AGCO GmbH
87616 Marktoberdorf

RSD | SCHALTPLAN_HYDRAULIK | _931.952.000.002

OVERALL SYSTEM/HYDRAULIC EQUIPMENT

Hydraulic circuit diagram (Auto-Guide) - 931.952.000.002

C

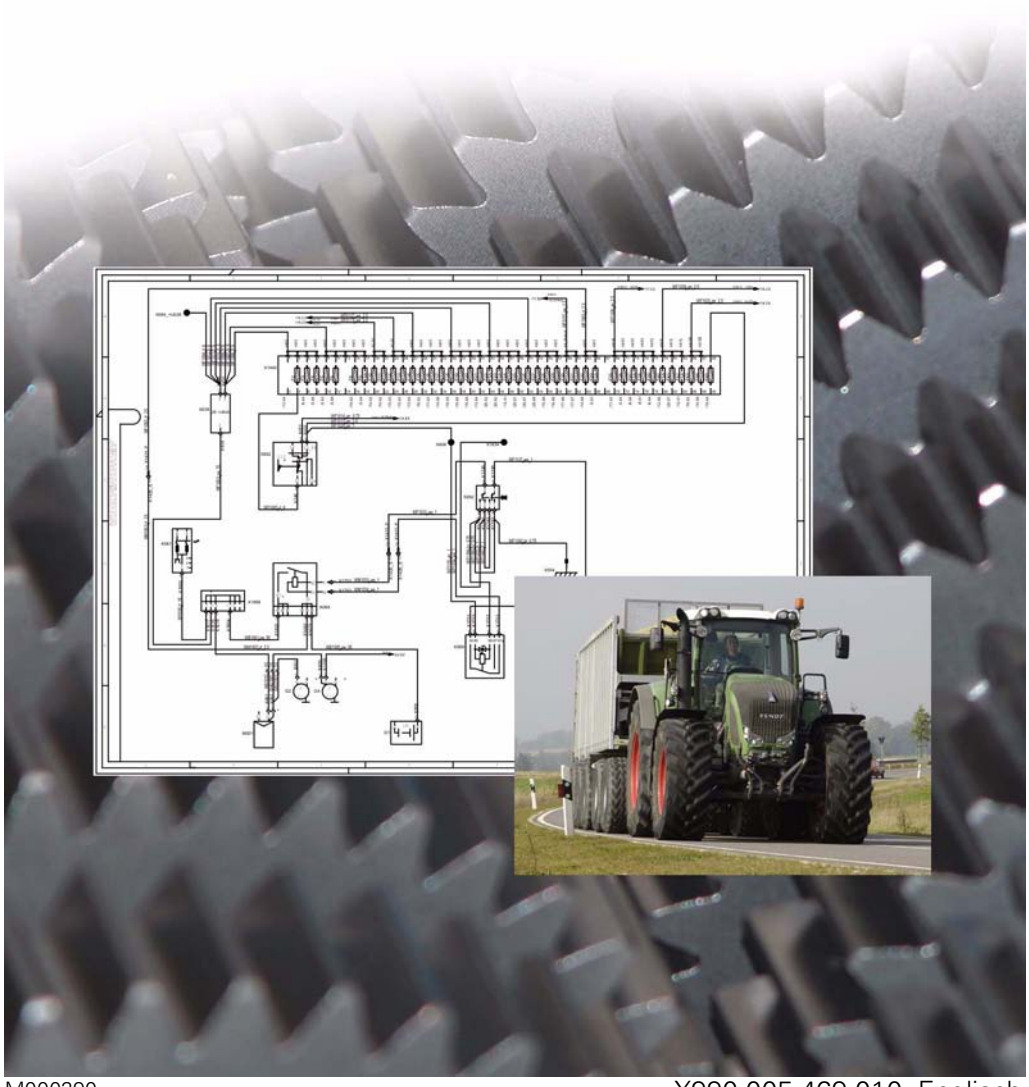
APLE - Connection plate for el.-hyd. steering system
DRVLE - Pilot pressure cut-off valve, el.-hyd. steering system
MVLE1 [Y085] - Solenoid valve, pilot pressure/switch-off (Auto-Guide)
MVLE2 [Y086] - Solenoid valve, steering disconnect (Auto-Guide)
PVLE - Proportional valve, el.-hyd. steering system
VBLE1 - Valve block, el.-hyd. steering system 1
VBLE2 - Valve block, el.-hyd. steering system 2
VLE1 - LE priority valve (oversteering valve)
VLE2+3 - LE switch off 1 + 2 valves
WVLE - LS shuttle valve, el.-hyd. steering system

Service Training

Electrical and hydraulic circuit diagrams

FENDT 900 Vario COM III

919 .. 1847-
922 .. 2004-
925 .. 2054-
928 .. 2291-
931 .. 1908-
934 .. 2790-



M000290

X990.005.469.010 -Englisch

FENDT Service-Training Dokumentation

Edition
11/2008

3432 G - en
AGCO GmbH
Johann-Georg-Fendt-Str. 4 D-87616 Marktoberdorf

FENDT

Electrical and hydraulic circuit diagrams

9000 Overall system/electrical system

C	Documents and diagrams	
1	Fuse assignment	1
2	Component list for circuit diagram set 931.901.000.004	6

9000 Electrical system/overall system

C	Documents and diagrams	
1	Overview of instrument panel/actuator unit/keyboard/A4 terminal/multifunction armrest (MFA) - Sheet 2	1
2	Overview of microfuse - Sheet 3	3
3	Overview of central electrical system - Sheet 4	5
4	Overview of EXT - Sheet 5	7
5	Overview of EDC/Vario-Doc/air conditioning/B4 TopDock/Auto-Guide terminal - Sheet 6	9
6	Supply - Sheet 7	11
7	Electronics supply - Sheet 8	13
8	Earth layout - Sheet 9	15
9	G bus/K bus/V bus/ISO bus - Sheet 10	17
10	Transmission control system - Sheet 11	19
11	Hydraulics - Sheet 12	21
12	Hydraulics/Auto-Guide - Sheet 13	23
13	Suspension/Auto-Guide - Sheet 14	25
14	PTO - Sheet 15	27
15	Trailer brake - Sheet 16	29
16	Instrument panel/ABS/driver seat - Sheet 17	31
17	STVZO/corner light/4th hydraulic circuit - Sheet 18	33
18	STVZO/work light/reversing system - Sheet 19	35
19	STVZO/work light/air conditioning - Sheet 20	37
20	Wipers/work light - Sheet 21	39
21	Work light/wipers/emergency mode - Sheet 22	41
22	Air conditioning/mirror/3rd hydraulic circuit - Sheet 23	43
23	Radio/Auto-Guide terminal - Sheet 24	45
24	ISO bus/load sockets - Sheet 25	47
25	EDC engine control - Sheet 26	49
26	KHD engine control - Sheet 27	51
27	Immobiliser/Vario-Doc/Auto-Guide/direction indicator LED - Sheet 28	53
28	Hands-free device/tachograph - Sheet 29	55

1005 Transmission/transmission control system

C	Documents and diagrams	
1	Transmission hydraulic system diagram - 931.100.000.002	57

9600 Overall system/hydraulic equipment

C	Documents and diagrams	
1	Hydraulic circuit diagram - 931.952.000.002	59
2	Hydraulic circuit diagram (Auto-Guide) - 931.952.000.002	65

1 Fuse assignment

DANGER: Use only genuine fuses! The use of over-rated fuses will destroy the electrical unit! Fire hazard!

X1440 - Fuse holder **(A)**
A013 - PCB, microfuses **(B)**

Remove panel from right side of cab

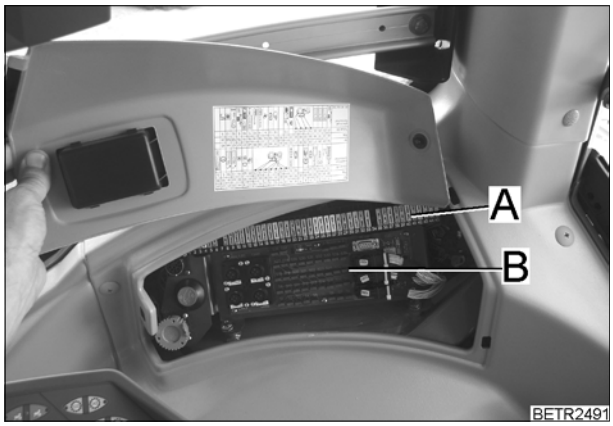


Fig. 1. I001035

A038 - ECU, central electrical system

Remove panel from right side of cab

NOTE: *When working on the **A038** - ECU, central electrical system Disconnect the battery*

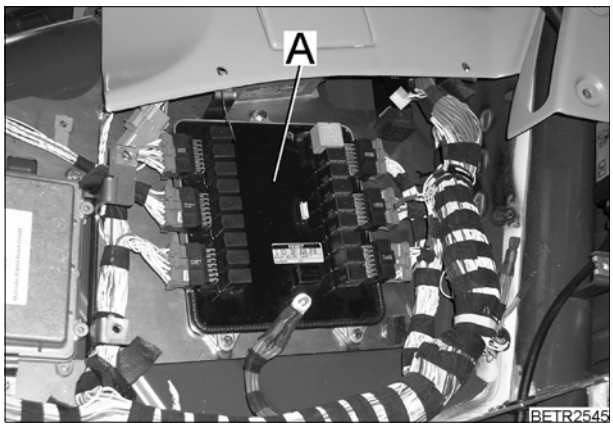


Fig. 2. I001044

Nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PIN	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Value(A)	15	25	15	25	40	10		10	5	15	15	15	15	15	15	15	25	40	15	10	10	5	5
electrical Consumer	Worklamp USA	Start	A009	Engine	E-Box			E-Aid	Cluster											10A	10A		ISO Diag

BETR2496

Fig. 3. ***X1440*** *- Fuse holder (Fuse nos 1-23)* I001045

Fuse no.	PIN	Value (A)	Consumer
1	-	-	-
2	30	25	Ignition switch
3	30	15	Transmission control unit
4	30	25	Engine control unit
5	30	40	EXT supply (E-box)
6	30	10	Multifunction armrest supply, Terminal
7	-	-	-
8	30	10	Terminal A1

Fuse no.	PIN	Value (A)	Consumer
9	30	5	Microfuse board supply, electrics control panel, tachograph
10	30	15	External work light, front roof
11	30	15	Internal work light, front roof
12	30	15	Work light, A pillar
13	30	15	Work light, A pillar
14	30	15	Work light, corner light
15	30	15	External work light, rear roof
16	30	15	Internal work light, rear roof
17	30	25	Heated rear windscreen
18	30	15	Air conditioning system (fan)
19	30	15	Primary fan, air conditioning system
20	30	10	3. Hydraulic circuit
21	30	10	4. Hydraulic circuit
22	30	5	Autoguide
23	30	5	ISO socket (cab)(X028) and ISO diagnostics (X1539)

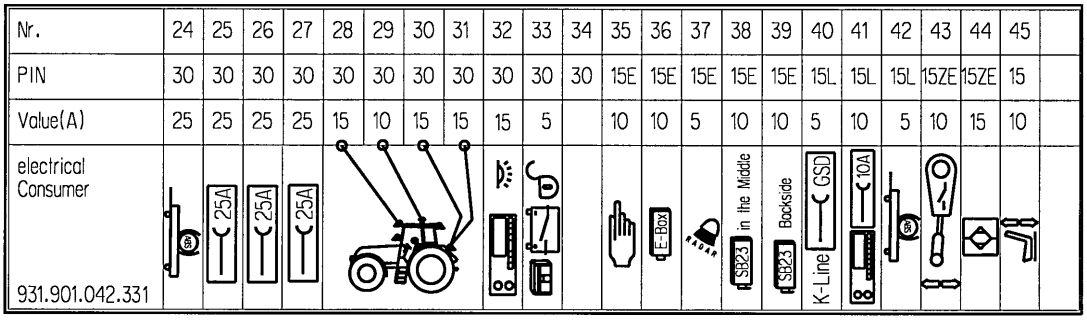


Fig. 4. ***X1440*** *- Fuse holder (Fuse nos 24-45)* I001110

Fuse no.	PIN	Value (A)	Consumer
24	30	25	ABS socket
25	30	25	25 A socket
26	30	25	25 A socket
27	30	25	25 A socket
28	30	15	Internal work light, front roof
29	30	10	Rotating beacons
30	30	15	Work light, rear lamp
31	30	15	Work light, rear lamp
32	30	15	Cab light, radio
33	30	5	Instrument panel supply, disconnect relay ON
34	-	-	-
35	15E	10	Transmission emergency actuation
36	15E	10	Electronics supply, Terminal 15 ON
37	15E	5	Radar sensor, tachograph
38	15E	10	Electrical valves (SB23 centre connection)
39	15E	10	Electrical valves (SB23 rear connection)

Fuse no.	PIN	Value (A)	Consumer
40	15L	5	Implement socket (GSD), ISO socket (cab)
41	15L	10	10A socket, radio
42	15L	5	ABS socket
43	15ZE	10	Steering column switch supply
44	15ZE	10	Compressed air dryer
45	15ZSS	15	Seat, electric mirror adjustment

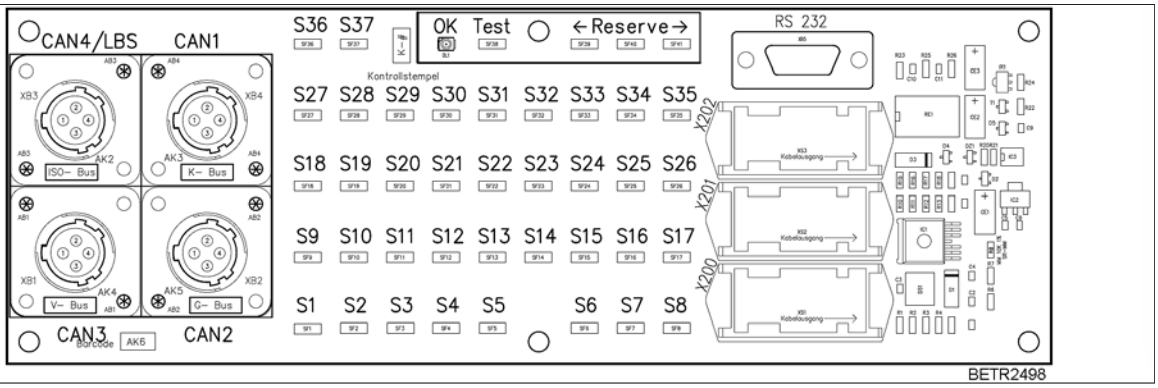


Fig. 5. ***A013*** *- PCB, microfuses* I001049

Fuse no.	Connector/PIN	Component
S4	X200/14	**X015** - External control socket (Contact 58 R)
S5	X200/13	**B017** - Sensor, clutch pedal
S6	X200/12	**B016** - Sensor, travel range detection
S7	X200/11	**B014** - Sensor, collecting shaft
S8	X200/10	**B015** - Sensor, bevel pinion
S9	X201/1	**B068** - Sensor, wheel position (right)
S12	X200/7	**B040** - Sensor, front power lift position
S13	X200/6	**B032** - Sensor, draft sensing pin, left
S14	X200/5	**B031** - Sensor, draft sensing pin, right
S15	X200/4	**B030** - Sensor, rear power lift position
S16	X201/4	**B067** - Sensor, steering angle
S17	X201/5	**B066** - Sensor, wheel position (left)
S19	X201/7	**B055** - Sensor, foot throttle
S29	X202 / 7	**B081** - Steering wheel sensor (360°)
S31	X202/5	**B039** - Sensor, high-pressure 2
S32	X202/4	**B008** - Sensor, high-pressure 1
S33	X202/1	**B010** - Sensor, engine speed
S35	X202/10	**B020** - Sensor, rear PTO speed (stub shaft)
S36	X202/8	**B002** - Sensor, front PTO speed
S37	X202/11	**B021** - Sensor, rear PTO speed (clutch)

NOTE: *Unlisted fuses in* ***A013*** *- PCB, microfuses not currently assigned*

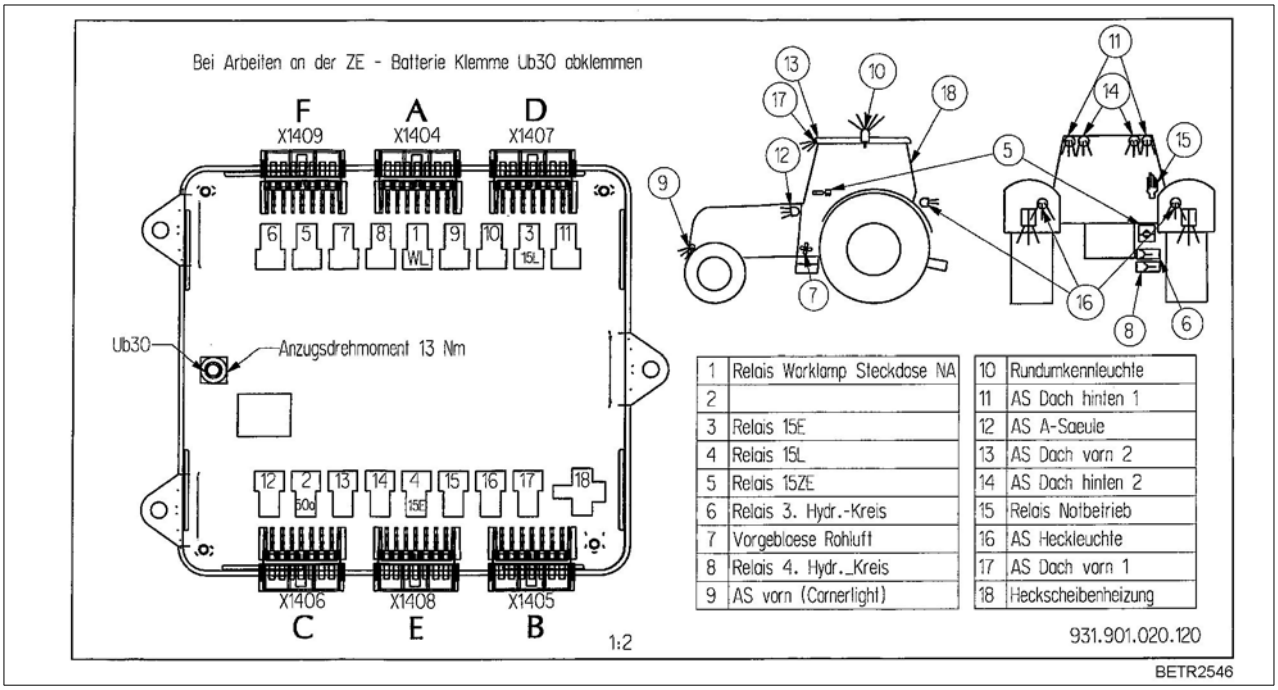


Fig. 6. Central electrical system - relay assignment I003837

Relay	Consumer	Relay	Consumer
1	Relay socket NA	10	Rotating beacon
2		11	Work light, rear roof 1 (external)
3	Relay 15E	12	Work light, A pillar
4	Relay 15L	13	Work light, front roof 2 (internal)
5	Relay 15ZE	14	Work light, rear roof 2 (internal)
6	3rd hydraulic circuit relay	15	Relay, emergency operation
7	Primary fan, intake air	16	Work light, rear lamp
8	4th hydraulic circuit relay	17	Work light, front roof 1 (external)
9	Front work light	18	Rear window heater

NOTE: *When testing the relay supply voltage, see WHB Chapter 9000 Reg. E, Measuring and testing **A038** - ECU, central electrical system*

2 Component list for circuit diagram set 931.901.000.004

DIN component designation	Separation point	Circuit diagram sheet no.
A007 - Instrument panel	X100 X101	2, 8, 9, 10, 17
A009 - Actuator unit	X037	2, 10, 11
A011 - Radar sensor	X479	13
A013 - PCB, microfuses	X200 X201 X202	3, 8, 9, 10, 11, 12, 14, 15
A015 - Radio	X1315 X1316 X1768	24, 29
A036 - Control panel, dashboard right/left	X1357	2, 8, 9, 10, 17
A038 - ECU, central electrical system	X454 X455 X456 X1404 X1405 X1406 X1407 X1408 X1409	4, 7, 18, 19, 20, 21, 22, 23
A039 - MFA, multifunction armrest	X1401	2, 8, 9, 10, 11, 17, 23
A050 - ECU, basic control unit	X1402 X1403	5, 8, 9, 10, 11, 12, 14, 15, 16, 26
A051 - ECU, engine control unit (EDC 7).	X1466 X1671 X1672	6, 8, 9, 10, 26, 27
A053 - ECU, air conditioning control	X920 X921	6, 20, 23
A055 - ECU, data transfer	X1411	6, 8, 28
A058 - TopDock (Auto-Guide)	X1728	6, 28
A059 - Terminal (Auto-Guide)	X1732	6, 24
A060 - Hands-free device	X1765	29
A073 - Terminal (A4)	X1830	2, 8, 9, 10
A075 - ECU, tail light LED, right	X1785	28
A076 - ECU, tail light LED, left	X1786	28
A077 - Immobiliser ECU	X1852	28
A078 - Tachograph ECU	X2025 X2026	29

DIN component designation	Separation point	Circuit diagram sheet no.
B002 - Sensor, front PTO speed	X151	15
B004 - Vacuum switch (air filter)	X153	26
B008 - Sensor, high-pressure 1	X157	11
B009 - Discharge temperature sensor	X158	11
B010 - Sensor, engine speed	X159	11

DIN component designation	Separation point	Circuit diagram sheet no.
B013 - Sensor, hydraulic oil temperature	X162	17
B014 - Sensor, collecting shaft	X163	11
B015 - Sensor, bevel pinion	X164	11
B016 - Sensor, travel range detection	X165	11
B017 - Sensor, clutch pedal	X166	11
B019 - Sensor, compressed air supply (circuit 2)	X168	17
B020 - Sensor, rear PTO speed (stub shaft)	X169	15
B021 - Sensor, rear PTO speed (clutch)	X170	15
B030 - Sensor, rear power lift position	X178	12
B031 - Sensor, draft sensing pin, right	X179	12
B032 - Sensor, draft sensing pin, left	X180	12
B034 - Immersed tube sensor (fuel)	X182	17
B039 - Sensor, high-pressure 2	X177	11
B040 - Sensor, front power lift position	X188	12
B050 - Loudspeaker, left	X289 X290	24
B051 - Loudspeaker, right	X311 X312	24
B055 - Sensor, foot throttle	X898	26
B060 - Compressed air supply sensor (circuit 1)	X1410	17
B061 - Loudspeaker	X1620 X1621	24
B062 - Loudspeaker	X1622 X1623	24
B063 - Pressure switch, filter contamination (hydraulic circuit)	X1500	12
B066 - Sensor, wheel position (left)	X1509	14
B067 - Sensor, steering angle	X1508	14
B068 - Sensor, wheel position (right)	X1507	14
B071 - Sensor, output temperature	X1536	20
B073 - Sensor, solar (irradiation)	X1535	20
B074 - Sensor, internal temperature	X1545	20
B076 - Sensor, external temperature	X1538	20
B077 - Engine fan (speed sensor/magnetic clutch)	X1532	26
B081 - Steering wheel sensor (360°)	X1519	14
B084 - Sensor, hydraulic oil level	X214	17
B085 - Camshaft speed sensor	X1654	27
B086 - Rail pressure sensor	X1655	27
B087 - Fuel low pressure sensor	X1656	27
B088 - Crankshaft speed sensor	X1657	27
B089 - Engine temperature sensor (Deutz)	X1658	27
B090 - Sensor, oil pressure	X1659	27
B091 - Sensor, water in fuel	X1660	27
B092 - Sensor, charge air pressure/temperature	X1661	27
B095 - Microphone	X1766	29
B101 - KITAS sensor	X2136	29

DIN component designation	Separation point	Circuit diagram sheet no.
E003 - H4 additional headlight, right	X352	18
E004 - H4 additional headlight, left	X353	18
E009 - Licence plate lighting, right	X374 X375	19
E010 - Licence plate lighting, left	X376 X377	19
E019 - Lighting, cab	X308 X309 X310	19
E020 - Lighting (EPC)	X842 X843 X844	19
E021 - Rotating beacon, right	X346	21
E022 - Rotating beacon, left	X345	21
E023 - Rear window heater	X259 X260	19
E050 - Work lights, front left roof, internal	X798	20
E051 - Work lights, front right roof, internal	X799	20
E054 - Wide vehicle marker lights, right	X896	19
E055 - Wide vehicle marker lights, left	X897	19
E063 - Heater element, air dryer (temperature-controlled)	X1556	23
E064 - Rear direction indicator, left	X916	21
E065 - Rear direction indicator, right	X917	21
E066 - Brake and tail light left	X918	18, 19
E067 - Brake and tail light right	X919	18, 19
E070 - Work lights, front right roof, external	X1291	19
E071 - Work lights, front left roof, external	X1292	19
E074 - Work light, right (cornerlight)	X1289	18
E075 - Work light, left (cornerlight)	X1290	18
E078 - Work light, rear right mudguard (optional Xenon)	X1285	22
E079 - Work light, rear left mudguard (optional Xenon)	X1286	22
E082 - Work light, rear right external (roof)	X1561 X1562	21
E083 - Work light, rear right internal (roof)	X1570 X1571	22
E084 - Work light, rear left internal (roof)	X1572 X1573	22
E085 - Work light, rear left external (roof)	X1563 X1564	21
E086 - Side lamp, front right	X1685 X1686	19
E087 - Side lamp, front left	X1687 X1688	19
E088 - Direction direction indicator, front right	X1689 X1690	20
E089 - Direction direction indicator, front left	X1691 X1692	20
E098 - Drive headlight (main beam), right	X1603	18

DIN component designation	Separation point	Circuit diagram sheet no.
E099 - Drive headlight (dipped beam), right	X1604	18
E100 - Drive headlight (main beam), left	X1605	18
E101 - Drive headlight (dipped beam), left	X1606	18
E106 - Exterior mirror (adjustment/heater), right	X868	23
E107 - Exterior mirror (adjustment/heater), left	X869	23
E108 - Work light, right A pillar (optional Xenon)	X1613	20
E109 - Work light, left A pillar (optional Xenon)	X1614	20
E116 - Work lights, Xenon front right roof, external	X1802	19
E117 - Work lights, Xenon front left roof, external	X1802	19
E130 - LED for rear direction indicator, left	X916	21
E131 - LED for rear direction indicator, right	X917	21

DIN component designation	Separation point	Circuit diagram sheet no.
G001 - Battery 1	X058 X059 X060 X066	7, 9
G002 - Alternator 1	X062 X064	7, 17
G004 - Alternator 2	X449 X450	7, 17

DIN component designation	Separation point	Circuit diagram sheet no.
H005 - Horn	X998 X999	22
H006 - Audio warning signal	X204	17
H009 - Blip signal, reversing	X1544	11

DIN component designation	Separation point	Circuit diagram sheet no.
K061 - ISO bus disconnect relay	X1592 X1593 X1594 X1595	7, 8, 25
K063 - Heater flange relay	X1663 X1664 X1665	27
K065 - Starter relay	X1648	26
K068 - Relay, battery disconnect (impulse)	X1679 X1680 X1805	7
K069 - Relay, safety function (battery disconnect)	X1753	7

DIN component designation	Separation point	Circuit diagram sheet no.
M001 - starter.	X057 X061	7, 26
M002 - Front wiper motor	X347	21
M003 - Wiper pump, front	X301	22
M004 - Rear wiper motor	X258	21
M005 - Wiper pump, rear	X303	22
M010 - Fuel pump	X300	22
M015 - Actuator motor, top/middle air flap	X1546	23
M016 - Servomotor, bottom air valve	X1547	23
M017 - Primary fan	X1555	23

DIN component designation	Separation point	Circuit diagram sheet no.
R002 - Heater flange	X991	27

DIN component designation	Separation point	Circuit diagram sheet no.
S002 - Switch, ignition	X072 X246	7, 26
S005 - Switch, right brake	X217	11
S006 - Switch, left brake	X218	11
S012 - Switch, starter lockout	X082	22, 26
S013 - Emergency mode button	X224	22
S017 - Filter contamination switch	X228	11
S019 - Button, rear PTO, external left	X229	15
S020 - Button, rear PTO, external right	X230	15
S021 - Button, front power lift, external raise	X231	12
S022 - Button, front power lift, external lower	X232	12
S025 - Switch, LS pump pressure monitor	X235	12
S026 - Switch, steering pump flow controller	X236	12
S027 - Button, rear power lift, right-hand external raise	X237	12
S028 - Button, rear power lift, right-hand external lower	X238	12
S029 - Button, rear power lift, left-hand external raise	X239	12
S030 - Button, rear power lift, left-hand external lower	X240	12
S032 - Switch, left door contact	X299	19
S034 - Switch, coolant level	X244	26
S035 - Switch, high-pressure/low-pressure (air conditioning system)	X341	23
S045 - Switch, reversing driver stand	X213	11
S047 - Switch, engine brake	X140	26
S067 - Button, valve actuation, external raise	X1114	12
S068 - Button, valve actuation, external lower	X1115	12
S075 - Switch, guard rail pump flow monitor	X1499	12

DIN component designation	Separation point	Circuit diagram sheet no.
S076 - Switch, clutch fluid	X1542 X1543	17
S079 - Switch, steering column	X1590 X1591	11, 21, 22
S080 - Switch, hand brake	X1467	11
S085 - Switch, reverse operation (RÜFA) actuation	X1650	19
S086 - Switch, brake wearing, right	X1651	16
S087 - Switch, brake wearing, left	X1652	16
S092 - Battery disconnect switch	X1749	7

DIN component designation	Separation point	Circuit diagram sheet no.
U002 - Radio aerial	X1669 X1670	24

DIN component designation	Circuit diagram sheet no.
X007 - Implement socket	17
X008 - Socket, on-board computer counter input	12
X015 - External control socket	12, 18, 23
X017 - Front socket	19
X018 - Rear socket	18, 19
X028 - ISO socket (cab)	25
X037 - Separation point on A009	10, 11
X057 - Separation point on M001	7
X058 - Battery terminal (+ UB 30)	7
X059 - Separation point on G001	9
X060 - Separation point on G001	9
X061 - Separation point on M001	7
X062 - Separation point on G002	7
X064 - Separation point on G002	17
X066 - Separation point on G001	9
X072 - Separation point on S002	7, 26
X082 - Separation point on S012	22, 26
X086 - Separation point on Y006	27
X100 [blau] - Separation point on A007	10, 17
X101 [gelb] - Separation point on A007	8, 9, 17
X140 - Separation point on S047	26
X151 - Separation point on B002	15
X153 - Separation point on B004	26
X157 - Separation point on B008	11
X158 - Separation point on B009	11
X159 - Separation point on B010	11
X162 - Separation point on B013	17
X163 - Separation point on B014	11

DIN component designation	Circuit diagram sheet no.
X164 - Separation point on B015	11
X165 - Separation point on B016	11
X166 - Separation point on B017	11
X168 - Separation point on B019	17
X169 - Separation point on B020	15
X170 - Separation point on B021	15
X177 - Separation point on B039	11
X178 - Separation point on B030	12
X179 - Separation point on B031	12
X180 - Separation point on B032	12
X182 - Separation point on B034	17
X188 - Separation point on B040	12
X200 - Separation point on A013	8, 10, 11, 12
X201 - Separation point on A013	8, 9, 10, 14
X202 - Separation point on A013	10, 11, 14, 15
X204 - Separation point on H006	17
X213 - Separation point on S045	11
X214 - Separation point on B084	17
X217 - Separation point on S005	11
X218 - Separation point on S006	11
X224 - Separation point on S013	22
X228 - Separation point on S017	11
X229 - Separation point on S019	15
X230 - Separation point on S020	15
X231 - Separation point on S021	12
X232 - Separation point on S022	12
X235 - Separation point on S025	12
X236 - Separation point on S026	12
X237 - Separation point on S027	12
X238 - Separation point on S028	12
X239 - Separation point on S029	12
X240 - Separation point on S030	12
X244 - Separation point on S034	26
X246 - Separation point on S002	7
X254 - 10 amp socket	25
X255 - 25 A socket (+ UB 30)	25
X256 - 25 amp socket (earth)	25
X258 - Separation point on M004	21
X259 - Separation point on E023	19
X260 - Separation point on E023	19
X289 - Separation point on B051	24
X290 - Separation point on B051	24
X299 - Separation point on S032	19
X300 - Separation point on M010	22
X301 - Separation point on M003	22
X303 - Separation point on M005	22

DIN component designation	Circuit diagram sheet no.
X308 - Separation point on E019	19
X309 - Separation point on E019	19
X310 - Separation point on E019	19
X311 - Separation point on B050	24
X312 - Separation point on B050	24
X315 - Separation point on Y002	11
X316 - Separation point on Y003	11
X317 - Separation point on Y004	22
X318 - Separation point on Y005	11
X319 - Separation point on Y008	15
X320 - Separation point on Y009	11
X321 - Separation point on Y010	11
X322 - Separation point on Y011	15
X323 - Separation point on Y012	12
X332 - Separation point on Y021	12
X333 - Separation point on Y022	12
X336 - Separation point on Y032	12
X341 - Separation point on S035	23
X342 - Separation point on Y024	23
X345 - Separation point on E022	21
X346 - Separation point on E021	21
X347 - Separation point on M002	21
X352 - Separation point on E003	18
X353 - Separation point on E004	18
X360 - Separation point on Y026	15
X361 - Separation point on Y027	15
X374 - Separation point on E009	19
X375 - Separation point on E009	19
X376 - Separation point on E010	19
X377 - Separation point on E010	19
X400 - Rear ISO implement socket	25
X449 - Separation point on G004	17
X450 - Separation point on G004	7
X454 - Separation point on A038	7
X455 - Separation point on A038	7
X456 - Separation point on A038	7
X479 - Separation point on A011	13
X497 - Separation point, ISO preparation	25
X510 - Earth pin, engine left	9, 12, 13
X511 - Earth pin, engine	8, 9, 14, 15
X512 - Earth pin, engine	9
X513 - Earth pin, engine	9, 13, 19, 22
X520 - Earth pin, oil sump right	9, 18
X521 - Earth pin, engine	9
X532 - Earth pin, cab body	9, 18, 19, 20, 21
X533 - Earth pin, cab body	9, 12, 17, 19, 24, 25

DIN component designation	Circuit diagram sheet no.
X534 - Earth pin, cab body	9, 19, 21, 22, 25
X550 - Earth pin, operator platform right	9
X551 - Earth pin, operator platform right	9, 17, 19, 22
X552 - Earth pin, operator platform	9, 20, 21, 23
X553 - Earth pin, operator platform	9, 24, 25, 26
X554 - Earth pin, operator platform	7, 8, 9, 11, 19, 25, 28
X558 - Earth pin, transmission	9, 17
X559 - Earth pin, transmission	9, 25
X570 - Earth pin, transmission	9, 12, 15, 19, 22
X571 - Earth pin, transmission	9, 11, 13
X572 - Earth pin, transmission	9, 12, 14, 18, 23
X573 - Earth pin, transmission	9
X574 - Earth pin, transmission	9, 19, 21
X596 - Connector, earth (X1048 socket, ABS)	17
X598 - Connector, K bus_High	10, 18
X599 - Connector, K bus_Low	10, 18
X608 - Connector, + UB 15	7, 21, 22
X619 - Connector, electronics earth	9
X620 - Connector, sensor system earth	9, 12, 14
X621 - Connector, sensor system earth	9, 11
X627 - Connector, electronics earth	9, 11, 12
X629 - Connector, + UB 30	8
X631 - Connector, rear PTO LED ON	15
X635 - Connector, sensor system earth (instrument panel)	17
X643 - Connector, instrument panel earth	9
X650 - Connector, headlight 56b (dipped beam)	18
X651 - Connector, headlight 56a (main beam)	18
X657 - Connector, auxiliary lighting 56a (main beam)	18
X658 - Connector, auxiliary lighting 56b (dipped beam)	18
X659 - Connector, work light (cornerlight)	18
X660 - Connector, sensor system earth	9, 11, 26
X661 - Connector, electronics earth	9, 18, 19
X668 - Connector, sensor system earth	9, 12
X669 - Connector, sensor system earth	9, 14, 15
X671 - Connector, sensor system earth	9, 11, 12
X672 - Connector, sensor system earth	9, 11
X673 - Connector, sensor system earth	9, 11, 12
X674 - Connector, sensor system earth	9, 15, 16
X678 - Connector, sensor system earth	17
X684 - Connector, ISO socket earth	25
X692 - Connector, +UB 30 (A051)	8
X694 - Connector, +UB 30 (A038)	7, 19, 20, 21, 22, 23
X698 - Connector, sensor system earth	17
X707 - Connector, ISO bus_Low	10
X708 - Connector, ISO bus_High	10
X711 - Connector, V bus_High	10, 13

DIN component designation	Circuit diagram sheet no.
X712 - Connector, V bus_Low	10, 13
X714 - Connector, G bus_Low	10
X715 - Connector, G bus_High	10
X718 - Connector, K bus_Low	10
X719 - Connector, K bus_High	10
X725 - Connector, K bus_High	10, 25
X726 - Connector, K bus_Low	10, 25
X727 - Connector, ISO bus_High	25
X728 - Connector, ISO bus_Low	25
X738 - Connector, serial RXD	10, 24
X739 - Connector, serial TXD	10, 24
X760 - Connector, earth	19, 21, 22
X761 - Connector, earth	19, 21, 22
X762 - Connector, + UB 15	21
X766 - Connector, air conditioning earth	18, 20
X769 - Connector, signal (E021/E022)	21
X789 - Connector, signal (E083/E084)	22
X793 - Connector, signal (E082/E085)	21
X794 - Connector, earth (A051)	9
X796 - Cable coupling (M002)	20, 21, 23
X797 - Connector, air conditioning coupler signal	23
X798 - Separation point on E050	20
X799 - Separation point on E051	20
X810 - EDC diagnostics socket (engine control unit)	26
X814 - Connector, +UB30 (X1048 socket, ABS)	17
X834 - Separation point on E070	19
X835 - Separation point on E071	19
X836 - Separation point on E0116 / E117	19
X837 - Separation point on X1048 socket, ABS	17
X838 - Separation point on X015 socket, external control	12, 18, 23
X842 - Separation point on E020	19
X843 - Separation point on E020	19
X844 - Separation point on E020	19
X845 - 25 A socket (+ UB 30)	25
X846 - 25 amp socket (earth)	25
X847 - 25 A socket (+ UB 30)	25
X848 - 25 amp socket (earth)	25
X868 - Separation point on E106	23
X869 - Separation point on E107	23
X896 - Separation point on E054	19
X897 - Separation point on E055	19
X898 - Separation point on B055	26
X899 - Connector, earth	18
X916 - Separation point on E064	21
X916 - Separation point on E118	21
X917 - Separation point on E065	21

DIN component designation	Circuit diagram sheet no.
X917 - Separation point on E119	21
X918 - Separation point on E066	18, 19
X919 - Separation point on E067	18, 19
X920 - Separation point on A053	20, 23
X921 - Separation point on A053	23
X991 - Separation point on R002	27
X998 - Separation point on H005	22
X999 - Separation point on H005	22
X1041 - Separation point on Y053	11
X1048 - Socket ABS	17
X1114 - Separation point on S067	12
X1115 - Separation point on S068	12
X1153 - Separation point on Y088	16
X1285 - Separation point on E078	22
X1286 - Separation point on E079	22
X1289 - Separation point on E074	18
X1290 - Separation point on E075	18
X1291 - Separation point on E070	19
X1292 - Separation point on E071	19
X1315 - Separation point on radio (compact plug)	24
X1316 - Separation point on radio (compact plug)	24
X1343 - Connector, G bus_High	10, 28
X1344 - Connector, G bus_Low	10, 28
X1357 [weiß] - Separation point on A036	8, 9, 10, 17
X1401 - Separation point on A039	8, 9, 10, 11, 17, 23,
X1402 [B] - Separation point on A050	8, 10, 11, 12, 14, 15, 16, 26
X1403 [A] - Separation point on A050	8, 9, 10, 11, 12, 14, 15, 16,
X1404 [A] - Separation point on A038	18
X1405 [B] - Separation point on A038	19
X1406 [C] - Separation point on A038	20
X1407 [D] - Separation point on A038	21
X1408 [E] - Separation point on A038	22
X1409 [F] - Separation point on A038	23
X1410 - Separation point on B060	17
X1411 - Separation point on A055	8, 28
X1417 - Cable coupling, operator platform/cab	10, 18, 19, 25
X1418 - Cable coupling, operator platform/transmission	11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23
X1419 - Cab cable coupling	12, 17, 23, 25
X1420 - Cab cable coupling	19, 20, 21, 22, 24, 25
X1421 - Cable coupling, operator platform	12, 15, 18, 19, 21, 22
X1422 - Cable coupling, mudguard	12, 15, 18, 19, 21, 22
X1423 - Cable coupling, operator platform/transmission	9, 10, 11, 12, 13, 15, 17, 18, 23
X1424 - Cable coupling, operator platform	10, 13, 14, 15, 16, 17, 19, 20, 25, 26
X1425 - Cable coupling, operator platform	7, 8, 9, 11, 12, 18, 22, 23
X1436 - Cable coupling, tractor bonnet (drive light, cornerlight)	18

DIN component designation	Circuit diagram sheet no.
X1440 - Fuse holder	7, 8, 11, 13, 17, 18, 19, 20, 21, 22, 23, 24, 25
X1459 - Separation point on Y055	12
X1461 - Connector, sensor system earth (left mudguard)	12, 15
X1462 - Connector, sensor system earth (right mudguard)	12, 15
X1463 - Connector, G bus_High	10
X1464 - Connector, G bus_Low	10
X1466 - Separation point on A051	8, 9, 10, 26
X1467 - Separation point on S080	11
X1470 - Separation point, control valve	13
X1471 - Separation point, control valve	13
X1472 - Separation point, control valve	13
X1473 - Separation point, control valve	13
X1474 - Separation point, control valve	13
X1477 - Separation point, control valve	13
X1478 - Separation point, control valve	13
X1479 - Separation point, control valve	13
X1480 - Separation point, control valve	13
X1481 - Separation point, control valve	13
X1482 - Separation point, control valve	13
X1483 - Separation point, control valve	13
X1484 - Separation point, control valve	13
X1485 - Separation point, control valve	13
X1486 - Separation point, control valve	13
X1487 - Separation point, control valve	13
X1488 - Separation point, control valve	13
X1489 - Separation point, control valve	13
X1490 - Separation point, control valve	13
X1497 - Separation point on Y060	12
X1498 - Separation point on Y061	12
X1499 - Separation point on S075	12
X1500 - Separation point on B063	12
X1501 - Separation point on Y062	12
X1502 - Separation point on Y084	12
X1503 - Separation point on Y063	14
X1504 - Separation point on Y064	14
X1507 - Separation point on B068	14
X1508 - Separation point on B067	14
X1509 - Separation point on B066	14
X1510 - Separation point on Y065	14
X1512 - Separation point on Y067	14
X1513 - Separation point on Y085	14
X1514 - Separation point on Y086	14
X1517 - Separation point on Y082	14
X1518 - Separation point on Y083	14
X1519 - Separation point on B081	14

DIN component designation	Circuit diagram sheet no.
X1525 - Connector, sensor + UB (from instrument panel)	17
X1528 - Connector, sensor system supply	26
X1532 - Separation point on B077	26
X1535 - Separation point on B073	20
X1536 - Separation point on B071	20
X1538 - Separation point on B076	20
X1539 - ISO bus diagnostics socket	25
X1542 - Separation point on S076	17
X1543 - Separation point on S076	17
X1544 - Separation point on H009	11
X1545 - Separation point on B074	20
X1546 - Separation point on M015	23
X1547 - Separation point on M016	23
X1555 - Separation point on M017	23
X1556 - Separation point on E063	23
X1561 - Separation point on E082	21
X1562 - Separation point on E082	21
X1563 - Separation point on E085	21
X1564 - Separation point on E085	21
X1565 - Connector, position light	19
X1570 - Separation point on E083	22
X1571 - Separation point on E083	22
X1572 - Separation point on E084	22
X1573 - Separation point on E084	22
X1578 - Connector, + UB 15	8, 18, 24
X1586 - V bus cable coupling (Auto-Guide)	13
X1587 - Cable coupling, Y087	13
X1588 - Separation point on Y087	13
X1589 - Separation point on Y087	13
X1590 - Separation point on S079	11, 21
X1591 - Separation point on S079	21, 22
X1592 - Separation point on K061	8
X1593 - Separation point on K061	7
X1594 - Separation point on K061	25
X1595 - Separation point on K061	25
X1597 - Cable coupling A059	10, 24
X1600 - Cable coupling, to rear work lights (roof)	19, 20, 23
X1603 - Separation point on E098	18
X1604 - Separation point on E099	18
X1605 - Separation point on E100	18
X1606 - Separation point on E101	18
X1611 - Separation point on X400 PCB, ISO (bus terminal)	25
X1612 - Separation point on X400 PCB, ISO (bus terminal)	25
X1613 - Separation point on E108	20
X1614 - Separation point on E109	20
X1616 - Separation point on X1806 - +UB 30 distributor	7

DIN component designation	Circuit diagram sheet no.
X1617 - Separation point on X1806 - +UB 30 distributor	7
X1618 - Separation point on X1806 - +UB 30 distributor	7
X1620 - Separation point on B061	24
X1621 - Separation point on B061	24
X1622 - Separation point on B062	24
X1623 - Separation point on B062	24
X1624 - Cable coupling to front position lights	19, 20
X1633 - Separation point, Auto-Guide TopDock	25
X1634 - Connector (+ UB 30)	7, 8, 28
X1635 - Cable coupling, operator platform	8, 10
X1636 - Vario-Doc cable coupling	8, 28
X1637 - Connector, ISO bus_Low (A055 Vario-Doc)	28
X1638 - Connector, ISO bus_High (A055 Vario-Doc)	28
X1639 - Connector, K bus_High	28
X1640 - Connector, K bus_Low	28
X1648 - Separation point on K065	26
X1649 - Separation point, 10 amp socket	25
X1650 - Separation point on S085	19
X1651 - Separation point on S086	16
X1652 - Separation point on S087	16
X1654 - Separation point on B085	27
X1655 - Separation point on B086	27
X1656 - Separation point on B087	27
X1657 - Separation point on B088	27
X1658 - Separation point on B089	27
X1659 - Separation point on B090	27
X1660 - Separation point on B091	27
X1661 - Separation point on B092	27
X1662 - Separation point on Y091	27
X1663 - Separation point on K063	27
X1664 - Separation point on K063	27
X1665 - Separation point on K063	27
X1667 - Separation point on Y092	21
X1668 - Separation point on Y093	19
X1669 - Separation point on U002	24
X1670 - Separation point on U002	24
X1671 - Separation point on A051	27
X1672 - Separation point on A051	27
X1673 - Cylinder head cable coupling (injectors)	27
X1674 - Separation point on Y094	27
X1675 - Connector, earth	27
X1676 - Connector + UB 12 VDC	27
X1677 - Cylinder head cable coupling (injectors)	27
X1678 - Connector, front work light	20
X1679 - Separation point on K068	7
X1680 - Separation point on K068	7

DIN component designation	Circuit diagram sheet no.
X1681 - Cable coupling, E051	20
X1682 - Cable coupling, E050	20
X1683 - Cable coupling, camera socket	24
X1685 - Separation point on E086	19
X1686 - Separation point on E086	19
X1687 - Separation point on E087	19
X1688 - Separation point on E087	19
X1689 - Separation point on E088	20
X1690 - Separation point on E088	20
X1691 - Separation point on E089	20
X1692 - Separation point on E089	20
X1700 - Separation point on K063	27
X1702 - Separation point on K063	27
X1703 - Separation point on G004	7
X1728 - Separation point on A058	28
X1729 - Connector, ISO bus_Low	24
X1730 - Connector, ISO bus_Low	24
X1731 - Connector, ISO bus_High	24
X1732 - Separation point on A059	24
X1734 - Connector, ISO bus_High	24
X1735 - Connector, earth (Auto-Guide)	24
X1740 - Connector, Auto-Guide (+UB 15)	24
X1742 - Connector, Auto-Guide (+UB 30)	24
X1749 - Separation point on S092	7
X1751 - Separation point, left frame earth point	11, 22
X1752 - Separation point on K068	7
X1753 - Separation point on K069	7
X1765 - Separation point on A060	29
X1766 - Separation point on B095	29
X1767 - Separation point on radio to B050/B051	29
X1768 - Separation point on radio from A060	29
X1785 - Separation point on A075	28
X1786 - Separation point on A076	28
X1787 - Connector, + UB 15	8, 28
X1802 - Separation point on E116 / E117	19
X1804 - Separation point on X1806	7
X1805 - Separation point on K068	7
X1806 - +UB 30 distributor	7
X1830 - Separation point on A073	10
X1852 - Separation point on A077	28
X2025 - Separation point on A078	29
X2026 - Separation point on A078	29
X2136 - Separation point on B101	29
X4000 - Separation point on X1633_ P	28
X4001 - Separation point on X1633_ S	28
X4002 - Auto-Guide diagnostics socket	28

DIN component designation	Circuit diagram sheet no.
X4003 - Connector, ISO bus_Low	28
X4004 - Connector, ISO bus_High	28
X4005 - Connector, V bus_Low	28
X4006 - Connector, V bus_High	28
X4007 - Earth pin, operator platform	28
X4024 - Connector, earth E020	19
X4091 - Connector, +UB 15 on A078	19, 29
X5028 - Connector, cab earth pin	9, 29

DIN component designation	Separation point	Circuit diagram sheet no.
Y002 - Solenoid valve, travel range I	X315	11
Y003 - Solenoid valve, travel range II	X316	11
Y004 - Solenoid valve, turbo-clutch	X317	22
Y005 - Solenoid valve, speed governor	X318	11
Y006 - Solenoid valve, engine brake	X086	27
Y008 - Solenoid valve, rear PTO (clutch)	X319	15
Y009 - Solenoid valve, 4WD	X320	11
Y010 - Solenoid valve, differential lock	X321	11
Y011 - Front PTO solenoid valve (clutch)	X322	15
Y012 - Oil pre-heater/load suspension solenoid valve	X323	12
Y021 - Lifting solenoid valve (standard front power lift)	X332	12
Y021 - Front pressure compensator lock valve	X332	12
Y022 - Lowering solenoid valve (standard front power lift)	X333	12
Y022 - Field pressure control solenoid valve (front),	X333	12
Y024 - Magnetic clutch, air conditioning compressor	X342	23
Y026 - Solenoid valve, rear PTO, stage I	X360	15
Y027 - Solenoid valve, rear PTO, stage II	X361	15
Y032 - Control pressure solenoid valve	X336	12
Y053 - Active hold function solenoid valve	X1041	11
Y055 - Rear pressure compensator lock valve	X1459	12
Y060 - Hydraulic oil pre-heater solenoid valve (rear)	X1497	12
Y061 - hydraulic oil pre-heater solenoid valve (middle)	X1498	12
Y062 - Solenoid valve, field pressure control (rear)	X1501	12
Y063 - Wobble stabiliser solenoid valve	X1503	14
Y064 - Suspension load pressure/lowering solenoid valve	X1504	14
Y065 - Raise suspension solenoid valve	X1510	14
Y067 - Lock suspension solenoid valve	X1512	14
Y070 [FKH] - Cut-off valve, front power lift enhanced control	X1470 X1471	13
Y071 [2.1] - Auxiliary control valve (olive)	X1472 X1473	13
Y072 [2.2] - Auxiliary control valve (grey)	X1474 X1477	13
Y074 [1.1] - Auxiliary control valve (yellow)	X1478 X1479	13

DIN component designation	Separation point	Circuit diagram sheet no.
Y075 [1.2] - Auxiliary control valve (blue)	X1480 X1481	13
Y076 [1.3] - Auxiliary control valve (red)	X1482 X1483	13
Y077 [HKH] - Cut-off valve, rear EPC	X1484 X1485	13
Y078 [1.4] - Auxiliary control valve (green)	X1486 X1487	13
Y079 [1.5] - Auxiliary control valve (brown)	X1488 X1489	13
Y080 [1.6] - Auxiliary control valve (violet)	X1490	13
Y082 - Solenoid valve, lower link stabiliser, lock	X1517	14
Y083 - Solenoid valve, lower link stabiliser, release	X1518	14
Y084 - Solenoid valve, Power Beyond	X1502	12
Y085 - Pilot pressure/switch-off solenoid valve (Auto-Guide)	X1513	14
Y086 - Solenoid valve, steering disconnect (Auto-Guide)	X1514	14
Y087 - Steering valve block, Auto-Guide	X1588 X1589	13
Y088 - Solenoid valve, release trailer brake	X1153	16
Y091 - Dispensing unit (fuel)	X1662	27
Y092 - Solenoid valve, reverse operation (RÜFA), rotate to left	X1667	21
Y093 - Solenoid valve, reverse operation (RÜFA), rotate to right	X1668	19
Y094 - Actuator unit, AGR (exhaust gas recirculation)	X1674	27
Y095 - Injector valve 1 (injector)	-	27
Y096 - Injector valve 2 (injector)	-	27
Y097 - Injector valve 3 (injector)	-	27
Y098 - Injector valve 4 (injector)	-	27
Y100 - Injector valve 5 (injector)	-	27
Y101 - Injector valve 6 (injector)	-	27

9000 Electrical system/overall system

C **Electrical circuit diagrams**

1 Overview of instrument panel/actuator unit/keyboard/A4 terminal/multifunction armrest (MFA) - Sheet 2 . . . 1
2 Overview of microfuse - Sheet 3 . . . 3
3 Overview of central electrical system - Sheet 4 . . . 5
4 Overview of EXT - Sheet 5 . . . 7
5 Overview of EDC/Vario-Doc/air conditioning/B4 TopDock/Auto-Guide terminal - Sheet 6 . . . 9
6 Supply - Sheet 7 . . . 11
7 Electronics supply - Sheet 8 . . . 13
8 Earth layout - Sheet 9 . . . 15
9 G bus/K bus/V bus/ISO bus - Sheet 10 . . . 17
10 Transmission control system - Sheet 11 . . . 19
11 Hydraulics - Sheet 12 . . . 21
12 Hydraulics/Auto-Guide - Sheet 13 . . . 23
13 Suspension/Auto-Guide - Sheet 14 . . . 25
14 PTO - Sheet 15 . . . 27
15 Trailer brake - Sheet 16 . . . 29
16 Instrument panel/ABS/driver seat - Sheet 17 . . . 31
17 STVZO/corner light/4th hydraulic circuit - Sheet 18 . . . 33
18 STVZO/work light/reversing system - Sheet 19 . . . 35
19 STVZO/work light/air conditioning - Sheet 20 . . . 37
20 Wipers/work light - Sheet 21 . . . 39
21 Work light/wipers/emergency mode - Sheet 22 . . . 41
22 Air conditioning/mirror/3rd hydraulic circuit - Sheet 23 . . . 43
23 Radio/Auto-Guide terminal - Sheet 24 . . . 45
24 ISO bus/load sockets - Sheet 25 . . . 47
25 EDC engine control - Sheet 26 . . . 49
26 KHD engine control - Sheet 27 . . . 51
27 Immobiliser/Vario-Doc/Auto-Guide/direction indicator LED - Sheet 28 . . . 53
28 Hands-free device/tachograph - Sheet 29 . . . 55

1 Overview of instrument panel/actuator unit/keyboard/A4 terminal/multifunction armrest (MFA) - Sheet 2

A007 - Instrument panel (Item B2, D2)
A009 - Actuator unit (Item A4)
A036 - Control panel, dashboard right/left (Item D4)
A039 - MFA, multifunction armrest (Item D6)
A073 - Terminal (A4) (Item B6)

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A007

/17.A6	1	Enter key	Yellow instrument panel
/17.A7	2	ESC key	
/17.A7	3	UP arrow key	
/17.A7	4	DOWN arrow key	
/17.A6	5	Sensor system earth	
	6		
	7		
/8.G5	8	UB 30	
/8.G5	9	UB 15	
/17.A7	10	58	
/9.A5	11	Earth 31	
/9.A5	12	Electronics earth	
/17.A6	13	UB sensors	
	14		
	15		
	16		
	17		
	18		
	19		
/17.A6	20	Sensor system earth	
/17.A6	21	Fuel supply sensor	
/17.A6	22	Hydraulic oil supply sensor	
	23		
/17.A6	24	Compressed air supply sensor 1	
	25		
	26		

A007

	1		Blue instrument panel
	2		
	3		
/17.A4	4	Alternator 1 LED	
	5		
	6		
	7		
/17.A4	8	Loud buzzer	
/17.A4	9	Quiet buzzer	
/17.A4	10	PTO speed signal	
/17.A4	11	Theoretical speed signal	
/17.A4	12	Actual speed signal	
/10.A3	13	Control bus_Low	
	14		
/17.A4	15	Linkage position signal	
/17.A4	16	Hydraulic oil temp. sensor	
	17		
/17.A4	18	Compressed air supply sensor 2	
/17.A4	19	Brake fluid switch	
	20		
/17.A4	21	ABS LED	
/17.A4	22	Linkage position signal	
	23		
/17.A4	24	Alternator 2 LED	
	25		
/10.A3	26	Control bus_High	

A036

/8.B7	1	UB 30	Keypad
/8.B7	2	UB 15	
/9.B4	3	Earth	
/10.B3	4	Control bus_High In	
/9.B4	5	Electronics earth	
/10.B3	6	Control bus_Low In	
/10.B3	7	Control bus_High Out	
/10.B3	8	Control bus_Low Out	
	9		
/17.B8	10	Enter key	
/17.B8	11	ESC key	
/17.B8	12	UP arrow key	
/17.B8	13	DOWN arrow key	
	14		
	15		
	16		
	17		
	18		

A009

	1			Actuator unit
/10.F8	2	sw 1	Transmission bus_High	
/11.G5	3	sw 1	Actuator unit reference F/R	
/11.G5	4	sw 1	UB 30	
/10.F8	5	sw 1	Transmission bus_Low	
/11.G5	6	sw 1	UB actuator unit	
/11.G5	7	sw 1	Electronics earth	
/11.G6	8	sw 1	Earth	

A039

/11.D4	1	ws_0.5	Driver seat switch	MFA
/11.D4	2	ws_0.5	Driver seat switch	
	3	ws_0.75		
/23.A3	4	ws_0.75	Right/left horizontal mirror	
/23.A3	5	ws_0.75	Right/left vertical mirror	
/23.A3	6	ws_0.75	Right horizontal mirror	
/23.A3	7	ws_0.75	Left horizontal mirror	
/23.A3	8	ws_0.75	Right vertical mirror	
/23.A3	9	ws_0.75	Left vertical mirror	
/23.A3	10	gn_0.75	UB 15	
/9.C6	11	br_0.75	Earth 31	
/17.F2	12	br_1	Earth 31	
/17.F3	13	gn_1	UB 15	
/10.B2	14	ws_0.5	Serial Tx	
/10.B2	15	ws_0.5	Serial Rx	
/10.B2	16	ws_0.5	Control bus_High In	
/10.B2	17	ws_0.5	Control bus_High Out	
/10.B2	18	ws_0.5	Control bus_Low In	
/10.B2	19	ws_0.5	Control bus_Low Out	
/10.B2	20	ws_0.5	ISO bus_High In	
/10.B2	21	ws_0.5	ISO bus_High Out	
/10.B2	22	ws_0.5	ISO bus_Low In	
/10.B2	23	ws_0.5	ISO bus_Low Out	
	24			
/8.F5	25	gn_1	UB 15E	
/8.F5	26	rt_1.5	UB 30E	
/9.C5	27	br_ws_0.75	Electronics earth	
/9.C6	28	br_ge_0.5	Serial earth	
/9.C6	29	br_1.5	Earth 31	
	30			
	31			

A073

/10.B1	1	Serial Tx	Terminal A4
/10.B1	2	Serial Rx	
/10.B1	3	Control bus_High	
/10.B1	4	Control bus_Low	
/10.B1	5	ISO bus_High	
/10.B1	6	ISO bus_Low	
	7		
/8.F5	8	UB 15	
/8.F5	9	UB 30	
/9.B5	10	Electronics earth	
/9.B6	11	Serial earth	
/9.B6	12	Earth 31	

Overview of instrument panel/actuator unit/keyboard/
A4 terminal/multifunction armrest (MFA) - Sheet 2

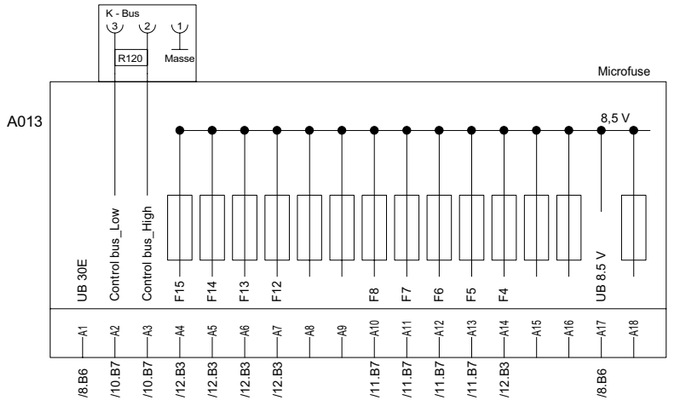
FENDT 900 Vario COM III

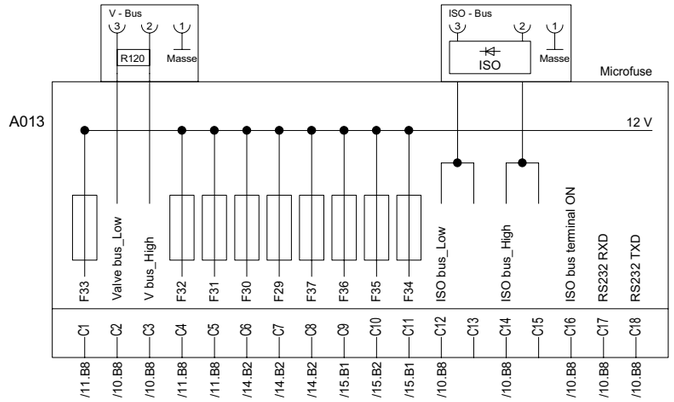
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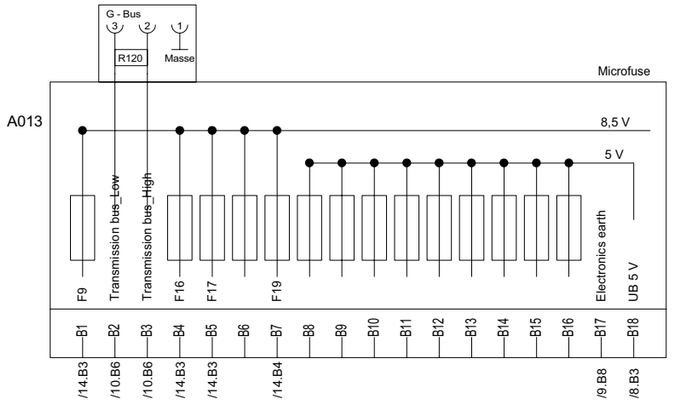
FENDT Service-Training Dokumentation

1 Overview of instrument panel/actuator unit/keyboard/A4 terminal/multifunction armrest (MFA) - Sheet 2

A007 - Instrument panel (Item B2, D2)
A009 - Actuator unit (Item A4)
A036 - Control panel, dashboard right/left (Item D4)
A039 - MFA, multifunction armrest (Item D6)
A073 - Terminal (A4) (Item B6)







Overview of microfuse - Sheet 3

FENDT 900 Vario COM III

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FENDT Service-Training Dokumentation

2 Overview of microfuse - Sheet 3

A013 - PCB, microfuses

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A038 ZE

/20.B5	C1	–	Work light indic. relay (30)
/20.B5	C2	–	Front RH direction indicator
/20.B5	C3	–	Work light indic. relay (87)
	C4	–	
/20.B5	C5	–	Front LH direction indicator
	C6	–	
	C7	–	
/20.B6	C8	–	Evaporator temperature sensor
/20.B6	C9	–	Solar sensor 1
/20.B6	C10	–	Internal temperature sensor
/20.B6	C11	–	Output temperature sensor
	C12	–	
	C13	–	
/20.B6	C14	–	UB stepper motor
/20.B6	C15	–	High/low pressure switch
	C16	–	
/20.B6	C17	–	External temperature sensor
/20.B6	C18	–	Door contact switch
/20.B6	C19	–	Rel., F int. wk lts, roof (30)
/20.B6	C20	–	Solar sensor 2
/20.B6	C21	–	Rel., F int. wk lts, roof (87)

A038 ZE

/19.B5	B1	–	Reverse op. (turning right)
/19.B5	B2	–	Rev.op. (steer. col. straight)
/19.B5	B3	–	Right indicator socket
/19.B5	B4	–	Socket 58R
/19.B5	B5	–	Left indicator socket
/19.B6	B6	–	Main beam/dipped beam switch
/19.B5	B7	–	Socket 58L
/19.B5	B8	–	Position light 58
/19.B6	B9	–	Fan diagnostics
/19.B6	B10	–	Rel., F ext. wk lts, roof (30)
/19.B6	B11	–	Left tail light
/19.B6	B12	–	Rel., F ext. wk lts, roof (87)
/19.B6	B13	–	Right tail light
/19.B6	B14	–	LH wide load (NA indicator 2)
/19.B6	B15	–	RH wide load (NA indicator 2)
/19.B6	B16	–	Rear window heater relay (30)
/19.B6	B17	–	Rear window heater relay (30)
/19.B5	B18	–	Lighting, cab
/19.B5	B19	–	Rear window heater relay (87)
/19.B5	B20	–	Rear window heater relay (87)
/19.B6	B21	–	Earth 31

A038 ZE

/18.B6	A1	–	Wk light corner light rel.(87)
/18.B6	A2	–	Electronics earth
/18.B6	A3	–	Wk light corner light rel.(30)
	A4	–	
/18.B6	A5	–	Right brake light
/18.B6	A6	–	Left brake light
/18.B6	A7	–	Work light relay (NA) (30)
/18.B6	A8	–	Socket 54
/18.B6	A9	–	Control bus_Low
/18.B6	A10	–	Headlight 56b
/18.B6	A11	–	Additional headlight 56a
/18.B6	A12	–	Control bus_High
/18.B6	A13	–	Work light relay (NA) (87)
/18.B6	A14	–	Air conditioning earth
/18.B7	A15	–	UB 15
	A16	–	
/18.B6	A17	–	Headlight 56a
/18.B7	A18	–	UB 5 V air conditioning
/18.B6	A19	–	4th hydr. circuit relay (87)
/18.B6	A20	–	Additional headlight 56b
/18.B6	A21	–	4th hydr. circuit relay (30)

A038 ZE

/23.B6	F1	–	Primary fan relay (30)
/23.B5	F2	–	Stepper motor earth
/23.B5	F3	–	Primary fan relay (87)
	F4	–	
/23.B6	F5	–	Internal fan temp. signal
/23.B5	F6	–	Stepper motor earth
/23.B5	F7	–	15ZE relay (30)
/23.B5	F8	–	Fan governor
/23.B6	F9	–	Fuel pump
/23.B5	F10	–	Stepper motor earth
	F11	–	
/23.B5	F12	–	Stepper motor earth
/23.B6	F13	–	15ZE relay (87)
	F14	–	
/23.B6	F15	–	Lower air conditioning flap
	F16	–	
/23.B5	F17	–	Middle/upper air con flap
/23.B6	F18	–	Middle/upper air con flap
/23.B6	F19	–	3rd hydr. circuit relay (30)
/23.B6	F20	–	Lower air conditioning flap
/23.B6	F21	–	3rd hydr. circuit relay (87)

A038 ZE

/22.B4	E1	–	Rel., R int. wk lts, roof (30)
/22.B5	E2	–	Air con magnetic clutch
/22.B4	E3	–	Rel., R int. wk lts, roof (87)
	E4	–	
	E5	–	
/22.B5	E6	–	Exterior mirror heater
/22.B4	E7	–	15E relay (30)
/22.B5	E8	–	50a
/22.B4	E9	–	Left indicator switch
/22.B4	E10	–	15E relay (86)
/22.B4	E11	–	Right indicator switch
/22.B4	E12	–	Rear washer system
/22.B4	E13	–	15E relay (87)
/22.B4	E14	–	Main light flash switch
/22.B4	E15	–	Front washer system
/22.B4	E16	–	Emergency actuation relay (86)
/22.B4	E17	–	Emergency actuation relay (86)
/22.B4	E18	–	Emergency actuation relay (87)
/22.B4	E19	–	Emergency actuation relay (30)
/22.B4	E20	–	Rr mudguard wk light rel. (87)
/22.B4	E21	–	Rr mudguard wk light rel. (30)

A038 ZE

/21.B4	D1	–	Rel, R ext. wk lts, roof (30)
/21.B5	D2	–	Reverse op. (turning left)
/21.B4	D3	–	Rel., R ext. wk lts, roof (87)
	D4	–	
/21.B5	D5	–	Front wiper 53
	D6	–	
/21.B4	D7	–	Relay 15L (30)
/21.B5	D8	–	Rear wiper 53
/21.B5	D9	–	Front wiper 31b
/21.B5	D10	–	Front washer ON
/21.B4	D11	–	Rear wiper 31B
	D12	–	
/21.B4	D13	–	Relay 15L (87)
/21.B5	D14	–	Front wiper ON
/21.B5	D15	–	Front wiper intermittent
/21.B4	D16	–	Relay 15L (86)
/21.B4	D17	–	Rear left direction indicator
	D18	–	
/21.B4	D19	–	Rotating beacon relay (30)
/21.B4	D20	–	Rear right direction indicator
/21.B4	D21	–	Rotating beacon relay (87)

Overview of central electrical system - Sheet 4

FENDT 900 Vario COM III

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FENDT Service-Training Dokumentation

FENDT 900 Vario COM III: 919 .. 1847- / 922 .. 2004- / 925 .. 2054- / 928 .. 2291- / 931 .. 1908- / 934 .. 2790-

3 Overview of central electrical system - Sheet 4

A038 - ECU, central electrical system

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EXT

A050

/8.B2	B1	UB 30
/9.B3	B2	Earth 31
/8.B2	B3	UB 30
/8.B2	B4	UB 30
/8.B2	B5	UB 30
/8.B2	B6	UB 30
/9.B3	B7	Earth 31
	B8	
/11.B3	B9	Reverse operation positioning
/11.B3	B10	Quick reverse switch R
/11.B3	B11	Right brake switch
/12.B4	B12	Ext. RH rr power lift low. btn
/12.B4	B13	Event counter
/11.B3	B14	Driver seat switch
/10.B5	B15	Control bus_High
/10.B5	B16	Control bus_Low
/14.B2	B17	Steering wheel sensor
/26.B7	B18	Foot throttle sensor
/8.B2	B19	UB 5 V
/9.B3	B20	Earth 31
/11.B3	B21	Emergency actuation ON signal
/11.B3	B22	Quick reverse switch F
/11.B3	B23	Discharge temperature sensor
/11.B3	B24	Left brake switch
/16.B4	B25	Left brake pad wear switch
	B26	
/16.B4	B27	Hand brake sensor
	B28	
/11.B3	B29	Clutch pedal sensor
	B30	
	B31	
/8.B2	B32	UB 8.5 V
/9.B3	B33	Earth 31
/11.B3	B34	Hand brake switch
/12.B4	B35	External raise valve button
/15.B5	B36	Left external rear PTO button
/12.B4	B37	Ext. RH raise rr pwr lift btn
	B38	
/12.B4	B39	Ext. LH raise rr pwr lift btn
/8.B2	B40	UB 15
/15.B5	B41	Rear PTO LED on
/11.B3	B42	Reverse warning signal
/10.B5	B43	ISO bus terminal ON
/14.B2	B44	Auto-Guide activation
/8.B2	B45	UB electronics
/9.B3	B46	Earth 31
/12.B4	B47	External lower valve button
/12.B4	B48	Ext. LH rr power lift low. btn
	B49	
/15.B5	B50	External right rear PTO button
/16.B4	B51	Right brake pad wear switch
	B52	
/10.B5	B53	Transmission bus_High
/10.B5	B54	Transmission bus_Low
	B55	
/8.B2	B56	ISO disconnect relay ON
	B57	
/8.B2	B58	UB electronics

EXT

A050

/14.B6	A1	Wobble stabiliser SV
/16.B3	A2	Hyd. tr. brake release SV_High
/16.B3	A3	Hydr. trailer brake 2 SV_High
/11.B6	A4	Active hold function SV
	A5	
/14.B6	A6	Pilot pressure SV_High
/14.B6	A7	Steering switch off SV_High
/15.B2	A8	Front PTO sensor
/11.B5	A9	Bevel pinion speed sensor
/15.B3	A10	Rear PTO sensor
/11.B6	A11	Engine speed sensor
/12.B1	A12	Radar sensor
/11.B5	A13	Collector speed sensor
/8.B1	A14	ISO disconnect relay ON
/11.B6	A15	UB actuator unit
/12.B2	A16	LH draught sensing pin sens.
/12.B2	A17	RH draught sensing pin sens.
/12.B2	A18	Ext. rear power lift sensor
	A19	
	A20	
/12.B2	A21	Rear power lift pos. sensor
/9.B2	A22	Earth 31
/9.B2	A23	Earth 31
/9.B2	A24	Earth 31
	A25	
/14.B6	A26	Suspension load pressure SV
	A27	
	A28	
	A29	
	A30	
/12.B2	A31	Rear pressure compens. lock SV
	A32	
/15.B3	A33	Rear PTO clutch speed sensor
/11.B5	A34	Filter contamination switch
/12.B1	A35	LS pump pressure switch
/12.B2	A36	Ext. front power lift low. btn
/12.B2	A37	Ext. front power lift rai. btn
/12.B2	A38	Front power lift pos. sensor
/16.B3	A39	Brake pressure sensor
	A40	
	A41	
/12.B1	A42	Filter monitor switch
/12.B1	A43	Guard rail pump flow switch
	A44	
/9.B2	A45	Sensor system earth
/9.B2	A46	Sensor system earth
	A47	
/12.B2	A48	Constant pump flow switch
/12.B2	A49	Raise/lock FKH press. comp. SV
/12.B2	A50	POWER BEYOND solenoid valve
/11.B5	A51	Neutral/TC solenoid valve
/12.B2	A52	Control pressure SV
/15.B3	A53	Rear PTO level 2 SV
/15.B3	A54	Rear PTO level 1 SV.
	A55	
/12.B2	A56	Rear power lift field pres. SV
/11.B5	A57	Bevel pinion direction sensor
/11.B5	A58	Actuator unit reference F/R
/11.B5	A59	Collector direction sensor
/10.B4	A60	ISO bus_Low
/10.B4	A61	ISO bus_High
/10.B4	A62	Valve bus_Low
/10.B4	A63	V bus_High
/14.B6	A64	Right wheel position sensor
/14.B6	A65	Steering angle sensor
/14.B6	A66	Left wheel position sensor
/11.B5	A67	High pressure 1 sensor
	A68	
/11.B5	A69	Travel range detection sensor
/11.B5	A70	High pressure 2 sensor
	A71	
/14.B6	A72	Lower link stabil. release SV
/12.B2	A73	Lower FPL/FPL field pres. SV
/12.B2	A74	Front pre-heater SV
/11.B6	A75	Speed governor solenoid valve
	A76	
/15.B3	A77	Rear PTO clutch solenoid valve
/14.B6	A78	Steering wheel off SV_Low
/14.B6	A79	Pilot pressure SV_Low
	A80	
/11.B6	A81	Active hold function earth SV
	A82	
/16.B3	A83	Hydr. trailer brake 2 SV_Low
	A84	
/16.B3	A85	Hydr. tr. brake release SV_Low
/15.B3	A86	Front PTO clutch SV
/12.B2	A87	Load suspension solenoid valve
/12.B2	A88	Rear pre-heater solenoid valve
/11.B6	A89	4WD solenoid valve
/11.B6	A90	Diff. solenoid valve
/11.B6	A91	Travel range 2 solenoid valve
/11.B6	A92	Travel range 1 solenoid valve
/14.B6	A93	Raise susp. solenoid valve
	A94	
/14.B6	A95	Suspension lock solenoid valve
/14.B6	A96	Lower link stabiliser lock SV

Overview of EXT - Sheet 5

FENDT 900 Vario COM III

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4 Overview of EXT - Sheet 5

A050 - ECU, basic control unit

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A053 — Air conditioning

/23.E5	1	Stepper pin 1
/20.E6	2	Stepper pins 2 and 5
/23.E5	3	Stepper pin 3
/23.E5	4	Stepper pin 4
	5	
/23.E5	6	Stepper pin 6
/20.E6	7	Evaporator temperature sensor
/20.E6	8	Sensor system earth

A053 — Air conditioning

/23.E4	1	UB 12 V
/23.E4	2	Fan govemor
/23.E4	3	Fan diagnostics
/23.E4	4	Earth 31

A051 — EDC

	1	
	2	
/27.A3	3	UB actuators
	4	
/27.A3	5	AGR earth
/27.A3	6	Engine brake solenoid valve
/27.A3	7	Heater flange relay
/27.A3	8	Pre-heating sensor switch
/27.A4	9	Camshaft speed sensor
/27.A4	10	Camshaft speed sensor earth
/27.A3	11	AGR solenoid valve
/27.A4	12	Rail sensor earth
/27.A4	13	UB rail sensor
/27.A4	14	Rail sensor
/27.A4	15	Coolant temp. sensor
/27.A4	16	UB fuel low pressure sensor
	17	
/27.A4	18	Fuel low pressure sensor earth
/27.A4	19	Crankshaft speed sensor earth
	20	
	21	
/27.A4	22	Fuel low pressure sensor
/27.A4	23	Crankshaft speed sensor
/27.A4	24	Oil pressure sensor earth
/27.A4	25	Charge air pres. sensor earth
/27.A4	26	Coolant temp. sensor earth
/27.A4	27	Oil pressure sensor
/27.A4	28	Water in fuel sensor
	29	
	30	
	31	
/27.A4	32	UB oil pressure sensor
/27.A4	33	UB charge air pressure sensor
/27.A4	34	Charge air pressure sensor
	35	
/27.A5	36	Charge air temperature sensor

A051 — EDC

	1	
	2	
/8.F7	3	UB 30
/8.F7	4	UB 30
	5	
/9.A1	6	Earth 31
/9.A1	7	Earth 31
	8	
/8.F7	9	UB 30
/8.F7	10	UB 30
/9.A1	11	Earth 31
/9.A1	12	Earth 31
	13	
	14	
/26.A2	15	Fan solenoid valve (86)
/26.A2	16	Fan solenoid valve (85)
	17	
/26.A3	18	Start relay
	19	
	20	
	21	
/26.A3	22	UB sensors
	23	
	24	
	25	
	26	
	27	
	28	
/26.A2	29	Electronics earth
	30	
	31	
	32	
	33	
/10.G1	34	Transmission bus_Low
/10.G1	35	Transmission bus_High
	36	
/26.A3	37	Start relay
	38	
	39	
/8.F6	40	UB 15
	41	
/26.A2	42	Vacuum switch
	43	
	44	
	45	
	46	
/26.A3	47	Engine brake switch
	48	
	49	
	50	
	51	
	52	
	53	
	54	
/26.A2	55	Coolant level sensor
	56	
	57	
	58	
	59	
	60	
	61	
	62	
	63	
	64	
	65	
/26.A3	66	Starter lockout switch
/26.A2	67	Fan earth
/26.A2	68	UB fan
/26.A2	69	Fan speed sensor
	70	
	71	
	72	
	73	
/26.A3	74	50a
	75	
	76	
/26.A3	77	UB 5 V foot throttle
/26.A3	78	Foot throttle earth
/26.A3	79	Foot throttle sensor
	80	
	81	
	82	
	83	
	84	
	85	
	86	
	87	
	88	
/26.A3	89	ISO characteristic curve

A058 — TopDock B4

/28.F1	1	UB 30
/28.F1	2	UB 30
/28.F1	3	ISO bus_Low
/28.F1	4	ISO bus_High
/28.F1	5	Valve bus_Low
/28.F1	6	V bus_High
/28.F2	7	Serial earth
/28.F1	8	Earth
/28.F2	9	Earth
/28.F2	10	Auto-Guide activation
/28.F2	11	Serial Tx
/28.F2	12	Serial Rx
	13	

A051 — EDC

	1	
	2	
/27.A7	3	Injectors 4, 5 and 6 High
/27.A7	4	Injectors 1, 2 and 3 High
	5	
/27.A7	6	Injector 3 Low
	7	
	8	
/27.A7	9	Dispensing unit_High
/27.A7	10	Dispensing unit_Low
	11	
/27.A7	12	Injector 2 Low
/27.A7	13	Injector 1 Low
/27.A7	14	Injector 6 Low
/27.A7	15	Injector 5 Low
/27.A7	16	Injector 4 Low

A059 — Auto-Guide terminal

/24.B1	1	UB 30
	2	
	3	
/24.B1	4	Earth
/24.B1	5	ISO bus_High
/24.B2	6	ISO bus_Low
/24.B1	7	UB 15

A055 — Vario-Doc

/28.E7	1	Control bus_High
/28.E7	2	Control bus_Low
/8.F3	3	UB 15
	4	
	5	
	6	
/28.E7	7	ISO bus_High
/28.E7	8	ISO bus_Low
/8.F3	9	UB 30
	10	
/8.F3	11	Earth
	12	
	13	
	14	
	15	
	16	

Overview of EDC/Vario-Doc/air conditioning/
B4 TopDock/Auto-Guide terminal - Sheet 6

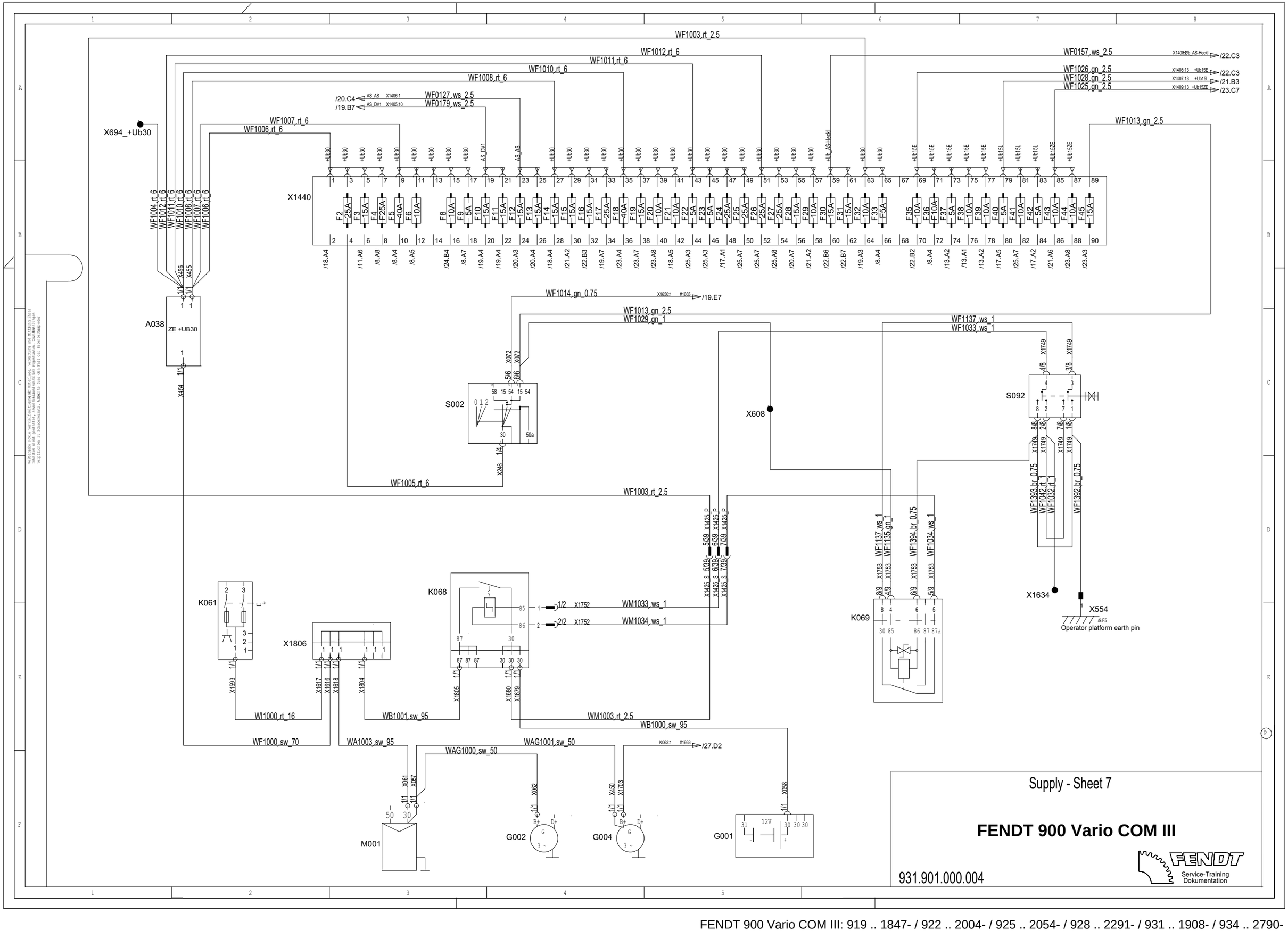
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Service-Training Dokumentation

5 Overview of EDC/Vario-Doc/air conditioning/B4 TopDock/Auto-Guide terminal - Sheet 6

A051 - ECU, engine control unit (EDC 7). (Item A2, C2, C4)
A053 - ECU, air conditioning control (Item E1, E2)
A055 - ECU, data transfer (Item C6)
A058 - TopDock (Auto-Guide) (Item E4)
A059 - Terminal (Auto-Guide) (Item E6)



FENDT 900 Vario COM III: 919 .. 1847- / 922 .. 2004- / 925 .. 2054- / 928 .. 2291- / 931 .. 1908- / 934 .. 2790-

6 Supply - Sheet 7

A038 - ECU, central electrical system (Item C2)
G001 - Battery 1 (Item F5)
G002 - Alternator 1 (Item F4)
G004 - Alternator 2 (Item F4)
K061 - ISO bus disconnect relay (Item E2)
K068 - Relay, battery disconnect (impulse) (Item E3)
K069 - Relay, safety function (battery disconnect) (Item E6)
M001 - starter. (Item F3)
S002 - Switch, ignition (Item C3)
S092 - Battery disconnect switch (Item C7)

X554 - Earth pin, operator platform (Item E7)
X608 - Connector, + UB 15 (Item C5)
X694 - Connector, +UB 30 (A038) (Item A1)
X1425 - Cable coupling, operator platform (Item D5)
X1440 - Fuse holder (Item B 3-7)
X1634 - Connector (+ UB 30) (Item D7)
X1806 - +UB 30 distributor (Item E2)

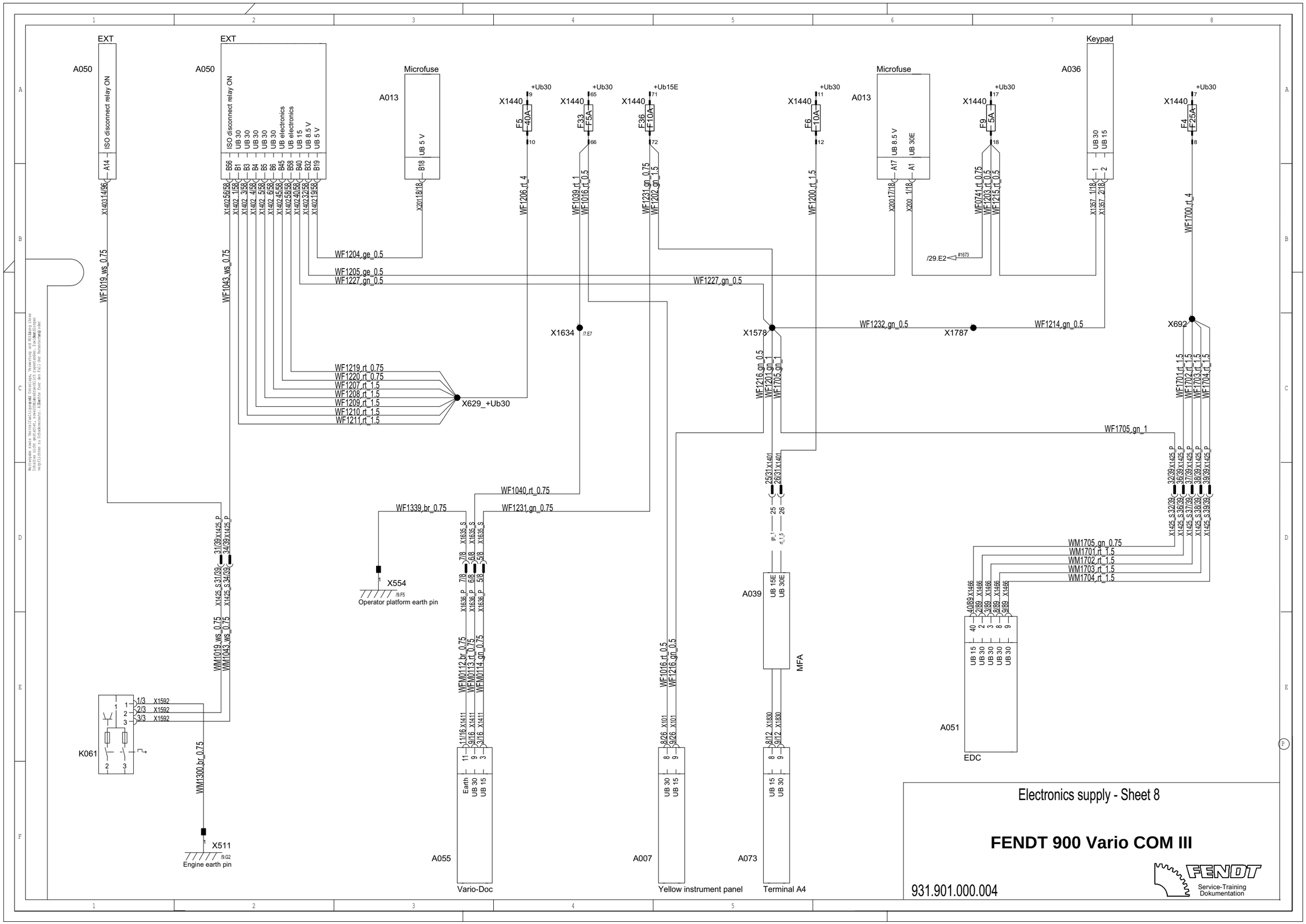
NOTE: *The wiring diagram shown includes the optional battery disconnect.*

K068 - Relay, battery disconnect (impulse) (Item E3)
K069 - Relay, safety function (battery disconnect) (Item E6)
S092 - Battery disconnect switch (Item C7)
Cable **WB1001,sw_95** (Item E3)

If the optional battery disconnect is **not** installed, the separation points
X1679 - Separation point on K068 (Item E4)
X1680 - Separation point on K068 (Item E3)
are connected directly to
X1806 - +UB 30 distributor (Item E2)

NOTE: *The following separation points are all screwed together on one pin:*

X454 - Separation point on A038 (Item C2)
X455 - Separation point on A038 (Item B2)
X456 - Separation point on A038 (Item B2)


EXT
A050
ISO disconnect relay ON
A14
X140314/96
WF1019_ws_0.75
EXT
A050
ISO disconnect relay ON
UB 30
UB 30
UB 30
UB 30
UB electronics
UB electronics
UB 15
UB 8.5 V
UB 5 V
B56
B1
B3
B4
B5
B6
B45
B58
B40
B32
B19
X1402/56/58
X1402 1/58
X1402 3/58
X1402 4/58
X1402 5/58
X1402 6/58
X1402.45/58
X1402/58/58
X1402.40/58
X1402/32/58
X1402/19/58
WF1043_ws_0.75
Microfuse
A013
UB 5 V
B18
X20118/18
WF1204_ge_0.5
WF1205_ge_0.5
WF1227_gn_0.5
+Ub30
X1440
9
F5
40A
10
WF1206_rt_4
+Ub30
X1440
65
F33
F5A
66
WF1039_rt_1
WF1016_rt_0.5
+Ub15E
X1440
71
F36
F10A
72
WF1231_gn_0.75
WF1202_gn_1.5
+Ub30
X1440
11
F6
10A
12
WF1200_rt_1.5
Microfuse
A013
UB 8.5 V
UB 30E
A17
A1
X20017/18
X200 1/18
+Ub30
X1440
17
F9
5A
18
WF0741_rt_0.75
WF1203_rt_0.5
WF1215_rt_0.5
/29.E2 #1673
Keypad
A036
UB 30
UB 15
1
2
X1357 1/18
X1357 2/18
+Ub30
X1440
7
F4
F25A
8
WF1700_rt_4
X1634 /7.E7
X1578
X1787
WF1227_gn_0.5
WF1232_gn_0.5
WF1214_gn_0.5
X692
WF1219_rt_0.75
WF1220_rt_0.75
WF1207_rt_1.5
WF1208_rt_1.5
WF1209_rt_1.5
WF1210_rt_1.5
WF1211_rt_1.5
X629_+Ub30
WF1216_gn_0.5
WF1201_gn_1
WF1705_gn_1
WF1701_rt_1.5
WF1702_rt_1.5
WF1703_rt_1.5
WF1704_rt_1.5
WF1705_gn_1
25/31 X1401
26/31 X1401
25
26
gn_1
rt_1.5
X1425_S.32/39
X1425_S.36/39
X1425_S.37/39
X1425_S.38/39
X1425_S.39/39
32/39 X1425_P
36/39 X1425_P
37/39 X1425_P
38/39 X1425_P
39/39 X1425_P
WF1040_rt_0.75
WF1339_br_0.75
WF1231_gn_0.75
X554
/9.F5
Operator platform earth pin
X1635_S
7/8
6/8
5/8
X1636_P
WFM0112_br_0.75
WFM0113_rt_0.75
WFM0114_gn_0.75
31/39 X1425_P
34/39 X1425_P
X1425_S.31/39
X1425_S.34/39
WM1019_ws_0.75
WM1043_ws_0.75
1/3 X1592
2/3 X1592
3/3 X1592
K061
WM1300_br_0.75
X511
/9.G2
Engine earth pin
11/16 X1411
9/16 X1411
3/16 X1411
Earth
UB 30
UB 15
A055
Vario-Doc
WF1016_rt_0.5
WF1216_gn_0.5
8/26 X101
9/26 X101
UB 30
UB 15
A007
Yellow instrument panel
A039
UB 15E
UB 30E
MFA
8/12 X1830
9/12 X1830
UB 15
UB 30
A073
Terminal A4
WM1705_gn_0.75
WM1701_rt_1.5
WM1702_rt_1.5
WM1703_rt_1.5
WM1704_rt_1.5
40/89 X1466
2/89 X1466
3/89 X1466
8/89 X1466
9/89 X1466
40
2
3
8
9
UB 15
UB 30
UB 30
UB 30
UB 30
A051
EDC
Electronics supply - Sheet 8
FENDT 900 Vario COM III
931.901.000.004
FENDT
Service-Training
Dokumentation

7 Electronics supply - Sheet 8

A007 - Instrument panel (Item F5)
A013 - PCB, microfuses (Item A3, A6)
A036 - Control panel, dashboard right/left (Item A7)
A039 - MFA, multifunction armrest (Item D5)
A050 - ECU, basic control unit (Item A1, A2)
A051 - ECU, engine control unit (EDC 7). (Item E6)
A055 - ECU, data transfer (Item F3)
A073 - Terminal (A4) (Item F5)
K061 - ISO bus disconnect relay (Item E1)
X511 - Earth pin, engine (Item F2)
X554 - Earth pin, operator platform (Item D3)
X629 - Connector, + UB 30 (Item C3)
X692 - Connector, +UB 30 (A051) (Item C8)
X1401 - Separation point on A039 (Item D5)
X1425 - Cable coupling, operator platform (Item D2; D8)
X1440 - Fuse holder (Item A4 - 8)
X1578 - Connector, + UB 15 (Item C5)
X1634 - Connector (+ UB 30) (Item C4)
X1635 - Cable coupling, operator platform (Item D3)
X1636 - Vario-Doc cable coupling (Item D3)
X1787 - Connector, + UB 15 (Item C6)

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EDC
A051
X1466 5/89 — Earth 31
X1466 6/89 — Earth 31
X1466 10/89 — Earth 31
X1466 11/89 — Earth 31
WM1393 br 1.5
WM1394 br 1.5
WM1392 br 1.5
WM1391 br 1.5
X794

EXT
A050
X1403 45/96 — A45 — Sensor system earth
X1403 46/96 — A46 — Sensor system earth
X1403 22/96 — A22 — Earth 31
X1403 24/96 — A24 — Earth 31
X1403 23/96 — A23 — Earth 31
WF1359 br ge 0.75
WF1358 br ge 0.75
WF1366 br 0.75
WF1368 br 0.75
WF1365 br 0.75
X620
X621

EXT
A050
X1402 2/58 — B2 — Earth 31
X1402 7/58 — B7 — Earth 31
X1402 20/58 — B20 — Earth 31
X1402 33/58 — B33 — Earth 31
X1402 46/58 — B46 — Earth 31
WF1360 br 1
WF1361 br 1
WF1362 br 1
WF1363 br 1
WF1364 br 1
WF1365 br 0.75
WF1367 br 1
X619
X627

Keypad
A036
X1357 3/18 — 3 — Earth
X1357 5/18 — 5 — Electronics earth
WF1313 br 0.5
WF1375 br ws 0.5
X643
WF1376 br ws 0.75
X661
WF1380 br ws 1
WF1379 br ws 1
WF1312 br 1
WF1311 br 2.5
WF1301 br 4
WF1385 br 2.5
WF1312 br 1
WF1311 br 2.5

Yellow instrument panel
A007
X1001 1/26 — 11 — Earth 31
X1001 2/26 — 12 — Electronics earth
WF1374 br ws 0.5
WF1373 br ws 0.5

Terminal A4
A073
X1830 10/12 — 10 — Electronics earth
X1830 11/12 — 11 — Serial earth
X1830 12/12 — 12 — Earth 31

MFA
A039
Electronics earth
Serial earth
Earth 31
Earth 31
br_ws_0.75
br_ge_0.5
br_0.75
br_1.5
X1401 27/31 — 27
X1401 28/31 — 28
X1401 11/31 — 11
X1401 29/31 — 29

Microfuse
A013
B17 — Electronics earth
X20117/18
WF1346 br ws 0.5
X627 /9.D4

X660
WF1308 br ge 1
X621 /9.D2
X620 /9.D2
WF1349 br ge 1
WF1350 br ge 1
X1425 S 24/39 — 24/39 X1425 P
X1425 S 13/39 — 13/39 X1425 P
WM1370 br ge 1
WM1368 br ge 1
X671
X669
X668
WM1376 br ge 0.5
WF1338 br ge 1
WF1351 br ge 1
X1423 S 60/62 — 60/62 X1423 P
X1423 S 5/62 — 5/62 X1423 P
WG1338 br ge 1
WG1351 br ge 1
X673
X672
X674
WG1365 br ge 0.5

WF1300 sw 50
WAM1301 sw 70
WM1390 br 4
X086
X059
X060
1/1
1/1
1/1
31 31 31
12V
30
G001

X550 Operator platform earth pin
X551 Operator platform earth pin
X552 Operator platform earth pin
X553 Operator platform earth pin
X554 Operator platform earth pin

X534 Cab earth pin
X533 Cab earth pin
X532 Cab earth pin
X5028 Cab earth pin

WMG1302 sw 35
X510 Engine earth pin
X511 Engine earth pin
X512 Engine earth pin
X513 Engine earth pin
X520 Engine earth pin
X521 Engine earth pin

X573 Transmission earth pin
X558 Transmission earth pin
X559 Transmission earth pin
X570 Transmission earth pin
X571 Transmission earth pin
X572 Transmission earth pin
X574 Transmission earth pin

Earth layout - Sheet 9

FENDT 900 Vario COM III

931.901.000.004

FENDT Service-Training Dokumentation

8 Earth layout - Sheet 9

A007 - Instrument panel (Item A5)
A013 - PCB, microfuses (Item A8)
A036 - Control panel, dashboard right/left (Item A4)
A039 - MFA, multifunction armrest (Item C5)
A050 - ECU, basic control unit (Item A2, A3)
A051 - ECU, engine control unit (EDC 7). (Item A1)
A073 - Terminal (A4) (Item A5)
G001 - Battery 1 (Item F1)
X510 - Earth pin, engine left (Item F2)
X511 - Earth pin, engine (Item F2)
X512 - Earth pin, engine (Item F2)
X513 - Earth pin, engine (Item F3)
X520 - Earth pin, oil sump right (Item F3)
X521 - Earth pin, engine (Item F3)
X532 - Earth pin, cab body (Item E7)
X533 - Earth pin, cab body (Item E6)
X534 - Earth pin, cab body (Item E6)
X550 - Earth pin, operator platform right (Item E4)
X551 - Earth pin, operator platform right (Item E4)
X552 - Earth pin, operator platform (Item E5)
X553 - Earth pin, operator platform (Item E5)
X554 - Earth pin, operator platform (Item E5)
X558 - Earth pin, transmission (Item F4)
X559 - Earth pin, transmission (Item F4)
X570 - Earth pin, transmission (Item F5)
X571 - Earth pin, transmission (Item F5)
X572 - Earth pin, transmission (Item F5)
X573 - Earth pin, transmission (Item F4)
X574 - Earth pin, transmission (Item F6)
X619 - Connector, electronics earth (Item C4)
X620 - Connector, sensor system earth (Item D2, B7)
X621 - Connector, sensor system earth (Item D2, B6)
X627 - Connector, electronics earth (Item C4, C8)
X643 - Connector, instrument panel earth (Item C4)
X660 - Connector, sensor system earth (Item A6)
X661 - Connector, electronics earth (Item D4)
X668 - Connector, sensor system earth (Item E6)
X669 - Connector, sensor system earth (Item D7)
X671 - Connector, sensor system earth (Item D6)
X672 - Connector, sensor system earth (Item D7)
X673 - Connector, sensor system earth (Item D7)
X674 - Connector, sensor system earth (Item E8)
X794 - Connector, earth (A051) (Item C1)
X1401 - Separation point on A039 (Item D5/6)
X1423 - Cable coupling, operator platform/transmission (Item C7)
X1425 - Cable coupling, operator platform (Item C6/7)
X5028 - Connector, cab earth pin (Item E7)

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A073
Terminal A4
Control bus_High
Control bus_Low
Serial Rx
Serial Tx
ISO bus_Low
ISO bus_High
3/12 X1830
4/12 X1830
2/12 X1830
1/12 X1830
6/12 X1830
5/12 X1830

A039
MFA
ISO bus_High Out
ISO bus_Low Out
Serial Tx
Serial Rx
Control bus_Low In
Control bus_High In
ISO bus_High In
ISO bus_Low In
Control bus_Low Out
Control bus_High Out

A036
Keypad
Control bus_High In
Control bus_Low In
Control bus_High Out
Control bus_Low Out
4/18 X1357
6/18 X1357
7/18 X1357
8/18 X1357

A007
Blue instrument panel
R120
Control bus_Low
Control bus_High
13 X100 13/26
26 X100 26/26

A050
EXT
ISO bus_Low
ISO bus_High
Valve bus_Low
V bus_High
A60 X1403 60/96
A61 X1403 61/96
A62 X1403 62/96
A63 X1403 63/96

A050
EXT
Control bus_High
Control bus_Low
Transmission bus_High
Transmission bus_Low
ISO bus terminal ON
B15 X1402 15/58
B16 X1402 16/58
B53 X1402 53/58
B54 X1402 54/58
B43 X1402 43/58

A013
Microfuse
G - Bus
R120
Masse
Transmission bus_Low
Transmission bus_High
B2 X201 2/18
B3 X201 3/18

A013
Microfuse
K - Bus
R 120
Masse
Control bus_Low
Control bus_High
A2 X200 2/18
A3 X200 3/18

A013
Microfuse
ISO - Bus
ISO
Masse
V - Bus
R 120
Masse
ISO bus_Low
ISO bus_High
ISO bus terminal ON
Valve bus_Low
V bus_High
RS232 RXD
RS232 TXD
C12 X202 12/18
C14 X202 14/18
C16 X202 16/18
C2 X202 2/18
C3 X202 3/18
C17 X202 17/18
C18 X202 18/18

WF0800_ws_0.5
WF0801_ws_0.5
WF0802_ws_0.5
WF0803_ws_0.5
WF0811_ws_0.5
WF0810_ws_0.5
WF0842_ws_0.5
WF0843_ws_0.5
WF0814_ws_0.5
WF0815_ws_0.5
WF0823_ws_0.5
WF0822_ws_0.5
WF0853_ws_0.5
WF0821_ws_0.5
WF0820_ws_0.5
WF0829_ws_0.5
WF0828_ws_0.5
WF0853_ws_0.5
WF0858_ws_0.5
WF0857_ws_0.5
WF0834_ws_0.5
WF0835_ws_0.5

WF2006_ws_0.5
WF2005_ws_0.5
WF0837_ws_0.5
WF0836_ws_0.5
WF0807_ws_0.5
WF0806_ws_0.5
WF0808_ws_0.5
WF0809_ws_0.5
X1401 21/31
X1401 23/31
X1401 14/31
X1401 15/31
X1401 18/31
X1401 16/31
X1401 20/31
X1401 22/31
X1401 19/31
X1401 17/31

X1635_P 1/8 — 1/8 X1635_S WF0862_ws_0.5
X1635_P 2/8 — 2/8 X1635_S WF0861_ws_0.5
X1635_P 3/8 — 3/8 X1635_S WF0860_ws_0.5
X1635_P 4/8 — 4/8 X1635_S WF0859_ws_0.5
/28.F5 /28.F8
WF0840_ws_0.5
WF0841_ws_0.5
X707
X708
X718
X719
X712
X711
X714
X715
WF0816_ws_0.5
WF0817_ws_0.5
X725
X726
WF0830_ws_0.5
WF0831_ws_0.5
X598
X599
WF0844_ws_0.5
WF0845_ws_0.5
X1343
X1344
Bridge connector
A/14 X1597_P WF0819_ws_0.5
B/14 X1597_P WF0818_ws_0.5
C/14 X1597_P WF0812_ws_0.5
D/14 X1597_P WF0813_ws_0.5
E/14 X1597_P WF0826_ws_0.5
F/14 X1597_P WF0827_ws_0.5
G/14 X1597_P WF0829_ws_0.5
H/14 X1597_P WF0828_ws_0.5
/24.C3
SO-Bus_High 27.1
SO-Bus_Low 28.1
/25.D3
/25.D3
X1417_S 9/21 — 9/21 X1417_P WK0841_ws_0.5 X1633_S:5V-Bus_High /25.D4
X1417_S 8/21 — 8/21 X1417_P WK0840_ws_0.5 X1633_S:5V-Bus_Low /25.D4
/25.D6 V-Bus_LowX1633_P:5 WK0842_ws_0.5 X1417_P 10/21 — 10/21 X1417_S
/25.D6 V-Bus_HigX1633_P:6 WK0843_ws_0.5 X1417_P 11/21 — 11/21 X1417_S
WF0836_ws_0.5
WF0837_ws_0.5
X738
X739
WF0834_ws_0.5
WF0835_ws_0.5

WM0846_ws_0.5
WM0847_ws_0.5
X1463
X1464
WM0844_ws_0.5
WM0842_ws_0.5
WM0845_ws_0.5
WM0843_ws_0.5
X1424_S 50/62 — 50/62 X1424_P WF0838_ws_0.5
X1424_S 52/62 — 52/62 X1424_P
X1424_S 51/62 — 51/62 X1424_P WF0839_ws_0.5
X1424_S 53/62 — 53/62 X1424_P
WF0846_ws_0.5
WF0847_ws_0.5
X1423_P 32/62 — 32/62 X1423_S WG0846_ws_0.5
X1423_P 34/62 — 34/62 X1423_S WG0847_ws_0.5
X037 2/8 — +2 sw 1
X037 5/8 — +5 sw 1
A009
Transmission bus_High 120
Transmission bus_Low
Actuator unit
35/89 X1466
34/89 X1466
35
34
Transmission bus_High
Transmission bus_Low
A051
EDC

G bus / K bus / Valve bus / ISO bus - Sheet 10

FENDT 900 Vario COM III

931.901.000.004

FENDT Service-Training Dokumentation

9 G bus/K bus/V bus/ISO bus - Sheet 10

A007 - Instrument panel (Item A3)
A009 - Actuator unit (Item E8)
A013 - PCB, microfuses (Item A6-8)
A036 - Control panel, dashboard right/left (Item A3)
A039 - MFA, multifunction armrest (Item B2)
A050 - ECU, basic control unit (Item A4-5)
A051 - ECU, engine control unit (EDC 7). (Item F1)
A073 - Terminal (A4) (Item C1)
X037 - Separation point on A009 (Item E7)
X598 - Connector, K bus_High (Item D 6/7)
X599 - Connector, K bus_Low (Item D 6/7)
X707 - Connector, ISO bus_Low (Item C4)
X708 - Connector, ISO bus_High (Item C4)
X711 - Connector, V bus_High (Item D4)
X712 - Connector, V bus_Low (Item D4)
X714 - Connector, G bus_Low (Item C6)
X715 - Connector, G bus_High (Item C6)
X718 - Connector, K bus_Low (Item D4)
X719 - Connector, K bus_High (Item D4)
X725 - Connector, K bus_High (Item D6)
X726 - Connector, K bus_Low (Item D6)
X738 - Connector, serial RXD (Item E6)
X739 - Connector, serial TXD (Item E6)
X1343 - Connector, G bus_High (Item D5)
X1344 - Connector, G bus_Low (Item D5)
X1401 - Separation point on A039 (Item C2)
X1417 - Cable coupling, operator platform/cab (Item E3, E7)
X1423 - Cable coupling, operator platform/transmission (Item EF 6)
X1424 - Cable coupling, operator platform (Item E4)
X1463 - Connector, G bus_High (Item E 2/3)
X1464 - Connector, G bus_Low (Item E 2/3)
X1597 - Cable coupling A059 (Item D6)
X1635 - Cable coupling, operator platform (Item CD 2/3)

NOTE: *The bridge connector must be fitted to **X1597** - Cable coupling A059 (Item D6).*

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Transmission control system - Sheet 11

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FENDT Service-Training Dokumentation

Actuator unit

FENDT 900 Vario COM III: 919 .. 1847- / 922 .. 2004- / 925 .. 2054- / 928 .. 2291- / 931 .. 1908- / 934 .. 2790-

10 Transmission control system - Sheet 11

A009 - Actuator unit (Item F5)
A013 - PCB, microfuses (Item A7, A8)
A039 - MFA, multifunction armrest (Item CD4)
A050 - ECU, basic control unit (Item A3, A 5/6)
B008 - Sensor, high-pressure 1 (Item F4)
B009 - Discharge temperature sensor (Item F2)
B010 - Sensor, engine speed (Item D8)
B014 - Sensor, collecting shaft (Item F3)
B015 - Sensor, bevel pinion (Item F3)
B016 - Sensor, travel range detection (Item F4)
B017 - Sensor, clutch pedal (Item CD 1/2)
B039 - Sensor, high-pressure 2 (Item F5)
H009 - Blip signal, reversing (Item A1)
S005 - Switch, right brake only with/21/ (Item CD2)
S006 - Switch, left brake (Item CD3)
S017 - Filter contamination switch (Item F3)
S045 - Switch, reversing driver stand (Item CD3)
S079 - Switch, steering column (Item D1)
S080 - Switch, hand brake (Item F 1/2)
X037 - Separation point on A009 (Item E5)
X554 - Earth pin, operator platform (Item B2)
X571 - Earth pin, transmission (Item E8)
X621 - Connector, sensor system earth (Item B3)
X627 - Connector, electronics earth (Item C7)
X660 - Connector, sensor system earth (Item B1)
X671 - Connector, sensor system earth (Item C8)
X672 - Connector, sensor system earth (Item E4)
X673 - Connector, sensor system earth (Item E1)
X1401 - Separation point on A039 (Item C4)
X1418 - Cable coupling, operator platform/transmission (Item C4)
X1423 - Cable coupling, operator platform/transmission (Item CD 4 -6)
X1425 - Cable coupling, operator platform (Item C8)
X1440 - Fuse holder (Item A6)
X1590 - Separation point on S079 (Item C1)
X1751 - Separation point, left frame earth point (Item B 1/2)
Y002 - Solenoid valve, travel range I (Item E8)
Y003 - Solenoid valve, travel range II (Item E7)
Y005 - Solenoid valve, speed governor (Item E6)
Y009 - Solenoid valve, 4WD (Item E7)
Y010 - Solenoid valve, differential lock (Item E7)
Y053 - Active hold function solenoid valve (Item E6)

EXT

A050

A12	Radar sensor
A42	Filter monitor switch
A43	Guard rail pump flow switch
A35	LS pump pressure switch
A48	Constant pump flow switch
A36	Ext. front power lift low. btn
A37	Ext. front power lift rai. btn
A38	Front power lift pos. sensor
A87	Load suspension solenoid valve
A49	Raise/lock FKH press. comp. SV
A73	Lower FPL/FPL field pres. SV
A52	Control pressure SV
A74	Front pre-heater SV
A50	POWER BEYOND solenoid valve
A21	Rear power lift pos. sensor
A17	RH draught sensing pin sens.
A16	LH draught sensing pin sens.
A18	Ext. rear power lift sensor
A66	Rear power lift field pres. SV
A31	Rear pressure compens. lock SV
A88	Rear pre-heater solenoid valve

Microfuse

A013

F12	A7
F15	A4
F14	A5
F13	A6
F4	A14

EXT

A050

B13	Event counter
B12	Ext. RH rr power lift low. btn
B37	Ext. RH raise rr pwr lift btn
B35	External raise valve button
B39	Ext. LH raise rr pwr lift btn
B47	External lower valve button
B48	Ext. LH rr power lift low. btn

S030 S029 S068 S067 S027 S028

X1461 X1462

X620 /9.D2

X627 /9.D4

X533 /9.F6 Cab earth pin

X008 Counter socket

Y062 Y055 Y060

X572 /9.G5 Transmission earth pin

X668 /9.E6

X673 /9.E7

X671 /9.E6

X510 /9.G2 Engine earth pin

X570 /9.G5 Transmission earth pin

X015 External control socket

B063 S075 S025 S026 S022 S021 B040 Y012 Y021 Y022 Y032 Y061 Y084 B030 B031 B032

Hydraulics - Sheet 12

FENDT 900 Vario COM III

931.901.000.004

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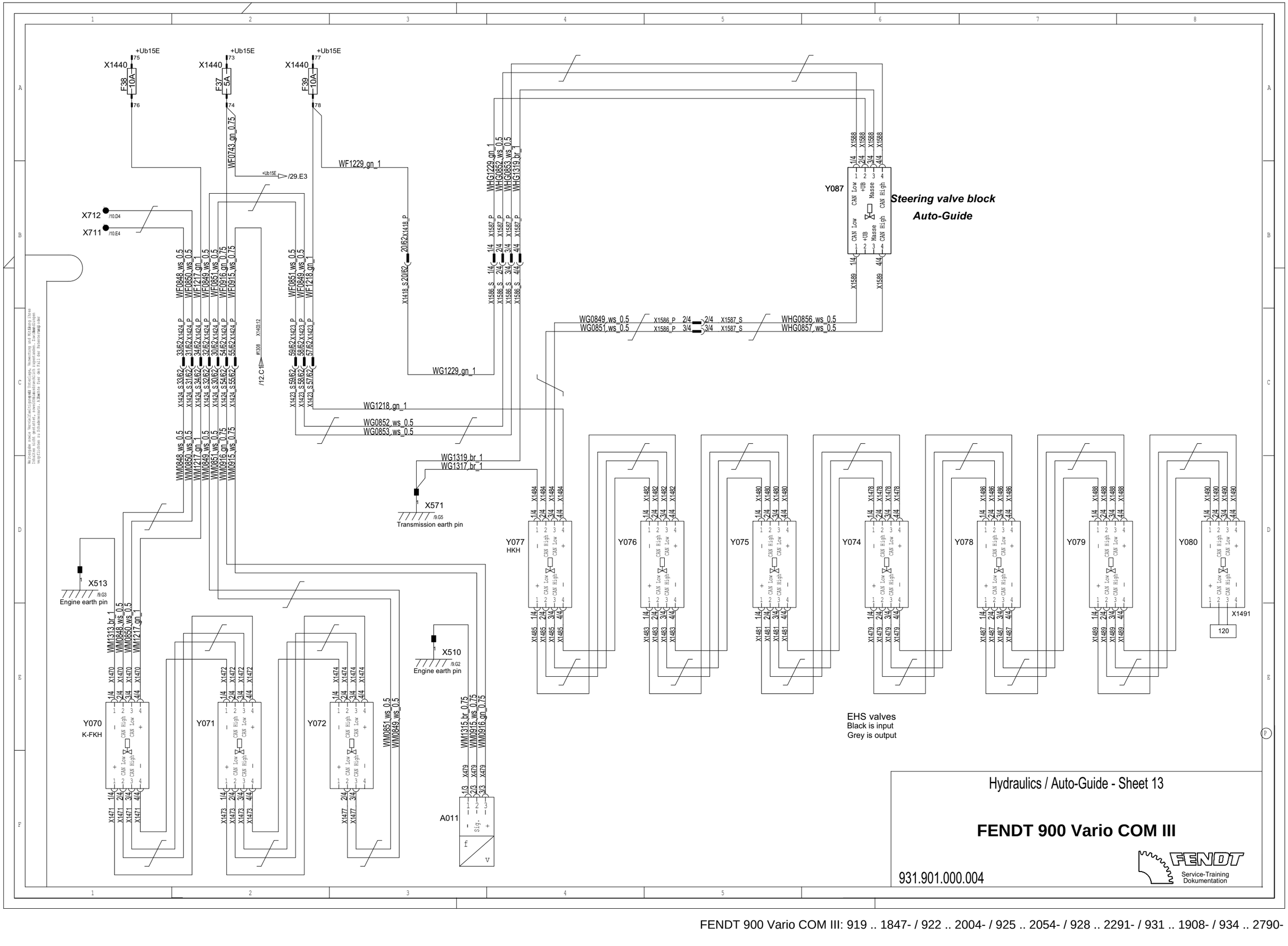
11 Hydraulics - Sheet 12

A013 - PCB, microfuses (Item A3)
A050 - ECU, basic control unit (Item A2, A4)
B030 - Sensor, rear power lift position (Item E7)
B031 - Sensor, draft sensing pin, right (Item E7)
B032 - Sensor, draft sensing pin, left (Item E7)
B040 - Sensor, front power lift position (Item F3)
B063 - Pressure switch, filter contamination (hydraulic circuit) (Item F1)
S021 - Button, front power lift, external raise (Item F3)
S022 - Button, front power lift, external lower (Item F2)
S025 - Switch, LS pump pressure monitor (Item F2)
S026 - Switch, steering pump flow controller (Item F2)
S027 - Button, rear power lift, right-hand external raise (Item A7)
S028 - Button, rear power lift, right-hand external lower (Item A8)
S029 - Button, rear power lift, left-hand external raise (Item A6)
S030 - Button, rear power lift, left-hand external lower (Item A6)
S067 - Button, valve actuation, external raise (Item A7)
S068 - Button, valve actuation, external lower (Item A7)
S075 - Switch, guard rail pump flow monitor (Item F1)
X008 - Socket, on-board computer counter input (Item CD 5/6)
X015 - External control socket (Item E8)
X510 - Earth pin, engine left (Item F5)
X533 - Earth pin, cab body (Item D4)
X570 - Earth pin, transmission (Item E6)
X572 - Earth pin, transmission (Item D8)
X620 - Connector, sensor system earth (Item B4)
X627 - Connector, electronics earth (Item C4)
X668 - Connector, sensor system earth (Item E1)
X671 - Connector, sensor system earth (Item F3)
X673 - Connector, sensor system earth (Item D6)
X838 - Separation point on X015 socket, external control (Item D8)
X1418 - Cable coupling, operator platform/transmission (Item C5)
X1419 - Cab cable coupling (Item CD4)
X1421 - Cable coupling, operator platform (Item BC5)
X1422 - Cable coupling, mudguard (Item B 5)
X1423 - Cable coupling, operator platform/transmission (Item D 2/3)
X1425 - Cable coupling, operator platform (Item D 1/2)
X1461 - Connector, sensor system earth (left mudguard) (Item B6)
X1462 - Connector, sensor system earth (right mudguard) (Item C6)
Y012 - Oil pre-heater/load suspension solenoid valve (Item F4)

NOTE:
Front power lift standard version
Y021 - Lifting solenoid valve (standard front power lift) (Item F4)
Y022 - Lowering solenoid valve (standard front power lift) (Item F 4/5)

Front power lift enhanced control version
Y021 - Front pressure compensator lock valve (Item F4)
Y022 - Field pressure control solenoid valve (front), (Item F 4/5)

Y032 - Control pressure solenoid valve (Item F5)
Y055 - Rear pressure compensator lock valve (Item CD7)
Y060 - Hydraulic oil pre-heater solenoid valve (rear) (Item CD7)
Y061 - hydraulic oil pre-heater solenoid valve (middle) (Item F 5/6)
Y062 - Solenoid valve, field pressure control (rear) (Item CD7)
Y084 - Solenoid valve, Power Beyond (Item E6)


+Ub15E
X1440
75
F38
10A
76
73
F37
5A
74
77
F39
10A
78
WF0743 gn 0.75
WF1229 gn 1
+Ub15E
/29.E3
X712
/10.D4
X711
/10.E4
WF0848 ws 0.5
WF0850 ws 0.5
WF1217 gn 1
WF0849 ws 0.5
WF0851 ws 0.5
WF0916 gn 0.75
WF0915 ws 0.5
WF1218 gn 1
X1424 S 33/62
X1424 S 31/62
X1424 S 34/62
X1424 S 32/62
X1424 S 30/62
X1424 S 54/62
X1424 S 55/62
X1423 S 59/62
X1423 S 58/62
X1423 S 57/62
#308 X140312
/12.C1
X1418 S 20/62
20/62 X1418 P
WG1229 gn 1
WG1218 gn 1
WG0852 ws 0.5
WG0853 ws 0.5
WG1319 br 1
WG1317 br 1
WHG1229 gn 1
WHG0852 ws 0.5
WHG0853 ws 0.5
WHG1319 br 1
X1587 P
X1586 S
Y087
Steering valve block
Auto-Guide
CAN Low
+UB
Masse
CAN High
X1588
WG0849 ws 0.5
WG0851 ws 0.5
X1586 P
X1587 S
WHG0856 ws 0.5
WHG0857 ws 0.5
X571
/9.G5
Transmission earth pin
Y077
HKH
Y076
Y075
Y074
Y078
Y079
Y080
X1484
X1482
X1480
X1478
X1486
X1488
X1490
X1485
X1483
X1481
X1479
X1487
X1489
X1491
120
X513
/9.G3
Engine earth pin
X510
/9.G2
Engine earth pin
WM1313 br 1
WM0848 ws 0.5
WM0850 ws 0.5
WM1217 gn 1
WM0851 ws 0.5
WM0849 ws 0.5
WM1315 br 0.75
WM0915 ws 0.75
WM0916 gn 0.75
Y070
K-FKH
Y071
Y072
X1470
X1472
X1474
X1471
X1473
X1477
A011
X479
Sig.
f
V
EHS valves
Black is input
Grey is output
Hydraulics / Auto-Guide - Sheet 13
FENDT 900 Vario COM III
931.901.000.004
FENDT
Service-Training
Dokumentation

12 Hydraulics/Auto-Guide - Sheet 13

A011 - Radar sensor (Item F 3/4)
X510 - Earth pin, engine left (Item E3)
X513 - Earth pin, engine (Item D1)
X571 - Earth pin, transmission (Item D3)
X711 - Connector, V bus_High (Item B1)
X712 - Connector, V bus_Low (Item B1)
X1418 - Cable coupling, operator platform/transmission (Item B3)
X1423 - Cable coupling, operator platform/transmission (Item C2)
X1424 - Cable coupling, operator platform (Item C2)
X1440 - Fuse holder (Item A1-2)
X1491 - Rear V bus terminal (120 Ω) (Item E8)
X1586 - V bus cable coupling (Auto-Guide) (Item B4, C5)
X1587 - Cable coupling, Y087 (Item B4, C5)
Y070 [FKH] - Cut-off valve, front power lift enhanced control (Item EF1)
Y071 [2.1] - Auxiliary control valve (olive) (Item EF2)
Y072 [2.2] - Auxiliary control valve (grey) (Item EF3)
Y074 [1.1] - Auxiliary control valve (yellow) (Item D6)
Y075 [1.2] - Auxiliary control valve (blue) (Item D5)
Y076 [1.3] - Auxiliary control valve (red) (Item D 4/5)
Y077 [HKH] - Cut-off valve, rear EPC (Item D4)
Y078 [1.4] - Auxiliary control valve (green) (Item D7)
Y079 [1.5] - Auxiliary control valve (brown) (Item D7)
Y080 [1.6] - Auxiliary control valve (violet) (Item D8)
Y087 - Steering valve block, Auto-Guide (Item B6)

NOTE: *Wiring diagram shows the maximum number of fittings.*

For tractors with **standard front power lift and without auxiliary control units**, the following components are missing:

Y070 [FKH] - Cut-off valve, front power lift enhanced control (Item EF1)
Y071 [2.1] - Auxiliary control valve (olive) (Item EF2)
Y072 [2.2] - Auxiliary control valve (grey) (Item EF3)

The valve bus is then closed using bridge connector H931.901.042.300 with **separation points X1470 and X1477**

For tractors **without Y087 - Steering valve block, Auto-Guide** , separation point X1586_S (Item B4) is connected to separation point X1586_P (Item C5).

The following components are missing:

Y087 - Steering valve block, Auto-Guide (Item B6)
along with the corresponding wiring.

Weitergabe sowie Vervielfältigung dieser Unterlage, Verwertung und Mitteilung ihres Inhaltes nicht gestattet, soweit nicht ausdrücklich zugestanden. Zuwiderhandlungen verpflichten zu Schadenersatz. Alle Rechte für den Fall der Patenterteilung oder

Microfuse

A013

F30 F29 F37

C6 C7 C8

X202 6/18 — WF1424 ge 0.5
X202 7/18 — WF1423 ge 0.5
X202 8/18

EXT

A050

Steering wheel sensor — B17 — X1402 17/58 — WF2015 ws 0.5
Auto-Guide activation — B44 — X1402 44/58

/16.C3 #470 X1418 P:17
/16.C3 #471 X1418 P:12
/25.E4 #473 X1417 S:2

X620 /9.D2

WF1378 br ge 0.5
WF1421 ge 0.5
WF0614 ws 0.5

B081 — 1/3 X1519 — 2/3 X1519 — 3/3 X1519 — Sig. — I

Microfuse

A013

F9 F16 F17 F19

B1 B4 B5 B7

X201 1/18 — WF1412 ge 0.5
X201 4/18 — WF1413 ge 0.5
X201 5/18 — WF1414 ge 0.5
X201 7/18 — WF1721 ge 0.5 — X898:2 #472 /26.E6

EXT

A050

Wobble stabiliser SV	A1	X1403 1/96 — WF0600 ws 0.75
Suspension load pressure SV	A26	X1403 26/96 — WF0601 ws 0.75
Raise susp. solenoid valve	A93	X1403 93/96 — WF0607 ws 0.75
Suspension lock solenoid valve	A95	X1403 95/96 — WF0609 ws 0.75
Right wheel position sensor	A64	X1403 64/96 — WF0603 ws 0.5
Steering angle sensor	A65	X1403 65/96 — WF0604 ws 0.5
Left wheel position sensor	A66	X1403 66/96 — WF0605 ws 0.5
Lower link stabiliser lock SV	A96	X1403 96/96 — WF0965 ws 0.75
Lower link stabil. release SV	A72	X1403 72/96 — WF0966 ws 0.75
Steering switch off SV_High	A7	X1403 7/96 — WF0611 ws 0.75
Steering wheel off SV_Low	A78	X1403 78/96 — WF0613 ws 0.75
Pilot pressure SV_High	A6	X1403 6/96 — WF0612 ws 0.75
Pilot pressure SV_Low	A79	X1403 79/96 — WF0610 ws 0.75

WF0600 ws 0.75 — 7/62 X1424 P — X1424 S 7/62
WF0601 ws 0.75 — 8/62 X1424 P — X1424 S 8/62
WF0607 ws 0.75 — 19/62 X1424 P — X1424 S 19/62
WF0609 ws 0.75 — 21/62 X1424 P — X1424 S 21/62
WF0603 ws 0.5 — 11/62 X1424 P — X1424 S 11/62
WF1412 ge 0.5 — 12/62 X1424 P — X1424 S 12/62
WF0604 ws 0.5 — 13/62 X1424 P — X1424 S 13/62
WF1413 ge 0.5 — 14/62 X1424 P — X1424 S 14/62
WF0605 ws 0.5 — 15/62 X1424 P — X1424 S 15/62
WF1414 ge 0.5 — 16/62 X1424 P — X1424 S 16/62

WF0965 ws 0.75 — 4/62 X1418 P — X1418 S 4/62
WF0966 ws 0.75 — 5/62 X1418 P — X1418 S 5/62
WF0611 ws 0.75 — 21/62 X1418 P — X1418 S 21/62
WF0613 ws 0.75 — 22/62 X1418 P — X1418 S 22/62
WF0612 ws 0.75 — 23/62 X1418 P — X1418 S 23/62
WF0610 ws 0.75 — 24/62 X1418 P — X1418 S 24/62

WM0600 ws 0.75
WM0601 ws 0.75
WM0607 ws 0.75
WM0609 ws 0.75
WM0603 ws 0.5
WM1412 ge 0.5
WM0604 ws 0.5
WM1413 ge 0.5
WM0605 ws 0.5
WM1414 ge 0.5

X669 /9.E7

Y063 — 1/2 X1503 — 2/2 X1503 — WM1352 br 0.75
Y064 — 1/2 X1504 — 2/2 X1504 — WM1353 br 0.75
Y065 — 1/2 X1510 — 2/2 X1510 — WM1354 br 0.75
Y067 — 1/2 X1512 — 2/2 X1512 — WM1356 br 0.75

X511 /9.G2 Engine earth pin

B068 — 1/3 X1507 — 2/3 X1507 — 3/3 X1507 — WM1350 br ge 0.5 — Sig. — I
B067 — 1/3 X1508 — 2/3 X1508 — 3/3 X1508 — WM1349 br ge 0.5 — Sig. — I
B066 — 1/3 X1509 — 2/3 X1509 — 3/3 X1509 — WM1348 br ge 0.5 — Sig. — I

WG1372 br 0.75
WG1371 br 0.75

Y082 — 1/2 X1517 — 2/2 X1517
Y083 — 1/2 X1518 — 2/2 X1518
Y085 — 1/2 X1513 — 2/2 X1513
Y086 — 1/2 X1514 — 2/2 X1514

X572 /9.G5 Transmission earth pin

Suspension / Auto-Guide - Sheet 14

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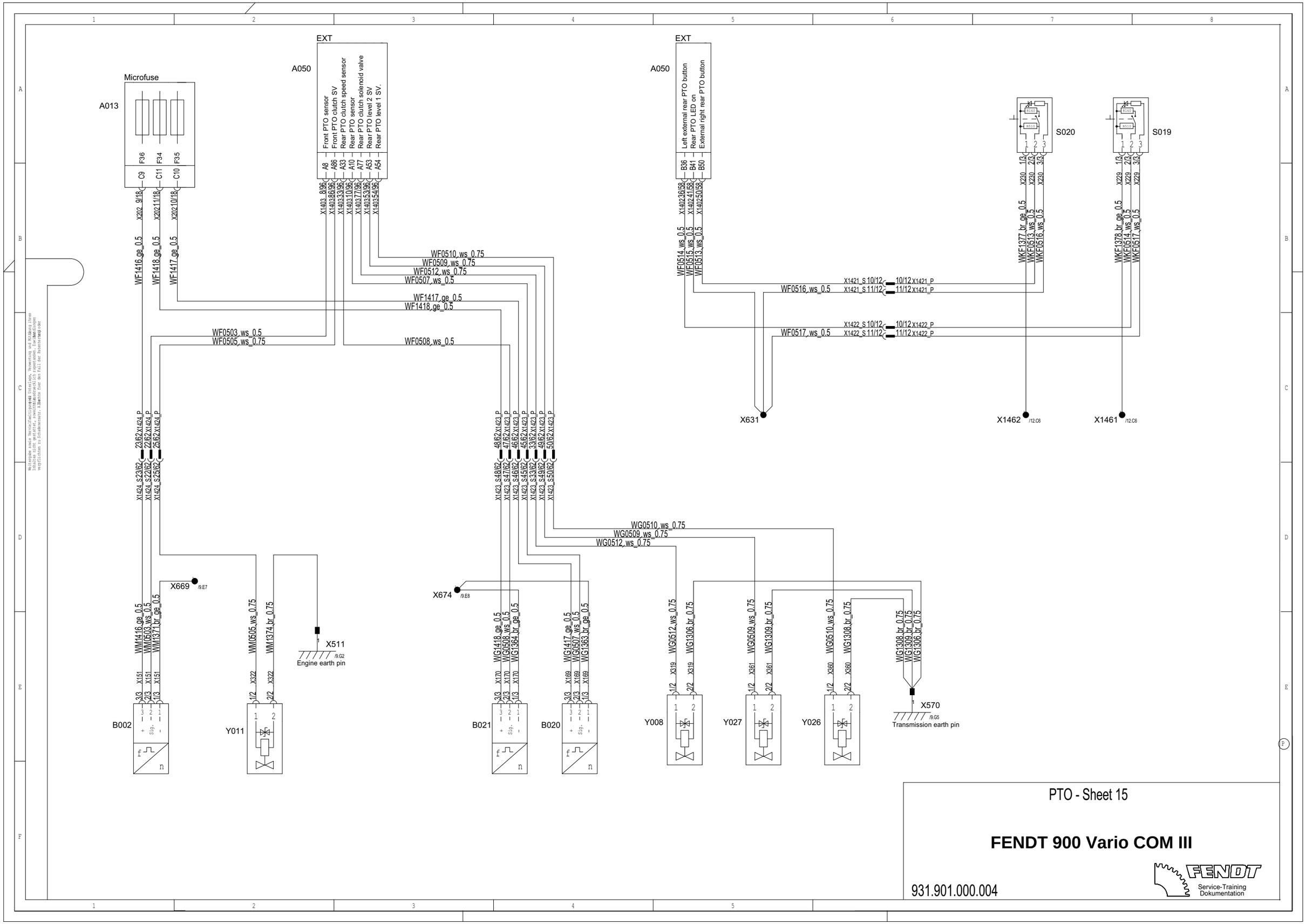
FENDT Service-Training Dokumentation

FENDT 900 Vario COM III: 919 .. 1847- / 922 .. 2004- / 925 .. 2054- / 928 .. 2291- / 931 .. 1908- / 934 .. 2790-

13 Suspension/Auto-Guide - Sheet 14

A013 - PCB, microfuses (Item A2, A3)
A050 - ECU, basic control unit (Item A2, A6)
B066 - Sensor, wheel position (left) (Item F5)
B067 - Sensor, steering angle (Item F5)
B068 - Sensor, wheel position (right) (Item F4)
B081 - Steering wheel sensor (360°) (Item D2)
X511 - Earth pin, engine (Item EF4)
X572 - Earth pin, transmission (Item E7)
X620 - Connector, sensor system earth (Item C2)
X669 - Connector, sensor system earth (Item E5)
X1418 - Cable coupling, operator platform/transmission (Item C6)
X1424 - Cable coupling, operator platform (Item D 3-4)
Y063 - Wobble stabiliser solenoid valve (Item F2)
Y064 - Suspension load pressure/lowering solenoid valve (Item F2)
Y065 - Raise suspension solenoid valve (Item F3)
Y067 - Lock suspension solenoid valve (Item F3)
Y082 - Solenoid valve, lower link stabiliser, lock (Item E6)
Y083 - Solenoid valve, lower link stabiliser, release (Item E6)
Y085 - Pilot pressure/switch-off solenoid valve (Auto-Guide) (Item E7)
Y086 - Solenoid valve, steering disconnect (Auto-Guide) (Item E8)

NOTE: *For safety-related circuits, not only is the positive side connected via the **A050** - ECU, basic control unit but the negative side is too.*
The positive side is called _High in the E-box.
The negative side is called _Low in the E-box.


EXT
A050
Front PTO sensor
Front PTO clutch SV
Rear PTO clutch speed sensor
Rear PTO sensor
Rear PTO clutch solenoid valve
Rear PTO level 2 SV
Rear PTO level 1 SV.
A8
A86
A33
A10
A77
A53
A54
Microfuse
A013
F36
F34
F35
C9
C11
C10
X202 9/18
X202 11/18
X202 10/18
WF1416,ge_0.5
WF1418,ge_0.5
WF1417,ge_0.5
WF0510,ws_0.75
WF0509,ws_0.75
WF0512,ws_0.75
WF0507,ws_0.5
WF0503,ws_0.5
WF0505,ws_0.75
WF0508,ws_0.5
X1403_8/96
X1403_86/96
X1403_33/96
X1403_10/96
X1403_77/96
X1403_53/96
X1403_54/96
X1424_S23/62
X1424_S22/62
X1424_S25/62
23/62 X1424_P
22/62 X1424_P
25/62 X1424_P
X1423_S48/62
X1423_S47/62
X1423_S46/62
X1423_S45/62
X1423_S33/62
X1423_S49/62
X1423_S50/62
48/62 X1423_P
47/62 X1423_P
46/62 X1423_P
45/62 X1423_P
33/62 X1423_P
49/62 X1423_P
50/62 X1423_P
X669 /9.E7
X674 /9.E8
WM1416,ge_0.5
WM0503,ws_0.5
WM1371,br_ge_0.5
WM0505,ws_0.75
WM1374,br_0.75
WG1418,ge_0.5
WG0508,ws_0.5
WG1364,br_ge_0.5
WG1417,ge_0.5
WG0507,ws_0.5
WG1363,br_ge_0.5
WG0510,ws_0.75
WG0509,ws_0.75
WG0512,ws_0.75
WG1306,br_0.75
WG1309,br_0.75
WG1308,br_0.75
WG1303,br_0.75
X151
X322
X170
X169
X319
X361
X360
X511
/9.G2
Engine earth pin
X570
/9.G5
Transmission earth pin
B002
Y011
B021
B020
Y008
Y027
Y026
EXT
A050
Left external rear PTO button
Rear PTO LED on
External right rear PTO button
B36
B41
B50
X1402_36/58
X1402_41/58
X1402_50/58
WF0514,ws_0.5
WF0515,ws_0.5
WF0513,ws_0.5
WF0516,ws_0.5
WF0517,ws_0.5
X1421_S 10/12
X1421_S 11/12
10/12 X1421_P
11/12 X1421_P
X1422_S 10/12
X1422_S 11/12
10/12 X1422_P
11/12 X1422_P
X631
X1462 /12.C6
X1461 /12.C6
S020
S019
WKF1377,br_ge_0.5
WKF0513,ws_0.5
WKF0516,ws_0.5
WKF1378,br_ge_0.5
WKF0514,ws_0.5
WKF0517,ws_0.5
X230
X229
PTO - Sheet 15
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Dokumentation

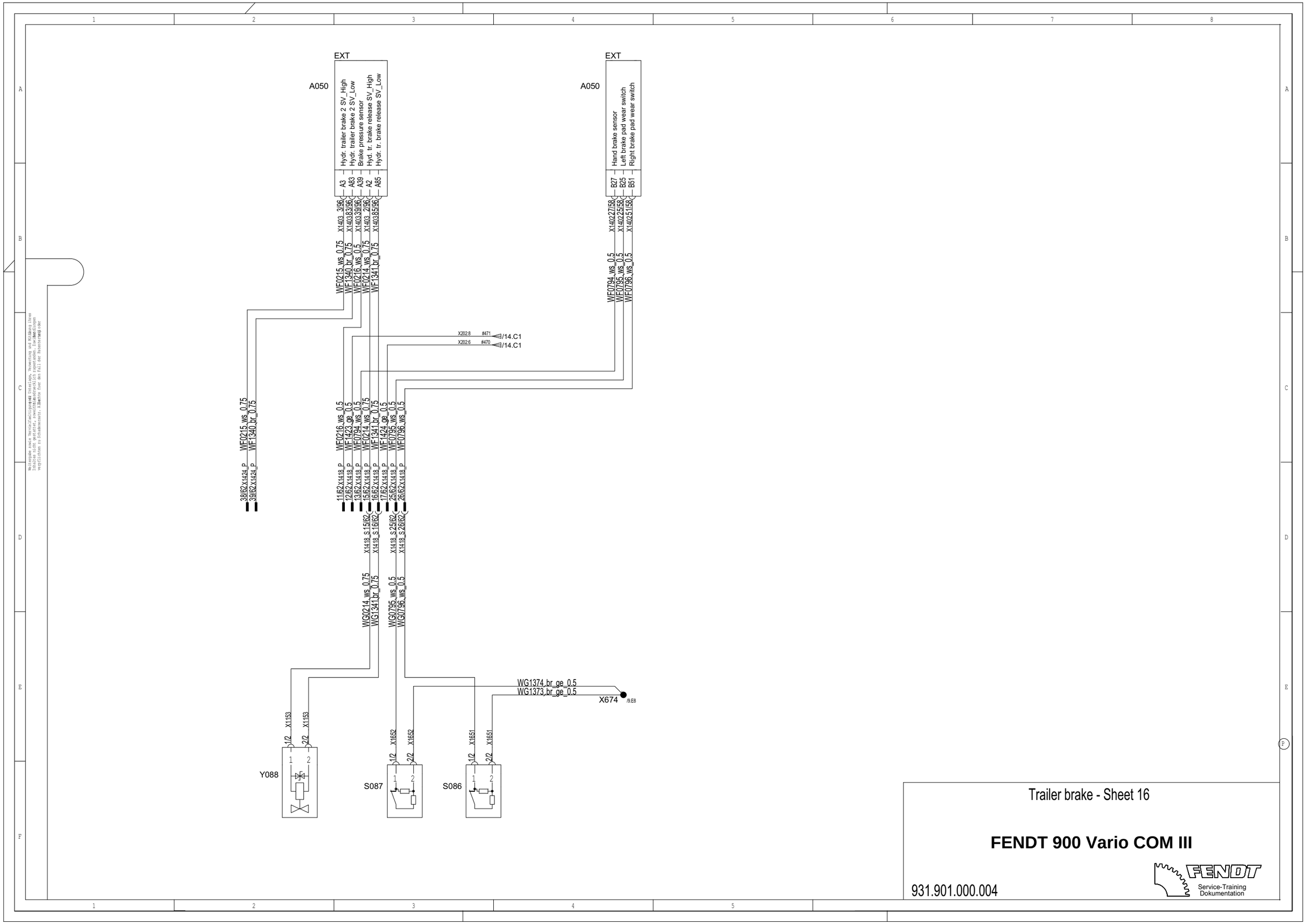
14 PTO - Sheet 15

A013 - PCB, microfuses (Item A 1-2)
A050 - ECU, basic control unit (Item A 2-3, A5)
B002 - Sensor, front PTO speed (Item E1)
B020 - Sensor, rear PTO speed (stub shaft) (Item E4)
B021 - Sensor, rear PTO speed (clutch) (Item E4)
S019 - Button, rear PTO, external left (item A 7/8)
S020 - Button, rear PTO, external right (Item A7)
X511 - Earth pin, engine (Item E2)
X570 - Earth pin, transmission (Item E6)
X631 - Connector, rear PTO LED ON (Item C5)
X669 - Connector, sensor system earth (Item D2)
X674 - Connector, sensor system earth (Item D3)
X1421 - Cable coupling, operator platform (Item B6)
X1422 - Cable coupling, mudguard (Item C6)
X1423 - Cable coupling, operator platform/transmission (Item CD4)
X1424 - Cable coupling, operator platform (Item CD1)
X1461 - Connector, sensor system earth (left mudguard) (Item C7)
X1462 - Connector, sensor system earth (right mudguard) (Item C7)
Y008 - Solenoid valve, rear PTO (clutch) (Item E5)
Y011 - Front PTO solenoid valve (clutch) (Item E2)
Y026 - Solenoid valve, rear PTO, stage I (Item E6)
Y027 - Solenoid valve, rear PTO, stage II (Item E5)

NOTE: *The **Y026** - Solenoid valve, rear PTO, stage I (Item E6) can select the following PTO speeds:*

- *540*
- *540 E*
- *1000 E*

1000 E is available from chassis number 9XX/2X/3501 onwards on request.



Trailer brake - Sheet 16

FENDT 900 Vario COM III

931.901.000.004

FENDT Service-Training Dokumentation

15 Trailer brake - Sheet 16

A050 - ECU, basic control unit (Item A3, A4)
S086 - Switch, brake wearing, right (Item F 3/4)
S087 - Switch, brake wearing, left (Item F3)
X674 - Connector, sensor system earth (Item E4)
X1418 - Cable coupling, operator platform/transmission (Item D3)
X1424 - Cable coupling, operator platform (Item D2)
Y088 - Solenoid valve, release trailer brake (Item F2)

NOTE: *For safety-related circuits, not only is the positive side connected via the **A050** - ECU, basic control unit but the negative side is too.*
The positive side is called _High in the E-box.
The negative side is called _Low in the E-box.

Blue instrument panel

A007

ABS LED
Brake fluid switch
Quiet buzzer
Loud buzzer
Actual speed signal
Theoretical speed signal
PTO speed signal
Linkage position signal
Linkage position signal
Alternator 2 LED
Alternator 1 LED
Hydraulic oil temp. sensor
Compressed air supply sensor 2

Yellow instrument panel

A007

Fuel supply sensor
Hydraulic oil supply sensor
Sensor system earth
Sensor system earth
UB sensors
Compressed air supply sensor 1
Enter key
ESC key
UP arrow key
DOWN arrow key
58

Keypad

A036

DOWN arrow key
UP arrow key
ESC key
Enter key

+Ub30 X1440 47 F24 25A 48
+Ub15L X1440 83 F42 5A 84
+Ub15L X1440 79 F40 5A 80

WF0260_rt_2.5
WF0261_rt_2.5
WF0262_gn_1.5
WF0263_ws_0.5
WF0554_ws_0.5
WF0559_ws_0.5
WF0558_ws_0.5
WF0552_ws_0.5
WF0551_ws_0.5
WF0963_ws_0.5
WF0553_ws_0.5
WF0964_ws_0.5
WF0163_ws_0.5
WF0162_ws_0.5
WF0548_ws_0.5
WF0571_ws_0.5
WF1222_ge_0.75
WF1745_gn_0.75

#1672 /26.E5

WF0190_ws_0.5 X1565 /19.D3
WF0563_ws_0.5
WF0562_ws_0.5
WF0561_ws_0.5
WF0560_ws_0.5
WF0546_ws_0.5
WF0582_ws_0.5
WF1384_br_ge_0.5
WF1382_br_ge_0.5
WF0572_ws_0.5
WF1419_ge_0.5
WF1383_br_ge_0.5
X635
WF1386_br_ge_0.5

61/62 X1418_P X1418_S61/62
60/62 X1418_P X1418_S60/62
58/62 X1418_P X1418_S58/62
59/62 X1418_P X1418_S59/62

WG0260_rt_2.5
WG0261_rt_2.5
WG0262_gn_1.5
WG0263_ws_1.5

X551 /9.F4
Operator platform earth pin
/23.C3

WF1318_br_ws_0.5
WF1377_br_ws_0.5
WF1315_br_1.5
WF1024_gn_1.5

X1543 1/1 1 2 1/1 X1542
S076
X204 1/3 2/3 3/3 1 2 3 SU
H006

X1440/90 +Ub15

12/31 X1401
13/31 X1401
A039 /2.E7

WK0552_ws_0.5
WK0551_ws_0.5
WK0963_ws_0.5
WK0553_ws_0.5
WK0964_ws_0.5
WK1222_ge_0.75
WK1318_br_0.5
WK2001_ge_0.75

X1419_S 3/21 4/21 5/21 2/21 1/21 6/21
X1419_P 3/21 4/21 5/21 2/21 1/21 6/21

#1672 /25.B5

X007 1/7 2/7 3/7 4/7 5/7 6/7 7/7
1 2 3 4 5 6 7 Implement socket
X533 /9.F6 Cab earth pin

X1424_S27/62 27/62 X1424_P
X1424_S29/62 29/62 X1424_P
X1424_S35/62 35/62 X1424_P
X1424_S26/62 26/62 X1424_P
X1424_S28/62 28/62 X1424_P
X1424_S36/62 36/62 X1424_P

X1423_S56/62 56/62 X1423_P
X1423_S54/62 54/62 X1423_P

X1418_S_7/62 7/62 X1418_P
X1418_S_8/62 8/62 X1418_P

WM1383_br_ge_0.5
WM0163_ws_1
WM0162_ws_1
WM0548_ws_0.5
WM1384_br_ge_0.5
WM0546_ws_0.5
WM1366_br_ge_0.5
WM0582_ws_0.5
WM1388_br_ge_0.5

X678
X1525
X698

WG1421_ge_0.5
WG1420_ge_0.5
WG0571_ws_0.5
WG1367_br_ge_0.5
WG1422_ge_0.5
WG0572_ws_0.5
WG1387_br_ge_0.5
WG1386_br_ge_0.5

G004 G002 B013 B034 B084 B019 B060

WABS0260_rt_2.5
WABS0261_rt_2.5
WABS0268_br_2.5
WABS0267_br_2.5
WABS0264_rt_4
WABS0262_gn_1.5
WABS0266_br_1.5
WABS0265_br_4
WABS0263_ws_1.5

X837_S 1/8 2/8 3/8 4/8 5/8 6/8 7/8
X837_P 1/8 2/8 3/8 4/8 5/8 6/8 7/8

WG0265_br_2.5
WG0264_br_2.5
WG0266_br_1.5

X558 /9.G4
Transmission earth pin

X814 X596

X1048 1 2 3 4 5 6 7
ABS socket

Instrument panel/ABS/driver seat - Sheet 17

FENDT 900 Vario COM III

931.901.000.004

FENDT Service-Training Dokumentation

16 Instrument panel/ABS/driver seat - Sheet 17

A007 - Instrument panel (Item A4, A 6/7)
A036 - Control panel, dashboard right/left (Item A8)
A039 - MFA, multifunction armrest (Item E 2/3)
B013 - Sensor, hydraulic oil temperature (Item E6)
B019 - Sensor, compressed air supply (Circuit II) (Item E7)
B034 - Immersed tube sensor (fuel) (Item E6)
B060 - Compressed air supply sensor (Circuit I) (Item E8)
B084 - Sensor, hydraulic oil level (Item E7)
G002 - Alternator 1 (Item E5)
G004 - Alternator 2 (Item E5)
H006 - Audio warning signal (Item D 3/4)
S076 - Switch, clutch fluid (Item D3)
X533 - Earth pin, cab body (Item F4)
X551 - Earth pin, operator platform right (Item C2)
X558 - Earth pin, transmission (Item E2)
X596 - Connector, earth (X1048 socket, ABS) (Item E1)
X635 - Connector, sensor system earth (instrument panel) (Item C7)
X678 - Connector, sensor system earth (Item D7)
X698 - Connector, sensor system earth (Item D8)
X814 - Connector, +UB30 (X1048 socket, ABS) (Item E1)
X837 - Separation point on X1048 socket, ABS (Item D1)
X1048 - Socket ABS (Item F1)
X1401 - Separation point on A039 (Item E 2/3)
X1418 - Cable coupling, operator platform/transmission (Item C1, C8)
X1419 - Cab cable coupling (Item D4)
X1423 - Cable coupling, operator platform/transmission (Item C7)
X1424 - Cable coupling, operator platform (Item CD6)
X1440 - Fuse holder (Item A1, A2, A5)
X1525 - Connector, sensor + UB (from instrument panel) (Item D7)
X1565 - Connector, position light (Item B7)

NOTE: *The wiring diagram shows **A039** - MFA, multifunction armrest (Item E 2/3) with the super deluxe seat wiring. Optional extra versions Fendt Evolution and Fendt Evolution Active are not shown.*

ZE

A038

+Ub30 X1440 1 F1 2 nur bei NA bestückt

+Ub30 X1440 27 F14 15A 28

+Ub30 X1440 41 F21 10A 42

A21	4th hydr. circuit relay (30)
A3	Wk light corner light rel.(30)
A7	Work light relay (NA) (30)
A11	Additional headlight 56a
A20	Additional headlight 56b
A1	Wk light corner light rel.(87)
A17	Headlight 56a
A10	Headlight 56b
A19	4th hydr. circuit relay (87)
A8	Socket 54
A13	Work light relay (NA) (87)
A6	Left brake light
A5	Right brake light
A2	Electronics earth
A9	Control bus_Low
A12	Control bus_High
A14	Air conditioning earth
A15	UB 15
A18	UB 5 V air conditioning

X1404 21/21 WF0100,rt_2.5
X1404 3/22 WF0101,rt_2.5
X1404 7/22 WF0189,rt_2.5
X1404 11/22
X1404 20/22
X1404 1/22
X1404 17/22
X1404 10/22
X1404 19/22
X1404 8/22
X1404 13/22
X1404 6/22
X1404 5/22
X1404 2/22
X1404 9/22
X1404 12/22
X1404 14/22
X1404 15/22
X1404 18/22

WF0105,ws_2.5
WF0107,ws_2.5
WF0106,ws_2.5
WF0188,ws_2.5
WF0202,ws_1.5
WF0156,ws_2.5
WF0201,ws_0.75
WF0200,ws_0.75

WF0318,ws_0.5 X796_S:8 #1657 /20.C7

WF1228,gn_0.5 X1578 /8.C5

WF1372,br_ws_0.5 X766

WF0824,ws_0.5 X598 /10.D7

WF0825,ws_0.5 X599 /10.D7

WF1371,br_ws_0.5 X661 /9.E4

E003
56a/3 X352 WK0115,ws_2.5
31/3 X352 WK1323,br_2.5
56b/3 X352 WK0106,ws_2.5

E004
56a/3 X353 WK0116,ws_2.5
31/3 X353 WK1301,br_2.5
56b/3 X353 WK0107,ws_2.5

X1417_P 3/21 3/21 X1417_S WF0115,ws_2.5
X1417_P 4/21 4/21 X1417_S WF0116,ws_2.5
X1417_P 5/21 5/21 X1417_S WF0117,ws_2.5
X1417_P 6/21 6/21 X1417_S WF0118,ws_2.5

X657 WF0128,ws_2.5
X658 WF0102,ws_2.5

X532 /9.F7
Cab earth pin

X659
X651
X650

WF0104,ws_2.5
WF0172,ws_2.5
WF0175,ws_2.5
WF0174,ws_2.5
WF0176,ws_2.5
WF0173,ws_2.5

X1421_S 1/12 1/12 X1421_P WKF0135,ws_0.75 X919 1/3 E067
X1422_S 1/12 1/12 X1422_P WKF0136,ws_0.75 X918 1/3 E066

E074
1/2 X1289 WHM0104,ws_2.5
2/2 X1289 WHM1301,br_2.5

E098
1/2 X1603 WHM0105,ws_2.5
2/2 X1603 WHM1302,br_2.5

E099
1/2 X1604 WHM0106,ws_2.5
2/2 X1604 WHM1303,br_2.5

E100
1/2 X1605 WHM0107,ws_2.5
2/2 X1605 WHM1310,br_2.5

E101
1/2 X1606 WHM0108,ws_2.5
2/2 X1606 WHM1311,br_2.5

E075
1/2 X1290 WHM0109,ws_2.5
2/2 X1290 WHM1312,br_2.5

X1425_S 1/39 1/39 X1425_P
X1425_S 2/39 2/39 X1425_P
X1425_S 3/39 3/39 X1425_P
X1425_S 14/39 14/39 X1425_P
X1425_S 15/39 15/39 X1425_P
X1425_S 4/39 4/39 X1425_P

WM0104,ws_2.5
WM0105,ws_2.5
WM0106,ws_2.5
WM0107,ws_2.5
WM0108,ws_2.5
WM0109,ws_2.5

X1436_S 1/12 1/12 X1436_P
X1436_S 2/12 2/12 X1436_P
X1436_S 3/12 3/12 X1436_P
X1436_S 9/12 9/12 X1436_P
X1436_S 4/12 4/12 X1436_P
X1436_S 10/12 10/12 X1436_P
X1436_S 5/12 5/12 X1436_P
X1436_S 11/12 11/12 X1436_P
X1436_S 6/12 6/12 X1436_P
X1436_S 12/12 12/12 X1436_P
X1436_S 7/12 7/12 X1436_P
X1436_S 8/12 8/12 X1436_P

WM1312,br_2.5
WM1311,br_2.5
WM1310,br_2.5
WM1303,br_2.5
WM1302,br_2.5
WM1301,br_2.5

X899
WM1330,br_6
X520 /9.G3
Engine earth pin

WG0188,ws_2.5 X1423_S 62/62 62/62 X1423_P

X1418_P 62/62
X1418_P 57/62 57/62 X1418_S

WG1366,br_2.5
X572 /9.G5
Transmission earth pin

X838_S 6/8 6/8 X838_P
X838_S 7/8 7/8 X838_P

WFR1366,br_2.5
WFR0188,ws_2.5

X015
L
54G
31
R
58R
54
58L
External control socket

WG0202,ws_1.5
X018 54/7
54
L
54G
58L
31
R
58R
Rear socket

STVZO/corner light/4th hydraulic circuit - Sheet 18

FENDT 900 Vario COM III

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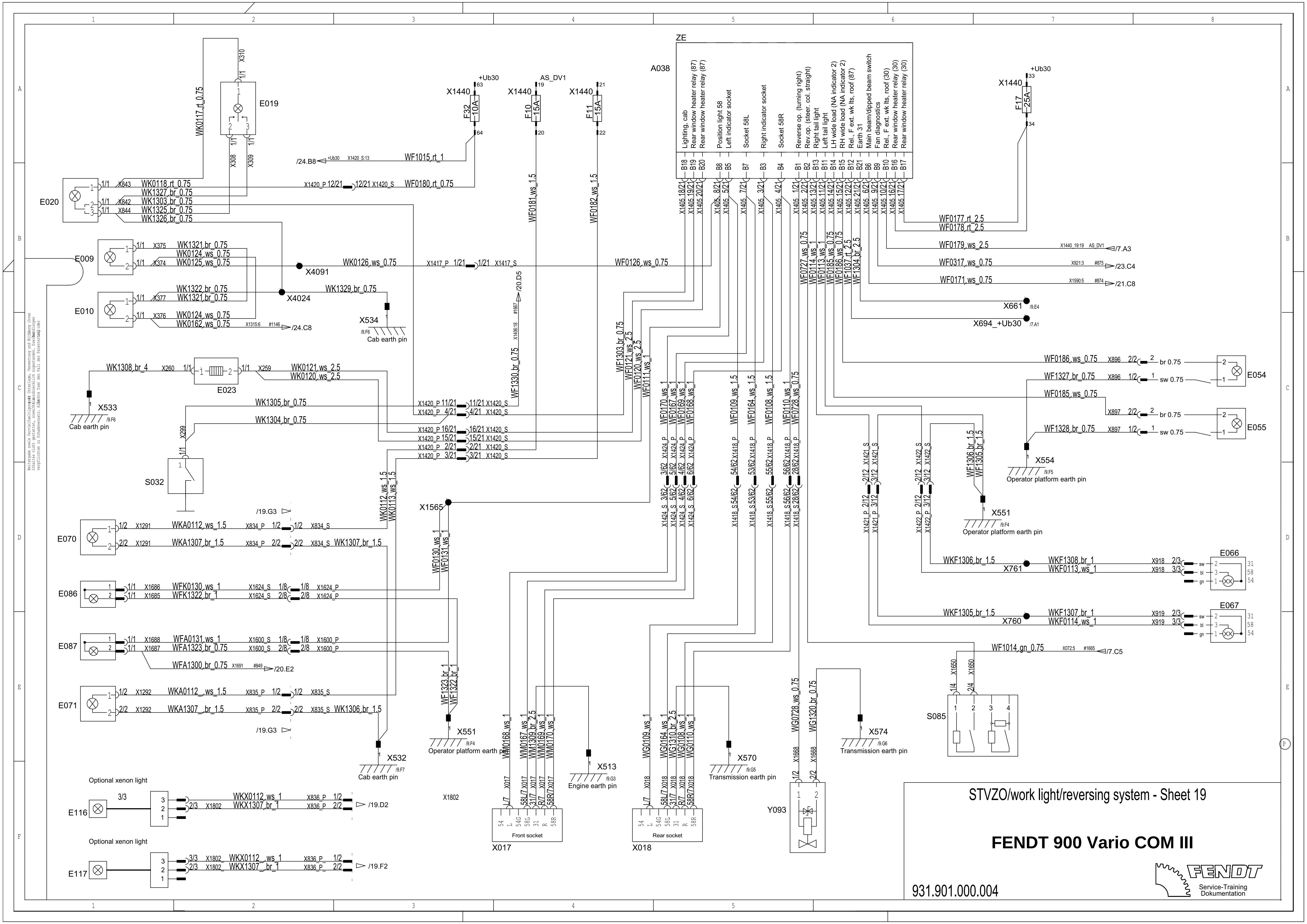
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17 STVZO/corner light/4th hydraulic circuit - Sheet 18

A038 - ECU, central electrical system (Item A6)
E003 - H4 additional headlight, right (Item B1)
E004 - H4 additional headlight, left (Item C1)
E066 - Brake and tail light left (Item D8)
E067 - Brake and tail light right (Item C8)
E074 - Work light, right (cornerlight) (Item CD1)
E075 - Work light, left (cornerlight) (Item EF1)
E098 - Drive headlight (main beam), right (Item D1)
E099 - Drive headlight (dipped beam), right (Item D1)
E100 - Drive headlight (main beam), left (Item E1)
E101 - Drive headlight (dipped beam), left (Item E1)
X015 - External control socket (Item F5)
X018 - Rear socket (Item E7)
X520 - Earth pin, oil sump right (Item F3)
X532 - Earth pin, cab body (Item C 2/3)
X572 - Earth pin, transmission (Item E4)
X598 - Connector, K bus_High (Item C8)
X599 - Connector, K bus_Low (Item C8)
X650 - Connector, headlight 56b (dipped beam) (Item C6)
X651 - Connector, headlight 56a (main beam) (Item C6)
X657 - Connector, auxiliary lighting 56a (main beam) (Item B 5)
X658 - Connector, auxiliary lighting 56b (dipped beam) (Item B 5)
X659 - Connector, work light (cornerlight) (Item C5)
X661 - Connector, electronics earth (Item C8)
X766 - Connector, air conditioning earth (Item BC8)
X838 - Separation point on X015 socket, external control (Item E5)
X899 - Connector, earth (Item EF 3/4)
X918 - Separation point on E066 (Item D8)
X919 - Separation point on E067 (Item C8)
X1417 - Cable coupling, operator platform/cab (Item B3)
X1418 - Cable coupling, operator platform/transmission (Item D7)
X1421 - Cable coupling, operator platform (Item CD7)
X1422 - Cable coupling, mudguard (Item D7)
X1423 - Cable coupling, operator platform/transmission (Item D6)
X1425 - Cable coupling, operator platform (Item D5)
X1436 - Cable coupling, tractor bonnet (drive light, cornerlight) (Item DE3)
X1440 - Fuse holder (Item A 4-5)
X1578 - Connector, + UB 15 (Item B8)

NOTE: *The following components are also optionally available as LED tail lights:*
E066 *- Brake and tail light left (Item D8)*
E067 *- Brake and tail light right (Item C8)*
In this case, components:
A075 *- ECU, tail light LED, right*
A076 *- ECU, tail light LED, left must be fitted. See Sheet 28.*



STVZO/work light/reversing system - Sheet 19

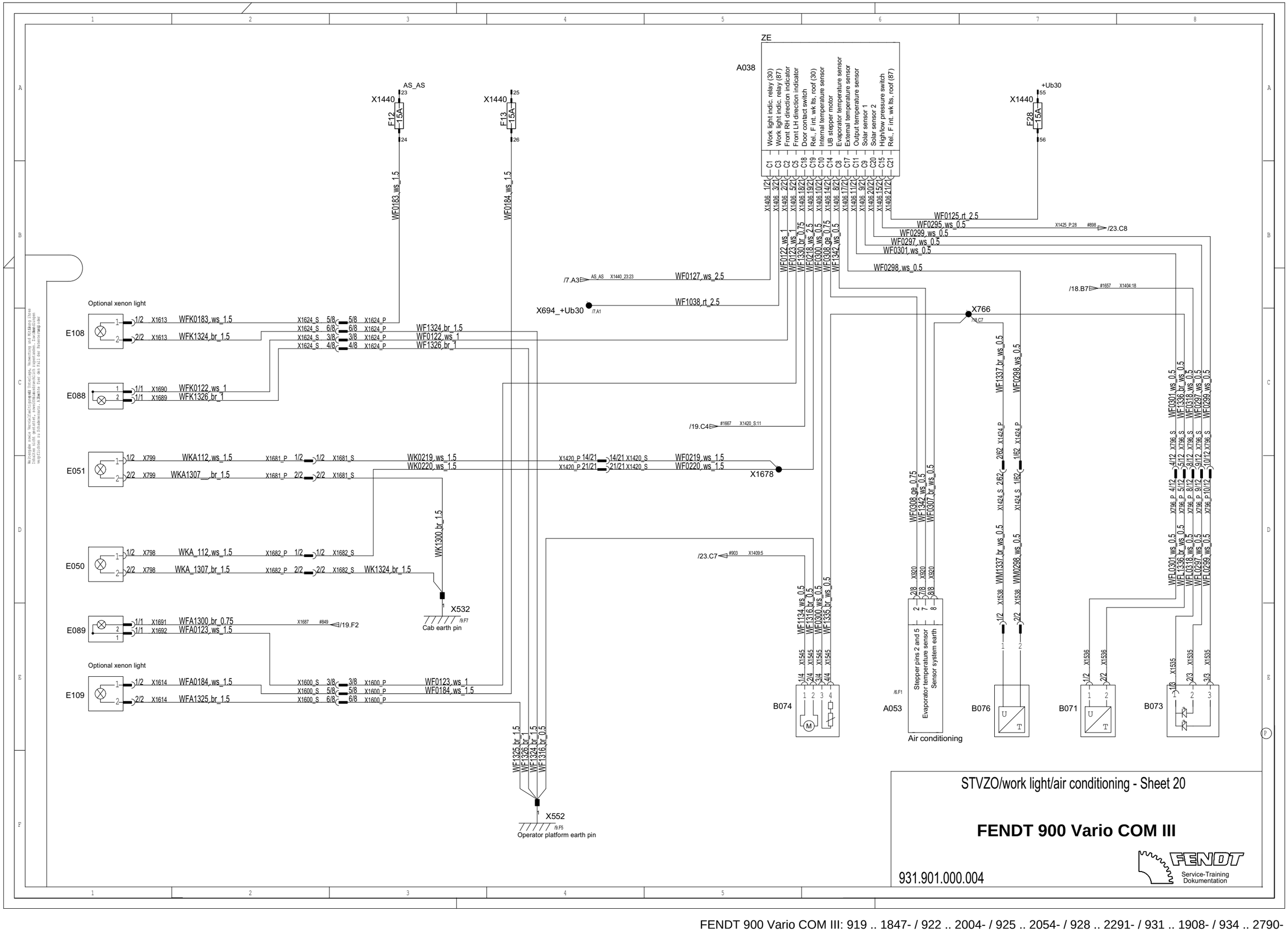
FENDT 900 Vario COM III

931.901.000.004

18 STVZO/work light/reversing system - Sheet 19

A038 - ECU, central electrical system (Item A 5-6)
E009 - Licence plate lighting, right (Item B1)
E010 - Licence plate lighting, left (Item BC1)
E019 - Lighting, cab (Item A2)
E020 - Lighting (EPC) (Item B1)
E023 - Rear window heater (Item C2)
E054 - Wide vehicle marker lights, right (Item C8)
E055 - Wide vehicle marker lights, left (Item C8)
E066 - Brake and tail light left (Item D8)
E067 - Brake and tail light right (Item DE8)
E070 - Work lights, front right roof, external (Item D1)
E071 - Work lights, front left roof, external (Item E1)
E086 - Side lamp, front right (Item D1)
E087 - Side lamp, front left (Item E1)
E116 - Work lights, Xenon front right roof, external (Item F1)
E117 - Work lights, Xenon front left roof, external (Item F1)
S032 - Switch, left door contact (Item CD 1/2)
S085 - Switch, reverse operation (RÜFA) actuation (Item E 6/7)
X017 - Front socket (Item F4)
X018 - Rear socket (Item F 4/5)
X513 - Earth pin, engine (Item EF4)
X532 - Earth pin, cab body (Item EF3)
X533 - Earth pin, cab body (Item C1)
X534 - Earth pin, cab body (Item BC3)
X551 - Earth pin, operator platform right (Item D7, E3)
X554 - Earth pin, operator platform (Item CD7)
X570 - Earth pin, transmission (Item EF5)
X574 - Earth pin, transmission (Item E6)
X661 - Connector, electronics earth (Item BC7)
X694 - Connector, +UB 30 (A038) (Item BC7)
X760 - Connector, signal (raise suspension) (Item DE7)
X761 - Connector, signal (lower suspension) (Item D7)
X834 - Separation point on E070 (Item D2)
X835 - Separation point on E071 (Item E2)
X836 - Separation point on E0116 / E117 (Item F 2/3)
X896 - Separation point on E054 (Item C 7/8)
X897 - Separation point on E055 (Item C 7/8)
X918 - Separation point on E066 (Item D8)
X919 - Separation point on E067 (Item DE8)
X1417 - Cable coupling, operator platform/cab (Item B 3/4)
X1418 - Cable coupling, operator platform/transmission (Item CD5)
X1420 - Cab cable coupling (Item B3, C3)
X1421 - Cable coupling, operator platform (Item D6)
X1422 - Cable coupling, mudguard (Item D6)
X1424 - Cable coupling, operator platform (Item CD5)
X1440 - Fuse holder (Item A3, A4; A7)
X1565 - Connector, position light (Item D3)
X1600 - Cable coupling, to rear work lights (roof) (Item E2)
X1624 - Cable coupling to front position lights (Item DE2)
X1802 - Separation point on E116 / E117 (Item F2)
Y093 - Solenoid valve, reverse operation (RÜFA), rotate to right (Item F5)

NOTE: *The following components are also optionally available as LED tail lights:*
***E066** - Brake and tail light left (Item D8)*
***E067** - Brake and tail light right (Item C8)*
In this case, components:
***A075** - ECU, tail light LED, right*
***A076** - ECU, tail light LED, left must be fitted. See Sheet 28.*



FENDT 900 Vario COM III: 919 .. 1847- / 922 .. 2004- / 925 .. 2054- / 928 .. 2291- / 931 .. 1908- / 934 .. 2790-

19 STVZO/work light/air conditioning - Sheet 20

A038 - ECU, central electrical system (Item A 5-6)
A053 - ECU, air conditioning control (Item E6)
B071 - Sensor, output temperature (Item E7)
B073 - Sensor, solar (irradiation) (Item E8)
B074 - Sensor, internal temperature (Item E5)
B076 - Sensor, external temperature (Item E7)
E050 - Work lights, front left roof, internal (Item D1)
E051 - Work lights, front right roof, internal (Item C1)
E088 - Direction direction indicator, front right (Item C1)
E089 - Direction direction indicator, front left (Item E1)
E108 - Work light, right A pillar (optional Xenon) (Item C1)
E109 - Work light, left A pillar (optional Xenon) (Item E1)
X532 - Earth pin, cab body (Item CD3)
X552 - Earth pin, operator platform (Item F4)
X694 - Connector, +UB 30 (A038) (Item BC4)
X766 - Connector, air conditioning earth (Item BC 6/7)
X796 - Cable coupling (M002) (Item CD8)
X1420 - Cab cable coupling (Item CD4)
X1424 - Cable coupling, operator platform (Item CD7)
X1440 - Fuse holder (Item A3; A4; A7)
X1538 - Separation point on B076 (Item E7)
X1600 - Cable coupling, to rear work lights (roof) (Item E3)
X1624 - Cable coupling to front position lights (Item C 2/3)
X1678 - Connector, front work light (Item D5)
X1681 - Cable coupling, E051 (Item D2)
X1682 - Cable coupling, E050 (Item D2)

ZE

A038

+Ub30 X1440 29 F15 15A 30

+Ub30 X1440 57 F29 10A 58

+Ub15ZE X1440 85 F43 10A 86

Relay 15L (87) D13
Rotating beacon relay (87) D21
Rel. R ext. wk lts. roof (87) D3
Relay 15L (30) D7
Relay 15L (86) D16
Rear right direction indicator D20
Rear left direction indicator D17
Rel. R ext. wk lts. roof (30) D1
Rotating beacon relay (30) D19
Rear wiper 31B D11
Rear wiper 53 D8
Front wiper 31b D9
Front wiper 53 D5
Reverse op. (turning left) D2
Front washer ON D10
Front wiper intermittent D15
Front wiper ON D14

/28.D2

X1407.13/21 X1407.21/21 X1407.3/21 X1407.7/21 X1407.16/21 X1407.20/22 X1407.17/22 X1407.1/21 X1407.19/21 X1407.11/21 X1407.8/21 X1407.9/21 X1407.5/22 X1407.2/21 X1407.10/21 X1407.15/21 X1407.14/21

/7.A8 +Ub15L X1440.79:79 WF1028,gn_2.5

WF0138,rt_1.5
WF0129,rt_2.5
WF1027,rt_2.5
WF1030,gn_1

X694_+Ub30 /7.A1
X608 /7.D5

WF0132,gn_0.75

WF0140,ws_0.75
WF0139,ws_0.75
WF0141,ws_0.75

WF0312,ws_0.75
WF0311,ws_0.75
WF0137,ws_2.5
WF0160,ws_2.5
WF0143,ws_0.75
WF0142,ws_1.5
WF0144,ws_0.5
WF0145,ws_1.5
WF0729,ws_0.75

X762

WF0133,gn_0.75
WF0135,gn_0.75
WF0134,gn_0.75
WF0136,gn_0.75

WF0171,ws_0.75 X1405:6 #874 /19.C7

X1591 7/8 3/8 2/8
X1590 8/8 7/8 6/8 5/8 4/8

S079

E082
1 1/1 X1561 WK0137,ws_2.5
2 1/1 X1562 WK1311,br_2.5

Optional indicator LED

E131
R 31 sw 2 gn 1
2/2 X917 WKF0312,ws_0.75
1/2 X917 WKF1311,br_0.75

E065
R 31 sw 2 gn 1
2/2 X917 WKF0312,ws_0.75
1/2 X917 WKF1311,br_0.75

X760 /19.E7

E064
L 31 sw 2 gn 1
2/2 X916 WKF0311,ws_0.75
1/2 X916 WKF1312,br_0.75

X761 /19.E7

E130
L 31 sw 2 gn 1
2/2 X916 WKF0311,ws_0.75
1/2 X916 WKF1312,br_0.75

Optional indicator LED

X1421_S 4/12
X1422_S 4/12

X1420_P 8/21 X1420_S
X1420_P 7/21 X1420_S
X1420_P 10/21 X1420_S
X1420_P 9/21 X1420_S

WF1307,br_1.5

X552 /9.F5
Operator platform earth pin

X796_P 12/12 X796_S
X796_P 1/12 X796_S
X796_P 6/12 X796_S

WFL1307,br_1.5
WFL0144,ws_0.5
WFL0145,ws_1.5

X1418_S 27/62 X1418_P

WG0729,ws_0.75
WG1321,br_0.75

X574 /9.G6
Transmission earth pin

E085
1 1/1 X1563 WK0138,ws_2.5
2 1/1 X1564 WK1312,br_2.5

X793

WK0135,ws_2.5
WK0160,ws_2.5

X532 /9.F7
Cab earth pin

X769

WK0189,ws_1.5
WK0188,ws_1.5

WK1313,br_1.5

X534 /9.F6
Cab earth pin

X258 2/4 3/4 1/4
A

M004
31 53a L 31b 53
br 1 sw-gn 1 sw 1 ge 1

M002
31 53a L 31b 53
br 1 sw-gn 1 sw 1 ge 1

X346 1/1
X345 1/1

E021 E022

Y092 X1667 1/2 2/2
1 2

ws br-ws 0.75
sw-gn 1.5
SW-WS 1.5
SW 0.75
SW-WS-gn 1.5
sw-ge0.75
ge 1.5 ws-SW 1.5 SW 1.5 Vi 0.75 sw-rt 0.75 ge 0.75

H 15c 15 J 53 31b 49a R L 30 56 56a 56b

Wipers / Work lights - Sheet 21

FENDT 900 Vario COM III

931.901.000.004

FENDT Service-Training Dokumentation

20 Wipers/work light - Sheet 21

A038 - ECU, central electrical system (Item A 4-5)
E021 - Rotating beacon, right (Item F2)
E022 - Rotating beacon, left (Item F3)
E064 - Rear direction indicator, left (Item D1)
E065 - Rear direction indicator, right (Item C1)
E082 - Work light, rear right external (roof) (Item C1)
E085 - Work light, rear left external (roof) (Item DE1)
E130 - LED for rear direction indicator, left (Item D1)
E131 - LED for rear direction indicator, right (Item C1)
M002 - Front wiper motor (Item F 4/5)
M004 - Rear wiper motor (Item F 3/4)
S079 - Switch, steering column (Item DE7)
X258 - Separation point on M004 (Item E 3/4)
X345 - Separation point on E022 (Item E3)
X346 - Separation point on E021 (Item E2)
X347 - Separation point on M002 (Item E 4/5)
X532 - Earth pin, cab body (Item E2)
X534 - Earth pin, cab body (Item E3)
X552 - Earth pin, operator platform (Item D4)
X574 - Earth pin, transmission (Item E6)
X608 - Connector, + UB 15 (Item B3)
X694 - Connector, +UB 30 (A038) (Item B3)
X760 - Connector, signal (raise suspension) (Item C3)
X761 - Connector, signal (lower suspension) (Item D3)
X762 - Connector, pre-heater signal (Item C6)
X769 - Connector, signal (E021/E022) (Item E3)
X793 - Connector, signal (E082/E085) (Item D2)
X796 - Cable coupling (M002) (Item D 4/5)
X916 - Separation point on E064 (Item D1)
X917 - Separation point on E065 (Item C1)
X1418 - Cable coupling, operator platform/transmission (Item D5)
X1420 - Cab cable coupling (Item D 3/4)
X1421 - Cable coupling, operator platform (Item C3)
X1422 - Cable coupling, mudguard (Item C3)
X1440 - Fuse holder (Item A2, A6)
X1590 - Separation point on S079 (Item C 7/8)
X1591 - Separation point on S079 (Item C7)
Y092 - Solenoid valve, reverse operation (RÜFA), rotate to left (Item F5)

NOTE: *If LED tail lights are fitted,*
E130 *- LED for rear direction indicator, left (Item D1)*
E131 *- LED for rear direction indicator, right (Item C1)*
the following components are also fitted:
A075 *- ECU, tail light LED, right*
A076 *- ECU, tail light LED, left See Sheet 28.*

ZE

A038

+Ub15E

X1440 69

F35 10A

70

+Ub30

X1440 31

F16 15A

32

Rel., R int. wk lts, roof (87)
Emergency actuation relay (30)
Emergency actuation relay (86)
15E relay (87)
Emergency actuation relay (87)
Emergency actuation relay (86)
Rr mudguard wk light rel. (30)
Right indicator switch
Left indicator switch
Main light flash switch
Rear washer system
Front washer system
15E relay (30)
Rr mudguard wk light rel. (87)
15E relay (86)
Rel., R int. wk lts, roof (30)
Air con magnetic clutch
Exterior mirror heater
50a

E3 E19 E17 E13 E18 E16 E21 E11 E9 E14 E12 E15 E7 E20 E10 E1 E2 E6 E8

X1408 3/21 X1408 19/21 X1408 17/21 X1408 13/21 X1408 18/21 X1408 16/21 X1408 21/21 X1408 11/21 X1408 9/21 X1408 14/21 X1408 12/21 X1408 15/21 X1408 7/21 X1408 20/21 X1408 10/21 X1408 1/21 X1408 2/21 X1408 6/21 X1408 8/21

WF0119,rt_2.5
WF0146,gn_0.75
WF0519,ws_0.5

/7.A8 +Ub15E X1440 69:69 WF1026,gn_2.5
/11.B4 #121 X1403:51 WF0501,ws_0.75
/11.B4 #118 X1402:21 WF0502,ws_0.5
/7.A8 +Ub_AS-Heckl X1440 59:59 WF0157,ws_2.5

WF0150,ws_0.75
WF0149,ws_0.75
WF0151,ws_0.75

WF0148,ws_0.75 X072:8 #1019 /26.G2
WF1226,ws_1 X1419_S:14 #1018 /23.F2
WF0292,ws_1.5 X1425_P:10 #1017 /23.C8
WF0155,ws_2.5
WF1031,gn_1 X608 /7.D5
WF1036,rt_2.5
WF1017,rt_2.5 X694_+Ub30 /7.A1

+Ub_AS-Heckl

X1440 59 F30 15A 60

X1440 61 F31 15A 62

WF0158,ws_1.5
WF0159,ws_1.5

X1421_S 5/12 5/12 X1421_P WKF0159,ws_1.5 X1285 1/2 E078
WKF1310,br_1.5 X1285 2/2
X760 /19.E7

X1420_P 1/21 1/21 X1420_S

WF0147,gn_0.75
WF0518,ws_0.5
WF0519,ws_0.5

S012 X082 1/4 2/4 X082 1 2 3 4

S013 X224 1/3 2/3 X224 1 2 3

open when pedal in rest pos.

WF0152,ws_0.75
WF0153,ws_0.75

WF0520,ws_0.75

WK0155,ws_2.5 X1570 1/1 E083
WK1310,br_2.5 X1571 1/1

WK0154,ws_2.5
X789

WK0156,ws_2.5 X1572 1/1 E084
WK1309,br_2.5 X1573 1/1

X534 /9.F6
Cab earth pin

/23.C7 #1002 X1409:9 WF0547,ws_1

WF0154,ws_1

X1425_S 9/39 X1425_P 9/39 X1591 6/8
X1425_S 33/39 X1425_P 33/39 X1591 5/8
X1591 4/8
X1591 1/8

S079

8 7 6 5 4 3 2 1

WM0514,ws_1 X999 1/1 1

WM0547,ws_1 X300 1/2 1

H005 M010 M

WM1316,br_1 X300 2/2

WM1308,br_1 X998 1/1 2

X513 /9.G3
Engine earth pin

X1418_S 18/62 X1418_P 18/62

WG0520,ws_0.75 X317 1/2 1

WG1312,br_0.75 X317 2/2 2

Y004

X570 /9.G5
Transmission earth pin

X1751_P 1B/6 X1751_S 1B/6
X1751_P 1A/6 X1751_S 1A/6
X1751_P 1C/6 X1751_S 1C/6

WF1310,br_0.75

X551 /9.F4
Operator platform earth pin

WFW0153,ws_0.75
WFW0152,ws_0.75
WFW1310,br_0.75

M005 X303 1/2 1 2/2 2
M003 X301 1/2 1 2/2 2

WFW1309,br_0.75

X1422_S 5/12 5/12 X1422_P WKF0158,ws_1.5 X1286 1/2 E079
WKF1309,br_1.5 X1286 2/2
X761 /19.E7

ws
br-ws 0.75
SW-ws 1.5
sw-ge0.75
SW 0,75
SW-ws-gn 1.5
sw 1.5
ge 1.5
ws-sw 1.5
sw 1,5
vi 0,75
sw-rt 0,75
ge 0,75
sw-gn 1.5
H
83c
15
J
53
31b
49a
R
L
30
56
56a
56b

Work light/wipers/emergency mode - Sheet 22

FENDT 900 Vario COM III

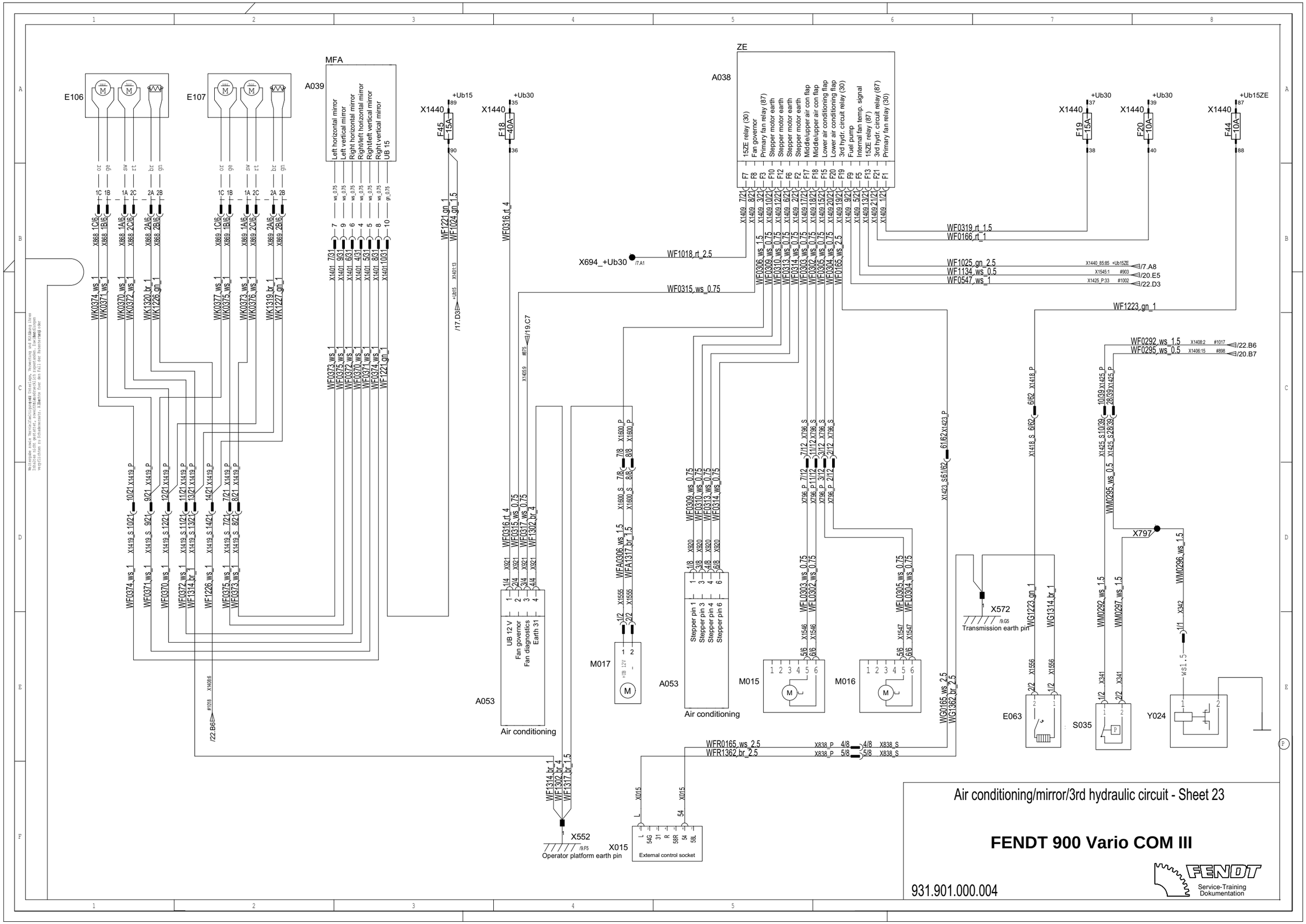
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21 Work light/wipers/emergency mode - Sheet 22

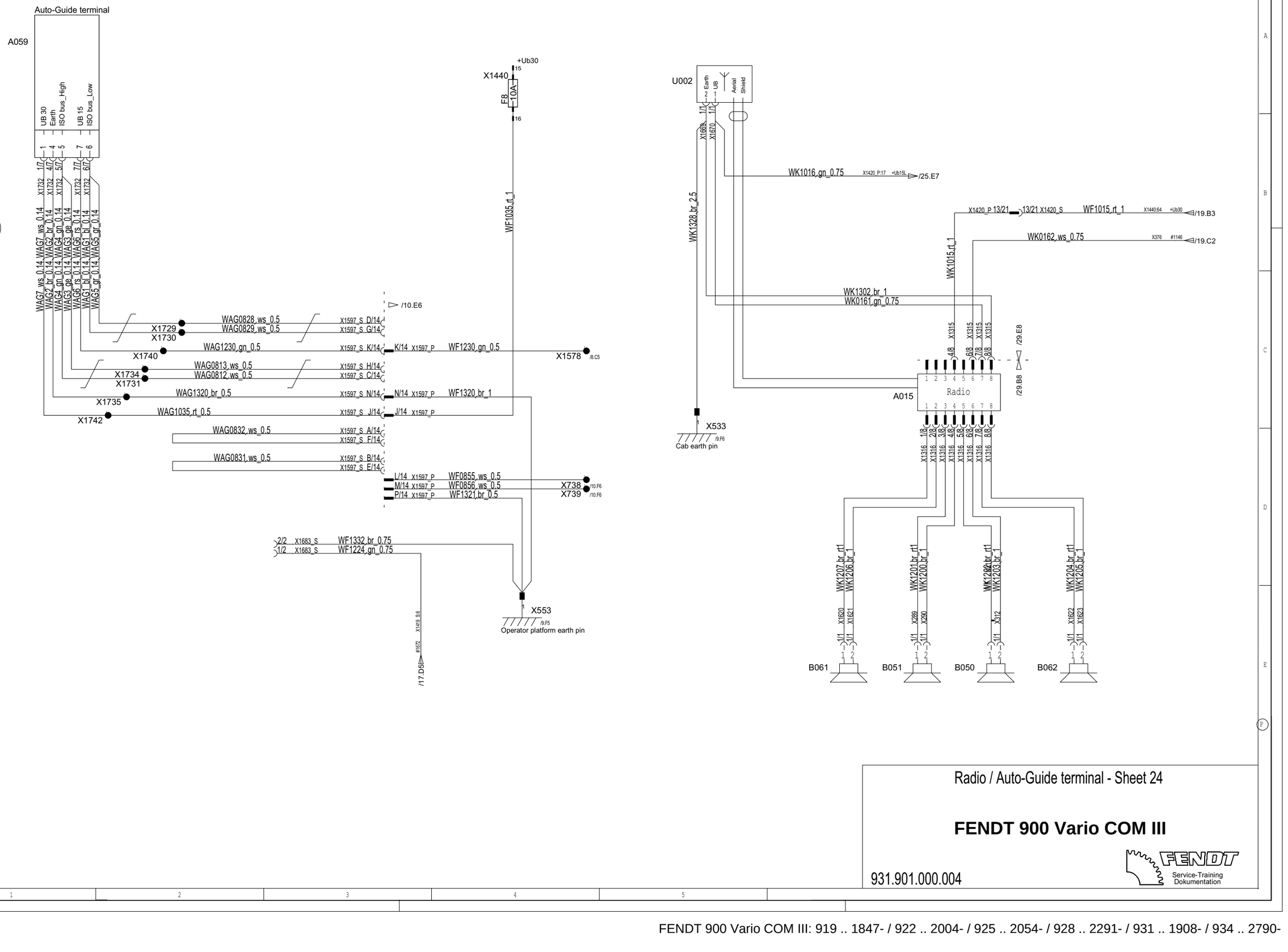
A038 - ECU, central electrical system (Item A 4-5)
E078 - Work light, rear right mudguard (optional Xenon) (Item B8)
E079 - Work light, rear left mudguard (optional Xenon) (Item D8)
E083 - Work light, rear right internal (roof) (Item C8)
E084 - Work light, rear left internal (roof) (Item CD8)
H005 - Horn (Item E4)
M003 - Wiper pump, front (Item E6)
M005 - Wiper pump, rear (Item E5)
M010 - Fuel pump (Item E4)
S012 - Switch, starter lockout (Item CD 1)
S013 - Emergency mode button (Item CD 2)
S079 - Switch, steering column (Item. EF 2-3)
X513 - Earth pin, engine (Item F4)
X534 - Earth pin, cab body (Item D7)
X551 - Earth pin, operator platform right (Item D6)
X570 - Earth pin, transmission (Item E5)
X608 - Connector, + UB 15 (Item B6)
X694 - Connector, +UB 30 (A038) (Item BC6)
X760 - Connector, earth (Item B7)
X761 - Connector, earth (Item D7)
X789 - Connector, signal (E083/E084) (Item C7)
X1418 - Cable coupling, operator platform/transmission (Item D 4/5)
X1420 - Cab cable coupling (Item C6)
X1421 - Cable coupling, operator platform (Item B7)
X1422 - Cable coupling, mudguard (Item D7)
X1425 - Cable coupling, operator platform (Item D4)
X1440 - Fuse holder (Item A2, A3, A6, A7)
X1591 - Separation point on S079 (Item D2)
X1751 - Separation point, left frame earth point (Item C 5/6)
Y004 - Solenoid valve, turbo-clutch (Item F5)



FENDT 900 Vario COM III: 919 .. 1847- / 922 .. 2004- / 925 .. 2054- / 928 .. 2291- / 931 .. 1908- / 934 .. 2790-

22 Air conditioning/mirror/3rd hydraulic circuit - Sheet 23

A038 - ECU, central electrical system (Item A 5-6)
A039 - MFA, multifunction armrest (Item A 2-3)
A053 - ECU, air conditioning control (Item DE 3/4, DE5)
E063 - Heater element, air dryer (temperature-controlled) (Item E7)
E106 - Exterior mirror (adjustment/heater), right (Item A1)
E107 - Exterior mirror (adjustment/heater), left (Item A2)
M015 - Actuator motor, top/middle air flap (Item E 5/6)
M016 - Servomotor, bottom air valve (Item E6)
M017 - Primary fan (Item E4)
S035 - Switch, high-pressure/low-pressure (air conditioning system) (Item E7)
X015 - External control socket (Item F 4/5)
X342 - Separation point on Y024 (Item E8)
X552 - Earth pin, operator platform (Item F4)
X572 - Earth pin, transmission (Item D7)
X694 - Connector, +UB 30 (A038) (Item B4)
X796 - Cable coupling (M002) (Item C 5/6)
X797 - Connector, air conditioning coupler signal (Item D8)
X838 - Separation point on X015 socket, external control (Item E6)
X868 - Separation point on E106 (Item B1)
X869 - Separation point on E107 (Item B2)
X920 - Separation point on A053 (Item D5)
X921 - Separation point on A053 (Item D4)
X1401 - Separation point on A039 (Item B 2/3)
X1418 - Cable coupling, operator platform/transmission (Item C7)
X1419 - Cab cable coupling (Item D1-2)
X1423 - Cable coupling, operator platform/transmission (Item C6)
X1425 - Cable coupling, operator platform (Item C7)
X1440 - Fuse holder (Item A3, A4, A7, A8)
X1555 - Separation point on M017 (Item E4)
X1600 - Cable coupling, to rear work lights (roof) (Item C4)
Y024 - Magnetic clutch, air conditioning compressor (Item E8)



Radio / Auto-Guide terminal - Sheet 24

FENDT 900 Vario COM III

931.901.000.004

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23 Radio/Auto-Guide terminal - Sheet 24

A015 - Radio (Item C 6-7)
A059 - Terminal (Auto-Guide) (Item AB1)
B050 - Loudspeaker, left (Item E7)
B051 - Loudspeaker, right (Item E6)
B061 - Loudspeaker (Item E6)
B062 - Loudspeaker (Item E7)
U002 - Radio aerial (Item A5)
X533 - Earth pin, cab body (Item C5)
X553 - Earth pin, operator platform (Item D4)
X738 - Connector, serial RXD (Item D4)
X739 - Connector, serial TXD (Item D4)
X1315 - Separation point on radio (compact plug) (Item C 6/7)
X1316 - Separation point on radio (compact plug) (Item C 6/7)
X1420 - Cab cable coupling (Item B7)
X1440 - Fuse holder (Item A4)
X1578 - Connector, + UB 15 (Item C4)
X1597 - Cable coupling A059 (Item CD3)
X1683 - Cable coupling, camera socket (Item D2)
X1729 - Connector, ISO bus_Low (Item C2)
X1730 - Connector, ISO bus_Low (Item C2)
X1731 - Connector, ISO bus_High (Item C2)
X1734 - Connector, ISO bus_High (Item C2)
X1735 - Connector, earth (Auto-Guide) (Item C2)
X1740 - Connector, Auto-Guide (+UB 15) (Item C2)
X1742 - Connector, Auto-Guide (+UB 30) (Item C2)

Bridge connector

K061

+Ub30 X1440 43 F22 5A 44 — WF2016_rt_0.75

+Ub30 X1440 45 F23 5A 46 — WF2002_rt_1, WF2001_rt_1

+Ub15L X1440 81 F41 10A 82 — WF0161_gn_1, WF1020_gn_1.5

+Ub30 X1440 49 F25 25A 50 — WF1021_rt_2.5

+Ub30 X1440 51 F26 25A 52 — WF1022_rt_2.5

+Ub30 X1440 53 F27 25A 54 — WF1023_rt_2.5

X1633_P 1/9 2/9 3/9 4/9 5/9 6/9 7/9 8/9 9/9

/17.F4 #1672 WK2001_ge_0.75

X1419_S 19/21 — 19/21 X1419_P — WK2002_rt_0.75

X1419_S 17/21 — 17/21 X1419_P — WK2009_ws_0.5

X1419_S 18/21 — 18/21 X1419_P — WK2008_ws_0.5

X1419_S 15/21 — 15/21 X1419_P — WF2011_ws_0.5

X1419_S 16/21 — 16/21 X1419_P — WF2012_ws_0.5

X728

X727

WK2010_br_ws_0.75

WK2011_br_ws_0.75

X1417_S 7/21 — 7/21 X1417_P

X1417_S 2/21 — 2/21 X1417_P

WF2015_ws_0.5

WK2015_ws_0.5, WK2017_rt_0.75, WK2016_rt_0.75, WK2004_ws_0.5, WK2003_ws_0.5

/28.F4 — /28.E4

X1633_S 1/12

X1633_S 2/12

X1633_S 3/12 — 3/12 X1633_P — WK2005_ws_0.5

X1633_S 4/12 — 4/12 X1633_P — WK2006_ws_0.5

X1633_S 5/12 — 5/12 X1633_P

X1633_S 6/12 — 6/12 X1633_P

X1633_S 10/12

X1633_S 8/12

X1633_S 9/12

WK2015_ws_0.5

WK2040_br_0.75

WK2014_br_0.75

/10.E4 V-Bus_LowK1417_P:8

/10.E4 V-Bus_HighK1417_P:9

X1401250-Bus_High — /10.E1

X1401250-Bus_Low — /10.E1

WK0842_ws_0.5 X1417_P:10V-Bus_Low — /10.E5

WK0843_ws_0.5 X1417_P:1V-Bus_High — /10.E5

X17.21 X1420_S — X1420_P 17/21

X18/21 X1420_S — X1420_P 18/21

X19/21 X1420_S — X1420_P 19/21

X20/21 X1420_S — X1420_P 20/21

WK1016_gn_0.75, WK1020_gn_1, WK1021_rt_2.5, WK1022_rt_2.5, WK1023_rt_2.5

WF0161_gn_1

/24.B6 +Ub15L X1670

WK2010_br_ws_0.75

WK2011_br_ws_0.75

WF1388_br_1

X534 /9.F6 Cab earth pin

X554 /9.F5 Operator platform earth pin

X553 /9.F5 Operator platform earth pin

X533 /9.F6 Cab earth pin

X1641 1/2 2/2 — X1649

X254 1/2 2/2

X848 1/1 X847

X846 1/1 X845

X256 1/1 X255

WK1314_br_2.5, WK1315_br_2.5, WK1316_br_2.5, WK1317_br_1

WZF2001_rt_10

WZF2004_gn_2.5

WZF2006_gn_1

WZF2007_br_1.5

WZF2002_br_2.5

WZF2003_br_10

WZF2000_br_4

X684

X559 /9.G4 Transmission earth pin

X400

Masse Karosserie - 01

Masse ECU — 02

+UB 60A — 03

+UB 25A — 04

Busabschluss

TBC PWR — 01

CAN High — 02

CAN Low — 04

TBC RTN — 03

WZF2009_ws_0.5, WZF2008_ws_0.5

X57/62 X1424_P — X1424_S57/62

X58/62 X1424_P — X1424_S58/62

X497_S 2/2 — X497_P 2/2

X497_S 1/2 — X497_P 1/2

WF2013_ws_0.5, WF2005_ws_0.5

WF2014_ws_0.5, WF2006_ws_0.5

X726 /10.D6

X725 /10.D6

WF0833_ws_0.5, WF0832_ws_0.5, WF2002_rt_1, WF2003_br_1

X1539 J/9 H/9 D/9 C/9 B/9 A/9

J H G F E D C B A ISO diagnostics

X1539

X1402/44 #473 /14.C1

ISO bus/load sockets - Sheet 25

FENDT 900 Vario COM III

931.901.000.004

FENDT Service-Training Dokumentation

24 ISO bus/load sockets - Sheet 25

K061 - ISO bus disconnect relay (Item A1)
X028 - ISO socket (cab) (Item A6)
X254 - 10 amp socket (Item E7)
X255 - 25 A socket (+ UB 30) (Item E8)
X256 - 25 amp socket (earth) (Item E8)
X400 - Rear ISO implement socket (Item F2)
X497 - Separation point, ISO preparation (Item D2)
X533 - Earth pin, cab body (Item E8)
X534 - Earth pin, cab body (Item E4)
X553 - Earth pin, operator platform (Item E3)
X554 - Earth pin, operator platform (Item E6)
X559 - Earth pin, transmission (Item F1)
X684 - Connector, ISO socket earth (Item E1)
X725 - Connector, K bus_High (Item D3)
X726 - Connector, K bus_Low (Item D3)
X727 - Connector, ISO bus_High (Item B3)
X728 - Connector, ISO bus_Low (Item B2)
X845 - 25 A socket (+ UB 30) (Item E8)
X846 - 25 amp socket (earth) (Item E8)
X847 - 25 A socket (+ UB 30) (Item E7)
X848 - 25 amp socket (earth) (Item E7)
X1417 - Cable coupling, operator platform/cab (Item C4)
X1419 - Cab cable coupling (Item B4)
X1420 - Cab cable coupling (Item C 7/8)
X1424 - Cable coupling, operator platform (Item C2)
X1440 - Fuse holder (Item A3, A7, A8)
X1539 - ISO bus diagnostics socket (Item E 2/3)
X1633 - Separation point, Auto-Guide TopDock (Item CD5)
X1649 - Separation point, 10 amp socket (Item E7)

NOTE: *If nothing is connected to **X028** - ISO socket (cab) the short-circuit connector H515.810.210.030 must be fitted.*

EDC

A051

Fan speed sensor — 69 — X1466 69/89
Fan earth — 67 — X1466 67/89
Fan solenoid valve (85) — 15 — X1466 15/89
Fan solenoid valve (86) — 14 — X1466 14/89
UB fan — 68 — X1466 68/89
Electronics earth — 29 — X1466 29/89
Coolant level sensor — 55 — X1466 55/89
Vacuum switch — 42 — X1466 42/89
UB sensors — 21 — X1466 21/89
50a — 74 — X1466 74/89
Engine brake switch — 47 — X1466 47/89
Starter lockout switch — 66 — X1466 66/89
ISO characteristic curve — 89 — X1466 89/89
Foot throttle sensor — 79 — X1466 79/89
Foot throttle earth — 78 — X1466 78/89
UB 5 V foot throttle — 77 — X1466 77/89
Start relay — 37 — X1466 37/89
Start relay — 17 — X1466 17/89

EXT

A050

Foot throttle sensor — B18 — X140 218/58

WM1721 br 0.75
WM1715 ws 0.75
WM1711 ge 0.75
WM1710 br 0.75
WM1712 ws 0.75
WM1728 ws 0.5
WM1714 ws 0.75
WM1708 ws 0.75
WM1736 ws 0.75

WM1717 ge 0.75
X1528
WM1718 ge 0.75
WM1719 ge 0.75

X1424 41/62 X1424 S
X1424 42/62 X1424 S
X1424 43/62 X1424 S
X1424 44/62 X1424 S
X1424 45/62 X1424 S
X1424 46/62 X1424 S
X1424 47/62 X1424 S
X1424 48/62 X1424 S
X1424 49/62 X1424 S

WM1724 ws 0.75
WM1726 br 0.75
WM1723 br 0.75
WM1722 ws 0.75
WM1725 ws 0.75

X1532 1/5 1
X1532 2/5 2
X1532 3/5 3
X1532 4/5 4
X1532 5/5 5

B077 — Sig. – 85 86 +
U / f

WM1716 br 0.75
WM1707 ws 0.75

X244 2/2 2
X244 1/2 1

S034 — Q

WM1709 ws 0.75
WM1720 ge 0.75

X153 2/2 2
X153 1/2 1

B004 — P

WF1736 ws 0.75
WF1719 ge 0.75
WF1708 ws 0.75
WF1718 ge 0.75
WF1714 ws 0.75
WF1711 ge 0.75
WF1710 br 0.75
WF1712 ws 0.75
WF1728 ws 0.75

/14.B4 #472 X201:7

X660 /9.B6

/17.C5 #1672

X553 /9.F5
Operator platform earth point

WF1723 br ge 0.5
WF1721 ge 0.5
WF1713 ws 0.5
WF1710 br 0.75
WF1711 ge 0.75
WF1712 ws 0.75
WF1745 gn 0.75
WF1746 br 0.75

X810_S
A 1/2 X810_S
B 1/2 X810_S
K 1/2 X810_S
A B C D E F G H J K L M
ISO characteristic curve

X888 1/6 1
X888 2/6 2
X888 3/6 3
X888 4/6 4
X888 5/6 5
X888 6/6 6
B055 — Sig. – + Sig. – +
I / U

WM1715 ws 0.75
WM1721 br 0.75

X1648 1/2 85
X1648 2/2 86
K065 — 87 30

M001 — 50 30

X140 1/2 1
X140 2/2 2
S047

X082 3/4 3
X082 4/4 4
S012
open when pedal in rest pos.

S002 — 0 1 2 — 58 — 15_54 — 30 — 50a

8/6
X072
/22.B6 #1019 X1408:8 WF0148 ws 0.75

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EDC engine control - Sheet 26

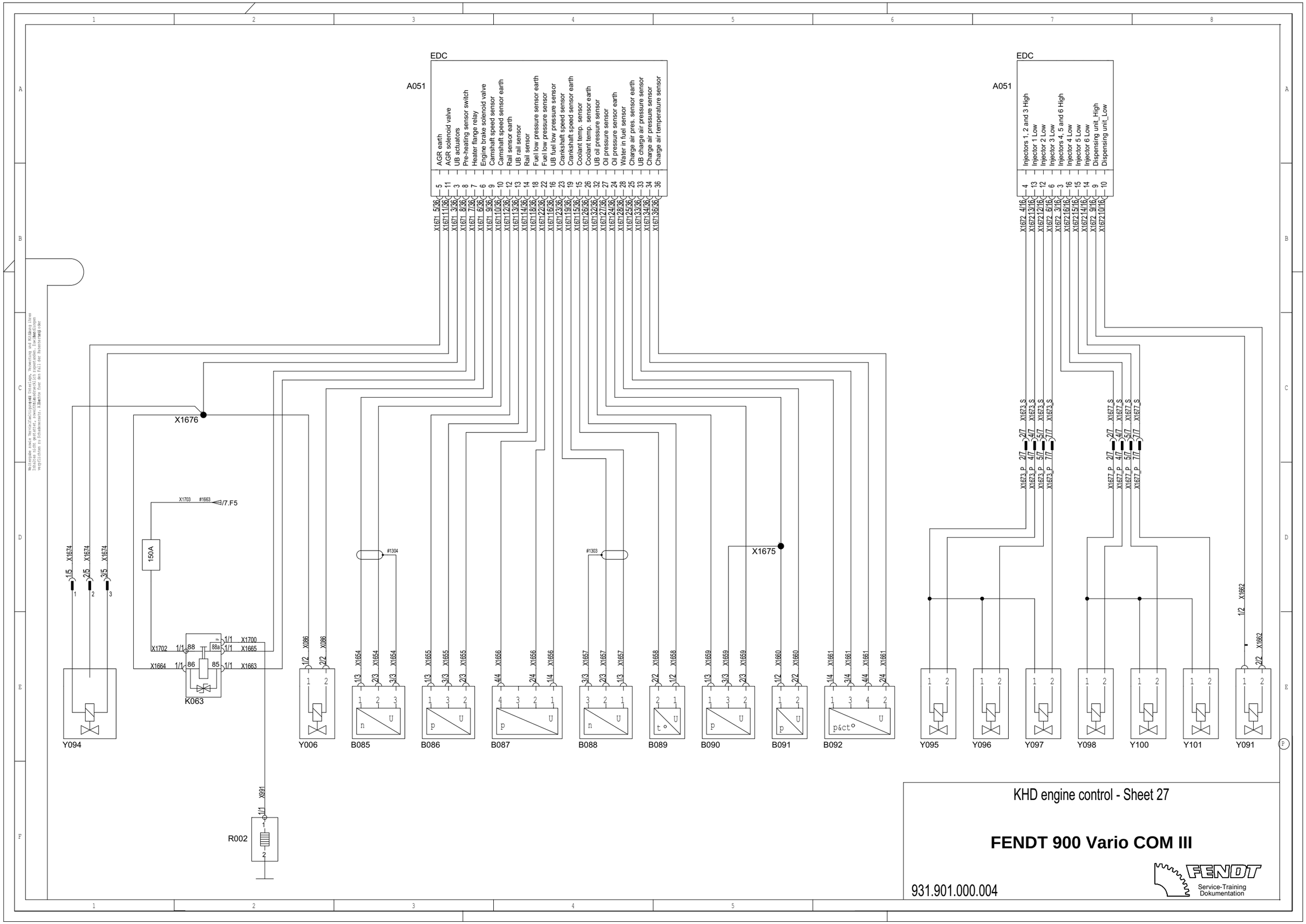
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931.901.000.004

FENDT Service-Training Dokumentation

25 EDC engine control - Sheet 26

A050 - ECU, basic control unit (Item A7)
A051 - ECU, engine control unit (EDC 7). (Item A 2-3)
B004 - Vacuum switch (air filter) (Item DE 2/3)
B055 - Sensor, foot throttle (Item E7)
B077 - Engine fan (speed sensor/magnetic clutch) (Item DE 1)
K065 - Starter relay (Item D8)
M001 - starter. (Item E8)
S002 - Switch, ignition (Item E3)
S012 - Switch, starter lockout (Item E4)
S034 - Switch, coolant level (Item DE2)
S047 - Switch, engine brake (Item E4)
X553 - Earth pin, operator platform (Item E5)
X660 - Connector, sensor system earth (Item D6)
X810 - EDC diagnostics socket (engine control unit) (Item E 5/6)
X1424 - Cable coupling, operator platform (Item C5)
X1528 - Connector, sensor system supply (Item C3)
X1532 - Separation point on B077 (Item D1)


EDC
A051
AGR earth
AGR solenoid valve
UB actuators
Pre-heating sensor switch
Heater flange relay
Engine brake solenoid valve
Camshaft speed sensor
Camshaft speed sensor earth
Rail sensor earth
UB rail sensor
Rail sensor
Fuel low pressure sensor earth
Fuel low pressure sensor
UB fuel low pressure sensor
Crankshaft speed sensor
Crankshaft speed sensor earth
Coolant temp. sensor
Coolant temp. sensor earth
UB oil pressure sensor
Oil pressure sensor
Oil pressure sensor earth
Water in fuel sensor
Charge air pres. sensor earth
UB charge air pressure sensor
Charge air pressure sensor
Charge air temperature sensor
EDC
A051
Injectors 1, 2 and 3 High
Injector 1 Low
Injector 2 Low
Injector 3 Low
Injectors 4, 5 and 6 High
Injector 4 Low
Injector 5 Low
Injector 6 Low
Dispensing unit_High
Dispensing unit_Low
X1676
X1675
X1703 #1663 /7.F5
150A
K063
R002
X991
X1674
X1700
X1665
X1663
X1702
X1664
#1304
#1303
Y094
Y006
B085
B086
B087
B088
B089
B090
B091
B092
Y095
Y096
Y097
Y098
Y100
Y101
Y091
X1662
KHD engine control - Sheet 27
FENDT 900 Vario COM III
931.901.000.004
Service-Training
Dokumentation

26 KHD engine control - Sheet 27

A051 - ECU, engine control unit (EDC 7). (Item A 3-5, A7)
B085 - Camshaft speed sensor (Item E3)
B086 - Rail pressure sensor (Item E3)
B087 - Fuel low pressure sensor (Item E4)
B088 - Crankshaft speed sensor (Item E4)
B089 - Engine temperature sensor (Deutz) (Item E5)
B090 - Sensor, oil pressure (Item E5)
B091 - Sensor, water in fuel (Item E5)
B092 - Sensor, charge air pressure/temperature (Item E6)
K063 - Heater flange relay (Item E2)
R002 - Heater flange (Item F2)
X1673 - Cylinder head cable coupling (injectors) (Item C7)
X1674 - Separation point on Y094 (Item D1)
X1675 - Connector, earth (Item D5)
X1676 - Connector + UB 12 VDC (Item C2)
X1677 - Cylinder head cable coupling (injectors) (Item C7)
Y006 - Solenoid valve, engine brake (Item E2)
Y091 - Dispensing unit (fuel) (Item E8)
Y094 - Actuator unit, AGR (exhaust gas recirculation) (Item E1)
Y095 - Injector valve 1 (injector) (Item E6)
Y096 - Injector valve 2 (injector) (Item E7)
Y097 - Injector valve 3 (injector) (Item E7)
Y098 - Injector valve 4 (injector) (Item E7)
Y100 - Injector valve 5 (injector) (Item E8)
Y101 - Injector valve 6 (injector) (Item E8)

NOTE: *The dispensing unit and the injectors are not only actuated via the positive side, but also via the negative side. The positive side is called _High in the E-box. The negative side is called _Low in the E-box.*

Central electrical system ZE

A038

D21 Rotating beacon relay (87)
D1 Rel. R ext. wk lts, roof (30)
D2 Reverse op. (turning left)
D3 Rel. - R ext. wk lts, roof (87)
D5 Front wiper 53
D8 Rear wiper 53
D9 Front wiper 31b
D10 Front washer ON
D11 Rear wiper 31B
D13 Relay 15L (87)
D14 Front wiper ON
D15 Front wiper intermittent
D19 Rotating beacon relay (30)
D17 Rear left direction indicator
D16 Relay 15L (86)
D7 Relay 15L (30)
D20 Rear right direction indicator

X1407_S 21/21 WLED0138 rt 1.5 21/21 X1407_P
X1407_S 1/21 WLED0137 ws 2.5 1/21 X1407_P
X1407_S 2/21 WLED0729 ws 0.75 2/21 X1407_P
X1407_S 3/21 WLED0123 rt 2.5 3/21 X1407_P
X1407_S 5/21 WLED0145 ws 0.75 5/21 X1407_P

X1407_S 8/21 WLED0142 ws 0.75 8/21 X1407_P
X1407_S 9/21 WLED0144 ws 0.75 9/21 X1407_P
X1407_S 10/21 WLED0141 ws 0.75 10/21 X1407_P
X1407_S 11/21 WLED0143 ws 0.75 11/21 X1407_P
X1407_S 13/21 WLED1028 gn 2.5 13/21 X1407_P
X1407_S 14/21 WLED0140 ws 0.75 14/21 X1407_P
X1407_S 15/21 WLED0139 ws 0.75 15/21 X1407_P
X1407_S 19/21 WLED0160 ws 2.5 19/21 X1407_P

X1407_S 16/21 WLED1030 gn 1 16/21 X1407_P

X1407_S 7/21 WLED1027 rt 1.5 7/21 X1407_P
X1407_S 20/21 17/21 X1407_P

/21.B5

A075

IN
UB 30
OUT
Earth
UB 15

X1785 2/9
X1785 4/9
X1785 5/9
X1785 6/9
X1785 8/9

A076

IN
UB 30
OUT
Earth
UB 15

X1786 2/9
X1786 4/9
X1786 5/9
X1786 6/9
X1786 8/9

WLED0150 ws 0.75
WLED0148 rt 1
WLED0146 gn 1
WLED0151 ws 0.75
WLED0312 ws 0.75
WLED0311 ws 0.75

WLED0153 br 1
WLED0149 rt 1
WLED0147 gn 1

WLED0152 br 1

X4007
ʠ

A077

Earth
UB 15
UB 30
Transmission bus_Low
Transmission bus_High

X1852 1/5
X1852 2/5
X1852 3/5
X1852 4/5
X1852 5/5

WF1329 br 0.75

WF0864 ws 0.5
WF0863 ws 0.5
X1344
X1343
/10.E5

WF1041 rt 0.75
WF0187 gn 0.75
X1634
X1787
/7.E7
/8.C6

X554
/9.F5
Operator platform earth pin

Vario-Doc

A055

Control bus_High
Control bus_Low
ISO bus_High
ISO bus_Low

1
2
7
8

X1411 1/16
X1411 2/16
X1411 7/16
X1411 8/16

WFM0100 ws 0.5
WFM0101 ws 0.5
WFM0102 ws 0.5
WFM0103 ws 0.5

/10.D3

3/8 X1636_P WFM0106 ws 0.5 X1639 WFM0110 ws 0.5 X1636_S 3/8
4/8 X1636_P WFM0107 ws 0.5 X1640 WFM0111 ws 0.5 X1636_S 4/8
2/8 X1636_P WFM0105 ws 0.5 X1638 WFM0109 ws 0.5 X1636_S 2/8
1/8 X1636_P WFM0104 ws 0.5 X1637 WFM0108 ws 0.5 X1636_S 1/8

/10.D3

X4003
X4004
X4005
X4006

rt 0.75 X4001 1/12
sw 0.75 X4001 2/12
gn 0.75 X4001 3/12
bl 0.75 X4001 4/12
ge 0.75 X4001 5/12
gr 0.75 X4001 6/12
rs 0.75 X4001 8/12
br 0.75 X4001 9/12
rt gn 0.75 X400110/12

/25.C5

ws 0.75 X4000 3/12
or 0.75 X4000 4/12
br 0.75 X4000 5/12
vio 0.75 X4000 6/12

/25.C5

X4002 2/9
X4002 3/9
X4002 5/9

1 2 3 4 5 6 7 8 9

Auto-Guide diagnostics

1/13 X1728 UB 30
2/13 X1728 UB 30
3/13 X1728 ISO bus_Low
4/13 X1728 ISO bus_High
5/13 X1728 Valve bus_Low
6/13 X1728 V bus_High
8/13 X1728 Earth
9/13 X1728 Earth
10/13 X1728 Auto-Guide activation
7/13 X1728 Serial earth
12/13 X1728 Serial Rx
11/13 X1728 Serial Tx

A058

TopDock B4

Immobiliser / Vario-Doc / Auto-Guide / Direction indicator LED - Sheet 28

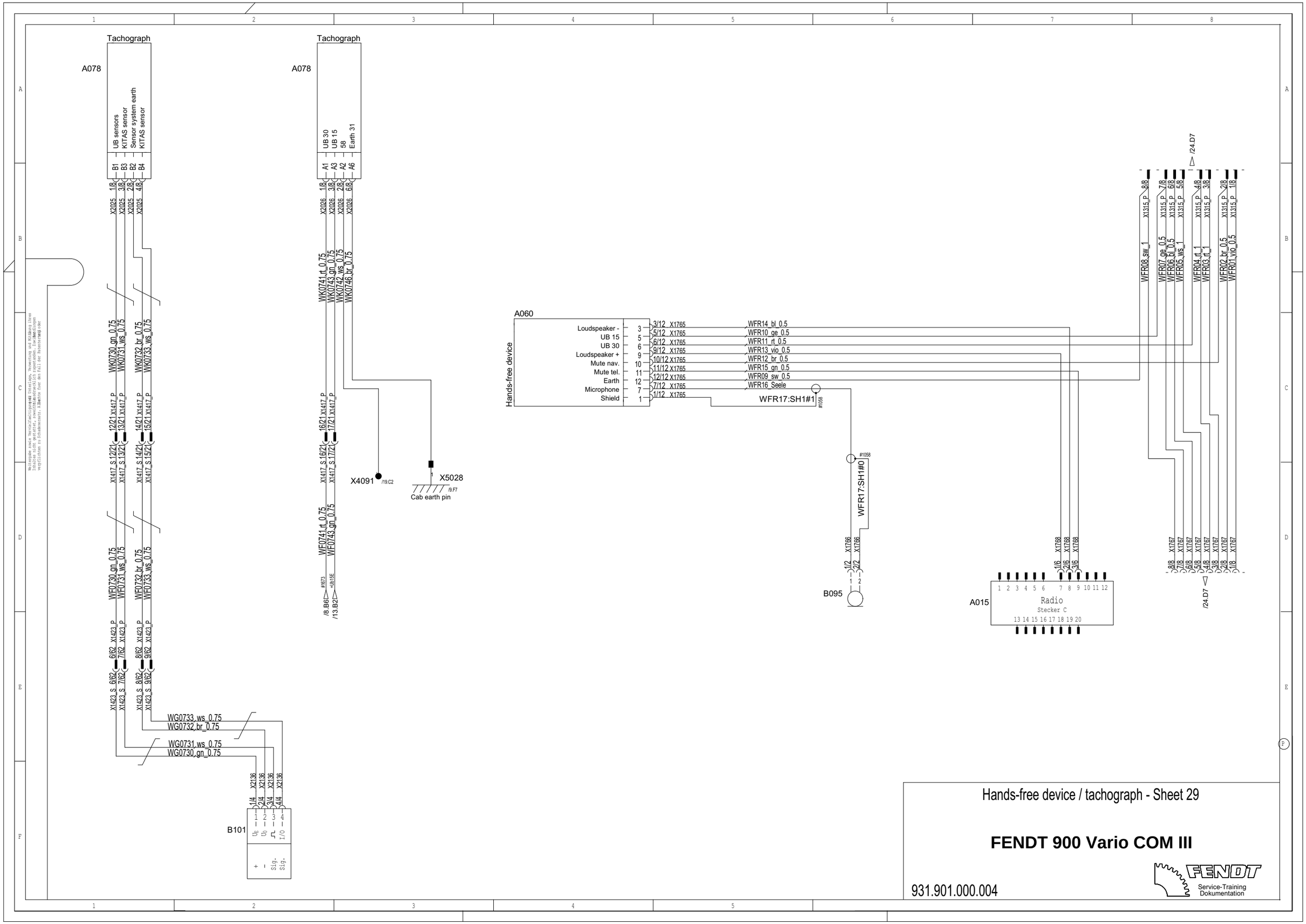
FENDT 900 Vario COM III

931.901.000.004

FENDT Service-Training Dokumentation

27 Immobiliser/Vario-Doc/Auto-Guide/direction indicator LED - Sheet 28

A038 - ECU, central electrical system (Item AB 1/2)
A055 - ECU, data transfer (Item CD7)
A058 - TopDock (Auto-Guide) (Item EF 1/2)
A075 - ECU, tail light LED, right (Item A3)
A076 - ECU, tail light LED, left (Item A4)
A077 - Immobiliser ECU (Item A5)
X554 - Earth pin, operator platform (Item B5)
X1343 - Connector, G bus_High (Item B7)
X1344 - Connector, G bus_Low (Item B7)
X1407 [D] - Separation point on A038 (Item C 1/2)
X1634 - Connector (+ UB 30) (Item BC 7)
X1636 - Vario-Doc cable coupling (Items E5, E8)
X1637 - Connector, ISO bus_Low (A055 Vario-Doc) (Item E7)
X1638 - Connector, ISO bus_High (A055 Vario-Doc) (Item E7)
X1639 - Connector, K bus_High (Item E7)
X1640 - Connector, K bus_Low (Item E7)
X1787 - Connector, + UB 15 (Item BC 7)
X4000 - Separation point on X1633_ P (Item E4)
X4001 - Separation point on X1633_ S (Item DE4)
X4002 - Auto-Guide diagnostics socket (Item E2)
X4003 - Connector, ISO bus_Low (Item D2)
X4004 - Connector, ISO bus_High (Item D2)
X4005 - Connector, V bus_Low (Item D2)
X4006 - Connector, V bus_High (Item E2)
X4007 - Earth pin, operator platform (Item C3)


Tachograph
A078
UB sensors
KITAS sensor
Sensor system earth
KITAS sensor
B1
B3
B2
B4
Tachograph
A078
UB 30
UB 15
58
Earth 31
A1
A3
A2
A6
A060
Hands-free device
Loudspeaker -
UB 15
UB 30
Loudspeaker +
Mute nav.
Mute tel.
Earth
Microphone
Shield
WFR17:SH1#1
WFR17:SH1#0
B095
A015
Radio
Stecker C
X4091
X5028
Cab earth pin
B101
WG0733,ws_0.75
WG0732,br_0.75
WG0731,ws_0.75
WG0730,gn_0.75
/24.D7
/24.D7
Hands-free device / tachograph - Sheet 29
FENDT 900 Vario COM III
931.901.000.004
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Service-Training
Dokumentation

28 Hands-free device/tachograph - Sheet 29

A015 - Radio (Item D7)
A060 - Hands-free device (Item C4)
A078 - Tachograph ECU (Item A1, A2)
B095 - Microphone (Item D6)
B101 - KITAS sensor (Item F2)
X1315 - Separation point on radio (compact plug) (Item B8)
X1417 - Cable coupling, operator platform/cab (Items C1, C2/3)
X1423 - Cable coupling, operator platform/transmission (Item E1)
X1767 - Separation point on radio to B050/B051 (Item D8)
X4091 - Connector, +UB 15 on A078 (Item D3)
X5028 - Connector, cab earth pin (Item D3)

NOTE: *Work on the **A078** - Tachograph ECU may only be undertaken by authorised personnel.*

7

Frontzapfwelle:
eigener, unabhängiger
Hydraulikkreis
siehe 931.150.200

ø8x1 DSV 6A7 HA HZW DSH 6A5

5Z2 6A1 6A3 1000 750 6A6

6V1 6V4 6V3 6V6 6V5

5 6

M18 ZWK M11 M10 VR M14 750 M13 1000 M16 DS M15

ø15x1.5 ø12x1 ø10x1

4Z1 ø8x0.75 4Z4 Nur bei Variante RÜFA

4Z2 V=0.3 l p_0=10 bar 4S2 4S1 ø12,7

M9 PH M22 I M6 P PHA M7 I M8 II

4V5 4V4 p=18 bar 4V6 4V3 4V1 4V2

4Z3 ø0.3

4

ø6.4

1Z4 3Z2 ø15x1.5 ø6.4 ø8x2 3Z1 3A3 ø6.4 ø6.4

10x1

SM M2 3V1 3V2 4A1

unter Last 100 L/min
Lastlos 110 L/min
ø28x1.5 1V6 p=25bar 1S2

1V1 Δp=3.5bar Δp=7bar Δp=5bar

1Z3 ø28x1.5 1V2 Δp=6.5bar 1V3 Δp=6.5bar β_{10}=75 (10µm abs)

p=50bar 1Z2

M1 KV 1V5 3A1 3A2

3

68 L/min AS M3 ES M4 42 L/min PU M5

1

1P2 23.4ccm/U 1S1 1P1 14ccm/U

p=10bar 1V4

2V4 ø1 R(Kanal oben) Δp=7bar

2V1 p=0- 540bar 2V5

2P1 233ccm/U 2V2 2V6 p=0- 540bar ø1 2V3 V(Kanal unten) 2A1 233ccm/U 2A2 233ccm/U

2

1Z1 Δp=0.25bar (β_{50}≈75) 200µm 15µm nom.

ø12.7 ø12.7

6A4 AR

Schaltplan nach ISO 1219
Bauteilbezeichnung typ-
uebergreifend.
Gueltig ab:
919/21/0101
922/21/0101
925/21/0101
928/21/0101
931/21/0101
934/21/0101

931.100.000.002
CAD

1 Transmission hydraulic system diagram - 931.100.000.002

Item	DIN	Designation	Item	DIN	Designation
Switching circuits:			**Valves:**		
1		Valve block, feed/lubrication	1V1		Radiator bypass valve
2		Main circuit	1V2		Pressure-limiting valve, discharge
3		Displacement	1V3		Pressure-limiting valve, feed
4		Valve block, enhanced hydraulics	1V4		Pressure-limiting valve, lubrication
5		Brake and rear axle	1V5		Pressure-limiting valve, servo pump
6		Valve block, rear axle	1V6		Pressure-limiting valve, servo circuit
7		Front PTO	2V1		Feed valve, forward
Pumps:			2V2		Feed valve, reverse
1P1		Servo pump	2V3		High-pressure limiting valve, forward
1P2		Lubrication pump	2V4		High-pressure limiting valve, reverse
2P1		Hydraulic pump	2V5		Purge valve
Drives:			2V6		Shuttle valve
2A1		Hydraulic motor	3V1		Hydraulic pump governor
2A2		Hydraulic motor	3V2		Hydraulic motor governor
3A1		Variable displacement cylinder, hydraulic pump	4V1	Y002	Solenoid valve, travel range 1
3A2		Variable displacement cylinder, hydraulic motor	4V2	Y003	Solenoid valve, travel range 2
3A3		Speed governor, emergency mode	4V3	Y005	Solenoid valve, speed governor
4A1		Range selector	4V4	Y004	Turbo clutch solenoid valve
6A1		Clutch, rear PTO	4V5		Pressure-limiting valve, clutch
6A3		Selector cylinder, PTO level 1[(1)]	4V6		Pressure reducing valve, rear axle
6A4		4WD clutch	6V1	Y008	Solenoid valve, rear PTO
6A5		Differential lock, rear axle	6V3	Y026	Solenoid valve, PTO level 1[(1]
6A6		Selector cylinder, PTO level 2	6V4	Y009	4WD solenoid valve
6A7		Differential lock, front axle	6V5	Y010	Solenoid valve, differential lock
Buzzers:			6V6	Y027	Solenoid valve, PTO level 2
1S1	B009	Discharge temperature	**Measuring points:**		
1S2	S017	Transmission oil contamination switch	M1		Radiator feed
4S1	B008	Sensor, high-pressure 1	M2		Pressure lubrication
4S2	B039	Sensor, high-pressure 2	M3		Outlet pressure
Other components:			M4		Inlet pressure
1Z1		Suction filter with bypass	M5		Pressure, servo pump
1Z2		Pressure filter with bypass	M6		System pressure, transmission
1Z3		Transmission oil cooler	M7		Switching pressure, travel range 1
1Z4		Transmission lubrication	M8		Switching pressure, travel range 2
3Z1		Actuator shaft	M9		High-pressure
3Z2	A009	Actuator unit	M10		System pressure, rear axle
4Z1		Clutch pedal with sensor cylinder	M11		Pressure, PTO clutch
4Z2		Pressure accumulator	M13		Switching pressure, PTO level 1[(1)]
4Z3		Strainer insert	M14		Pressure, 4WD clutch
4Z4		Rotary feedthrough RÜFA	M15		Pressure, differential lock
5Z2		Lubrication, rear PTO	M16		Switching pressure, PTO level 2
			M18		Lubrication pressure, rear axle
			M22		Clutch and turbo-clutch valve leakage

1. Depending on the version, level 1 operates at the following PTO speeds: 540/540 E or 1000 E (1000 E is available from chassis number 9XX/2X/3501 onwards on request).

Anhängerbremse
RH 3/4" Stecker
Case Drain
LS 3/8" Muffe
PB 3/4" Muffe
P
T
LS
LE
APE
DRVE
DFE
SRVE 0.5l/min
LS_EXT
0.2mm
1.1
Gelb
1.1-
1.1+
1.2
Blau
1.2-
1.2+
Wegeventil SB 23 LS-EHS 2
1.3
Rot
1.3-
1.3+
EHR Heck
230+20bar
MVKH
dw HKH
ZHKH1 d=100/40 H=272
ZHKH2 d=100/40 H=272
UL-Abstützung
DBVKH
SVUL
MVUL
MEE
1.4
Grün
1.4-
1.4+
1.5
Braun
1.5-
1.5+
1.6
Violett
1.6-
1.6+
EPH
MVVH 1,9mm Q=25l/min
Leckölauffang-behälter
M6
ZL d=140/115 H=310 V=1.552L
QSPC400LSRM
VBL
Hy.ABV
zum Betriebsbremskreis
zum Feststellbremskreis
PVL
105bar 8bar
DWL
QETR 38-54°C
RVL3
RVL2
RVL1
ZSB
M1
M2
DWP 10bar
MVP
DSPP P0=20bar V0=0.16L Vgl=0.08L
DFP
DRVP 16+4bar
WVP
VBP
HP
RLF b16>=200 150 MTD-Kap.=83g ø 2.5bar
RVN
PNL 8ccm Antrieb Allradwelle
SFN2 0.5x0.22mm Sieb
SFN1 0.5x0.22mm Sieb
DSF 2bar
DFWN
DFWH
PH 22.5ccm 55l/min
Motor n_nenn=2200U/min i=0.896 i=0.869
TG
SFH 1.0x0.24mm Sieb
Heizstab
SFR 0.45mm Sieb
GDR
PR A10VN085 215l/min
MVL
WV1
WV2
DBVL 175+5bar
RVF1
MVFH
RVFH
DBVF1
AVF1
AVF2
DRF
DBV1
DRVF
RVFS
M3
M4
DS1 8bar
0.15mm Kerbe
EPM
Q=10L/min 1,2ma
MVVM
Wegeventil SB 23 LS-EHS 2
2.2
2.1
EHR Front
MVKF
DBVKF
FSP P0=75bar V0=0.75L
ZFKH1 d=80/36 H=210
ZFKH2 d=80/36 H=210
dw FKH
2.2-
2.2+
Grau
2.1-
2.1+
Oliv
Lecköl-auffang-behälter
ASP1 (unten) P0=45bar V0=2.0L
ASP2 (oben) P0=45bar V0=2.0L
Federung 60 km/h-Ausf.
VBF
MVFF
MVFW
DBVF2 250bar
ZF1 d=80/63 H=155
ZF2 d=80/63 H=155
ZSP P0=70bar V0=1.4L
BF 7µm
EF 0.8mm
FSS
RF
Maximale Ausstattung mit dw EHR, dw FKH, mit UL-Verstellung ab Serie Dez. 2006
ADCO GmbH 87616 Marktoberdorf
931.952.000.002

Hydraulic circuit diagram - 931.952.000.002

1 Hydraulic circuit diagram - 931.952.000.002

1.1 [Y074] - Control valve, position 1 (yellow)	**1.2 [Y075]** - Control valve, position 2 (blue)
1.3 [Y076] - Control valve, position 3 (red)	**1.4 [Y078]** - Control valve, position 4 (green)
1.5 [Y079] - Control valve, position 5 (brown)	**1.6 [Y080]** - Control valve, position 6 (purple)
2.1 [Y071] - Control valve, position 7 (olive)	**2.2 [Y072]** - Control valve, position 8 (grey)

APE - Entry plate for external pressure supply	**ASP1** - Accumulator, suspension 1
ASP2 - Accumulator, suspension 2	**AVF1** - Lock valve, suspension 1
AVF2 - Lock valve, suspension 2	

BF - Ventilation filter	

DBV1 - Main pressure-limiting valve	**DBVF1** - Pressure-limiting valve, suspension 1
DBVF2 - Pressure-limiting valve, suspension 2	**DBVKF [Y022]** - Field pressure valve, DA front power lift enhanced control
DBVKH [Y062] - Field pressure valve, DA rear power lift	**DBV-L** - Pressure-limiting valve, 175 bar steering
DFE - Pressure filter, external LS	**DFP** - Pressure filter, pilot pressure
DFWH - Flow monitor, auxiliary pump	**DRVE [Y084]** - Pressure cut-off valve, Power Beyond
DRVF [Y064] - Suspension load pressure/lower	**DRVP** - Pressure cut-off valve, pilot pressure
DS1 - Pressure switch, LS pump monitor	**DSF [B063]** - Pressure switch, filter monitor
DWKF - Pressure compensator, front power lift, SA	**DWL** - Pressure compensator, steering
DWP - Pressure compensator, pilot pressure	

EHR Heck [Y077] - Cut-off valve, rear EPC	**EHR Front [Y070]** - Cut-off valve, front power lift enhanced control
EPH - End plate, rear valve block	**EPM** - End plate, centre

FKH - Front power lift	**FKH Standard** - Cut-off valve, standard front power lift
FSP - Front power lift accumulator	**FSS [B084]** - Level switch

GDR - Silencer, LS pump	

HKH - Rear power lift	**HP** - Hand pump, pilot pressure – emergency supply
Hy.ABV - Hydraulic trailer brake	

K - Hydraulic oil cooler	

LE - Steering unit	

M1 - Measuring point, emergency pumps	**M2** - Measuring point, auxiliary pumps
M3 - Measuring point, LS pump	**M4** - Measuring point, LS pressure
M5 - Measuring point, control pressure	**M6** - Rear return flow reference pressure measuring point
M7 - Front return flow reference pressure measuring point	**MVFF [Y067]** - Solenoid valve, lock suspension
MVFH [Y065] - Solenoid valve, raise suspension	**MVFW [Y063]** - Solenoid valve, wobble stabiliser
MVKF [Y021] - Front pressure compensator lock valve (SA/DA)	**MVKFH [Y021]** - Lifting solenoid valve (standard front power lift)
MVKFS [Y022] - Lowering solenoid valve (standard front power lift)	**MVKH [Y055]** - Rear pressure compensator lock valve (SA/DA)
MVL [Y012] - Solenoid valve, charge function (suspension, oil pre-heater)	**MVP [Y032]** - Solenoid valve, pilot pressure
MVUL [Y082] - Solenoid valve, lower link stabiliser lock	**MVVH [Y060]** - Solenoid valve, rear pre-heater
MVVM [Y061] - Solenoid valve, central pre-heater	

OETR - Oil temperature regulator	

PH - Auxiliary pump	**PNL** - Emergency steering pump
PR - LS pump	**PVL** - Priority valve, steering

RLF - Return line filter	**RVF1** - Non-return valve, suspension 1
RVFH - Non-return valve, raise suspension	**RVFS** - Non-return valve, lower suspension
RVL1-3 - Non-return valve, steering 1-3	**RVN** - Non-return valve, emergency steering pump

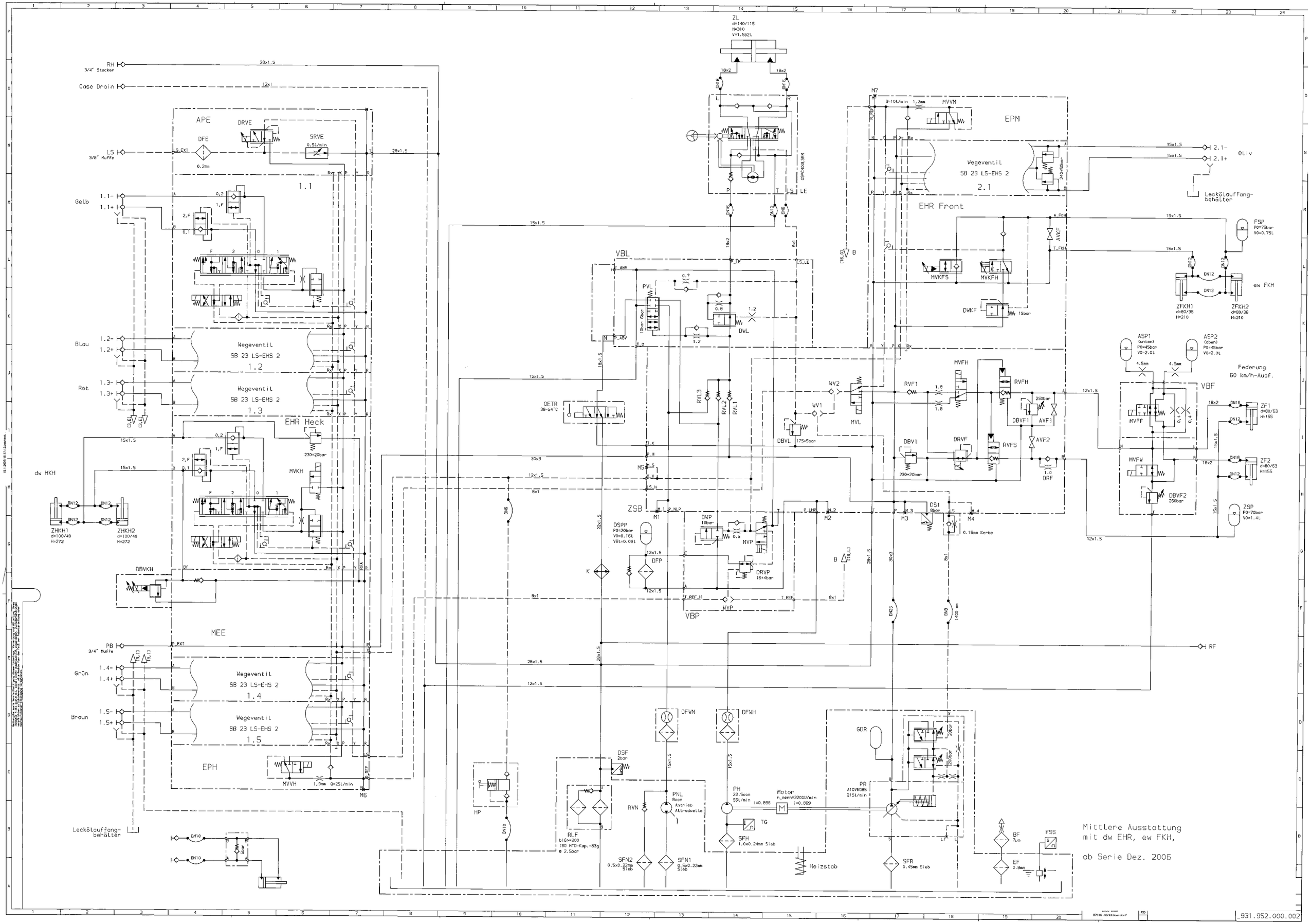
SFH - Auxiliary pump suction filter	**SFN1+2** - Suction filter, emergency steering pump 1+2
SFR - Suction filter, LS pump	**SRVE** - Flow cut-off valve, external LS relief
SVUL [Y083] - Solenoid valve, lower link stabiliser release	

TG [B013] - Temperature sensor	

VBF - Valve block, suspension	**VBL** - Valve block, steering
VBP - Valve block, pilot pressure supply	

WV1 - LS shuttle valve 1	**WV2** - LS shuttle valve 2
WVP - Shuttle valve, pilot pressure	

ZF1 - Federungszylinder 1	**ZL** - Steering cylinder
ZSB - Central control block	**ZSP** - Auxiliary accumulator, suspension



Hydraulic circuit diagram - 931.952.000.002

1 Hydraulic circuit diagram - 931.952.000.002

1.1 [Y074] - Control valve, position 1 (yellow)	**1.2 [Y075]** - Control valve, position 2 (blue)
1.3 [Y076] - Control valve, position 3 (red)	**1.4 [Y078]** - Control valve, position 4 (green)
1.5 [Y079] - Control valve, position 5 (brown)	**1.6 [Y080]** - Control valve, position 6 (purple)
2.1 [Y071] - Control valve, position 7 (olive)	**2.2 [Y072]** - Control valve, position 8 (grey)

APE - Entry plate for external pressure supply	**ASP1** - Accumulator, suspension 1
ASP2 - Accumulator, suspension 2	**AVF1** - Lock valve, suspension 1
AVF2 - Lock valve, suspension 2	

BF - Ventilation filter	

DBV1 - Main pressure-limiting valve	**DBVF1** - Pressure-limiting valve, suspension 1
DBVF2 - Pressure-limiting valve, suspension 2	**DBVKF [Y022]** - Field pressure valve, DA front power lift enhanced control
DBVKH [Y062] - Field pressure valve, DA rear power lift	**DBV-L** - Pressure-limiting valve, 175 bar steering
DFE - Pressure filter, external LS	**DFP** - Pressure filter, pilot pressure
DFWH - Flow monitor, auxiliary pump	**DRVE [Y084]** - Pressure cut-off valve, Power Beyond
DRVF [Y064] - Suspension load pressure/lower	**DRVP** - Pressure cut-off valve, pilot pressure
DS1 - Pressure switch, LS pump monitor	**DSF [B063]** - Pressure switch, filter monitor
DWKF - Pressure compensator, front power lift, SA	**DWL** - Pressure compensator, steering
DWP - Pressure compensator, pilot pressure	

EHR Heck [Y077] - Cut-off valve, rear EPC	**EHR Front [Y070]** - Cut-off valve, front power lift enhanced control
EPH - End plate, rear valve block	**EPM** - End plate, centre

FKH - Front power lift	**FKH Standard** - Cut-off valve, standard front power lift
FSP - Front power lift accumulator	**FSS [B084]** - Level switch

GDR - Silencer, LS pump	

HKH - Rear power lift	**HP** - Hand pump, pilot pressure – emergency supply
Hy.ABV - Hydraulic trailer brake	

K - Hydraulic oil cooler	

LE - Steering unit	

M1 - Measuring point, emergency pumps	**M2** - Measuring point, auxiliary pumps
M3 - Measuring point, LS pump	**M4** - Measuring point, LS pressure
M5 - Measuring point, control pressure	**M6** - Rear return flow reference pressure measuring point
M7 - Front return flow reference pressure measuring point	**MVFF [Y067]** - Solenoid valve, lock suspension
MVFH [Y065] - Solenoid valve, raise suspension	**MVFW [Y063]** - Solenoid valve, wobble stabiliser
MVKF [Y021] - Front pressure compensator lock valve (SA/DA)	**MVKFH [Y021]** - Lifting solenoid valve (standard front power lift)
MVKFS [Y022] - Lowering solenoid valve (standard front power lift)	**MVKH [Y055]** - Rear pressure compensator lock valve (SA/DA)
MVL [Y012] - Solenoid valve, charge function (suspension, oil pre-heater)	**MVP [Y032]** - Solenoid valve, pilot pressure
MVUL [Y082] - Solenoid valve, lower link stabiliser lock	**MVVH [Y060]** - Solenoid valve, rear pre-heater
MVVM [Y061] - Solenoid valve, central pre-heater	

OETR - Oil temperature regulator	

PH - Auxiliary pump	**PNL** - Emergency steering pump
PR - LS pump	**PVL** - Priority valve, steering

RLF - Return line filter	**RVF1** - Non-return valve, suspension 1
RVFH - Non-return valve, raise suspension	**RVFS** - Non-return valve, lower suspension
RVL1-3 - Non-return valve, steering 1-3	**RVN** - Non-return valve, emergency steering pump

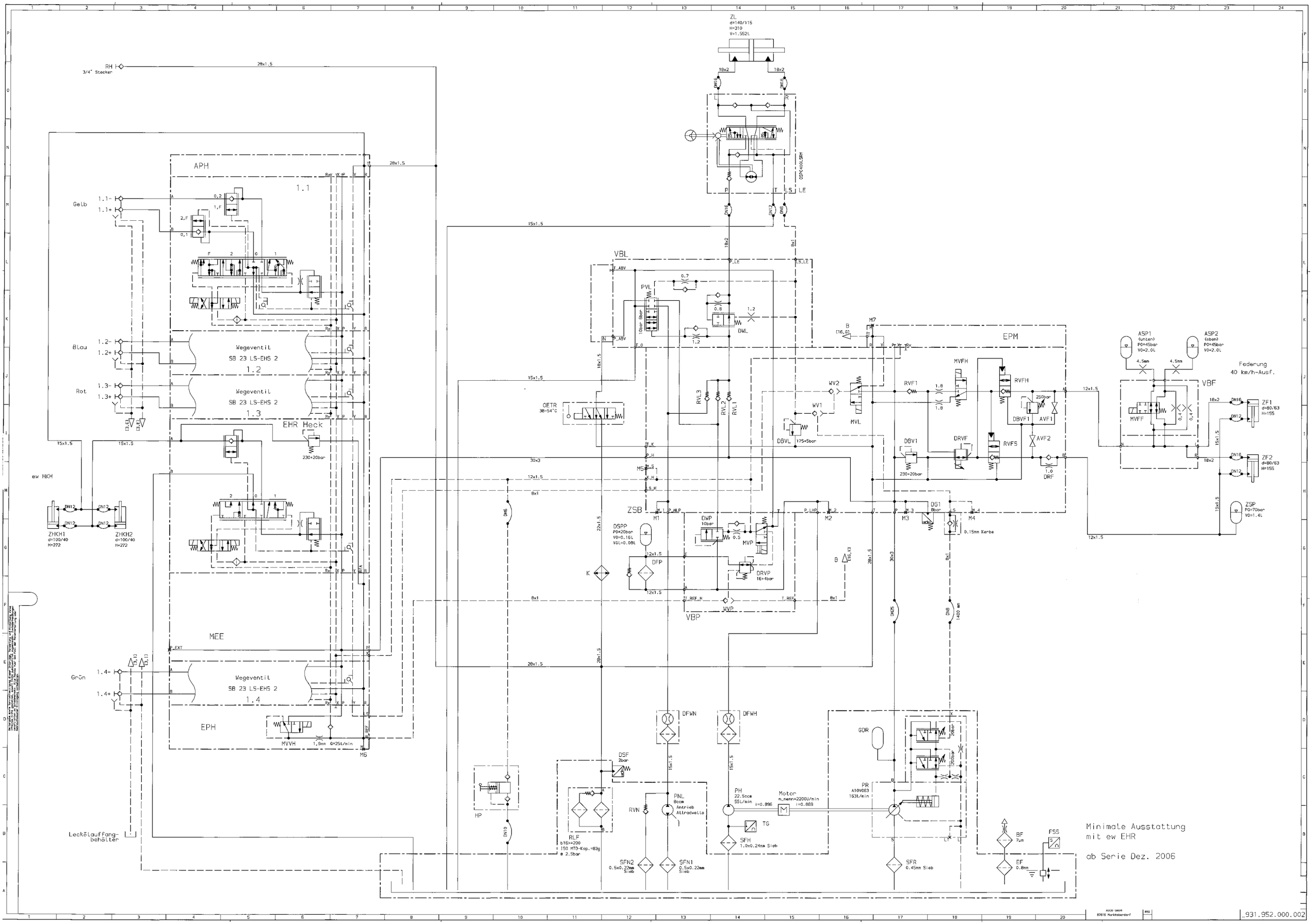
SFH - Auxiliary pump suction filter	**SFN1+2** - Suction filter, emergency steering pump 1+2
SFR - Suction filter, LS pump	**SRVE** - Flow cut-off valve, external LS relief
SVUL [Y083] - Solenoid valve, lower link stabiliser release	

TG [B013] - Temperature sensor	

VBF - Valve block, suspension	**VBL** - Valve block, steering
VBP - Valve block, pilot pressure supply	

WV1 - LS shuttle valve 1	**WV2** - LS shuttle valve 2
WVP - Shuttle valve, pilot pressure	

ZF1 - Federungszylinder 1	**ZL** - Steering cylinder
ZSB - Central control block	**ZSP** - Auxiliary accumulator, suspension



Hydraulic circuit diagram - 931.952.000.002

1 Hydraulic circuit diagram - 931.952.000.002

1.1 [Y074] - Control valve, position 1 (yellow)	**1.2 [Y075]** - Control valve, position 2 (blue)
1.3 [Y076] - Control valve, position 3 (red)	**1.4 [Y078]** - Control valve, position 4 (green)
1.5 [Y079] - Control valve, position 5 (brown)	**1.6 [Y080]** - Control valve, position 6 (purple)
2.1 [Y071] - Control valve, position 7 (olive)	**2.2 [Y072]** - Control valve, position 8 (grey)

APE - Entry plate for external pressure supply	**ASP1** - Accumulator, suspension 1
ASP2 - Accumulator, suspension 2	**AVF1** - Lock valve, suspension 1
AVF2 - Lock valve, suspension 2	

BF - Ventilation filter	

DBV1 - Main pressure-limiting valve	**DBVF1** - Pressure-limiting valve, suspension 1
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OETR - Oil temperature regulator	

PH - Auxiliary pump	**PNL** - Emergency steering pump
PR - LS pump	**PVL** - Priority valve, steering

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RVFH - Non-return valve, raise suspension	**RVFS** - Non-return valve, lower suspension
RVL1-3 - Non-return valve, steering 1-3	**RVN** - Non-return valve, emergency steering pump

SFH - Auxiliary pump suction filter	**SFN1+2** - Suction filter, emergency steering pump 1+2
SFR - Suction filter, LS pump	**SRVE** - Flow cut-off valve, external LS relief
SVUL [Y083] - Solenoid valve, lower link stabiliser release	

TG [B013] - Temperature sensor	

VBF - Valve block, suspension	**VBL** - Valve block, steering
VBP - Valve block, pilot pressure supply	

WV1 - LS shuttle valve 1	**WV2** - LS shuttle valve 2
WVP - Shuttle valve, pilot pressure	

ZF1 - Federungszylinder 1	**ZL** - Steering cylinder
ZSB - Central control block	**ZSP** - Auxiliary accumulator, suspension

VBLE1 und VBLE2 nur bei Variante el-hyd.Lenkung

ZL

VBLE1

EPLE

PVLE

VBLE2

VLE2

VLE3

APLE

DRVLE
13+2bar

VLE1

0.6mm

0.8mm

25bar

MVLE1

MVLE2

1.4mm

WVLE

DDFL
Nur bei Variante RÜFA

180°

0°

DN16 12 12 DN16
DN16 13 13 DN16
DN6 9 9 DN6
DN16 11 11 DN16
DN12 14 14 DN12

OSPC400LSRM

L R P T LS LE

VBL

T_ABV P_LE LS_LE

0.7

PVL

10bar 6bar

0.8 1.2

DWL

1.2

P_ABV T o

HP

DN10

Varianten elektrohydraulische Lenkung
und RÜFA

ab Serie Dez. 2006

AGCO GmbH
87616 Marktoberdorf

RSD

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2 Hydraulic circuit diagram (Auto-Guide) - 931.952.000.002

APLE - Connection plate for el.-hyd. steering system
DRVLE - Pilot pressure cut-off valve, el.-hyd. steering system
MVLE1 [Y085] - Solenoid valve, pilot pressure/switch-off (Auto-Guide)
MVLE2 [Y086] - Solenoid valve, steering disconnect (Auto-Guide)
PVLE - Proportional valve, el.-hyd. steering system
VBLE1 - Valve block, el.-hyd. steering system 1
VBLE2 - Valve block, el.-hyd. steering system 2
VLE1 - LE priority valve (oversteering valve)
VLE2+3 - LE switch off 1 + 2 valves
WVLE - LS shuttle valve, el.-hyd. steering system