VEBM340200

Shop Manual

WA270-3

WA270PT-3

Wheel Loader	Serial-no.
WA270-3	WA270H20051 and up
WA270PT-3	WA270H30051 and up

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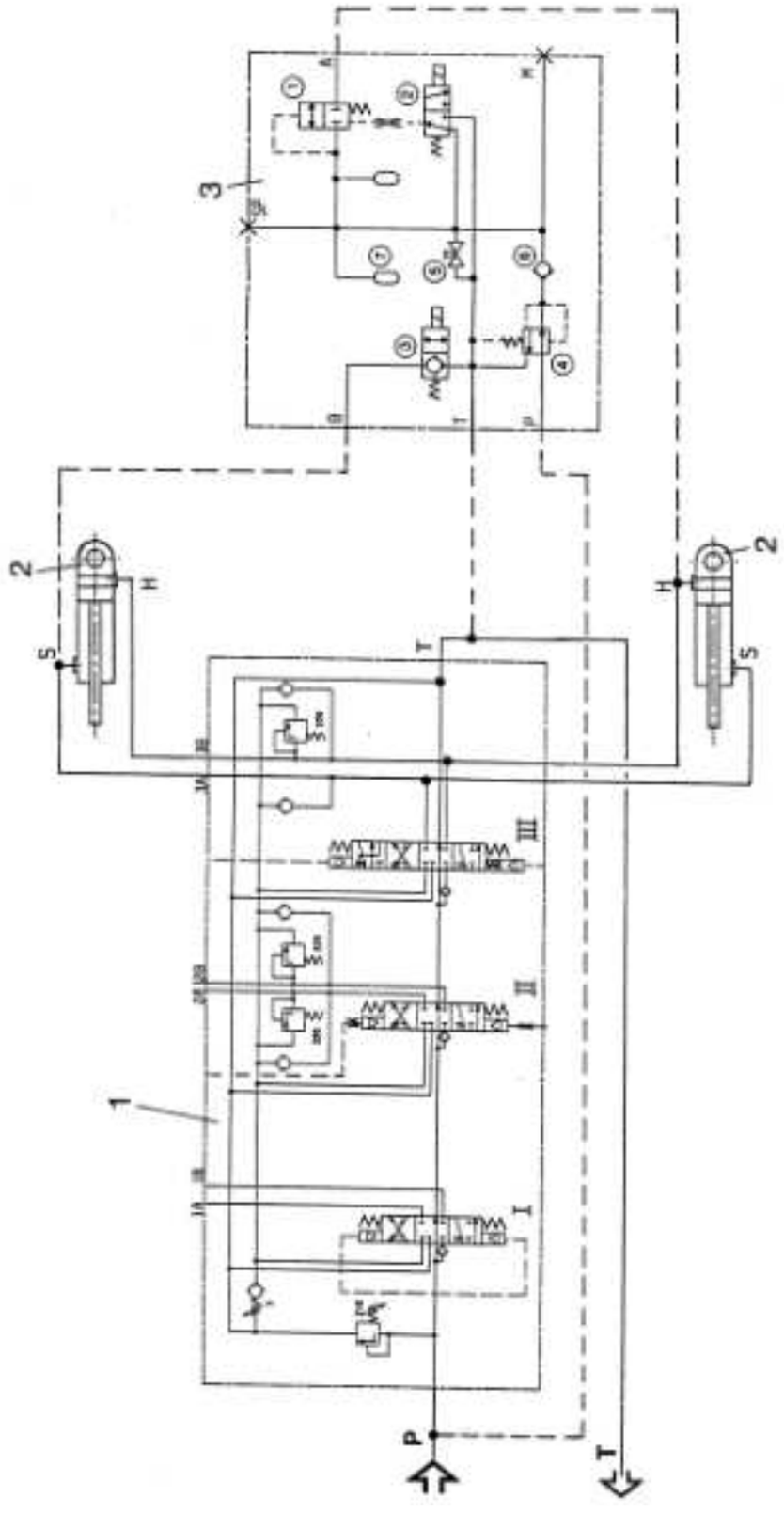
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ALS HYDRAULIC SYSTEM



1. Main hydraulic control valve
   - I 3rd circuit
   - II Bucket circuit
   - III Lift frame circuit
2. Lift cylinder with connections:
   - H Lift
   - S Lower
3. ALS-control unit with connections:
   - A Lift cylinder piston side
   - B Lift cylinder piston rod side
   - P Working hydraulic pressure
   - T Return oil to the tank
   - M Pressure check point
   - Sp Connections for further accumulators

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Fault Code (hex)	MEANING OF THE FAULT CODE possible reason for fault detection	reaction of the TCU	possible steps to repair	remarks
	limit, the voltage at K4 valve is too low. • *cable / connector is defective and has contact to vehicle ground* • *regulator has an internal defect*	TCU shifts to neutral OP-Mode: TCU shutdown	• check the regulator resistance [1] • check internal wire harness of the gearbox	
83	O.C. AT CLUTCH K4 the measured resistance value of the valve is out of limit. • *cable / connector is defective and has no contact to TCU* • *regulator has an internal defect*	TCU shifts to neutral OP-Mode: limp home if failure at another clutch is pending TCU shifts to neutral OP-Mode: TCU shutdown	• check the cable from TCU to the gearbox • check the connectors from gearbox to TCU • check the regulator resistance [1] • check internal wire harness of the gearbox	[1] see chapter 6
84	S.C. TO BATTERY VOLTAGE AT CLUTCH KV the measured resistance value of the valve is out of limit, the voltage at KV valve is too high. • *cable / connector is defective and has contact to battery voltage* • *cable / connector is defective and has contact to another regulator output of the TCU* • *regulator has an internal defect*	TCU shifts to neutral OP-Mode: limp home if failure at another clutch is pending TCU shifts to neutral OP-Mode: TCU shutdown	• check the cable from TCU to the gearbox • check the connectors from gearbox to TCU • check the regulator resistance [1] • check internal wire harness of the gearbox	[1] see chapter 6
85	S.C. TO GROUND AT CLUTCH KV the measured resistance value of the valve is out of limit, the voltage at KV valve is too low. • *cable / connector is defective and has contact to vehicle ground* • *regulator has an internal defect*	TCU shifts to neutral OP-Mode: limp home if failure at another clutch is pending TCU shifts to neutral OP-Mode: TCU shutdown	• check the cable from TCU to the gearbox • check the connectors from gearbox to TCU • check the regulator resistance [1] • check internal wire harness of the gearbox	[1] see chapter 6
86	O.C. AT CLUTCH KV the measured resistance value of the valve is out of limit. • *cable / connector is defective and has no*	TCU shifts to neutral OP-Mode: limp home if failure at another clutch is pending TCU shifts to neutral OP-Mode: TCU	• check the cable from TCU to the gearbox • check the connectors from gearbox to TCU • check the regulator resistance [1]	[1] see chapter 6

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Adjust plate clearance = $2{,}5^{+0{,}2}$ mm.

Note:
For the adjustment of the plate clearance there are snap rings of different thickness available!
To ensure a faultless measuring result, install plates for the moment without oil!

Introduce plate pack according to Draft/Page 30-346!



Fig. 105

Mount end shim and squeeze snap ring (e.g. s = 3,0 mm) in.



Fig. 106

Press end shim on with about 100 N (10 kg) and measure Dimension I from the end face/plate carrier to the end shim.

Dimension I e.g.	7,25 mm
(S) Digital-Depth gauge	5870 200 072

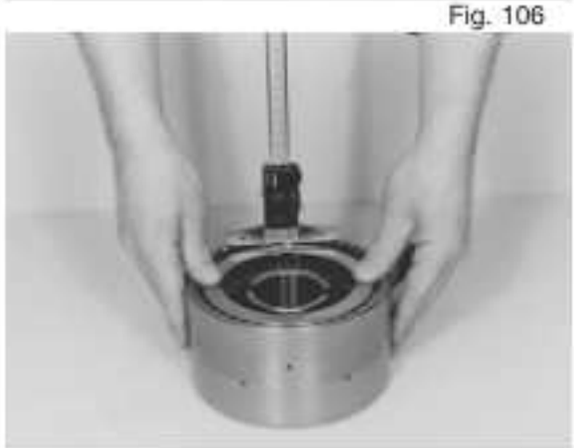


Fig. 107

Press end shim against snap ring (upward) until contact is obtained and determine Dimension II.

Dimension II e.g.	4,75 mm
(S) Digital-Depth gauge	5870 200 072

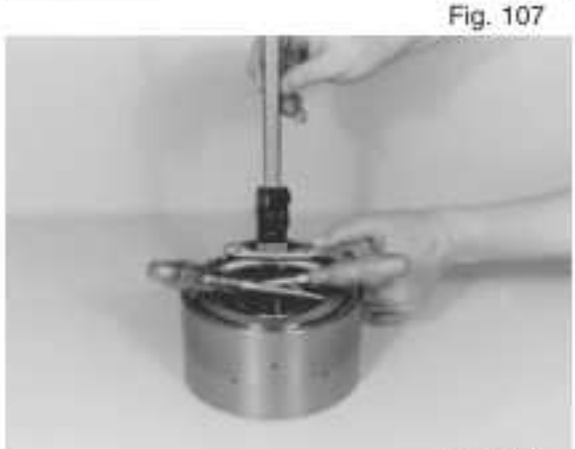
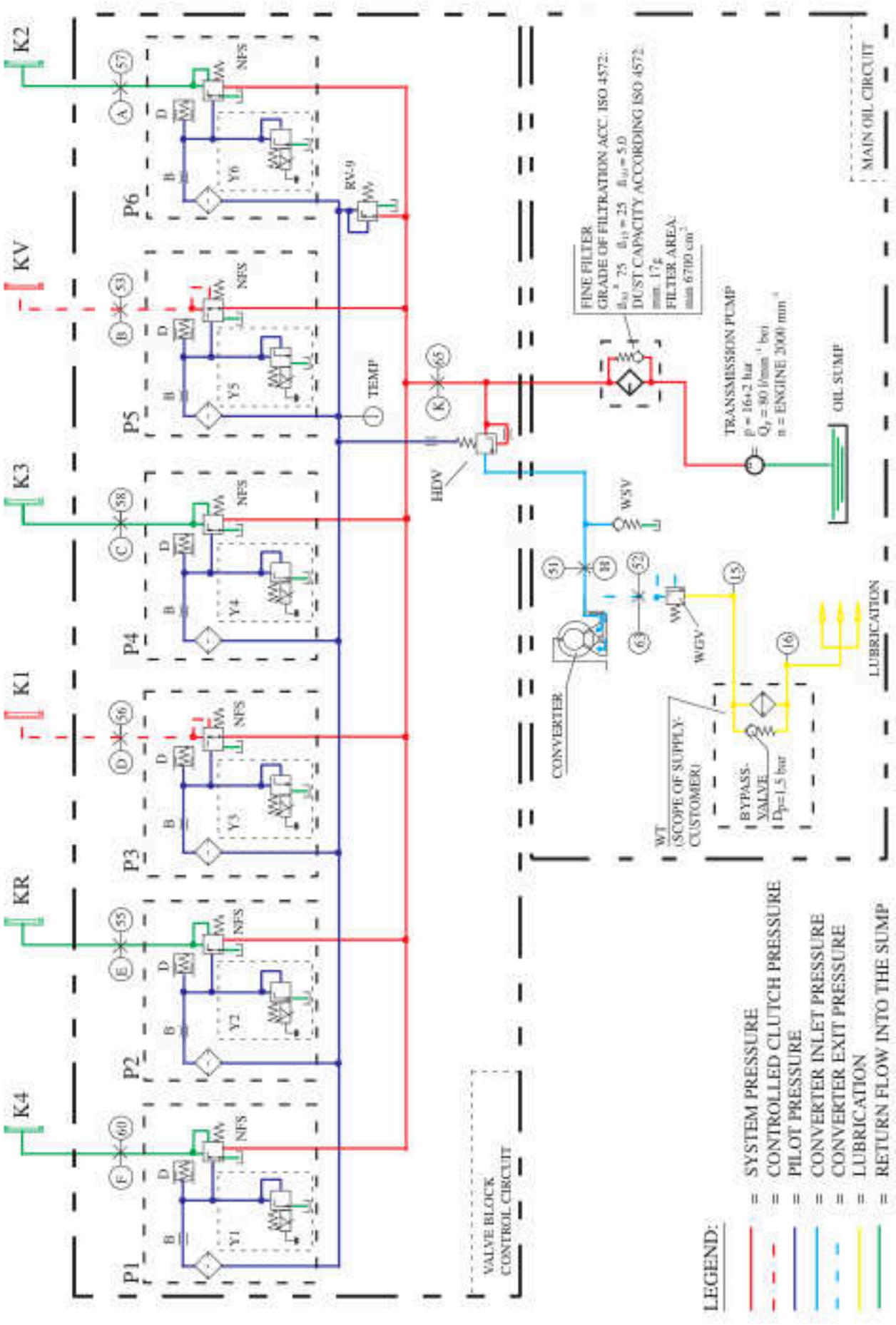
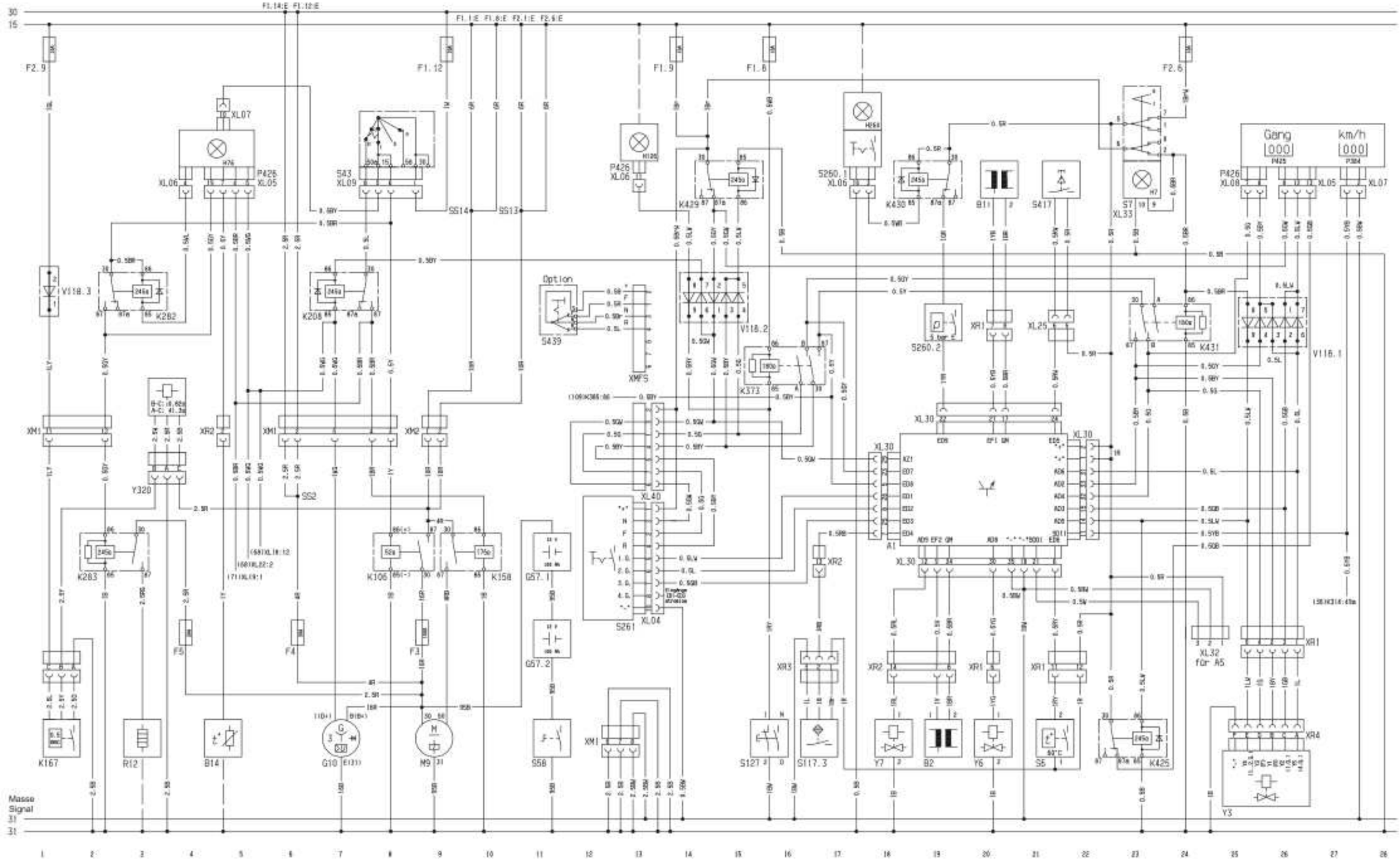


Fig. 108

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