Fig. 2

BC 771 F

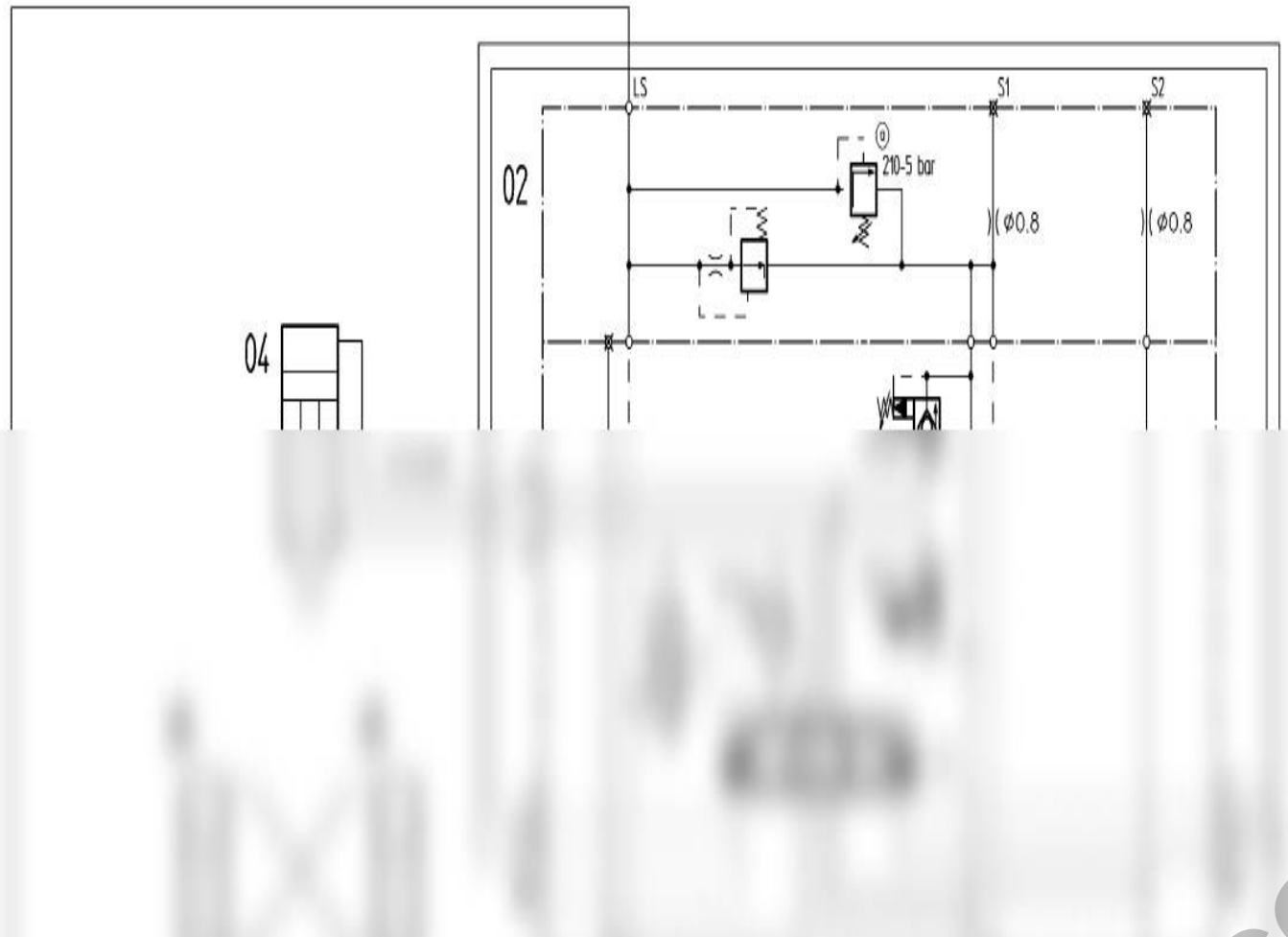
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| Pos. | Benennung | Designation |
|---|---|---|
| 01 | Arbeitspumpe Lenkung/Schild | Operat.pump steering/dozer blade |
| 02 | Ventilblock Schaufel | Valve block shovel |
| 03 | | |
| 04 | Schaufelzylinder | Shovel cylinder |
| 05 | Lenkzylinder | Steering cylinder |
| 06 | Schubschildzylinder | Dozer blade cylinder |
| 07 | Rücklauffiltereinheit | Return filter unit |
| 08 | Fahrpumpe vorne rechts | Travel pump front rh |
| 09 | Fahrpumpe hinten rechts | Travel pump rear rh |
| 10 | Speisepumpe Fahrantrieb rechts | Charge pump travel sys. rh |

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## Adjustment procedures

### Adjusting valves and injection nozzles

For an optimal performance of the engine all valves and injection nozzles must be correctly adjusted. For this reason valves and injection nozzles must be checked and adjusted to the correct values at regular intervals. The following table contains adjustment values for engines with fixed timing.

Once an operating time of 1500 hours is reached or the engine has run for 6 months, valves and injection nozzles must be checked and adjusted during each maintenance interval.

All work on valves and injection nozzles must be performed when the engine is cold and at a stabilized coolant temperature of maximum 60 °C.

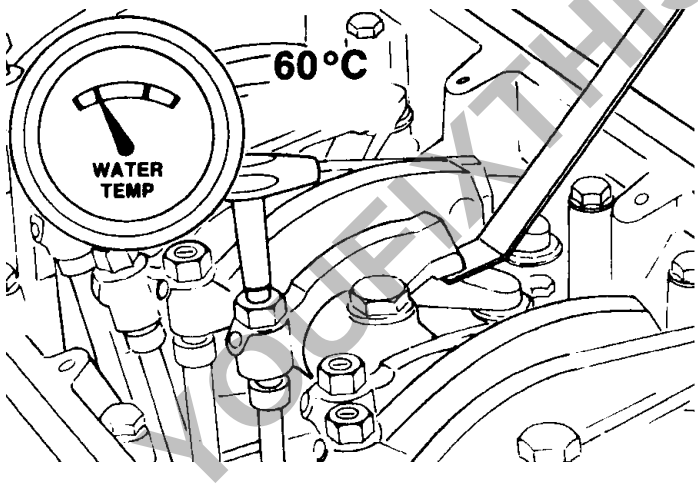



Fig. 10

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## 7. Description of error codes for the Rexroth control

**Note:** **On machines with bucket the Rexroth control is only responsible for the bucket movement and steering functions as well as the monitoring of the related control parts. This is why the following table lists only error codes, which are related with these functions. The other functions are not monitored by the control.**
**The faults are displayed via the BB3 in form of numeric codes and text and via the CAN – module as numeric code only. The CAN – module scrolls existing faults in intervals of 5 seconds. BB3 offers the additional possibility to scroll forward and backwards through the messages with the ”arrow keys ↑↓”.**

**OVERVIEW**

| Error code | Description of fault |
|---|---|
| **230 - 236** | Fault input steering, joystick right / left (only if option is installed) |
| **240 - 246** | Fault input steering, steering wheel right / left |
| **271 / 273** | Fault output proportional solenoid, steering left |
| **276 / 278** | Fault output proportional solenoid, steering right |
| **400 - 406** | Fault input bucket arm up / down |
| **411 / 413** | Fault output proportional solenoid, bucket up |
| **421 / 423** | Fault output proportional solenoid, bucket down |
| **450 - 456** | Fault input, bucket open / close |
| **461 / 463** | Fault output proportional solenoid, bucket open |
| **471 / 473** | Fault output proportional solenoid, bucket close |
| **800 - 803** | Error messages ”Reading of parameters not possible” |
| **ct0** | Error message CAN - Bus connection |

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## Maintenance table

| Maintenance work | Remark | Running-in inspect. (50 oper. hours) | 10 oper. hours | 250 oper. hours | 500 oper. hours | 1000 oper. hours | 2000 oper. hours | as required |
|---|---|---|---|---|---|---|---|---|
| Tighten all bolted connections on the machine | | X | | | | | | |
| Change the oil in the splitter gear | | X | | | | | | |
| Change the oil in the L+S planetary drives | | X | | | | | | |
| Check the engine oil level | Dipstick mark | | X | X | X | X | X | |
| Check the coolant level | | | X | X | X | X | X | |
| Drain the water from the water separator in the fuel system | | | X | X | X | X | X | |
| Check the V-belt | | | X | X | X | X | X | |
| Check the fuel level | | | X | X | X | X | X | |
| Check the hydraulic oil level | | | X | X | X | X | X | |
| Check the machine for damage and leaks | | | X | X | X | X | X | |
| Grease joints and bearings on bucket | RS-machines only | | X | X | X | X | X | |
| Change engine oil and oil filter | at least every 6 months | | | X | X | X | X | |
| Drain the engine oil condensation from the oil tank | | | | X | X | X | X | |
| Check anti-freeze concentration and coolant additives | at least every 6 months | | | X | X | X | X | X |
| Change the coolant filter | | | | X | X | X | X | X |

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BOMAG GMBH BOPPARD

Gez.: 31.08.2000
Name: Wemer
Gepr.: 31.08.2000
Name: Seis

Bauteilliste
component listing

Ers.f.:
Replaces:

Seite: 1 von: 7
page: from:

Blatt Nr.: 101
sheet no.:

570 700 21

| Name | Bl. | Pf. | Benennung | title | TYP |
|---|---|---|---|---|---|
| :A | 010 | 11 | | | |
| :B | 010 | 11 | | | |
| :C | 010 | 10 | | | |
| :D | 010 | 10 | | | |
| | | | | | |
| A12 | 011 | 3 | Radio | Radio | |
| A15 | 005 | 12 | Platine Ueberwachungsmodul | Printed circuit board, monitoring module | |
| A15 | 005 | 13 | Platine Ueberwachungsmodul | Printed circuit board, monitoring module | |
| A22 | 003 | 9 | Platine Fahr− und Vorgluehsteuerung | Printed circ., trav.− a. clow plug contr. | |
| A23 | 002 | 19 | Platine Generator | Printed circuit,generator | |
| A31 | 009 | 8 | Schaltkreis Zeitsteuerung Klimaanlage | Switching network, time contr. air condit. | |
| A45 | 010 | 3 | Lenkrad | Steering wheel | |
| A48 | 004 | 5 | elektronische Motorsteuerung | electronic engine management | |
| A52 | 010 | 3 | Steuerung Schaufel | Controller, shovel | |
| A52 | 010 | 13 | Steuerung Schaufel | Controller, shovel | |
| A53 | 008 | 9 | Modul Luefterueberwachung | Modul blower monitoring | |
| A57 | 011 | 14 | Intervallschalter Scheibenwischer | Interval switch, wiper | |
| | | | | | |
| B03 | 005 | 10 | Unterdruckschalter Luftfilter | Vacuum switch, air cleaner | |
| B05 | 005 | 18 | Druckschalter Bremse | Pressure switch, brake | |
| B06 | 005 | 8 | Druckschalter Motoroel | Pressure switch, engine oil | |
| B11 | 011 | 19 | Signalhorn | Warning horn | 2A |
| B19 | 005 | 19 | Magnetsensor Verschmutzung | Magnetic sensor, contamination | |
| B20 | 005 | 16 | Temperaturschalter Hydraulikoel | Temperature switch, hydraulic oil | |
| B21 | 005 | 17 | Differenzdruckschalter Hydr.−Oelfilter | Pressure diff. switch, hydr. oil filter | |
| B22 | 005 | 17 | Differenzdruckschalter Hydr.−Oelfilter | Pressure diff. switch, hydr. oil filter | |
| B23 | 005 | 15 | Schwimmerschalter Hydraulikoel | Float switch, hydraulic oil | |
| B24 | 005 | 15 | Schwimmerschalter Hydraulikoel | Float switch, hydraulic oil | |
| B25 | 005 | 16 | Druckschalter Ruecklauffilter | Pressure switch, return flow filter | |
| B28 | 011 | 20 | Signalhorn | Warning horn | 2A |
| B29 | 009 | 18 | Raumthermostat | Room thermostat | |
| B51 | 011 | 3 | Lautsprecher Radio | Speaker radio | |
| B51 | 011 | 4 | Lautsprecher Radio | Speaker radio | |
| B52 | 007 | 5 | Naeherungsinitiator Schmierkolben | Proximity switch, lubrication piston | |
| B53 | 005 | 7 | Temperaturgeber Kuehlmittel | Temperature switch, collant | |
| B54 | 003 | 9 | Temperaturgeber Starthilfe | Temperature switch, starting assistance | |
| B55 | 005 | 9 | Kuehlmittelstand Ausgleichsbehaelter | Coolant charge expansion tank | |
| B75 | 009 | 18 | Kuehlmitteldruck | coolant pressure | |
| B93 | 004 | 11 | Leistungskraftstoffdruck Sensor RPS | Rail pressure sensor | |
| B94 | 004 | 5 | Geschwindikgeitssensor Motor | Electronic speed sensor, engine | |
| B95 | 004 | 2 | Temperaturschalter f. Drehmomentumsch. | Temperature switch f. altern. torque | |
| | | | | | |
| E01 | 005 | 5 | Beleuchtung Tankanzeige | Illumination, level gauge | |
| E02 | 005 | 3 | Beleuchtung Temperaturanzeige | Illumination, temperature gauge | |
| E03 | 005 | 2 | Beleuchtung Drehzahlmesser | Illumination, rpm meter | |
| E16 | 011 | 6 | Scheinwerfer links | Head light, lh. | 55W |
| E17 | 011 | 6 | Scheinwerfer rechts | Head light, rh. | 55W |
| E20 | 002 | 3 | Zigarettenanzuender | Cigarette lighter | |
| E21 | 002 | 3 | Beleuchtung Zigarettenanzuender | Illumination, cigarette lighter | |
| E22 | 005 | 4 | Beleuchtung Temperaturanzeige Hydr.−oel | Illumination, temp. gauge, hydraulic oil | |
| E23 | 011 | 5 | Arbeitsscheinwerfer vorne links | Working head light, front, lh. | 55W |
| E25 | 011 | 5 | Arbeitsscheinwerfer vorne rechts | Working head light, front, rh. | 55W |
| E27 | 011 | 11 | Arbeitsscheinwerfer hinten links | Working head light, rear, lh. | 55W |
| E28 | 011 | 11 | Arbeitsscheinwerfer hinten rechts | Working head light, rear, rh. | 55W |
| E29 | 011 | 7 | Innenleuchte Kabine | Inside light, cabin | 15W |
| E29 | 011 | 7 | Innenleuchte Kabine | Inside light, cabin | 15W |
| E30 | 008 | 2 | Heizgeraet | Heating unit | max. 10A |
| E32 | 011 | 8 | Kennleuchte | Warning light | 70W |
| E37 | 009 | 16 | Klimaverdampfer | Air conditioning, evaporator | |
| E46 | 005 | 1 | Beleuchtung Voltmeter | Illumination volt meter | |
| E47 | 009 | 2 | Schutzbelueftung | Protection ventilation system | 650W |
| E56 | 011 | 10 | Scheinwerfer Motorraum rechts | Head light, engine area rh. | 55W |
| E57 | 011 | 10 | Scheinwerfer Motorraum links | Head light, engine area lh. | 55W |
| | | | | | |
| F00 | 002 | 10 | Hauptsicherung Batterie | Fuse, main, battery | 250A |
| F02 | 008 | 10 | Ersatzsicherung | Fuse, spare | 10A |
| F05 | 002 | 6 | Sicherung Steckdose | Fuse, socket | 30A |
| F14 | 003 | 17 | Sicherung Hubmagnet Motor | Fuse, shut off solenoid, engine | 30A |
| F16 | 007 | 5 | Sicherung Zentralschmieranlage | Fuse, central lubrication system | 10A |
| F23 | 007 | 10 | Sicherung Signalhorn | Fuse, warning horn | 30A |
| F24 | 005 | 11 | Sicherung Ueberwachungsmodul | Fuse, monitoring module | 30A |
| F25 | 006 | 8 | Sicherung Magnetv. Fahren u. Bremse | Fuse, sol. valve, travel and brake | 30A |
| F27 | 011 | 16 | Sicherung Wischer u. Wascher vorne | Fuse, windscr. wiper and washer, fr. | 10A |
| F28 | 011 | 18 | Sicherung Wischer u. Wascher hinten | Fuse, windscr. wiper and washer, re. | 10A |
| F29 | 007 | 15 | Sicherung Kompressor Sitzverstell. | Fuse, compr., seat height adjustm. | 10A |
| F30 | 003 | 10 | Sicherung Heizung Fahrersitz | Fuse, heating, operator's seat | 30A |
| F31 | 008 | 16 | Sicherung Kabinenluefter | Fuse, cabin ventilator | 30A |
| F34 | 009 | 12 | Sicherung Klimageraet | Fuse, air conditioning | 30A |
| F40 | 008 | 2 | Sicherung Kabinenheizung | Fuse, heating unit cab | 25A |
| F41 | 011 | 8 | Sicherung Rundumkennleuchte | Fuse, rotary beacon | 10A |
| F42 | 011 | 7 | Sicherung Kabineninnenleuchte | Fuse, inside light cab | 10A |
| F49 | 011 | 2 | Sicherung Spannungswandler | Fuse, voltage transformer | 10A |
| F52 | 010 | 19 | Sicherung Schubschild | Fuse, dozer blade | 30A |
| F63 | 010 | 18 | Sicherung Lenkung | Fuse, steering | 30A |
| F69 | 008 | 3 | Sicherung Streueinheit | Fuse, scratter unit | 5A |
| F84 | 004 | 17 | Sicherung Steuerung (Klemme 54) | Fuse, controller (Pin 54) | 10A |
| F85 | 011 | 6 | Sicherung, Scheinwerfer vorne | Fuse, head light front | 20A |
| F86 | 011 | 11 | Sicherung, Scheinwerfer hinten | Fuse, head lights rear | 15A |
| F89 | 002 | 3 | Sicherung, Zigarettenanzuender | Fuse, cigarette lighter | 30A |
| F90 | 011 | 1 | Sicherung, Ansteuerung | Fuse, actuation | 10A |
| F94 | 009 | 2 | Sicherung Schutzbelueftung | Fuse, protected ventilation syst. | 30A |
| F95 | 004 | 12 | Sicherung Motormanagement intern | Fuse, engine controller (internal) | 5A |
| F95 | 004 | 15 | Sicherung Motormanagement intern | Fuse, engine controller (internal) | 5A |
| F95 | 004 | 16 | Sicherung Motormanagement intern | Fuse, engine controller (internal) | 5A |
| F98 | 011 | 12 | Sicherung Spiegelheizung | fuse,mirror heating | 10A |
| F99 | 011 | 10 | Sicherung Motorraumbeleuchtung | fuse, illumination engine area | 15A |
| F112 | 003 | 15 | Sicherung Anzugswicklung | Fuse, pull in coil | 20A |
| | | | | | |
| G01 | 002 | 11 | Batterie | Battery | |

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| Fault | Cause | Remedy |
|---|---|---|
| Excessive coolant temperature – slow overheating | Coolant level too low | Check engine and radiator for external leaks, repair if necessary. Top up coolant |
| | Damaged or blocked (dirt, insects, etc.) radiator fins (externally) | Check the radiator fins |
| | Clogged, bent or leaking radiator hose | Check the hoses |
| | Loose blower V-belt and/or water pump drive belt | Check the belt tension, tighten if necessary |
| | Incorrect oil level | Top up or drain off engine oil |
| | Damaged or missing cooling blower shroud. Damaged or missing air circulation deflector plates | Check shroud and/or deflector plates, repair, replace or install |
| | Incorrect or missing radiator cap | Check the radiator cap |
| | Too high concentration of anti-freeze and/or other coolant additives | Use the right concentration |
| Excessive coolant temperature – sudden overheating | Coolant level too low | Top up coolant |
| | Clogged, bent or leaking radiator hose | Check the hoses |
| | Damaged cooling blower belt | Replace a damaged belt |
| | Wrong or missing radiator cap. Too low nominal pressure of cap | Check the radiator cap. Use the correct cap |
| Coolant temperature below the normal level | Permanent operation at low ambient temperatures | Observe the notes for operation under cold conditions |

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If the charge pressure is not reached or if the charge pressure measured in Fig. 33 drops under load, check the charge pump.

- Close the outlet of the respective pump with a 200 bar pressure relief valve.
- Connect a 600 bar pressure gauge to the valve.

**Caution!**
**During the following test the engine must not be started.**

- Crank the engine with the starter (pull the plug off the engine shut-down solenoid).

**Nominal value:**

200 bar

If the nominal pressure is not reached replace the charge pump.

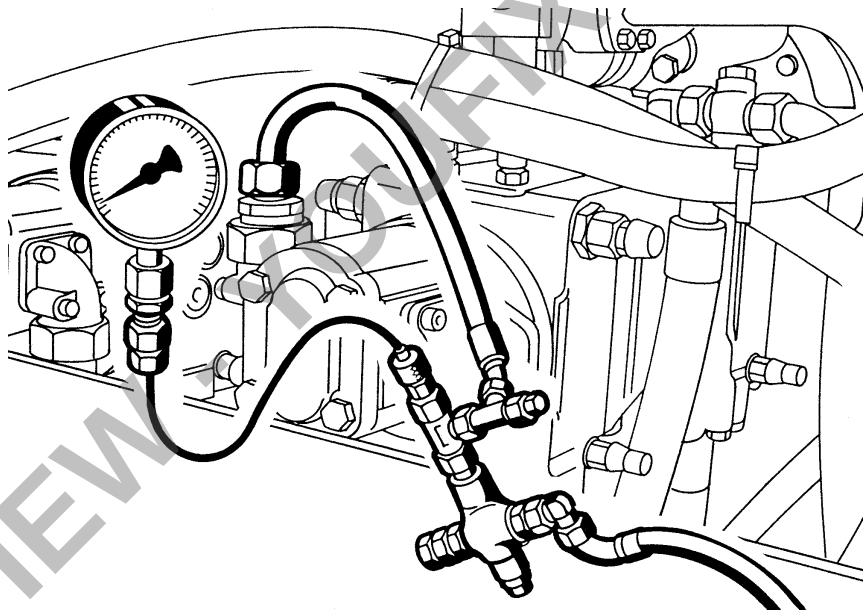


Fig. 36

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Fig. 16

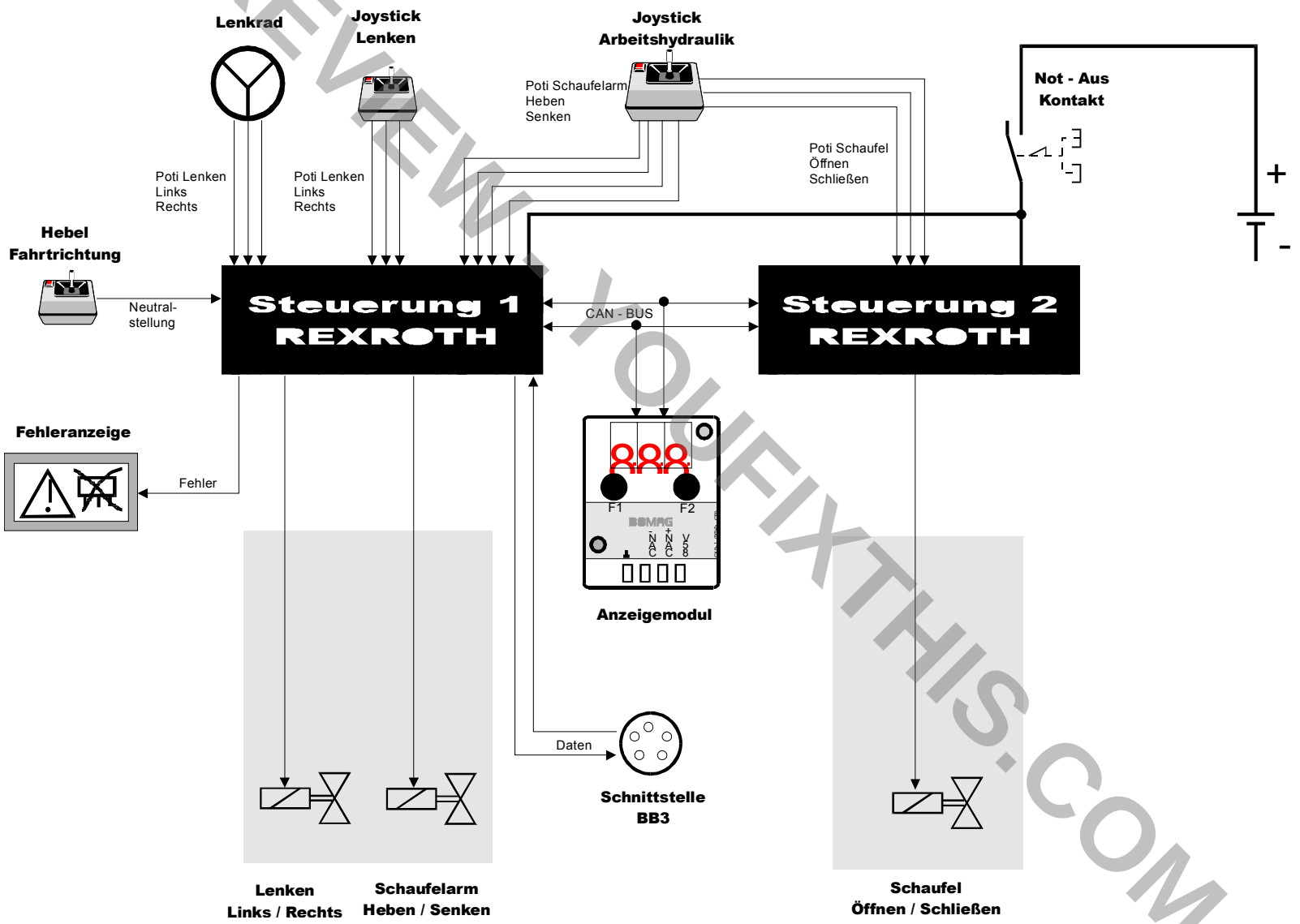


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# 1. Overview of the REXROTH controls




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