2.1 BW 80 AD-5

Dimensions



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4.8 Inspection and maintenance work

4.8.1 Maintenance Table

No.	Maintenance works	Page
	Every 250 operating hours	
4.8.2.1	*Battery service*	*202*
	As required	
4.8.3.1	*Battery service during prolonged machine downtimes*	*204*

4.8.2 Every 250 operating hours

4.8.2.1 Battery service

WARNING!

Danger of cauterisation ! Danger of explosion!

When working on the battery do not use open fire, do not smoke!

The battery contains acid. Do not let acid come in contact with skin or clothes!

Wear protective clothing!

Do not lay any tools on the battery!

For recharging remove the plugs from the battery to avoid the accumulation of highly explosive gases.

ENVIRONMENT!

Dispose of the old batteries environmentally.

Maintenance free batteries also need care. Maintenance free only means that the fluid level does not need to be checked. Each battery suffers under self-discharge, which may, in not checked occasionally, even cause damage to the battery as a result of exhaustive discharge.

The following therefore applies for the service life:

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AD machine

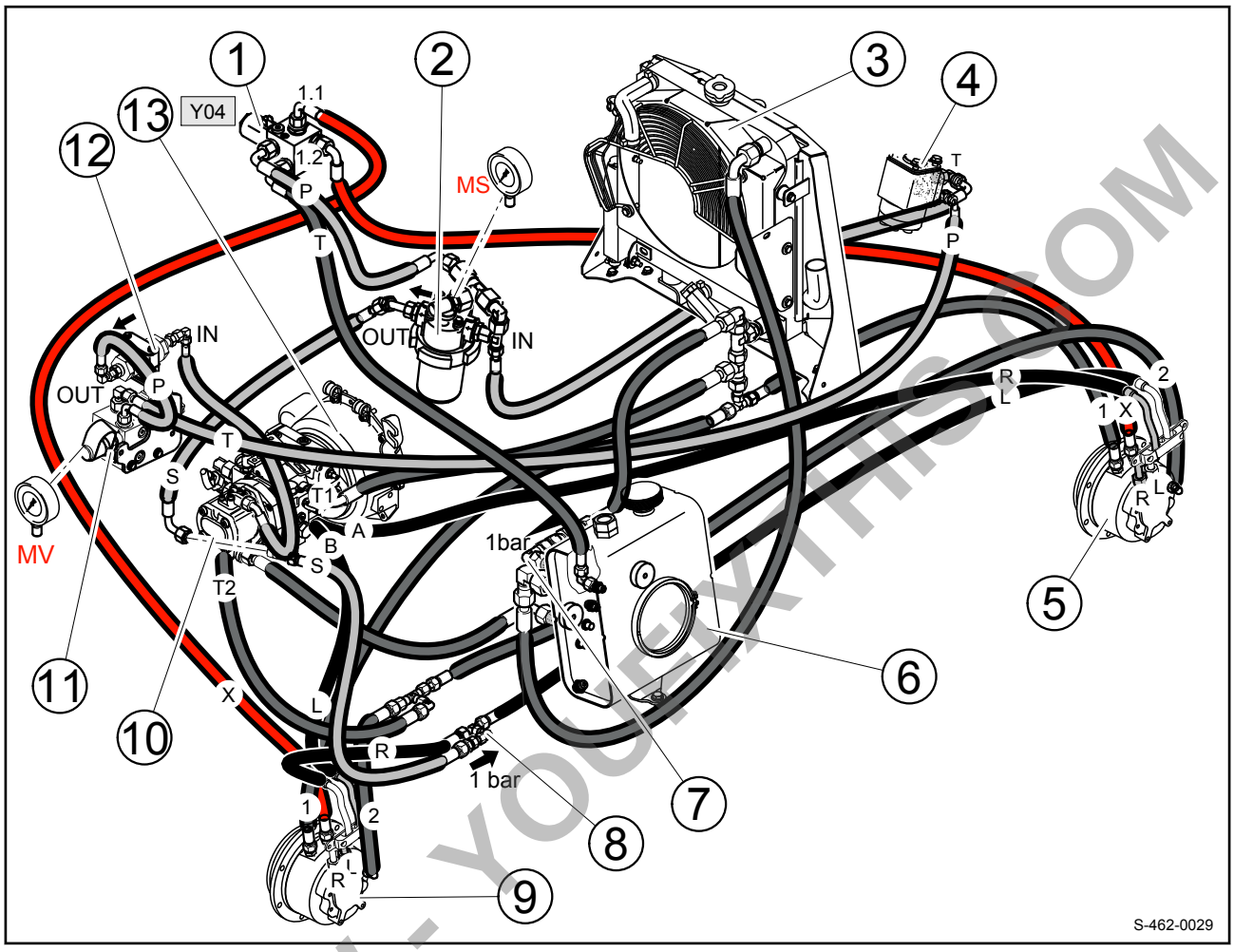
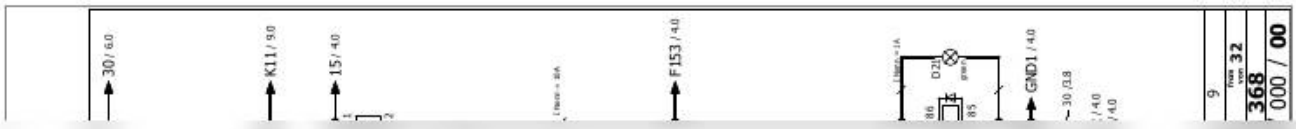


Fig. 240

1 Brake valve (Y04)
2 Charge circuit filter
3 Radiator
4 Steering valve
5 Rear drum drive motor
6 Hydraulic oil tank
7 Check valve
8 Check valve
9 Front drum drive motor
10 Steering-, vibration- and charge pump
11 Vibration valve
12 High pressure line filter
13 Travel pump
MS Pressure test port for charge circuit
MV Pressure test port on vibration valve

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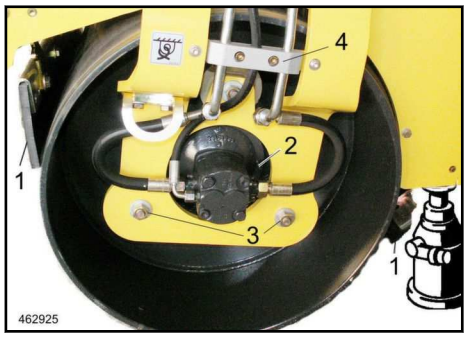


Fig. 419



Fig. 420

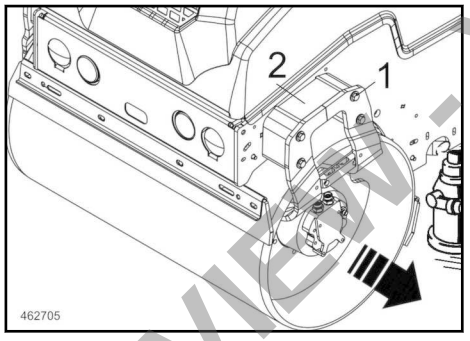


Fig. 421

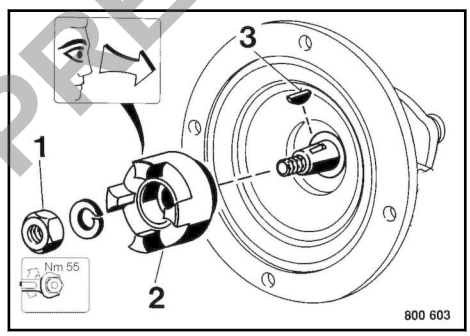


Fig. 422

1.

WARNING!

Danger of accident!

Block front and rear drums with wedges against rolling!

Jack the machine up ↳ Fig. 419 and support it safely, so that the rubber buffers on the drive disc are unloaded.

2. Unhook the springs to unload the scrapers (1) .

3. Remove the hose bracket (4).

4. Unscrew the screws (2) and remove the vibration motor with the motor flange.

5. Unscrew the nuts (3).

6. Remove the hose bracket (1) ↳ Fig. 420.

7. Mark the hydraulic hoses and disconnect them from the travel motor.

8. Close the hydraulic connections with plugs.

9. Unscrew the screws 1 ↳ Fig. 421, take of the spacer block (2) (not BW80) and move the drum carefully sideways out together with the support leg.

10. Check coupling hub 2 ↳ Fig. 422 for wear.

11. If necessary unscrew the hexagon nut (1) and pull off the coupling hub (2) with a puller.

12. Remove feather key (3).

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7.7 Trouble shooting, diesel engine

7.7.1 Engine problems

Fault description	Cause	Remedy
No or poor starting of engine	Fuel tank empty	Fill fuel tank
	Fuel filter clogged, in winter due to paraffin separation	Change the fuel filter, use winter fuel
	Fuel lines leaking	Check all line connections for leaks and tighten the fittings, bleed the fuel system
	Travel lever not in "0"-position	Shift the travel lever to position "0".
	Battery discharged or not connected, battery power too low	Charge the battery, clean the terminal clamps, tighten and cover them with acid-free grease, have battery tested
	Emergency stop push button is locked	Unlock the emergency stop switch
	Especially in winter: use of too viscous engine oil	Use the correct engine oil for the ambient temperatures
Engine runs irregularly with poor power	Fuel supply too low, fuel system clogged by paraffin separation (winter operation)	Change the fuel filter, check line connections for leaks and tighten fittings, us winter fuel under cold conditions
	Injection valve or injection pump defective	Have examined by a specialist
	Air filter cartridge soiled	clean, if necessary use a new one
	Excessive play in throttle cable	Adjust the throttle cable, replace if necessary
Engine looses power and speed, excessive exhaust smoke	Engine oil level too high	Drain the oil down to the top dipstick mark
	Poor quality fuel	Use specified fuel
	Air filter dirty	clean, if necessary use a new one
	Poor compression because of burned or broken compression rings	Have compression rings and pistons examined by specialist.
	Injection valve defective	Have examined by a specialist
Engine overheating, engine must be shut down immediately!	Radiator heavily soiled	Clean the cooling fins

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2 Technical data

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2.12 List of fuels and lubricants

Assembly group	Fuel or lubricant		Spare parts number	Filling quantity
	Summer	Winter		Observe the level mark!
Engine oil	SAE 10W-40 Specification: *Chapter 2.11.1 „Engine oil“ on page 82*		009 920 06 20 l	3.9 l (1.0 gal us)
	SAE 10W-30			
	SAE 15W-40			
	SAE 30			
Fuel	Diesel	Winter diesel fuel		30 l (7.9 gal us)
	Specification: *Chapter 2.11.2 „Fuel“ on page 83*			
Coolant	Mixture of water and anti-freeze agent Specification: *Chapter 2.11.3 „Coolant“ on page 84*		009 940 03 20 l	9 l (2.4 gal us)
Hydraulic system	Hydraulic oil (ISO), HVLP 46 Specification: *Chapter 2.11.4.1 „Mineral oil based hydraulic oil“ on page 85*		009 930 09 20 l	14 l (3.7 gal us)
	or ester based biodegradable hydraulic oil Specification: *Chapter 2.11.4.2 „Biodegradable hydraulic oil“ on page 85*			
Spraying system	Water	Anti-freeze mixture		100 l (26.4 gal us)
Emulsion spraying system	Emulsion			11 l (2.9 gal us)

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10 Fuse
11 Terminal strip
12 Plugs

Different symbols are used to simplify the differentiation of terminal strips 11 ↳ Fig. 85 and plugs (12) in a wiring diagram.

Plugs are mainly used to connect two wiring looms or to connect a wiring loom with a component with cable connection and mating plug.

Representation of electric devices

Electronic devices and components are increasingly used in the construction equipment industry. Controls with software, control elements (e.g. joystics and man / machine interfaces, such as e.g. screens, LC-Displays) are frequently used to represent and control machine functions. The internal construction of such components is in most cases protected or just too complex to be illustrated in the wiring diagram within the context of the actual machine function. There are two different ways to simplify the representation of such devices in the diagram.

Black-Box representation

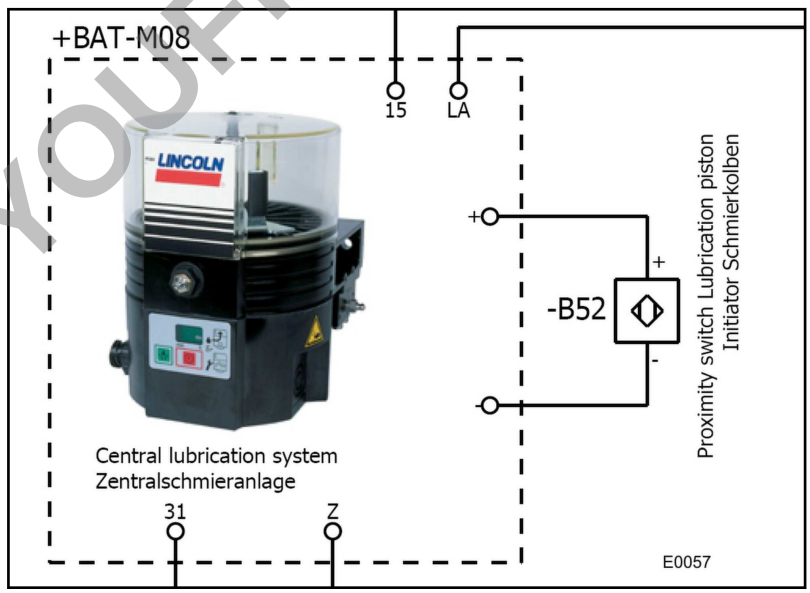


Fig. 86: Example: Central lubrication system

The Black-Box representation shows the device as a Box with the connections required for the machine function. Connections which are not needed do not need to be represented.

The Blackbox representation is mainly used if there is no differentiated information (e.g. signals from pins) available from the sub-supplier.

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Power elements implemented in the board by means of pressing technology, ensure permanent connections, which meet highest quality demands throughout the entire life cycle of the product and thus are a major contribution to product reliability.

A powerful electric press fit is made by pressing a press pin through the contacted hole in a printed circuit board - within the course of a cold welding process - whereby a gas tight electrical connection is achieved.

Advantages

- Particularly quick connection with the wiring loom of the vehicle
- Possibility of combining high-current and signal lines
- Highest possible avoidance of connecting and wiring faults
- Gain in space due to the possibility of compact design (e.g. by placement from both sides) as well as weight reduction
- 100% electric testing
- Increased reliability and prolonged lifetime of the overall system
- Clear display of switching states by means of LEDs (simple diagnostics).

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5.1 Basic principles

5.1.1 Open and closed hydraulic circuit

Open circuit

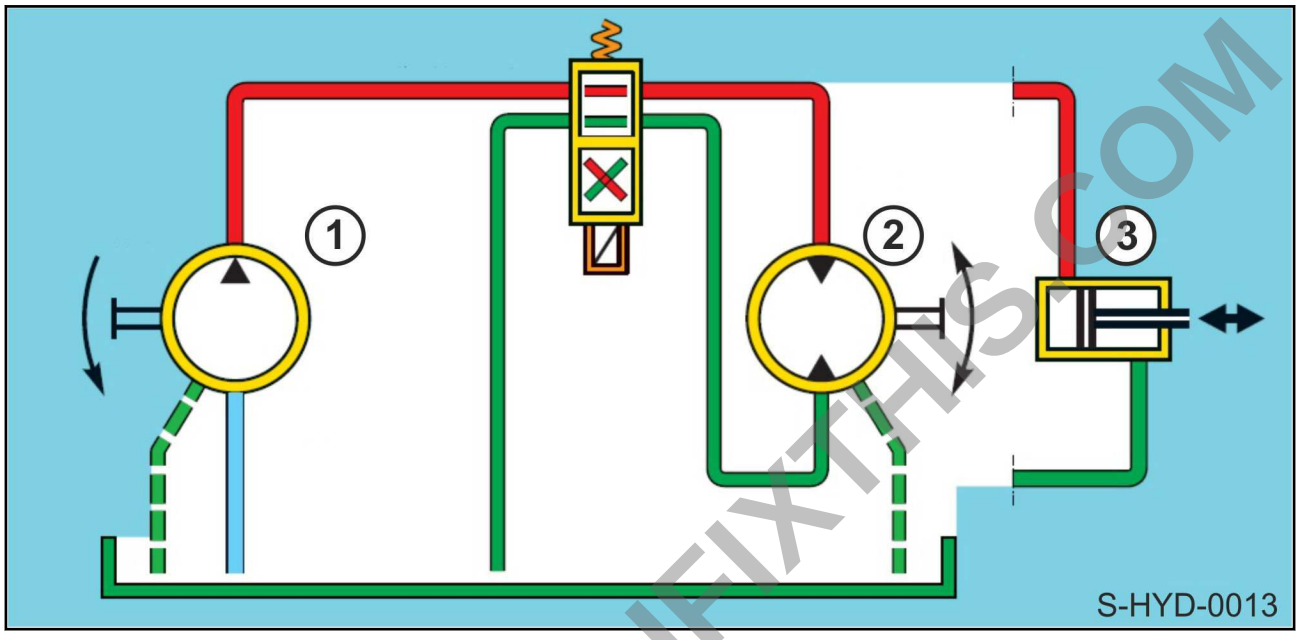


Fig. 203: Open circuit

Open in this case means that the suction line of a pump (1) normally is situated below the fluid level, the surface of which is in open contact with atmospheric pressure. Reliable equalization of pressure between the air in the hydraulic oil tank and the ambient air ensures problem free suction of the pump.

In an open circuit the hydraulic oil is fed to the consumer (2 or 3) and also returned to the tank through way valves.

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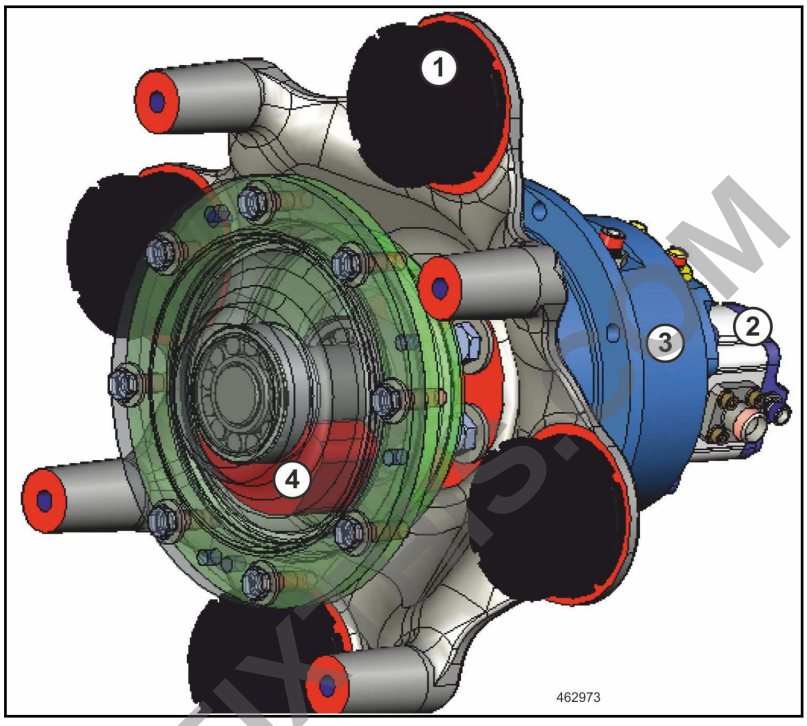


Fig. 246: Vibration drive SC drum

1 Rubber buffer
2 Vibration motor
3 Travel motor
4 Exciter shaft

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1. Drive the machine, until the hydraulic oil has reached operating temperature.
2. Shut down the engine, pull off the ignition key
3. Remove the cover from the hydraulic oil tank .

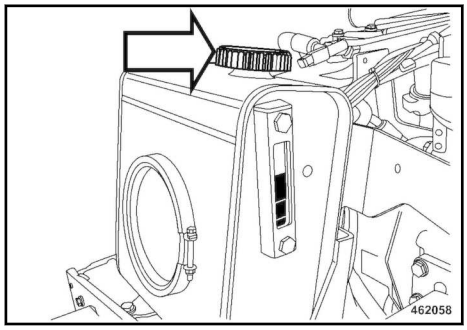


Fig. 317

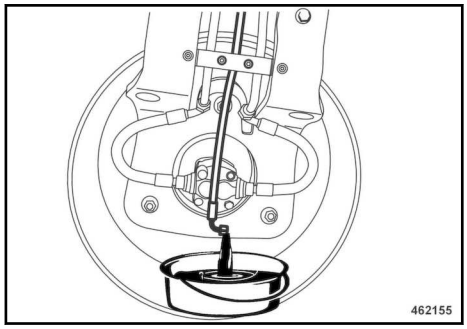


Fig. 318

4. **WARNING!**
   Danger of scalding!
   When draining off hot hydraulic oil!

   AD-/ADM-/ACM-machines: Disconnect the leak oil hose from the front right hand vibration motor, drain off and catch all hydraulic oil.

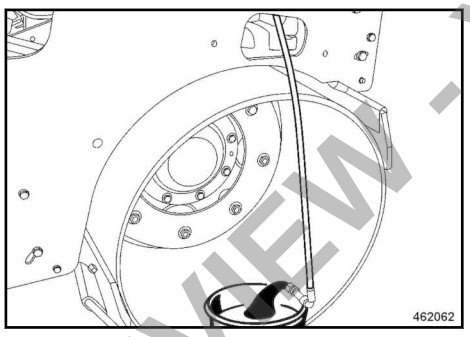


Fig. 319:

5. SC-/SCC-machines: Unscrew the leak oil return line at the right front inside the frame, route it to the outside and allow all hydraulic oil to run out and catch it.
6. Reconnect the leak oil hose tightly.

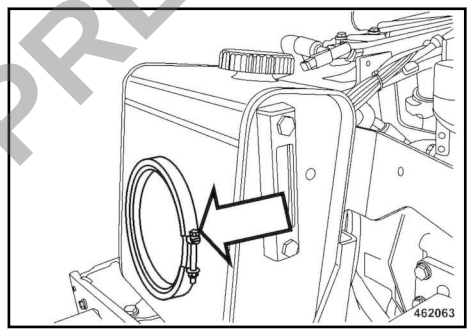


Fig. 320

7. Loosen the strap on the hydraulic oil tank and take it off with the cover.
8. Wipe the inside of the hydraulic tank clean with the lint-free cloth.
9. Attach the cover and tighten the strap.

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Oscillating articulated joint, new version

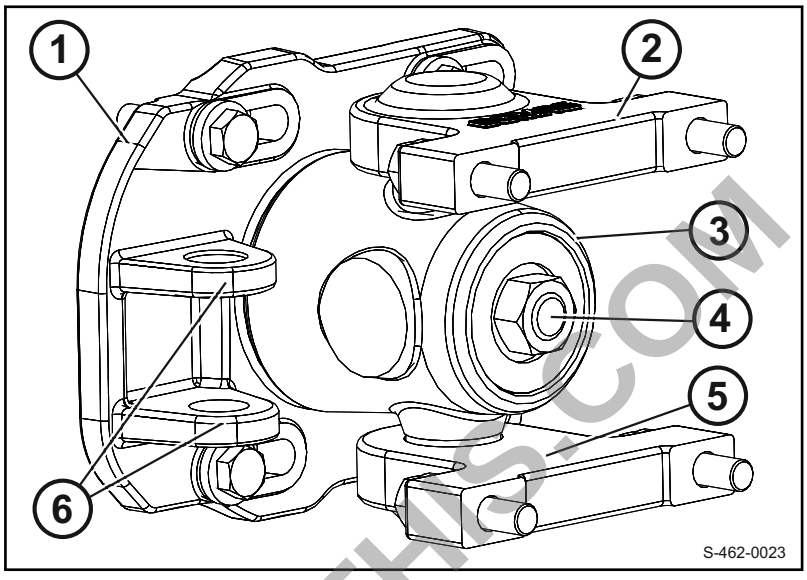


Fig. 386

1 Housing
2 Bearing block, top
3 Bearing housing
4 Bearing journal
5 Bearing block, bottom
6 Receptacle for steering cylinder, new version

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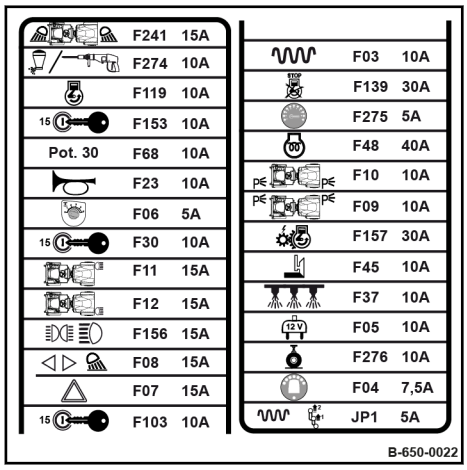


Fig. 475

Fuse	Amperage	Designation
F241	15 A	Optional headlights
F274	10 A	Precision spreader / hydraulic breaker
F119	10 A	Motor
F153	10 A	Potential 15
F68	10 A	Potential 30
F23	10 A	Warning horn
F06	5 A	Interval switch for pressure sprinkling system
F30	10 A	Potential 15
F11	15 A	Headlights, left
F12	15 A	Headlights, right
F156	15 A	Lighting
F08	15 A	Direction indicators and working head lights
F07	15 A	Hazard light system
F103	10 A	Potential 15
F03	10 A	Vibration
F139	30 A	Engine solenoid
F275	5 A	Economizer
F48	40 A	Preheating system
F10	10 A	Parking and tail light, right
F09	10 A	Parking and tail light, left
F157	30 A	Starter
F45	10 A	Edge cutter
F37	10 A	Sprinkling pump

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FAYAT GROUP

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Industriegebiet Hellerwald
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Wiring illustration Verkabelungsdarstellung	
thick lines dicke Linien	routing on Powerboard Routing auf Powerboard
thin lines dünne Linien	harness wiring Kabelbäume



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