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4.5 Maintenance table

No.	Maintenance work	Note
With all maintenance intervals perform also the work for shorter preceding service intervals.		
Every 10 operating hours		
5.6	Check the engine oil level	Dipstick mark
5.7	Check the fuel level	
5.8	Check the hydraulic oil level	Inspection glass
5.9	Check the hydraulic oil filter element	Contamination indicator
5.10	Check the coolant level	Inspection glass
5.11	Check the water level	
5.12	Check the emulsion level	only on ACM/SCC-machines
Every 50 operating hours		
5.13	Check, clean the air filter, replace if necessary	min. 1 x year
5.14	Check fuel lines and clamps	
5.15	Check, clean the water separator	

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7.4 Changing engine oil and oil filter

⚠ Danger

Danger of scalding!

When draining off hot oil.

By hot oil when unscrewing the engine oil filter.

⚠ Caution

The oil change at 250 operating hours refers to the use of fuels with a sulphur content of less than 0.5%.When using fuels with a sulphur content higher than 0.5% the oil change intervals must be halved.

Drain the engine oil only when the engine is warm.

For quality and quantity of oil refer to the "table of fuels and lubricants".

Environment

Catch running out oil and dispose of environmentally together with the oil filter cartridge.

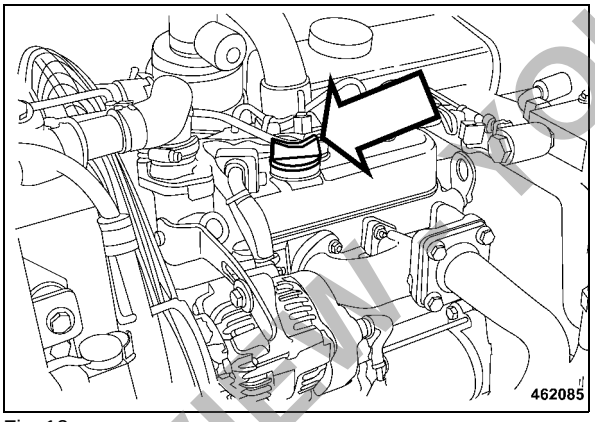


Fig. 12

Unscrew the oil filler plug (Fig. 12).

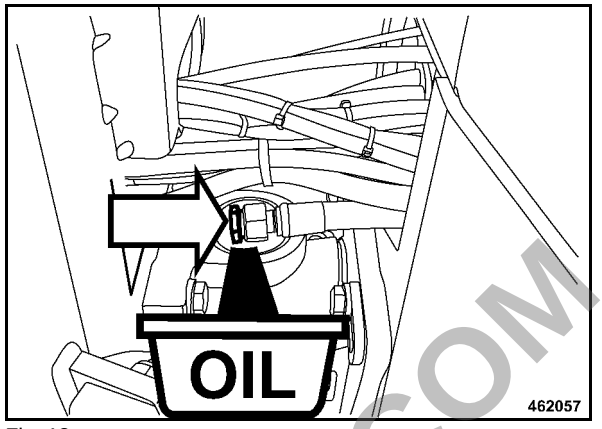


Fig. 13

Unscrew the drain plug (Fig. 13) and catch running out oil.

Turn the oil drain plug back in with a new seal ring.

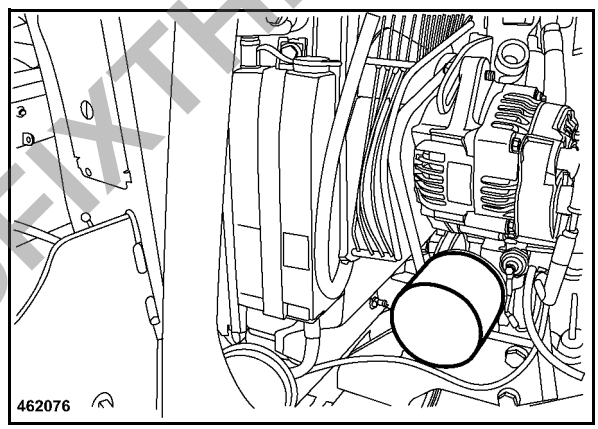


Fig. 14

Unscrew the filter cartridge (Fig. 14) using an appropriate filter wrench.

Clean the sealing face on the filter carrier from any dirt.

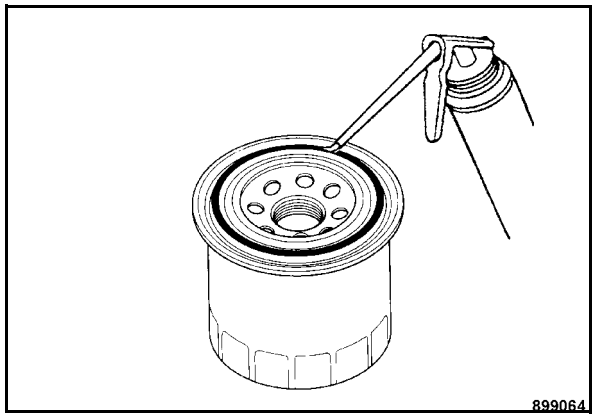


Fig. 15

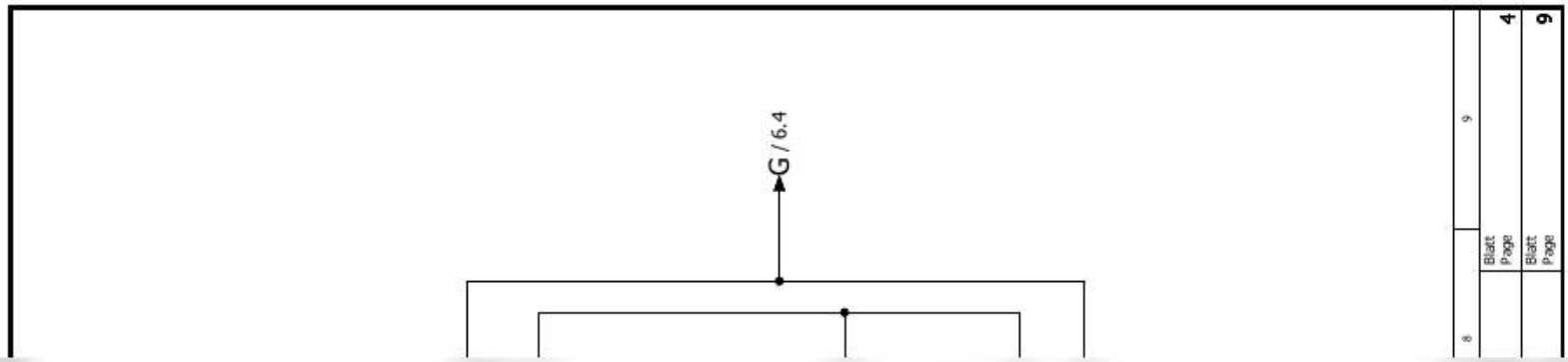
Slightly oil the rubber seal on the new filter cartridge (Fig. 15).

Turn the new filter cartridge on by hand, until the seal contacts.

Tighten the filter element for another half turn.

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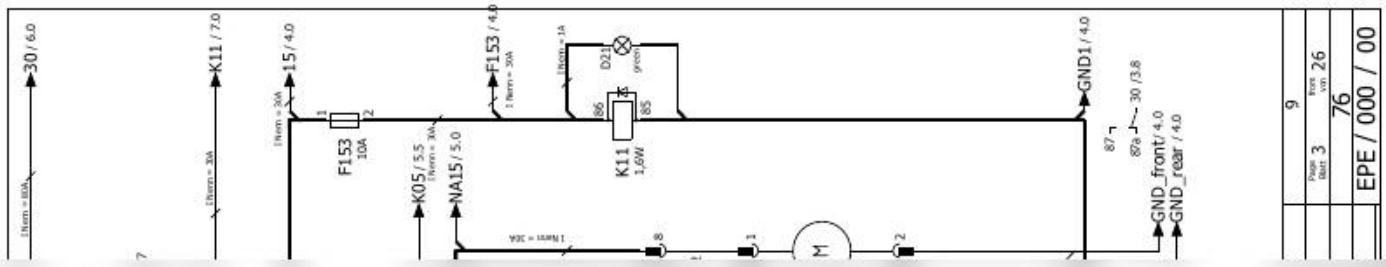
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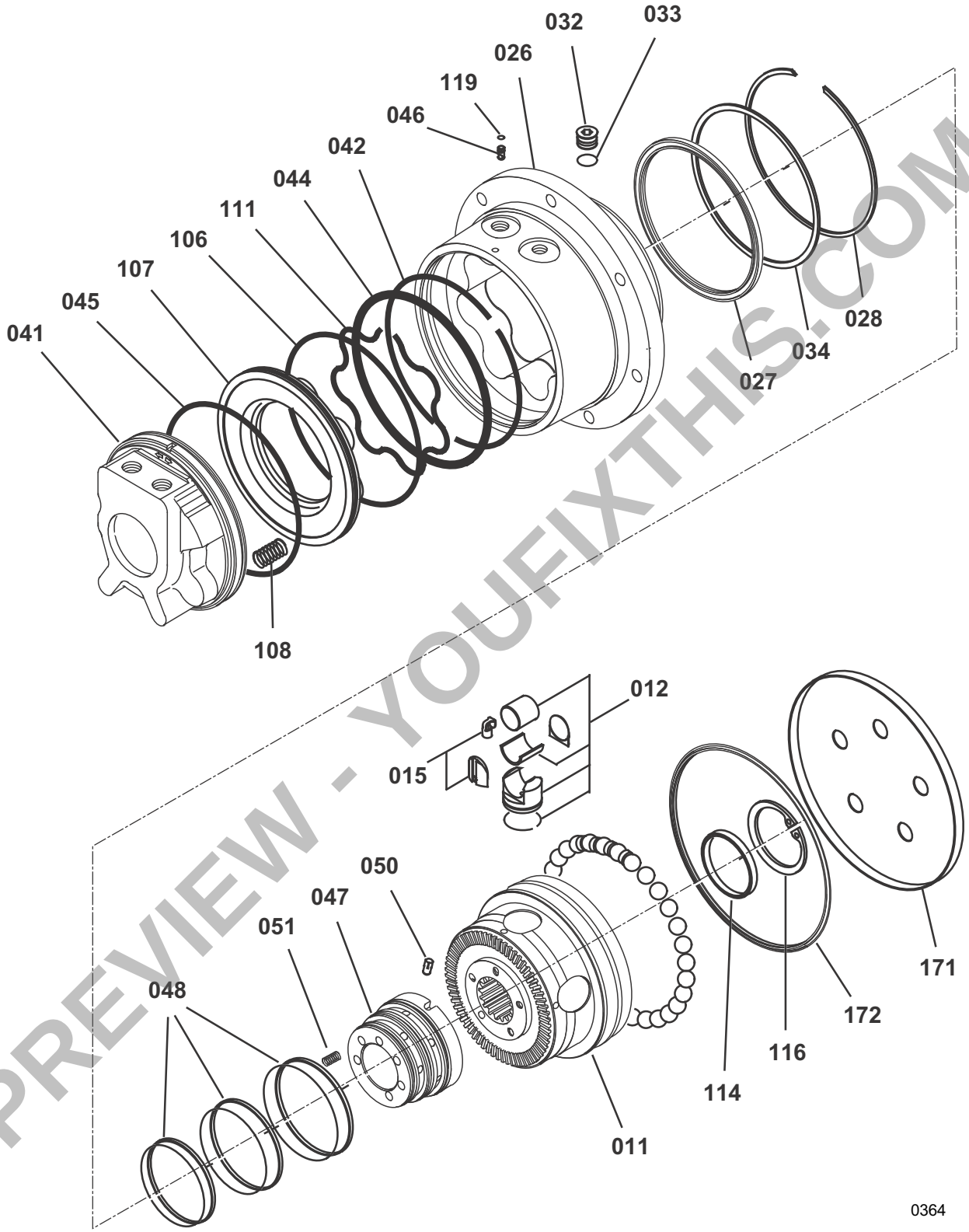


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Motor MK04 ***MK04 motor***

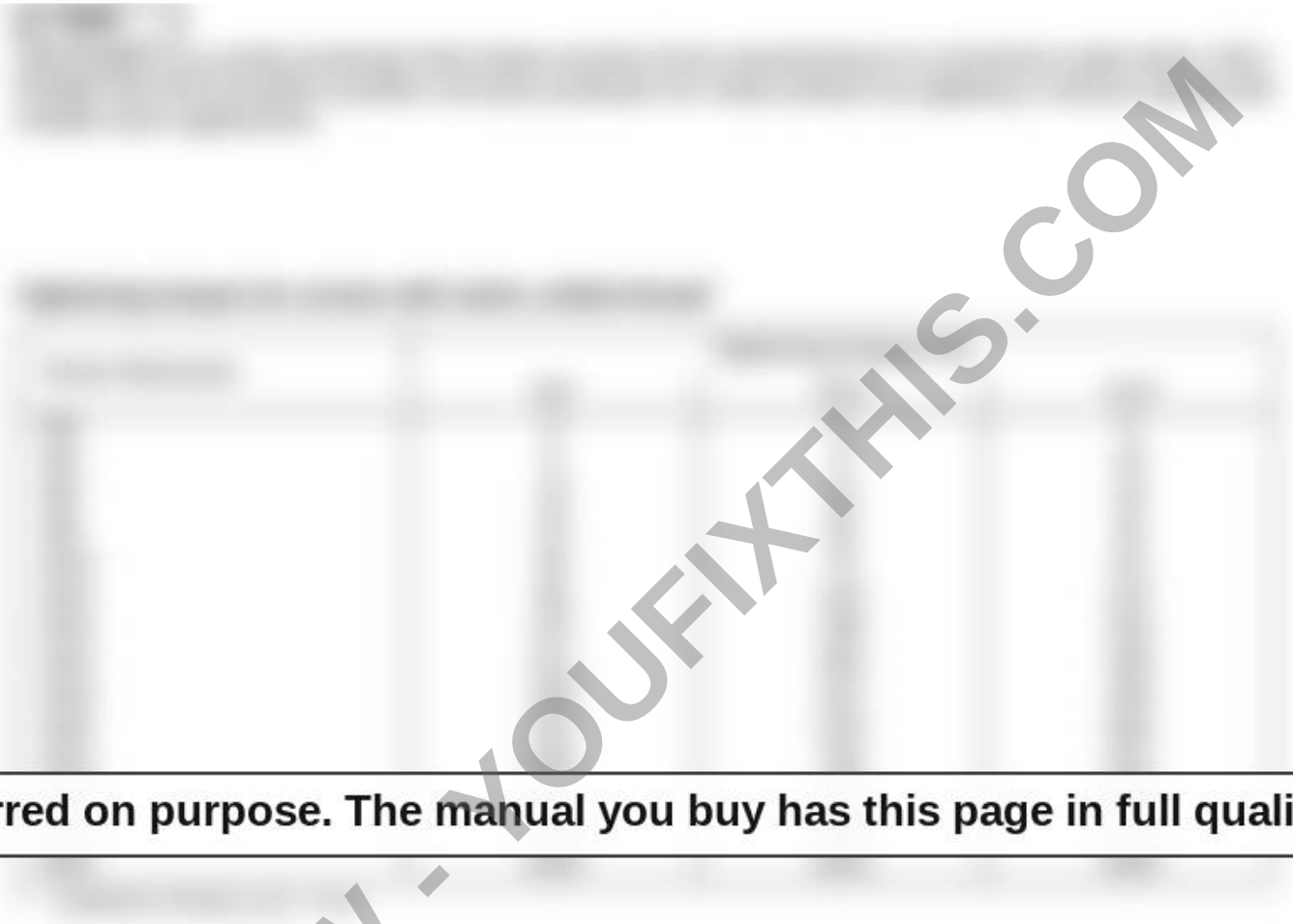


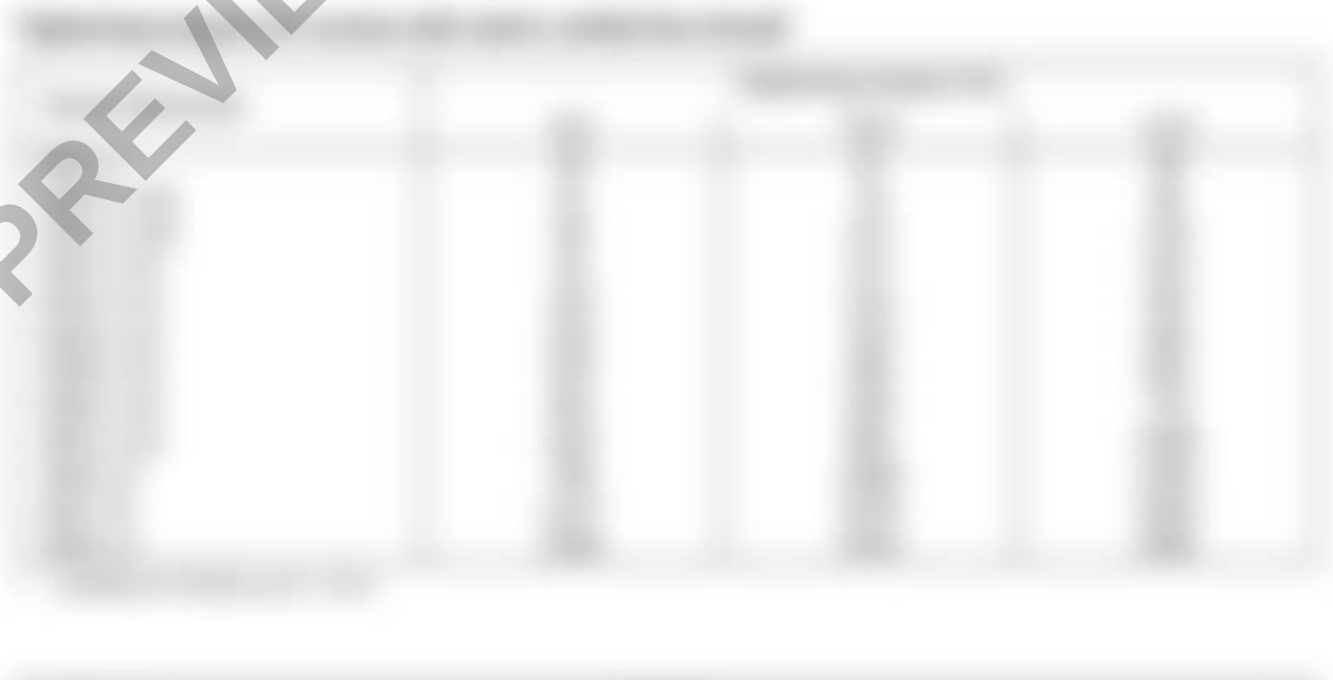
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The values specified in the table apply for screws:

- black oiled
- with surface protection A4C
- with surface protection DACROMET





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BW 100 SCC-5

Driven drum	front	front
Wheels driven	4	4
Tires		
Tire size	205/60-15	205/60-15
Brakes		
Service brake	hydrostatic	hydrostatic
Parking brake	hydro-mechanical	hydro-mechanical
Steering		
Type of steering	Oscill.-articul.	Oscill.-articul.
Steering operation	hydrostatic	hydrostatic
Steering angle	+/- 33 °	+/- 33 °
Oscillation angle	+/- 8 °	+/- 8 °
Inner track radius	1980 mm	78.0 in
Crab walk / lateral offsetting	0 - 50 mm	0 - 2.0 in
Exciter system		
Vibrating drum	front	front
Drive system	hydrostatic	hydrostatic
Frequency (1)	42 Hz	2520 vpm
Frequency (2)	63 Hz	3780 vpm
Amplitude	0.5 mm	0.02 in
Centrifugal force (1)	8 kN	1798 lbf
Centrifugal force (2)	19 kN	4271 lbf
Water sprinkler system		
Type of sprinkling	Pressure	Pressure
Filling capacities		
Fuel (diesel)	approx. 30.0 litres	approx. 7.9 gal us
Water	approx. 100.0 litres	approx. 26.4 gal us
Emulsion	approx. 11.0 litres	approx. 2.9 gal us

i Note

Subject to technical alterations.

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6.9 Switching on the pressure sprinkler system

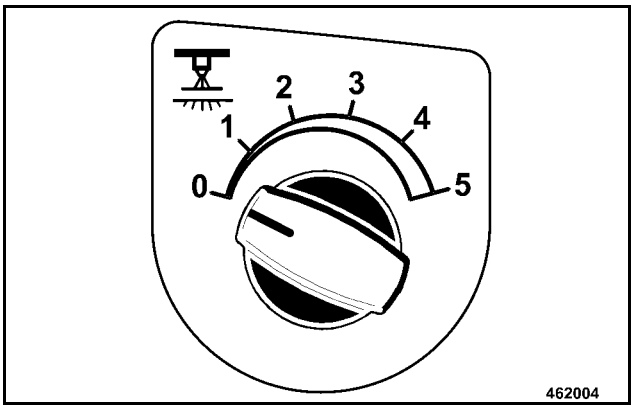


Fig. 1 Interval switch, A01

Step	On-time (sec.)	Off-time (sec.)	Cycle period (sec.)
0	0	15	15
1	3	12	15
2	6	9	15
3	9	6	15
4	12	3	15
5	15	0	15

The interval switch (A01, voltage divider) (Fig. 1) applies different voltages to terminal (A15 instrument cluster, X6:3).

Depending on the switching position /(A01) the instrument cluster (Fig. 2) switches the relay coil (K79) and thus the sprinkling pump (M02) on and off, via terminal (X6:24).

Sprinkling is switched off when the travel levr remains longer than 15 seconds in neutral position.

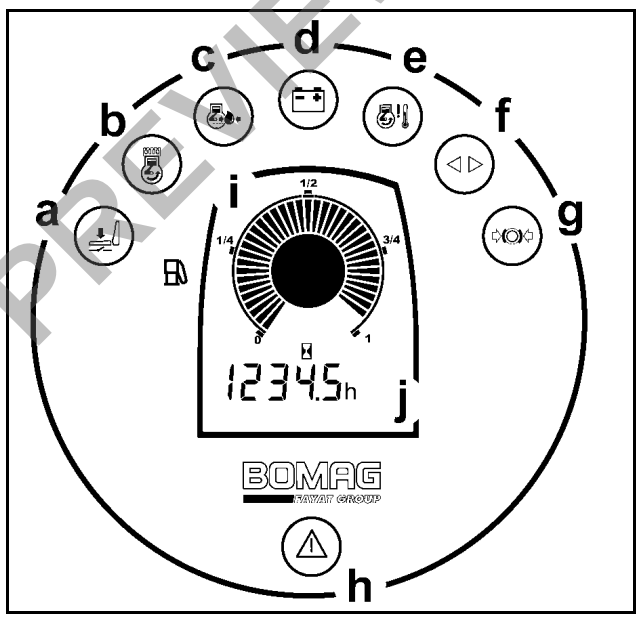


Fig. 2 Instrument cluster, A15

6.10 Level sensor in diesel tank (R03)

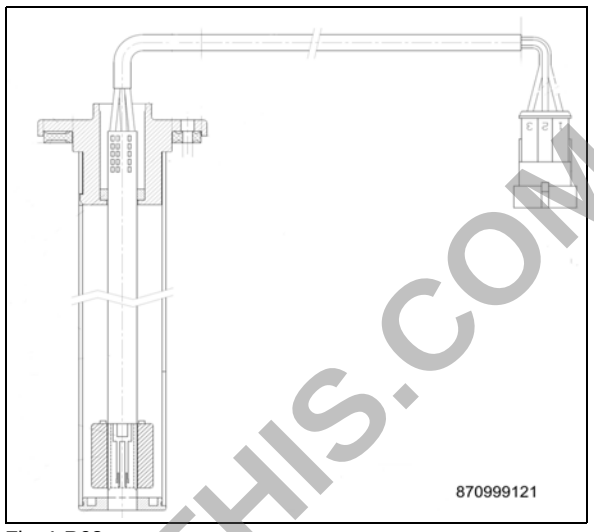


Fig. 1 R03

The fluid of the level to be measured carries a float, which lowers or rises with the fluid level. Contact springs mounted on the float thereby slide along two resistor wires arranged parallel to the movement of the float and generate a resistance value, which is proportionate to the fluid filling level. The corresponding resistance value is measured by an electric meter and displayed as fluid level value.

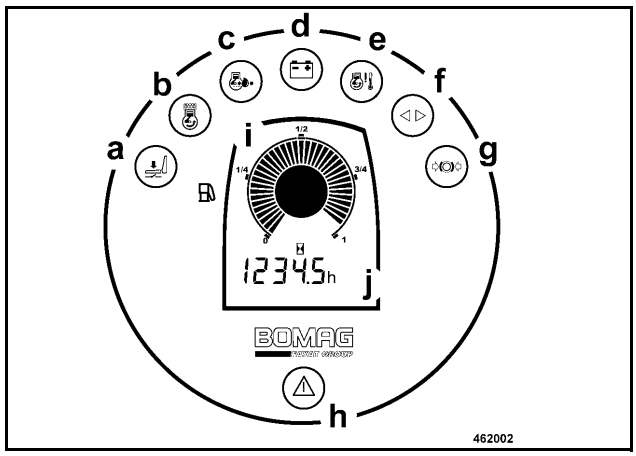


Fig. 2 A15

j = Fuel level gauge

00 Ohm = Tank full

30 Ohm = Tank 1/2

65 Ohm = Tank empty

If no level switch is connected or the cable is broken, no fuel level will be displayed

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Fuel injection pressure

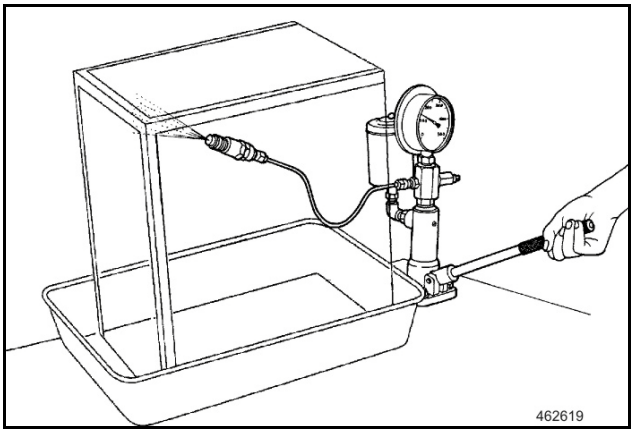


Fig. 2

Mount the injection valve to the nozzle tester (Fig. 2).

Slowly operate the testing lever to measure the pressure at which fuel starts to emerge from the nozzle.

If this measurement is not compliant with the factory specifications replace the adjusting shim (1) in the nozzle holder in order to adjust the nozzle pressure.

Nominal value:

BW80 to BW100-5: 140.0 to 150.0 bar

BW100 to BW138-5: 137.3 to 147.0 bar

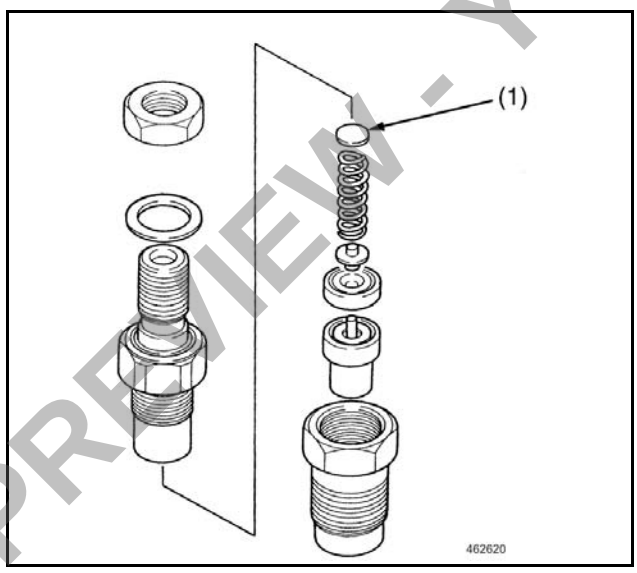


Fig. 3

i Note

0.025 mm (0.00098 inch) difference in the adjusting shim thickness 1 (Fig. 3) results in a opening pressure difference of approx. 6.0 bar.

Leak tightness of the nozzle element

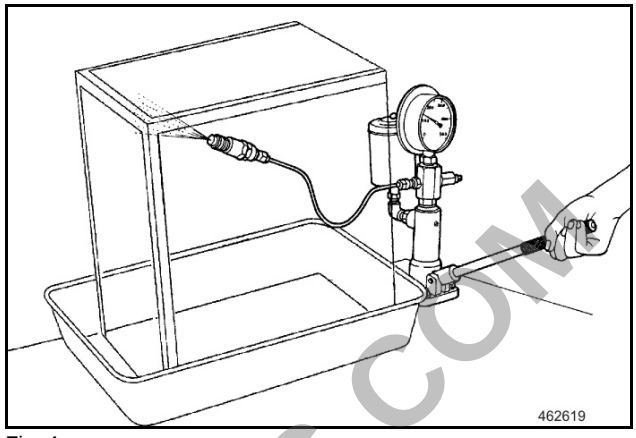


Fig. 4

Mount the injection valve to the nozzle tester (Fig. 4).

Increase the fuel pressure and hold it for 10 seconds.

Nominal value:

BW80 to BW100-5: 130 bar

BW100 to BW138-5: 127 bar

i Note

If a fuel leakage is detected, replace the nozzle element.

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8.10 Vibration circuit

The vibration drive is an open hydraulic circuit.

The vibration drive consists mainly of gear pump, high pressure oil filter, vibration control valve and vibration motors.

The gear pump delivers hydraulic oil through high pressure filters (2) and vibration control valve (1) (Fig. 2) to the two vibration motors, which are connected in series.

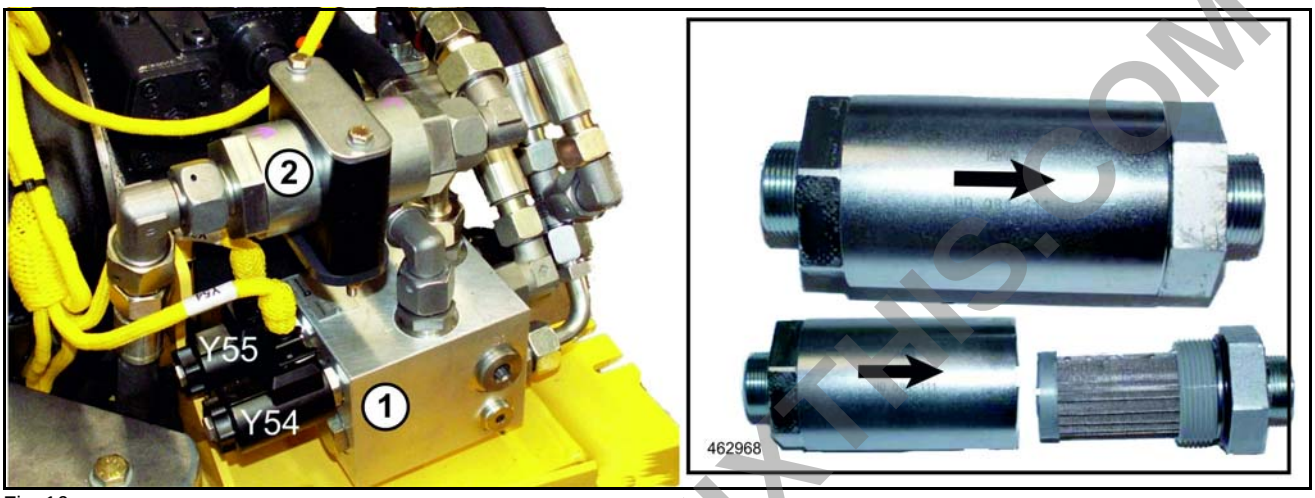


Fig. 16

1 Vibration valve

2 High pressure oil filter

Vibration drive

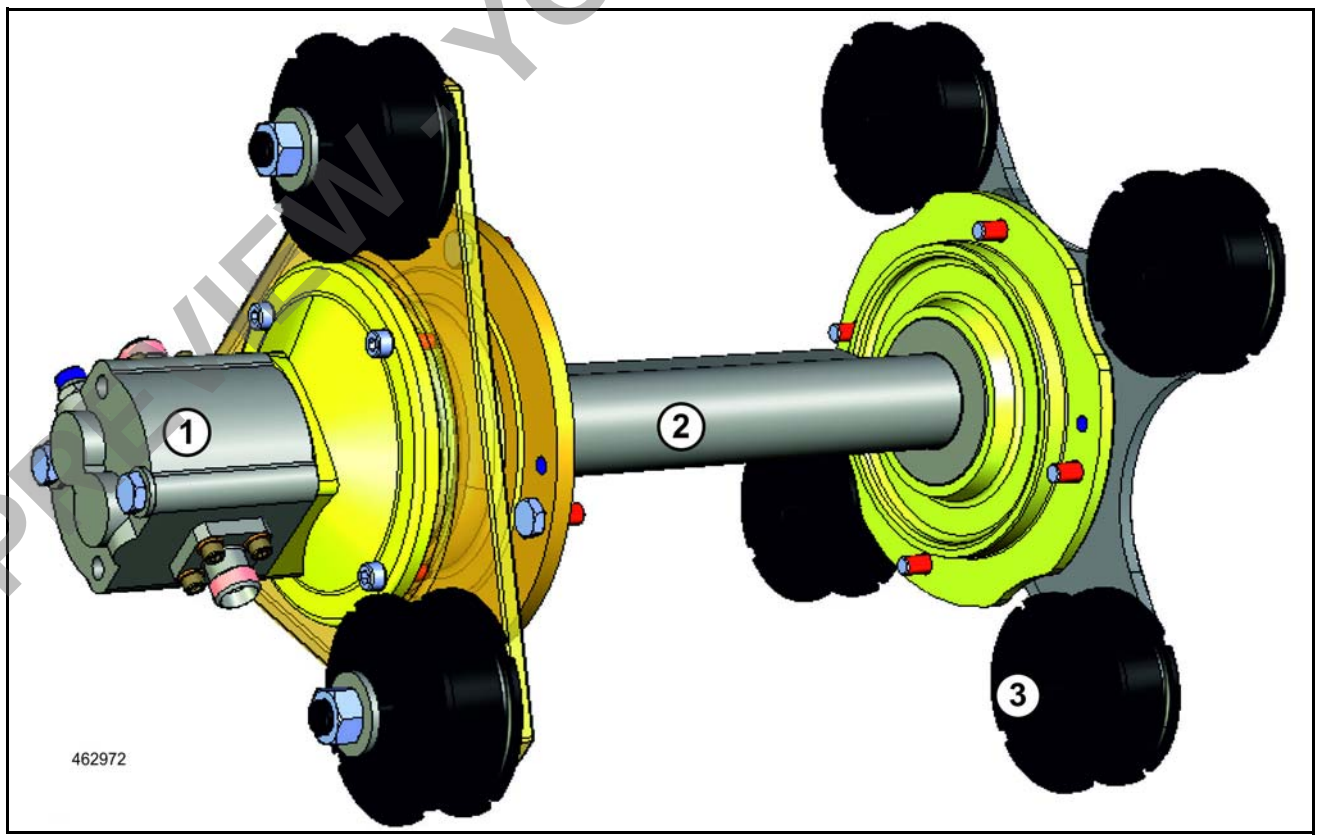


Fig. 1 Vibration drive AD drum

1 Vibration motor

2 Exciter shaft

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10.6 Insufficient travel power

Perform trouble shooting

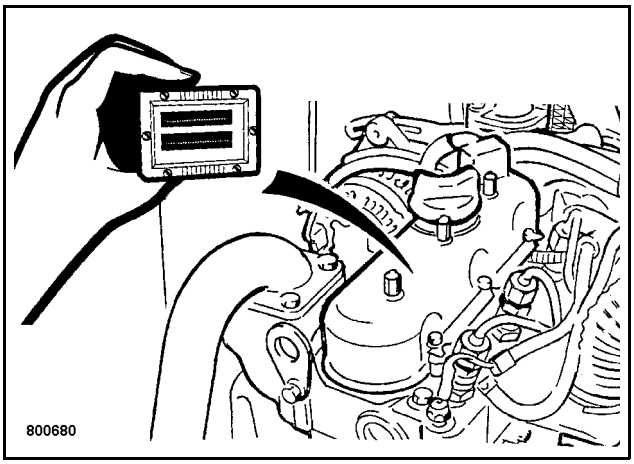


Fig. 5

Check the diesel engine speed (Fig. 5).

Nominal values:

See technical data.

i Note

If the engine speed is not correct, perform trouble shooting on the engine.

If the engine speed is correct, check the travel control.

Checking the travel cable

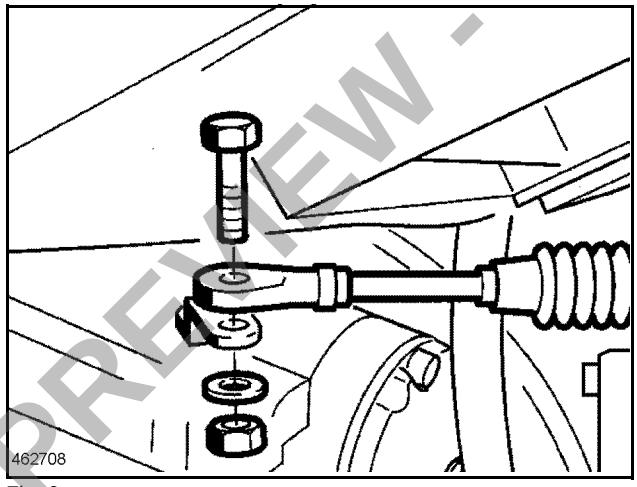


Fig. 6

Unhook the travel control cable (Fig. 6).

Move the travel control lever on the pump to forward and reverse and check whether the pump is actuated to full displacement.

Check the travel cable for signs of wear.

i Note

If maximum speed is not reached, adjust the end stops for the travel lever.

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Assembling the travel bearing on the vibration side

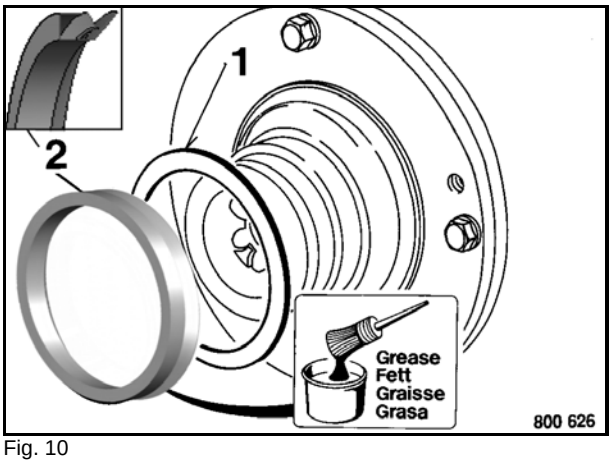


Fig. 10

14. Attach shim 1 (Fig. 10).
15. Install the new V-ring (2) to the bearing flange and lubricate as shown.

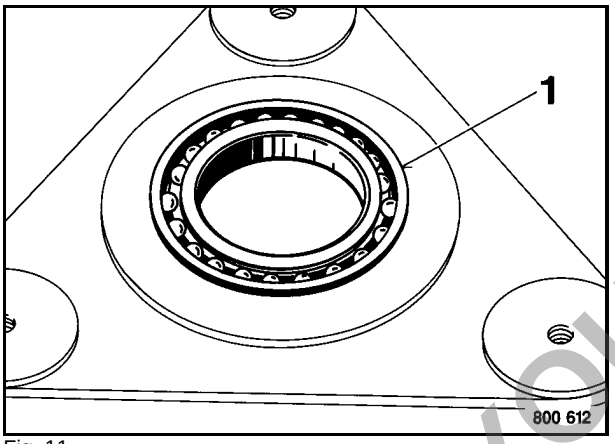


Fig. 11

16. Press ball bearing 1 (Fig. 11) into the flange until it bottoms.

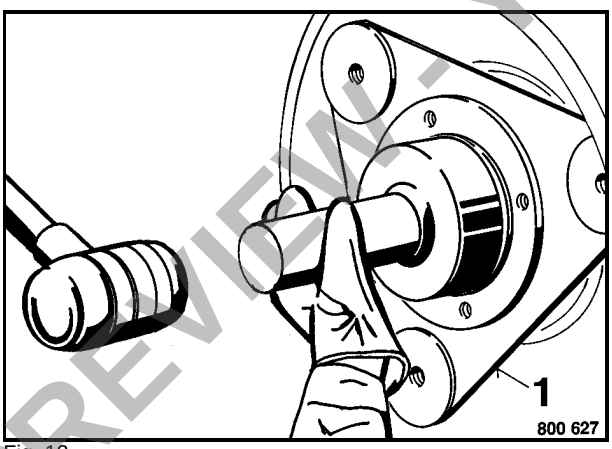


Fig. 12

17. Knock flange 1 (Fig. 12) onto the bearing flange using a drift punch.

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Trouble shooting

DAMAGE → IRON PARTICLES → DETECTION BY FILTERS → PREVENTION……

Troubles		Causes		Remedies
NOISY MOTOR	Without load	Regular rumbling	Worm bearing support	Replace the bearing support
		Vibrations	Mountings and/or hydraulic piping becoming loose	Tighten to torque
	Under load	Clattering	Boost pressure too low	Check the setting and condition of counter-pressure valve
		Cavitation	Excessive internal leaks	Replace the cylinders- block and distribution valve assembly
THE MOTOR DOES NOT REVOLVE			No supply to the motor	Check pump drive and pump inlet
			The circuit does not reach working pressure	Check condition of safety valve (regulator)
			Excessive internal leaks	Replace the cylinders block and distribution valve assembly
			The brake stays engaged	Check the brake pilot circuit
THE MOTOR DOES NOT REVOLVE AT ITS NORMAL SPEED UNDER LOAD			Pump flow is too low	Check drive speed and condition of the pump
			Excessive internal leaks	Check condition of cylinders-block and distribution valve assembly
			Working pressure is too low	Check safety valve setting pressure (regulator)
THE MOTOR REVOLVES IRREGULARLY			Irregular flow	Check the pump flow
			Excessive leaks	Check condition of cylinders-block and distribution valve assembly
EXTERNAL OIL LEAKS			Too high casing pressure	Check the leakage circuit and filter condition
			Seals damaged	Replace seals
			Incorrect assembling	Check tightening of mounting screws, bleed screws and unions

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- Monter la came (025).

Gros chanfreins orientés côté palier

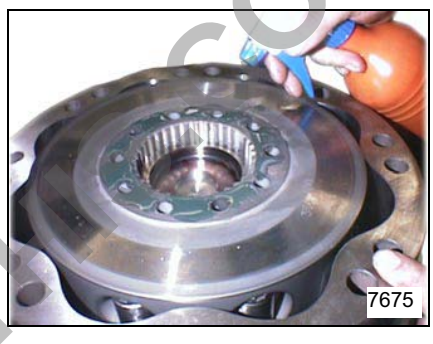
- *Install the cam (025).*

The big chamfers oriented towards bearing support



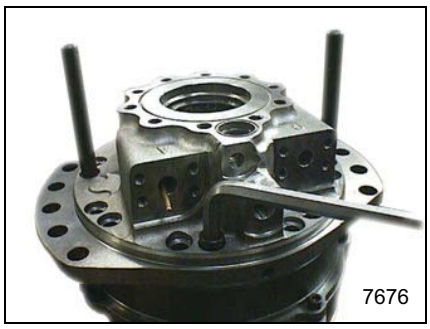
- Huiler avec du fluide hydraulique le dessus du bloc-cylindres.

- *Lubricate with hydraulic fluid the top of the cylinder-block.*



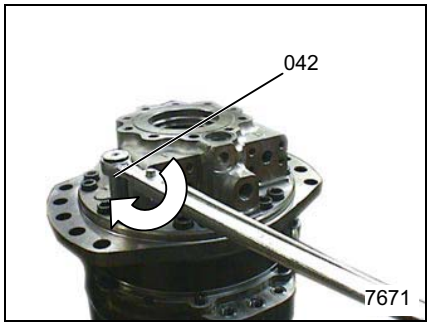
- Monter le couvercle équipé sur l'ensemble. Utiliser les 2 piges de positionnement.

- *Install the valving cover assembly on the unit. Use 2 positioning pins.*



- Monter et serrer au couple les vis (042).
Puis retirer les piges de positionnement.

- *Install and tighten the screws (042).*
Then remove the positioning pins.

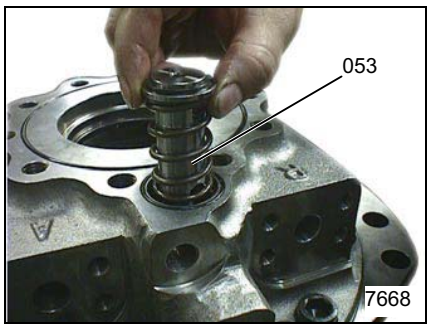


Les 3 étapes suivantes ne sont pas nécessaires si la plaque de fermeture n'a pas été démontée.

The 3 following steps are not necessary if the end cover was not removed.

- Monter le tiroir (053).

- *Install the valve spool (053).*



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