VIBROMAX

DIN EN ISO 9001
Certificate 59557–01

W 102

Vibrating Tandem Roller

Instruction Manual

04058/00221

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9.2 Hydraulic circuit diagrams

Explanations as to the Fig 'Hydraulic circuit diagram 102 ONAN P 220'
4050Z0700a Smooth drum
4050Z0710 Traction drum
4050Z0713a Exciter shift over

1a	Constant displacement hydromotor	Hydrostatic propulsion system, front
1b	Constant displacement hydromotor	Hydrostatic propulsion system, rear
2	-	
3a	Constant displacement hydromotor	Hydrostatic exciter system, front
3b	Constant displacement hydromotor	Hydrostatic exciter system, rear
4	Control unit	Hydrostatic exciter system
5	Engine	HATZ 2 G 30 or ONAN P 220
6a	Variable displacement hydropump	Hydrostatic propulsion system
6b	Constant displacement hydropump	Hydrostatic exciter system
7	-	
8	Switch, hydraulic oil temperature	Hydraulic oil cooler fan
9	Constant displacement hydropump	Hydrostatic steering and brake system
10	Hydraulic oil filter	
11	-	
12	Hydraulic oil cooler	incl. fan
13	Steering cylinder	
14	Steering unit	
15	-	
16	-	
17	Parking brake	
18	Shift over cock	Hydrostatic exciter system

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1 Technical data

1.1 Main data

1.1.01 Machine

Exciter force/drum	10,5 kN	2360 lbf
Exciter force/rolling width	132 N/cm	75.4 lbf/in
Exciter frequency	55 Hz	3300 vpm
Nominal amplitude	0,5 mm	0.02 in
Oscillation angle of front drum	± 5 °	

Weights and loads

Operating weight without ballast acc. to CECE	1168 kg	2575 lbw
Operating axle load without ballast		
front	568 kg	1252 lbw
rear	600 kg	1323 lbw
Operating line load without ballast		
front	7,1 kg/cm	39.8 lbw/in
rear	7,5 kg/cm	42 lbw/in
Maximum weight	1200 kg	2646 lbw

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4.4 Safe operation

4.4.01 General

The following statements correspond to the "Safety regulations for road roller operators," edition 3.88, No. 383, published by the Compensation Insurance Co-operative for industrial workmen.

All NOTES refer additionally to this machine.

4.4.02 Operation

1. Only persons at least 18 years old are suitable for operating and maintaining rollers. They must have received instruction in operation and maintenance.

2. Rollers may be operated for the purpose intended in compliance with the instruction manual. Protective equipment against dangerous points must be available.

3. Rollers may be started and operated only from the operator's area.

4. On articulated joint rollers the roller operator must be sure that nobody is in the way of the articulated area.

5. Drive motors should be started only after checks have been made to ensure that the roller cannot be set in motion.

6. All open windows, doors and flaps must be fixed with the devices provided.

7. The roller operator must ensure that he always has an adequate view of the drive range of the roller. The requisite mirrors must be correctly positioned and kept clean.

If the visibility in the drive range is restricted by the operational conditions, then a guide must be used.

8. Rollers must be used and operated in such a way that stability is ensured. Stability is particularly endangered on the edges of slopes and gaps. To avoid the danger of overturning, rollers should be kept in distance from the edges of slopes and gaps. On roadways, rollers should not be driven over side ledges.

NOTES: Without the application of a downhil-smashing protection, this machine may only be operated in working areas which, in conjunction with their vicinity, are plane and stable so that the machine cannot be exposed to the danger of sliding, rolling over or falling.

If the machine is operated in areas excluded hereunder, it will have to be provided with a downhil-smashing protection.

In this connection, compare VBG 40, UVV "Earthmoving Machinery", § 37, section 2:

"Earthmoving machines are to be protected against rolling over or sliding away in the vicinity of building pits, shafts, trenches, excavation or slope edges."

VBG = Regulations of the Workmen's Compensation Insurance Cooperative

UVV = Accident Prevention Regulations

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6.3 Lubricating

6.3.01 Check oil level in engine

NOTE: During the running-in period of the new engine (approx. 200 operating hours), check oil level of engine twice daily.

1 Place machine in horizontal position.

2 After stopping engine wait for approx. 1 min until the oil has penetrated into the crankcase.

3 Clean surrounding area of oil dipstick, if necessary, draw out oil dipstick, wipe it clean with a fuzz-free cloth and insert the oil dipstick completely.

4 Check oil level.

NOTE: Oil level must reach the upper mark.

5 Remove oil filler screw plug and fill with engine oil.

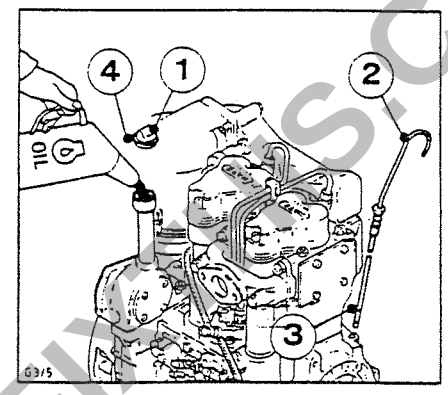
For engine oil, see section 7.2.03.

NOTE: Check O-ring, renew if needed.

NOTE: After filling with oil, wait for approx. 1 min until the oil has penetrated into the crankcase.

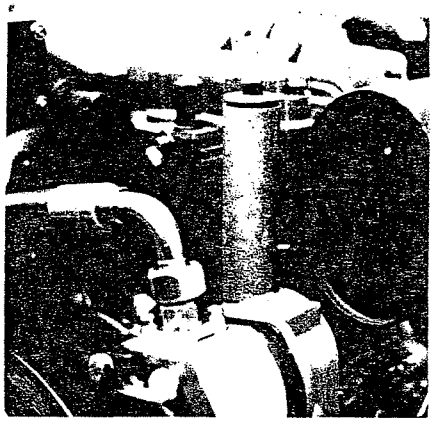
6 Recheck oil level.

7 Screw in oil filler screw plug and tighten by hand.



Check oil level

1 Oil filler screw plug
2 Oil dipstick
3 Upper mark
4 O-ring



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Troubles and potential causes:	Remedies:
5.1.10 Engine oil overpressure is insufficient	
NOTE: Red engine minimum oil overpressure indicator lamp lights up	Stop engine immediately!
1 Too little oil in crankcase	Refill with engine oil. See section 6.3.01.
2 Oil overpressure transmitter and/or indicator lamp defective	Check indicator lamp and transmitter, if required.
3 Leaks in the lubricant circuitry	Check tightness of screwed joints of oil pump, oil tube system, oil filter and oil cooler for leaks. Tighten, if required.
4 Crankshaft bearing clearance is excessively large	Have checked by an expert only.

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7.5.04 to 7.5.05 -

7.5.06 Other lubricating grease

Ambient air temperature, season of the year	Identification in accordance with DIN 51 502	Operating agent point	Filling quantity	Operating agent
All year round	-	Battery	As required	Brands and grades see reverse page!

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6.0.02 Maintenance schedule

Scope of maintenance work													
A	B	C	I				II	III	IV	V	VI	-	-	-	X
Maintenance instants															
Once after			Regularly every												If required
10	20	50	10 1)				50 2)	100	200	500	1000 3)				2000 4)
Operating hours															
			10	20	30	40	50								
			60	70	80	90	-	100							
			110	120	130	140	150								
			160	170	180	190	-	-	200						
			210	220	230	240	250								
			260	270	280	290	-	300							
			310	320	330	340	350								
			360	370	380	390	-	-	400						
			410	420	430	440	450								
			460	470	480	490	-	-	-	500					
			510	520	530	540	550								
			560	570	580	590	-	-	600						
			610	620	630	640	650								
			660	670	680	690	-	700							
			710	720	730	740	750								
			760	770	780	790	-	-	800						
			810	820	830	840	850								
			860	870	880	890	-	900							
			910	920	930	940	950								
			960	970	980	990	-	-	-	-	1000				

Explanations to 6.0.02 and 6.0.03:

1) 10 h or daily
2) 50 h or weekly, whatever occurs first
3) 1000 h or semi-annually, whatever occurs first

NOTE: After every 1000 operating hours, the maintenance schedule has been completely run through once. The complete passage must then be repeated.

4) In addition, every 2000 hours or in case of yearly inspection ≙ final and basic repair in winter

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