

# **Hako- System- Wartung**

# **Hako- System- Maintenance**

  

## **Scrubmaster B400R/RM/RH**

7190

Die ordnungsgemäße Ausführung der Hako-System-Wartung stellt die Verfügbarkeit der Maschine für den Kunden sicher und dient der nachhaltigen Werterhaltung des Powerboss Produktes.  
Der Nachweis der ordnungsgemäßen Durchführung ist die Voraussetzung für den Erhalt der Gewährleistungs- und Garantieansprüche gegenüber dem Hersteller.

The proper execution of the Hako-system-maintenance ensures a maximum availability of the machines of the customer and guarantees a sustainable conservation of value of the Powerboss product.  
The proof of the proper execution is the precondition for warranty and guarantee claims against the manufacturer.

<b>Hako-System Maintenance I every 250 working hours</b>		
<i>Pcs.</i>	<i>Part-No.</i>	<i>Description</i>
2	01077040	Strip, squeegee (cylindrical brush)
1	01378170	Strip, sealing (1360mm)
or 1	01380560	Strip, sealing (1660mm)
1	01378230	Strip, sloted (1360mm)
or 1	01380710	Strip, sloted (1660mm)
1	01380510	Strip, sealing
<i>Liter</i>	<i>Operating mat.</i>	
0.175	15W40	Hydraulic oil, HD-cleaner (once)
		(only if option available)

<b>Hako-System Maintenance II every 500 working hours</b>		
<i>Pcs.</i>	<i>Part-No.</i>	<i>Description</i>
1	00251060	Plate filter
or 1	01375740	Special plate filter H
or 1	01375560	Special plate filter M
		(only on B400RM or RH)
<i>Liter</i>	<i>Operating mat.</i>	

<b>Hako-System Maintenance IV every 1000 working hours</b>		
<i>Pcs.</i>	<i>Part-No.</i>	<i>Description</i>
1	90601907	Round cell CR2032
5.175 m	01372290	Hose, 4x1
1	01179730	Band, ribbed (4EPJ 742)
1	01380400	Rope, L=410,5
1	01372060	Rope, short
(1)	(x)	Rotor, dosing pump <i>(only every 3000h)</i>
<i>Liter</i>	<i>Operating mat.</i>	
0.175	15W40	Hydraulic oil, HP-Cleaner
		<i>(only if option available)</i>

<b>Hako-System Maintenance V every 2000 working hours</b>		
<i>Pcs.</i>	<i>Part-No.</i>	<i>Description</i>
2	01274230	Carbon brush (1230mm brush motor)
or 1	01383590	Carbon brush (1550mm brush motor)
2	01372140	Suction turbine
4	01383600	Carbon brush (Broom motor)*
1	01371210	Motor (1230mm side broom)*
or 1	01371180	Motor (1550mm side broom)*
1	01380590	Motor (dust extraction)*
		* = <i>(only on B400RM or RH)</i>
<i>Liter</i>	<i>Operating mat.</i>	

Work step	additional info	Result
Check for transport damage		
Check scope of delivery according to order	User manual, rigging, charge battery	
Electrical system	Functional check: lighting, work functions, horn etc.	
Hydraulic	Functional and leakage test	
	Oil level after test drive	
Wheels/tires	Retighten wheel nuts	
Probefahrt	mit kompl. Lieferumfang	
Driver Instruction	including safety instructions	
Driver training	Vacation replacement, substitute driver, shift work	
Remarks:		
Date: Service technician: Customer:		

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Work step	additional info	Result
Check hydraulic system for leaks		
Check the broom (sweeper attachment) for wear and damage		
Check side brooms for wear and damage		
Check broom aprons (sealing strips) for clearance, wear and damage		
Check hopper seals		
Check filter system		
Check optical condition		
Remarks:		
Date:		
Service technician:		
Customer:		

**Matrix which documents are required for which test**

	250h	500h	1000h	2000h
250h	x			
500h	x	x		
750h	x			
1000h	x	x	x	
1250h	x			
1500h	x	x		
1750h	x			
2000h	x	x	x	x
2250h	x			
2500h	x	x		
2750h	x			
3000h	x	x	x	
3250h	x			
3500h	x	x		
3750h	x			
4000h	x	x	x	x
4250h	x			
4500h	x	x		
6750h	x			
5000h	x	x	x	
5250h	x			
5500h	x	x		
5750h	x			
6000h	x	x	x	x

Work step	additional info	Result
Check battery and charger		
Check the cables and plug connections of battery and charger for ease of movement, wear and corrosion		
Check battery acid level and acid density, top up with demineralized water if necessary		
Check the settings in the battery management system (BMS) and in the charger		
Check electrical system (lighting, fuses and relays), replace parts if necessary		
Checking of all power connections on the controls, drive control, power relays, fuses, potential distributors		
Check for new software version, update software if necessary		
Read event log memory		
Check the steering for stiffness		
Check the bearing play of the pinions and universal joints		
Check steering pinion and ring gear for damage, grease if necessary		
Check front and rear parking brake (only X-AC drive) for function		
Check the signaling in the multifunction display		
Check the function of the brake; braking deceleration when pressing the brake button must be noticeably stronger than when releasing the accelerator pedal		
Front wheel: Check the condition of the tires and the wheel fastening screws, tighten if necessary	170 ± 25 Nm	



Work step	additional info	Result
Rear wheels: Check the condition of the tires and the wheel fastening screws, tighten if necessary.	Standard drive: 50 Nm, X-AC-Drive: 72 Nm	
Check function of lifting, lowering and pressure reinforcement (brush deck)		
Check the ejection and pickup function of the brushes		
Check the driver of the disc brushes for condition and function, replace if necessary		
Check disk brushes for wear and replace if necessary		
Clean fluff and dirt from the ventilation grilles of the brush motors		
Check the scraper rubber from the side scraper, turn or replace if necessary		
Check the front collision protection with the deflector roller for damage		
Check the sealing strip and slotted strip of the squeegee, turn or replace if necessary		
Check the folding function of the squeegee		
Check the deflector bar/deflector rollers on the squeegee and replace if necessary		
Check the squeegee setting and readjust if necessary		
Check the support rollers of the squeegee for ease of movement and wear, replace if necessary		
Check function of suction turbines		
Check the suction turbine drainage valve and clean if necessary		
Check the lid seal of the flex wall tank and replace if necessary		
Check the function of the lid positioner		
Check the waste water and suction system, replace worn parts if necessary		

Work step	additional info	Result
Check flex wall for damage		
Check solution fill level display, calibrate if necessary		
Check drain hoses (fresh and dirty water) for leaks and function, replace if necessary		
Clean coarse dirt and filter sieve		
Check solution supply, replace worn parts if necessary		
Check solution inlet cover seal		
Check the sieve insert and cover seal of the solution filter for damage, replace if necessary		
Check the sweeper attachmet broom for wear and adjust or replace if necessary		
Check the broom setting and readjust if necessary		
Check the shaking function and suction from the filter system		
Clean plate filter		
Check the sealing strips in the broom room for clearance, wear and damage, adjust or replace if necessary		
Check the side broom for wear and replace if necessary		
Check dust stop for wear and replace if necessary		
Check the side broom setting and readjust if necessary		
Check the function of the coarse dirt flap lock (B400 RH only)		
Check high dump function (B400 RH only)		
Check hydraulic oil level, top up if necessary (B400 RH only). Oil, see appendix operating materials		
Check V-belt drive, replace if necessary		
Change oil, once (HP-Cleaner)		

Work step	additional info	Result
Spray the following points on the machine with penetrating oil:		
•Hinges on the squeegee lift		
•Hinges on the side deflectors		
•Brush lifting hinge and articulation points		
Grease high dump chain (B400 RH only).		
Grease the grease nipples on the lifting cylinder (only B400 RH)		
Check the visual condition of the machine (corrosion and stickers).		
Test drive and function test		
Remarks:		
Date:		
Service technician:		
Customer:		

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Work step	additional info	Result
Check the following electrical performances:		
•Traction motor		
•Brush motors		
•Suction turbines		
•Sweeping attachment with side brooms		
Clean the brush motors of carbon dust and check the carbon brushes for ease of movement and wear, if necessary change the carbon brushes		
Clean the suction turbines of carbon dust and check the carbon brushes for ease of movement and wear, if necessary change the carbon brushes		
Clean the sweeper attachment broom motor of carbon dust and check the carbon brushes for ease of movement and wear, if necessary change the carbon brushes		
Change the backup battery of the electr. control and set real time clock	CR2032	
Check wheel bearing play of the rear wheels, replace wheel bearings if necessary		
Replace dosing pump hose		
Change the V-belt in the sweeper attachment		
Replace the sweeper attachment lifting cables		
Change oil (HP-Cleaner)		
Replace the dosing pump rotor after three years (3000 hours).		

Work step	additional info	Result
Remarks:		
Date: Service technician: Customer:		

Work step	additional info	Result
Clean brush motors from carbon dust and change carbon		
Change suction turbines		
Clean the sweeper attachment broom motor from carbon dust and change the carbon brushes		
Change side broom motors		
Change dust extraction motor		
Remarks:		
Date:		
Service technician:		
Customer:		