

Hako- System- Wartung Hako- System- Maintenance

Hako- Citymaster 1250

Hako- Citymaster 1250 (1433.21) Classic
Hako- Citymaster 1250 (1433.22) Comfort mit Klimaanlage (AC)
Hako- Citymaster 1250 C (1433.31) Classic
Hako- Citymaster 1250 C (1433.32) Comfort mit Klimaanlage (AC)



Hako-Citymaster 1250 basic machine

Hako-System Maintenance Delivery (in-house standards for delivery)

to be performed by	authorised Hako Service
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Serial no.:		
Operating hours:		
Customer:		

Works to be performed		Techn. data
Damages in transit	Р	
Delivery acc. to order	P set-up, fill up fuel	
Engine	P oil lever	
Hydraulic System	P oil level after mounting and trial ride	
	with implements	
Tire Pressure	P check inflation pressure (tires: 195R14C)	3,5 bar
Seat contact switch	P test with accel. pedal to engine stop	
Windscreen washer system	Р	
Coolant	Р	
Bio oil sticker	Р	
Trial ride	with compl. delivery including funct.	
	check for all implements to be	
	supplied according to the order	
	completeness of coding plugs	
	for purchased implements	
Delivery	P manual basic machine	
	manual of implements	
	enclosure accompan. documents	
Driver instruction	incl. specific safety instructions	
Driver training **	spare driver, substitute for holidays	
	shift work	

P = Test: function, leakage, refill, adjust W = replace (W) = change if required

^{* =} at least once yearly ** = against specific accounting



Hako-Citymaster 1250 basic machine

Hako System Maintenance A 2 (in-house standards for delivery)

Implement type:	Diement type: Order no.		no.
Accessory type:	• •		
Customer:			
Works to be performed:			Techn. data:
Damages in transit	F		
Set-up		with all covers, safety and	
		protective elements	
Mounting to basic machine		coding plug	
Functional check	F		
Level of liquids	F		
Completeness of delivery	F	instruction manuals for all attached	
		implements and tools delivered by Hako	
		(purchased)	
Driver instruction		mounting/dismounting/safety instruct.	
Hako System Maintenance 50 fo	r at	tached implements and tools	
Oil levels	Р	transmission, lubrication points	acc. to manufacturer
			in instr. manual
V-belts	Р	tension Optikrik	acc. to manufacturer
			in instr. manual

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Hako-Citymaster 1250 basic machine

Hako System Maintenance A 2 (in-house standards for delivery)

Works to be performed		l echn. data:	
Hako System Maintenance 250	for attached implements and tools		
Perform all maintenance and			
service works	as specified by manufacturer		
Safety check of all tools	P mower blades, brush/broom, spreader etc.		
Completeness and function of all			
safety and protective elements	Р		
Trial ride	Р		

^{* =} at least once yearly ** = against specific accounting



Hako-Citymaster 1250 basic machine

Hako System Maintenance K (part of the instruction manual)

to be performed by the custome	er	
Serial no.:		
Operating hours:		
Customer:		
Works to be performed:		Techn. data
Maintenance and service works	to be	
performed by the owner:		
Each work day:		
	clean machine as required	
Engine	P oil level	8.5 { SAE 15W40
	P air filter, check indicator	
Fill fuel oil		
Coolant level	P (compensation tank)	
Combined radiator	P oil / water (clean)	
Weekly in addition		
Clean machine as required		
Hydraulic system	P check oil level	
Lubrication compl.:	P Sweepin unit, front tool carrier,	grease gun
	suction mouth (17)	grease:
	Pedals (3X)	
	Hinge (2X)	
	Hopper (6X)	
Details can be found in the	e operators manual CM 1250	
Lighting system	Р	
Tire pressure	P check inflation pressure	3,0 bar
	(tires 195R14C)	

P incl. brake test

Trial ride

 $^{{\}sf P} \ = {\sf Test:} \ function, \ leakage, \ \ refill, \ adjust$

W = replace (W) = change if required

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Hako System Maintenance unique (50 h. of operat.)

Serial no.:		
Operating hours:		
Customer:		

Works to be perfor	med:		Techn. data:
Clean machine, if re	quired **		
Engine	W	engine oil W	8,6 ltr SAE 15-W-40
	W		
		fuel filter W	
	P	drain water seperator	11401140000
	Р	engine idling speed	1100 ¹/min +/- 50
	Р	engine service speed	2450 ¹/min +/- 25
	Р	engine max. speed	2750 ¹/min +/- 25
	Р	check V-belt generator for tension	PN 01142880
	Р	check V-belt air condition for tension	PN 01143290
	Р	check radiator and coolant hoses	
		for leakage	
	Р	check combined radiator and radiator grill	
		for soiling	
Brakes	Р	check brake fluid of service brake,	0,5 ltr SAE J 1703
		top up if required	
	Р	check service brake function	
		readjust if required	
	Р	check parking brake function	
		readjust if required	
	Р	Check bowden cables from the parking brake	
		brake for damages and wearing	
Tires	P	check wheel bolt for tight seating	Nm 160
	P	check inflation pressure	
	<u> </u>	195 R14 C	3,5 bar
		215/ 65 R14 C	2,9 bar
		26X 12.00- 12 TL8 8PR	1,5 bar

P = Test: function, leakage, refill, adjust

W = replace (W) = change if required

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Hako System Maintenance unique (50 h. of operat.)

Works to be performed		· · · · ·	Techn. data:
Hydraulic system	W	return filter W	PN 01092790
	P	check oil level	
	Р	check function of hydraulic system	
	Р	check hydraulic system at the hydraulic	
		cylinders, screw connections	
		and hydraulic lines for leakage	
	Р	check function of hand pump	
		(lift dirt hopper by using hand pump)	
Steering (Hydr.)	Р	check for function and ease of movement	
	Р	check ball heads of steering cylinder	
Bowden cables	Р	check for function and ease of movement	
(drive pedal)		as well as neutral position	
Sweeping unit	Р	check for damages and wearing	
	Р	check sweeping track and adjust if required	
	Р	water spray system: check spray nozzles,	
		spray nozzle filter and filter sieve	
		and clean if required	
Suction unit	Р	check for damages and wearing	
	Р	check adjustment of suction unit	clearance to the ground:
			front 3 + 2 mm
			rear 8 + 2 mm
	Р	check suction hose for damages and firm seat	
	Р	check sealing between suction pipe	
		and dirt hopper	
	Р	check function of fresh water nozzle and	
		recirculation water system at the sucition unit	
	Р	check coars particle flap for damges	

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Hako System Maintenance unique (50 h. of operat.)

Works to be performed: 5	0h of	operating	Techn. data:
Dirt hopper	Р	check for soiling	
	Р	check function of bog ground flap	
Suction fan	Р	check soiling	
	Р	check fan speed	2600 1/min fan speed
		with 2750 engine rpm	
	Р	check hydraulic motor and lines for density	
		(hydraulic motor and lines for leakages)	
Flap of dirt hopper	Р	check baffle plate for wearing	PN 01161060
	Р	check sealings of the flap	
		for density and damages	
	Р	check cover joint and bearing of	
		hopper flap	
	Р	check exhaust air side of the flap for soiling	
Electric System	— Р	check function	
Wiring	Р	check for chaffing marks and damages	
Battery	P	charging condition	
	Р	clean and grease battery terminals	
Cabin	Р	check function of heating	
	Р	check function of air conditioner	
Windscreen washer fluid	Р	windscreen washer fluid	
Lubrication compl.:	Р	Sweeping unit, front tool carrier,	
		suction mouth (17)	
		Pedals (3X)	
		Hinge (2X)	
		Hopper (6X)	
Details can be found in	the	operators manual CM 1250	

P = Test: function, leakage, refill, adjust

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Hako System Maintenand	ce unique (50 h. of operat.)	
Works to be performed: 50h of operating		Techn. data:
Look of the machine		
	signs, labels (30 km/h)	
Trial ride	test of all functional and safety-	
	relevant components, brake test	
Driver instruction	if required, additional instructions	
	on operation, maintenance	
	and safety	
Driver training **	spare driver, subsitute for holidays	
	shift work	
Comments; service infor	mation for customer:	
Location:	Date:	
Signature, customer:		
Signature, service techni	ician:	
<u> </u>		

P = Test: function, leakage, refill, adjust

W = replace (W) = change if required

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Hako System Maintenance I* (250 h. of operat.)

Customer:		
Operating hours:		
Serial no.:		

Works to be perfo	rmed:		Techn. data:
Clean machine, if r	equired **		
Engine	W	engine oil W	8,6 ltr SAE 15-W-40
	W	engine oil filter W	PN 01140320
	Р	drain water seperator	
	Р	clean air filter element	
	Р	check V-belt generator for tension	PN 01142880
	Р	check V-belt air condition for tension	PN 01143290
	Р	check radiator and coolant hoses	
		for leakage	
	Р	check combined radiator and radiator grill	
		for soiling, clean if required	
Brakes	Р	check brake fluid of service brake,	0,5 ltr SAE J 1703
		top up if required	
	P	check service brake function	
		readjust if required	
	P	check parking brake function	
		readjust if required	
	Р	Check bowden cables from the parking brake	
		for damages and wearing	
Tires	Р	check wheel bolt for tight seating	Nm 160
	Р	check inflation pressure	
		195 R14 C	3,5 bar
		215/ 65 R14 C	2,9 bar
		26X 12.00- 12 TL8 8PR	1,5 bar

P = Test: function, leakage, refill, adjust
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Hako System Maintenance I* (250 h. of operat.)

Works to be performe	d: Every	250h of operating CM 1250	Techn. data:
Hydraulic system			
	Р	check oil level	
	Р	check function of hydraulic system	
	Р	check hydraulic system at the hydraulic	
		cylinders, screw connections	
		and hydraulic lines for leakage	
	Р	check function of hand pump	
		(lift dirt hopper by using hand pump)	
Ctooring (Hydr)		check for function and ease of movement	
Steering (Hydr.)	<u>Р</u>		
	<u>Р</u>	check ball heads of steering cylinder	
Bowden cables	Р	check for function and ease of movement	
(drive pedal)		as well as neutral position	
Sweeping unit	Р	check for damages and wearing	
	Р	check sweeping track and adjust if required	
	Р	water spray system: check spray nozzles,	
		spray nozzle filter and filter sieve	
		and clean if required	
Suction unit	P	check for damages and wearing	
	Р	check adjustment of suction unit	clearance to the ground:
		,	front 3 + 2 mm
			rear 8 + 2 mm
	Р	check suction hose for damages and firm seat	
	P	check sealing between suction pipe	
		and dirt hopper	
	Р	check function of fresh water nozzle and	
	-	recirculation water system at the sucition unit	
	Р	check the flap from the suction unit	
		for damages and wearing	
		To carraged and noaming	

P = Test: function, leakage, refill, adjust

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Hako System Maintenance I* (250 h. of operat.)

orks to be performed: E	very	250h of operating	Techn. data:
irt hopper	Р	check for soiling	
	Р	check function of bog ground flap	
uction fan	Р	check soiling	
	Р	check bearing clearence if there are any	
		vibrations at the suction fan	
	Р	check the suction sieve from the fan	
		for soiling an damges	
	Р	check hydraulic motor and lines for density	
		(hydraulic motor and lines for leakages)	
p of dirt hopper	Р	check baffle plate for wearing	PN 01161060
	Р	check sealings of the flap	
		for density and damages	
	Р	check cover joint and bearing of	
		hopper flap	
	Р	check exhaust air side of the flap for soiling	
ctric System	P	check function	
ring	Р	check for chaffing marks and damages	
ttery	Р	charging condition	
	Р	clean and grease battery terminals	
oin	P	clean air filter cabin	
	Р	check function of heating	
	Р	check function of air conditioner	
ndscreen washer fluid	Р	windscreen washer fluid	
brication compl.:	Р	Sweepin unit, front tool carrier,	
		suction mouth (17)	
		Pedals (3X)	
		Hinge (2X)	
		Hopper (6X)	
etails can be found	in th	e operators manual CM 1250!	

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Hako System	Maintenance I*	(250 h. of or	perat.)
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Works to be performed: Eve	Techn. data:	
Look of the machine	coloring, corrosion	
	signs, labels (30 km/h)	
Trial ride	test of all functional and safety-	
	relevant components, brake test	
Driver instruction	if required, additional instructions	
	on operation, maintenance	
	and safety	
Driver training **	spare driver, subsitute for holidays	
	shift work	
Comments; service informa	ation for customer:	
Location:	Date:	
Signature, customer:	Date.	
Signature, service technicia	an·	
orginature, service tecililici	ин.	

P = Test: function, leakage, refill, adjust
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Hako System Maintenance II* (500 h. of operat.)

Serial no.:			
Operating hours:			
Customer:			
Works to be perfe	ormed:		Techn. data:
Clean machine, if			
Engine	W engine oil	W	8,5 ltr SAE 15-W-40
	W engine oil filter	W	PN 01140320
	144 6 1 60 h	14.	DN 04440000

Clean machine, if re	equired **			
Engine	W	engine oil	N	8,5 ltr SAE 15-W-40
	W	engine oil filter	Ν	PN 01140320
	W	fuel filter \	N	PN 01140330
	Р	drain water separator		PN 01144310
	W	change air filter element	Ν	PN 01143470
	Р	check V-belt generator for tension		PN 01142880
	Р	check V-belt air condition for tension		PN 01143290
	Р	check radiator and coolant hoses		
		for leakage		
	Р	check combined radiator and radiator grill		
		for soiling, clean if required		
Brakes	Р	check brake fluid of service brake,		0,5 ltr SAE J 1703
		top up if required		
	Р	check service brake function		
	Р	readjust if required		
	Р	check parking brake function		
		readjust if required		
	Р	Check bowden cables from the parking brake		
		for damages and wearing		
Tires	Р	check wheel bolt for tight seating		Nm 160
	Р	check inflation pressure		
		195 R14 C		3,5 bar
		215/ 65 R14 C		2,9 bar
		26X 12.00- 12 TL8 8PR		1,5 bar

P = Test: function, leakage, refill, adjust

W = replace (W) = change if required

* = at least once yearly

^{** =} against specific accounting

Works to be performed	: Every	500h of operating	Techn. data:
Hydraulic system	W	replace hydraulic oil filter	PN 01092790
	Р	check oil level	sight glass
	Р	check function of hydraulic system	
	Р	check hydraulic system at the hydraulic	
		cylinders, screw connections	
		and hydraulic lines for leakage	
	Р	check function of hand pump	
		(lift dirt hopper by using hand pump)	
Steering (Hydr.)	Р	check for function and ease of movement	
	P	check ball heads of steering cylinder	
Bowden cables	Р	check for function and ease of movement	
		as well as neutral position	
		Check for damages and wearing	
Sweeping unit	Р	check for damages and wearing	
	Р	check sweeping track and adjust if required	
	Р	water spray system: check spray nozzles,	
		spray nozzle filter and filter sieve	
		and clean if required	
Suction unit	Р	check for damages and wearing	
	Р	check adjustment of suction unit	clearance to the ground:
			front 3 + 2 mm
			rear 8 + 2 mm
	Р	check suction hose for damages and firm seat	
	Р	check sealing between suction pipe	
		and dirt hopper	
	Р	check function of fresh water nozzle and	
		recirculation water system at the sucition unit	
	Р	check the flap from the suction unit	
		for damages and wearing	

P = Test: function, leakage, refill, adjust
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Works to be performed: E	very	500h of operating	Techn. data:
Dirt hopper	Р	check for soiling	
	Р	check function of bog ground flap	
	Р	check soiling	
	Р	check bearing clearence if there are any	
		vibrations at the suction fan	
	Р	check the suction sieve from the fan	
		for soiling an damges	
	Р	check hydraulic motor and lines for density	
		(hydraulic motor and lines for leakages)	
Flap of dirt hopper	Р	check baffle plate for wearing	PN 01161060
	Р	check sealings of the flap	
		for density and damages	
	Р	check cover joint and bearing of	
		hopper flap	
	Р	check exhaust air side of the flap for soiling	
Electric System	Р	check function	
Viring	Р	check for chaffing marks and damages	
Battery	Р	charging condition	
	Р	clean and grease battery terminals	
Cabin	Р	clean air filter cabin	
	Р	check function of heating	
	Р	check function of air conditioner	
Vindscreen washer fluid	Р	windscreen washer fluid	
ubrication compl.:	Р	Sweepin unit, front tool carrier,	
		suction mouth (17)	
		Pedals (3X)	
		Hinge (2X)	
		Hopper (6X)	
Details can be found i	n th	e operators manual CM 1250!	

P = Test: function, leakage, refill, adjust
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Works to be performed: E	Techn. data:	
Look of the machine	coloring, corrosion	
	signs, labels (30 km/h)	
Trial ride	test of all functional and safety-	
	relevant components and implements	
	brake test	
Comments; service informa	tion for customer:	
Location:	Date:	
Signature, customer:		
Signature, service technicia	ın:	

P = Test: function, leakage, refill, adjust
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Hako System Maintenance III* / S* (1000 h. of operat. safety check)

Serial no.:		
Operating hours:		
Customer:		

Works to be performed:			Techn. data:
Clean machine, if r	equired **		
Engine	W engine oil	W	8,6 ltr SAE 15-W-40
	W engine oil filter	W	PN 01140320
	W fuel filter	W	PN 01140330
	P drain water separator		PN 01144310
	W change air filter element	W	PN 01143470
	W replace safety cartridge of air cleaner		PN 01143480
	P check V-belt generator for tension		PN 01142880
	P check V-belt air condition for tension		PN 01143290
	P check radiator and coolant hoses		
	for leakage		
	P check combined radiator and radiator grill		
	for soiling, clean if required		
	P check air gap inlet/outlet with cold engine,		inlet/outlet valves:
	readjust if required		0,20 mm
	W replace diaphragm in valve bonnet		PN 01144410
	of engine ventilation system		
	W change coolant (anti-freeze		7,5 ltr. water incl.
	for winter operation!)		40 - 60%
			coolant additive
			Glaceelf Auto Supra
	P engine idling speed		1100 ¹/min +/- 50
	P engine service speed		2450 ¹/min +/- 25
	P engine max. speed		2750 ¹/min +/- 25

P = Test: function, leakage, refill, adjust W = replace (W) = change if required

^{* =} at least once yearly ** = against specific accounting

Works to be performed	d: Every 1000h of operating	Techn. data:
Brakes	P check brake fluid of service brake,	0,5 ltr SAE J 1703
	top up if required	
	P check service brake function	
	P check brake shoes;	2x PN 00302060
	change if required	2x PN 00301890
	P readjust if required	
	P check parking brake function	
	readjust if required	
	P Check bowden cables from the parking brake	
	brake for damages and wearing	
Wheels	P check wheel bolt for tight seating	130 Nm
	(even after wheel change)	
Tires	P check tires	
	(damage, tread depth)	
	P check inflation pressure	
	195 R14 C	3,5 bar
	215/ 65 R14 C	2,9 bar
	26X 12.00- 12 TL8 8PR	1,5 bar
Hydraulic System	P Sample of oil from the hydraulic oil,	
	and let check the oil sample.	
	W replace hydraulic oil filter	PN 01092790
	W replace ventilation filter in hydraulic tank	PN 01082600
	P check oil level	
	P Remove oil sample and have examined	
	P check function of hydraulic system	
	P check hydraulic system at the hydraulic	
	cylinders, screw connections	
	and hydraulic lines for leakage	
	P check function of hand pump	
	(lift dirt hopper by using hand pump)	
	(mit and mit and parties)	

P = Test: function, leakage, refill, adjust
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Works to be performe	ed: Every 1000h of operating	Techn. data:
Bowden cables	P check at engine group (1x)	PN 01166240
	P check at drive pump (2x)	PN 01140240
Drive pedal	P check for function and ease of movement,	PN 01168770
	replace parts or drive pedal if required	
Articulated joint	P check play and rubber damper	
Sweeping unit	P check for damages and wearing	
	P check sweeping track and adjust if required	
	P water spray system: check spray nozzles,	
	spray nozzle filter and filter sieve	
	and clean if required	
Suction unit	P check for damages and wearing	
	P check adjustment of suction unit	
	clearance to the ground	front 3 + 2 mm
		rear 8 + 2 mm
	P check suction hose for damages and firm seat	
	P check sealing between suction pipe	
	and dirt hopper	
	P check function of fresh water nozzle and	
	recirculation water system at the sucition unit	
	P check the flap from the suction unit	
	for damages and wearing	

P = Test: function, leakage, refill, adjust
W = replace (W) = change if required
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ver	1000h of operating		Techn. data:
Р	check for soiling		
Р	check function of bog ground flap		
W	replace the rubber buffer from the (4X)	W	PN 01160950
	suction fan		
Р	check suction fan for speed		2600 1/min fan rpn
	with 2750 engine rpm.		
Р	check bearing clearence if there are any		
	vibrations at the suction fan		
Р	check the suction sieve from the fan		
	for soiling an damges		
Р	check hydraulic motor and lines for density		
	(hydraulic motor and lines for leakages)		
P	check haffle plate for wearing		PN 01161060
			1101000
ь			
P			
	Check exhaust all side of the hap for solling		
Р	check function		
Р	check for chaffing marks and damages		
Р	charging condition		
Р	clean and grease battery terminals		
W	air filter cabin		
W	with air conditioning	W	PN 01065540
W	without air conditioning	W	PN 01063650
Р	windscreen washer fluid		
P	Sweepin unit, front tool carrier,		
	suction mouth (17)		
	Pedals (3X)		
	Hinge (2X)		
	P P P P P P P P P P P P P P P P P P P	P check suction fan for speed with 2750 engine rpm. P check bearing clearence if there are any vibrations at the suction fan P check the suction sieve from the fan for soiling an damges P check hydraulic motor and lines for density (hydraulic motor and lines for leakages) P check baffle plate for wearing P check sealings of the flap for density and damages P check cover joint and bearing of hopper flap P check exhaust air side of the flap for soiling P check for chaffing marks and damages P charging condition P clean and grease battery terminals W air filter cabin W with air conditioning W without air conditioning P windscreen washer fluid P Sweepin unit, front tool carrier, suction mouth (17) Pedals (3X)	P check for soiling P check function of bog ground flap W replace the rubber buffer from the (4X) W suction fan P check suction fan for speed with 2750 engine rpm. P check bearing clearence if there are any vibrations at the suction fan P check the suction sieve from the fan for soiling an damges P check hydraulic motor and lines for density (hydraulic motor and lines for leakages) P check sealings of the flap for density and damages P check cover joint and bearing of hopper flap P check exhaust air side of the flap for soiling P check function P check for chaffing marks and damages P charging condition P clean and grease battery terminals W air filter cabin W with air conditioning W W without air conditioning W P windscreen washer fluid

P = Test: function, leakage, refill, adjust
W = replace (W) = change if required
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** = against specific accounting



Works to be performed:		Techn. data:
Look of the machine	signs, labels (30 km/h)	
Trial ride	test of all functional and safety-	
	relevant components and implements	
Comments; service informa	ation for customer:	
Location:	Date:	
Signature, customer:		
Signature, service technicia	n:	



Hako System Maintenance III* / S* (2000 h. of operat. safety check)

Works to be performed:		Techn. data:	
Clean machine, if r	equired **		
Engine	W engine oil	W	8,6 ltr SAE 15-W-40
	W engine oil filter	W	PN 01140320
	W fuel filter		PN 01140330
	P drain water separator		PN 01144310
	W change air filter element	W	PN 01143470
	W replace safety cartridge of air cleaner		PN 01143480
	W change V-belt generator (alternator)	W	PN 01142880
	W change V-belt air condition	W	PN 01143290
	P check radiator and coolant hoses		
	for leakage		
	P check combined radiator and radiator grill		
	for soiling, clean if required		
	P check air gap inlet/outlet with cold engine,		inlet/outlet valves:
	readjust if required		0,20 mm
	W replace diaphragm in valve bonnet		PN 01144410
	of engine ventilation system		
	W change coolant (anti-freeze		7,5 ltr. water incl.
	for winter operation!)		40 - 60%
			coolant additive
			Glaceelf Auto Supra
	P engine idling speed		1100 ¹/min +/- 50
	P engine service speed		2450 ¹/min +/- 25
	P engine max. speed		2750 ¹/min +/- 25

P = Test: function, leakage, refill, adjust
W = replace (W) = change if required
* = at least once yearly
** = against specific accounting

Works to be performed	d: Every 2000h of operating	Techn. data:
	P check brake fluid of service brake.	0,5 ltr SAE J 1703
	top up if required	5,5 % 5 1 2 5 1 5 5
Brakes	P check service brake function	
2.0.00	readjust if required	
	P check brake shoes;	2x PN 00302060
	change if required	2x PN 00301890
	W Replace bowden cables (2X)	W PN 01168560
	from the parking brake	
	P check parking brake function	
	P readjust if required	
	, .	
Wheels	P check wheel bolt for tight seating	130 Nm
	(even after wheel change)	
Tires	P check tires	
	(damage, tread depth)	
	P check inflation pressure	
	195 R14 C	3,5 bar
	215/ 65 R14 C	2,9 bar
	26X 12.00- 12 TL8 8PR	1,5 bar
Hydraulic System	P Sample of oil from the hydraulic oil,	
	and let check the oil sample.	
	W replace hydraulic oil filter	PN 01092790
	W replace ventilation filter in hydraulic tank	PN 01082600
	P check oil level	sight glass
	P Remove oil sample and have examined	
	P check function of hydraulic system	
	P check hydraulic system at the hydraulic	
	cylinders, screw connections	
	and hydraulic lines for leakage	
	P check function of hand pump	
	(lift dirt hopper by using hand pump)	

P = Test: function, leakage, refill, adjust
W = replace (W) = change if required
* = at least once yearly
** = against specific accounting



Works to be performe	ed: Every 2000h of operating	Techn. data: PN 01168770
Drive pedal	W replace drive pedal after 2000 hours	
	with bowden cables!	
Articulated joint	P check play and rubber damper	
Sweeping unit	P check for damages and wearing	
	P check sweeping track and adjust if required	
	P water spray system: check spray nozzles,	
	spray nozzle filter and filter sieve	
	and clean if required	
Suction unit	P check for damages and wearing	
	P check adjustment of suction unit	
	clearance to the ground	front 3 + 2 mn
		rear 8 + 2 mm
	P check suction hose for damages and firm seat	
	P check sealing between suction pipe	
	and dirt hopper	
	P check function of fresh water nozzle and	
	recirculation water system at the sucition unit	
	P check the flap from the suction unit	
	for damages and wearing	
	· · · · · · · · · · · · · · · · · · ·	



Works to be performed: E	very 2000h of operating	Techn. data:
Dirt hopper	P check for soiling	
	P check function of bog ground flap	
	W replace the rubber buffer from the (4X)	PN 01160950
	suction fan	
	P check suction fan for speed	2600 1/min fan rpm
	with 2750 engine rpm.	
	P check bearing clearence if there are any	
	vibrations at the suction fan	
	P check the suction sieve from the fan	
	for soiling an damges	
	P check hydraulic motor and lines for density	
	(hydraulic motor and lines for leakages)	
Flore of distrib	D. shoots by Westerland	DN 04464999
Flap of dirt hopper	P check baffle plate for wearing	PN 01161060
	P check sealings of the flap	
	for density and damages	
	P check cover joint and bearing of	
	hopper flap	
	P check exhaust air side of the flap for soiling	
Electric System	P check function	
Wiring	P check for chaffing marks and damages	
Battery	P charging condition	
	P clean and grease battery terminals	
Cabin	W air filter cabin	
	with air conditioning	PN 01065540
	without air conditioning	PN 01063650
Windscreen washer fluid	P windscreen washer fluid	
Lubrication compl.:	P Sweepin unit, front tool carrier,	
	suction mouth (17)	
	Pedals (3X)	
	Hinge (2X)	
	Hopper (6X)	
Details can be found in the	e operators manual CM 1250!	

P = Test: function, leakage, refill, adjust
W = replace (W) = change if required
* = at least once yearly
** = against specific accounting



Works to be performed:		Techn. data:
Look of the machine	signs, labels (30 km/h)	
Trial ride	test of all functional and safety-	
	relevant components and implements	
Comments; service informa	ation for customer:	
Location:	Date:	
Signature, customer:		
Signature, service technicia	n:	



Hako System Maintenance III* / S* (3000 h. of operat. safety check)

Serial no.:	
Operating hours:	
Customer:	

Works to be performed:		Techn. data:	
Clean machine, if r	equired **		
Engine	W engine oil	W	8,6 ltr SAE 15-W-40
	W engine oil filter	W	PN 01140320
	W fuel filter	W	PN 01140330
	P drain water separator		PN 01144310
	W change air filter element	W	PN 01143470
	W replace safety cartridge of air cleaner	W	PN 01143480
	P check V-belt generator for tension		PN 01142880
	P check V-belt air condition for tension		PN 01143290
	P check radiator and coolant hoses		
	for leakage		
	P check combined radiator and radiator grill		
	for soiling, clean if required		
	P check air gap inlet/outlet with cold engine,		inlet/outlet valves:
	readjust if required		0,20 mm
	W replace diaphragm in valve bonnet		PN 01144410
	of engine ventilation system		
	W change coolant (anti-freeze		7,5 ltr. water incl.
	for winter operation!)		40 - 60%
			coolant additive
			Glaceelf Auto Supra
	P engine idling speed		1100 ¹/min +/- 50
	P engine service speed		2450 ¹/min +/- 25
	P engine max. speed		2750 ¹/min +/- 25

P = Test: function, leakage, refill, adjust
W = replace (W) = change if required
* = at least once yearly
** = against specific accounting

Works to be performed: Every 3000h of operating			
Drakas	W shapes bysics their	0.5 14 0.4.5 1	1700
Brakes	W change brake fluid	0,5 ltr SAE J	1703
	P check service brake function		
	P check brake shoes;	2x PN 00302	
	change if required	2x PN 00301	390
	P readjust if required		
	P check parking brake function		
	readjust if required		
	P Check bowden cables from the parking b	rake	
	brake for damages and wearing		
Wheels	P check wheel bolt for tight seating	130 Nm	
	(even after wheel change)		
Tires	P check tires		
	(damage, tread depth)		
	P check inflation pressure		
	195 R14 C	3,5 bar	
	215/ 65 R14 C	2,9 bar	
	26X 12.00- 12 TL8 8PR	1,5 bar	
Hydraulic System	W Changing the hydraulik oil, HVLP 46	W 45 L	
	W replace hydraulic oil filter	W PN 01092790)
	W replace ventilation filter in hydraulic tank	W PN 01082600)
	P check oil level	sight glass	
	P check function of hydraulic system		
	P check hydraulic system at the hydraulic		
	cylinders, screw connections		
	and hydraulic lines for leakage		
	P check function of hand pump		
	(lift dirt hopper by using hand pump)		
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		

P = Test: function, leakage, refill, adjust
W = replace (W) = change if required
* = at least once yearly
** = against specific accounting



Works to be performed: Every 3000h of operating		
Bowden cables	P check at engine group (1x)	PN 01166240
	P check at drive pump (2x)	PN 01140240
Drive pedal	P check for function and ease of movement,	PN 01168770
	replace parts or drive pedal if required	
Articulated joint	P check play and rubber damper	
Sweeping unit	P check for damages and wearing	
	P check sweeping track and adjust if required	
	P water spray system: check spray nozzles,	
	spray nozzle filter and filter sieve	
	and clean if required	
Suction unit	P check for damages and wearing	
	P check adjustment of suction unit	
	clearance to the ground	front 3 + 2 mm
		rear 8 + 2 mm
	P check suction hose for damages and firm seat	
	P check sealing between suction pipe	
	and dirt hopper	
	P check function of fresh water nozzle and	
	recirculation water system at the sucition unit	
	P check the flap from the suction unit	
	for damages and wearing	



Works to be performed: Ev	very 3000h of operating	Techn. data:
Dirt hopper	P check for soiling	
	P check function of bog ground flap	
	W replace the rubber buffer from the (4X)	PN 01160950
	suction fan	
	P check suction fan for speed	2600 1/min fan rpr
	with 2750 engine rpm.	
	P check bearing clearence if there are any	
	vibrations at the suction fan	
	P check the suction sieve from the fan	
	for soiling an damges	
	P check hydraulic motor and lines for density	
	(hydraulic motor and lines for leakages)	
Flap of dirt hopper	P check baffle plate for wearing	P PN 01161060
	P check sealings of the flap	
	for density and damages	
	P check cover joint and bearing of	
	hopper flap	
	P check exhaust air side of the flap for soiling	
Electric System	P check function	
Wiring	P check for chaffing marks and damages	
Battery	P charging condition	
	P clean and grease battery terminals	
Cabin	W air filter cabin	
	with air conditioning	PN 01065540
	without air conditioning	PN 01063650
Windscreen washer fluid	P windscreen washer fluid	
Lubrication compl.:	P Sweepin unit, front tool carrier,	
	suction mouth (17)	
	Pedals (3X)	
	Hinge (2X)	

P = Test: function, leakage, refill, adjust
W = replace (W) = change if required
* = at least once yearly
** = against specific accounting



Works to be performed:		Techn. data:
Look of the machine	signs, labels (30 km/h)	
Trial ride	test of all functional and safety-	
	relevant components and implements	
		_
Comments; service informa	ation for customer:	
·		
Location:	Date:	
Signature, customer:		
Signature, service technicia	n:	

P = Test: function, leakage, refill, adjust W = replace (W) = change if required * = at least once yearly *** = against specific accounting



Hako System Maintenance (in-house standards)

Spare part demand for: Wearing parts

Parts for operational safety

Parts for accident prevention

		Hako System Maintenance unique (50)
Pcs.	PN	Description
1	01140320	engine oil filter
1	01140330	fuel filter
1	01092790	return filter (hydraulic system)
Liter	Resources	
8,6	Engine oil	SAE 15 W 40
		Hako System Maintenance I* (250)
Pcs.	PN	Description
1	01140320	engine oil filter
	Resources	
8,6	Engine oil	SAE 15 W 40
	T	Hako System Maintenance II* (500)
Pcs.	PN	Description
1	01140320	engine oil filter
1	01140330	fuel filter
1	01143470	air filter element
Liter	Resources	
8,6	Engine oil	SAE 15 W 40



Hako System Maintenance (in-house standards)

Spare part demand for: Wearing parts

Parts for operational safety

Parts for accident prevention

Parts for accident prevention				
<u> </u>	Hako System Maintenance III* (1000)			
Pcs.	PN	Description		
1	01140320	engine oil filter		
1	01140330	fuel filter		
1	01143470	air filter element		
1	01143480	safety cartridge of air cleaner		
1	01082600	ventilation filter in hydraulic tank		
1	01092790	return filter (hydraulic system)		
1	01144410	diaphram in valve bonnet		
1	01144130	gasket valve bonnet		
1	01065540	air filter cabin with A/C		
1	01063650	air filter cabin without A/C		
4	01160950	Rubber buffers from the suction fan, check and replace if required.		
1	(01166240)	Bowden cable engine, check and replace if required.		
2	01140240	Bowden cable drive pump, check and replace if required		
1	(01168770)	Drive pedal, check and replace if required		
4	01160950	Rubber buffers from the suction fan, check and replace if required.		
2	(00302060)	brake shoes, check and replace if required		
2	(00301890)	brake shoes, checkand replace if required		
1	(01161060)	baffle plate, check and replace if required		
Liter	Resources			
8,6	Engine oil	SAE 15 W 40		
	Hai	ko System Maintenance III* (2000)		
Pcs.	PN	Description		
1	01140320	engine oil filter		
1	01140330	fuel filter		
1	01143470	air filter element		
1	01143480	safety cartridge of air cleaner		
1	01142880	V -belt generator (alternator)		
1	01143290	V- belt air condition		
1	01082600	ventilation filter in hydraulic tank		
1	01092790	return filter (hydraulic system)		
1	01144410	diaphram in valve bonnet		
1	01144130	gasket valve bonnet		
1	01065540	air filter cabin with A/C		
1	01063650	air filter cabin without A/C		
4	01160950	Rubber buffers from the suction fan		
1	01100000			
ᆫᆣ	01168770	Replace drive pedal with bowden cables!		
2				
	01168770	Replace drive pedal with bowden cables!		
2	01168770 01168560	Replace drive pedal with bowden cables! bowden cable parking brake		
2	01168770 01168560 (00302060)	Replace drive pedal with bowden cables! bowden cable parking brake brake shoes, check and replace if required		
2 2 2	01168770 01168560 (00302060) (00301890)	Replace drive pedal with bowden cables! bowden cable parking brake brake shoes, check and replace if required brake shoes, checkand replace if required		
2 2 2 1	01168770 01168560 (00302060) (00301890)	Replace drive pedal with bowden cables! bowden cable parking brake brake shoes, check and replace if required brake shoes, checkand replace if required		
2 2 2 1	01168770 01168560 (00302060) (00301890) (01161060)	Replace drive pedal with bowden cables! bowden cable parking brake brake shoes, check and replace if required brake shoes, checkand replace if required		
2 2 1 <i>Liter</i>	01168770 01168560 (00302060) (00301890) (01161060) Resources	Replace drive pedal with bowden cables! bowden cable parking brake brake shoes, check and replace if required brake shoes, checkand replace if required baffle plate, check and replace if required.		



Hako System Maintenance (in-house standards)

Spare part demand for: Wearing parts

Parts for operational safety

Parts for accident prevention

	Hako System Maintenance III* (3000)			
Pcs.	PN	Description		
1	01140320	engine oil filter		
1	01140330	fuel filter		
1	01143470	air filter element		
1	01143480	safety cartridge of air cleaner		
1	01082600	ventilation filter in hydraulic tank		
1	01092790	return filter (hydraulic system)		
1	01144410	diaphram in valve bonnet		
1	01144130	gasket valve bonnet		
1	01065540	air filter cabin with A/C		
1	01063650	air filter cabin without A/C		
4	01160950	Rubber buffers from the suction fan, check and replace if reqired		
1	(01166240)	Bowden cable engine, check and replace if required		
2	01140240	Bowden cable drive pump, check and replace if required		
1	(01168870)	Drive pedal, check and replace if required		
2	(00302060)	brake shoes, check and replace if required		
2	(00301890)	brake shoes, check and replace if required		
1	(01161060)	baffle plate (check)		
Liter	Resources			
8,6	Engine oil	SAE 15 W 40		
45	Hydraulic oil	HVLP 46, Mobil DTE 15 M		
0,5	Brake fluid	DOT 3 / SAE J 1703		

Hako System Maintenance A	Hako System Maintenance unique
Set-up - Trial ride Delivery to customer Instruction Driver training **	50 h. of operat.
Hako System Maintenance I 250 h. of operat.	Hako System Maintenance II 500 h. of operat.
Hako System Maintenance I 750 h. of operat.	Safety Check! Hako System Maintenance III 1000 h. of operat.
Hako System Maintenance I 1250 h. of operat.	Hako System Maintenance II. 1500 h. of operat.
Hako System Maintenance I 1750 h. of operat.	Safety Check! Hako System Maintenance III 2000 h. of operat.
Hako System Maintenance I 2250 h. of operat.	Hako System Maintenance II. 2500 h. of operat.
Hako System Maintenance I 2750 h. of operat.	Safety Check! Hako System Maintenance III 3000 h. of operat. Replace the hydraulic oil!
Hako System Maintenance I 3250 h. of operat.	Hako System Maintenance II 3500 h. of operat.
Hako System Maintenance I 3750 h. of operat.	Safety Check! Hako System Maintenance III 4000 h. of operat.

Hako System Maintenance I	Hako System Maintenance II
4250 h. of operat.	4500 h. of operat.
Hako System Maintenance I 4750 h. of operat.	Safety Check! Hako System Maintenance III 5000 h. of operat.
Hako System Maintenance I	Hako System Maintenance II
5250 h. of operat.	5500 h. of operat.
Hako System Maintenance I 5750 h. of operat.	Safety Check! Hako System Maintenance III 6000 h. of operat. Replace the hydraulic oil!
Hako System Maintenance I	Hako System Maintenance II
6250 h. of operat.	6500 h. of operat.
Hako System Maintenance I 6750 h. of operat.	Safety Check! Hako System Maintenance III 7000 h. of operat.
Hako System Maintenance I	Hako System Maintenance II
7250 h. of operat.	7500 h. of operat.
Hako- System- Wartung I 7750 h. of operat.	Safety Check! Hako-System-Wartung III 8000 h. of operat.
Hako- System- Wartung I	Hako-System-Wartung II
8250 h. of operat.	8500 h. of operat.

Hako System Maintenance I 8750 h. of operat.	Safety Check! Hako System Maintenance III 9000 h. of operat. Replace the hydraulic oil!
Hako- System- Maintenance I 9250 h. of operat.	Hako-System- Maintenance II 9500 h. of operat.
Hako- System- Maintenance I 9750 h. of operat.	Safety Check! Hako-System- Maintenance III 10000 h. of operat.
Hako- System- Maintenance I 10250 h. of operat.	Hako-System- Maintenance II 10500 h. of operat.
Hako- System- Maintenance I 10750 h. of operat.	Safety Check! Hako-System- Maintenance III 11000 h. of operat.
Hako- System- Maintenance I 11250 h. of operat.	Hako-System- Maintenance II 11500 h. of operat.
Hako- System- Maintenance I 11750 h. of operat.	Safety Check! Hako-System- Maintenance III 12000 Betr. Std. Replace the hydraulic oil!