



**Hako - system - maintenance:  
Hako-Citymaster 650 (1470.15)**

The Hako system maintenance specifies the special technical work to be carried out in individual modules and defines the time periods for the maintenance. Spare parts to be replaced are specified for the individual maintenance tasks. (Source: operating instructions, chapter 5 Maintenance).

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

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## Maintenance Parts Hako Citymaster 650

### Hako- System Maintenance E (50) after 50 operating hours (once)

<i>Stck.</i>	<i>Part Number</i>	<i>Spare part designation</i>
1	01140320	Engine Oil Filter
1	01477080	Fuel Filter
<i>Liter</i>	<i>Operating resources</i>	
6.7	Engine Oil, Manufacturer Fuchs	Fuchs Titan CARGO 5W-40, or comparable engine oil Specification: ACEA E9, API CJ-4, CAT ECF-3.

### Hako- System- Maintenance I. 500 operating hours (1500,2500,3500,4500,5500, 6500,7500, 8500 Betriebsstunden- Operating hours)

<i>Stck.</i>	<i>Part Number</i>	<i>Spare part designation</i>
1	01140320	Engine Oil Filter
1	01477080	Fuel Filter
1	01477140	Fuel pre filter insert (water separator)
1	00682430	Air Filter
<i>Liter</i>	<i>Operating resources</i>	
6.7	Engine Oil, Manufacturer Fuchs	Fuchs Titan CARGO 5W-40, or comparable engine oil Specification: ACEA E9, API CJ-4, CAT ECF-3.

## Maintenance Parts Hako Citymaster 650

### Hako- System- Maintenance II. 1000 operating hours (5000, 7000 Betriebsstunden- Operating hours)

<i>Stck.</i>	<i>Part Number</i>	<i>Spare part designation</i>
1	01140320	Engine oil filter
1	01477080	Fuel filter
1	01477140	Fuel pre filter insert (water separator)
1	00682430	Air Filter
1	00682420	Safety cartridge air filter
1	01082600	Venting filter hydraulic oil tank
1	01472210	Return filter (Hydraulic)
1	01477020	Diaphragm in valve cover (Yanmar engine)
1	01477150	Valve cover gasket (Yanmar engine)
1	01065540	Cabine air filter with AC
1	01063650	Cabine air filter without AC
2	01471350	Bowdencable broom arm
1	00009720	Oil sample set (take oil sample and send in)
<i>Liter</i>	<i>Operating resources</i>	
6.7	Engine Oil, Manufacturer Fuchs	Fuchs Titan CARGO 5W-40, or comparable engine oil Specification: ACEA E9, API CJ-4, CAT ECF-3.

## Maintenance Parts Hako Citymaster 650

**Hako- System- Maintenance II. 2000 operating hours (extended scope)**  
 (4000, 8000 Betriebsstunden - Operating hours)

<i>Stck.</i>	<i>Part Number</i>	<i>Spare part designation</i>
1	01140320	Engine oil filter
1	01477080	Fuel filter
1	01477140	Fuel pre filter insert (water separator)
1	00682430	Air filter
1	00682420	Safety cartridge air filter
1	01082600	Venting filter hydraulic oil tank
1	01472210	Return filter (Hydraulic)
1	01477020	Diaphragm in valve cover (Yanmar engine).
1	01477150	Valve cover gasket (Yanmar engine)
1	01065540	Cabine air filter with AC
1	01063650	Cabine air filter without AC
1	01142880	V- belt alternator
1	01471320	V-belt air condition compressor
2	01471350	Bowdencable broom arm
2	01470230	Bowdencable brake
1	01470260	Bowdencable brake
1	01167520	Bowden cable flap suction mouth (suction nozzle).
1	01132270	Bowden cable recirculation water valve
1	00009720	Oil sample set (take oil sample and send in)
<i>Liter</i>	<i>Operating resources</i>	
6.7	Engine Oil, Manufacturer Fuchs	Fuchs Titan CARGO 5W-40, or comparable engine oil Specification: ACEA E9, API CJ-4, CAT ECF-3.
8.0	Engine coolant	Glacelf Auto Supra, VW- G12+ or G13, 40 - 60% coolant content or use a finished product (ready mixed).

## Maintenance Parts Hako Citymaster 650

**Hako- System Maintenance II. 3000 operating hours (extended scope)**  
 (6000, 9000 Betriebsstunden- Operating hours)

<i>Stck.</i>	<i>Part Number</i>	<i>Spare part designation</i>
1	01140320	Engine oil filter
1	01477080	Fuel filter
1	01477140	Fuel pre filter insert
1	00682430	Air filter
1	00682420	Safety cartridge air filter
1	01082600	Venting filter hydraulic oil tank
1	01472210	Return filter (Hydraulic)
1	01477020	Diaphragm in valve cover (Yanmar engine)
1	01477150	Valve cover gasket (Yanmar engine)
1	01065540	Cabine air filter with AC
1	01063650	Cabine air filter without AC
2	01471350	Bowdencable broom arm
<i>Liter</i>	<i>Operating resources</i>	
6.7	Engine Oil, Manufacturer Fuchs	Fuchs Titan CARGO 5W-40, or comparable engine oil Specification: ACEA E9, API CJ-4, CAT ECF-3.
35	Hydraulic- Oil (HVL 46)	For example: Total Equivis AF 46, Exxon DTE10 Excel 46

## Hako- Maintenance system Citymaster 650- Maintenance Times

The indicated maintenance times refer to maintenance and inspection work. Any repairs will be charged separately!

The indicated maintenance times refer to maintenance carried out in a workshop (with lifting platform). For maintenance carried out in the field or at the customer's site without a workshop, longer working times must be calculated.

Hako system maintenance after <b>50</b> operating hours (one-time) <b>3.50</b> hours	Hako system maintenance after <b>250</b> operating hours (one-time) <b>3.00</b> hours
	Hako system maintenance I. after <b>500</b> operating hours <b>3.50</b> hours
Hako system maintenance II. after <b>1000</b> operating hours <b>6.00</b> hours	Hako system maintenance I. after <b>1500</b> operating hours <b>3.50</b> hours
Hako system maintenance II. after <b>2000</b> operating hours with engine coolant change <b>6.00</b> hours	Hako system maintenance I. after <b>2500</b> operating hours <b>3.50</b> hours
Hako system maintenance II. after <b>3000</b> operating hours with hydraulic oil change <b>7.00</b> hours	Hako system maintenance I. after <b>3500</b> operating hours <b>3.50</b> hours
Hako system maintenance II. after <b>4000</b> operating hours (change engine coolant) <b>6.00</b> hours	Hako system maintenance I. after <b>4500</b> operating hours <b>3.50</b> hours
Hako system maintenance II. after <b>5000</b> operating hours <b>6.00</b> hours	Hako system maintenance I. after <b>5500</b> operating hours <b>3.50</b> hours
Hako system maintenance II. after <b>6000</b> operating hours with hydraulic oil change <b>7.00</b> hours	Hako system maintenance I. after <b>6500</b> operating hours <b>3.50</b> hours
Hako system maintenance II. after <b>7000</b> operating hours <b>6.00</b> hours	Hako system maintenance I. after <b>7500</b> operating hours <b>3.50</b> hours
Hako system maintenance II. after <b>8000</b> operating hours (change engine coolant) <b>6.00</b> hours	Hako system maintenance I. after <b>8500</b> operating hours <b>3.50</b> hours



Hako system maintenance II. after <b>9000</b> operating hours with hydraulic oil change <b>7.00</b> hours	Hako system maintenance I. after <b>9500</b> operating hours <b>3.50</b> hours
Hako system maintenance II. after <b>10000</b> operating hours <b>6.00</b> hours	Hako system maintenance I. after <b>10500</b> operating hours <b>3.50</b> hours
Hako system maintenance II. <b>safety check</b> after <b>11000</b> operating hours <b>6.00</b> hours	Hako system maintenance I. after <b>11500</b> operating hours <b>3.50</b> hours

## Hako- Citymaster 650- Hako system maintenance

**Hako system maintenance before delivery A (factory specification).  
To be carried out by authorised Hako service.**

Machine-Nr.:

Operating hours:

**Customer:**

### Work to be carried out



### Technical data:

#### Assembly group:

#### Engine

#### Brake

#### Electrical system

#### Tyres

#### Vehicle

#### Test drive and function check

#### Hydraulic

#### Hydraulic

#### Driver briefing

#### Driver training \*\* against separate invoice

C Check engine oil level, top up if necessary

C Check coolant level in expansion tank, top up if necessary.

C Check service and parking brake for correct function.

C Check lighting, working functions, horn etc. for function.

C **Fully charge the battery before delivery!**

C Check wheel bolts for tightness. retighten!

C Check tyre inflation pressure

C Tyre size 23X8.5 12TT 10PR front/reare

C Tyre size 23 X10.5 - 12TL 6PR front/reare

C Check for transport damage

C Equip and refuel

C Check scope of delivery including all attachments.

C User manual for basic machine

C User manual for attachments

C Function check for all attachments to be delivered according to the order, check completeness of the coding plugs for attachments from other manufacturers.

C Visual inspection of the hydraulic system at the hydraulic cylinders, check screw connections and hydraulic lines for leaks. Carry out function test. The visual inspection must be carried out after the function test.

C Check hydraulic oil level after attaching implements, test drive and function test, top up if necessary.

C incl. safety instructions and function of the coding plugs.

C Substitute driver, holiday replacement, shift work

6.7 Ltr. Fuchs Titan CARGO, 5W-40

VW G13, 40 - 60%  
Coolant additive (anti-freeze)

130 Nm

1.9 bar/ 2.7 bar

bar/ 2.0 bar 1.5

**C = Check**  
**R = Replace**

## Hako- Citymaster 650- Maintenance system

### Maintenance and care work to be carried out by the operator

Daily maintenance and care work to be carried out		✓	Technical data:
<b>Assembly group:</b>			
Engine	C	Check engine oil level, top up with engine oil if necessary.	6.7 Ltr. Fuchs Titan CARGO, 5W-40
	C	Check the coolant level in the expansion tank and the radiator antifreeze, top up if necessary. Observe frost protection for winter operation!	VW G13, 40-60% Coolant additive (antifreeze)
Cooling system	C	Check the combi radiator and radiator grille for dirt, clean with compressed air if necessary.	
Steering	C	Check emergency steering function	
Brake	C	Check service and parking brake for function.	
Electrical equipment	C	Check lighting, working functions, horn etc. for function.	
Vehicle and sweeping system		Machine cleaning: Vehicle, sweepings container, circ. water system, suction mouth, suction pipe, suction fan	
Weekly maintenance and care work to be carried out		✓	Technical data:
<b>Assembly group:</b>			
Engine	C	Check engine oil level, top up with engine oil if necessary.	6.7 Ltr. Fuchs Titan CARGO, 5W-40
	C	Check the coolant level in the expansion tank and the radiator antifreeze, top up if necessary. Observe frost protection for winter operation!	VW G13, 40 - 60% Coolant additive (antifreeze)
Cooling system	C	Check the combi radiator and radiator grille for dirt, clean with compressed air if necessary.	
Fuel system		Filling up with fuel	
	R	Empty water separator	
Hydraulic	C	Check oil level, top up if necessary.	HVLP 46
Steering	C	Check emergency steering function	
Brake	C	Check service and parking brake for function.	
Electrical equipment	C	Check lighting, working functions, horn etc. for function.	

Weekly maintenance and care work to be carried out		✓	Technical data:
Assembly group:			
Vehicle and sweeping system	C	Machine cleaning: Vehicle, sweepings container, circulating water system, suction mouth, suction pipe, suction fan	
Sweeping system	C	Check sweeping unit, suction section, sweepings container, fresh water and circulating water system for function and damage.	
Lubrication service		Door hinges 4X	Lubricating grease
For details see lubrication chart CM 650		Front lifting cylinders 4X	
		Front power lift 2X	
		Dirt flap on suction unit 1X	
		Steering hinge 4X	
		Hydraulik steering cylinder 2X	
			<b>C = Check</b> <b>R</b>
			<b>= Replace</b>

## Hako- Citymaster 650- Hako Maintenance system

Hako system maintenance after **50** operating hours (to be carried out once).  
To be carried out by the authorised Hako service.

Machine Nr.:			
Operating hours:			
Customer:			
<b>Work to be carried out:Hako system maintenance after 50 operating hours (to be carried out once).</b>			✓
Assembly group:			
Engine Control Unit	C	Read out the error memory of the engine control unit, delete sporadic errors, repair clear errors if necessary.	Yanmar Engine Diagnosticsystem
Particel filter	C	Check the loading condition of the diesel particle filter, carry out a service regeneration if necessary.	Yanmar Engine Diagnosticsystem
	R	Change Engine oil.	ca. 6.7 Ltr. Fuchs Titan CARGO, 5W-40
	R	Change the engine oil filter.	RP-Nr. 01140320
	R	Change fuel filter.	RP-Nr. 01477080
	C	Fuel pre-filter insert - Empty water separator	RP-Nr. 01477140
Cooling system	C	Check coolant hoses and radiator for leaks.	
	C	Check the coolant level in the expansion tank and the radiator antifreeze, top up if necessary. Observe frost protection for winter operation!	VW G13, 40 - 60% Coolant additive (antifreeze)
Radiator	C	Check the combi radiator and radiator grille for dirt, clean with compressed air if necessary.	
Engine mount	C	Check engine mounts for damage, cracks and tight fit.	
V- Belt	C	V-belt generator Check condition and tension.	
	C	Air conditioner V-belt Check condition and tension.	
Exhaust System	C	Check the exhaust system for function and tightness.	
Fuel System	C	Check fuel lines for function and tightness.	
Air Intake System	C	Check air intake line for function and tightness.	

Work to be carried out:Hako system maintenance after <b>50</b> operating hours (to be carried out once).			✓	<b>Technical data:</b>
Assembly group:				
Control Unit work hydrauliks	C	Read out the entries in the working hydraulics control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Control Unit hydrostatic drive	C	Read out the entries in the hydrostat control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Hydraulic	C	Check oil level, top up if necessary.		HVLP 46
	C	Check the function of the hydraulic system.		
	C	Check hydraulic lines and hydraulic hoses for chafing and damage.		
	C	Check the hydraulic system for leaks at the hydraulic cylinders, screw connections and hydraulic lines.		
	C	Check the function of the hand pump by lifting the sweepings container with the hand pump.		
Steering (Hydr.)	C	Check function and ease of movement. Check steering for tightness.		
Electrical equipment	C	Function check, lighting, working functions, horn, etc.		
Cabels, wiring harnesses	C	Check cables (electrical lines) for chafing and damage.		
		Check positive and ground connections to battery and frame for tight fit and chafing, clean if necessary. Protect battery terminals with terminal grease.		
Battery	C	Check the charge status of the battery.		
Cabine	C	Clean the cabin air filter.		
	C	Check heating for function.		
	C	Check the function of the air conditioner.		
	C	Check windscreen washer fluid level, refill if necessary.		
With Air Condition	C	Check the condenser of the air conditioning system (radiator) on the rear wall of the cabin for dirt and clean it with compressed air if necessary.		
Brake	C	Check service brake for function and carry out a brake test		
	C	Check parking brake for function,		
Tyres	C	Check wheel bolts for tightness. retighten!		130 Nm
	C	Check tyre inflation pressure		
		Tyre size 23X8.5 12TT 10PR front/rear		1.9 bar/ 2.7 bar
		Tyre size 23 X10.5 - 12TL 6PR front/rear		1.5 bar/ 2.0 bar

Work to be carried out: Hako system maintenance after 50 operating hours (to be carried out once).			✓	<b>Technical data:</b>
Assambly group:				
Sweeping Unit	C	Check for wear and damage, replace defective parts if necessary.		
	C	Check the broom sweep level, adjust if necessary.		
	C	Fresh water system: Water spray system: Check spray nozzles, spray nozzle filter and sieve filter for function and clean if necessary.		
Suction Unit	C	Check for wear and damage, replace defective parts if necessary.		
	C	Check suction mouth settings, adjust if necessary		Distance to floor: Laterally 5mm: Rear 10-15 mm.
	C	Check the suction hose for damage and correct fit.		
	C	Check seal between suction pipe and sweepings container, replace if necessary.		
	C	Check the fresh water nozzle and the circulating water system at the suction mouth for function.		
	C	Check circulation water valve and hoses for function and damage.		
	C	Check the suction mouth flap for function and damage.		
	C	Check Bowden cables for function, damage and ease of movement, replace if necessary.		
Dirt Hopper	C	Check for dirt, clean if necessary.		
	C	Sump floor flap Check function.		
	C	Check suction strainer in the sweepings container for dirt, clean if necessary.		
	C	Check the hydraulic motor for the suction fan and the hydraulic lines for leaks.		
Container flap of the Dirt Hopper	C	Check the seals on the container flap for leaks and damage.		
	C	Check the lid joints and the bearing of the container flap.		
	C	Check the exhaust air side of the container flap for dirt.		

Work to be carried out: Hako system maintenance after 50 operating hours (to be carried out once).			✓	<b>Technical data:</b>
Assambly group:				
Lubrication service		Door hinges 4X		
		Front lifting cylinders 4X		
		Front power lift 2X		
		Dirt flap on suction unit 1X		
		Steering hinge 4 X		
		Steering Cylinder (Hydr.) 2X		
Visual condition of the machine		Colouring, corrosion, signs, stickers (25km/h)		
Test drive		Test of all functional and safety-relevant components, brake test		
Driver briefing		If necessary, supplementary instructions on operation, maintenance and safety		
Driver training **		for substitute drivers, holiday replacement, shift work		
<b>C = Check</b>				
<b>R = Replace</b>				
<b>Remarks; Service Notes for the customer:</b>				
Location:		Date:		
Signature Customer:				
Signatuer Service Technician:				



## Hako Maintenance System CM 650

Hako system maintenance after **250** operating hours (to be carried out once).  
To be carried out by authorised Hako service.

Machine Nr.:

Operating hours:

Customer:

Work to be carried out: Hako system maintenance after **250** operating hours (to be carried out once).



**Technical data:**

Assembly group:

Engine Control Unit

C

Read out the error memory of the engine control unit, delete sporadic errors, repair clear errors if necessary.

Yanmar Engine Diagnosticsystem

Particle Filter

C

Check the loading condition of the diesel particle filter, carry out a service regeneration if necessary.

Yanmar Engine Diagnosticsystem

C

Check engine oil level, top up if necessary.

ca. 6.7 Ltr. Fuchs Titan CARGO, 5W-40

Fuel system

C

Fuel pre-filter insert- Empty water separator...

RP-Nr. 01477140

Cooling System

C

Check coolant hoses and radiator for leaks.

C

Check coolant level in expansion tank u, top up if necessary.

VW G13, 40 - 60% Coolant additive (antifreeze)

Radiator

C

Check the combi radiator and radiator grille for dirt, clean with compressed air if necessary.

Engine mount

C

Check engine mounts for damage, cracks and tight fit.

V- Belt

C

V-belt generator Check condition and tension.

C

Air conditioner V-belt Check condition and tension.

Exhaust System

C

Check the exhaust system for function and tightness.

Fuel Lines

C

Check fuel lines for function and tightness.

Air Intake System

C

Check air intake line for function and tightness.

Work to be carried out: Work to be carried out: Hako system maintenance after <b>250</b> operating hours (to be carried out once).			✓	<b>Technical data:</b>
Assamby group:				
Control Unit Work Hydrauliks	C	Read out the entries in the working hydraulics control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Control Unit Drive Hydrauliks	C	Read out the entries in the hydrostat control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Hydraulik system:	C	Check oil level, top up if necessary.		HVLP 46
	C	Check the function of the hydraulic system.		
	C	Check hydraulic lines and hydraulic hoses for chafing and damage.		
	C	Check the hydraulic system for leaks at the hydraulic cylinders, screw connections and hydraulic lines.		
	C	Check the function of the hand pump by lifting the sweepings container with the hand pump.		
Steering (Hydr.)	C	Check function and ease of movement. Check steering for tightness.		
	C	Lubricate steering cylinder and articulated joint.		

Work to be carried out: Hako system maintenance after <b>250</b> operating hours (to be carried out once).			✓	<b>Technical data:</b>
Assembly group:				
Electrical Equipment	C	Function check, lighting, working functions, horn, etc.		
Cable and Wire harnesses	C	Check cables (electrical lines) for chafing and damage.		
		Check positive and ground connections to battery and frame for tight fit and chafing, clean if necessary. Protect battery terminals with terminal grease.		
Battery	C	Check the charge status of the battery.		
Cabine	C	Clean the cabin air filter.		
	C	Check heating for function.		
	C	Check the function of the air conditioner.		
	C	Check windscreen washer fluid level, refill if necessary.		
With Air Condition	C	Check the condenser of the air conditioning system (radiator) on the rear wall of the cabin for dirt and clean it with compressed air if necessary.		
Brake	C	Check the service brake for function and carry out a brake test.		
	C	Check parking brake for function,		
Tyres	C	Check wheel bolts for tightness. retighten!		130 Nm
	C	Check tyre pressure.		
		Tyre size 23X8.5 12TT 10PR front/rear		1.9 bar/ 2.7 bar
		Tyre size 23 X10.5 - 12TL 6PR front/rear		1.5 bar/ 2.0 bar

Work to be carried out: Work to be carried out: Hako system maintenance after <b>250</b> operating hours (to be carried out once).			✓	<b>Technical data:</b>
Assembly group:				
Sweeping unit	C (R)	Check for wear and damage, replace defective parts if necessary.		
	C	Check the broom sweep level, adjust if necessary.		
	C	Fresh water system: Water spray system: Check spray nozzles, spray nozzle filter and sieve filter for function and clean if necessary.		
Suction unit	C (R)	Check for wear and damage, replace defective parts if necessary.		
	C	Check suction mouth settings, adjust if necessary		Distance to floor: Laterally 5mm: Rear 10-15 mm.
	P (R)	Check the suction hose for damage and correct fit.		
	C (R)	Check seal between suction pipe and sweepings container, replace if necessary.		
	C (R)	Check the fresh water nozzle and the circulating water system at the suction mouth for function.		
	C (R)	Check circulation water valve and hoses for function and damage.		
	C (R)	Check the suction mouth flap for function and damage.		
	C (R)	Check Bowden cables for function, damage and ease of movement, replace if necessary.		
Dirt Hopper	C	Check for dirt, clean if necessary.		
	C	Sump floor flap Check function.		
	C	Check suction strainer in the sweepings container for dirt, clean if necessary.		
	C	Check the hydraulic motor for the suction fan and the hydraulic lines for leaks.		
Container flap from the Dirt Hopper	C	Check the seals on the container flap for leaks and damage.		
	C	Check the lid joints and the bearing of the container flap.		
	C	Check the exhaust air side of the container flap for dirt.		

Work to be carried out: Work to be carried out: Hako system maintenance after <b>250</b> operating hours (to be carried out once).		✓	<b>Technical data:</b>
Assembly group:			
<b>Lubrication service</b>		Door hinge 4X	
		Front lifting cylinders 4X	
		Front power lift 2X	
		Dirt flap on suction unit 1X	
		Steering hinge 4 X	
		Steering cylinder (Hydr.) 2X	
<b>Visual condition of the machine</b>		Colouring, corrosion, signs, stickers (25km/h)	
<b>Test drive</b>		Test of all functional and safety-relevant components, brake test according to legal requirements.	
<b>Driver briefing</b>		If necessary, supplementary instructions on operation, maintenance, safety	
<b>Driver training **</b>		for substitute drivers, holiday replacement, shift work	
<b>C= Check</b>			
<b>R= Replace</b>			
<b>Remarks; Service Notes for the customer:</b>			
Location:		Date:	
Customer signature:			
Signature of service technician:			

## Hako Maintenance system CM 650

Hako system maintenance I, **500** operating hours (1500 Bh, 2500, Bh, 3500Bh, 4500 Bh, 5500 Bh, 6500 Bh, 7500 Bh, 8500 Bh, 9500 Bh.

To be carried out by authorised Hako service.

Vehicle Nr:			
Operating hours:			
Customer:			
Hako system maintenance I, <b>500</b> operating hours (1500 Bh, 2500, Bh, 3500Bh, 4500 Bh, 5500 Bh, 6500 Bh, 7500 Bh, 8500 Bh, 9500 Bh. To be carried out by authorised Hako service.		✓	<b>Technical data:</b>
Assembly group:			
Engine Control Unit	C	Read out the error memory of the engine control unit, delete sporadic errors, repair clear errors if necessary.	Yanmar Engine Diagnosis
Particel Filter	C	Check the loading condition of the diesel particle filter, carry out a service regeneration if necessary.	Yanmar Engine Diagnosis
	R	Change engine oil.	ca. 6.7 Ltr. Fuchs Titan CARGO, 5W-40
	R	Change the engine oil filter.	RP-Nr. 01140320
	R	Change fuel filter.	RP-Nr. 01477080
	R	Change fuel prefilter element.	RP-Nr. 01477140
	R	Change air filter element	RP-Nr. 00682430
Cooling System	C	Check coolant hoses and radiator for leaks.	
	C	Check the coolant level in the expansion tank and the radiator antifreeze, top up if necessary. Observe frost protection for winter operation!	VW G13, 40 - 60% Coolant additive (antifreeze)
Radiator	C	Check the combi radiator and radiator grille for dirt, clean with compressed air if necessary.	
Engine mount	C	Check engine mounts for damage, cracks and tight fit.	
V - Belt	C	V-belt generator Check condition and tension.	
	C	Air conditioner V-belt Check condition and tension.	
Exhaust System	C	Check the exhaust system for function and tightness.	
Fuel - System	C	Check fuel lines for function and tightness.	
Air Intake	C	Check air intake line for function and tightness.	

Work to be carried out: Hako system maintenance I, <b>500</b> hours of operation (1500 Bh, 2500, Bh, 3500Bh, 4500 Bh, 5500 Bh, 6500 Bh, 7500 Bh, 8500 Bh, 9500 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Control Unit Work Hydrauliks	C	Read out the entries in the working hydraulics control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Control Unit Drive Hydrauliks	C	Read out the entries in the hydrostat control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Hydraulic System	C	Check hydraulic oil level, top up if necessary.		HVLP 46
	C	Check the function of the hydraulic system.		
	C	Check hydraulic lines and hydraulic hoses for chafing and damage.		
	C	Check the hydraulic system for leaks at the hydraulic cylinders, screw connections and hydraulic lines.		
	C	Check the function of the hand pump by lifting the sweepings container with the hand pump.		
Steering (Hydr.)	C	Check function and ease of movement. Check steering for tightness.		
	C	Check steering cylinder for play and wear. Lubricate steering cylinder, 2X.		
	C	Check articulated joint for play and wear. Lubricate articulated joint, 4X.		

Work to be carried out: Hako system maintenance I, <b>500</b> hours of operation (1500 Bh, 2500, Bh, 3500Bh, 4500 Bh, 5500 Bh, 6500 Bh, 7500 Bh, 8500 Bh, 9500 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Elektric	C	Function check, lighting, working functions, horn, etc.		
Cable and wire harnesses	C	Check cables (electrical lines) for chafing and damage.		
	C	Check positive and ground connections to battery and frame for tight fit and chafing, clean if necessary. Protect battery terminals with terminal grease.		
Battery	C	Check the charge status of the battery.		
Cabine	C	Clean the cabin air filter.		
	C	Check heating for function.		
	C	Check the function of the air conditioner.		
	C	Check windscreen washer fluid level and top up if necessary.		
Air - Condition	C	Check the condenser of the air conditioning system (radiator) on the rear wall of the cabin for dirt and clean it with compressed air if necessary.		
Brake	C (R)	Check service brake for function and wear and carry out a brake test, replace necessary parts if necessary.		
	C	Check parking brake for function, adjust if necessary.		
	C	Check the Bowden cables of the parking brake for chafing.		
Tyres	C	Check wheel bolts for tightness. retighten!		130 Nm
	C	Check tyre pressure.		
		Tyle size 23X8.5 12TT 10PR front/rear		1.9 bar/ 2.7 bar
		Tyre size 23 X10.5 - 12TL 6PR front/rear		1.5 bar/ 2.0 bar



Work to be carried out: Hako system maintenance I, <b>500</b> hours of operation (1500 Bh, 2500, Bh, 3500Bh, 4500 Bh, 5500 Bh, 6500 Bh, 7500 Bh, 8500 Bh, 9500 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Sweeping unit	C (R)	Check the sweeping unit for wear and damage, replace defective parts if necessary.		
	C (R)	Check the broom adjustment Bowden cables for damage and wear, replace if necessary.		
	C	Check the broom sweep level, adjust if necessary.		
	C	Fresh water system: Water spray system: Check spray nozzles, spray nozzle filter and sieve filter for function and clean if necessary.		
Suction Unit	C (R)	Check for wear and damage, replace defective parts if necessary.		
	C	Check suction mouth settings, adjust if necessary		Distance to floor: Laterally 5mm: Rear 10-15 mm.
	C (R)	Check the suction hose for damage and correct fit.		
	C (R)	Check seal between suction pipe and sweepings container, replace if necessary.		
	C	Check the fresh water nozzle and the circulating water system at the suction mouth for function.		
	C (R)	Check circulation water valve and hoses for function and damage.		
	P (W)	Check the suction mouth flap for function and damage.		
	C (R)	Check Bowden cables for function, damage and ease of movement, replace if necessary.		
Dirt Hopper	C	Check for dirt, clean if necessary.		
	C	Sump floor flap Check function.		
	C	Check suction strainer in the sweepings container for dirt, clean if necessary.		
	C	Check the hydraulic motor for the suction fan and the hydraulic lines for leaks.		

Work to be carried out: Hako system maintenance I, <b>500</b> hours of operation (1500 Bh, 2500, Bh, 3500Bh, 4500 Bh, 5500 Bh, 6500 Bh, 7500 Bh, 8500 Bh, 9500 Bh).		✓	<b>Technical data:</b>
Assembly group:			
Container flap of the sweepings container	C	Check the seals on the container flap for leaks and damage.	
	C	Check the lid joints and the bearing of the container flap.	
	C	Check the exhaust air side of the container flap for dirt.	
Lubrication service:		Door hinge 4X	
		Front lifting cylinders 4X	
		Front power lift 2X	
		Dirt flap on suction unit 1X	
		Steering hinge 4 X	
		Steering cylinder (Hydr.) 2X	
Visual condition of the machine	C	Coloring, corrosion, signs, stickers 25 km/h	
Test drive		Test of all functional and safety-relevant components, brake test according to legal requirements	
<b>C = Check</b>			
<b>R = Replace</b>			
<b>Remarks; Service Notes for the customer:</b>			
Location:	Date:		
Customer signature:			
Signature of service technician:			

## Maintenance System Hako Citymaster 650

Hako system maintenance II, after **1000** operating hours (5000 Bh,7000 Bh).  
To be carried out by authorised Hako service.

Vehicle Nr.:			
Operating hours:			
Costumer:			
Work to be done:		✓	<b>Technical data:</b>
Assambly group:			
Engine Control Unit	C	Read out the error memory of the engine control unit, delete sporadic errors, repair clear errors if necessary.	Yanmar Engine diagnosis
Particel filter	C	Check the loading condition of the diesel particle filter, carry out a service regeneration if necessary.	Yanmar Engine diagnosis
	R	Change Engine Oil	ca. 6.7 Ltr. <b>Fuchs Titan CARGO, 5W-40</b>
	R	Change the engine oil filter.	RP-Nr. 01140320
	R	Change fuel filter.	RP-Nr. 01477080
	R	Change fuel prefilter element.	RP-Nr. 01477140
	R	Change air filter element	RP-Nr. 00682430
	R	Change the safety cartridge of the air filter	RP-Nr. 00682420
	C	Check valve clearance when engine is cold and adjust valve clearance if necessary.	Inlet/exhaust valves: Valve clearance 0.20 mm
	R	Replace valve cover gasket	RP.Nr. 01477150
	R	Change the diaphragm in the valve cover of the engine ventilation.	RP-Nr. 01477020
	C	Check coolant hoses and radiator for leaks.	
	C	Check the coolant level in the expansion tank and the radiator antifreeze, top up if necessary. Observe frost protection for winter operation!	VW- G13, 40 - 60% Engine Cooling additive (antifreeze)
Radiator	C	Check the combi radiator and radiator grille for dirt, clean with compressed air if necessary.	
Engine mount	C	Check engine mounts for damage, cracks and tight fit.	
V - Belt	C	V-belt generator Check condition and tension.	
	C	Air conditioner V-belt Check condition and tension.	
	C	Check ECO, standard and maximum speed	1900/ 2250/ 2630 1/min
Exhaust System	C	Check the exhaust system for function and tightness.	
Fuel System	C	Check fuel lines for function and tightness.	
Air Intake System	C	Check air intake line for function and tightness.	

Work to be carried out: Hako system maintenance II after <b>1000</b> operating hours (5000 Bh,7000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Control Unit Work Hydraulik	C	Read out the entries in the working hydraulics control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Control Unit Drive Hydraulik	C	Read out the entries in the hydrostat control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Hydraulic	R	Change the return filter of the hydraulic system.		RP.-Nr.01472210
	R	Change breather filter hydraulic oil tank		RP.-Nr.01082600
	C	Take an oil sample and have it tested		RP.- Nr.00009720
	C	Check hydraulic oil level, top up if necessary.		HVLP 46
	C	Check the function of the hydraulic system.		
	C	Check hydraulic lines and hydraulic hoses for chafing and damage.		
	C	Check the hydraulic system for leaks at the hydraulic cylinders, screw connections and hydraulic lines.		
	C	Check the function of the hand pump by lifting the sweepings container with the hand pump.		
Steering	C	Check function and ease of movement. Check steering for tightness.		
	C	Check steering cylinder for play and wear. Lubricate steering cylinder, 2X.		
	C	Check articulated joint for play and wear. Lubricate articulated joint, 4X.		

Work to be carried out: Hako system maintenance II after <b>1000</b> operating hours (5000 Bh,7000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Elektric system	C	Function check, lighting, working functions, horn, etc.		
Cable and wire harnesses	C	Check cables (electrical lines) for chafing and damage.		
Cable and wire harnesses	C	Check positive and ground connections to battery and frame for tight fit and chafing, clean if necessary. Protect battery terminals with terminal grease.		
Battery	C	Check the charge status of the battery.		
Cabine	R	Cabin air filter with air conditioning.		RP.-Nr 01065540
	R	Cabin air filter without air conditioning.		RP.-Nr 01063650
	C	Check heating for function.		
	C	Check the function of the air conditioner.		
	C	Check windscreen washer fluid level and top up if necessary.		
Air Condition System	C	Check the condenser of the air conditioning system (radiator) on the rear wall of the cabin for dirt and clean it with compressed air if necessary.		
Brake	C (R)	Check service brake for function and wear and carry out a brake test, replace necessary parts if necessary.		
	C	Check parking brake for function, adjust if necessary.		
	C	Check the Bowden cables of the parking brake for chafing.		
Tyres	C	Check wheel bolts for tightness. Retighten!		130 Nm
	C	Check tyre pressure.		
		Tyre size 23X8.5 12TT 10PR front/reare		1.9 bar/ 2.7 bar
		Tyre size 23 X10.5 - 12TL 6PR front/reare		1.5 bar/ 2.0 bar

Work to be carried out: Hako system maintenance II after <b>1000</b> operating hours (5000 Bh,7000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Sweeping Unit	R	Replace the Bowden cables on the broom arms.		RP.-Nr. 01471350 <b>(2X)</b>
	C (R)	Check the sweeping unit for wear and damage, replace defective parts if necessary.		
	C	Check the broom sweep level, adjust if necessary.		
	C	Fresh water system: Water spray system: Check spray nozzles, spray nozzle filter and sieve filter for function and clean if necessary.		
Suction Unit	C (R)	Check for wear and damage, replace defective parts if necessary.		
	C	Check suction mouth settings, adjust if necessary		Distance to floor: Laterally 5mm: Rear 10-15 mm.
	C (R)	Check suction hose for damage and correct fit.		
	C (R)	Check seal between suction pipe and sweepings container, replace if necessary.		
	C	Check the fresh water nozzle and the circulating water system at the suction mouth for function.		
	C (R)	Check circulation water valve and hoses for function and damage.		
	C (R)	Check the suction mouth flap for function and damage.		
	C (R)	Check Bowden cables for function, damage and ease of movement, replace if necessary.		
Dirt Hopper	C	Check for dirt, clean if necessary.		
	C	Sump floor flap Check function.		
	C	Check suction strainer in the sweepings container for dirt, clean if necessary.		
	C	Check the hydraulic motor for the suction fan and the hydraulic lines for leaks.		
	C	Check the fan speed of the suction fan in the sweepings container.		2800 1/Min bei 2600 1/Min Engine speed
Container Flap of the Dirt Hopper	C	Check the seals on the container flap for leaks and damage.		
	C	Check the lid joints and the bearing of the container flap.		
	C	Check the exhaust air side of the container flap for dirt.		

Work to be carried out: Hako system maintenance II after <b>1000</b> operating hours (5000 Bh,7000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Lubrication service		Door hinges 4X		
		Front lifting cylinder 4X		
		Front power lift 2X		
		Dirt flap on suction unit 1X		
		Steering hinge 4 X		
		Steering cylinder (Hydr.) 2X		
Visual condition of the machine		Coloring, corrosion, signs, stickers 25 km/h		
Test Drive		Test of all functional and safety-relevant components, brake test according to legal requirements.		
<b>C = Check</b>				
<b>R = Replace</b>				
<b>Remarks; Service Notes for the customer:</b>				
Location:		Date:		
Customer signature:				
Signature of service technician:				

## Maintenance System Hako Citymaster 650

Hako system maintenance II extended, every **2000** operating hours (4000 Bh, 8000 Bh, 10000 Bh). To be carried out by authorised Hako service

Vehicle Nr:

Operating hours:

Customer:

Work to be carried out: Hako system maintenance II extended, every **2000** operating hours (4000 Bh, 8000 Bh)



**Technical data:**

Assembly group:

Engine Control Unit

C Read out the error memory of the engine control unit, delete sporadic errors, repair clear errors if necessary.

Yanmar Engine Diagnosis

Particel Filter

C Check the loading condition of the diesel particle filter, carry out a service regeneration if necessary.

Yanmar Engine Diagnosis

R Change engine oil

ca. 6.7 Ltr. **Fuchs Titan CARGO, 5W-40**

R Change engine oil

RP-Nr. 01140320

R Change fuel filter

RP-Nr. 01477080

R Change air filter element

RP-Nr. 00682430

R Change the safety cartridge of the air filter.

RP-Nr. 00682420

R Change fuel prefilter element.

RP-Nr. 01477140

C Check valve clearance when engine is cold and adjust valve clearance if necessary.

Inlet/exhaust valves:  
Valve clearance 0.20 mm

R Replace valve cover gasket

RP.Nr. 01477150

R Change the diaphragm in the valve cover of the engine ventilation.

RP-Nr. 01477020

V - Belt

R V-belt alternator change

RP.Nr 01479560

R Changing the air conditioner V-belt

RP.Nr. 01471320

Cooling System

R Change the engine coolant. Change the engine coolant after 2 years at the latest! Observe frost protection for winter operation!

VW- G12+ G13, 40 - 60%  
Cooling additive (antifreeze)

C Check coolant hoses and radiator for leaks.

Radiator

C Check the combi radiator and radiator grille for dirt, clean with compressed air if necessary.

Engine Mount

C Check engine mounts for damage, cracks and tight fit.

C Check ECO, standard and maximum speed

1900/ 2250/ 2630 1/min

Exhaust System

C Check the exhaust system for function and tightness.

Fuel System

C Check fuel lines for function and tightness.

Air Intake

C Check air intake line for function and tightness.



Work to be carried out: Hako system maintenance II extended, every <b>2000</b> operating hours (4000 Bh, 8000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Control Unit Work Hydrauliks	C	Read out the entries in the working hydraulics control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Control Unit Drive Hydraulik	C	Read out the entries in the hydrostat control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Hydraulic	R	Change the return filter of the hydraulic system		RP.-Nr.01472210
	R	Change breather filter hydraulic oil tank		RP.-Nr.01082600
	C	Take an oil sample and have it tested		RP.- Nr.00009720
	C	Check hydraulic oil level, top up if necessary.		HVLP 46
	C	Check the function of the hydraulic system.		
	C	Check hydraulic lines and hydraulic hoses for chafing and damage.		
	C	Check the hydraulic system for leaks at the hydraulic cylinders, screw connections and hydraulic lines.		
	C	Check the function of the hand pump by lifting the sweepings container with the hand pump.		
Steering (Hydr.)	C	Check function and ease of movement.check steering for tightness.		
	C	Check steering cylinder for play and wear. Lubricate steering cylinder, 2X.		
	C	Check articulated joint for play and wear. Lubricate articulated joint, 4X.		

Work to be carried out: Hako system maintenance II extended, every <b>2000</b> operating hours (4000 Bh, 8000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Electric System	C	Function check, lighting, working functions, horn, etc.		
Cable and wire harnesses	C	Check cables (electrical lines) for chafing and damage.		
	C	Check positive and ground connections to battery and frame for tight fit and chafing, clean if necessary. Protect battery terminals with terminal grease.		
Battery	C	Check the charge status of the battery.		
Cabine	R	Change cabin air filter with air conditioning system		RP.-Nr 01065540
	R	Changing the cabin air filter without air conditioning		RP.-Nr 01063650
	C	Check heating for function.		
	C	Check the function of the air conditioner.		
	C	Check windscreen washer fluid level and top up if necessary.		
Air Condition	C	Check the condenser of the air conditioning system (radiator) on the rear wall of the cabin for dirt and clean it with compressed air if necessary.		
Brake	R	Change the Bowden cables of the parking brake.		RP.-Nr. 01470230 <b>(2X)</b> RP.-Nr.01470260 <b>(1X)</b>
	C	Check parking brake for function, adjust if necessary.		
	C (R)	Check service brake for function and wear and carry out a brake test, replace necessary parts if necessary.		
Tyres	C	Check wheel bolts for tightness. retighten!		130 Nm
	C	Check tyre pressure.		
		Tyre size 23X8.5 12TT 10PR front/rear		1.9 bar/ 2.7 bar
		Tyre size 23 X10.5 - 12TL 6PR front/rear		1,5 bar/ 2,0 bar

Work to be carried out: Hako system maintenance II extended, every <b>2000</b> operating hours (4000 Bh, 8000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Sweeping Unit	R	Replace the Bowden cables on the broom arms.		RP.-Nr. 01471350 <b>(2X)</b>
	C (R)	Check the sweeping unit for wear and damage, replace defective parts if necessary.		
	C	Check the broom sweep level, adjust if necessary.		
	C	Fresh water system: Water spray system: Check spray nozzles, spray nozzle filter and sieve filter for function and clean if necessary.		
Suction Unit	R	Replace the Bowden cable for the coarse material flap.		RP.-Nr. 01167520
	C	Check for wear and damage, replace defective parts if necessary.		
	C (R)	Check suction mouth settings, adjust if necessary.		Distance to floor: Lateral 5mm:Rear 10-15 mm.
	C	Check the suction hose for damage and correct fit.		
	C (W)	Check seal between suction pipe and sweepings container, replace if necessary.		
	C	Check the fresh water nozzle and the circulating water system at the suction mouth for function.		
	C (R)	Check circulation water valve and hoses for function and damage.		
	C (R)	Check the suction mouth flap for function and damage.		
Dirt Hopper	P	Check for dirt, clean if necessary.		
	C	Sump floor flap Check function.		
	C	Check suction strainer in the sweepings container for dirt, clean if necessary.		
	C	Check the hydraulic motor for the suction fan and the hydraulic lines for leaks.		
	C	Check the fan speed of the suction fan in the sweepings container.		2800 1/Min bei 2600 1/Min Engine Speed
Container flap of the Dirt Hopper	C	Check the seals on the container flap for leaks and damage.		
	C	Check the lid joints and the bearing of the container flap.		
	C	Check the exhaust air side of the container flap for dirt.		

Work to be carried out: Hako system maintenance II extended, every <b>2000</b> operating hours (4000 Bh, 8000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Lubrication Service:		Door hinges 4X		
		Front lifting cylinders 4X		
		Front power lift 2X		
		Dirt Flap on Suction Unit 1X		
		Steering hinge 4 X		
		Steering Cylinder (Hydr.) 2X		
Visual condition of the machine	C	Coloring, corrosion, signs, sticker 25 km/h		
Test drive	C	Test of all functional and safety-relevant components, brake test according to legal requirements		
<b>C = Check</b>				
<b>R = Replace</b>				
<b>Remarks; Service Notes for the customer:</b>				
Location:		Date:		
Signature Customer:				
Signature Service Technician:				

## Maintenance System Hako Citymaster 650

Hako system maintenance II extended every **3000** operating hours (6000 Bh, 9000 Bh, 12000 Bh). To be carried out by authorised Hako service.

Vehicle Nr:

Operating hours:

Customer:

Work to be carried out: Hako system maintenance II extended every **3000** operating hours (6000 Bh, 9000 Bh).



**Technical data:**

Assambly group:

Engine Control Unit

C

Read out the error memory of the engine control unit, delete sporadic errors, repair clear errors if necessary.

Yanmar Engine diagnosis

Particel filter

C

Check the loading condition of the diesel particle filter, carry out a service regeneration if necessary.

Yanmar Engine diagnosis

R

Change engine oil.

ca. 6.7 Ltr. **Fuchs** Titan CARGO, 5W-40

R

Change the engine oil filter.

RP-Nr. 01140320

R

Change fuel filter.

RP-Nr. 01477080

R

Change fuel prefilter element.

RP-Nr. 01477140

R

Change air filter element

RP-Nr. 00682430

R

Change the safety cartridge of the air filter

RP-Nr. 00682420

C

Check valve clearance when engine is cold and adjust valve clearance if necessary.

Inlet/exhaust valves:  
Valve clearance 0.20 mm

R

Replace valve cover gasket

RP.Nr. 01477150

R

Change the diaphragm in the valve cover of the engine ventilation.

RP-Nr. 01477020

Cooling System

C

Check coolant hoses and radiator for leaks.

C

Check the coolant level in the expansion tank and the radiator antifreeze, top up if necessary. Observe frost protection for winter operation!

VW- G13, 40 - 60%  
Cooling additive (antifreeze)

Radiator

C

Check the combi radiator and radiator grille for dirt, clean with compressed air if necessary.

Engine mount

C

Check engine mounts for damage, cracks and tight fit.

V - Belt

C

V-belt generator Check condition and tension.

C

Air conditioner V-belt Check condition and tension.

C

Check ECO, standard and maximum speed

1900/ 2250/ 2630 1/min

Exhaust System

C

Check the exhaust system for function and tightness.

Fuel System

C

Check fuel lines for function and tightness.

Air Intake System

C

Check air intake line for function and tightness.

Work to be carried out: Hako system maintenance II extended every <b>3000</b> operating hours (6000 Bh, 9000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Control Unit Work Hydraulics	C	Read out the entries in the working hydraulics control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Control Unit Drive Hydraulic	C	Read out the entries in the hydrostat control unit and eliminate the fault if necessary. Check software status, carry out software update if necessary.		
Hydraulic System	R	Change hydraulic oil approx. 35L (HVLP46)		z.B. Mobil DTE Excel 46
	R	Change the return filter of the hydraulic system		RP.-Nr.01472210
	R	Change breather filter hydraulic oil tank		RP.-Nr.01082600
	C	Check the function of the hydraulic system.		
	C	Check hydraulic lines and hydraulic hoses for chafing and damage.		
	C	Check the hydraulic system for leaks at the hydraulic cylinders, screw connections and hydraulic lines.		
	C	Check the function of the hand pump by lifting the sweepings container with the hand pump.		
Steering (Hydr.)	C	Check function and ease of movement. Check steering for tightness.		
	C	Check steering cylinder for play and wear. Lubricate steering cylinder, 2X.		
	C	Check articulated joint for play and wear. Lubricate articulated joint, 4X.		

Work to be carried out: Hako system maintenance II extended every <b>3000</b> operating hours (6000 Bh, 9000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Elektric Equipment	R	Function check, lighting, working functions, horn, etc.		
Cable and wire harnesses	R	Check cables (electrical lines) for chafing and damage.		
	R	Check positive and ground connections to battery and frame for tight fit and chafing, clean if necessary. Protect battery terminals with terminal grease.		
Battery	R	Check the charge status of the battery.		
Cabine	R	Cabin air filter with air conditioning.		RP.-Nr 01065540
	R	Cabin air filter without air conditioning.		RP.-Nr 01063650
	C	Check heating for function.		
	C	Check the function of the air conditioner.		
	C	Check windscreen washer fluid level and top up if necessary.		
Air Condition	C	Check the condenser of the air conditioning system (radiator) on the rear wall of the cabin for dirt and clean it with compressed air if necessary.		
Brake	C (R)	Check service brake for function and wear and carry out a brake test, replace necessary parts if necessary.		
	C	Check parking brake for function, adjust if necessary.		
	C	Check the Bowden cables of the parking brake for chafing.		
Tyres	C	Check wheel bolts for tightness. retighten!		130 Nm
	C	Check tyre pressure		
		Tyre size 23X8.5 12TT 10PR front/reare		1.9 bar/ 2.7 bar
		Tyre size 23 X10.5 - 12TL 6PR front/reare		1.5 bar/ 2.0 bar

Work to be carried out: Hako system maintenance II extended every <b>3000</b> operating hours (6000 Bh, 9000 Bh).			✓	<b>Technical data:</b>
Assembly group:				
Sweeping Unit	R	Replace the Bowden cables on the broom arms.		RP.-Nr. 01471350 <b>(2X)</b>
	C (R)	Check the sweeping unit for wear and damage, replace defective parts if necessary.		
	C	Check the broom sweep level, adjust if necessary.		
	C	Fresh water system: Water spray system: Check spray nozzles, spray nozzle filter and sieve filter for function and clean if necessary.		
Suction Unit	C (R)	Check for wear and damage, replace defective parts if necessary.		
	C	Check suction mouth settings, adjust if necessary		Distance to floor: Laterally 5mm: Rear 10-15 mm.
	C (R)	Check the suction hose for damage and correct fit.		
	C (R)	Check seal between suction pipe and sweepings container, replace if necessary.		
	C	Check the suction hose for damage and correct fit.		
	C	Check circulation water valve and hoses for function and damage.		
	C	Check the suction mouth flap for function and damage.		
	C	Check Bowden cables for function, damage and ease of movement, replace if necessary.		
Dirt Hopper	C	Check for dirt, clean if necessary.		
	C	Sump floor flap Check function.		
	C	Check suction strainer in the sweepings container for dirt, clean if necessary.		
	C	Check the hydraulic motor for the suction fan and the hydraulic lines for leaks.		
	C	Check the fan speed of the suction fan in the sweepings container.		2800 1/Min bei 2600 1/Min Engine Speed
Container flap of the Dirt Hopper	C	Check the seals on the container flap for leaks and damage.		
	C	Check the lid joints and the bearing of the container flap.		
	C	Check the exhaust air side of the container flap for dirt.		



Work to be carried out: Hako system maintenance II extended every <b>3000</b> operating hours (6000 Bh, 9000 Bh).			✓	<b>Technical data:</b>
Assembly:				
Lubrication Service:		Door hinge 4X		
		Front lifting cylinders 4X		
		Front power lift 2X		
		Dirt Flap on Suction Unit 1X		
		Steering hinge 4X		
		Steering Cylinder (Hydr.) 2X		
Visual condition of the machine	C	Colouring, corrosion, signs, stickers 25km/h		
	C			
Test Drive	C	Test of all functional and safety-relevant components, brake test according to legal requirements.		
<b>C = Check</b>				
<b>R = Replace</b>				
<b>Remarks; Service Notes for the customer:</b>				
Location:		Date:		
Signature Customer:				
Signature Service technician:				