

Maintenance of the empty bottle inspection machine miho DAVID 2

Customer:

Date:

Technician:.....

DAVID 2 No.:

Operating hours:

Only in compliance with the maintenance intervals an optimal detection accuracy is guaranteed.

Changes in the setting values have a direct influence on the inspection accuracy of the respective inspection unit.

The detection guarantees of the individual inspection units of the miho David 2 correspond to the state of technology at the time of commissioning/acceptance of the empty bottle inspection machine. We recommend the replacement of bearings and shafts:

Up to 30,000 bph nominal line speed Replacement of bearings and shafts every 6,000 operating hours

From 30,000 bph replacement of bearings and shafts every 4000 operating hours

Maintenance Inspection List						
No.	Work to be carried out	not desired by Customer	Unnecessary Condition OK	Done / exchanged	required during next maintenance	Remarks
Preparations at miho						
1	Preparation					
1.1	LU/AB folder					
1.2	Customer Folders					
1.3	Customer History					
1.4	Calling the customer					
1.5	Preparation tools/material					
Preparation at the customer's site						
2	Process discussion at the beginning of maintenance					
2.1	Where can I find what?					
2.2	Arrange times					
2.3	Query issues					
2.4	Emergency contact					
2.5	Coordinate production before maintenance					
Production support before maintenance						
3	Production before maintenance possible?					
4	Save parameters to stick					
5	Maintenance clock active? From V.1.7.68					
5.1	Read the maintenance clock parameter					
5.2	Operating time (h)					
5.3	Mileage (km)					
5.4	Number of total bottles					
5.5	Number of rejected bottles					
5.6	Reset maintenance clock parameters, adjust if necessary					
6	Machine status					
6.1	Check bottle flow					
6.2	LED flash lamps: visual control. Check for defective LED segments.					
6.3	Check fans (also emergency fan)					
Maintenance of mechanical components After Shutting Down Inspector						
7	Disassembly of all covers, remove belts					

Maintenance Inspection List

No.	Work to be carried out	not desired by Customer	Unnecessary Condition OK	Done / exchanged	required during next maintenance	Remarks
7.1	Open and check all external miho enclosures. e.g. conveyor stop-box...					
7.2	Remove brush motor					
7.3	Check brushes; if necessary replace					
7.4	Check rubber wiper					
7.5	Check shaft and bearing clearance and free movement					
7.6	Check electrical connections					
8	Remove glass plates					
9	Remove IR lamp holder					
10	Rollers – belt pressure plates Check alignment, parallelism of belt pressure plates					
11	Marking and dismantling rollers					
12	Marking and removing railing holder outfeed/infeed position					
13	Infeed plate Check for a firm seat, adjustment, and wear					
14	Dismantle the outfeed plate					
15	Open transport chain outfeed side Pull back chain					
	Open transport chain infeed side Pull back chain					
16	Cleaning					
16.1	Remove broken glass, paper remnants, etc.					
16.2	Clean the substructure from belt lubricant and dirt.					
16.3	Clean all stainless steel and plastic surfaces with neutral detergent.					
17	Exchange of the belt tensioner/ roller bearings and shafts					
17.1	Disassembly of shaft and bearing					
17.2	Assembly of new shaft and bearing					
18	Drive motors for belts					
18.1	Reluctance motor up to Snr. DAV2_045					
18.2	Open electrical terminal box, Check oil loss, replace in case of oil loss					
18.3	Servomotor					
18.4	Check connection cable / seal the plug					
19	Diversion of the transport chain					
19.1	check the condition and elongation of the chain,					
19.2	Check chain tension pinions					
19.3	Check shaft and bearing of the plastic sprockets					
19.4	Check the bearing of the deflection shaft					

Maintenance Inspection List

No.	Work to be carried out	not desired by Customer	Unnecessary Condition OK	Done / exchanged	required during next maintenance	Remarks
20	Encoder (base cabinet): Check fastening and coupling.					
21	Conveyor chain, sprockets, and wear strips Infeed/outfeed					
21.1	Check sprockets for wear					
21.2	Check chain for tension and elongation, shorten if necessary.					
21.3	Check green wear strips for length, shorten if necessary.					
21.4	Arrange replacement of wear strips with customer if needed					
22	Maintenance unit, pressure reducer, pneumatics					
22.1	Clean, check for function.					
22.2	Drain oil and water separators.					
22.3	Check the compressed air switch, adjust if necessary (2 bar).					
22.4	Check the complete compressed air system for leaks. Leakage detection spray					
22.5	Check the symmetry of the lifting cylinders for SWK I/II. If necessary, symmetrize with exhaust air throttle.					
22.6	Clean, check and, if necessary, replace base nozzle					
23	Width adjustment BTS (Bottle Turn System)					
23.1	Check toothed belt condition and tension					
23.2	Check width adjustment for function.					
23.3	Check BTS spindles, lubricate					
24	Inspection head: Check the tangent and radial clearance of the inspection head guide. Clean, lubricate, adjust if necessary.					
25	Ventilators: Clean, replace if necessary					
25.1	Cabinet fan					
25.2	Emergency fan					
25.3	Air conditioning					
Maintenance of electrical components Switch on the inspector						
26	Electrical components, circuit boards: visual control. Check electrolytic capacitors on all lightning control boards.					
27	Check base inspection glass plates and seals					
28	finish control					

Maintenance Inspection List

No.	Work to be carried out	not desired by Customer	Unnecessary Condition OK	Done / exchanged	required during next maintenance	Remarks
28.1	Check flash lamp protective glass pane (Inspection head) Attention: For protective glass pane with hole, do not reach into the hole!					
28.2	Check protective glass pane inside the inspection head, if fitted. Attention: Carefully remove the inspection head cover.					
29	Side wall inspection infeed					
29.1	Check protective glass pane of the flash housings / polarization filters					
29.2	Check replaceable protective glass of the mirror cabinets.					
29.3	Check protective glass panes of the mirror cabinets.					
29.4	Clean Camera lens with optics cleaning cloth.					
30	Mirror systems of the side wall controls infeed					
30.1	Check the position of the mirrors, adjust them if necessary.					
30.2	Only if necessary: Clean mirrors very carefully. Attention: Sensitive surface-mirrors!					
31	Side wall inspection outfeed					
31.1	Protective glass pane of the flash housings / polarization filters					
31.2	Replaceable protective glass of the mirror cabinets.					
31.3	Protective glass panes of the mirror cabinets.					
31.4	Clean Camera lens with optics cleaning cloth.					
32	Mirror systems of the side wall inspection outfeed					
32.1	Check the position of the mirrors, adjust them if necessary.					
32.2	Only if necessary: Clean mirrors very carefully. Attention: Sensitive surface mirrors!					
32.3	Clean Camera lens with optics cleaning cloth.					
33	IR - Residual Fluid Control					
33.1	Clean sensor optics with optics cleaning cloth (test head).					
33.2	Clean protective glass pane of the infrared lamp.					
33.3	Replace the halogen bulb of the infrared lamp. Attention: Do not touch bulbs with your fingers!					
34	FSI Finish Sidewall Inspection					
34.1	Clean the Protective glass pane of the camera housing.					
34.2	Clean Camera lens with optics cleaning cloth.					
35	Monitor: Clean the screen with a suitable cleaner.					
36	HF residual liquid control: Clean sensor surfaces.					

Maintenance Inspection List

No.	Work to be carried out	not desired by Customer	Unnecessary Condition OK	Done / exchanged	required during next maintenance	Remarks
37	Thread blowing					
37.1	Clean and disinfect comb nozzles, replace if necessary.					
37.2	Drain oil and water separators.					
37.3	Check sterile air filters, replace them if necessary.					
38	FSI Finish Sidewall Inspection					
38.1	Visually check the general condition. Tightness of housing; Condition of the cable protection conduit, Screw connections, light barriers, etc.					
38.2	Check chain tension of the drive, tension if necessary. Attention: Risk of injury! Switch off the machine!					
38.3	Check the height adjustment of the FSI housing by test run for smoothness, tolerance, running noise.					
38.4	Clean lifting spindles, lubricate them if necessary.					Lubricant: Rivolta F.L. 2000
Production						
39	Production support possible after maintenance					
40	Bottle guides: Check the infeed and outlet components of the bottle guides, if necessary, level them out with spacers.					
41	Parameterization of inspection units: Check with associated software and save to disk.					
42	conveyor speed compensation: Check ejection timing depending on the conveyor speed, adjust times if necessary.					
43	BTS function: Check the synchronicity of the BTS and belt system Check the angle of rotation of the bottle, adjust it if necessary					
44	Mechanical alignment: Check height and side orientation. Avoid kinks and skews.					
45	Rejection systems: Clean, check condition and function, replace wear parts if necessary.					
46	EMERGENCY STOP Functional check					
47	Test bottles: Check condition and function.					
48	AWeS-PC: Check connection to David					
48.1	Test AWeS reports					
49	Check remote maintenance					
50	Time: Check on all inspection devices and on the AWeS computer and adjust if necessary.					

Remarks:

- 1.
- 2.
- 3.
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5. .
- 6.
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- 9.
- 10.

The proper execution of the maintenance is herewith confirmed.

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Place, date

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signature miho service technician

Received a copy or .PDF of the maintenance plan:

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Signature customer