

QUALITY CONTROL FLOW CHART OF CLEANER PRODUCTS

Document No.: 4-QC-221

Version: 28

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I. Purpose:

- Control the quality of Cleaner products, which is made in FOV.

II. Application:

- This document is applied for Cleaner products which are manufactured in FOV.
- This QC has a connection with PRD, QAE, PRE, PLN, LOG.

III. Reference Documents:

- 4-OP-221: Operation procedure of Cleaner product.
- 0-PR-012-0-FO-001-4-RC-0111: P- FMEA for Cleaner product [version: 7](#)
- Products Specification



No	Product Name	Specification	Remark
1	One-Click Cleaner MU/LC(MU/LC-CLK-C)	HW-0028-005\$015	
2	IBC Brand Cleaner LC (9393)	HW-0028-003\$019	
3	IBC Brand Cleaner HC (9394)	HW-0028-002\$017	
4	IBC Brand Cleaner SC (9392)	HW-0028-001\$016	
5	One-Click Cleaner ODC (ODC-CLK-A)	HW-0028-011\$014	
6	One-Click Cleaner SC (100) (SC-CLK-B (100))	HW-0028-013\$015	
7	IBC Brand Cleaner M20 (12926)	HW-0028-015\$016	
8	One-Click Cleaner MU/LC (100) (MU/LC-CLK-C (100))	HW-0028-014\$016	
9	One-Click Cleaner M20	HW-0028-016\$015	
10	One-Click Cleaner MU/LC (MU/LC-J-CLK-C)	HW-0028-012\$016	
11	IBC Brand Cleaner M16 (13309)	HW-0028-030\$020	
12	One-Click Cleaner SC/FA (100) (SC/FA-CLK-A (100))	HW-0028-017\$015	
13	One-Click Cleaner MU/LC (100) (MU/LC-J-CLK-C (100))	HW-0028-018\$016	
14	IBC Brand Cleaner H125 (12910)	HW-0028-010\$017	
15	One-Click Cleaner SC/FA-EN (SC/FA-EN-CLK-A)	HW-0028-035\$013	
16	One-Click Cleaner MU/LC-EN (MU/LC-EN-CLK-A)	HW-0028-036\$015	
17	One-Click Cleaner SC/FA-EN-100 (SC/FA-EN-100-CLK-A)	HW-0028-038\$014	
18	One-Click Cleaner MU/LC-EN-100 (MU/LC-EN-100-CLK-A)	HW-0028-039\$016	
19	One-Click Cleaner SC/FA (SC/FA-CLK-A)	HW-0028-007\$013	
20	Fujikura Cleaner MU/LC(MU/LC-CLK-C)	HW-0028-044\$011	
21	One-Click Cleaner LC Pro	HW-0028-059\$004	
22	One-Click Cleaner SC Pro	HW-0028-058\$004	
23	IBC Brand Cleaner Zi125(13965)	HW-0028-019\$019	
24	One-Click Cleaner MU/LC Mini (MU/LC-J-MINI-CLK-A)	HW-0028-021\$016	
25	One-Click Cleaner SC/FA Mini (SC/FA-J-MINI-CLK-A)	HW-0028-022\$011	
26	One-Click Cleaner MU/LC Mini (MU/LC-MINI-CLK-A)	HW-0028-023\$016	
27	One-Click Cleaner MU/LC Mini-100(MU/LC-MINI-100-CLK-A)	HW-0028-025\$017	
28	One-Click Cleaner SC Mini-100 (SC-MINI-100-CLK-A)	HW-0028-026\$015	
29	One-Click Cleaner MU/LC Mini-100 (MU/LC-J-MINI-100-CLK-A)	HW-0028-031\$017	
30	One-Click Cleaner SC/FA Mini-100 (SC/FA-J-MINI-100-CLK-A)	HW-0028-032\$013	
31	IBC Brand Cleaner ZiA125 (14649)	HW-0028-034\$017	
32	IBC Brand Cleaner GA16 (14829)	HW-0028-037\$018	
33	IBC Brand Cleaner G1000 (15523)	HW-0028-041\$017	
34	IBC Brand Cleaner G700	HW-0028-042\$016	

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35	One-Click Cleaner SC Mini (SC-MINI-CLK-A)	HW-0028-033\$011	
36	One-Click Cleaner MPO (MPO-CLK-D)	HW-0051-001\$017	
37	One-Click Cleaner MPO-100 (MPO-100-CLK-D)	HW-0051-003\$017	
38	IBC Brand Cleaner MPO II (7104)	HW-0051-002\$018	
39	IBC Brand Cleaner MT38II (15546)	HW-0051-005\$017	
40	IBC Brand Cleaner HBMT II	HW-0051-006\$016	
41	MPO Cleaner II	HW-0051-007\$015	
42	IBC Brand Cleaner Opti Tip II (15638)	HW-0051-008\$017	
43	One-Click Cleaner BNC(BNC-CLK-A)	HW-0051-009\$011	
44	IBC Brand Cleaner MTP-16 (17669)	HW-0051-011\$005	
45	One-Click Cleaner MPO-16(MPO16-CLK-A)	HW-0051-012\$005	
46	Fujikura Cleaner MPO (MPO-CLK-D)	HW-0051-014\$005	
47	One-Click Cleaner SC (SC-CLK-B)	HW-0028-004\$011	
48	IBC Brand Cleaner Zi25 (13964)	HW-0028-020\$012	
49	Fujikura Cleaner SC (SC-CLK-B)	HW-0028-043\$006	
50	Fujikura Cleaner H6BPC	HW-0059-001\$011	
51	IBC Brand Cleaner M250(13310)	HW-0035-001\$013	
52	One-Click Cleaner M250 (M250-CLK-A)	HW-0035-002\$009	
53	One-Click Ultra Cleaner 2.5 (M250-E-CLK-A)	HW-0035-003\$009	
54	One-Click Cleaner M250(100) (M250-CLK-A (100))	HW-0035-007\$010	
55	One-Click Ultra Cleaner 2.5(100) (M250-E-CLK-A (100))	HW-0035-008\$010	
56	CLEANER-PUSHLOK	HW-0028-047\$005	
57	One-Click Cleaner MU/LC (MU/LC-CLK-C) kit	HW-0028-054\$004	
58	IBC Brand Cleaner HBMT-EN (9959)	HW-0078-001\$007	
59	IBC Brand Cleaner HBMT (8037)	HW-0078-003\$007	
60	IBC Brand Cleaner MT38 (8150)	HW-0078-009\$004	
61	IBC Brand Cleaner MPOD (15428)	HW-0078-011\$006	
62	One-Click Cleaner MT-RJ	HW-0040-002\$008	
63	IBC Brand Cleaner LC2(14303)	HW-0042-001\$015	
64	One-Click Cleaner D-LC (DLC-CLK-A)	HW-0042-002\$013	
65	One-Click Cleaner D-LC (100) (DLC-100-CLK-A)	HW-0042-003\$014	
66	Bulk Pack One-Click Cleaner SN Duplex	HW-0042-006\$006	
67	Fujikura Cleaner H6DC (HW6BPDC2-CLK-A)	HW-0051-017\$005	
68	One-Click Cleaner SC PRO-100	HW-0028-060\$002	
69	One-Click Cleaner LC PRO-100	HW-0028-061\$002	
70	Bulk Pack IBC Brand Cleaner SC (23703)	HW-0028-062\$001	
71	IBC Brand Cleaner SC PLUS	HW-0028-063\$001	
72	IBC Brand Cleaner LC PLUS	HW-0028-064\$001	
73	One-Click Cleaner EPCO	HW-0051-018\$001	
74	IBC Brand Cleaner MMC (23121)	HW-0051-020\$002	
75	IBC Brand Cleaner MMC-16 (24903)	HW-0051-021\$002	
76	CLEANER-PUSHLOK-MF (22912)	HW-0051-024\$002	
77	One-Click Cleaner MMC	HW-0051-025\$002	
78	One-Click Cleaner MMC-16	HW-0051-026\$002	

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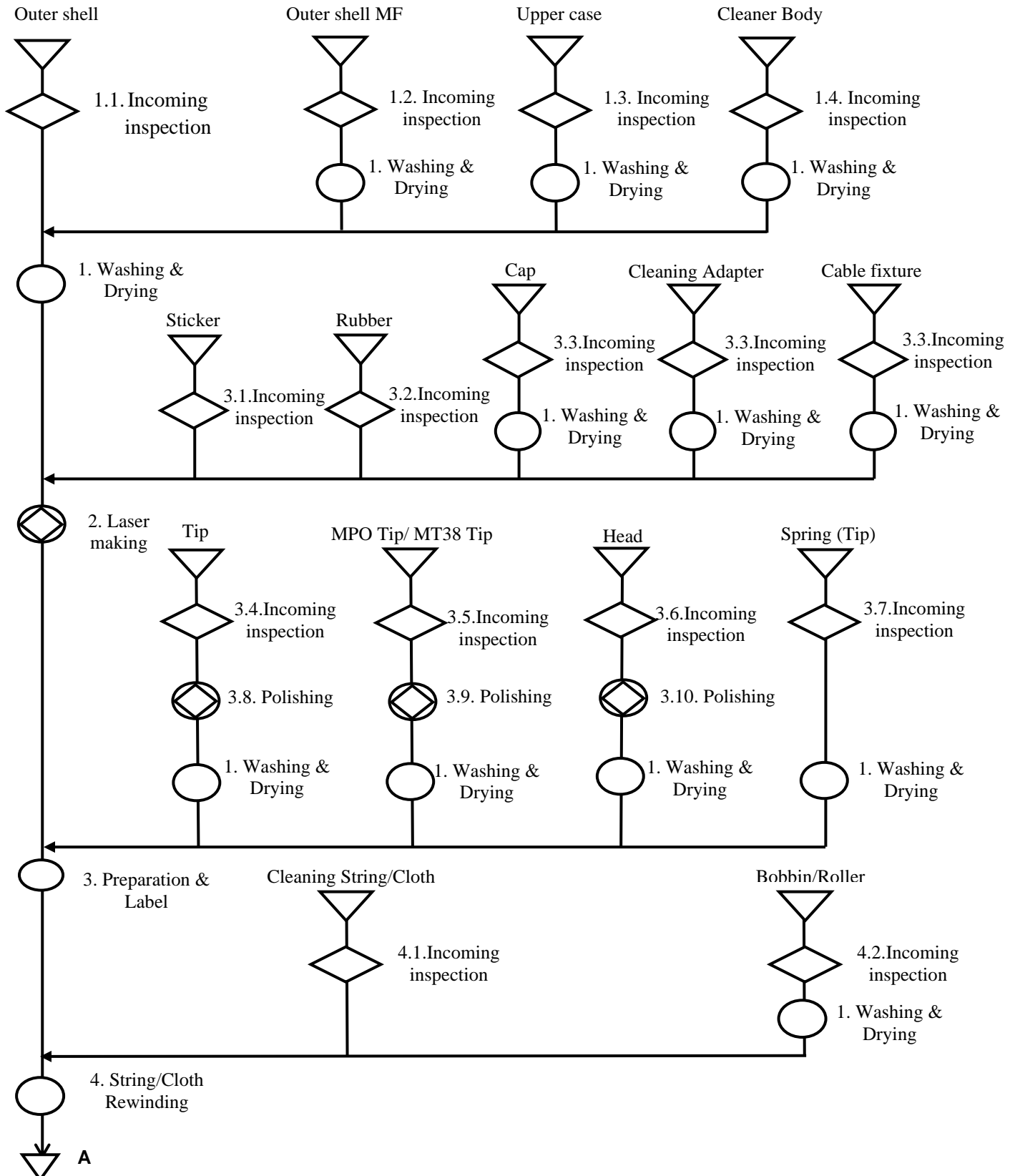
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79	One-Click Cleaner SC (SC-CLK-B)	HW-0028-068\$002	
80	One-Click Cleaner MU/LC(MU/LC-CLK-C)	HW-0028-069\$002	
81	One-Click Cleaner MPO (MPO-CLK-D)	HW-0051-028\$002	

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IV. Term definition:

FOV: Fujikura Fiber Optics Vietnam Ltd,

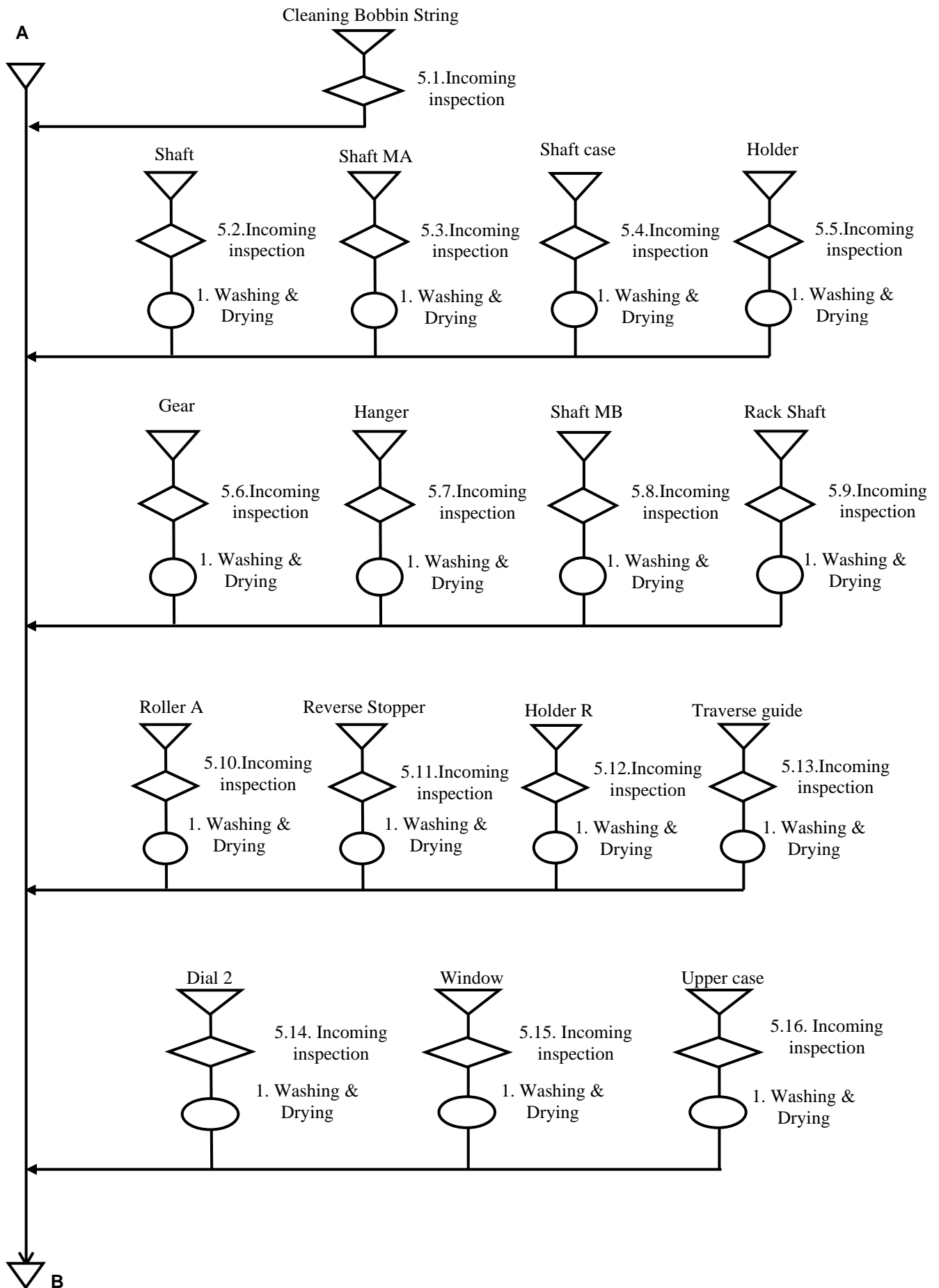
V. Content:**1. QC Flow chart for all processes is shown in the following figure:**

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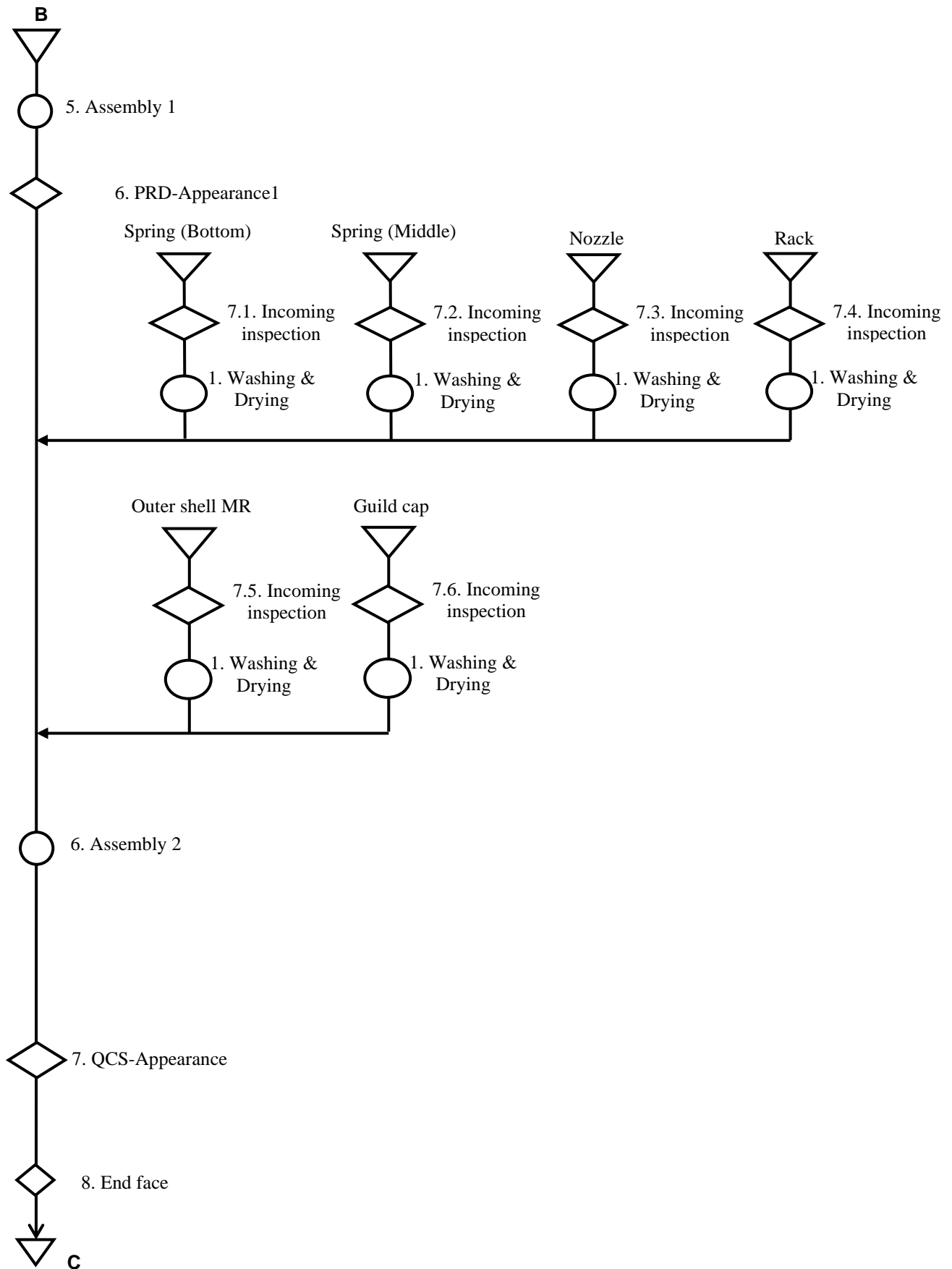


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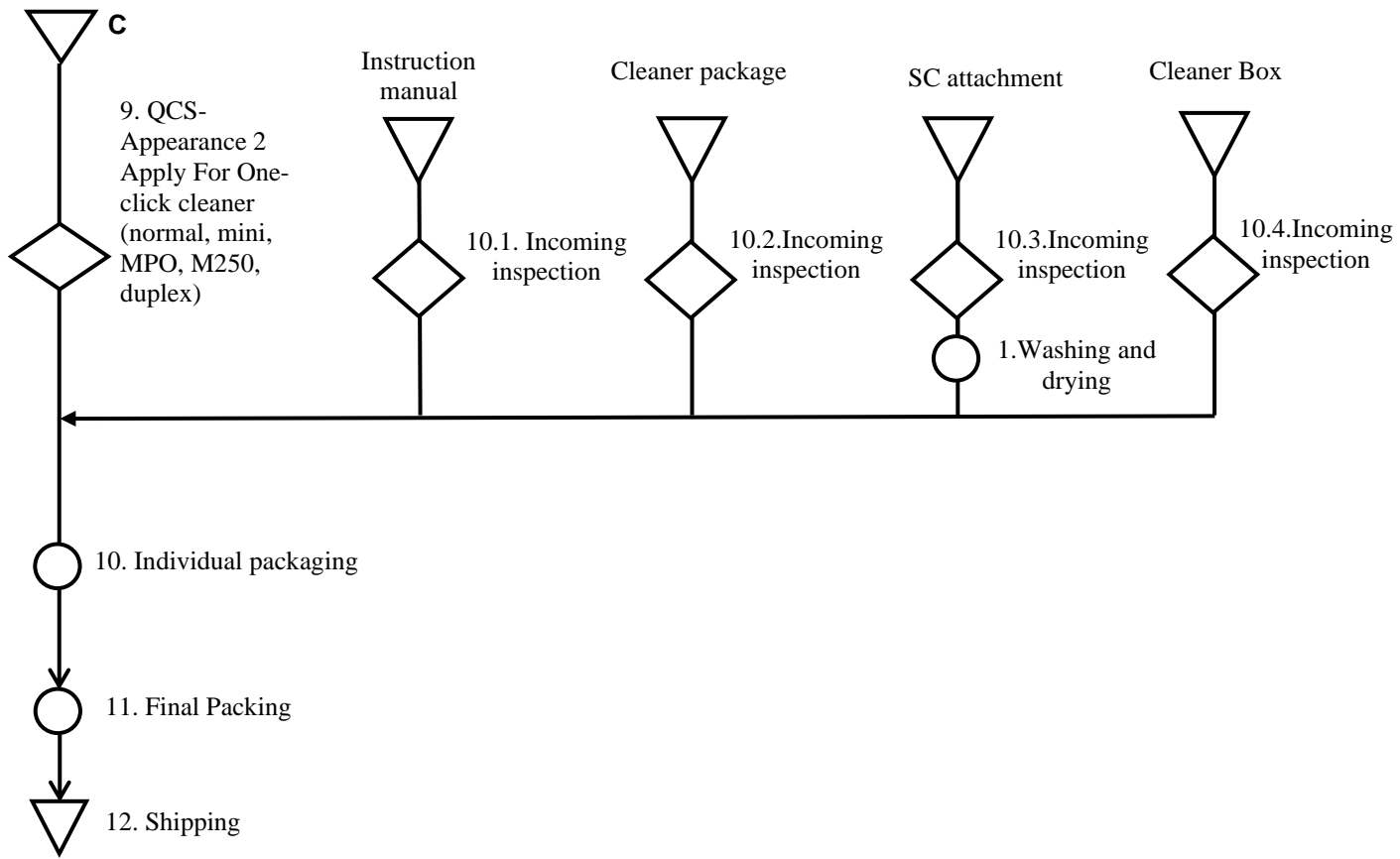


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2. Quality Control Items for each process:

No	Process	Quality control item	Instrument	Sampling size	Related Document	SIC
1	Washing & Drying	Washing condition	Ultrasonic machine	All	4-OP-221	PRD, PRE
		Drying condition	Drying machine & chamber machine	All		
		Appearance of parts (dry, no dirty, no change characteristic)	Microscope machine	3pcs/tray		
2.1	Incoming inspection (Outer shell)	-	-	-	9-PR-012	QAE, LOG
2.2	Incoming inspection (Outer shell MF)	-	-	-	9-PR-012	QAE, LOG
2.3	Incoming inspection (Upper case)	-	-	-	9-PR-012	QAE, LOG
2.4	Incoming inspection (Cleaner Body)	-	-	-	9-PR-012	QAE, LOG
2	Laser Marking	-Position of printing	Jig	All	4-OP-221	PRD, PRE
		-Content of printing	Laser printing machine			
		-Appearance of printing	Visual			
3.1	Incoming inspection (Sticker)	-	-	-	9-PR-012	QAE, LOG
3.2	Incoming inspection (Rubber)	-	-	-	9-PR-012	QAE, LOG
3.3	Incoming inspection (Cap)	-	-	-	9-PR-012	QAE, LOG

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3.4	Incoming inspection (Tip)	-	-	-	9-PR-012	QAE, LOG
3.5	Incoming inspection (MPO Tip/ MT38 Tip)	-	-	-	9-PR-012	QAE, LOG
3.6	Incoming inspection (Head)	-	-	-	9-PR-012	QAE, LOG
3.7	Incoming inspection (SPRING (TIP))	-	-	-	9-PR-012	QAE, LOG
3.8	Tip/head polishing	Flatness of Tip/head	Visual	All	4-OP-221	PRD, PRE
3.9	Tip/head polishing	Flatness of Tip/head	Visual	All	4-OP-221	PRD, PRE
3.10	Tip/head polishing	Flatness of Tip/head	Visual	All	4-OP-221	PRD, PRE
3	Preparation & Label	Correct position	Visual	All	4-OP-221	PRD, PRE
		Correct quantity	Visual			
		Correct direction	Visual			
		Correct color	Visual			
		Correct kind	Visual			
		Appearance of sticker	Visual			
4.1	Incoming inspection (Cleaning String/Cloth)	-	-	-	9-PR-012	QAE, LOG
4.2	Incoming inspection (Bobbin/Roller)	-	-	-	9-PR-012	QAE, LOG
4.	String/Cloth Rewinding	- Length of string	Ruler template	1pcs when machine stop or re-run or change kind of product.	4-OP-221	PRD, PRE
		- Appearance of Cleaning Bobbin String	Visual	All	4-OP-221	PRD, PRE
5.1	Incoming inspection (Cleaning Bobbin String)	-	-	-	9-PR-012	QAE, LOG
5.2	Incoming inspection (Shaft)	-	-	-	9-PR-012	QAE, LOG
5.3	Incoming inspection (Shaft MA)	-	-	-	9-PR-012	
5.4	Incoming inspection (Shaft case)	-	-	-	9-PR-012	
5.5	Incoming inspection (Holder)	-	-	-	9-PR-012	
5.6	Incoming inspection (Gear)	-	-	-	9-PR-012	
5.7	Incoming inspection (Hanger)	-	-	-	9-PR-012	
5.8	Incoming inspection (Shaft MB)	-	-	-	9-PR-012	
5.9	Incoming inspection (Rack Shaft)	-	-	-	9-PR-012	
5.10	Incoming inspection (Roller A)	-	-	-	9-PR-012	
5.11	Incoming inspection (Reverse Stopper)	-	-	-	9-PR-012	
5.12	Incoming inspection (Holder R)	-	-	-	9-PR-012	
5.13	Incoming inspection	-	-	-	9-PR-012	

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	(Traverse guide)					
5.14	Incoming inspection (Dial 2)	-	-	-	9-PR-012	
5.15	Incoming inspection (Window)	-	-	-	9-PR-012	
5.16	Incoming inspection (Upper case)	-	-	-	9-PR-012	
5	Assembly 1	Kind of parts	Visual	All	4-OP-221	PRD, PRE
		Position of parts	Visual	All	4-OP-221	
		Direction of parts	Visual	All	4-OP-221	
		Quantity of parts	Visual	All	4-OP-221	
		Color of parts	Visual	All	4-OP-221	
		Assembly structure	Visual, manual	All	4-OP-221	
6.1	Incoming inspection (Spring(Bottom))	-	-	-	9-PR-012	QAE, LOG
6.2	Incoming inspection (Spring(Middle))	-	-	-	9-PR-012	
6.3	Incoming inspection (Nozzle)	-	-	-	9-PR-012	
6.4	Incoming inspection (Rack)	-	-	-	9-PR-012	
6.5	Incoming inspection (Outer shell MR)	-	-	-	9-PR-012	
6.6	Incoming inspection (Guild cap)	-	-	-	9-PR-012	
6	Assembly 2	Kind of parts	Visual	All	4-OP-221	PRD, PRE
		Position of parts	Visual	All	4-OP-221	
		Direction of parts	Visual	All	4-OP-221	
		Quantity of parts	Visual	All	4-OP-221	
		Color of parts	Visual	All	4-OP-221	
		Assembly structure	Visual, manual	All	4-OP-221	
		Click test jamming	Manual	All (3 click times/ cleaner)	4-OP-221	
7	QCS appearance	Cap appearance	Visual	All	4-OP-221	QAE, LOG
		Nozzle appearance	Visual	All	4-OP-221	
		Cap's anchor position	Visual	All	4-OP-221	
		Sticker appearance	Visual	All	4-OP-221	
		Outer-shell appearance	Visual	All	4-OP-221	
		String position	Visual	All	4-OP-221	
		Laser matching appearance	Visual	All	4-OP-221	
8	Endface	Endface	Microscope machine	All	4-OP-221	
9	QCS appearance 2 (Apply For One-click cleaner (normal, mini, MPO, M250, duplex))	Cap's gap	Ruler Template	All	4-OP-221	
		SC Attachment holding test (only apply for M250 Cleaner)	Visual			
		String fluffing				
10.1	Incoming inspection (Instruction manual)	-	-	-	9-PR-012	
10.2	Incoming inspection (Cleaner package)	-	-	-	9-PR-012	
10.3	Incoming inspection (SC attachment)	-	-	-	9-PR-012	
10.4	Incoming inspection (Cleaner box)	-	-	-	9-PR-012	

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10	Individual packaging	Quantity of product/ box	Visual	All	4-OP-221	
		Kind of box	Visual	All	4-OP-221	
		Content of box no's label	Programing	All	4-OP-221	
		Direction packing	Visual	All	4-OP-221	
11	Final Packing	Quantity of product/carton box	Visual	All	4-OP-221	
		Size of carton box	Visual	All	4-OP-221	
		Content of carton box 's label	Programing	All	4-OP-221	
12	Shipping	- Test report - PO No	Visual	All	4-OP-221	LOG

Note:

- Incoming inspection: refer to document of ICM.

VI. Record:

No.	Record	Retention time	Responsibility for keeping
-	-	-	-

- Identification, storage, protection, retrieval & disposition of these records refer to 0-PR-004 Control of record.

Note: Nonconforming product/material shall be identified & controlled according to relevant procedures: 9-PR-008.

REVISION HISTORY

Date	PERSON	VERSIO N	DESCRIPTION		Reason	CHANGE REQUEST ER
			OLD CONTENT	NEW CONTENT		
9/26/2024	Thu DTM	28	III. Reference documents: 0-PR-012-0-FO-001-4-RC-0111: P- FMEA for Cleaner product	III. Reference Documents: Update new ver for 0-PR-012-0-FO-001-4-RC-0111: P- FMEA for Cleaner product	Document review	Nguyen Ba Phuoc
			N/A	Add product No. 79, 80 & 81	New product spec	
			N/A	Update spec version No. 20,21,22,32,38,40,50,68,69	Update spec version	
4/9/2024	Tram NTN Thu DTM	27	-	※QC flowchart: - Add polishing process before washing for MPO Tip/Head type. - Add material "Cleaning Adapter" & "cable fixture" to Laser marking process ※Quality control item - Add process 3.8, 3.9, 3.10 - Combine process 6 & 7	- Add process & material follow actual Cleaner line.	Pham Dinh Hieu
3/29/2024	Huy HM	26	10.3 SC attachment Washing &drying: None	11.3 SC attachment Added Washing &drying	Document review	Section Manager. Nguyen Thanh Ban
			7. Assembly 2 Click test jamming: All 8. QCS appearance Click test jamming: All	7. Assembly 2 Click test jamming: All (3 click times/ cleaner) 8. QCS appearance Click test jamming: Remove	Follow 9-PR-0014-9-FO-0001-9-RC-0015	
			0-PR-012-0-FO-001-4-RC-0111 ver 04	0-PR-012-0-FO-001-4-RC-0111 ver 05		

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3/19/2024	Huy HM	25	-	Section III. Add FMEA number	Follow 0-Pr-001-0-TEM-003	Section Manager. Nguyen Thanh Ban
			Section III. Table 1 PNJHW-0028-25-24F PNJHW-0051-25-04 HW-0051-016\$003	Section III. Table 1 - Remove	EOL products	
			HW-0028-005\$001 PNJHE-1217-25-02I HW-0051-001\$002 HW-0028-004\$QT		Sub item of other line	
			HW-0028-005\$011 HW-0028-005\$010		Pilot run item follow 000-5-WI-104	
			HW-0028-005\$012 HW-0028-003\$014 HW-0028-002\$014 HW-0028-001\$013 HW-0028-011\$011 HW-0028-013\$013 HW-0028-015\$014 HW-0028-014\$013 HW-0028-016\$013 HW-0028-012\$012 HW-0028-030\$017 HW-0028-017\$013 HW-0028-018\$013 HW-0028-019\$019 HW-0051-008\$016 HW-0051-016\$005		Remove duplicate item	
			Section III. Table 1 - Spec number: HW-0028-005\$012 HW-0028-003\$014 HW-0028-002\$014 HW-0028-001\$013 HW-0028-011\$011 HW-0028-013\$013 HW-0028-015\$014 HW-0028-014\$013 HW-0028-016\$013 HW-0028-012\$012 HW-0028-030\$017 HW-0028-017\$013 HW-0028-018\$013 HW-0028-010\$013 HW-0028-035\$011 HW-0028-036\$012 HW-0028-038\$012 HW-0028-039\$013 HW-0028-007\$010 HW-0028-044\$006 HW-0028-022\$010 HW-0028-032\$011 HW-0028-037\$017 HW-0028-033\$010	Section III. Table 1: - Spec number: HW-0028-005\$015 HW-0028-003\$019 HW-0028-002\$017 HW-0028-001\$016 HW-0028-011\$014 HW-0028-013\$015 HW-0028-015\$016 HW-0028-014\$016 HW-0028-016\$015 HW-0028-012\$016 HW-0028-030\$020 HW-0028-017\$015 HW-0028-018\$016 HW-0028-010\$017 HW-0028-035\$013 HW-0028-036\$015 HW-0028-038\$014 HW-0028-039\$016 HW-0028-007\$013 HW-0028-044\$010 HW-0028-022\$011 HW-0028-032\$013 HW-0028-037\$018 HW-0028-033\$011	Customer update spec	

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			HW-0051-001\$014 HW-0051-003\$016 HW-0051-005\$015 HW-0051-007\$014 HW-0051-008\$016 HW-0051-009\$010 HW-0051-011\$003 HW-0051-012\$004 HW-0051-014\$004 HW-0028-004\$008 HW-0059-001\$004 HW-0035-001\$011	HW-0051-001\$017 HW-0051-003\$017 HW-0051-005\$017 HW-0051-007\$015 HW-0051-008\$017 HW-0051-009\$011 HW-0051-011\$005 HW-0051-012\$005 HW-0051-014\$005 HW-0028-004\$011 HW-0059-001\$010 HW-0035-001\$013		
			-	- Section III. Table 1: Add item 56 → 67.	Add more products	
				Add item 68 → 78.	Customer release new spec	
8-May-23	Huy HM	24	-	Section III. Table 1: add new product One-Click Cleaner LC Pro, One-Click Cleaner SC Pro	Customer release new spec	Division Manager. Nguyen Trung Kien
15-Jan-2022	Xanh GC	23	Item 8 QCS appearance: Cap holding test	Item 8 QCS appearance: Cancel: “Cap holding test”	Follow 4-PR-007-4-Fo-001-9-RC-0330	Division Manager. Nguyen Trung Kien
8-June-2021	Xanh GC	22	1/ Page 1, Table 1 2/ Page 8, Table 2 9-QC-001	Page 1, Update spec Table 1 2/ Page 8, Table 2 9-PR-012	Update spec follow EC-00518, EC-00937	Division Manager. Nguyen Trung Kien
30-Nov-2020	Xanh GC	21	1/ Appearance 2 Process PRD: Check jamming	1/ Assembly 2 Process: Moving item check jamming from Appearance 2 Process PRD to Assembly 2 Process.	1/ Combine process	Dept. Manager. Nguyen Trung Kien
27-July-2020	Xanh GC	20	1/ Update a/Page 8,11 QCS appearance 2 (Apply For One-click cleaner (M250) b/ Page 3, Not yet have	1/ Update a/ Page 8,11, QCS appearance 2 (Apply For One-click cleaner (normal, mini, MPO, M250, duplex)) b/ Page 3, update table 7.	Update follow: 4-Pr-007-4-Fo-0001-9-RC-0023	Dept. Manager. Nguyen Trung Kien