中国认可
国际互认
检测
TESTING
CNAS L6478

TEST REPORT

Report No	:	WTF24F10236946A1C
Applicant	:	Guangzhou Aimei Intelligent Technology Co., Ltd.
Address	:	Floor 2, building B, No. 185, Zhongsheng Road, Zhongcun street, Panyu District, Guangzhou
Sample Name	:	Hair clipper
Sample Model	:	HC-W056
Reference Sample Model	:	HC-W058, HC-W052, HC-W037, HC-W030, HC-W012, HC-W003A, TS7800, HC-W050, HC-W051, HC-W018, HC-W017, HC-W059, HC-W031, HC-W028, HC-W029, HC-W053
Test Requested	:	With reference to EU RoHS Directive 2011/65/EU and its amendment Directive EU 2015/863, to determine the Lead, Mercury, Cadmium, Hexavalent Chromium, PBBs and PBDEs, DBP, BBP, DEHP, DIBP content in the submitted sample.
Test Method	:	Refer to next page (s)
Test Conclusion	:	**Pass**
Date of Receipt sample	:	2024-10-16 & 2024-10-25
Testing period	:	2024-10-16 to 2024-10-23 & 2024-10-25 to 2024-10-29
Date of Issue	:	2024-10-31
Test Result	:	Refer to next page (s)

Prepared By:
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Signed for and on behalf of:
Waltek Testing Group (Foshan) Co., Ltd.

WTF24F10236946A1C

Swing.Liang
Waltek Testing Group (Foshan) Co., Ltd.
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Sample photo:

HC-W056

Test Results:

1. Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs and PBDEs

Test Method/Equipment:

1) With reference to IEC 62321-2:2021, disassembly, disjunction and mechanical sample preparation
2) With reference to IEC 62321-3-1:2013, screening –Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry
3) With reference to IEC 62321-4:2013+AMD1:2017 CSV, determination of Mercury by ICP-OES
4) With reference to IEC 62321-5:2013, determination of Lead and Cadmium by ICP-OES
5) With reference to IEC 62321-7-2: 2017 and IEC 62321-7-1: 2015, determination of Hexavalent Chromium by UV-Vis
6) With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
1	Black plastic shell	BL	BL	BL	BL	BL	NA
2	White plastic shell	BL	BL	BL	BL	BL	NA
3	Transparent plastic cover	BL	BL	BL	BL	BL	NA
4	Silvery metal cover	BL	BL	BL	IN	--	Cr^{6+}: Negative
5	Black transparent plastic shell	BL	BL	BL	BL	BL	NA
6	Grey soft plastic button	BL	BL	BL	BL	BL	NA
7	Silvery metal sheet	BL	BL	BL	IN	--	Cr^{6+}: Negative
8	Black plastic shell with coppery plating	BL	BL	BL	BL	BL	NA
9	Black plastic bobbin	BL	BL	BL	BL	BL	NA
10	Silvery metal spring	BL	BL	BL	IN	--	Cr^{6+}: Negative
11	Grey plastic part	BL	BL	BL	BL	BL	NA
12	White semi-transparent plastic part	BL	BL	BL	BL	BL	NA
13	Silvery metal spring	BL	BL	BL	BL	--	NA

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
14	Black soft plastic frame	BL	BL	BL	BL	BL	NA
15	Golden metal part	IN	**OL**	BL	BL	--	Cd :56 **#Pb : 2.44×10^4**
16	Grey plastic core(socket)	BL	BL	BL	BL	BL	NA
17	Grey-black plastic film	BL	BL	BL	BL	BL	NA
18	Black plastic shell	BL	BL	BL	BL	BL	NA
19	Silvery metal shell(socket)	BL	BL	BL	IN	--	Cr^{6+}: Negative
20	Silvery metal pin(socket)	BL	BL	BL	BL	--	NA
21	Silvery metal shell	BL	BL	BL	BL	--	NA
22	Rose red plastic wire covering	BL	BL	BL	BL	BL	NA
23	Yellow PCB	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND
24	Green PCB	BL	BL	BL	BL	BL	NA
25	Black plastic wire covering	BL	BL	BL	BL	BL	NA
26(R1)	Solder	BL	IN	BL	BL	--	Pb: 232
27	Dark grey magnetic ring	BL	BL	BL	BL	--	NA
28	Semi-transparent plastic bracket	BL	BL	BL	BL	BL	NA
29	Silvery silicon steel sheet	BL	BL	BL	IN	--	Cr^{6+}: Negative
30	Golden metal ring	BL	BL	BL	BL	--	NA
31	Silvery metal axle	BL	BL	BL	IN	--	Cr^{6+}: Negative

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
32	Off-white fibrous adhesive tape	BL	BL	BL	BL	BL	NA
33	Silvery metal shell(USB plug)	BL	BL	BL	BL	--	NA
34	White plastic sheet(USB plug)	BL	BL	BL	BL	BL	NA
35	White plastic jacket(USB plug)	BL	BL	BL	BL	BL	NA
36	White plastic jacket(Type-C plug)	BL	BL	BL	BL	BL	NA
37	White plastic wire jacket	BL	BL	BL	BL	BL	NA
38	Silvery metal screw	BL	BL	BL	IN	--	Cr^{6+}: Negative
39	White plastic shell	BL	BL	BL	BL	BL	NA
40	Black plastic shell	BL	BL	BL	BL	BL	NA

2. Phthalates

Test Method/Equipment:

1) With reference to IEC 62321-8:2017, determination of DBP, BBP, DEHP, DIBP by GC-MS

Serial No.	Part No.	Result (mg/kg)			
		DBP	BBP	DEHP	DIBP
T01	1+2+3+5+8△	ND	ND	ND	ND
T02	4	--	--	--	--
T03	6+14+17△	ND	ND	ND	ND
T04	7	--	--	--	--
T05	9+11+12+16+28△	ND	ND	ND	ND
T06	10	--	--	--	--
T07	13	--	--	--	--
T08	15	--	--	--	--
T09	18+34+39+40△	ND	ND	ND	ND
T10	19	--	--	--	--
T11	20	--	--	--	--
T12	21	--	--	--	--
T13	22+25+37△	ND	ND	ND	ND
T14	23+24△	ND	ND	ND	ND
T15	26(R1)	--	--	--	--
T16	27	--	--	--	--
T17	29	--	--	--	--
T18	30	--	--	--	--
T19	31	--	--	--	--
T20	32+35+36△	ND	ND	ND	ND
T21	33	--	--	--	--
T22	38	--	--	--	--

Remark:

(1) Results are obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for Cr^{6+}) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1: 2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	LOD < IN < (150+3σ) ≤ OL
Pb	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Hg	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Cr	BL ≤ (700-3σ) < IN	BL ≤ (700-3σ) <IN	BL ≤ (500-3σ) < IN
Br	BL ≤ (300-3σ) < IN	--	BL ≤ (250-3σ) < IN

BL= Below Limit OL= Over Limit LOD = Limit of Detection -- = Not Regulated

(2) "IN" expresses the inconclusive region, and further chemical testing to confirm whether it complies with the requirement of RoHS Directive.

(3) The XRF screening test for RoHS elements – the reading may be different to the actual content in the sample be of non-uniformity composition.

(4) mg/kg =milligram per kilogram=ppm, $\mu g/cm^2$= Micrograms per square centimetre.

(5) ND = Not Detected or lower than limit of quantitation.

(6) NA = Not Applicable, as the XRF screening test result was below the limit or as the XRF screening directly determine that test result was over the limit, it was not need to conduct the wet chemical testing.

(7) LOQ = Limit of quantitation.

Test Items	Pb	Cd	Hg	Cr^{6+}		PBB	PBDE	DBP	BBP	DEHP	DIBP
Units	mg/kg	mg/kg	mg/kg	mg/kg	$\mu g/cm^2$	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOQ	2	2	2	8	0.1	5	5	50	50	50	50

The LOQ for single compound of PBBs and PBDEs is 5mg/kg, LOQ of Cr^{6+} for polymer and composite sample is 8mg/kg and LOQ of Cr^{6+} for metal sample is 0.1$\mu g/cm^2$.

(8) RoHS Requirement

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr^{6+})	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)
Dibutyl phthalate (DBP)	0.1% (1000 mg/kg)
Benzyl butyl phthalate (BBP)	0.1% (1000 mg/kg)
Di(2-ethylhexyl) phthalate (DEHP)	0.1% (1000 mg/kg)
Di-iso-butyl phthalate (DIBP)	0.1% (1000 mg/kg)

(9) According to IEC 62321-7-1:2015, determined of Cr^{6+} on metal sample by boiling water extraction test method, and result is shown as Positive/Negative.
Boiling water extraction:
Negative = Absence of Cr^{6+} coating, the detected concentration in boiling water extraction solution is less than 0.10μg/cm^2.
Positive = Presence of Cr^{6+} coating, the detected concentration in boiling water extraction solution is greater than 0.13μg/cm^2.
Information on storage conditions and production date of the tested sample is unavailable and thus Cr^{6+} results represent status of the sample at the time of testing.

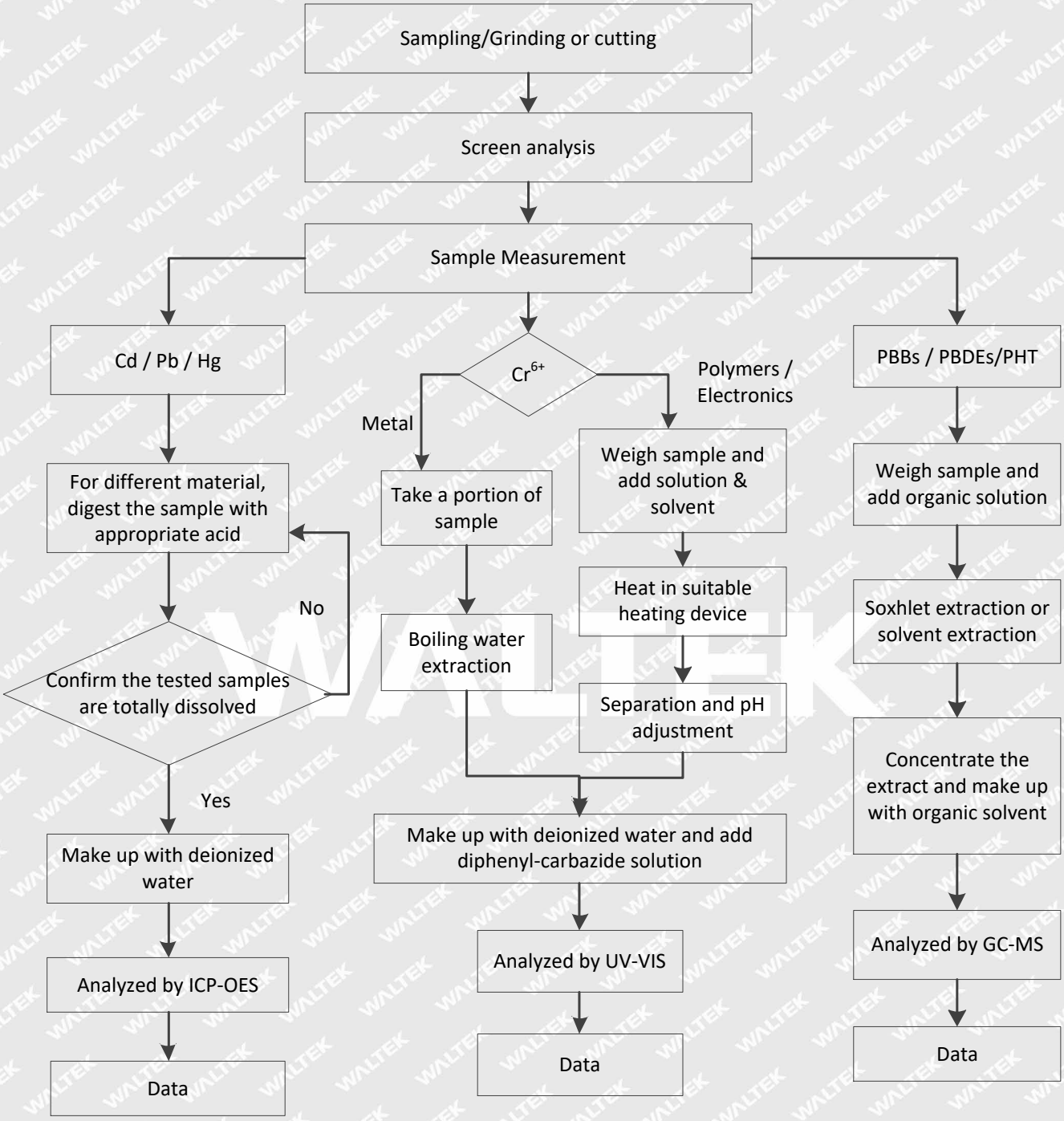
(10) Abbreviation:
"Pb" denotes Lead, "Cd" denotes Cadmium, "Hg" denotes Mercury, "Cr" denotes Chromium, "Cr^{6+}" denotes Hexavalent Chromium, "Br" denotes Bromine, "PBBs" denotes Total Polybrominated Biphenyls, "PBDEs" denotes Total Polybrominated Diphenyl Ethers.
"DBP" denotes Dibutyl phthalate, "BBP" denotes Benzyl butyl phthalate (BBP), "DEHP" denotes Bis(2-ethylhexyl)-phthalate, "DIBP" denotes Diisobutyl phthalate, "PHT" denotes Phthalates.

(11) As per client's requirement, to test the specified components. The test results relate only to the components tested, and it doesn't mean that the whole product complies with the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863.

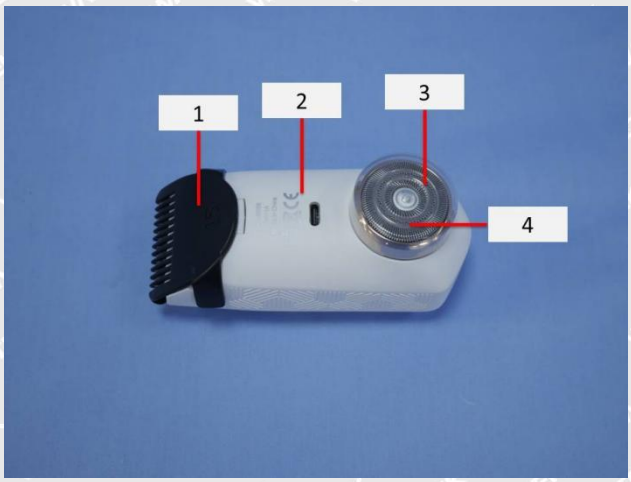
(12) "△"=As client's requirement, the testing was conducted based on mixed components. Results are calculated by the minimum weight of mixed components.

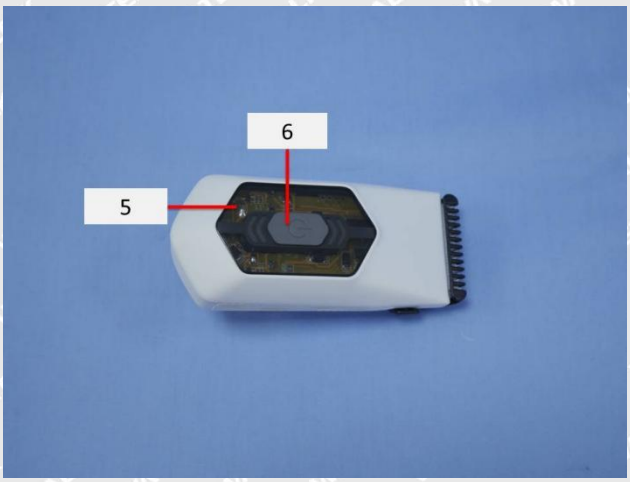
(13) # = According to the declaration from client, the source of lead in test sample is from copper alloy while lead as copper alloy containing up to 4% lead by weight is exempted by Directive 2011/65/EU ANNEX III-6(c).

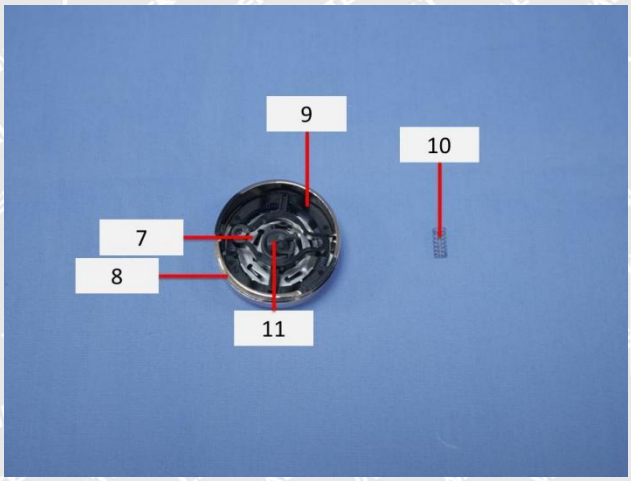
Testing Flow chart:

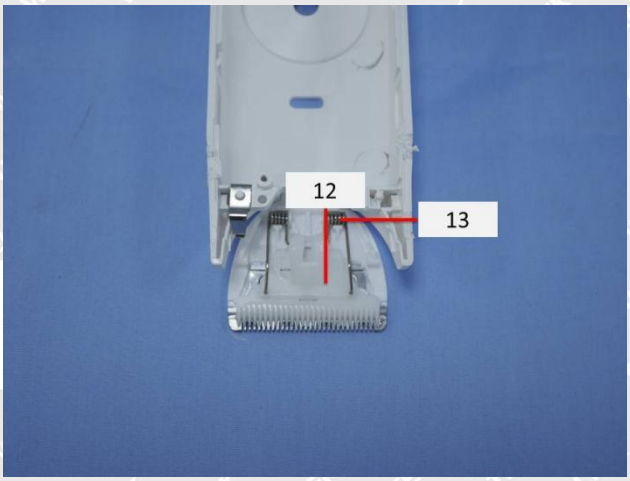


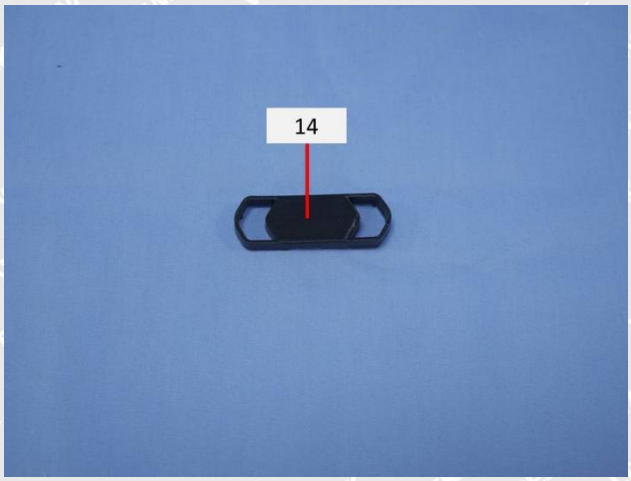
Photograph of parts tested:

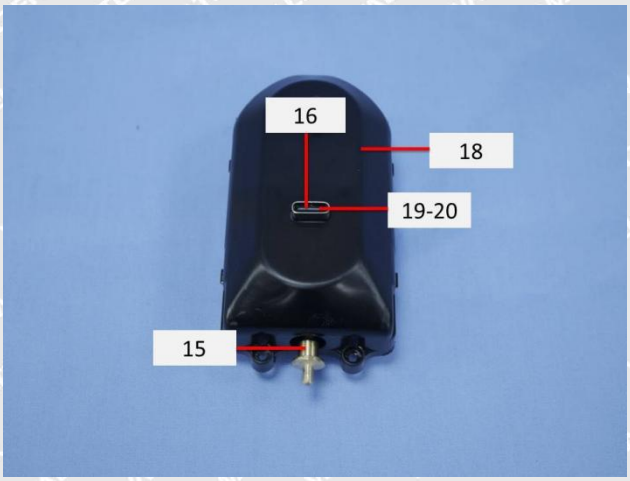


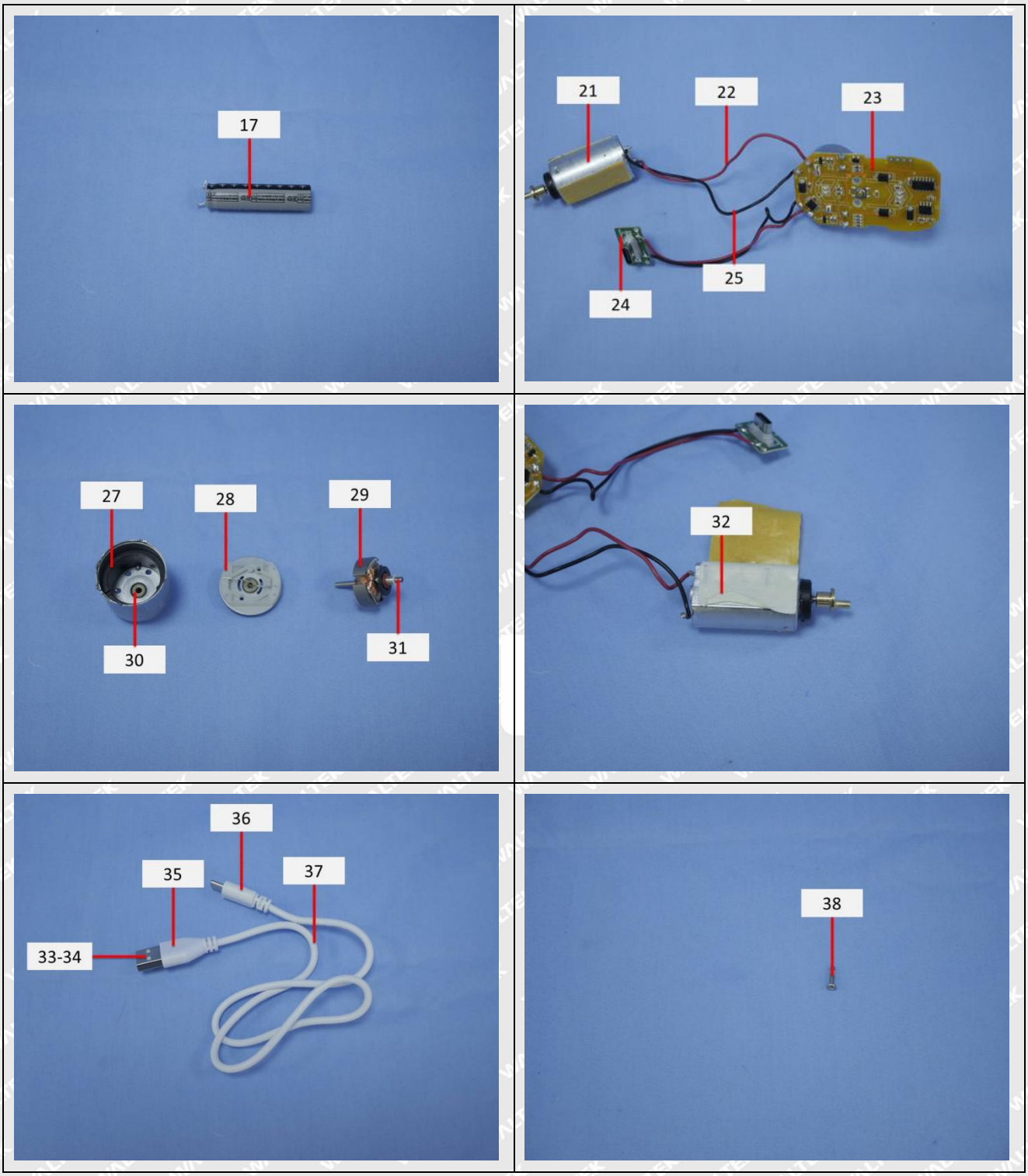








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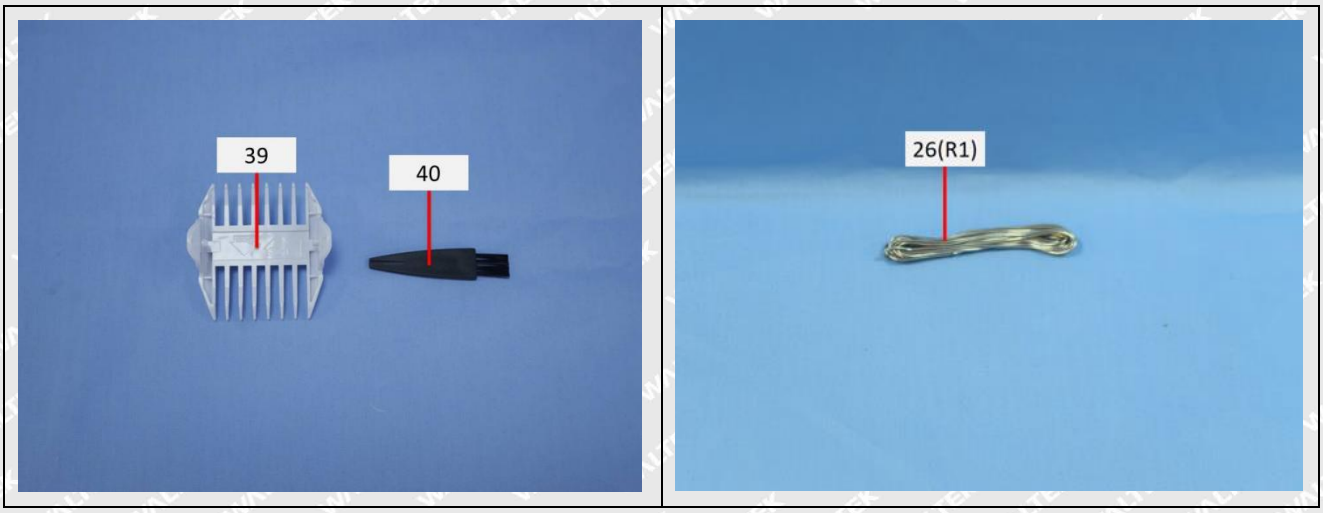

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====== End of Report ======