

Analysis of Quality Defects

Based on HQTS Inspection Reports for Home Appliances



HQTS

Total Quality Every Step of the Way

A. 152 North Jianxin Road, Second & Third Floors,
Fuzhou, Fujian, CN – 350002
P. +86-400-611-2125
M. inquiry@hqts.com
W. www.hqts.com

ABOUT HQTS

Founded in 1987, HQTS Group is a leading provider of quality management services in Asia.

Headquartered in China, with regional offices in Vietnam, India, UK, South Korea, Japan, Dubai and multiple services locations around the world, HQTS provides supply chain quality solutions to multiple companies across a range of industries.

20+
COUNTRIES

15+
OFFICES

1,500
STAFF

50,000+
CLIENTS

Services

- Quality Inspections
- Supplier and Factory Audits
- Testing (RoHS, Reach, other..)
- Production Monitoring
- Environmental Audits
- Consultancy
- Supplier Quality Engineering
- Government/Trade Services



25+ Years
of Experience



In-house
technicians



Personalized
Service

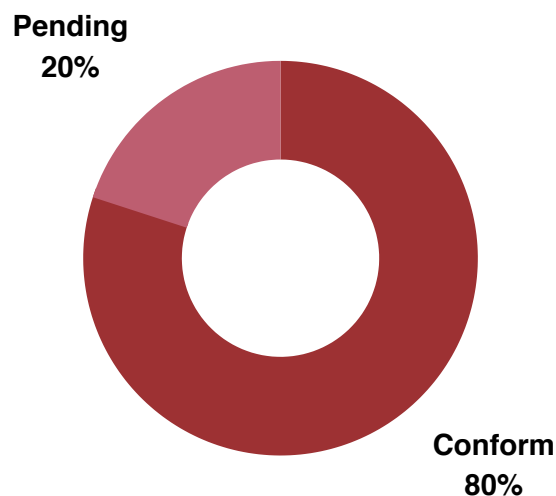
We've analysed 40 inspection reports of home appliances and this is what we found:

HQTS analysed 40 inspection reports of home appliances, including vacuum cleaners, hair dryers, microwaves, fridges, speakers, lighting, air conditioning, coffee machines, and other small appliances and categorised these into the quality issues of: quantity, workmanship, field test, shipping marks, packaging and labelling.

These were rated by the inspector according to Conform/Not Conform/Pending. Pending means that minor and non specified issues were detected and depend on client's final decision to approve/disapprove the inspected items. The inspections were conducted in Asia, most of them in China.

Quantity

One of the first steps by the inspector is to open several cartons and count the number of pieces to ensure it is the same number as in the specifications. Our data shows that 80% of the inspections met this criteria.



The most common issues related to quantity were:

- The inspector was unable to count the items as the packaging was mixed, or restricted by the manufacturer to count the items.

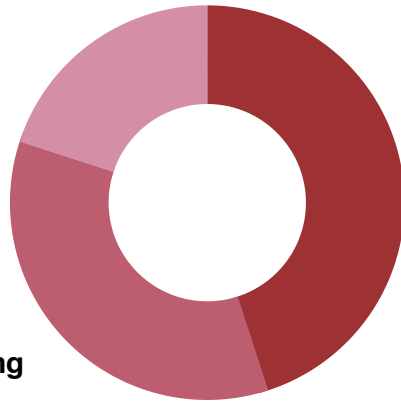
TIPS

Always ensure your manufacturer/supplier has enough production ready on-site before HQTS's inspector arrives.

Workmanship

Home appliance inspections always include an on-site observation of the workmanship, including searching for any physical defects that may negatively influence the product, or fail to conform to the client's expectations. Only 45% of the inspections fully met this criteria.

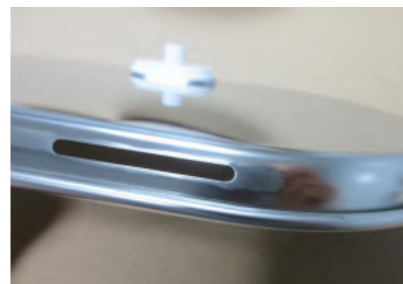
Not Conform
20%



Conform
45%

Common issues:

- Scratch marks
- Dirt Marks
- Painting Peeling
- Abrasion

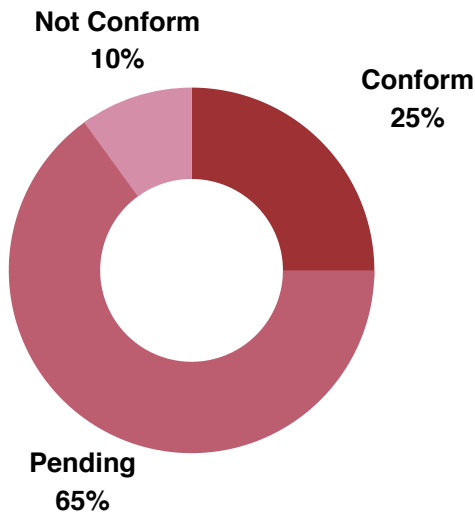


TIPS

During production inspections (DUPRO) allows you to detect and resolve these issues before they move further down the production line and become more costly.

Field Test and Measurement

Testing the functionality, safety and dimensions of home appliances is often of utmost importance. HQTS's inspector will check that the product align with the agreed specifications and international standards.



Common issues:

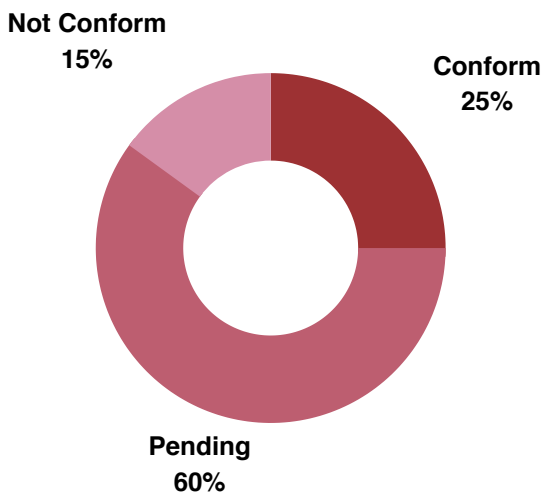
- Carton drop check
- Rubt/tape test
- Power related (Hipot, consumption, voltage...)
- Factory does not allow inspector to perform certain tests

TIPS

Products that require strict requirements and dimensions may be more appropriate for piece-by-piece inspections.

Style, Color & Documentation

HQTS Inspectors will verify that the product specifications, construction data form (CDF) and instruction manuals are consistent with the samples.



Common issues:

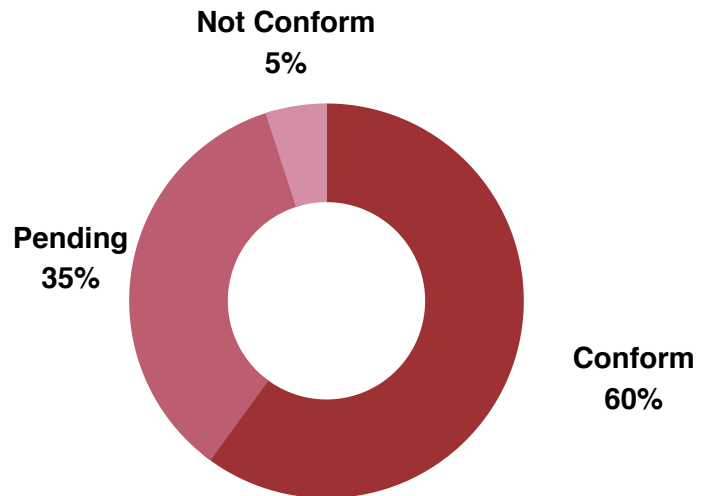
- Factory could not provide Construction Data Form(CDF)
- Marks and Stains in the Instructions Manual

Shipping Marks, Packaging and Labelling

The way the manufacturer has packaged and labelled the goods can influence the product's odds of surviving the long journey through harsh shipping conditions and customs. Our data showed that 60% of inspections met this criteria.

Common issues:

- The goods were not packaged by the time the inspector was on-site.
- There were no shipping marks on the packaging.



Conclusion

The data from our analysis underpins the importance of quality inspections in the supply chain. Home appliances are often highly complex products, requiring a lot of time, effort and advanced manufacturing techniques and skills to produce.

Our data show that buyers should pay special attention to:

- Ensure the factory has required items produced before an inspector arrives, including packaging, labels, and relevant documentation.
- Pay attention of visual defects such as paint marks and scratches.
- Factory sometimes does not facilitates inspectors to perform certain tests.
- Complex products with many internal parts might require piece by piece inspections.



**Total Quality
Every Step of the Way**

HQTS GROUP

A. 152 North Jianxin Road, Second & Third Floors,
Fuzhou, Fujian, CN – 350002
P. Toll Free +86-400-611-2125
M. inquiry@hqts.com
W. www.hqts.com



INSPECTION REPORT

Pre-Shipment Inspection

Report No: H-XXXXXXX

INSPECTION INFORMATION

Client	XXXX		
Supplier	XXXX		
Factory	XXXX		
Inspection Instruction	GWI-E-003-HQT		
P.O. No.	XXXX	P.O. Quantity	2000 Pieces
Item No.	XXXX	Sampling Plan	Fixed sample size
Inspection Date	XXXX	Inspection Level	-
Inspection Sequence	Original inspection	Sample Size	80 Pieces
Inspection Location	XXXX	AQL	Critical:0, Major:1.0, Minor:4.0
Product Description	Cofeemachine		



INSPECTION RESULT SUMMARY

Category	Conform	Not Conform	Pending
1.Quantity	X		
2.Workmanship			X
3.Style, Color & Documentation			X
4.Field Test & Measurement	X		
5.Shipping Mark & Packaging	X		
OVERALL CONCLUSION	PENDING to client's requirement		

Approved by HQTS Supervisor:

Arthur

This report reflects the facts as recorded by HQTS at the time and place of inspection. It does not relieve the manufacturers from their contractual obligations nor prejudice client's right for compensation for any apparent and/or hidden defects not detected during our random inspection or occurring thereafter.

SPECIAL ATTENTION POINT (SAP)

1	Quantity	NIL
---	----------	-----

2	Workmanship	
---	-------------	--

2.1	All inspection samples was found flow mark and the gap (2mm) on the back. which was judged as minor defect. Details refer to photos.	
-----	--	--



SAP 2.1 Flow mark and the gap (2mm) on the back



SAP 2.1 Flow mark and the gap (2mm) on the back



SAP 2.1 Flow mark and the gap (2mm) on the back



SAP 2.1 Flow mark and the gap (2mm) on the back

3	Style, Color & Documentation	
---	------------------------------	--

3.1	Actual found rating voltage was 220-240W on gift box label differ of requirement rating voltage 220-240V. Details refer to photos.	
-----	--	--

4	Field Test & Measurement	NIL
---	--------------------------	-----

5	Shipping Mark & Packaging	NIL
---	---------------------------	-----

INSPECTION DETAILS

1. Quantity					Conform			
P.O. No.	Item No.	P.O. Qty	Shipment Qty		Packed Qty		Sample Size	
		(Piece)	(Piece)	(Carton)	(Piece)	(Carton)	(Piece)	(Carton)
XXXX	XXXX	2000	2000	500	2000	500	80	23
Total		2000	2000	500	2000	500	80	23

2. Workmanship		Pending		
Defects Description		Critical	Major	Minor
Item# XXXX Sample Size=80				
Poor assembly on the unit			1	
Scratch mark on the top cover(1.5-2.3cm)				4
Scratch mark on the body surface(0.5-1.5cm)				2
Scratch mark on the container surface(1.5cm)				1
Total Found:		0	1	7
Allowed:		0	2	7
Sample Size:		80	80	80

SPECIAL ATTENTION POINT:

In addition to defects recorded in the workmanship table, the below massive defects were also found:

2.1	All inspection samples was found flow mark and the gap (2mm) on the back. which was judged as minor defect.
-----	---

The following field test included in workmanship check

Hi-Voltage check

Power consumption check at 230V 50Hz(without loading)

Function check

Defect Photos



Defect-Poor assembly on the unit-major



Defect-Scratch mark(2.2cm) on the top cover-minor



Defect-Scratch mark(2.3cm) on the top cover-minor



Defect-Scratch mark(1.2cm) on the top cover-minor



Defect-Scratch mark (2.2cm)on the top cover-minor



Defect-Scratch mark(1cm) on the body surface-minor



Defect-Scratch mark (1.5cm)on the body surface-minor



Defect-Scratch mark(1.5cm) on the container surface-minor

3. Style, Color & Documentation		Pending		
DESCRIPTION		Conform	Not Conform	Pending
The inspected samples were consistent with		-	-	-
Purchase Order		X		
Product Specification				X
Instruction manual and Document Verification		-	-	-

Instruction manual in multi-language, the description of English was verified.	X		
Client Comment	-	-	-

4. Field Test & Measurement				Conform		
Item		Specification	Sample Size	Conform	Not Conform	Pending
4.1	Power consumption check(220V,240V) (without loading)		5 Samples	X		
4.2	Power consumption check(230V) (with loading)		5 Samples	X		
4.3	Rub test		5 Samples	X		
4.4	Tape test		20 Samples	X		
4.5	Internal check		2 Samples	X		
4.6	Power on check		2 Samples	X		
4.7	Stability check		2 Samples	X		
4.8	Rotational speed check		5 Samples	X		
4.9	Noise level check		5 Samples	X		
4.10	Switch life check		2 Samples	X		
4.11	Strain relief check on power cord		2 Samples	X		
4.12	Length of power cord check		2 Samples	X		
4.13	Product dimension check		5 Samples	X		
4.14	Product weight check		5 Samples	X		
4.15	Real function check		2 Samples	X		
4.16	Barcode Readability Check		5 Samples	X		
4.17	Lock rotor check		1 Sample	X		
4.18	Smell check		5 Samples	X		
4.19	Unit packing weight check		2 Samples	X		
4.20	Unit packing dimension check		2 Samples	X		
4.21	Other data check		2 Samples	X		
4.22	Carton gross weight check		1 Carton	X		
4.23	Carton dimension check		1 Carton	X		
4.24	Quantity per carton check		2 Cartons	X		

Checking Item	Specification	Result
Power consumption (without loading)	220V 50Hz: -	49-54W
	230V 50Hz: -	55-58W
	240V 50Hz: -	59-62W
Power consumption (with loading)(Fine)	230V 50Hz: $\leq 110W + 20\%$	96-112W
Motor noise (environment: 49.7dB)	88db(A)	81.2,85.0,83.3,84.3,85.4dB
Rotational speed	-	19876-22780-rpm
Power cord length	-	1.21,1.22M

Unit size	-	11.8x17.1x23.1, 11.8x17.1x23.1, 11.8x17.1x23.1, 11.8x17.1x23.1, 11.8x17.1x23.1cm
Unit weight	-	1.40,1.41,1.41, 1.40,1.40kg
Gift box label size	123x42mm	123x42,123x42mm
Promo booklet size	70x100mm	70x100, 70x100mm
Rating label size	64x35mm	64x35, 64x35mm
Warning label size	40x20mm	40x20, 40x20mm
S/N barcode size	35x10mm	33x10,33x10mm
S/N label size	39x15mm	39x15, 39x15mm
Logo print size	35x5.5x6mm	35x5.5x6, 35x5.5x6mm
Front knob print size	48.4x51.8mm	48.4x51.8, 48.4x51.8mm
Max volume print size	15.3x2.5x17mm	15.3x2.5x17, 15.3x2.5x17mm
ILUSTRATION print size	15x8.9mm	15x8.9, 15x8.9mm
Gift box size	-	22.2x17.0x27.6, 22.2x17.0x27.5cm
Gross gift box weight	-	1.946,1.959kg
Measurement of carton	-	45.5x35.1x30.5cm
Gross weight of carton	-	8.435kg

5. Shipping Mark & Packaging**Conform****5.1 Shipping mark photos****5.2 Packaging photos**

Packaging Description:

- 1 piece of product was packed into a polybag.
- 1 piece of product was packed into a gift box.
- 4 gift boxes were packed into a 5-ply corrugated export carton.
- Export carton was sealed with gummed tape.

6. Reference Note

6.1	Carton numbers selected for sampling were: 469,292,293,268,273,184,116,481,95,178,215,81,304,113,290,18,359,204,440,245,360,30,244.
6.2	The inspected cartons were not sealed because the factory did not repack them immediately after inspection.
6.3	Manufacturer did not allow us to draw any production sample for reference.
6.4	Our inspector required the factory to repair all defective samples before shipment.
6.5	Draft report has been provided to the factory and defective points have been explained as well.
6.6	Carton drop test is not requested.

7. Photos

Warehouse



Barcode Readability Check



Rotational speed



Noise level check



Noise level check



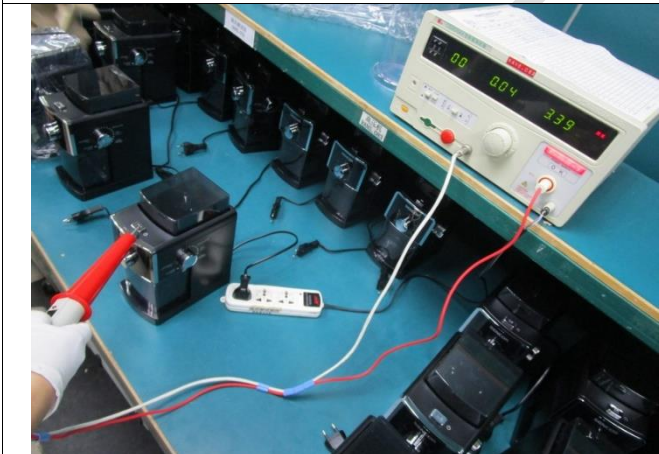
Noise level check



Power consumption check



Power consumption check



Hi-Voltage check



Real function check



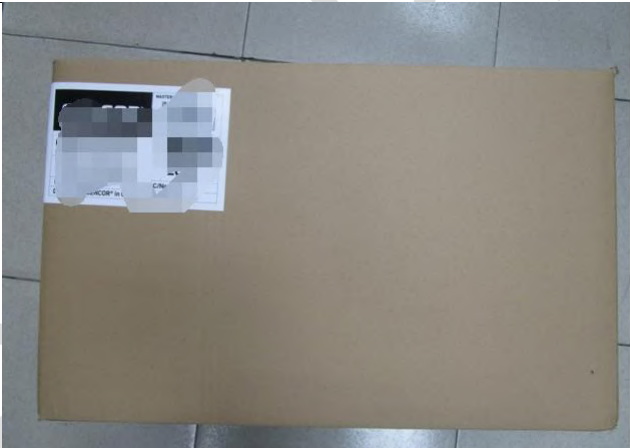
Hi-Voltage check



Real function check



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



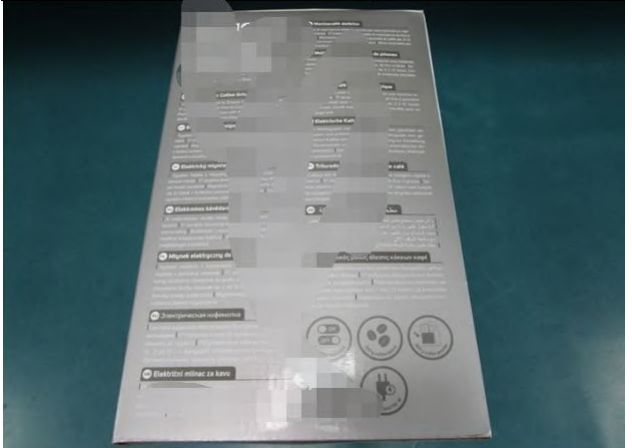
Item XXXX



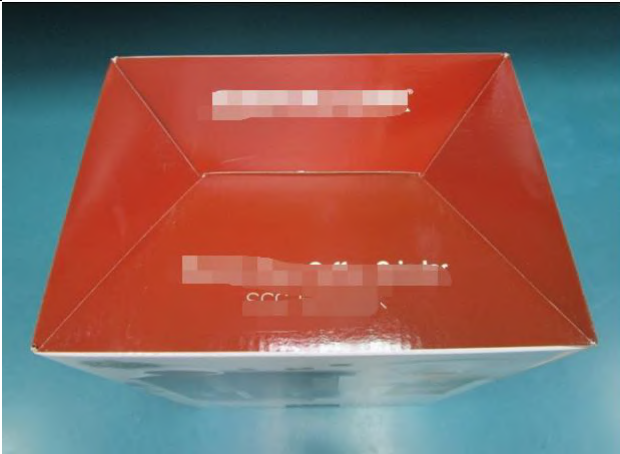
Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



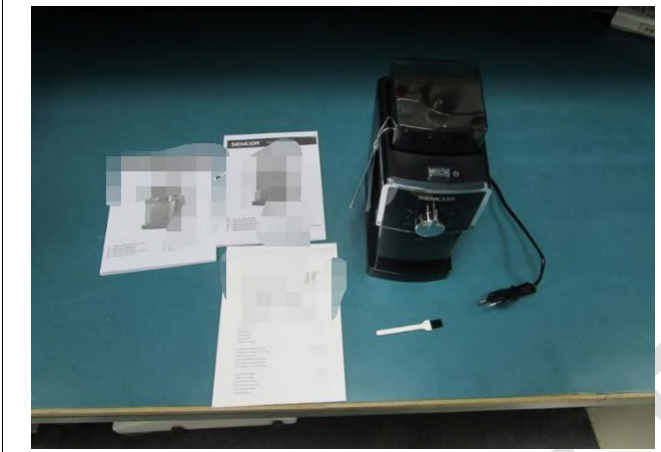
Item XXXX



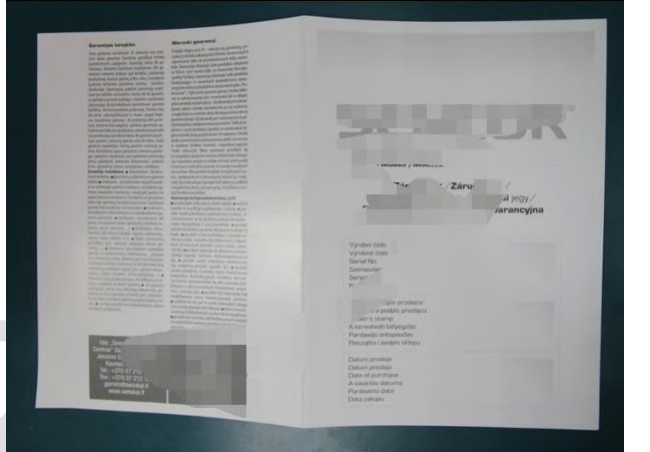
Item XXXX



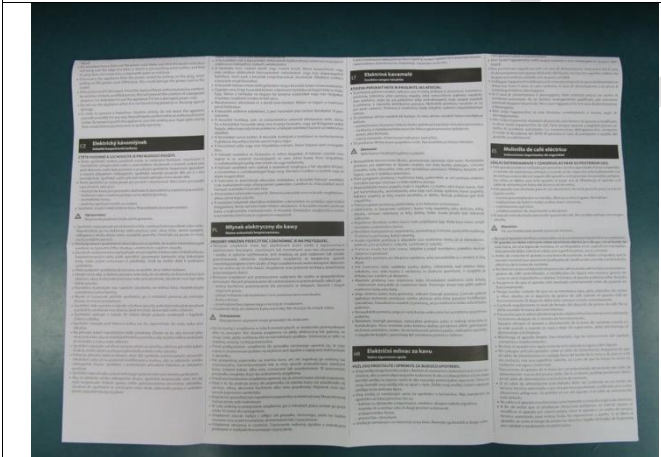
Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX



Item XXXX

	
Item XXXX	Item XXXX
	
Item XXXX	Item XXXX
	
Item XXXX	Item XXXX



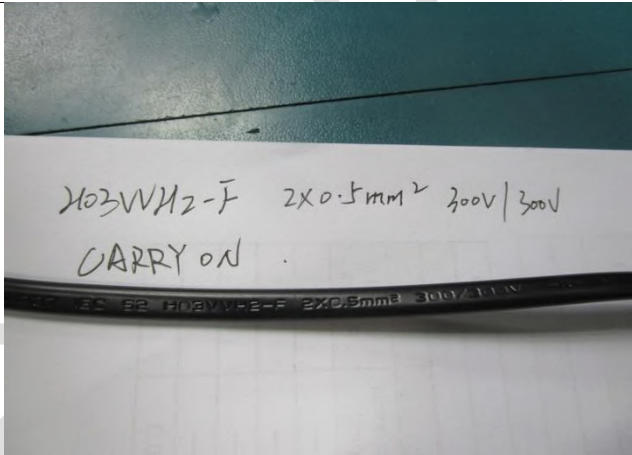
Item XXXX



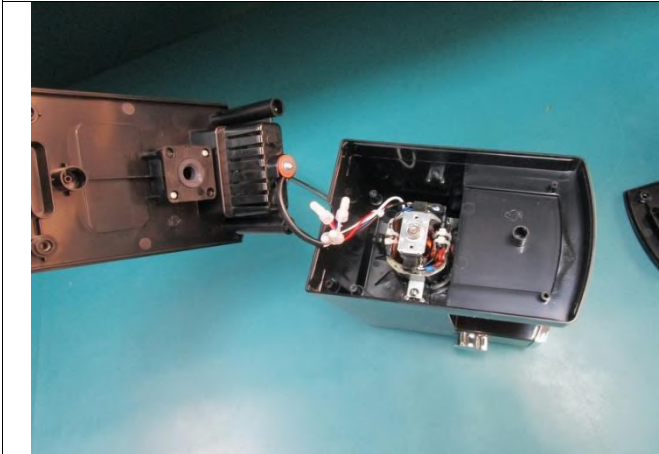
Item XXXX



Item XXXX



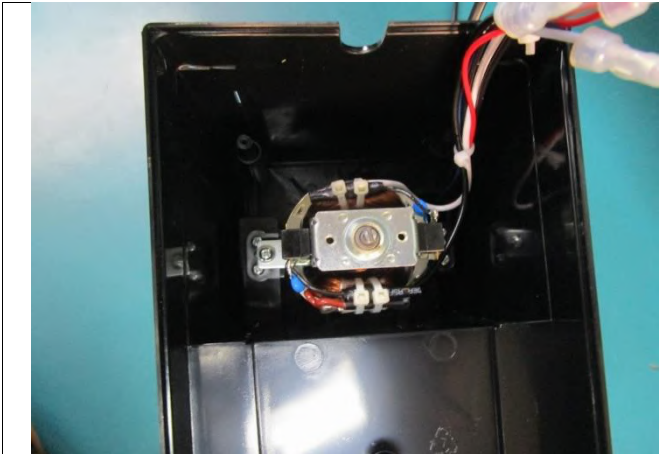
Item XXXX



Item XXXX- Internal check



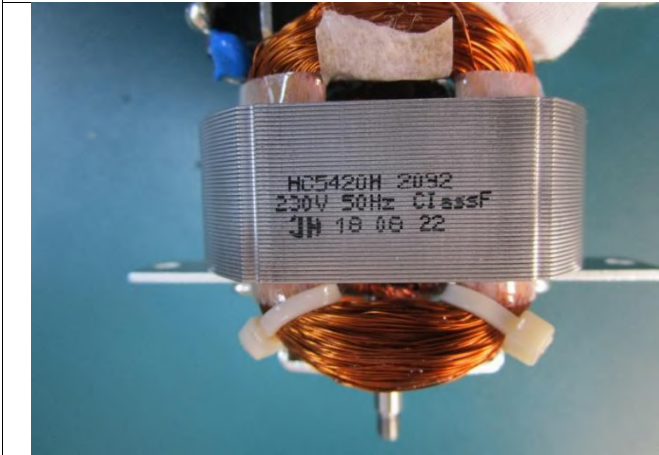
Item XXXX- Internal check



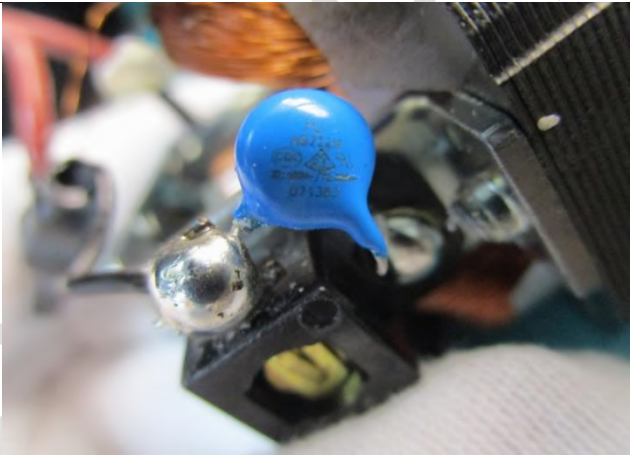
Item XXXX- Internal check



Item XXXX- Internal check



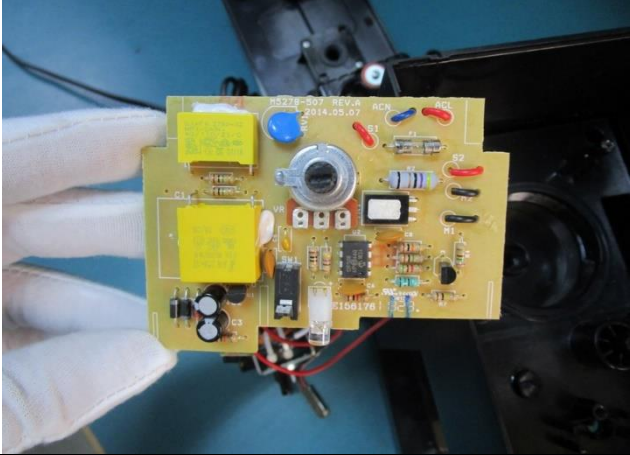
Item XXXX- Internal check



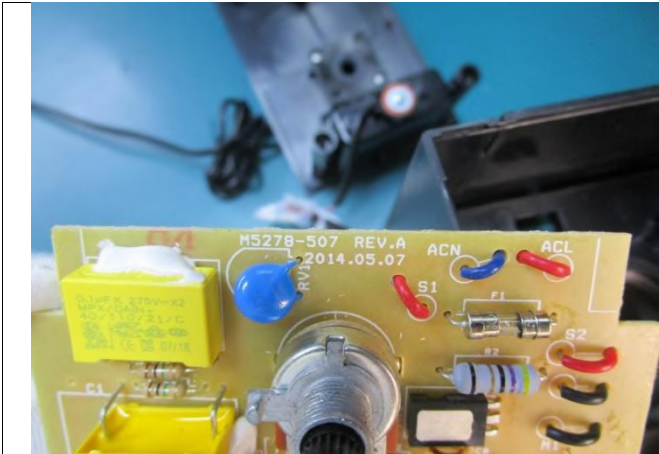
Item XXXX- Internal check



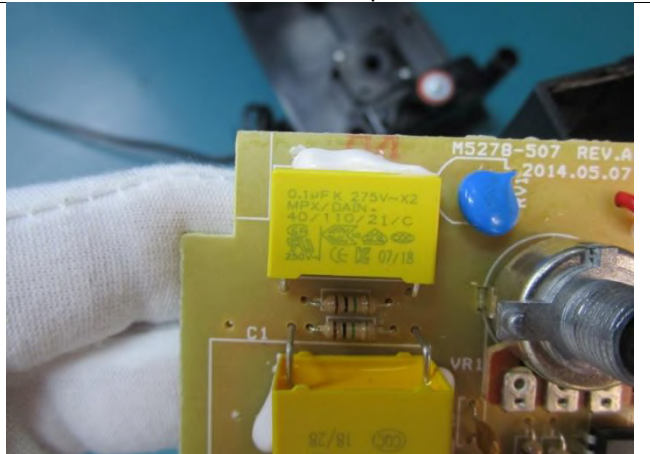
Item XXXX- Internal check



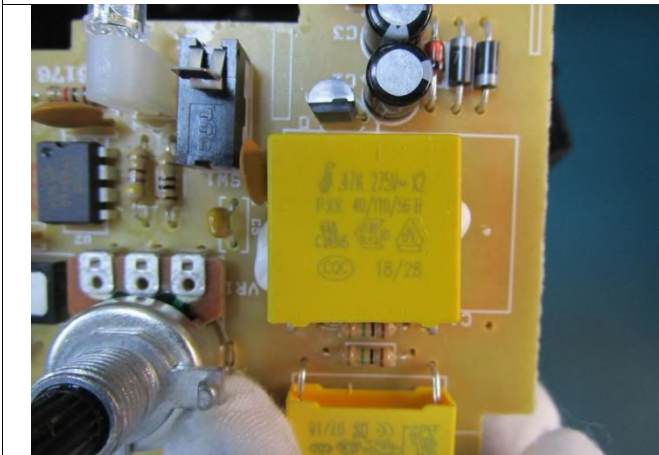
Item XXXX- Internal check



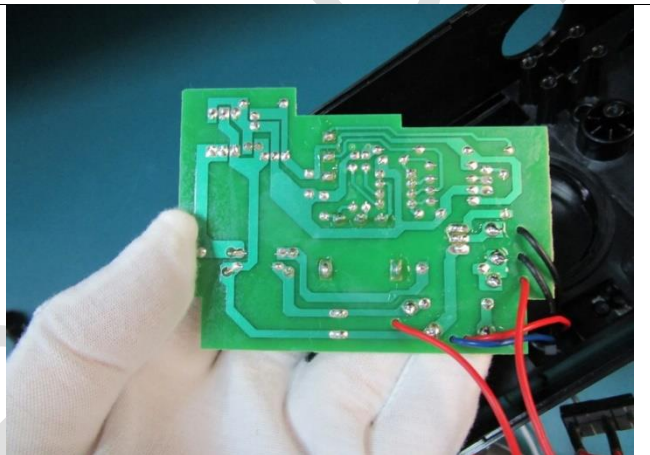
Item XXXX- Internal check



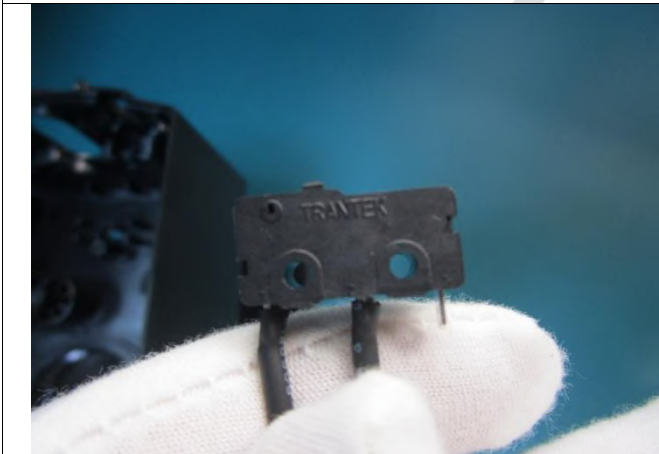
Item XXXX- Internal check



Item XXXX- Internal check



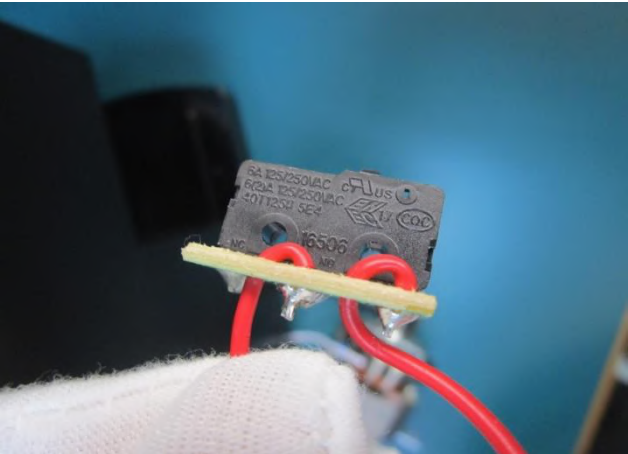
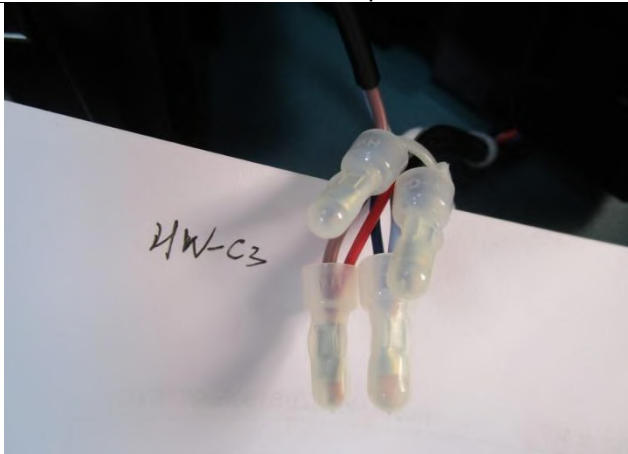
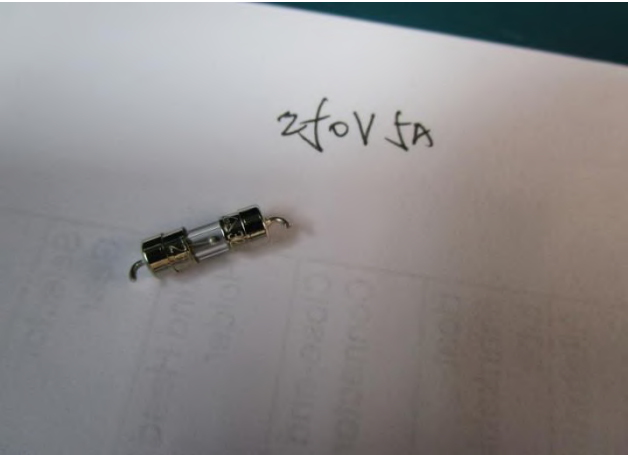
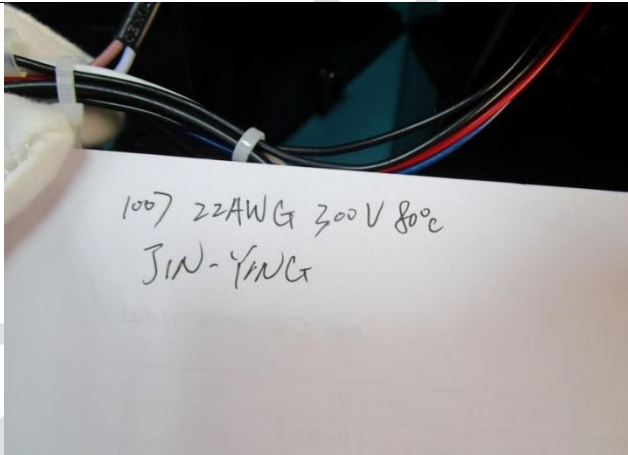
Item XXXX- Internal check



Item XXXX- Internal check



Item XXXX- Internal check

	
Item XXXX- Internal check	Item XXXX- Internal check
	
Item XXXX- Internal check	Item XXXX- Internal check
	NA
Item XXXX- Internal check	-

Inspector:	996	Auditor:	1401
End of Report			