

Case studies

Unsafe / sub-standard electrical equipment at HKUST

Case #1

- Aspirator

Direct purchase from PRC



Case #1

- Aspirator

Body made of plastic



Case #1

- Aspirator

Incorrect type of power plug



Case #1

- Aspirator

Exposed metal parts



Case #1

- Aspirator

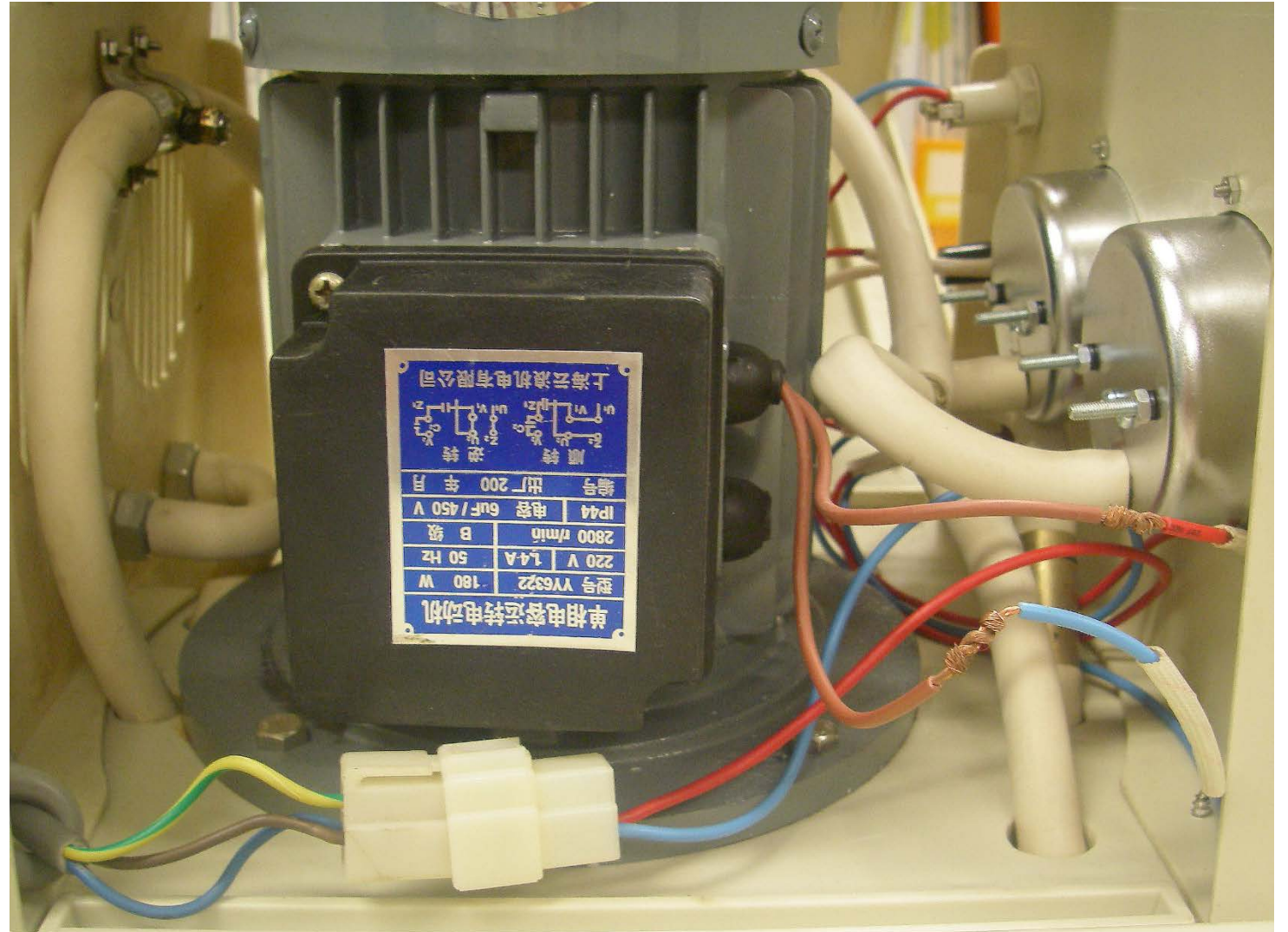
Exposed metal parts
accessible by operator



Case #1

- Aspirator

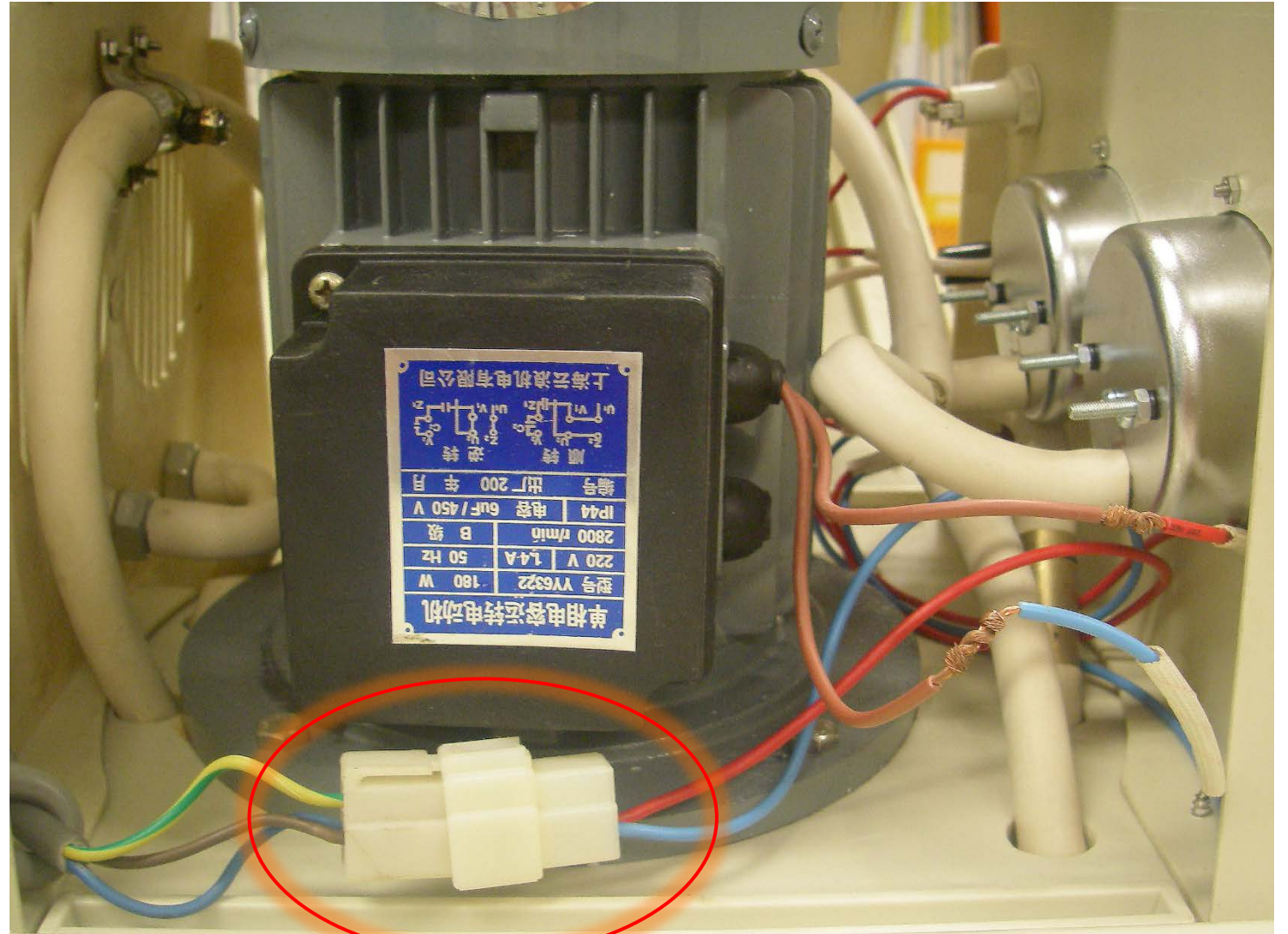
Internal wirings



Case #1

- Aspirator

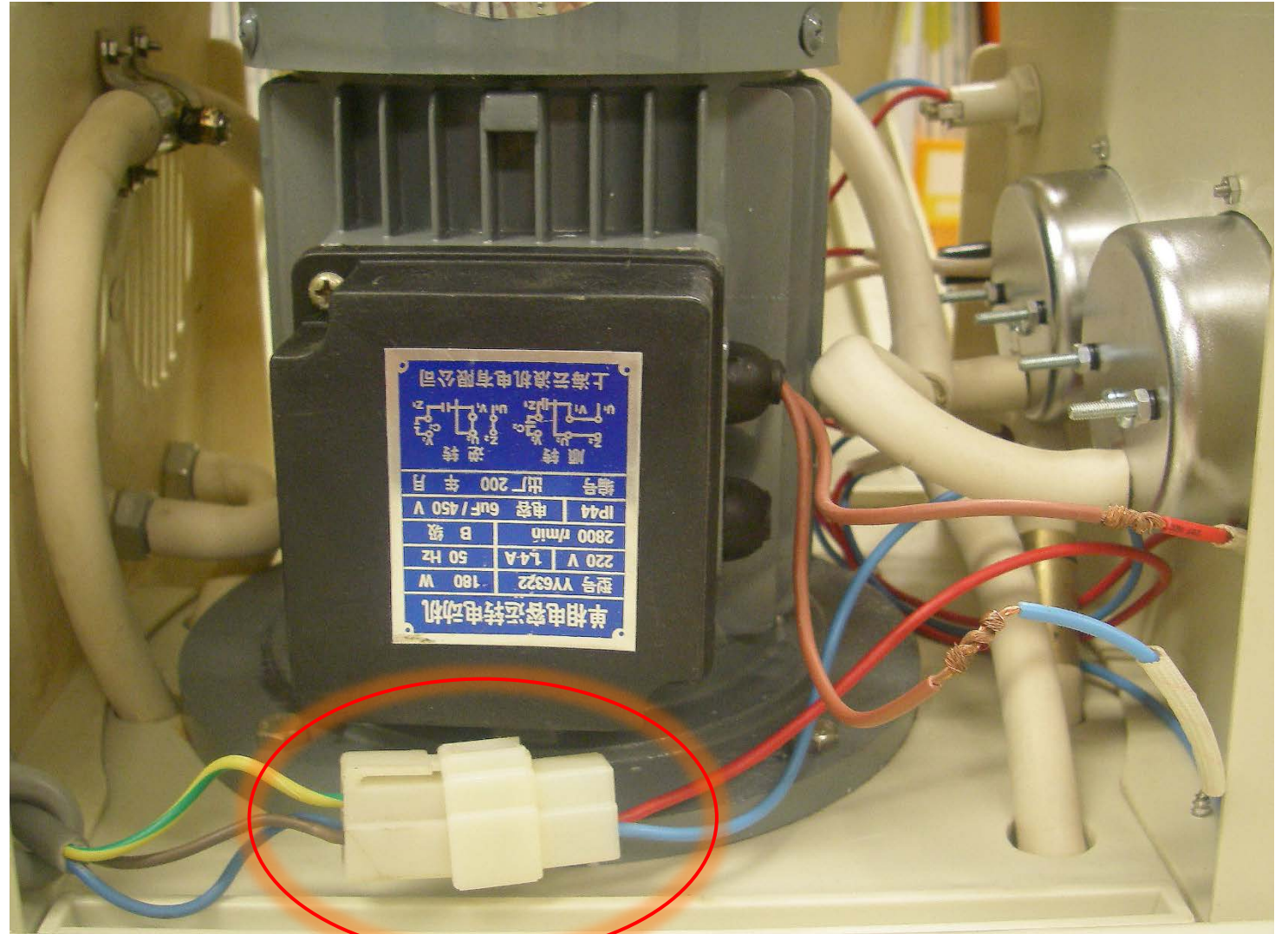
No earth connection



Case #1

- Aspirator

Insecure wires connection



Case #1

- Aspirator



Dislocated **live** wires may touch the metal parts and cause **electric shock**.

Case #2

- Mini Centrifuge



Case #2

- Mini Centrifuge

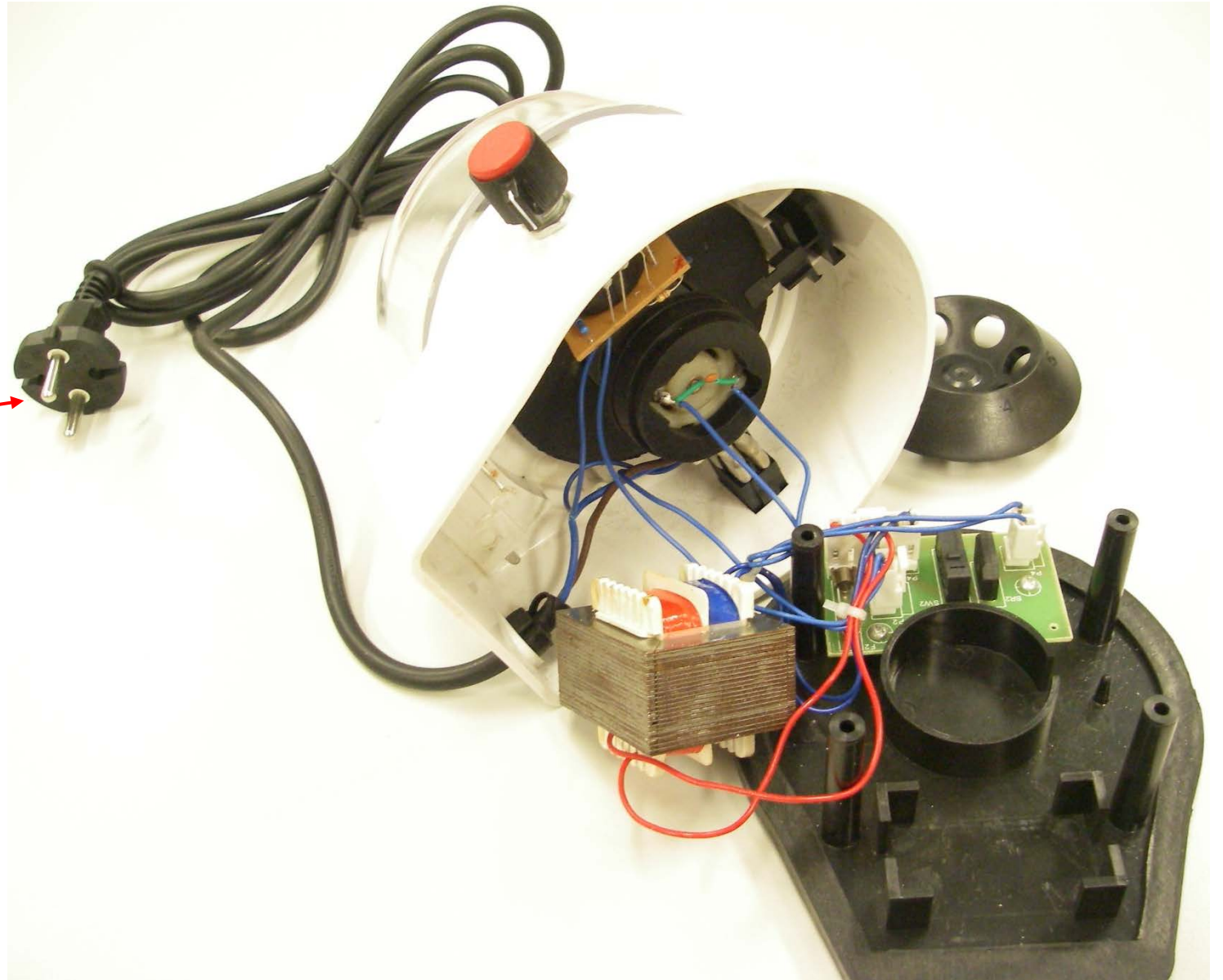
Body mainly plastic



Case #2

- Mini Centrifuge

Power plug incorrect →

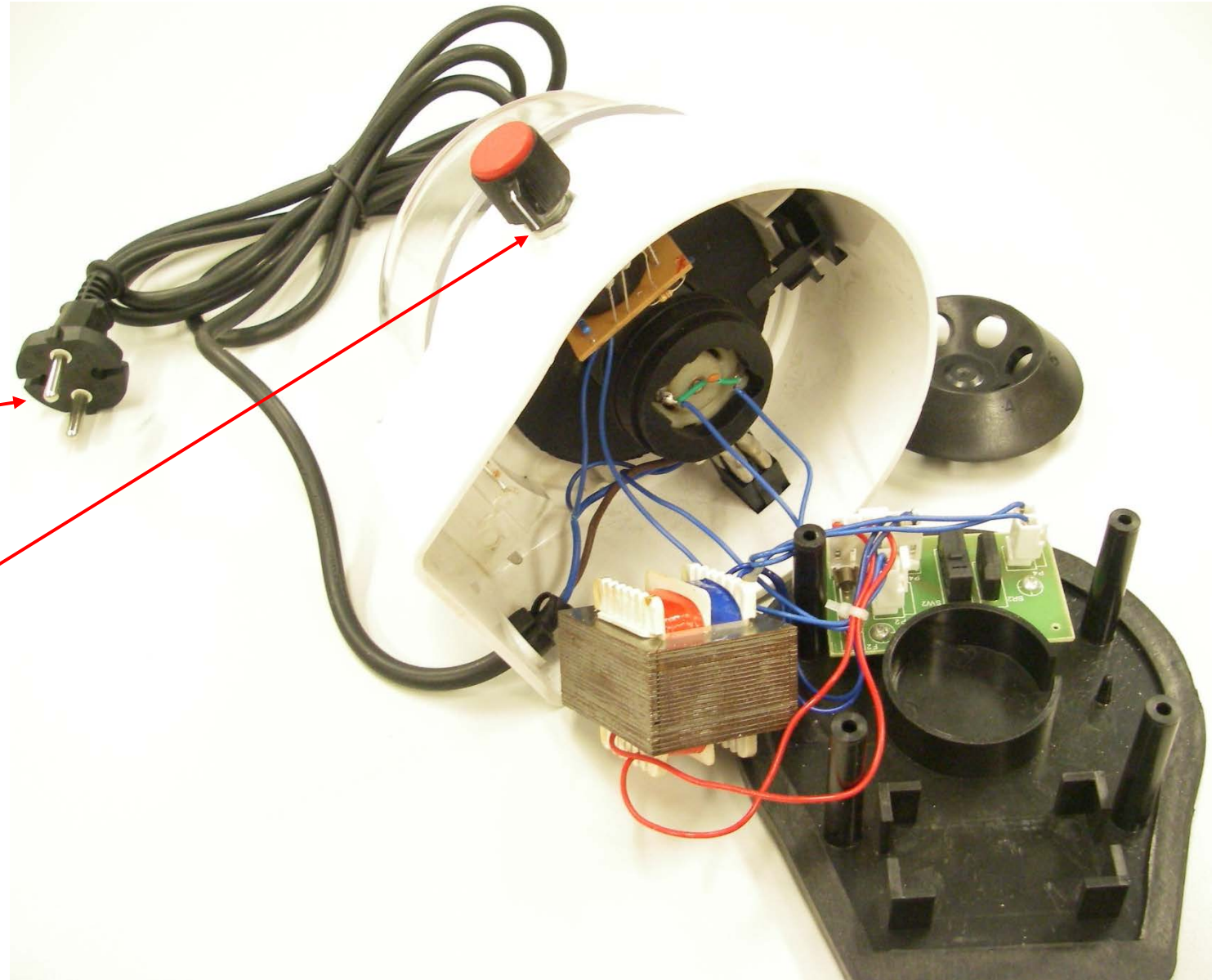


Case #2

- Mini Centrifuge

Power plug incorrect

Metal parts accessible



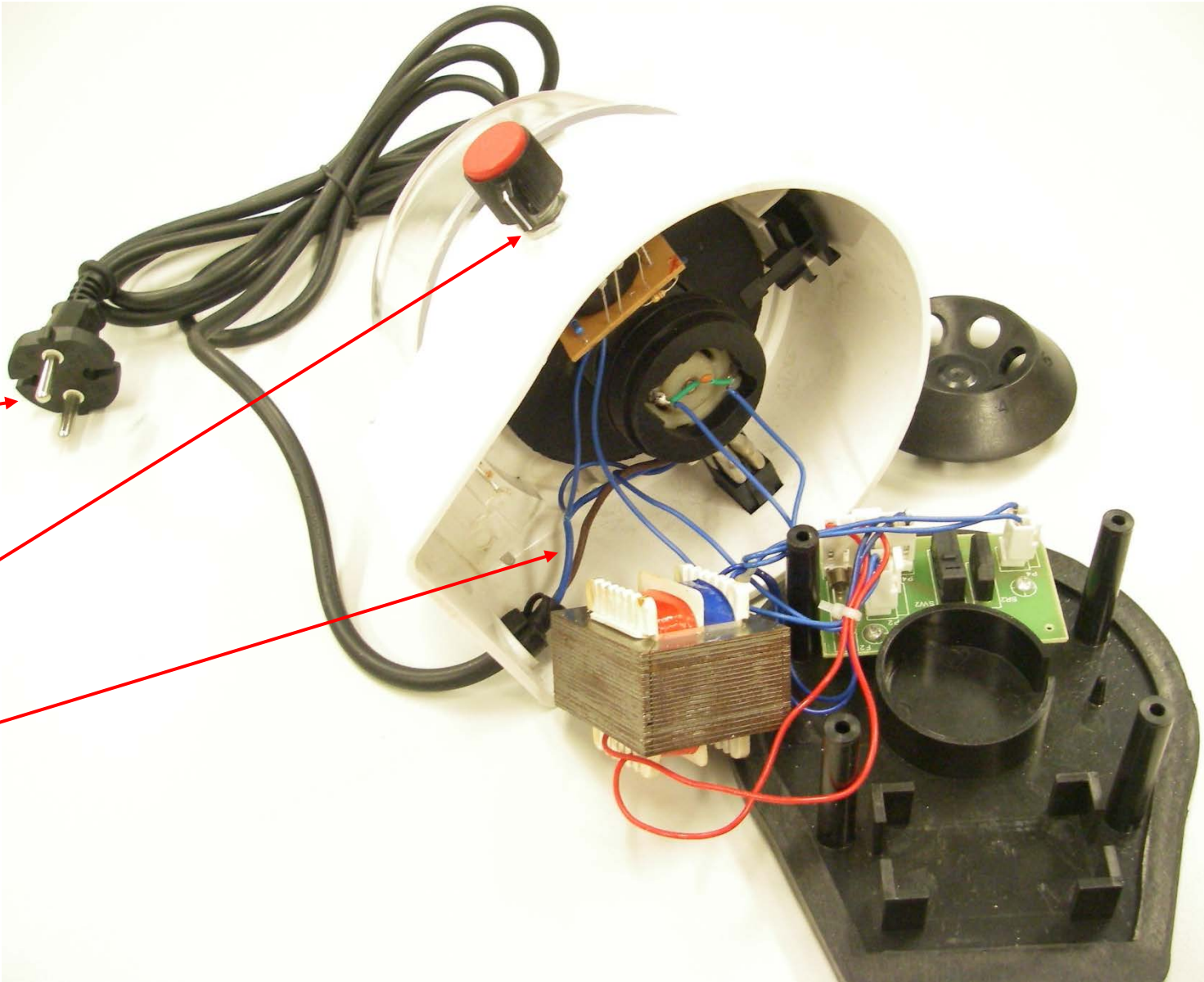
Case #2

- Mini Centrifuge

Power plug incorrect

Metal parts accessible

No earth connection



Case #2

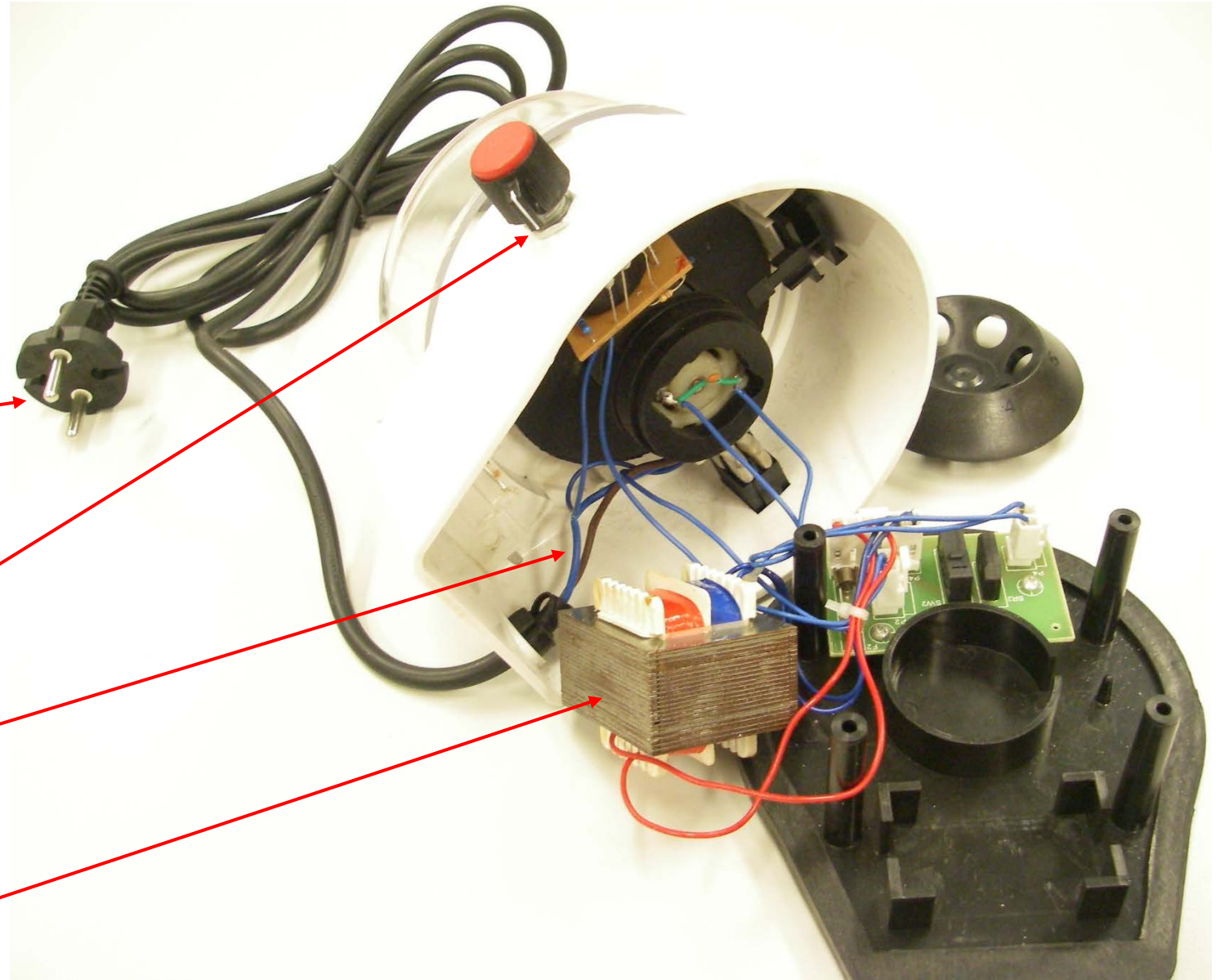
- Mini Centrifuge

Power plug incorrect

Metal parts accessible

No earth connection

Transformer insecure



Case #2

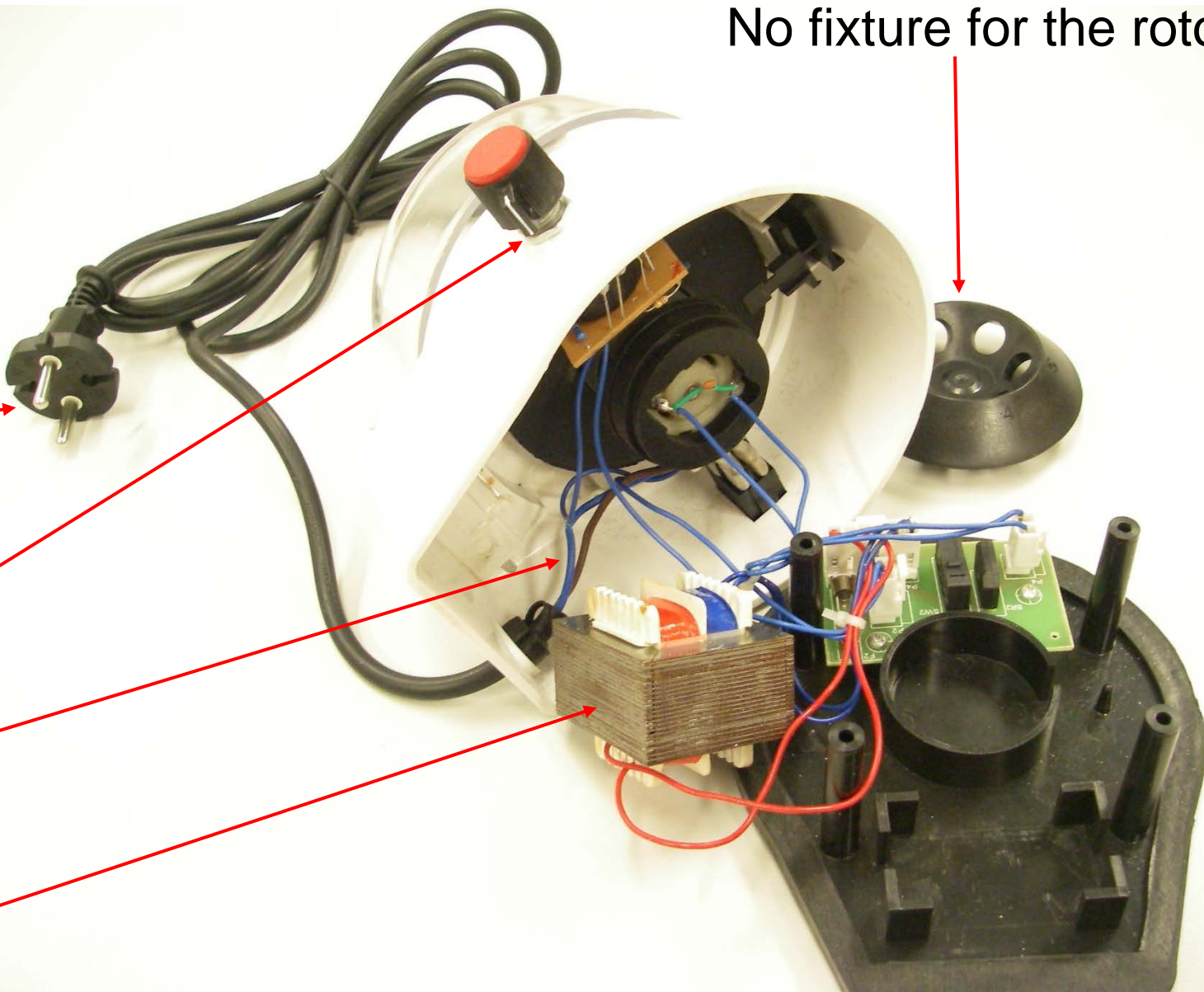
- Mini Centrifuge

Power plug incorrect

Metal parts accessible

No earth connection

Transformer insecure

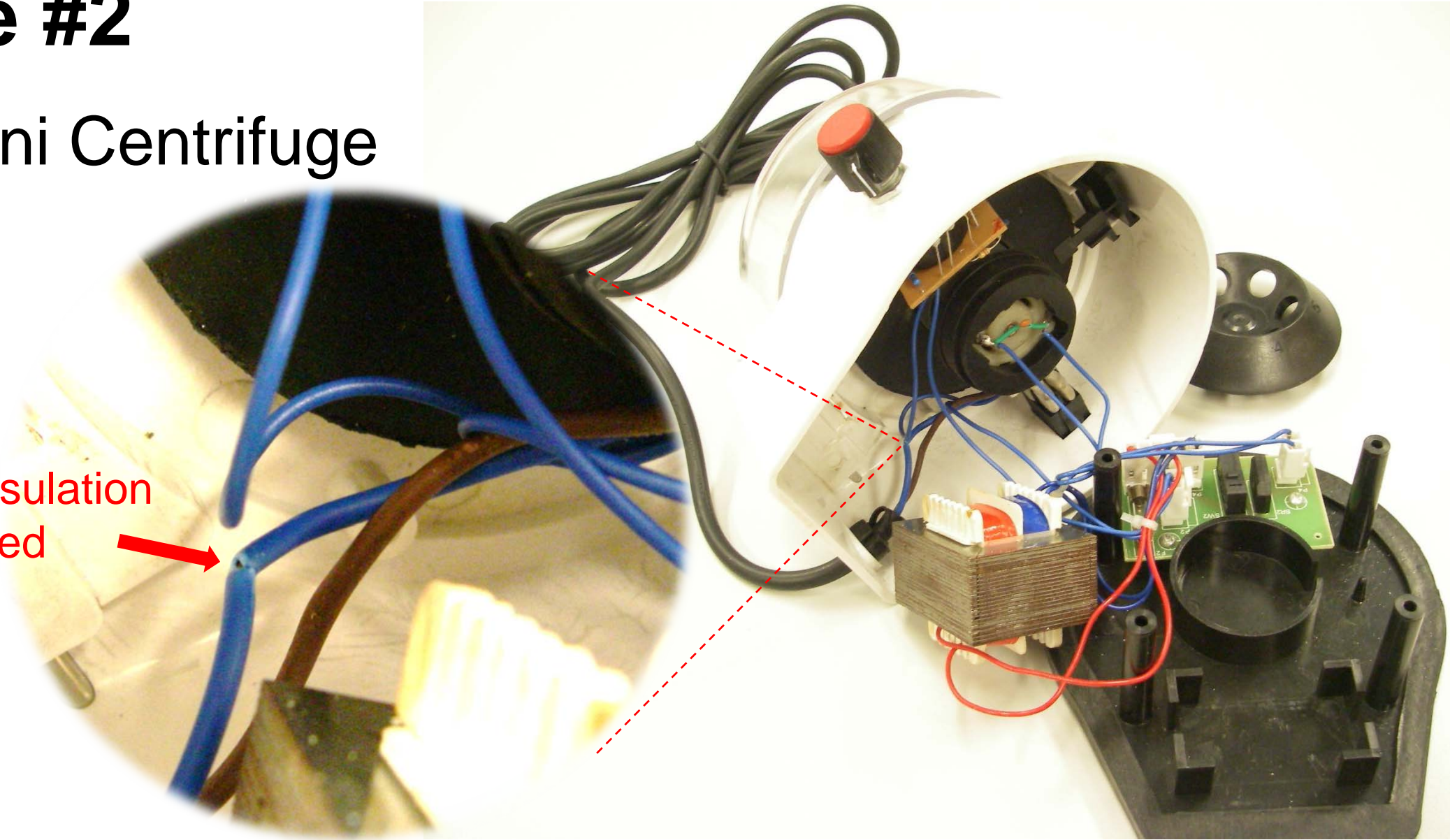


No fixture for the rotor

Case #2

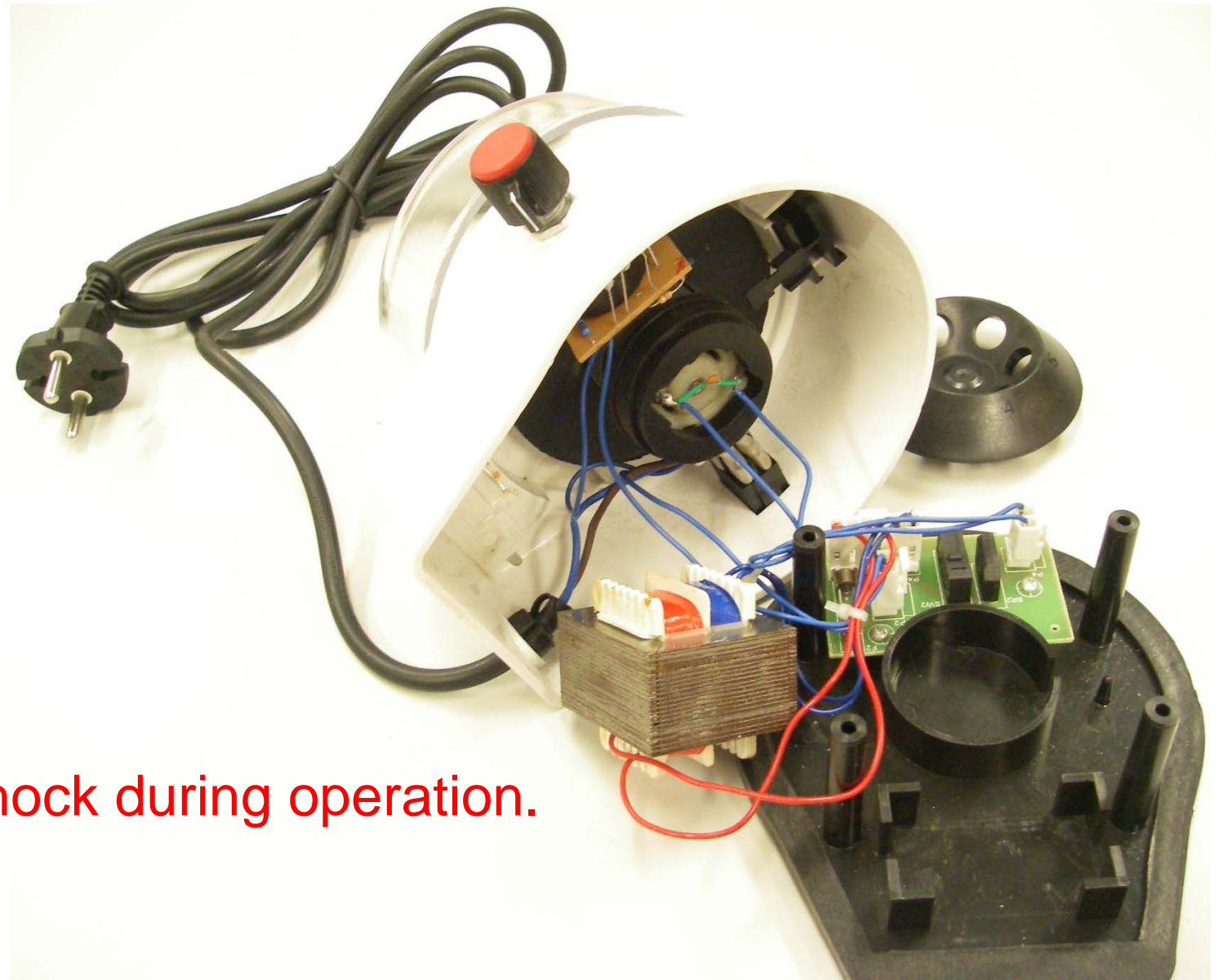
- Mini Centrifuge

Wire insulation
damaged



Case #2

- Mini Centrifuge



User may get electrical shock during operation.

Case #3

- Shaking Water Bath

Made in PRC



Case #3

- Shaking Water Bath

No earth connection to the case.



Case #3

- Shaking Water Bath

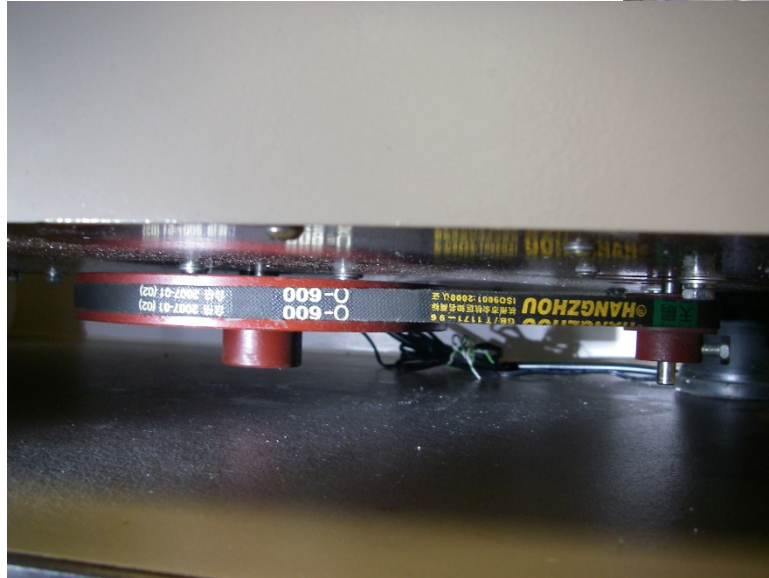


Sharp edges



Case #3

- Shaking Water Bath

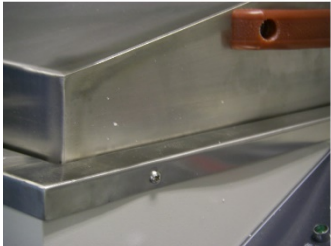


Moving parts exposed,
accessible during operation.

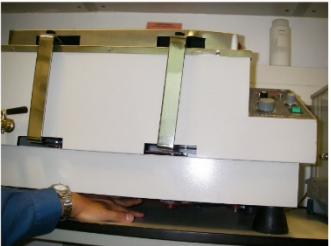
Case #3

- Shaking Water Bath

Having potential hazards during operation.



Shape edges



Exposed moving parts, can be accessed easily during operation.

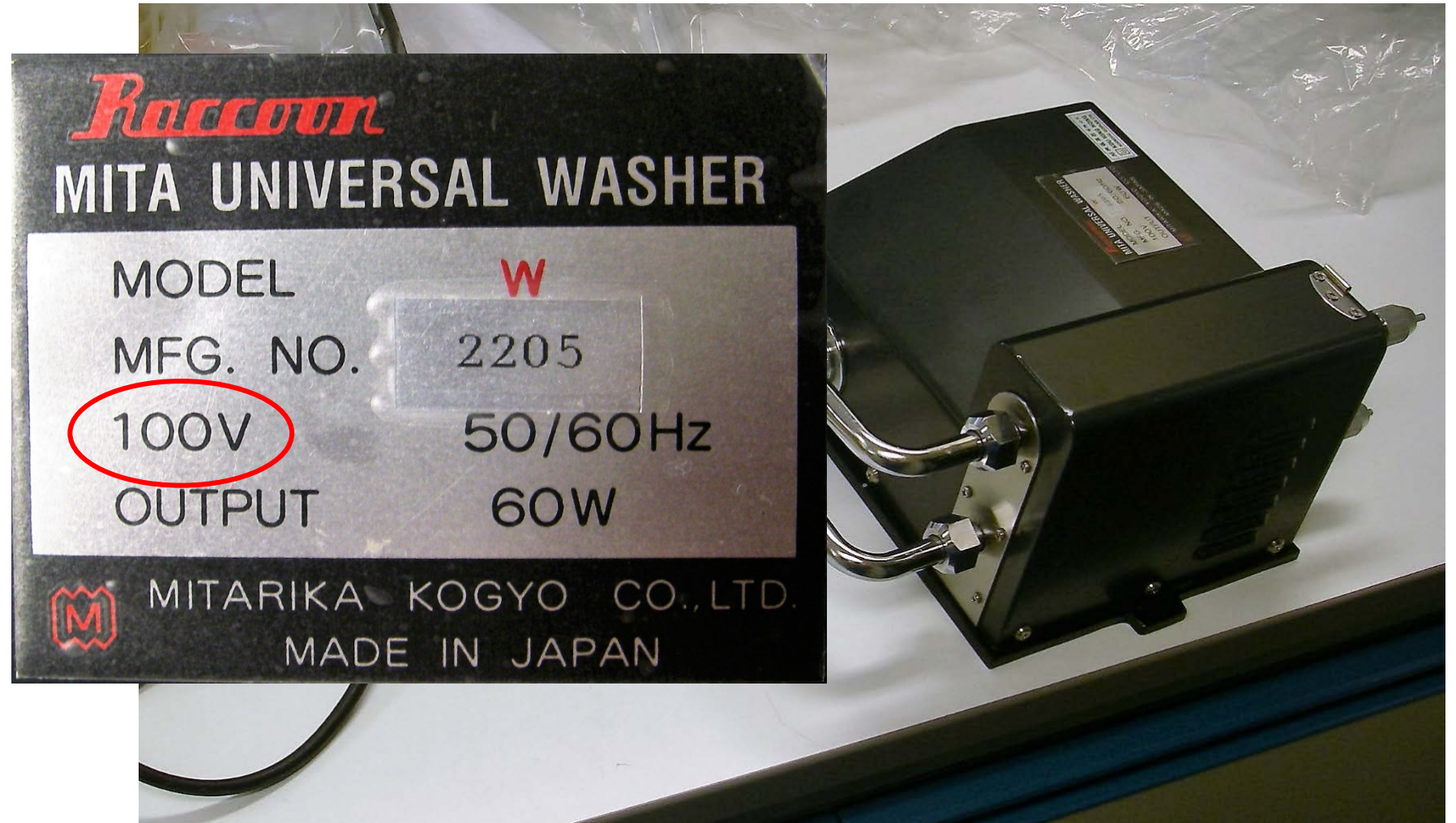


No ground connection to the case.

Case #4

- Bottle Washer

Made in Japan



Case #4

- Bottle Washer

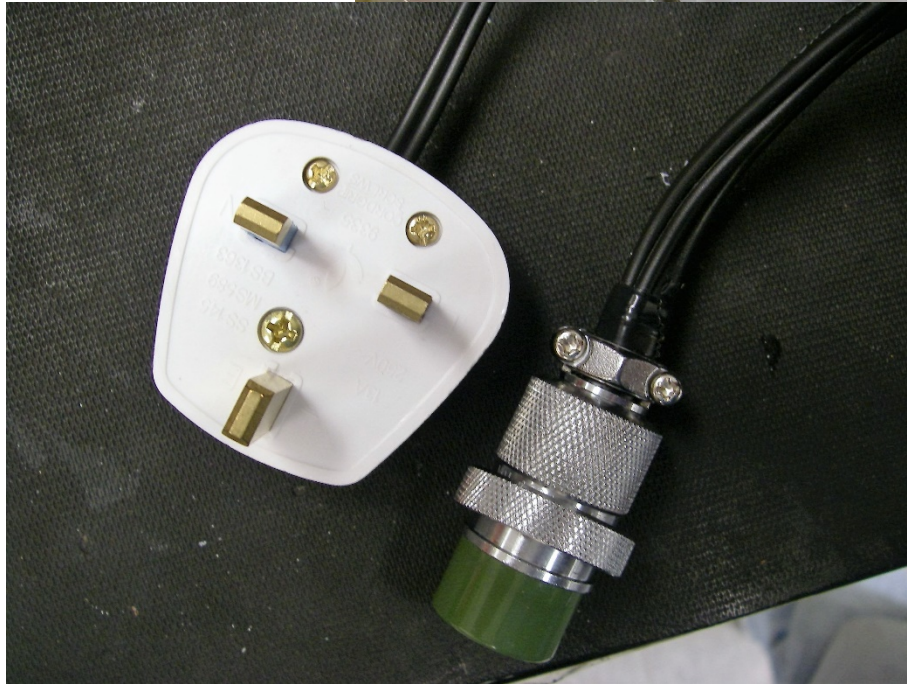
Made in Japan

Power plug modified
by supplier.



Case #4

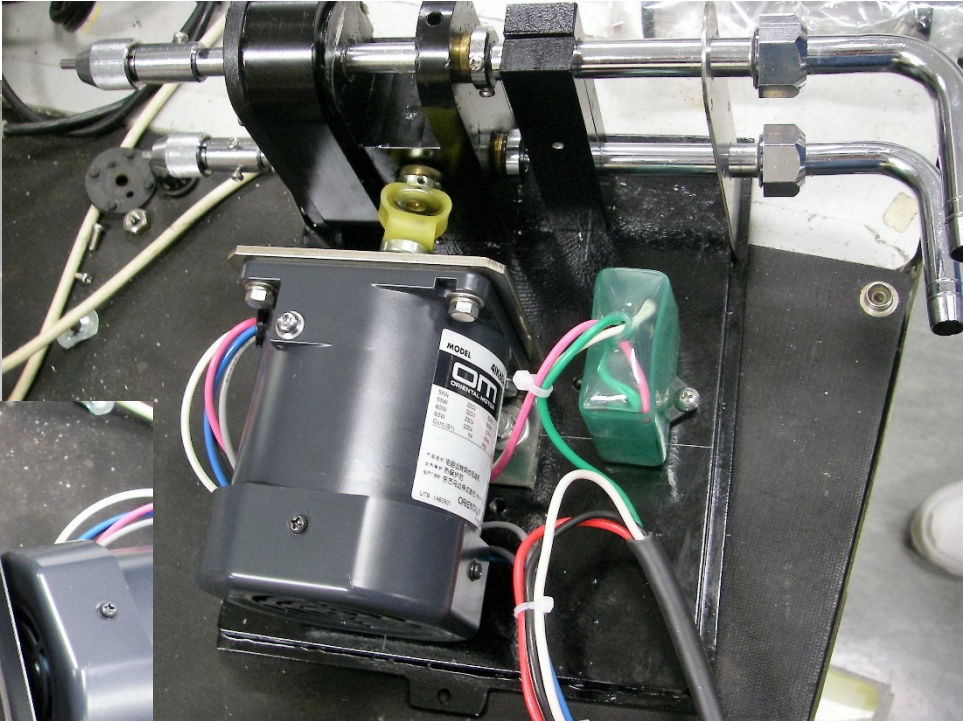
- Bottle Washer



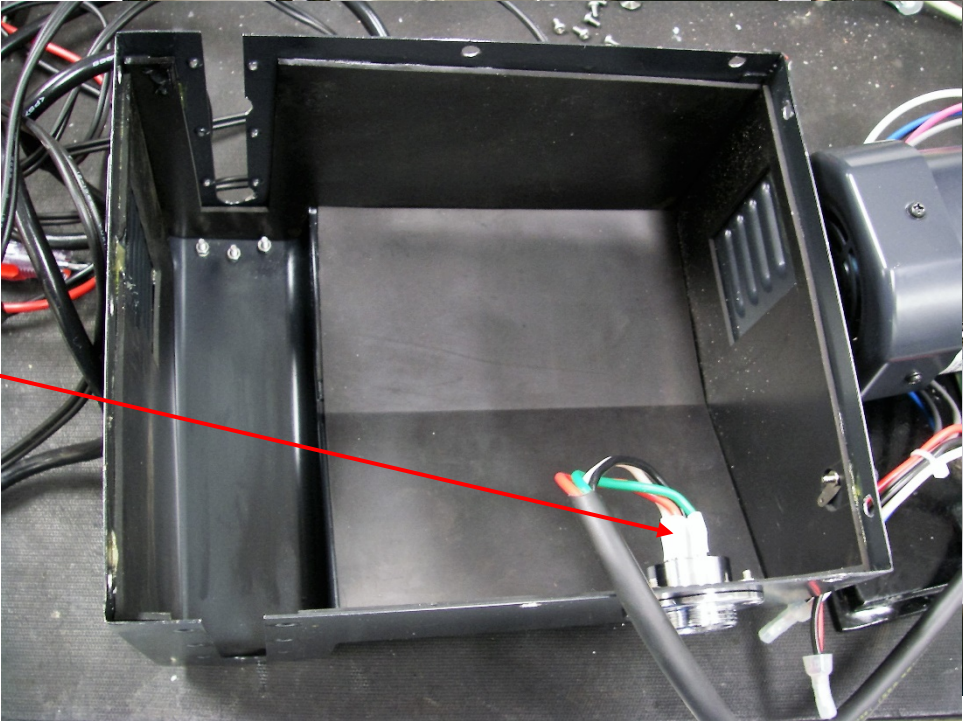
2-wires cable,
no earth connection.

Case #4

- Bottle Washer



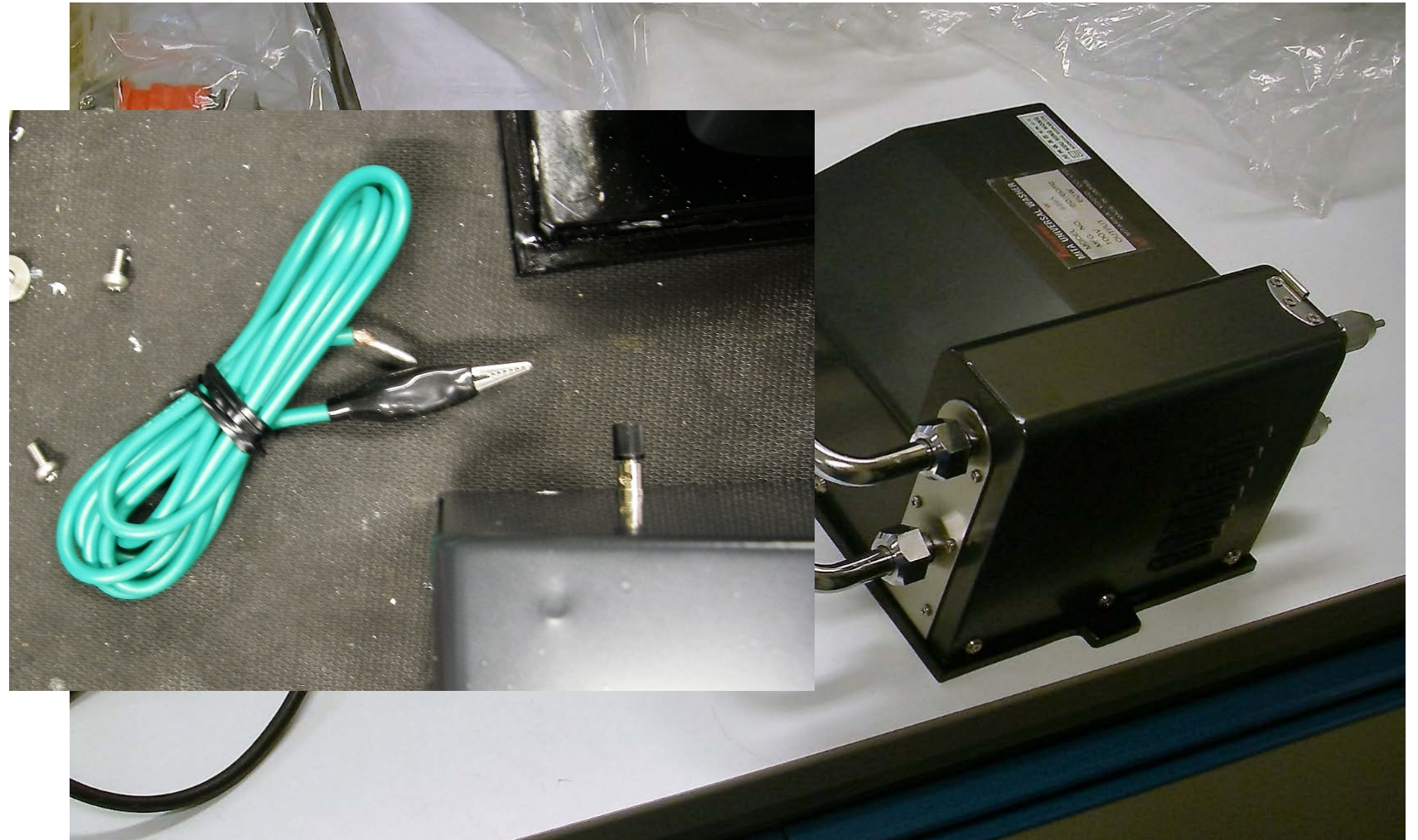
No earth connection to the case.



Case #4

- Bottle Washer

Improper / insecure
earth connection



Case #4

- Bottle Washer

Insecure earth connection



More examples of no earth connection

Pressure Heater

Tailor-made from PRC

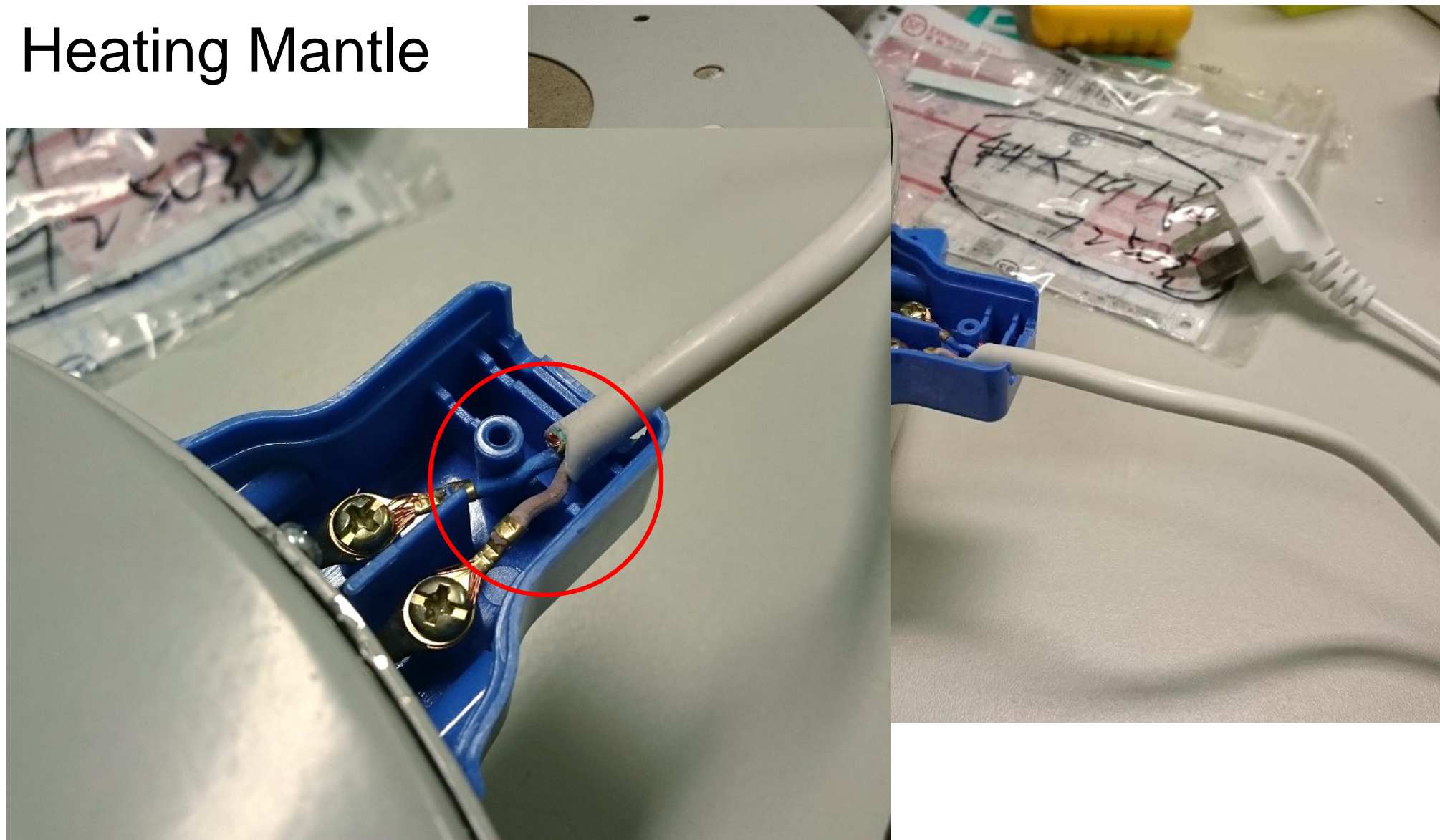
Live wires connect directly
No earth connection





No earth connection

Heating Mantle



Patching Machine



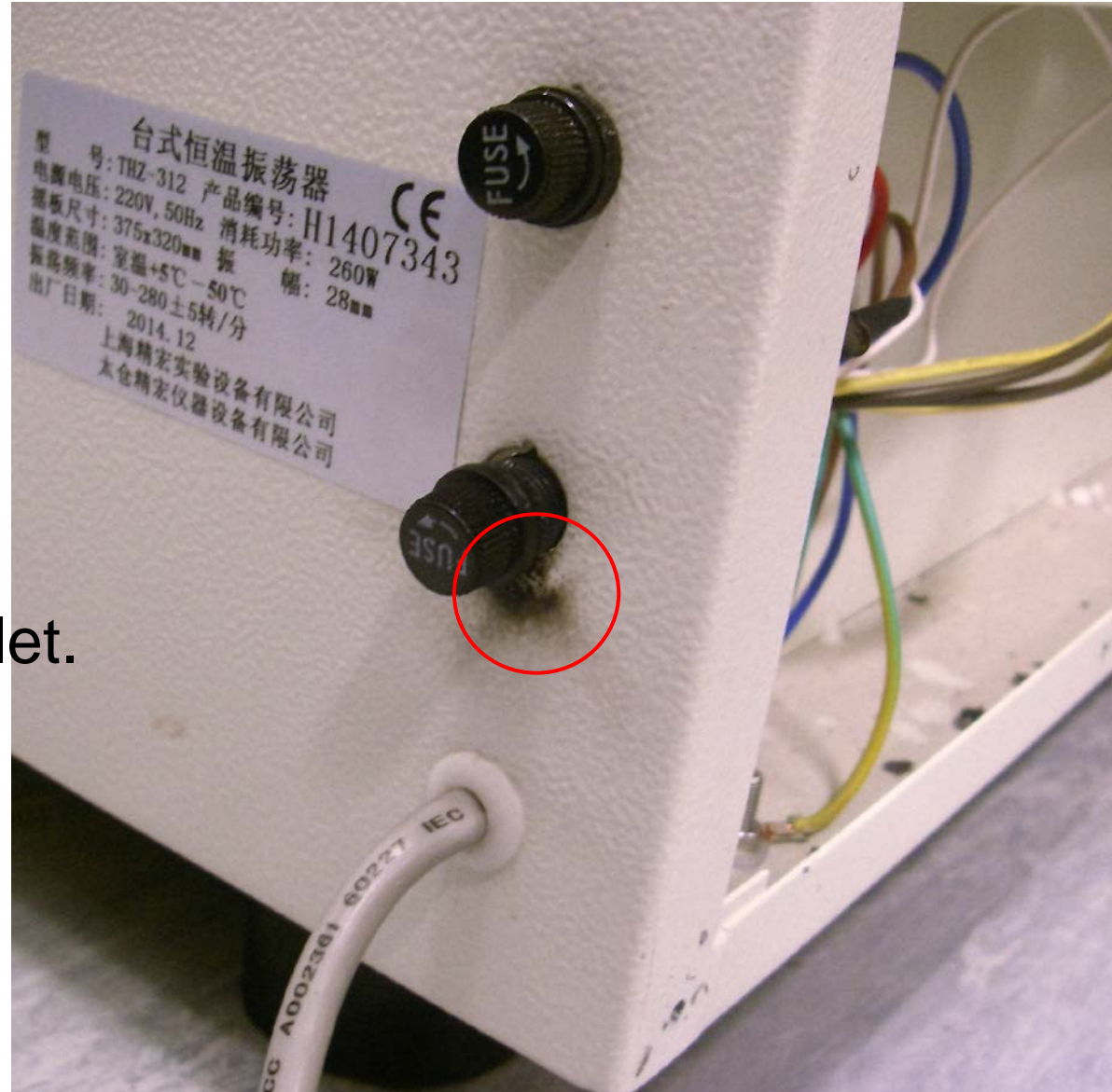
Sub-standard / poor quality parts

Shaker

with temp. control

From PRC

Tripped RCD when
plugged in the power outlet.

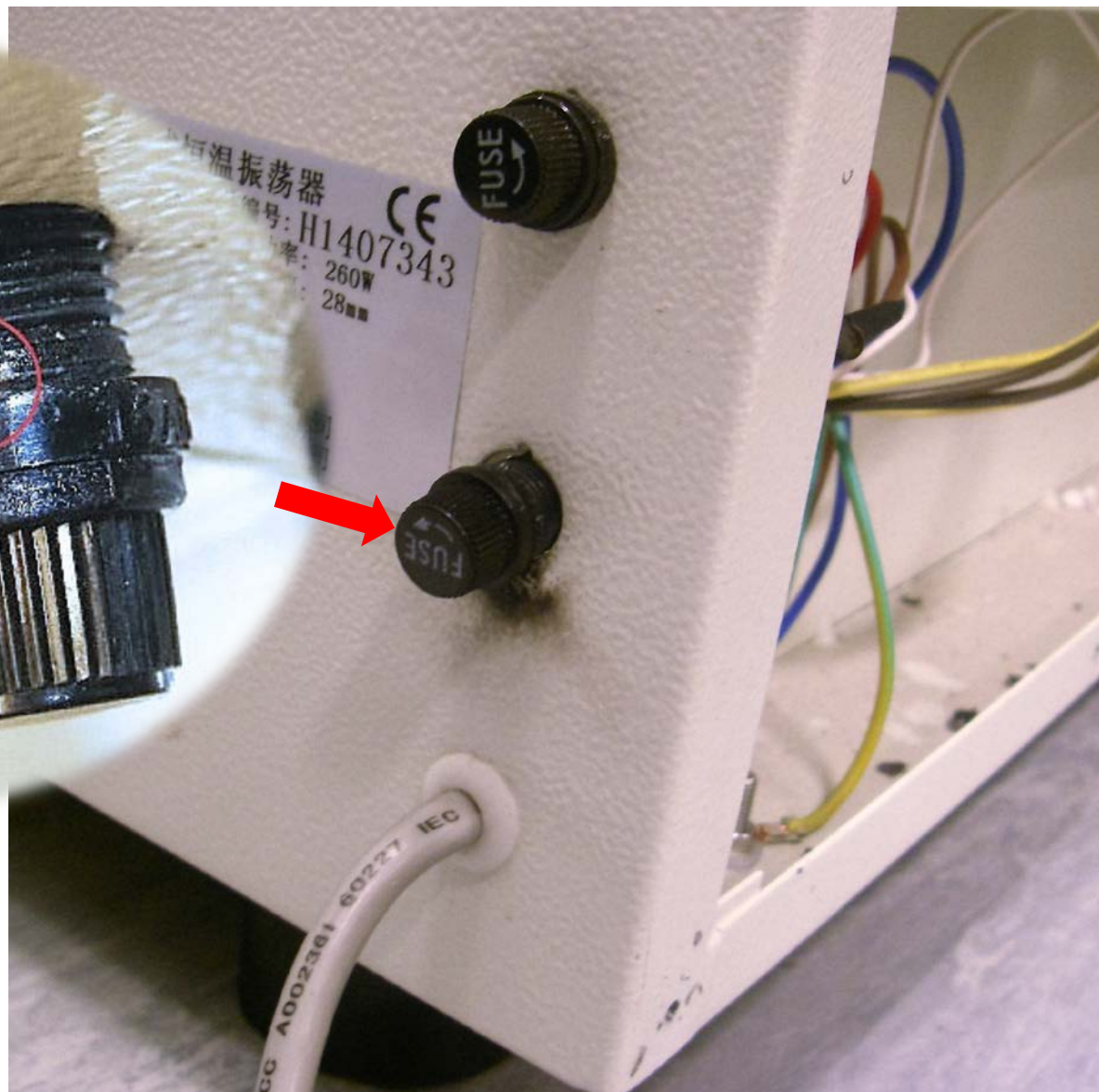




Crack, metal parts exposed.



Sub-standard parts cause short-circuit to the earth.

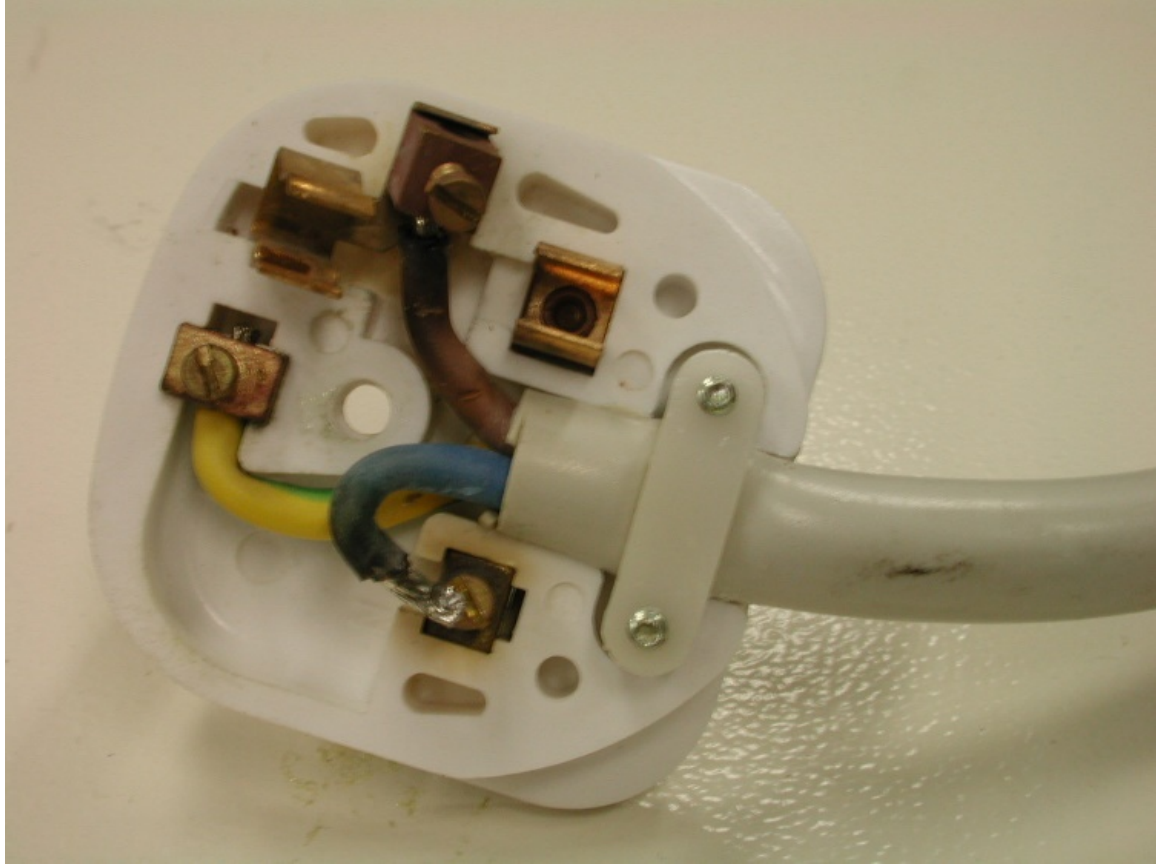


**Insecure wire connection
may cause fire hazard.**

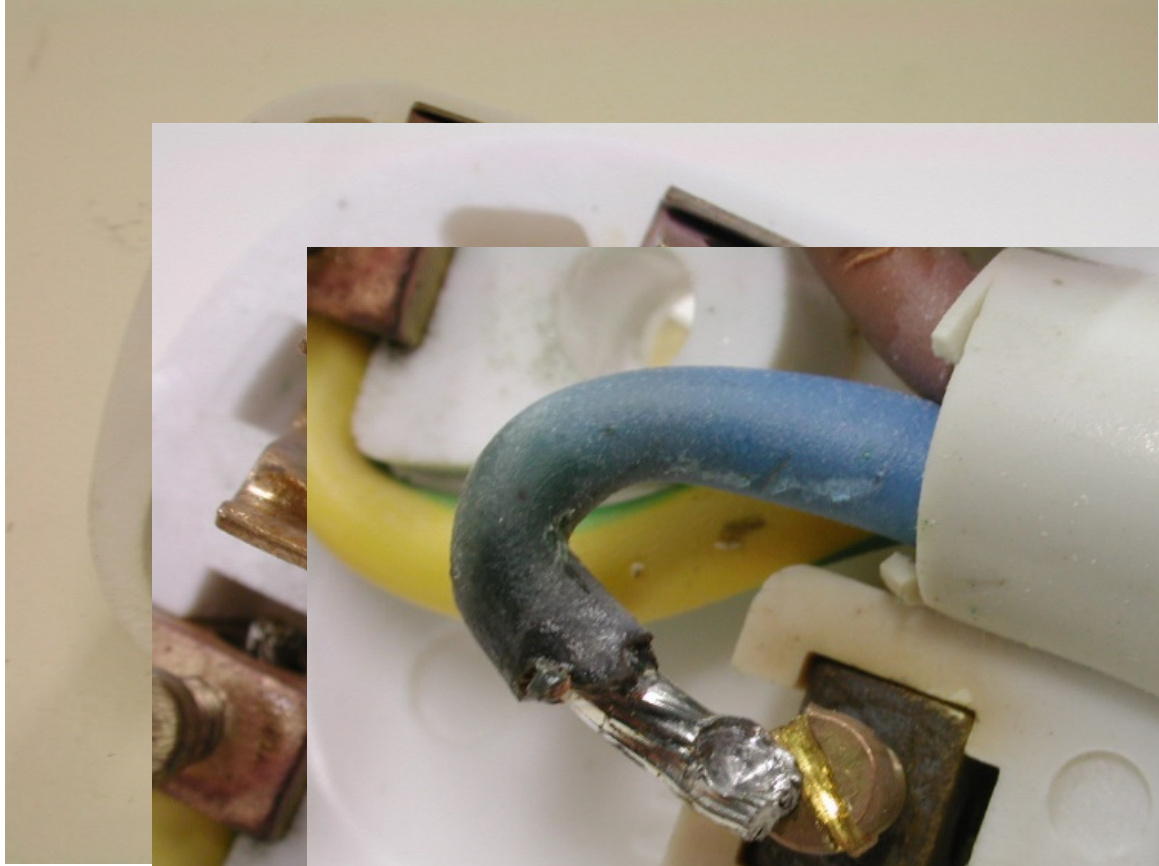
UPS

220V 13A







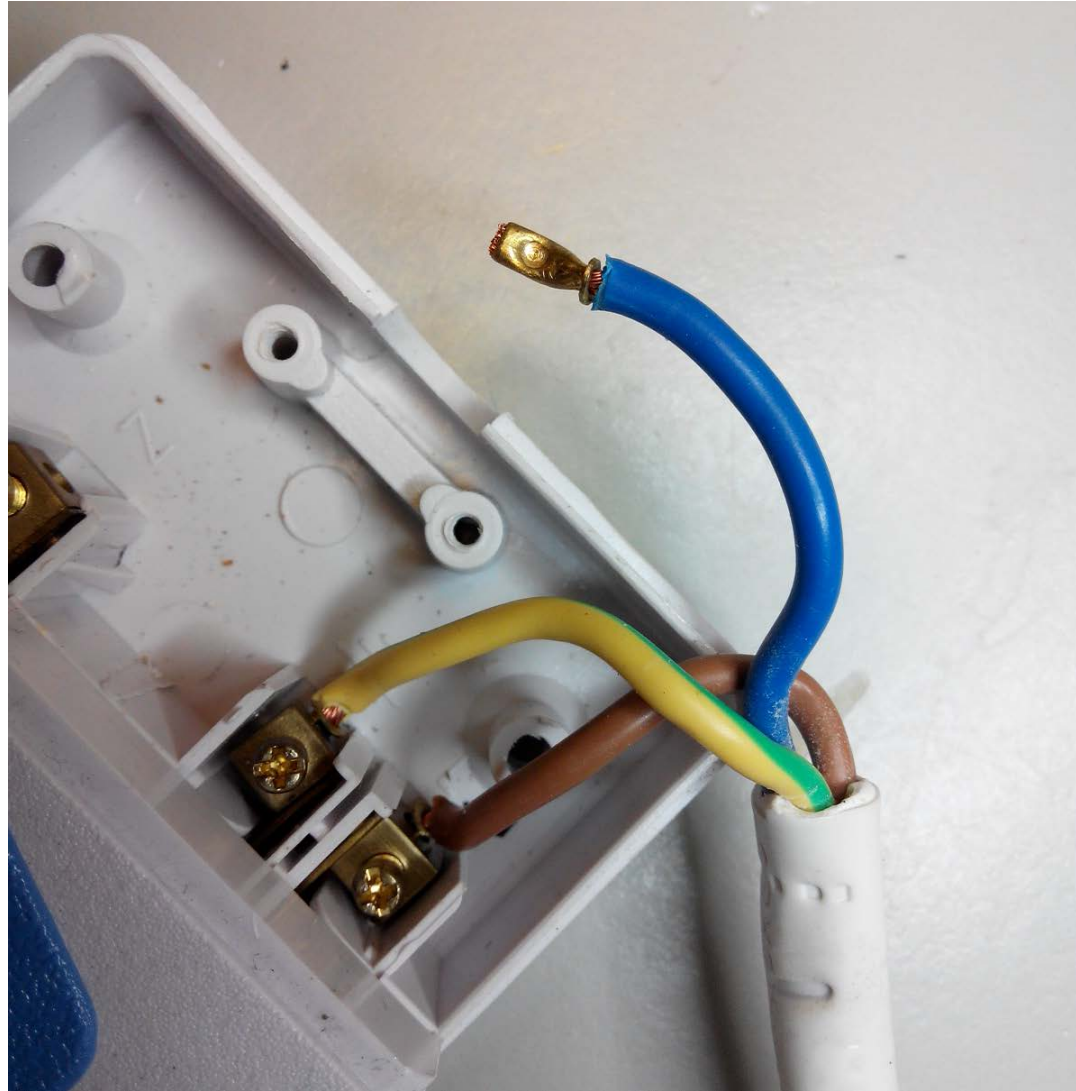


High Temp. Furnace

220V 13A



Copper eyelets



Multi-adapters

Insecure contact

Incorrect voltage



Equipment modified by user

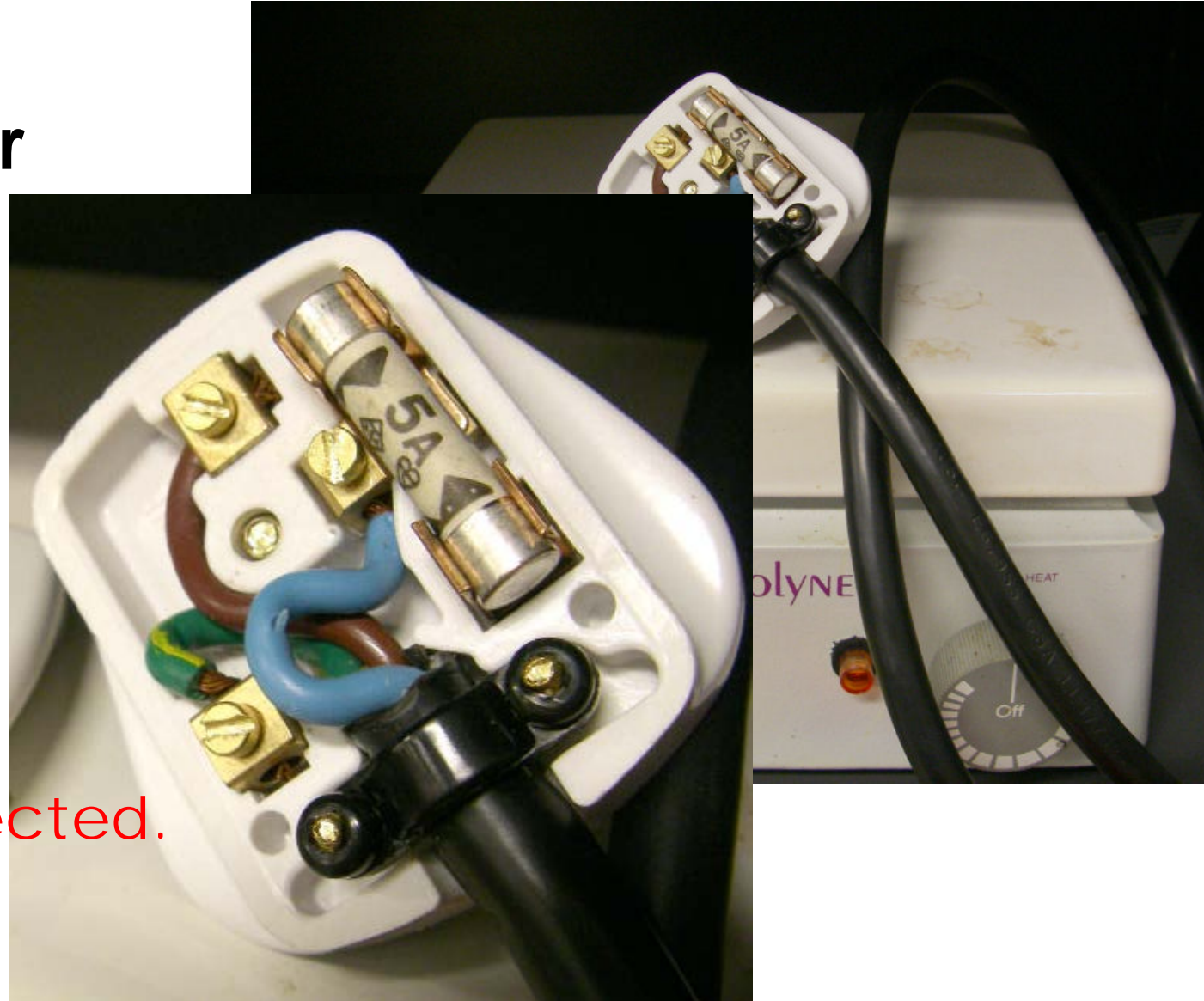
Heating stirrer

Tripped RCD when plugged in the power outlet.



Heating stirrer

All wires were
wrongly connected.



Can IMR modify this equipment to ensure safety?

Technically ... YES

- Approval & guidelines from HSEO.
- User clearly knows what they want.
- Detailed specification of the equipment provided by the manufacturer.
- Certificate or test report issued by a recognized certificate body.

Cheaper
Quicker

