

INSTRUCTION HANDBOOK

1SDH002302A1001 - ECN000285442

TMAX XT XT7M

Disassembly instructions



1. SCOPE

Scope of this document is to illustrate the step-by-step disassembly process of ABB SACE Tmax XT XT7M moulded case circuit breaker equipped with an electronic trip unit (type Ekip DIP LS/I).

Document is focused on Tmax XT XT7M 3p IEC version, anyway it allows to cover other versions of Tmax XT XT7M circuit breaker with just few slight differences to be taken into account.

2. SAFETY NOTES

Before proceeding with any disassembly operation, it's mandatory to put the circuit breaker in open position and make sure that the springs of the operating mechanism are discharged.

Disassembly operations of circuit breakers must be performed by qualified and skilled personnel in the electrical field (IEV 195-04-01: person with relevant education and experience to enable him or her to perceive risks and to avoid hazards which electricity can create) and having a detailed knowledge of circuit breakers.

Disassembly activities must be performed in an ergonomic workspace able to ensure protection of persons demanded to perform disassembly activities.

Applicable national legislation and international standards in force at the time of disassembly of circuit breakers must be taken into account in addition to prescriptions illustrated in this document.

ABB declines any responsibility for injury to people or damage to property resulting from a failure to comply with the instructions set out in this document and with any applicable safety standard.

3. PERSONAL PROTECTIVE EQUIPMENT (PPE)

When performing disassembly, following safety Personal Protective Equipment (PPE) must be worn:



4. TOOLS

Disassembly operations require the use of tools (e.g. screwdriver, torx key, pliers, ...); tools to be used are specified inside each phase of the disassembly process (see Chapter 6).

5. SEPARATE TREATMENT

Table below lists parts requiring a separate treatment adding information about part location inside circuit breakers and related quantity.

Description	Position inside circuit breaker	Quantity
Cap kits	In correspondence of circuit breaker connection terminals	6
Lever	In the T.U. reset group	1
Lever support	In the T.U. reset group	1
Support	Mounted on the upper part of the circuit breaker	1
Cables protection	Mounted on the back part of the trip unit	1
Rating plug case	Mounted on the front of the trip unit	1
Rating plug printed circuit board	In the rating plug case	1
Backplane	Mounted on the back part of the trip unit	1
Trip unit case	On the trip unit	1
Trip unit back cover	On the trip unit	1
Trip unit printed circuit board	In the trip unit	1
Motor PCS support	Mounted on the left part of the circuit breaker	1
Trip coil	In the trip coil group	1
Trip coil group	Mounted on the left part of the circuit breaker	1
MID	Mounted on the right part of the circuit breaker	1
Wires cover	Mounted on the left part of the circuit breaker	1
Wiring	Mounted on the left part of the circuit breaker	1
RTC lever	Mounted on the right side of the operating mechanism	1
Operating mechanism	Mounted on the center of the circuit breaker	1
Unlocking shaft appendices	Mounted on the pin of the operating mechanism	2
Springs charging lever	Mounted on the left side of the operating mechanism	1
Protections	Mounted on the upper case assembly	2
Fixed contacts protections	Mounted on the fixed contacts	3
Covers	Below the sensors	3
Sensors	In the bottom part of the circuit breaker	3
Insulation protections	On the moving contacts assembly	3

If disassembled parts require a separate treatment a specific indication is provided inside each phase with reason why for the separate treatment (see Chapter 6).

6. DISASSEMBLY PROCESS

Circuit breakers disassembly process is constituted by a sequence of operations to be performed on products after their dismounting from original installation. For each phase following information are provided:

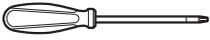
- Part/parts to be disassembled (title of the phase)
- Tools to be used
- Description of actions to be performed
- Pictures showing actions to be performed
- List, quantity and picture of disassembled parts with an indication about separate treatment (when applicable)
- In case of potential hazards signal below is reported



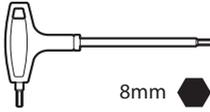
6.1 PHASE 1 – CAP KITS

Tools

Cross screwdriver



Allen key

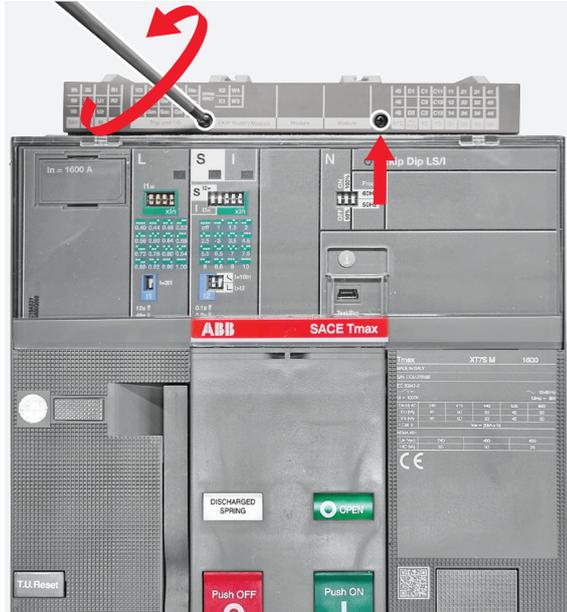


Flat screwdriver

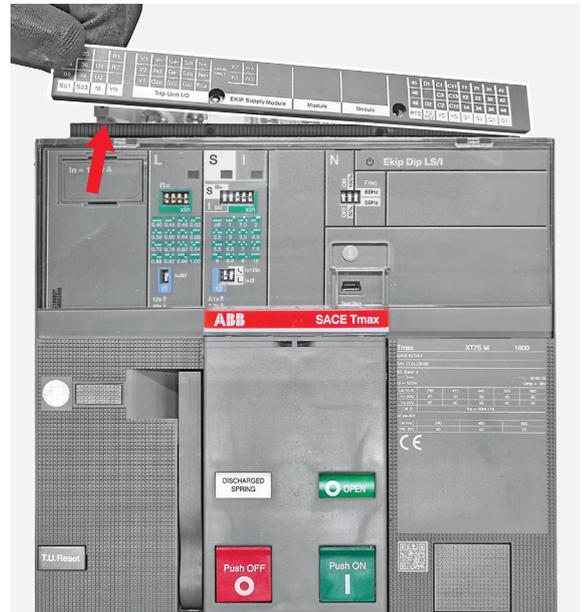


Actions to be performed

1 By means of the cross screwdriver unscrew the 2 screws fixing the terminal clamp to the circuit breaker main structure.



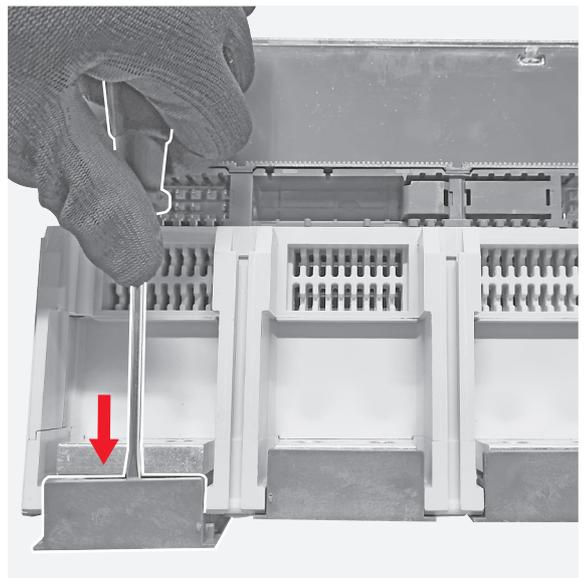
2 Manually remove the terminal clamp.



3 By means of the allen key remove the screws connected with the cap kits and after manually remove the plates.

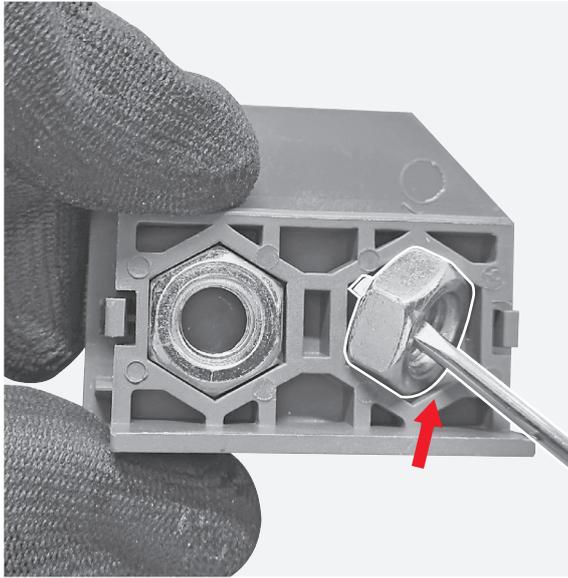
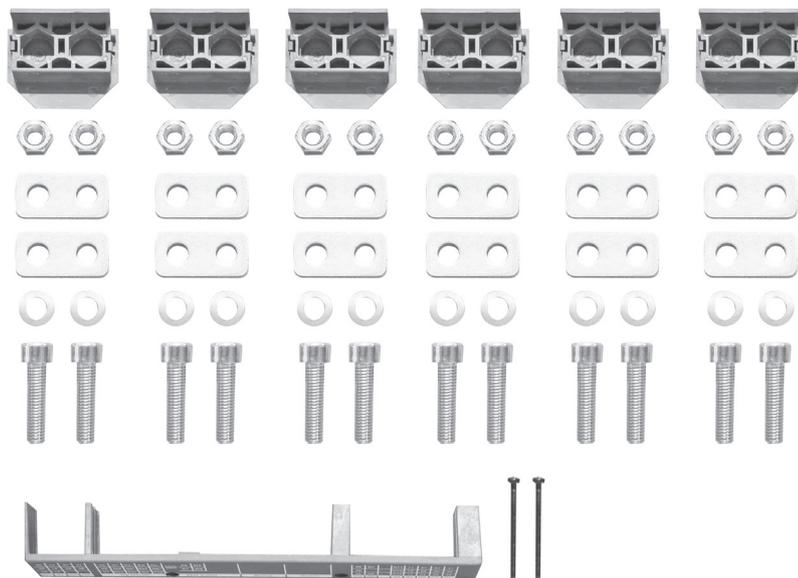


4 By means of the flat screwdriver push the cap kits in order to remove them from the circuit breaker main structure.



5

By means of the flat screwdriver remove the nuts mounted on the cap kits.

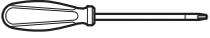
**Disassembled parts**

- 1 terminal clamp (Plastic)
- 2 screws (Metal)
- 12 screws and related washers (Metal)
- 12 plates (Metal)
- 6 cap kits (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 12 nuts (Metal)

6.2 PHASE 2 – CIRCUIT BREAKER FRONT COVER AND OPERATING MECHANISM COVER

Tools

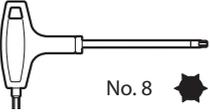
Cross screwdriver



Flat screwdriver



Torx key



No. 8

Actions to be performed

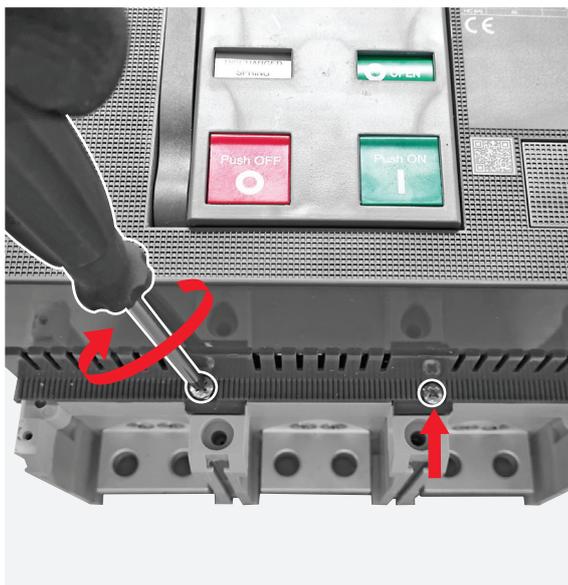
6 Manually push the trip unit transparent protection as indicated by the arrow and remove it.



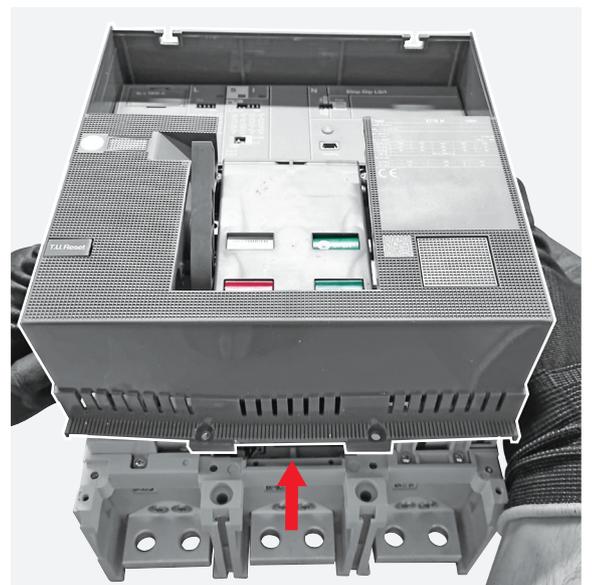
7 Lift the springs charging lever and by means of the cross screwdriver unscrew the screw located below the springs charging lever fixing the circuit breaker cover to the circuit breaker main structure.



8 By means of the cross screwdriver unscrew the 2 screws located in the lower part of the circuit breaker fixing the circuit breaker front cover to the circuit breaker main structure.

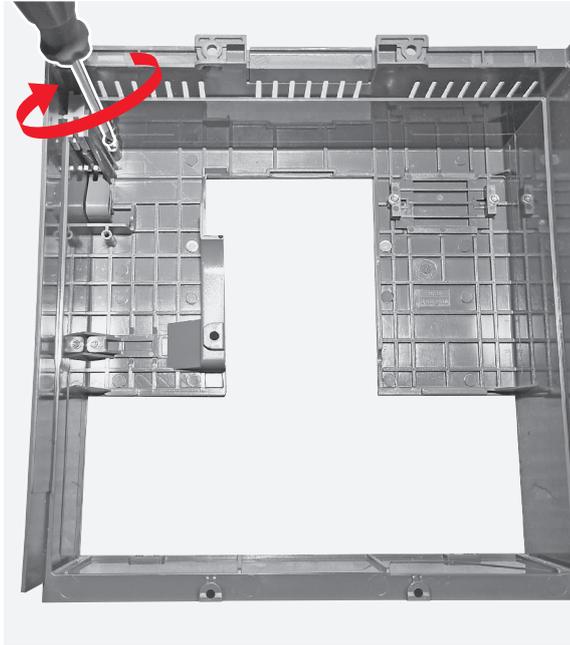


9 Manually lift the circuit breaker front cover to complete the removal.

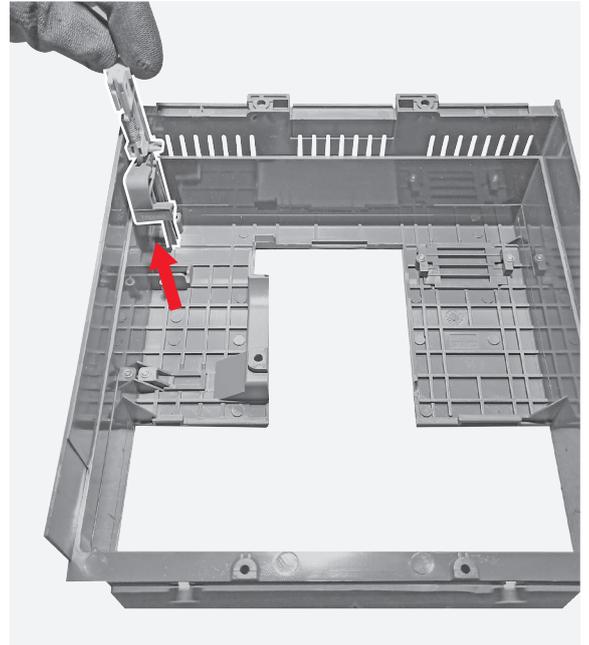


10

By means of the cross screwdriver unscrew the screw fixing the T.U. reset group to the circuit breaker front cover.

**11**

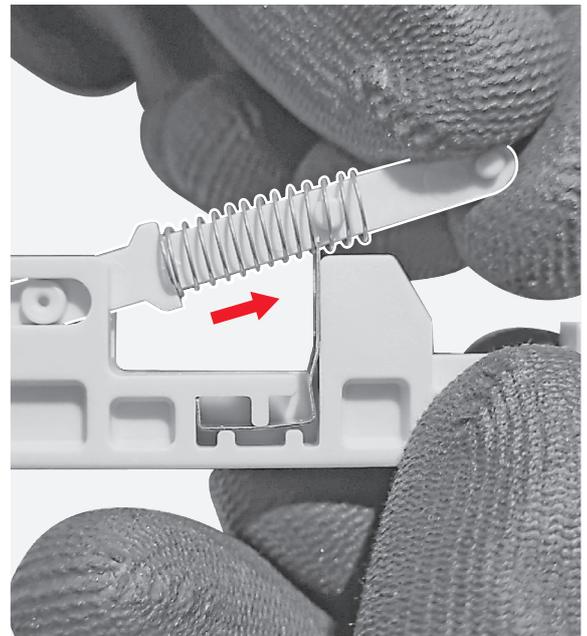
Manually lift the T.U. reset group and complete the removal.

**12**

By means of the flat screwdriver unhook the reset lever from the lever support of the T.U. reset group.

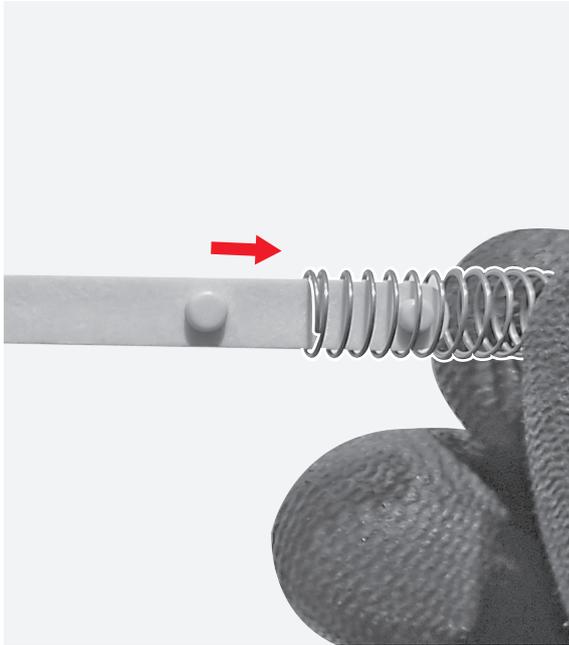
**13**

Manually separate the lever support and the lever. A red arrow indicates the direction of the lever's movement.



14

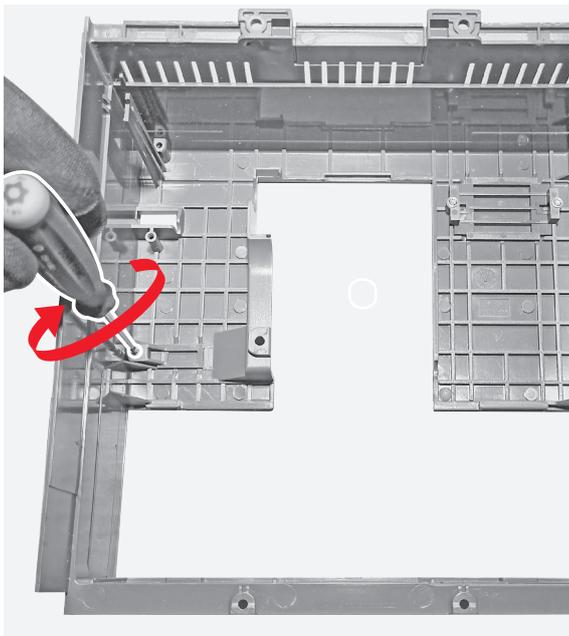
Manually remove the spring from the lever.

**15**

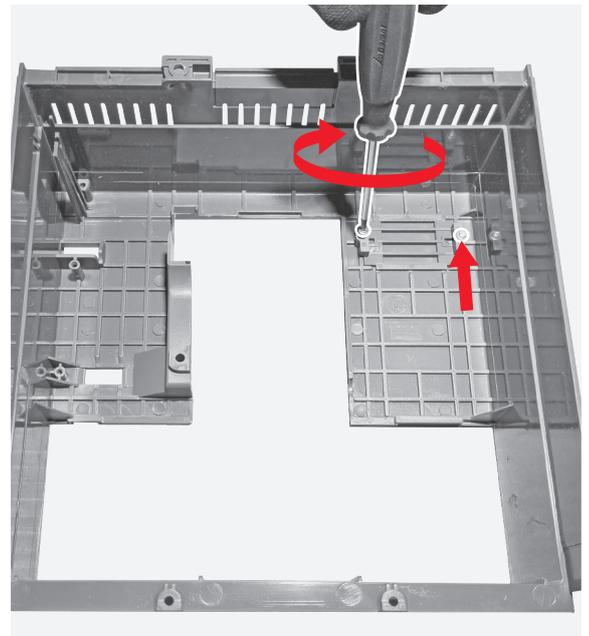
Manually remove the reset spring from the lever support.

**16**

By means of the tork key remove the screw fixing the operation counter cap to the circuit breaker front cover and after manually remove the operation counter cap.

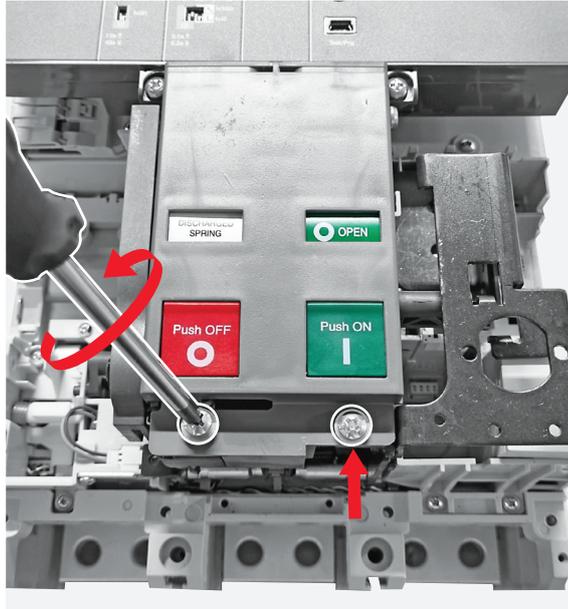
**17**

By means of the tork key remove the 2 screws fixing the front cap to the circuit breaker front cover and after manually remove the front cap.

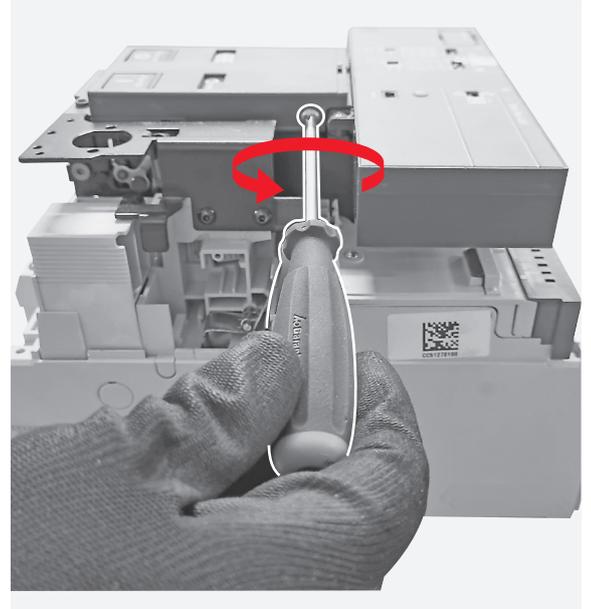
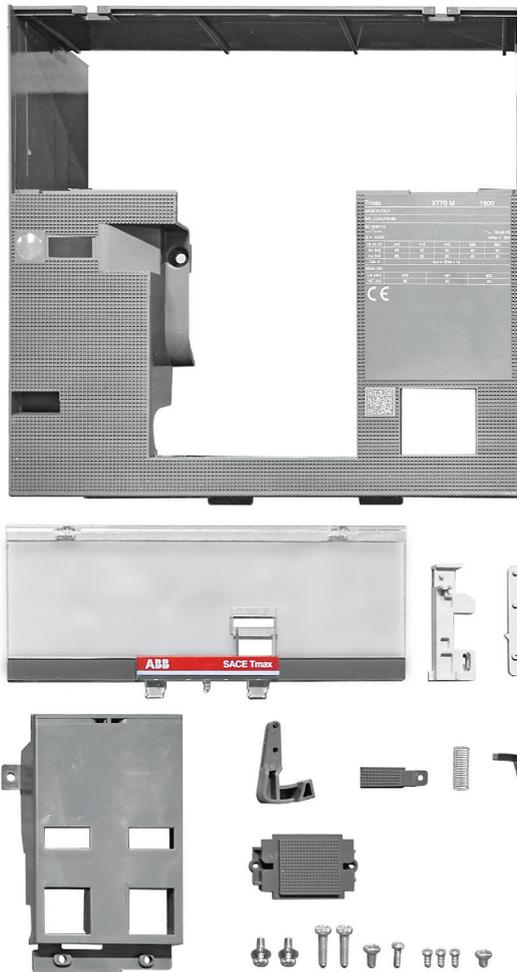


18

By means the cross screwdriver unscrew the 2 screws located in the lower part of the operating mechanism cover fixing the operating mechanism cover to the main structure of the circuit-breaker.

**19**

By means the cross screwdriver unscrew the screw located on the right of the operating mechanism cover fixing the operating mechanism cover to the main structure of the circuit breaker and manually complete the removal of the operating mechanism cover.

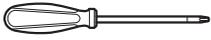
**Disassembled parts**

- 1 trip unit transparent protection (Plastic)
- 1 + 2 + 1 + 1 + 2 + 1 screws (Metal)
- 1 reset lever (Plastic)
- 1 lever (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 spring (Metal)
- 1 lever support (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 reset spring (Metal)
- 2 screws and related washers (Metal)
- 1 circuit breaker front cover (Plastic)
- 1 operation counter cap (Plastic)
- 1 front cap (Plastic)
- 1 operating mechanism cover (Plastic)

6.3 PHASE 3 – TRIP UNIT

Tools

Cross screwdriver



Flat screwdriver

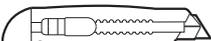


Torx key



No. 8

Cutter



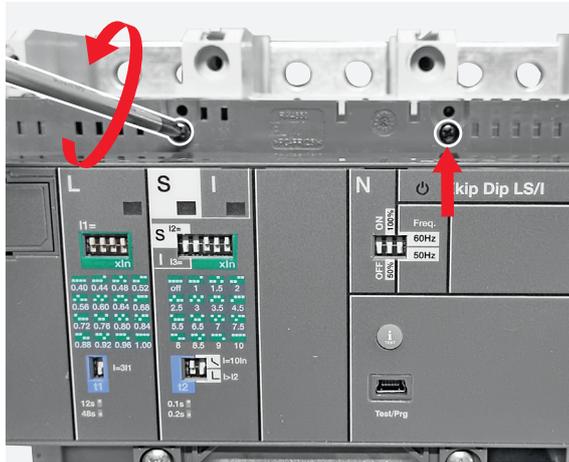
Pliers



Actions to be performed

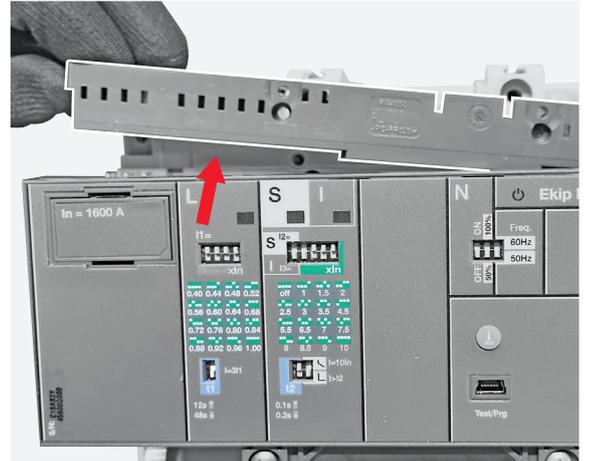
20

By means of a cross screwdriver unscrew the 2 screws fixing the support to the circuit breaker main structure.



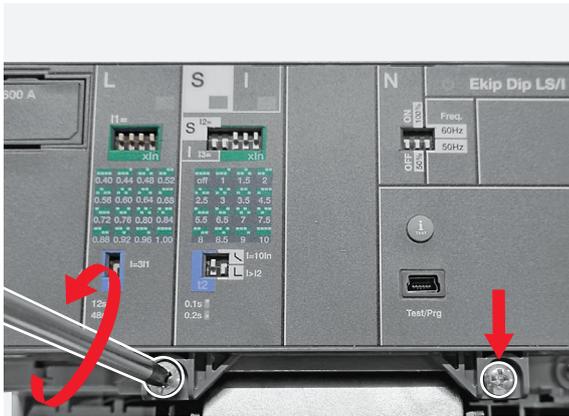
21

Manually remove the support.



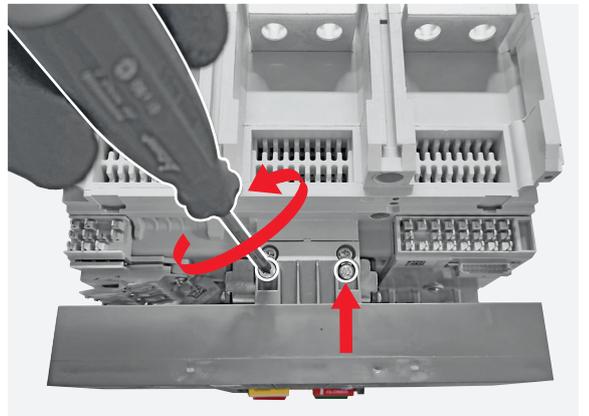
22

By means of the cross screwdriver unscrew the 2 screws located in the bottom part of the trip unit and fixing the trip unit to the circuit breaker main structure.



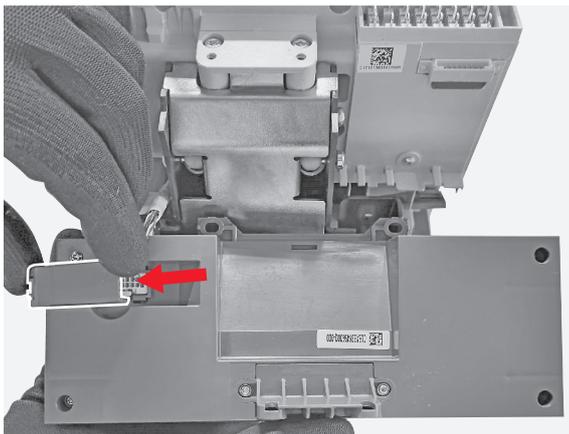
23

By means of the cross screwdriver unscrew the 2 screws located over the trip unit fixing the trip unit to the circuit breaker main structure.



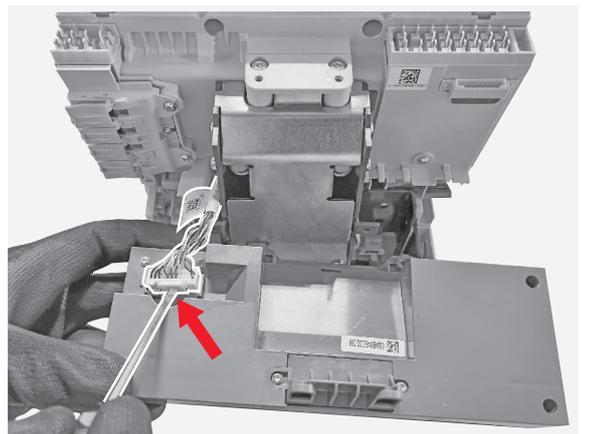
24

Manually push the cables protection as indicated by the arrow and remove it.



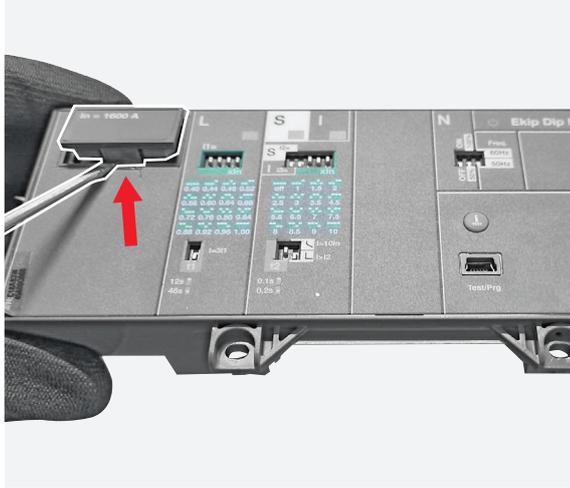
25

By means of the flat screwdriver disconnect the connector from the trip unit and after manually complete the removal of the trip unit.



26

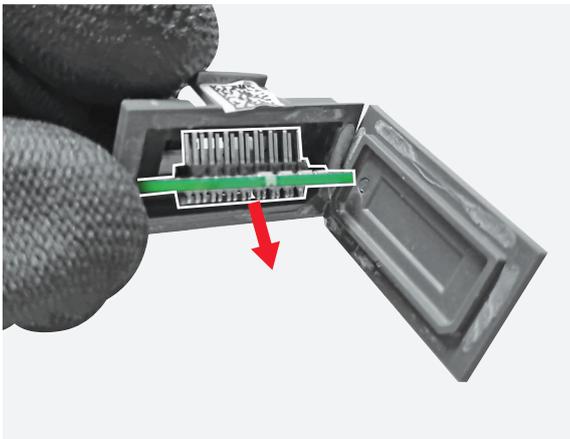
By means of the flat screwdriver remove the rating plug from the trip unit.

**27**

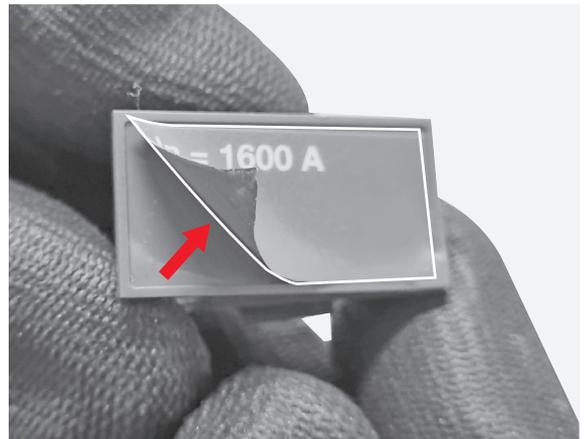
By means of the flat screwdriver open the rating plug case.

**28**

Let the rating plug printed circuit board mounted inside the rating plug let fall by gravity.

**29**

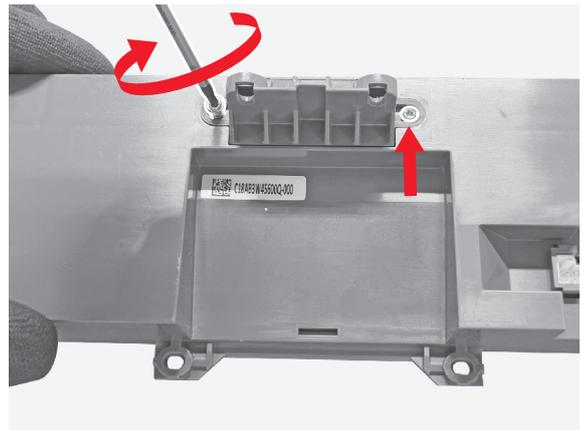
By means of the cutter start removing the label located on the front of the rating plug case and manually complete the operation.

**30**

By means of the cutter start removing the label located on the front of the trip unit and manually complete the operation.

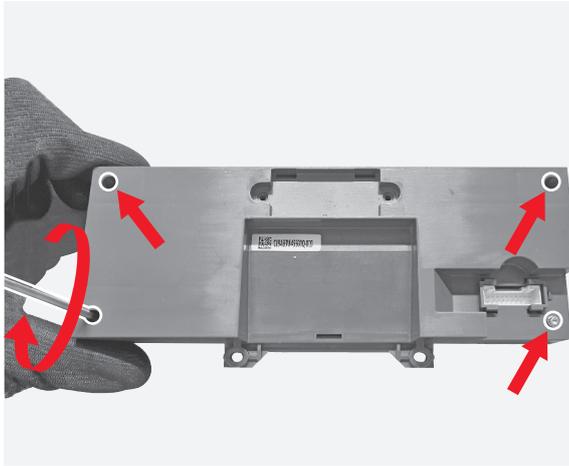
**31**

By means of the torx key (size 8) unscrew the 2 screws fixing the backplane to the trip unit and after manually remove the backplane.

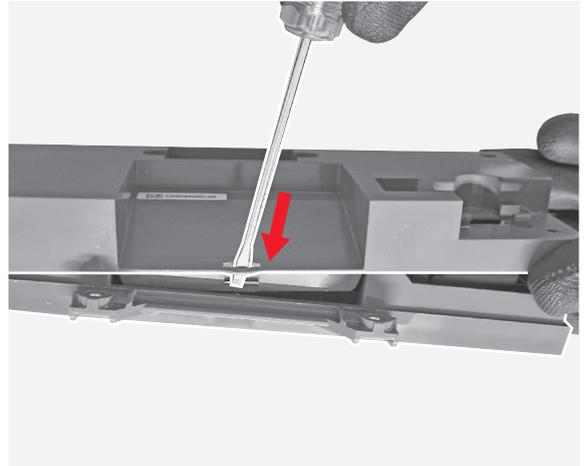


32

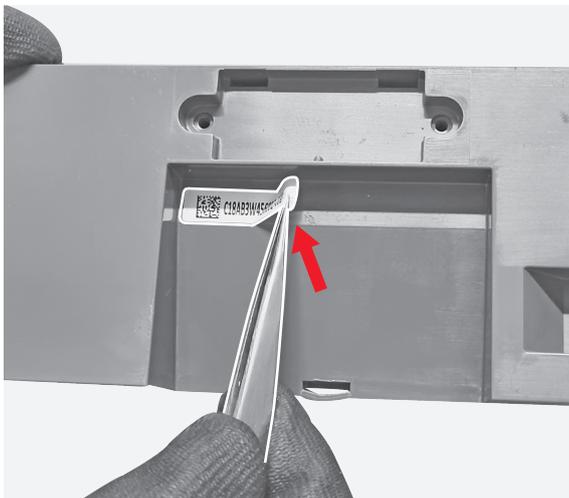
By means of the torx key (size 8) uncrew the 4 screws fixing the trip unit case to the trip unit base.

**33**

By means of the flat screwdriver separate the trip unit case from the trip unit back cover.

**34**

By means of the cutter start removing the trip unit Data Matrix label located on the trip unit back cover and by means of the pliers complete the operation.

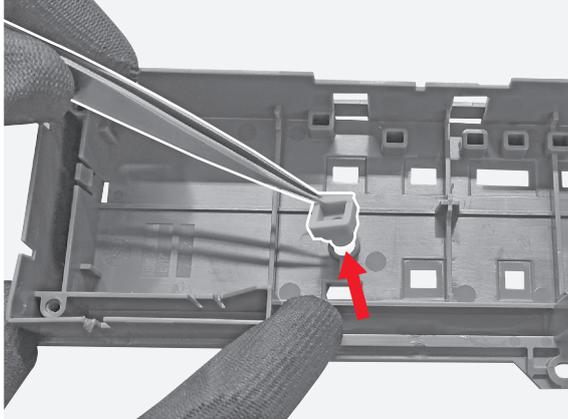
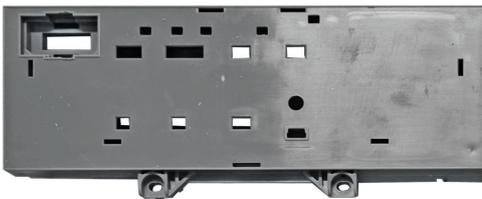
**35**

Manually remove the printed circuit board from the trip unit back cover.



36

By means of the pliers remove the “i TEST” pushbutton.

**Disassembled parts**

- 1 support (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 2 + 2 + 2 + 2 + 4 screws (Metal)
- 1 cables protection (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 rating plug case (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 rating plug printed circuit board (Plastic, Metal and Electronic components) SEPARATE TREATMENT (Printed circuit board)
- 1 rating plug label (Adhesive paper)
- 1 trip unit label (Adhesive paper)
- 1 backplane (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 trip unit case (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 trip unit back cover (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 QR code label (Adhesive paper)
- 1 trip unit printed circuit board (Plastic, Metal and Electronic components) SEPARATE TREATMENT (Printed circuit board)
- 1 “i TEST” pushbutton (Rubber)

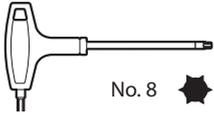
6.4 PHASE 4 – ASSEMBLIES ON CIRCUIT BREAKER LEFT SIDE

Tools

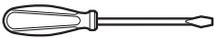
Cross screwdriver



Torx key



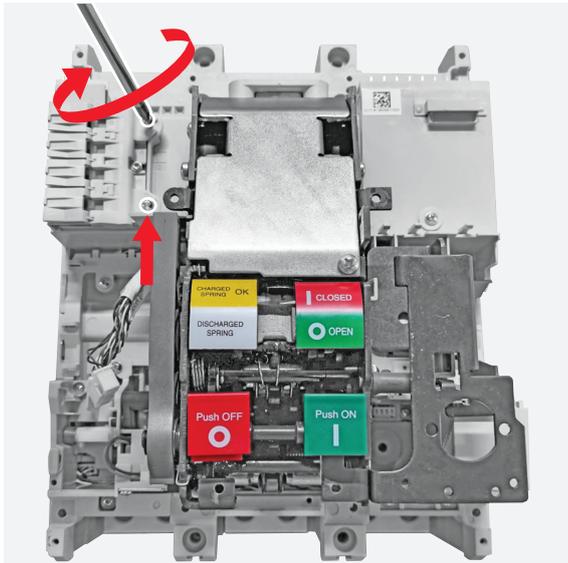
Flat screwdriver



Actions to be performed

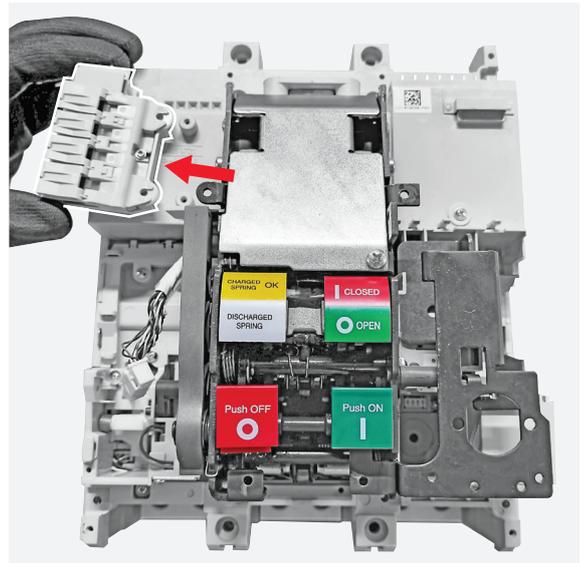
37

By means of the cross screwdriver unscrew the 2 screws fixing the motor PCS support to the circuit breaker main structure.



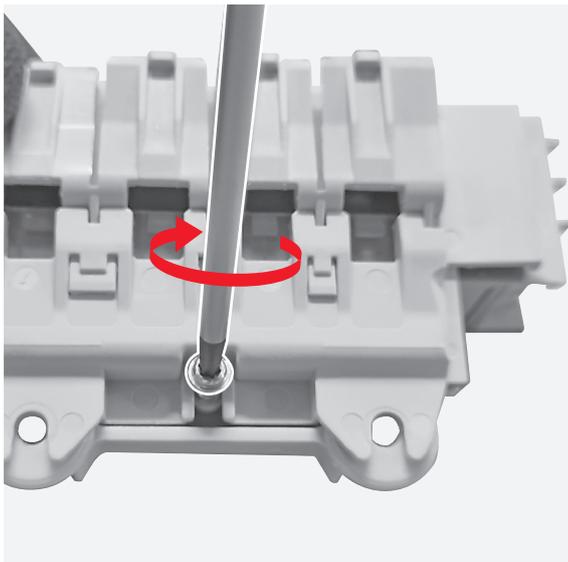
38

Manually remove the motor PCS support from the circuit breaker main structure.



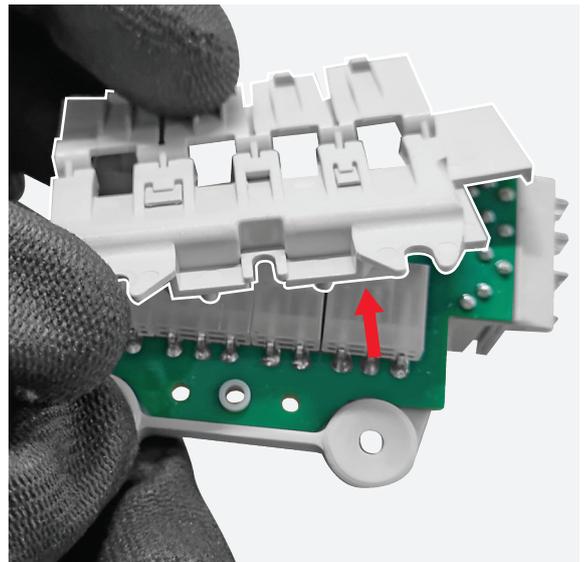
39

By means of the torx key unscrew the screw fixing the PCS cover to motor PCS support.



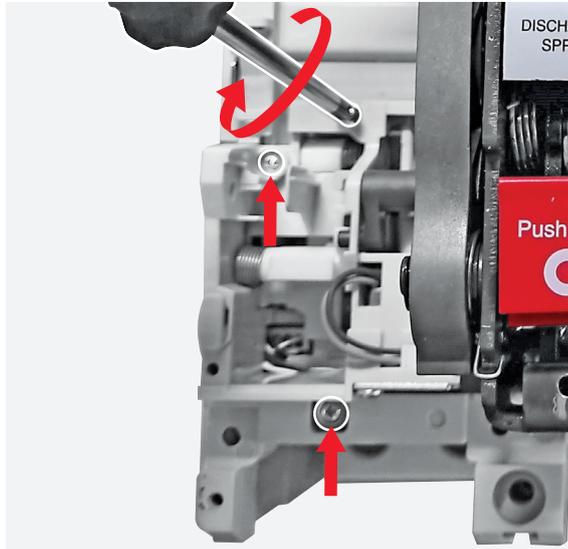
40

Manually separate the PCS cover and the motor PCS support.

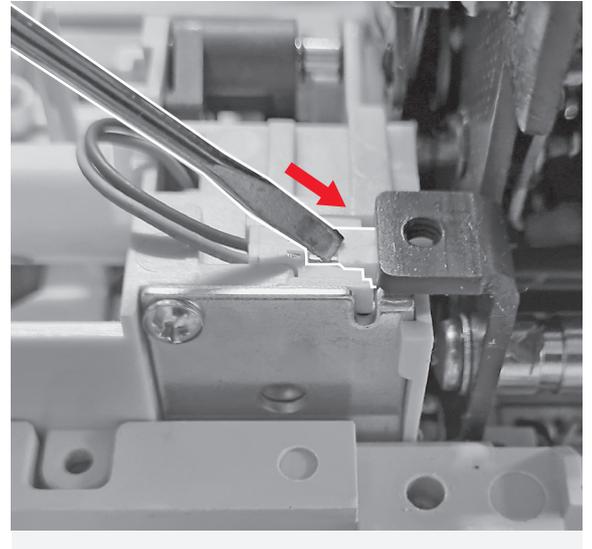


41

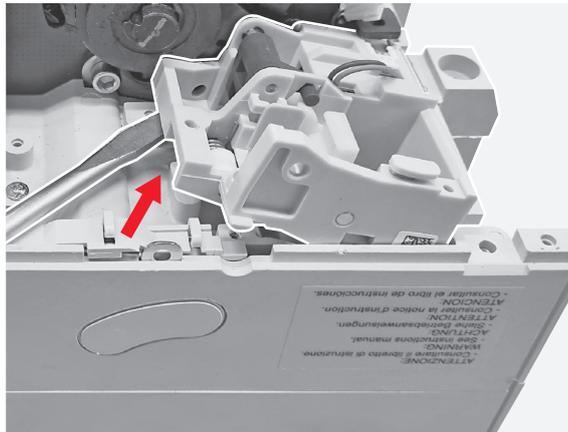
By means of the cross screwdriver unscrew the 3 screws fixing the trip coil group to the circuit breaker main structure.

**42**

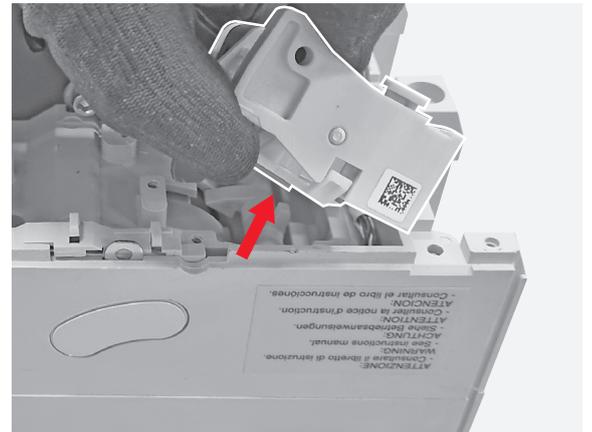
By means of the flat screwdriver unhook the connector from the trip coil group.

**43**

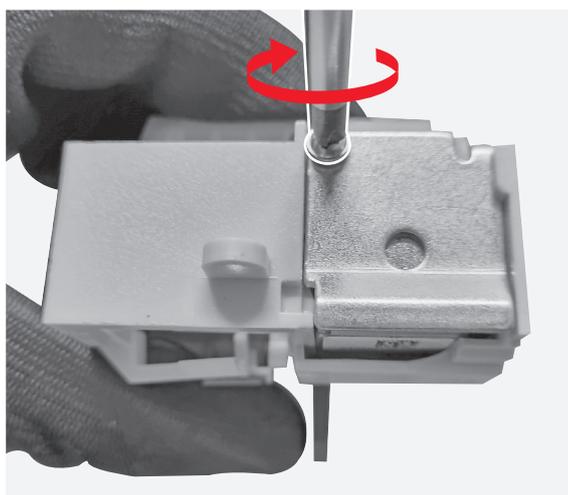
By means of the flat screwdriver lift the trip coil group.

**44**

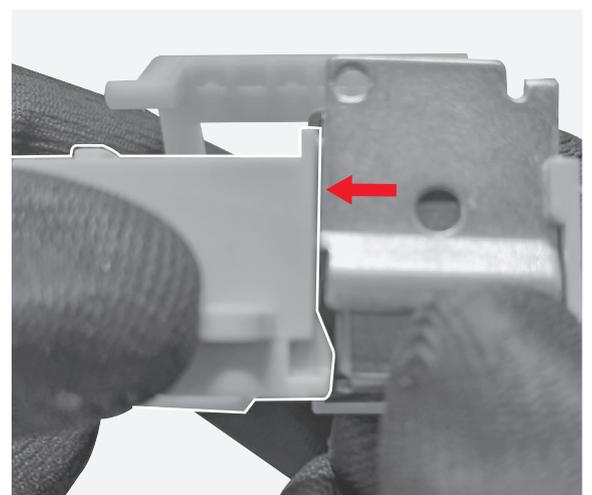
Manually remove the trip coil group.

**45**

By means of the cross screwdriver unscrew the screw fixing the lower plate to the trip coil.

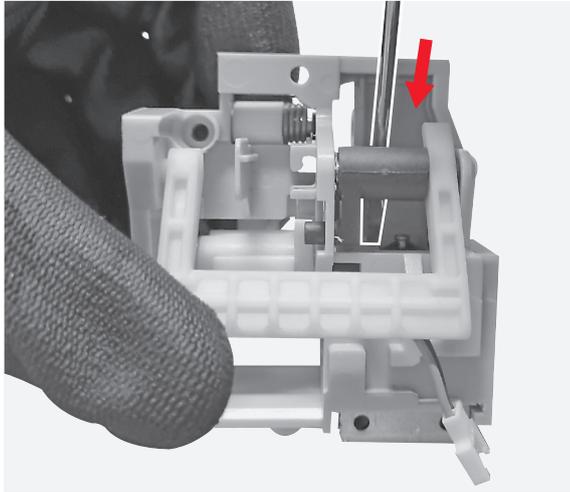
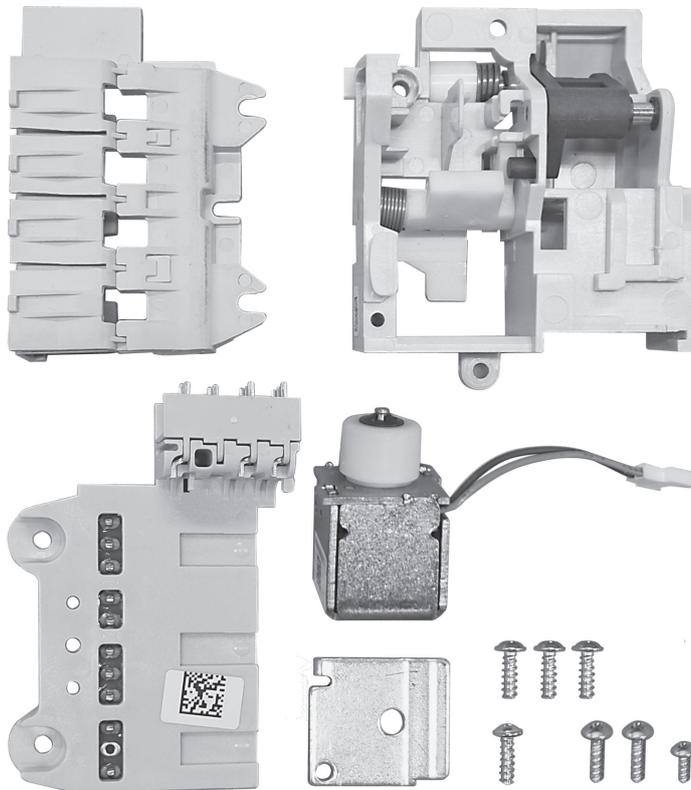
**46**

Manually push the lower plate as indicated by the arrow in order to complete the removal.



47

By means of the flat screwdriver push out from the trip coil group the trip coil.

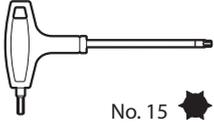
**Disassembled parts**

- 2 + 1 + 3 + 1 screws (Metal)
- 1 PCS cover (Plastic)
- 1 motor PCS support (Plastic, Metal and Electronic components) SEPARATE TREATMENT (Printed circuit board)
- 1 lower plate (Metal)
- 1 trip coil (Plastic, Metal and Magnets) SEPARATE TREATMENT (Magnets)
- 1 trip coil group (Plastic and Metal) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)

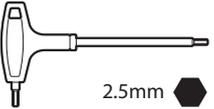
6.5 PHASE 5 – ASSEMBLIES MOUNTED ON CIRCUIT BREAKER RIGHT SIDE

Tools

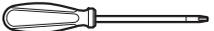
Torx key



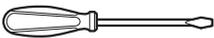
Allen key



Cross screwdriver



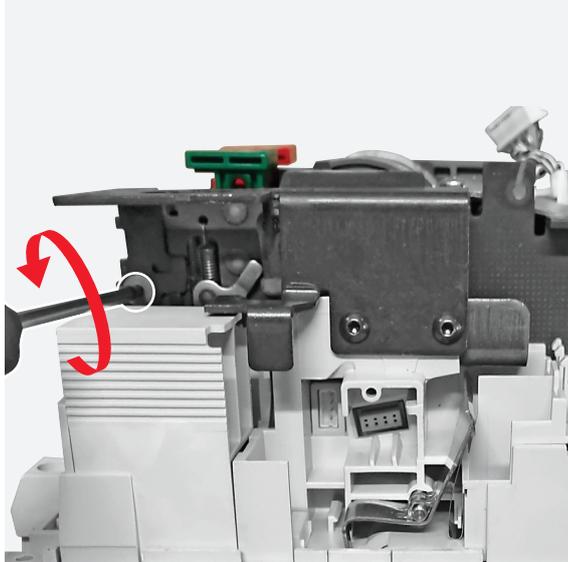
Flat screwdriver



Actions to be performed

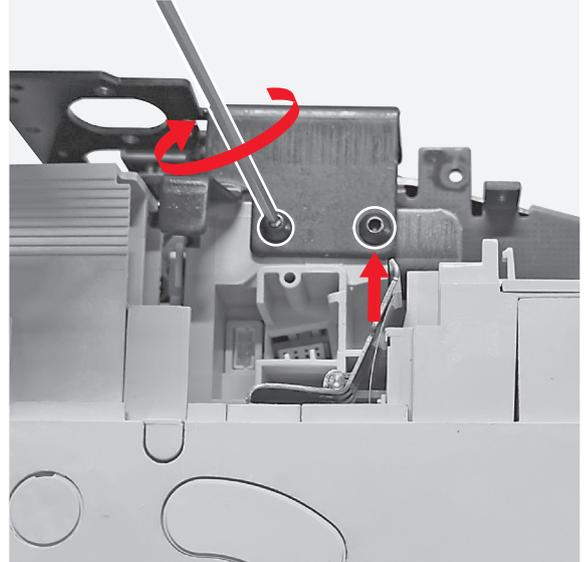
48

By means of the torx key unscrew the screw fixing the support key block over the MID to the operating mechanism.



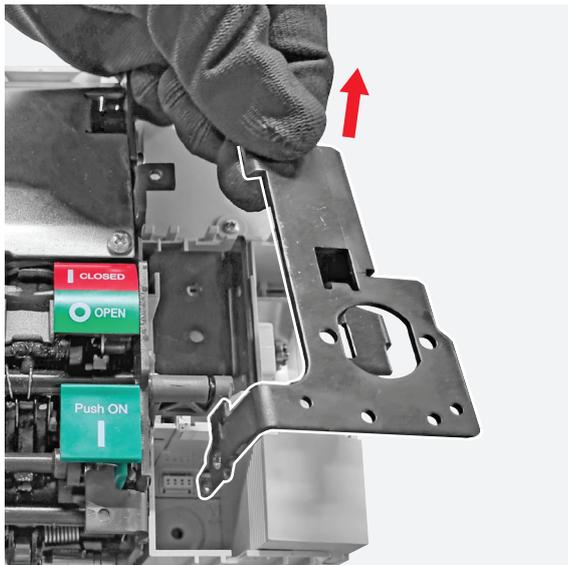
49

By means of the allen key unscrew the 2 screws fixing the support key block over the MID to the operating mechanism.



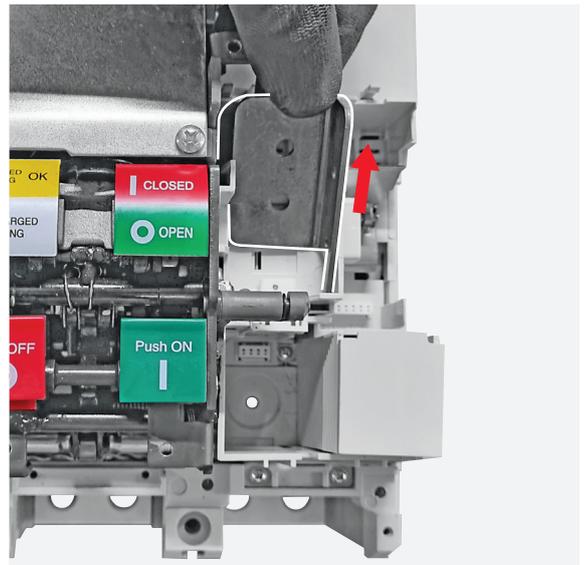
50

Manually remove the support key block.



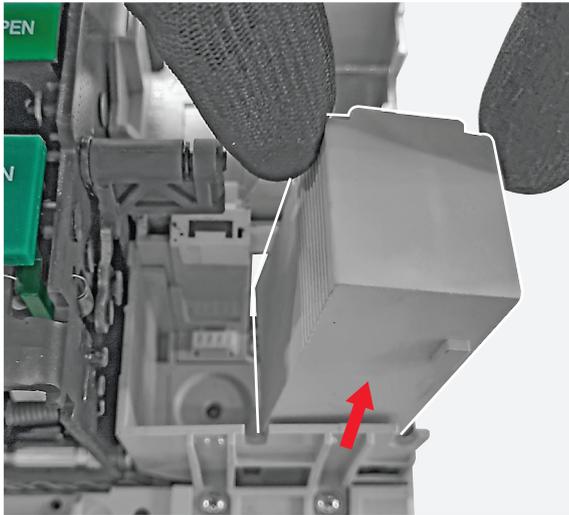
51

Manually remove the key block holder located under the key block holder.

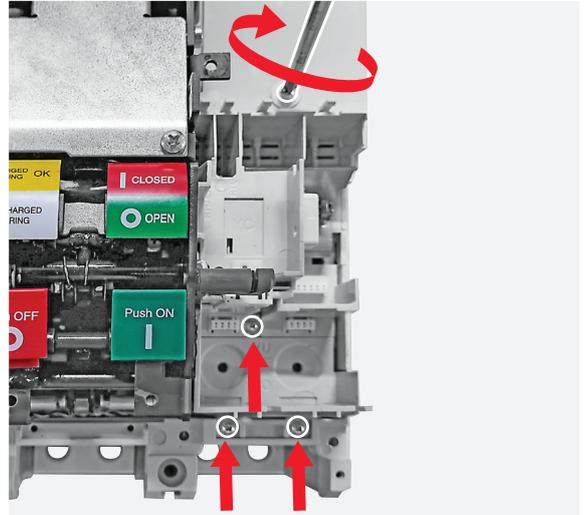


52

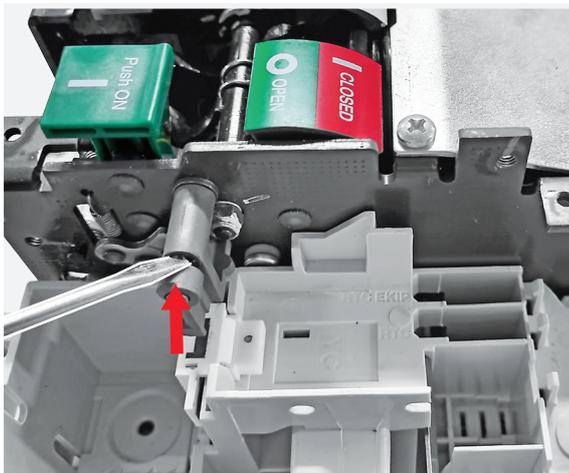
Manually lift and remove the shunt opening release plug.

**53**

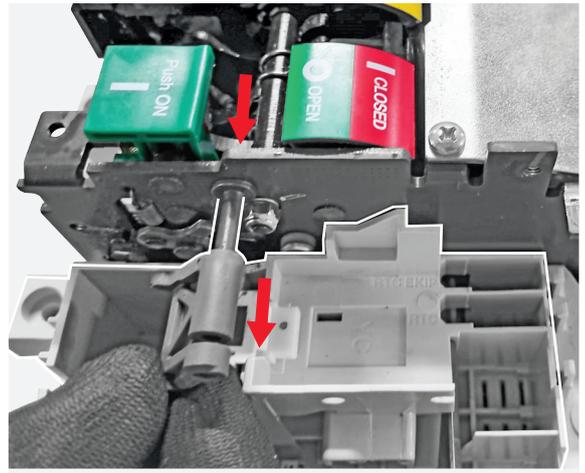
By means of the cross screwdriver unscrew the 4 screws fixing the MID to the circuit breaker main structure.

**54**

By means of the flat screwdriver remove the benzene mounted on the lever present on the right side of the operating mechanism.

**55**

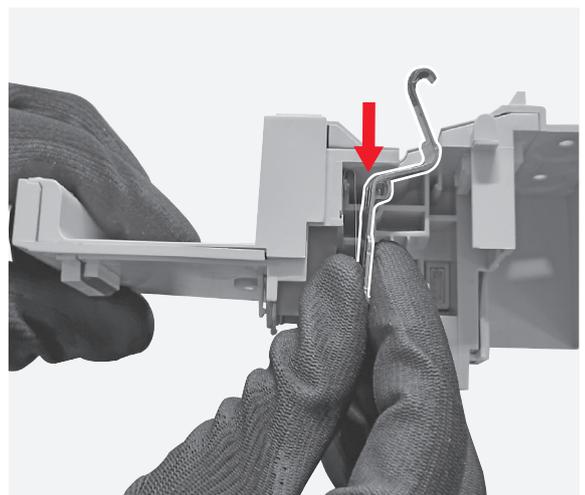
Manually remove the lever pulling it as indicated by the arrow.

**56**

Manually remove the MID.

**57**

Manually remove the auxiliary contacts lever mounted on the MID.

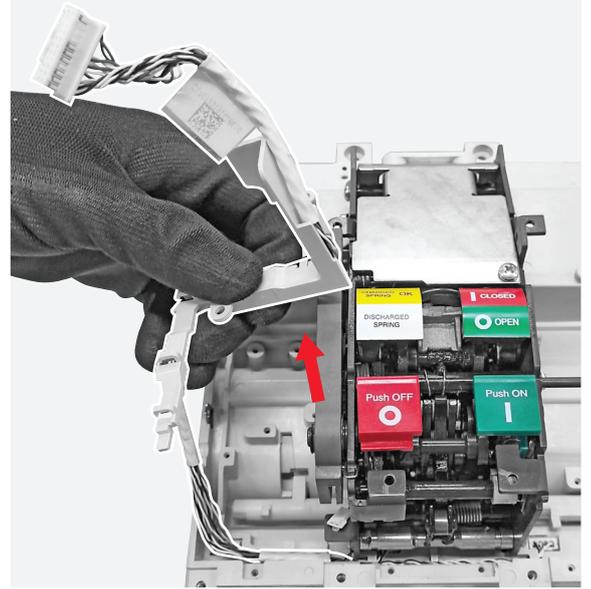
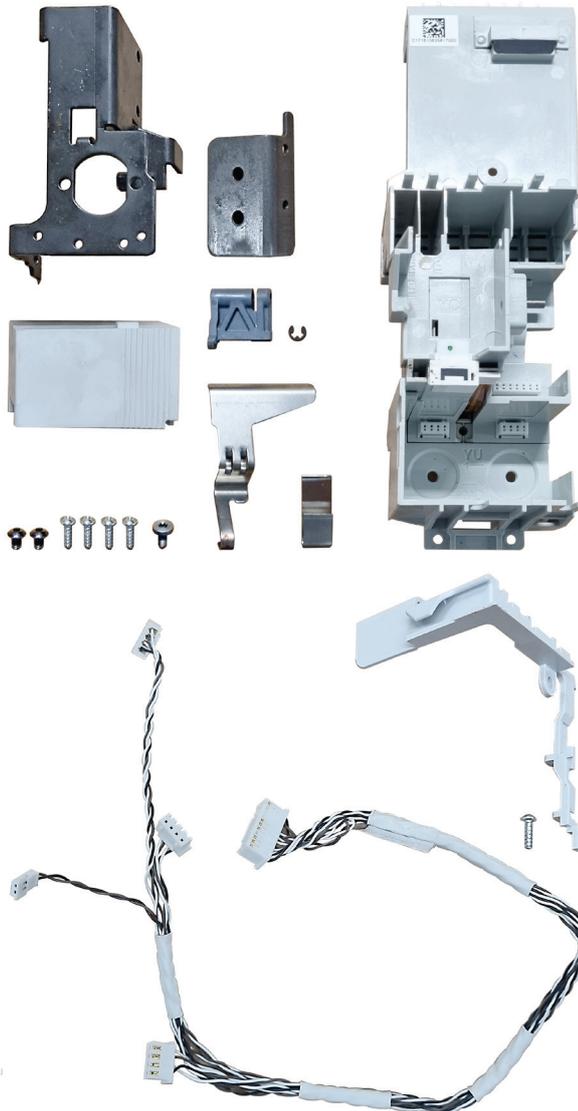


58

By means of the cross screwdriver unscrew the screw fixing the wires cover to the circuit breaker main structure.

**59**

Manually remove the wires cover and the wiring.

**Disassembled parts**

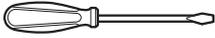
- 1 + 2 + 4 + 1 screws (Metal)
- 1 support key block (Metal)
- 1 key lock holder (Metal)
- 1 shunt opening release plug (Plastic)
- 1 benzing (Metal)
- 1 lever (Plastic)
- 1 MID (Plastic, Metal and Electronic components) SEPARATE TREATMENT (Printed circuit board)
- 1 auxiliary contacts lever (Metal)
- 1 wires cover (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 wiring (Plastic and Metal) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)

6.6 PHASE 6 – OPERATING MECHANISM

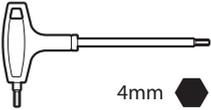
Actions to be performed

Tools

Flat screwdriver



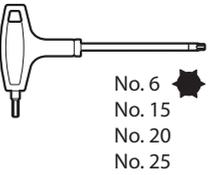
Allen key



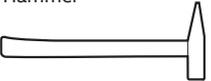
Pliers



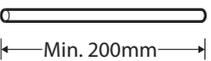
Torx key



Hammer

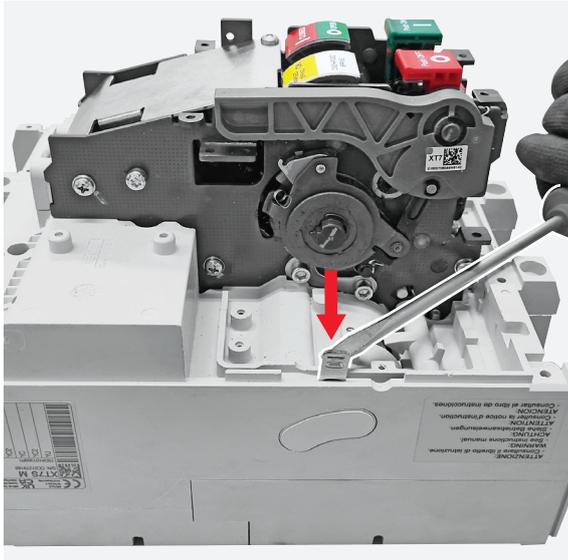


Rod Ø 5mm



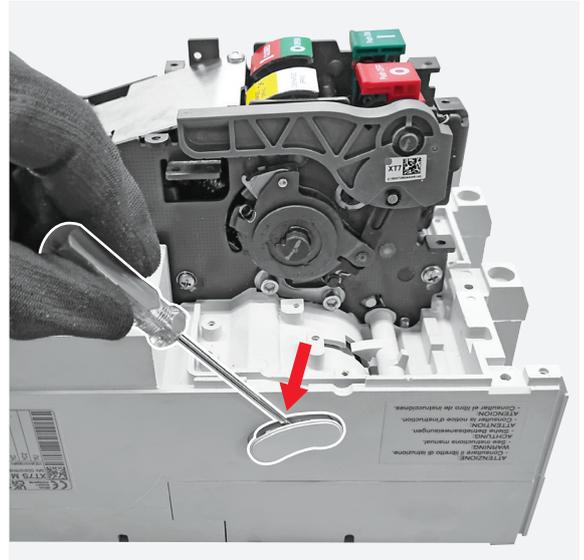
60

By means of the flat screwdriver lift the lever mounted on the left side of the circuit breaker and remove it.



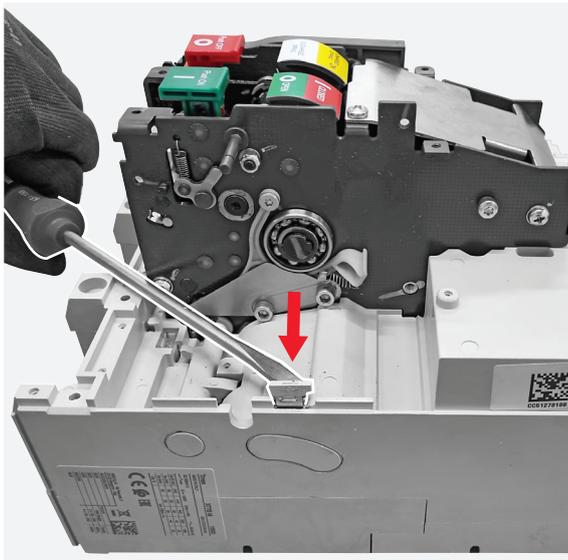
61

By means of the flat screwdriver remove the cover cap on the left side of the circuit breaker.



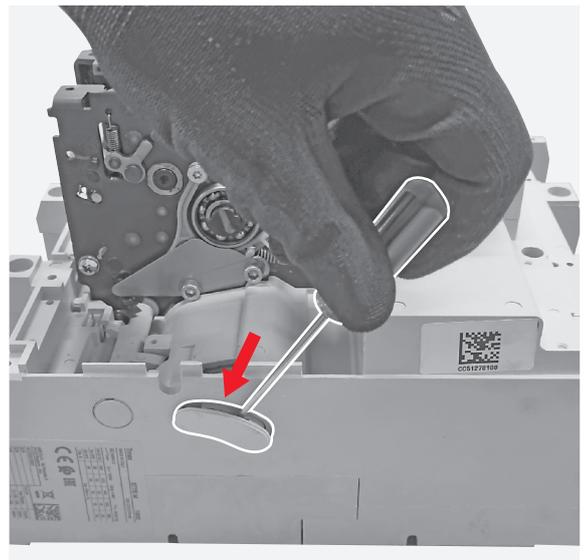
62

By means of the flat screwdriver lift the lever mounted on the right side of the circuit breaker and remove it.



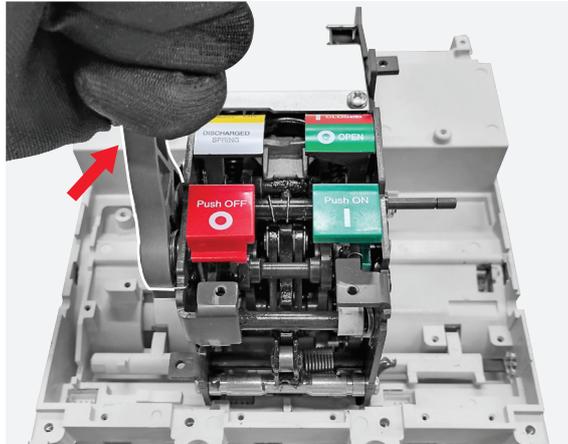
63

By means of the flat screwdriver remove the cover cap on the right side of the circuit breaker.

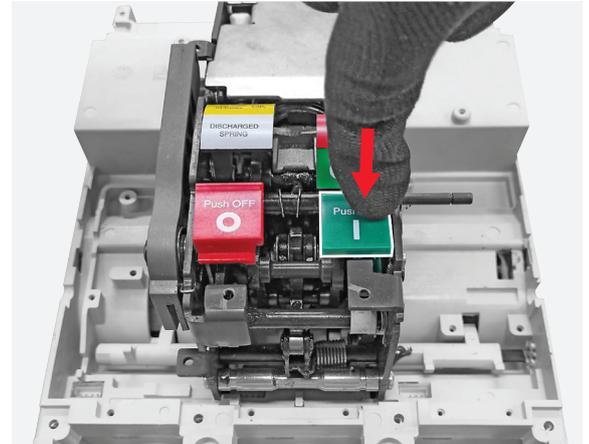


64

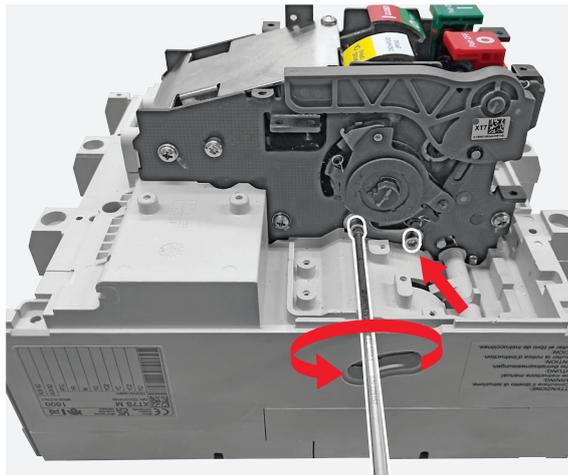
Manually charge circuit breaker springs.

**65**

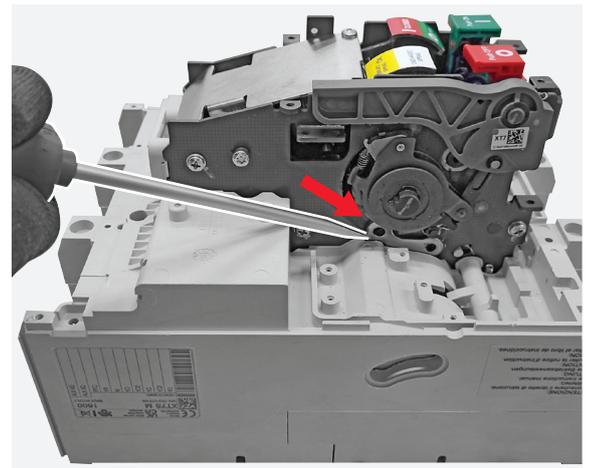
Close the circuit breaker pushing the close button.

**66**

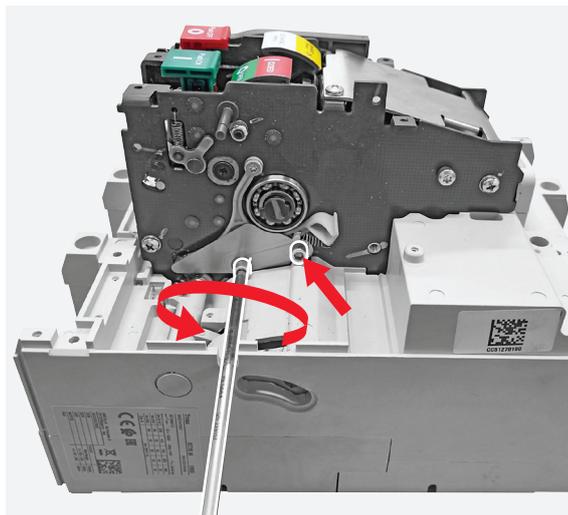
By means of the allen key unscrew the 2 screws located on the left side of the operating mechanism.

**67**

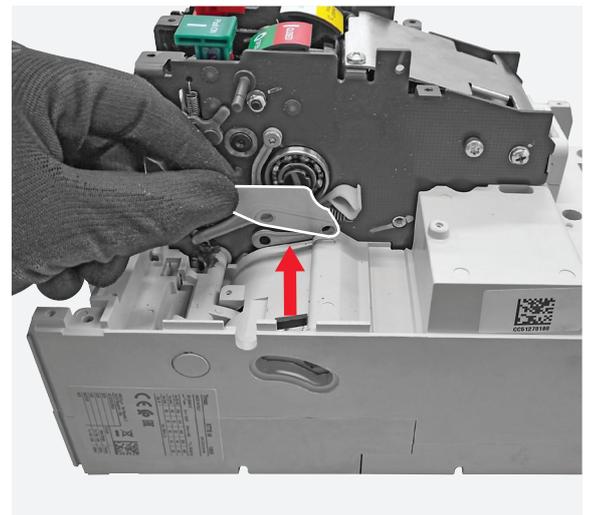
By means of the flat screwdriver push the shaft support as indicated by the arrow.

**68**

By means of the allen key unscrew the 2 screws located on the right side of the operating mechanism.

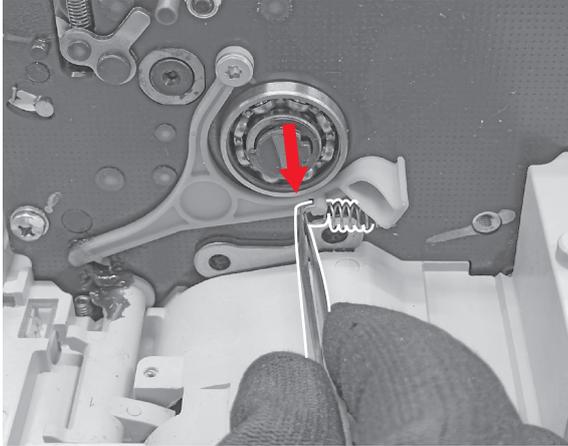
**69**

Manually remove the plate located in the place where the 2 screws had been unscrewed at step before.

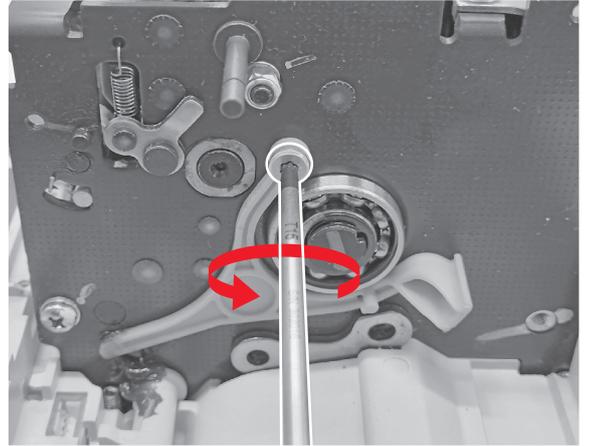


70

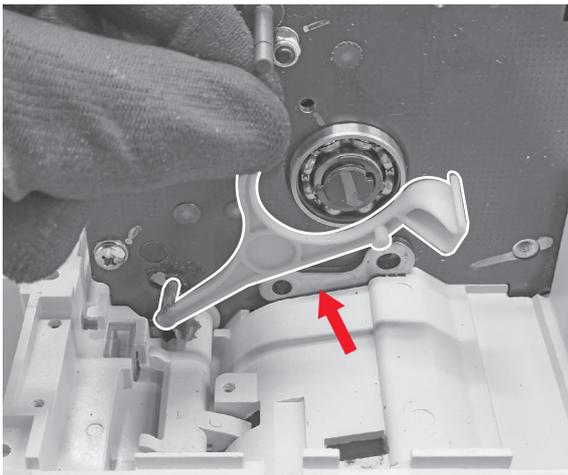
By means of the pliers remove the spring.

**71**

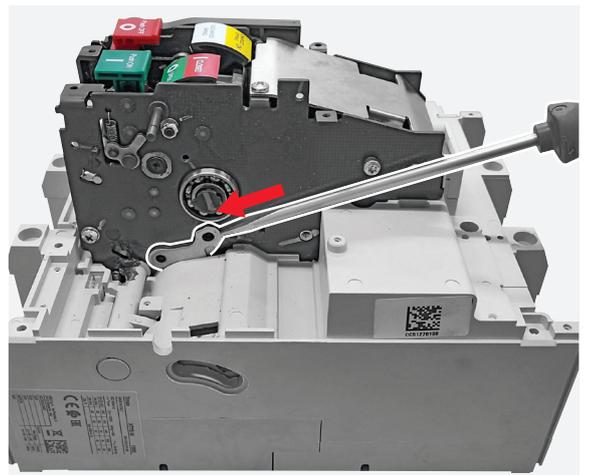
By means of the torx key (size 15) unscrew the screw fixing the RTC lever to the operating mechanism.

**72**

Manually remove the RTC lever.

**73**

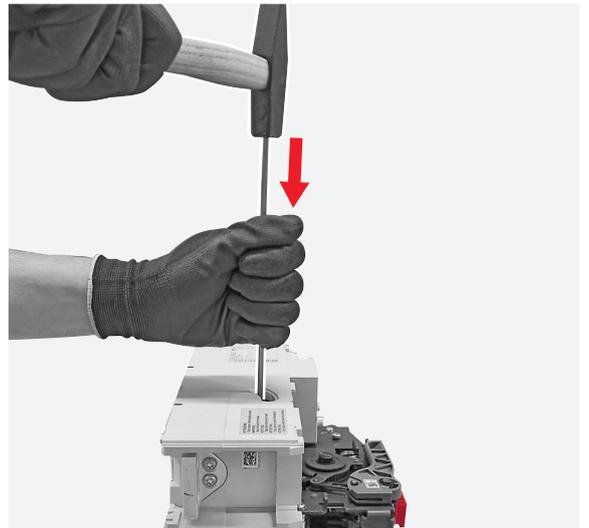
By means of the flat screwdriver push the shaft support as indicated by the arrow.

**74**

Put the circuit breaker with the left side up and insert the rod in the hole left by the cover cap.

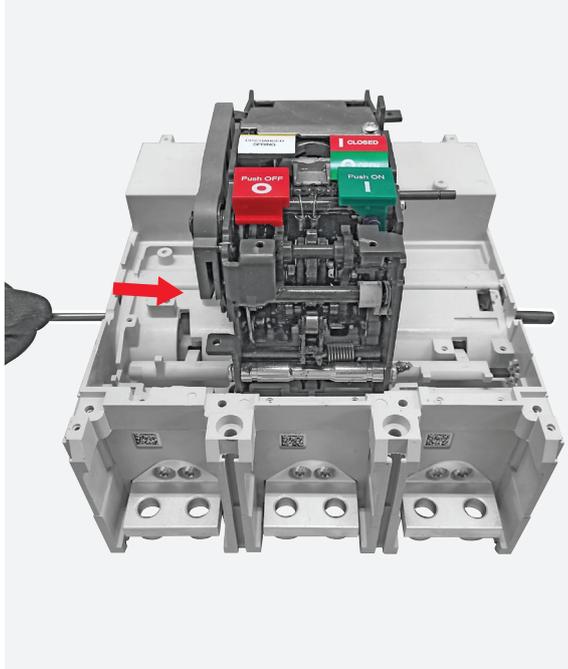
**75**

Push down the rod using the hammer.

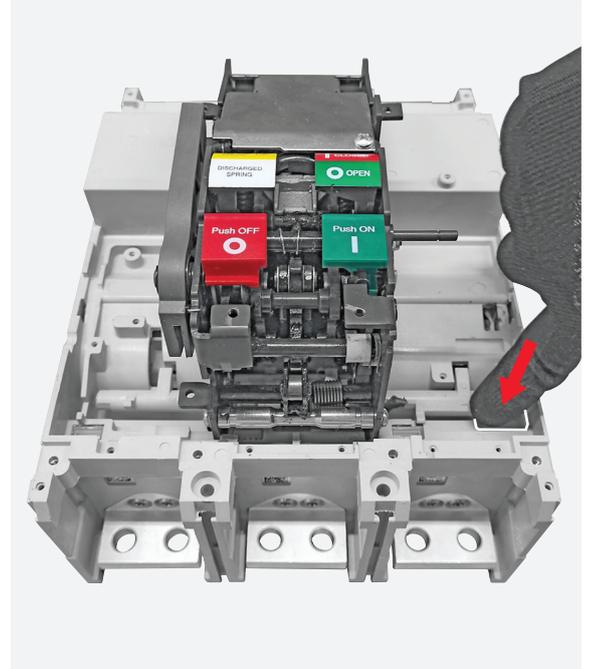


76

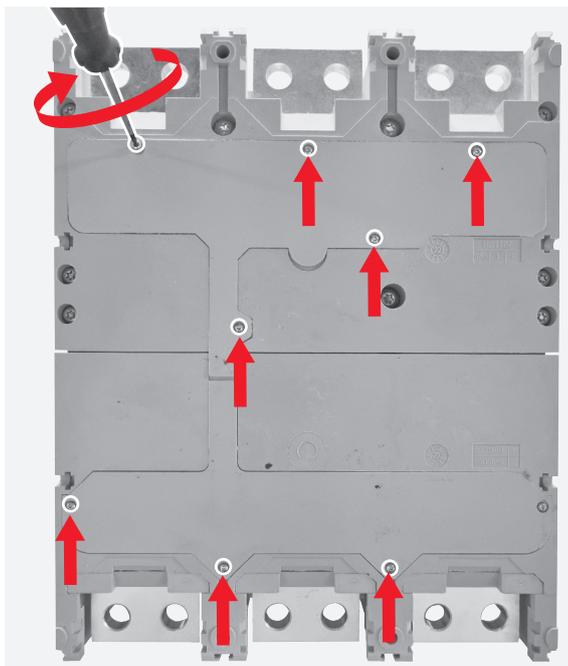
Put the circuit breaker with front up and push the rod as indicated by the arrow until the pin comes out from the hole left by the cover cap on the right side of the circuit breaker and after remove the rod.

**77**

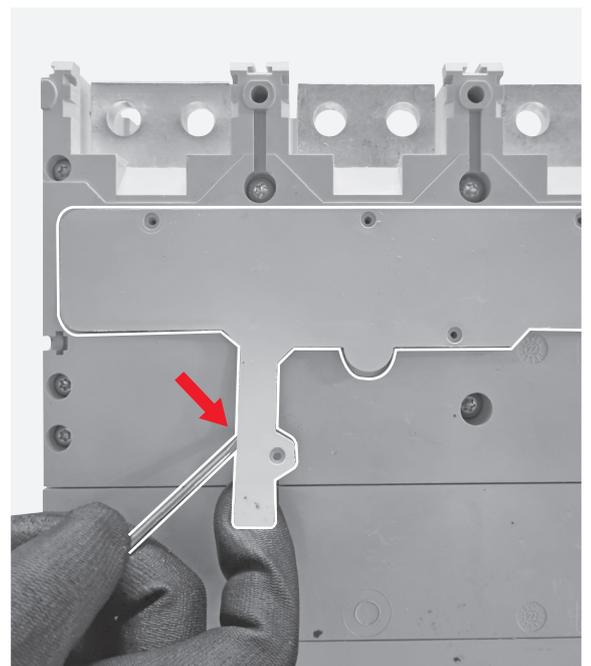
Manually push the lever mounted on the bottom right part of the circuit breaker main structure.

**78**

By means of the torx key (size 6) unscrew the 9 screws fixing the 2 rear plates mounted on the back part of the circuit breaker.

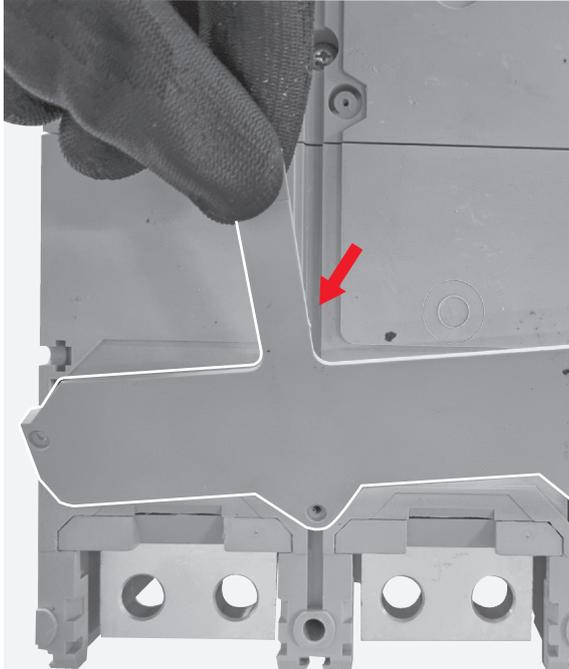
**79**

By means of the flat screwdriver remove the rear plate mounted on the upper part of the circuit breaker.

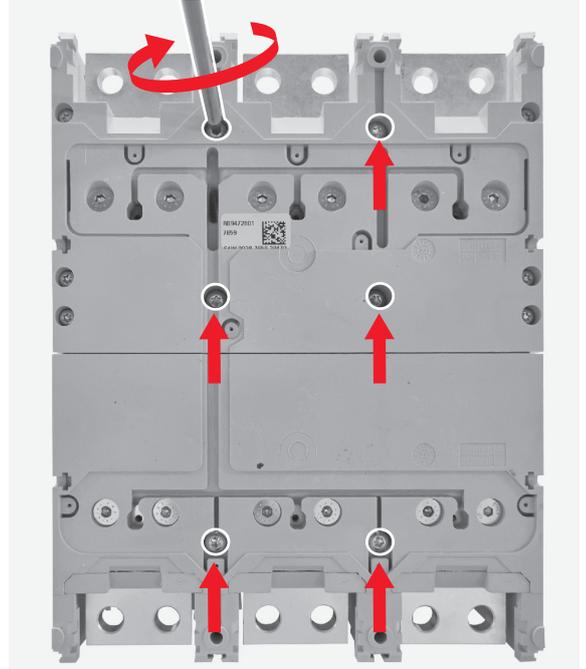


80

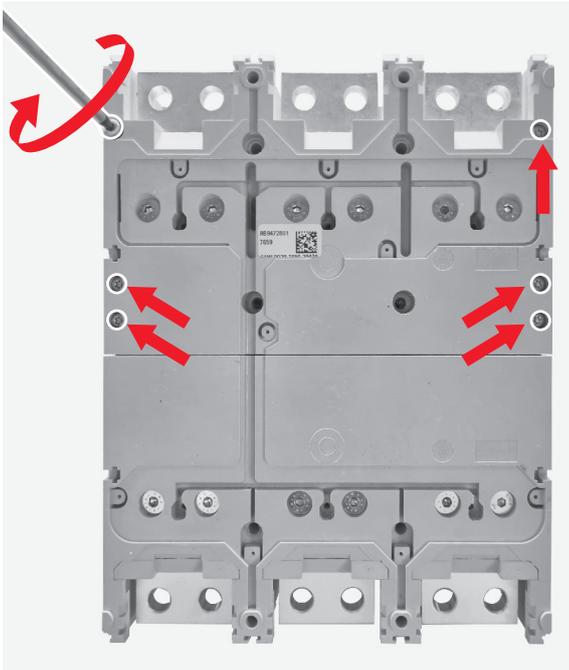
Manually remove the rear plate mounted on the lower part of the circuit breaker.

**81**

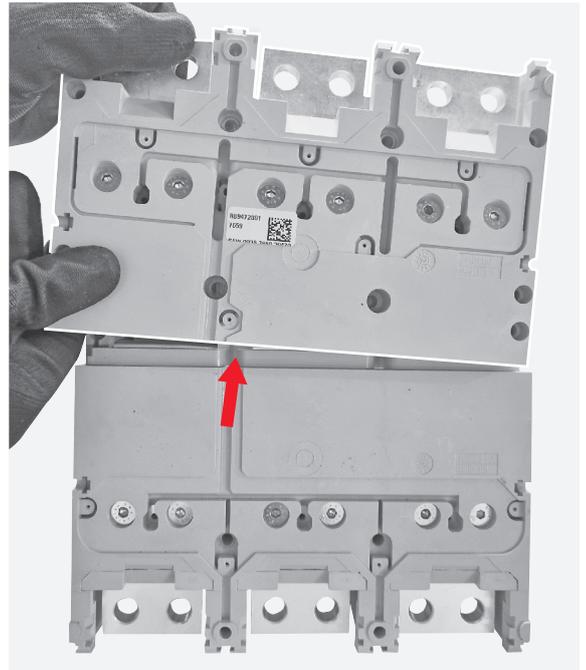
By means of the torx key (size 25) unscrew the 6 screws located in the back part of the circuit breaker.

**82**

By means of the torx key (size 20) unscrew the 6 screws located in the back part of the circuit breaker.

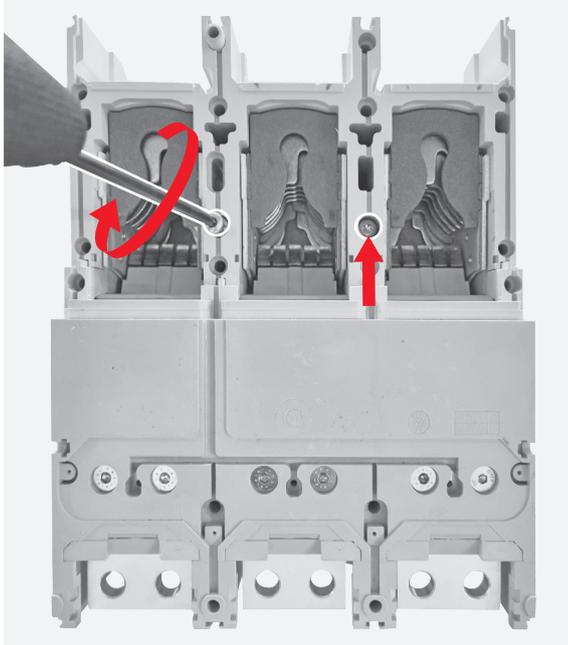
**83**

Manually remove the upper case assembly.

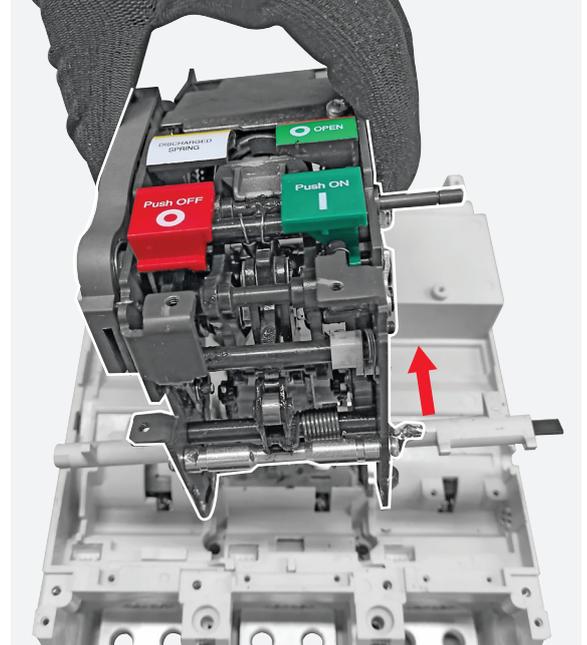


84

By means of the torx key (size 25) unscrew the 2 screws located in the back part of the circuit breaker.

**85**

Manually lift the operating mechanism and remove it from circuit breaker main structure-

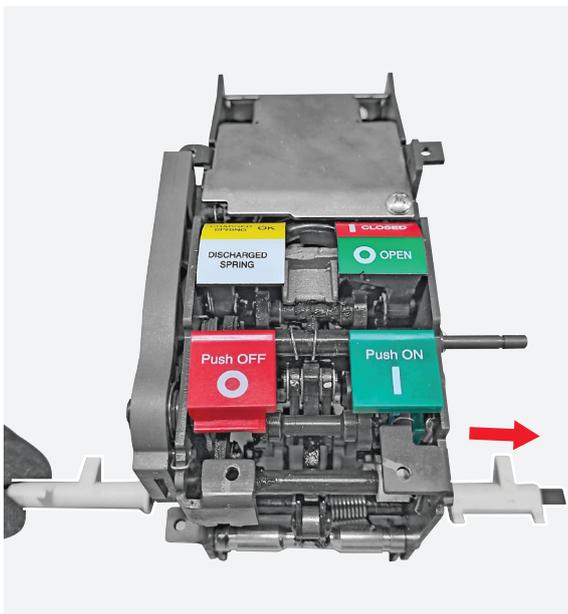


Operating mechanism contains springs: their removal constitutes a potential hazard if not performed in the proper way and using dedicated tools.

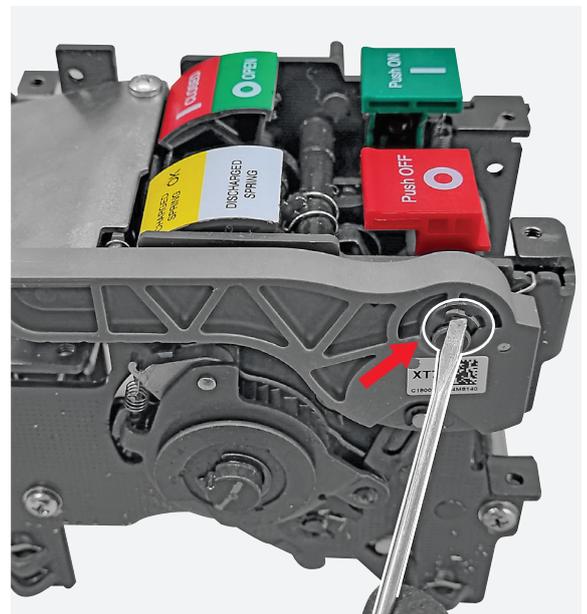
Based on this ABB indication is not to remove them from the operating mechanism and to manage the assembly with the maximum level of attention during disassembly and dismantle phases.

86

Manually remove the 2 unlocking shafts mounted on the pin of the operating mechanism.

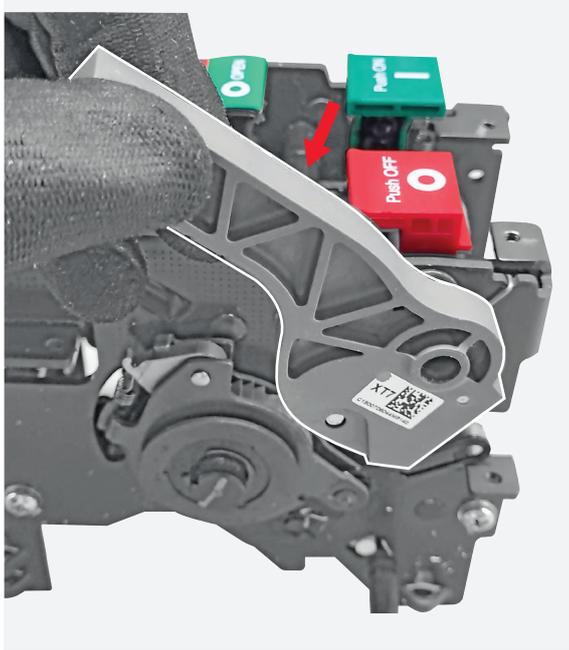
**87**

By means of the flat screwdriver unhook the benzing fixing the springs charging lever to the operating mechanism.



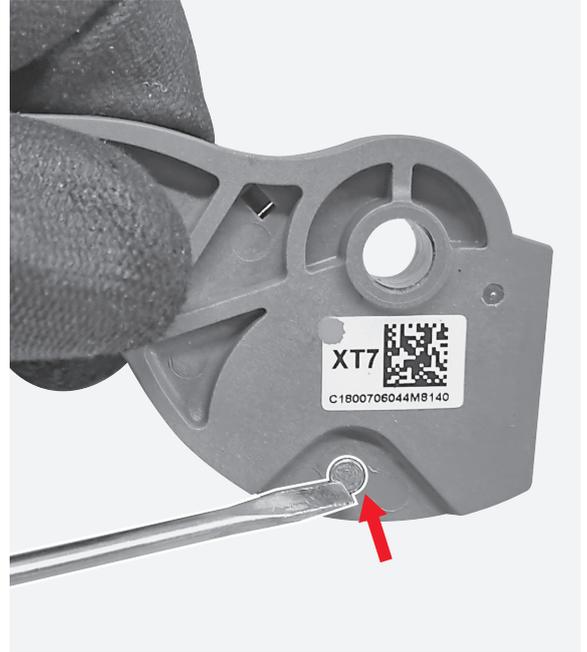
88

Manually remove the springs charging lever.



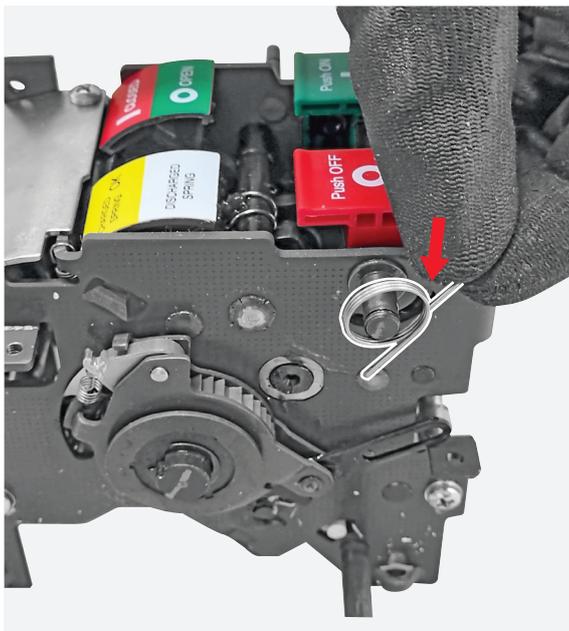
89

By means of the flat screwdriver remove the pin mounted on the springs charging lever and the related benzing.



90

Manually remove the spring located on the operating mechanism.



Disassembled parts

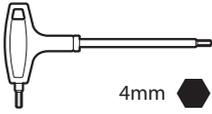


- 1 lever (Metal)
- 1 lever (Plastic and Metal)
- 2 cover caps (Plastic)
- 4 + 1 + 9 + 6 + 6 + 2 screws (Metal)
- 1 plate (Metal)
- 1 + 1 springs (Metal)
- 1 RTC lever (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 + 1 pins (Metal)
- 2 rear plates (Plastic)
- 1 upper case assembly (Plastic and Metal) *
- 1 operating mechanism (Plastic and Metal) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 2 unlocking shafts (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 springs charging lever (Plastic and Metal) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 + 1 benzings (Metal)

*Upper case assembly will be furtherly disassembled (see phase 6.7).

6.7 PHASE 7 – UPPER CASE ASSEMBLY AND UPPER FIXED CONTACTS**Tools**

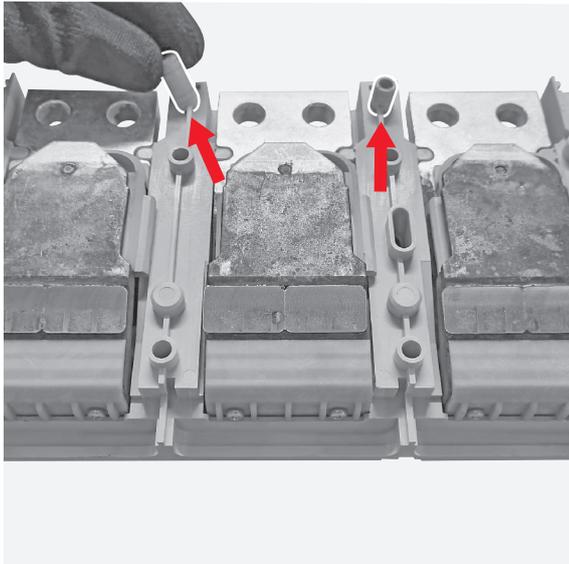
Allen key

4mm 

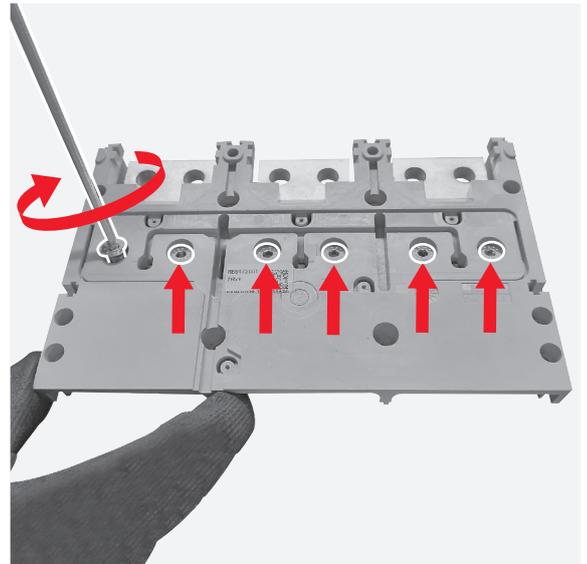
Cross screwdriver

**Actions to be performed****91**

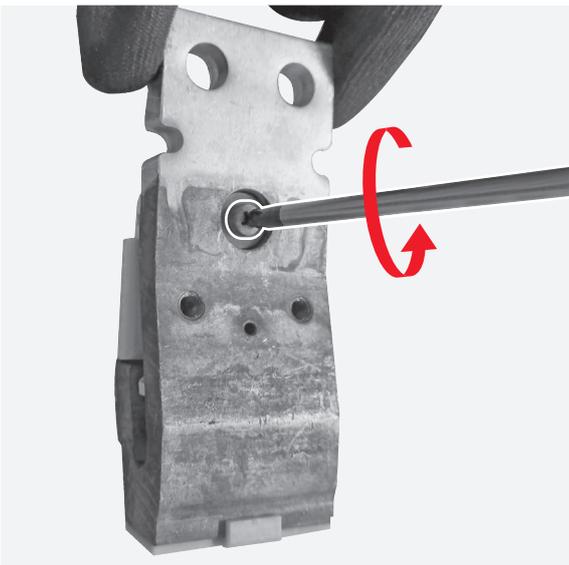
Manually remove the 2 protections located in the upper part of the upper case assembly.

**92**

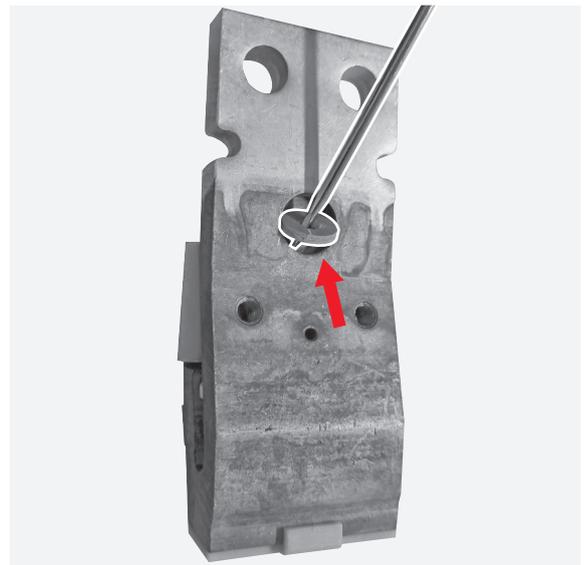
By means of the allen key unscrew the 6 screws fixing the fixed contacts and make them fall down by gravity.

**93**

By means of the cross screwdriver unscrew the screw present on the upper fixed contact.

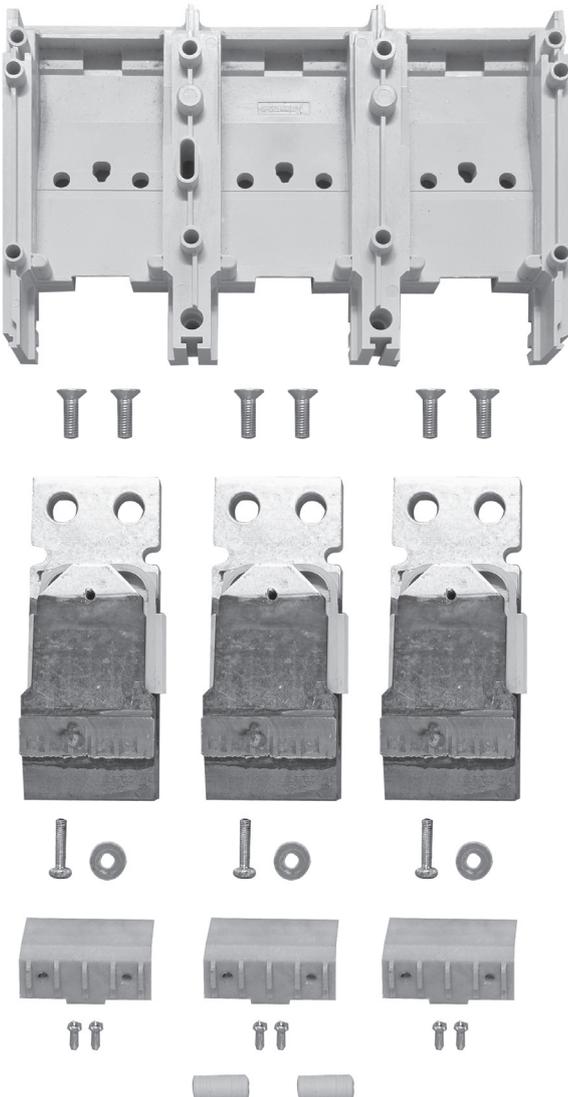
**94**

By means of the cross screwdriver remove the washer from the upper fixed contact.



95

By means of the cross screwdriver unscrew the 2 screws fixing the fixed contact protection to the upper fixed contact and manually complete the removal operation.

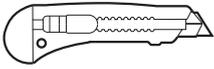
**Disassembled parts**

- 2 protections (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 6 + 3 + 6 screws (Metal)
- 3 washers (GPO-3)
- 3 fixed contacts protections (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 3 fixed contacts (Plastic and Metal)
- 1 upper case (Plastic)

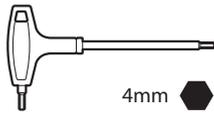
6.8 PHASE 8 – LOWER CASE ASSEMBLY, MOVING CONTACTS ASSEMBLY AND SENSORS

Tools

Cutter

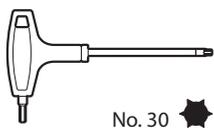


Allen key



4mm

Torx key



No. 30

Flat screwdriver



Actions to be performed

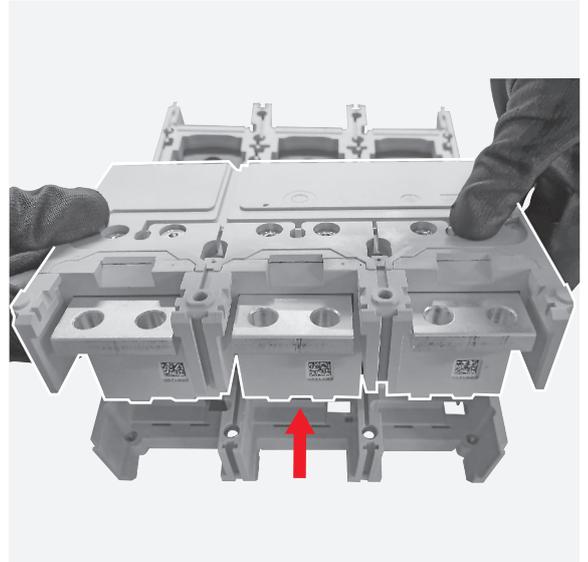
96

By means of the cutter start removing the label located on the side of the lower case assembly and manually complete the removal.



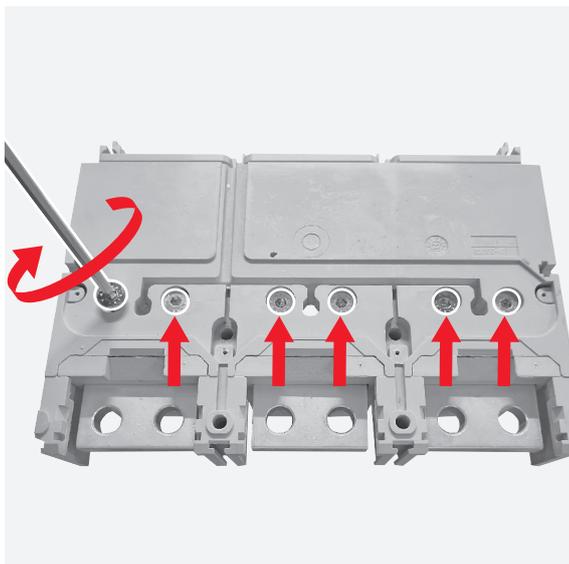
97

Manually lift the lower case assembly and complete the removal.



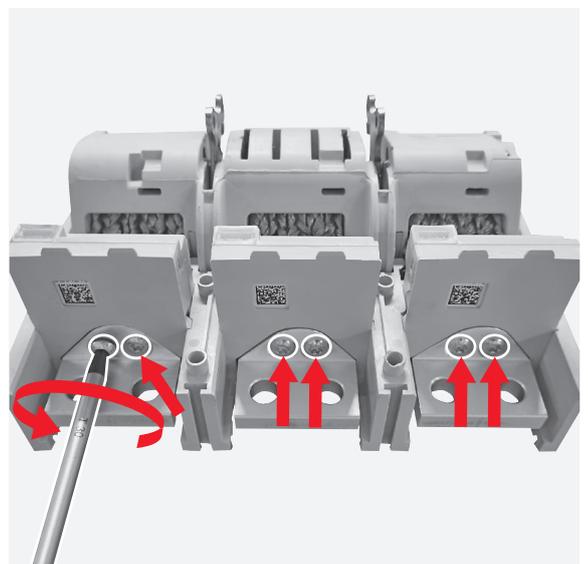
98

By means of the allen key unscrew the 6 screws located in the back part of the lower case assembly.



99

By means of the torx key unscrew the 6 screws fixing the fixed contacts to the lower case assembly and after manually complete the removal operation.

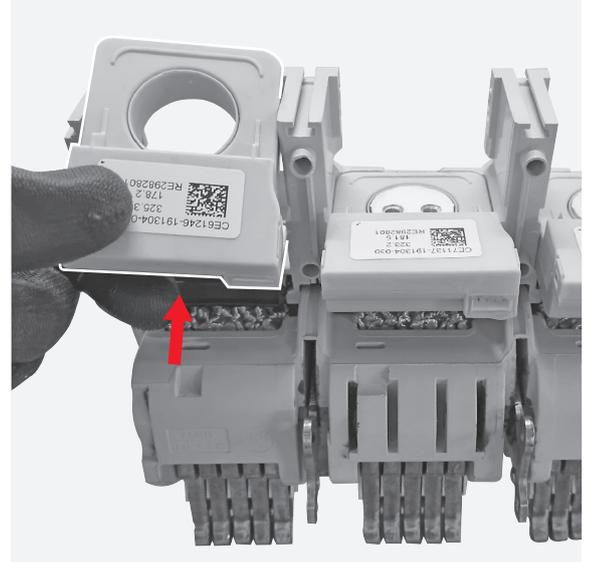


100

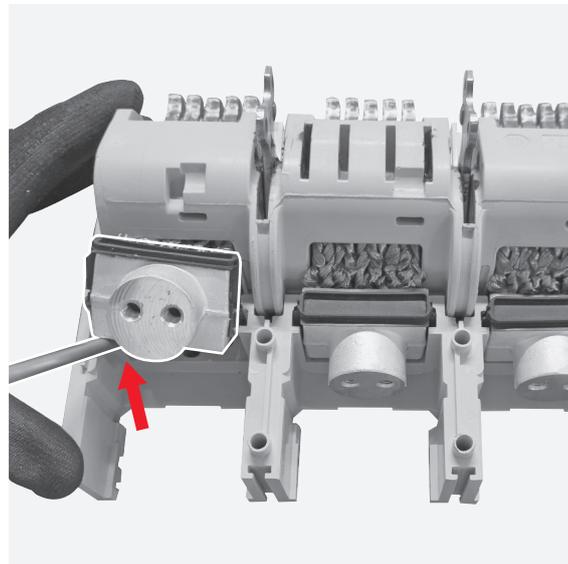
Manually push the cover mounted below the sensors as indicated by the arrow.

**101**

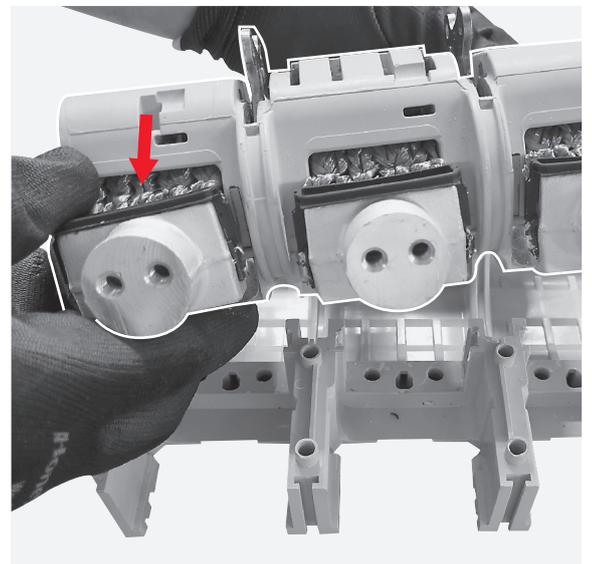
Manually remove the sensors.

**102**

By means of the flat screwdriver lift the moving contacts assembly until it's unhooked from the lower case.

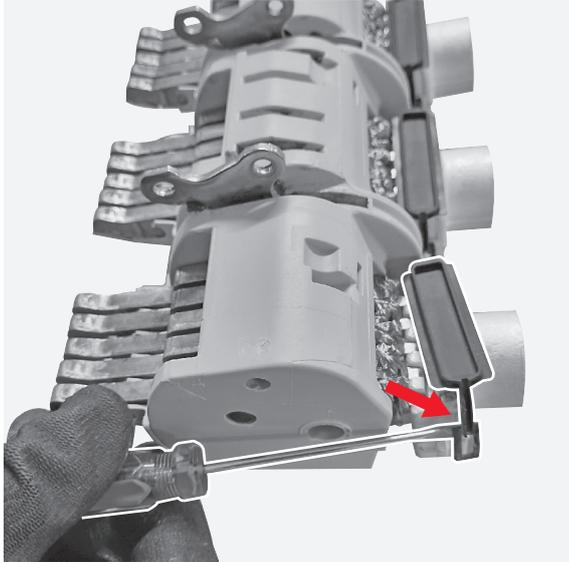
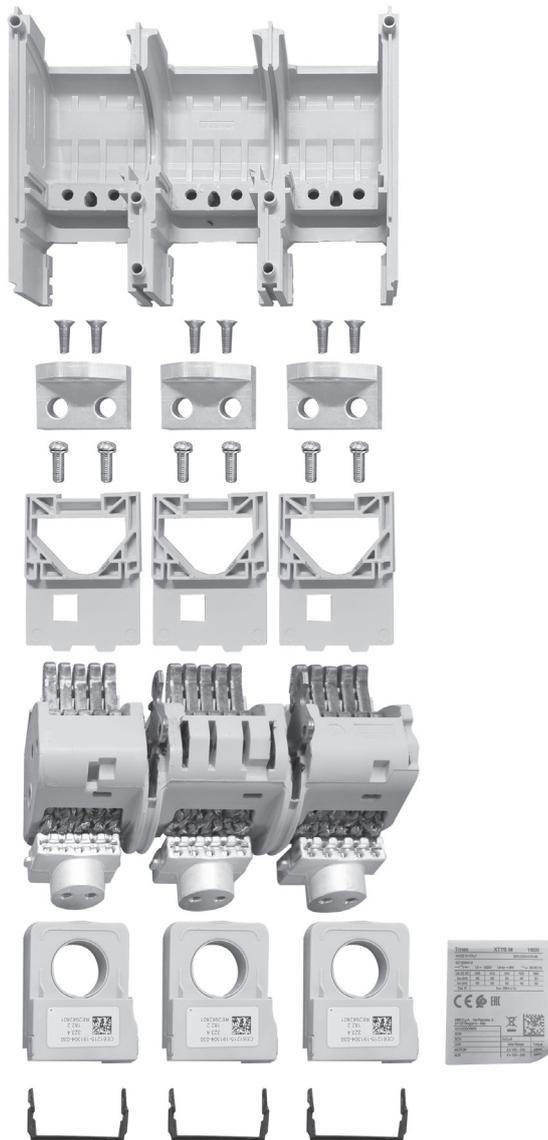
**103**

Manually remove the moving contacts assembly.



104

By means of the flat screwdriver unhook from both sides the insulation protections and after manually complete the removal.

**Disassembled parts**

- 1 label (Adhesive paper)
- 6 screws (Metal)
- 6 screws and related washers (Metal)
- 3 fixed contacts (Metal)
- 3 covers (Plastic) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 3 sensors (Plastic and Mixture) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 moving contacts assembly (Plastic and Metal)
- 3 insulation protections (Thermoplastic rubber) SEPARATE TREATMENT (Thermoplastics containing brominated flame retardants)
- 1 lower case (Plastic)

6.9 PHASE 9 – ARCHING CHAMBERS AND CIRCUIT BREAKER COVER

Tools

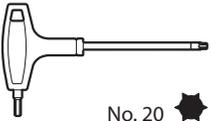
Cross screwdriver



Cutter

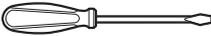


Torx key



No. 20

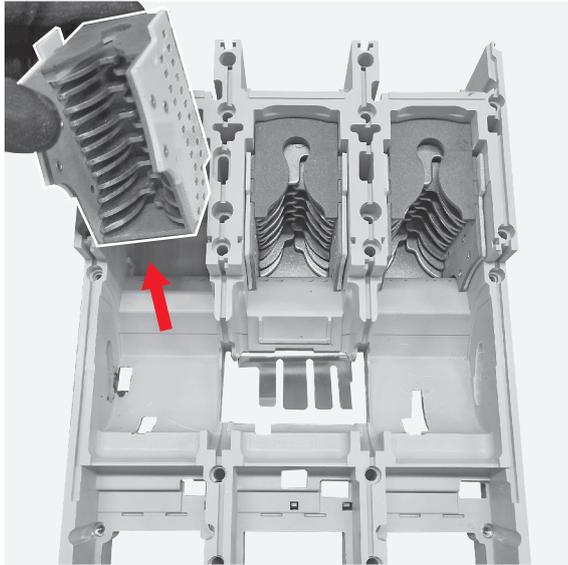
Flat screwdriver



Actions to be performed

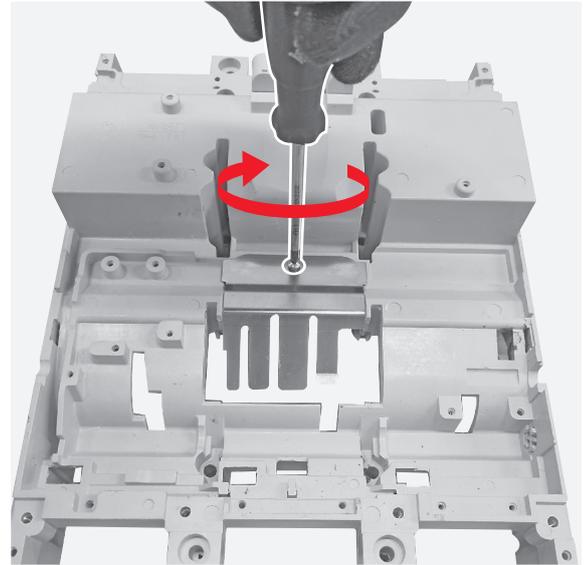
105

Manually remove the arching chambers.



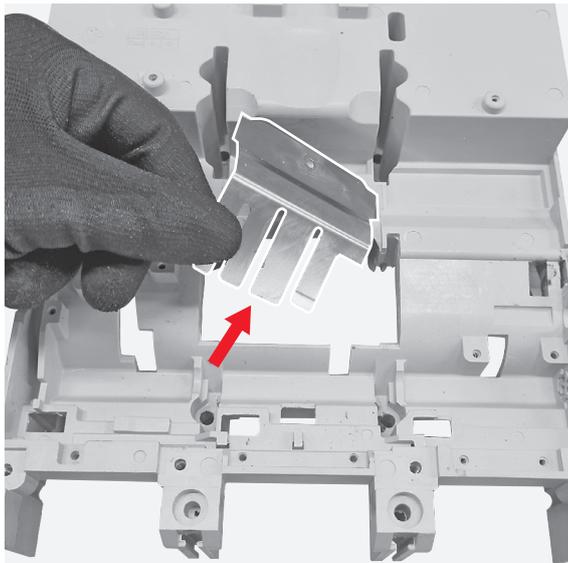
106

By means of the cross screwdriver unscrew the screw fixing the metallic command protection to the circuit breaker cover.



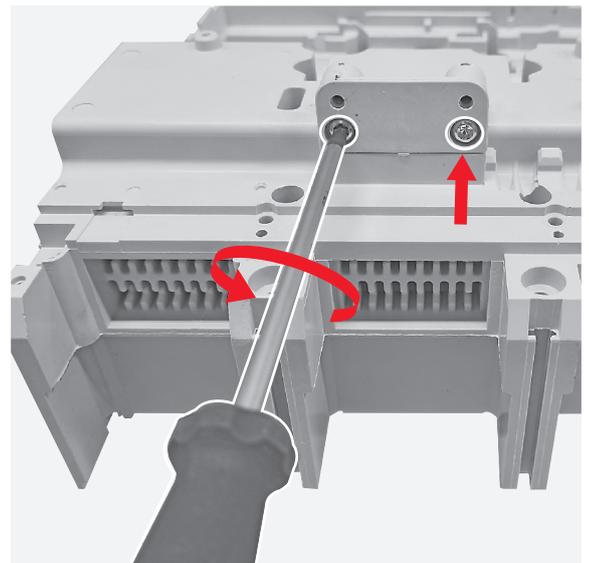
107

Manually complete the removal of the command protection.



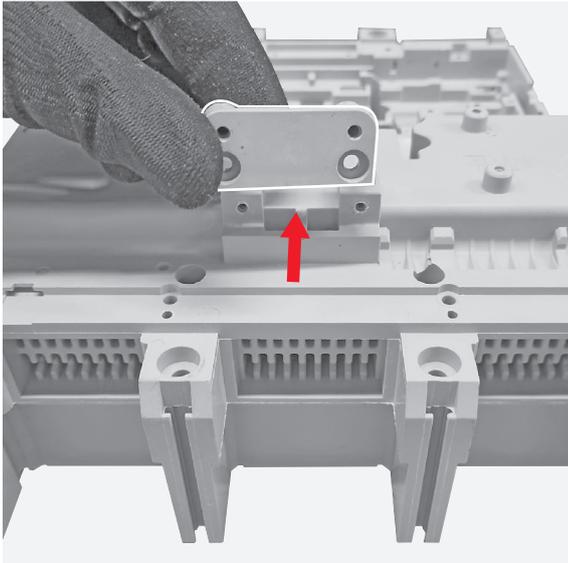
108

By means of the torx key unscrew the 2 screws fixing the cover plug to the circuit breaker cover.

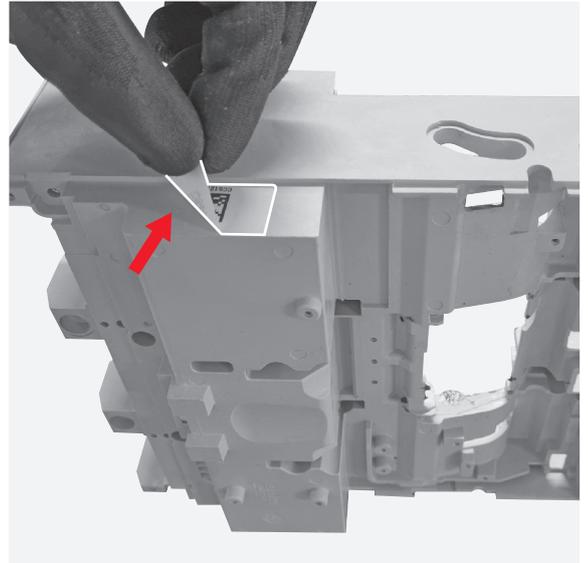


109

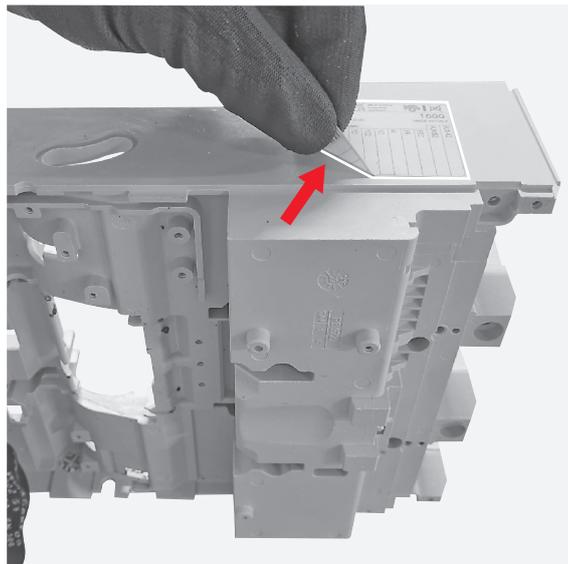
Manually remove the cover plug.

**110**

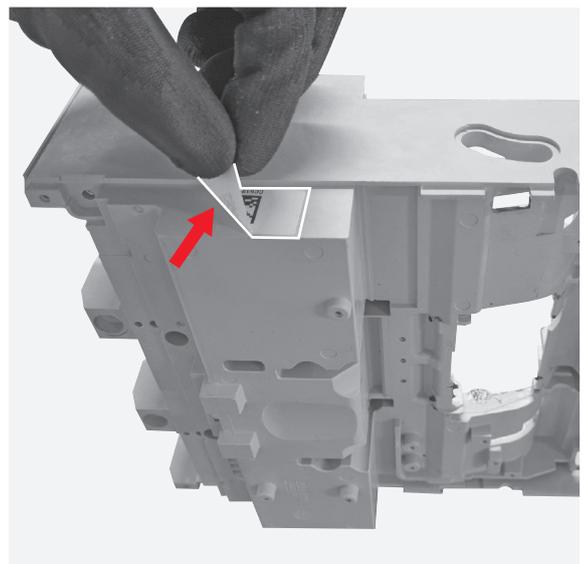
By means the cutter lift the label located on the side of the circuit breaker cover and manually complete the removal.

**111**

By means the cutter lift the label located on the side of the circuit breaker cover and manually complete the removal.

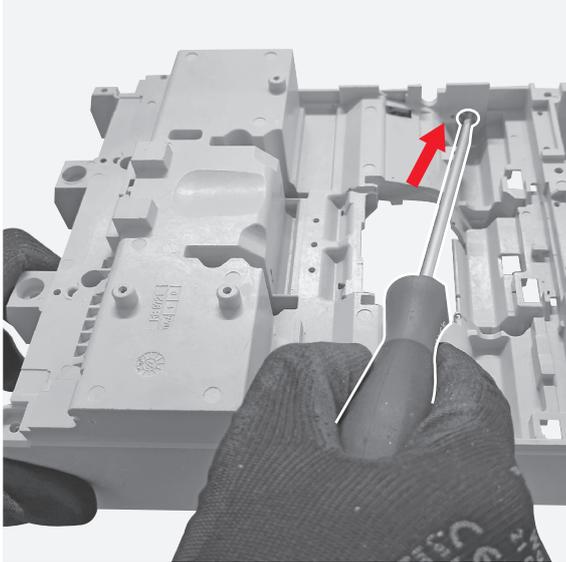
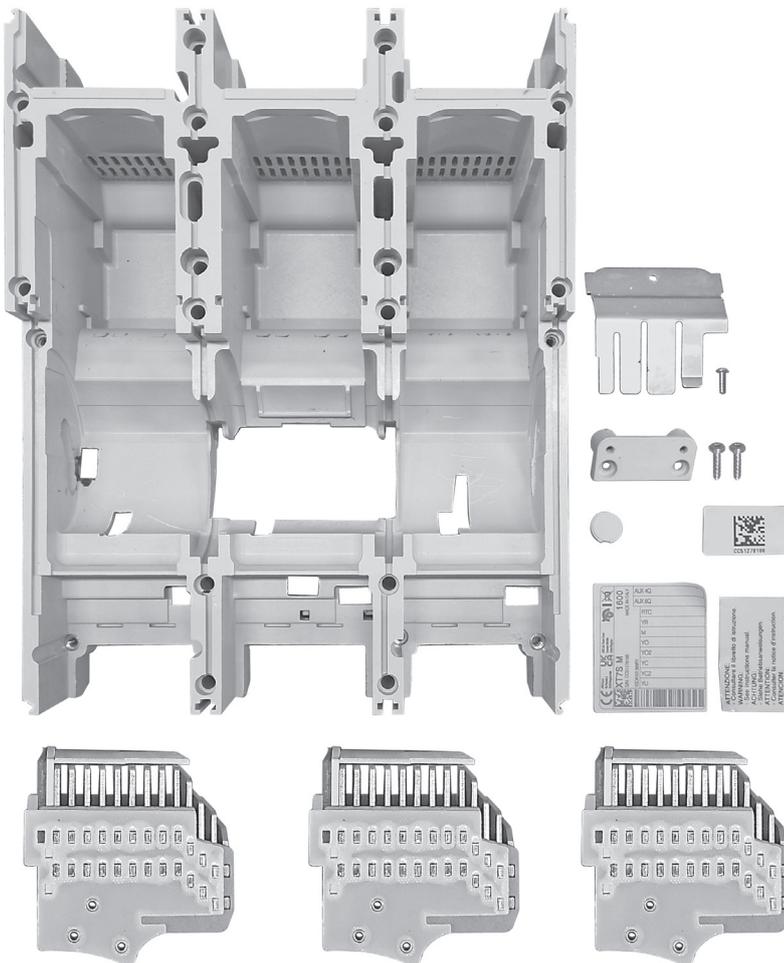
**112**

By means the cutter lift the label located on the side of the circuit breaker cover and manually complete the removal.



113

By means of the flat screwdriver remove the plug from the circuit breaker cover.

**Disassembled parts**

- 3 arching chambers (Plastic and Metal)
- 1 + 2 screws (Metal)
- 1 metallic command protection (Metal)
- 1 cover plug (Plastic)
- 3 labels (Adhesive paper)
- 1 plug (Plastic) separate?
- 1 circuit breaker cover (Plastic)

7. ENERGY CONSUMPTION FOR CIRCUIT BREAKERS DISASSEMBLY

Since all disassembly operations illustrated in this document are manual, the CO₂ equivalent emissions can be considered null/negligible.



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