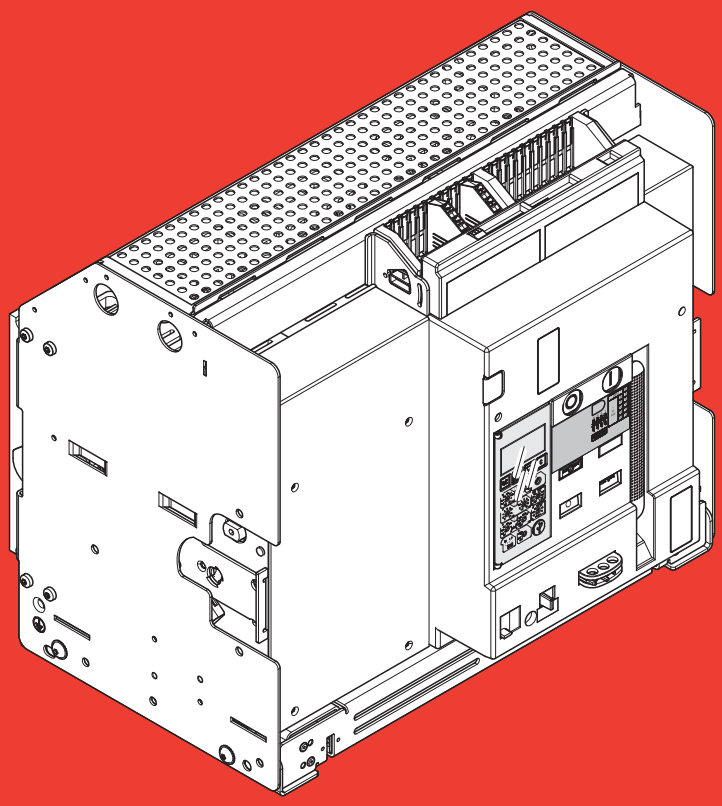
DMX-SP 4000
Maintenance guide



October 20

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DMX-SP 4000 - Maintenance guide

1. Warning

In order to plan and schedule the periodical maintenance is suggested the use of mechanical operation counter

Periodical checks and maintenance object of this guide is intended to be carried out by trained and qualified personnel

READ THIS DOCUMENT AND THE INSTRUCTION MANUAL CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE ANY CIRCUIT BREAKER OF THIS FAMILY.

Use only original and authorized spare parts / accessories

Keep this document available for the installation, operation and maintenance of this equipment.
The use of these instructions will facilitate proper maintenance of the equipment.

Before start to work follow the safety rules below:
- Disconnect the device from supply. No parts have to be under voltage (power and auxiliary circuits). Check the insulation from supply
- the breaker must be open with spring discharged (OFF - DISCHARGED)
- no parts have to be so hot (residual heating) to produce burn of personnel
- Make safe in compliance with current laws.

For correct handling of devices make reference to installation manual

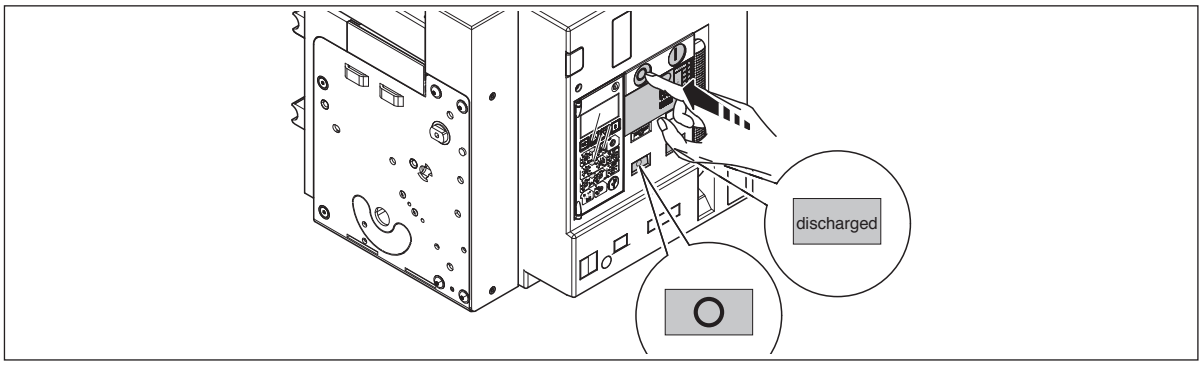
A non-compliance to previous instructions, can produces serious damage to persons and property.

During maintenance activities, indicated in this document, the personnel entrusted must take in charge the purposing of all tools and procedures necessaries for safeguard of persons and property.

Before to put the equipment in operation/work be sure:
- all connections are tightened with correct torque
- all protective covers are mounted correctly
- Do not remove covers, open doors or work on equipment unless all circuits have been de-energized, and after making sure of that with a suitable measuring instrument.
- the breaker is in position OFF- DISCHARGED

Note
It is recommended to get the original maintenance kit.
It is recommend to record the maintenance activity done on every breaker.

In no circumstance Legrand can be held responsible for damaging caused by failure of devices if the periodical check and maintenance were not performed in accordance with this document.



2. Frequency of maintenance

Service intervals shall have to be assessed accordingly in case of non-standard (different than the relevant product standard indications) environmental and operation conditions.
It is recommended to plan a periodical maintenance according with this guide, in order to:
- Check the efficiency of product
- Identify parts / accessories damaged
- Prevent emergency

It is recommend to record the maintenance activity done on every breaker.
In the following table are summarized the level 1 and level 2 maintenance and respective frequency.
Level 1 can be performed by trained customer technicians or qualified staff who are thoroughly familiar with the equipment and is completely explained in this maintenance guide.
Level 2 is not object of this maintenance guide and to perform this maintenance level is necessary to contact LEGRAND service.
Even circuit-breakers that remain OPEN or CLOSED for long periods of time or lightly loaded/operated should be subject to the maintenance programme.

Level 1 Maintenance - Explained in this maintenance guide

Check	Frequency-time		Frequency-cycles		Procedure
	1 year	2 years	at In	Without current	
Mechanism					MCH
- Correct working and lubricating	•		3000	5000	MCH-I
- Check the seals	•		3000	5000	MCH-II
- Check the position		•	3000	5000	MCH-III
Anti-shock opening spring		•	3000	5000	SCK
Arc chutes	•		1000	-	CTS
Main contacts					MNC
- Visual	•		1000	5000	MNC-I
- sequence		•	1000	5000	MNC-II
Draw-out system*					DWT
- Check the correct working	•		3000	5000	DWT-I
- Insulation shutter		•	3000	5000	DWT-II
- Cluster contacts		•	3000	5000	DWT-III
- Sliding aux contacts		•	3000	5000	DWT-IV
- Lubrication of draw-out chassis		•	3000	5000	DWT-V
- Draw-out mechanism		•	3000	5000	DWT-VI
Terminals	•		3000	5000	TRM
Aux contacts					AXL
- Visual check	•		3000	5000	AXL-I
- Functional Test:		•	3000	5000	AXL-II
Motor drive CC ST UVR					ECSR
- Functional test	•		3000	5000	ECSR-I
- Lubricating of motor gear		•	3000	5000	ECSR-II
Mechanical Accessories					MCSR
- Open position lock	•		-	-	MCSR-I
- Draw-out shutter lock	•		-	-	MCSR-II
Mechanical interlock		•	100	100	NTK
Trip Unit	•		-	-	PRT

Level 1 Maintenance
Maintenance intended to be used by trained and qualified customer technicians who are familiar with safety standards requirements for circuit breaker and distribution system. These level 1 procedures are explained in this maintenance guide

** must be checked after 200 "draw-out/draw-in" cycles*

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Level 2 Maintenance

Maintenance intended to be used only by LEGRAND service or by certified/qualified Company. For this reason the explanation of these second level procedures is not included in this maintenance guide.

Level 2 maintenance is suggested with a 4 years frequency for the various checks and verifications made available by LEGRAND service and/or certified/qualified Company.

If real operating and environment condition are more severe than the standard one:
- The level 1 maintenance frequency must be reduced by half, but anyway never less than 1 year
- The level 2 maintenance doesn't change its frequency

Excessive vibrations, extreme atmospheric conditions or polluted atmosphere may anyway shorten the device life for the application. Consult LEGRAND.

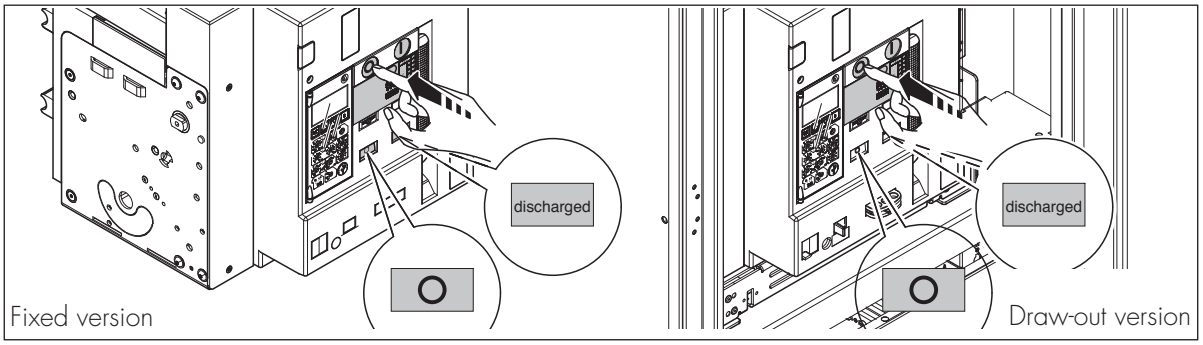
3. Preliminary work

Unless otherwise specified in the maintenance procedures, all operations must be carried out without supply (power and aux circuit) and with breaker in position OFF-DISCHARGED.

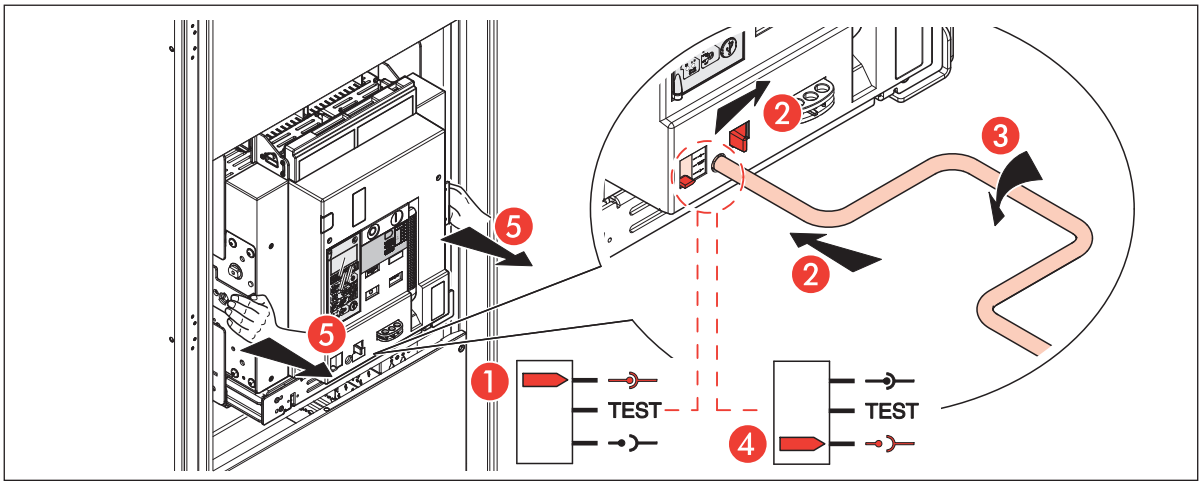
If in procedure there are different indications, at the end of procedure the breaker must anyway be in the safe condition: no supply in power and aux circuit and OFF-DISCHARGED

Check the general condition of breaker, if there are broken parts, ageing or damaged parts
- front covers and IP protection
- identification labels
- Protection Unit display and enclosure
- Connections
- Chassis
- Structure of breaker

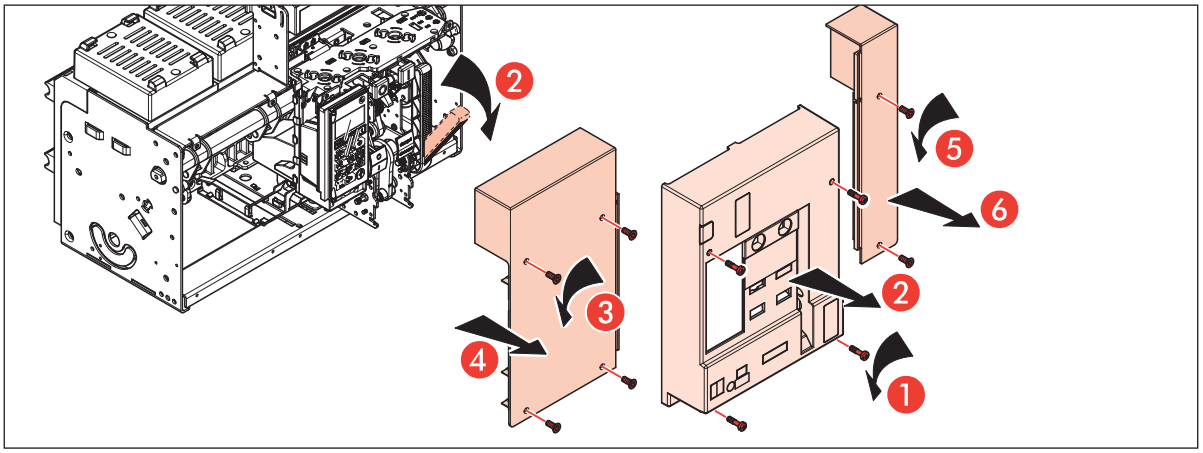
Check the compatibility between electrical accessories and the voltage used
Disconnect the breaker from the supply, both the power and auxiliary circuit
Perform a close/open cycle
Open the breaker and discharge the springs (OFF-DISCHARGED)



In case of draw-out breaker, remove the breaker from chassis



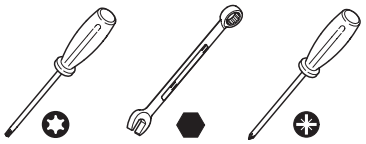
Remove the front cover



4. Maintenance procedures

4.1 MCH - Mechanism

Necessary tools:
Torx 30 – 40
Spanner n°7
Cross screw drivers
Lubricant



4.1.1 MCH-I - Correct working and Lubricating

- ***Check the correct working***

Do at least n°1 charge/close/open Cycle

O discharged

O charged

I discharged

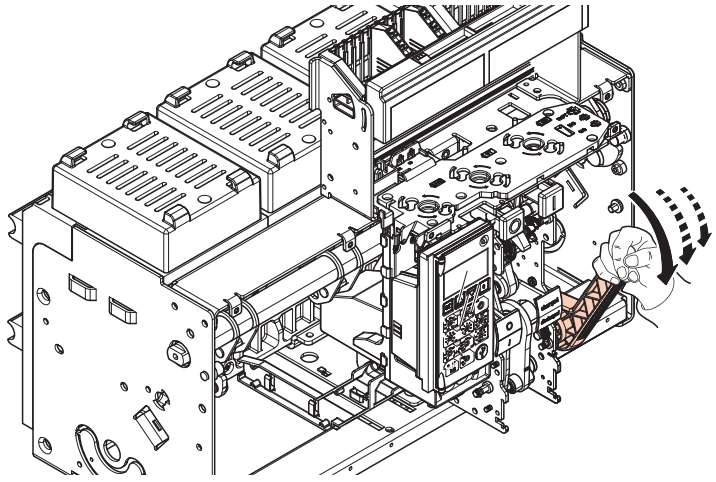
O discharged

Close the breaker and charge the spring manually.

The main contacts must remain in closed position. If breaker open (see the ON-OFF indication) ➔ it is necessary to contact Legrand.

At the end get the breaker in open position with springs discharged

O discharged



- ***Lubricating***

Clean the mechanism with dry air compressed Lubricate
(Rheolube 361F) the parts indicated in pictures
After lubricating do a cycle charge/close/open

O discharged

O charged

I discharged

O discharged

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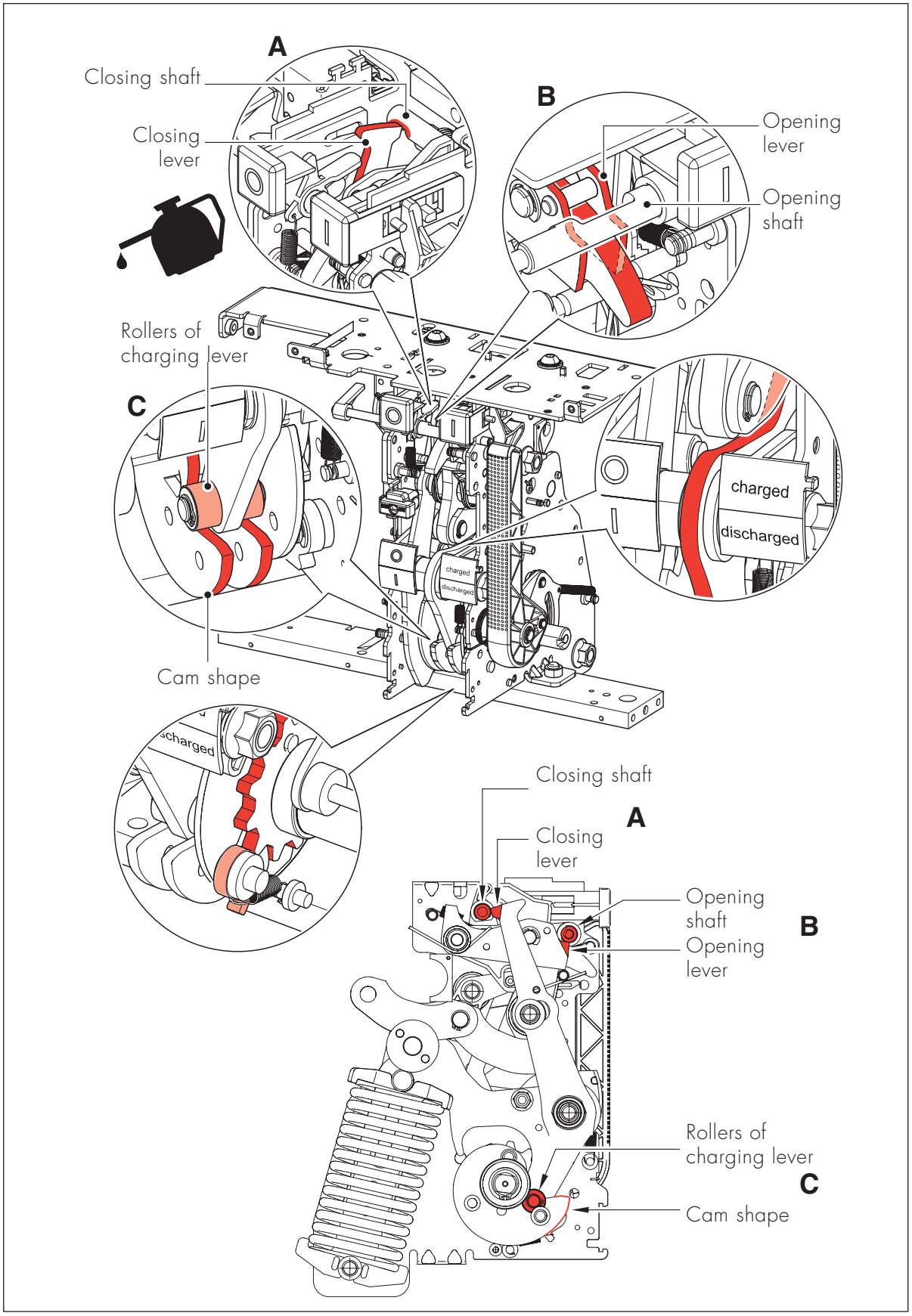
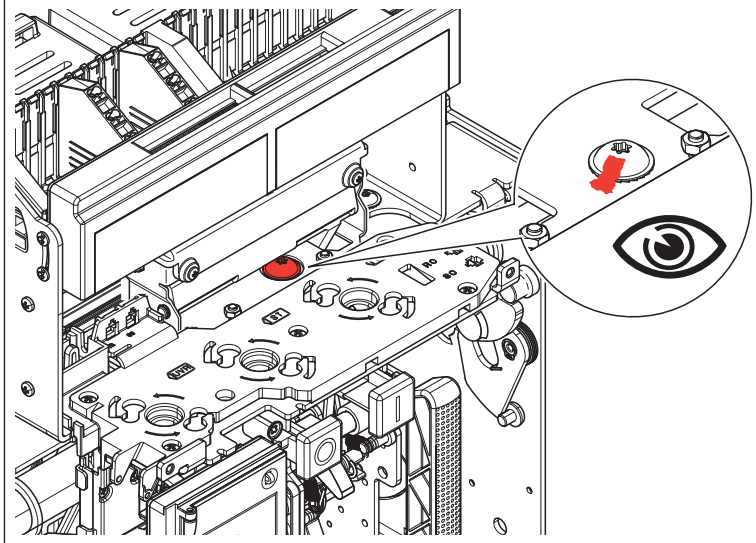
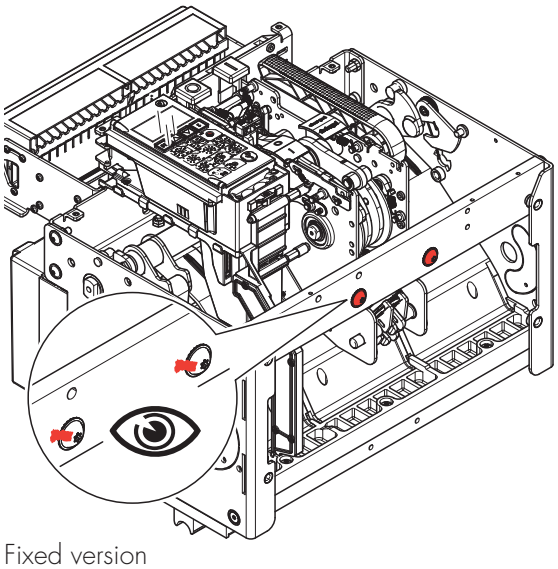


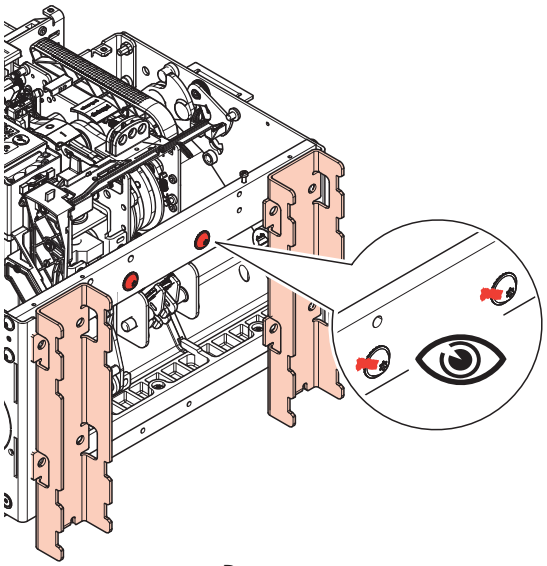
4.1.2 MCH-II - The seals

• ***Visual check***
Check the integrity of seals as showed in pictures





Fixed version



Draw-out version

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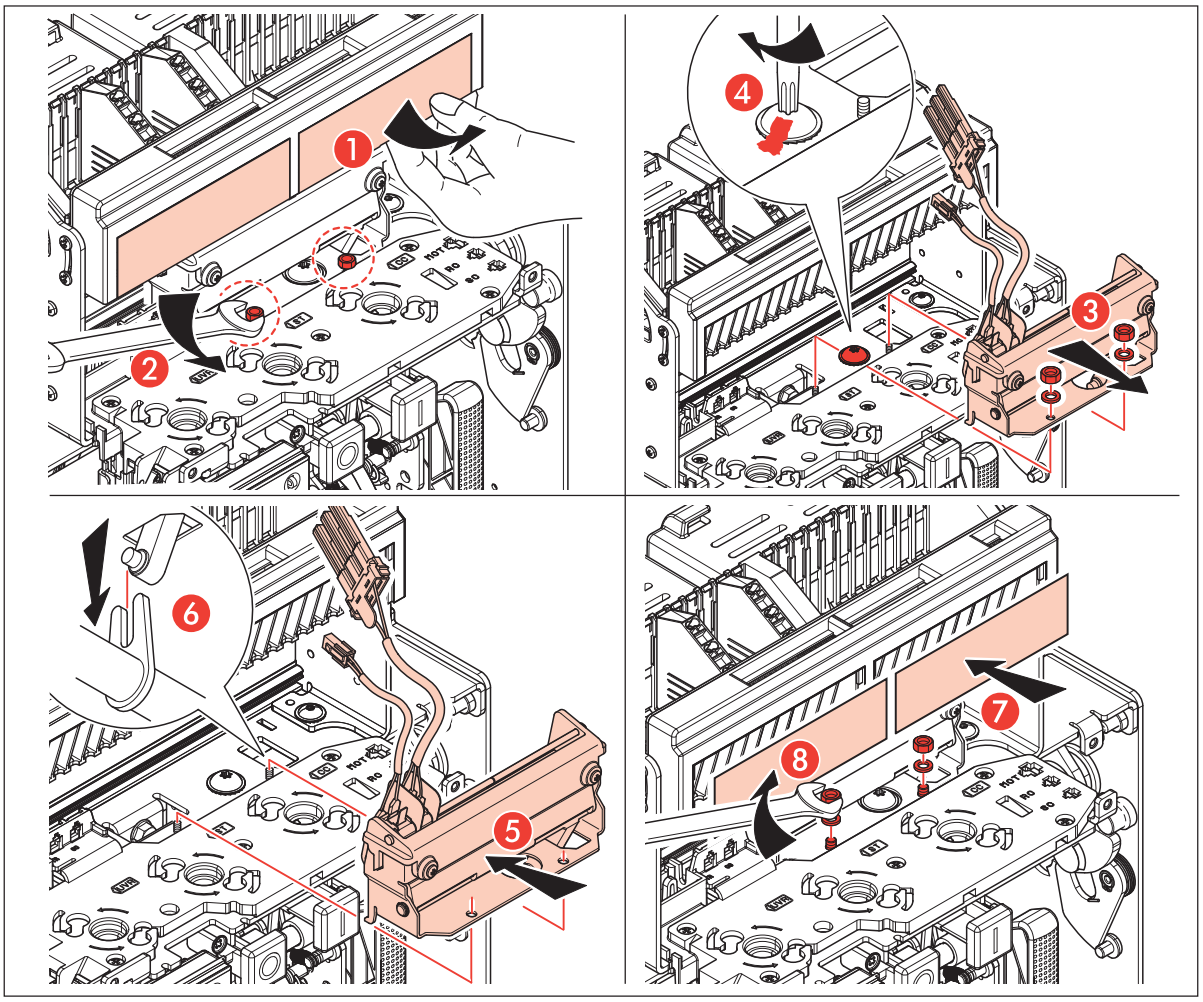
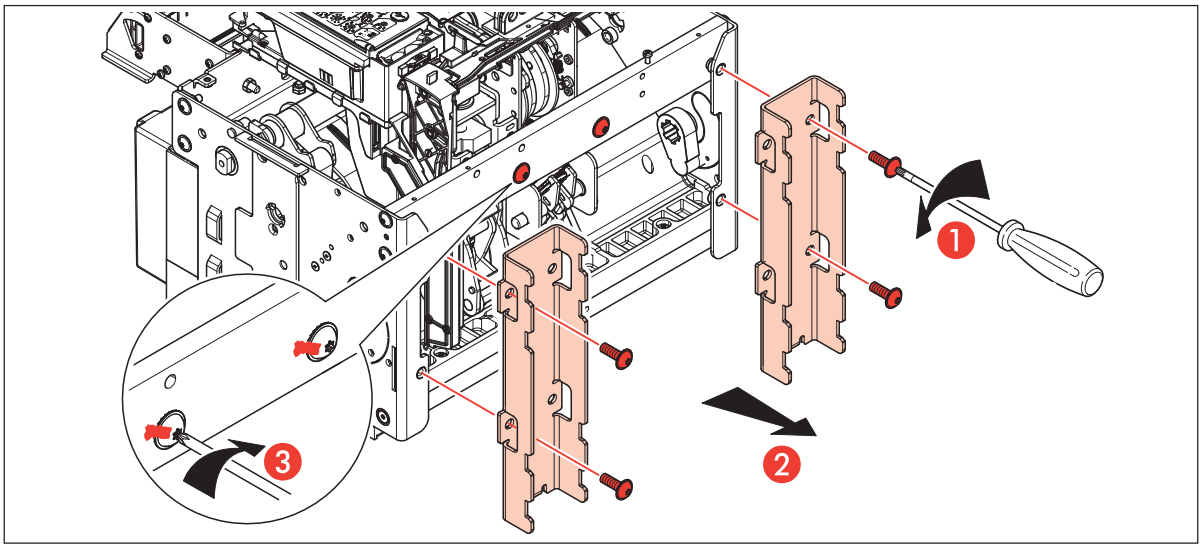
• ***Screws tightening***

In case on breaking seals:

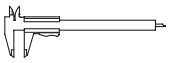
- tight the screws Torx40 (as showed in pictures) at 25-30Nm
- Jump to procedure "MCH-III".
- At the end Jump to procedure "MNC-II".





4.1.3 MCH-III - The position

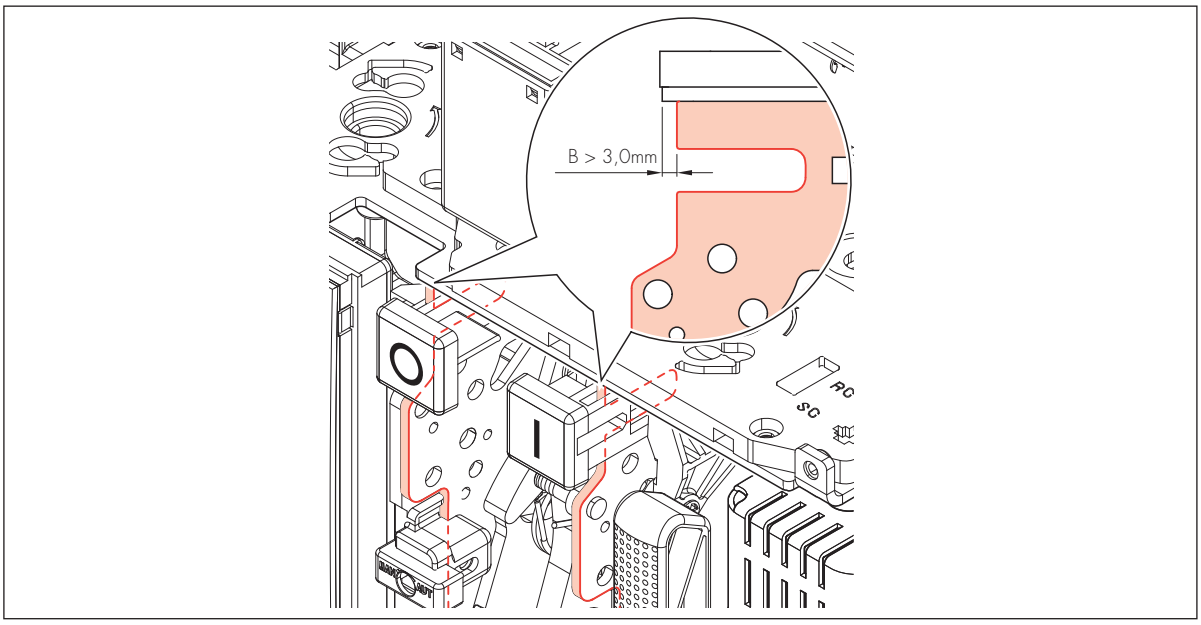
Tools necessary:
Venier



- **Measure the position of mechanism**

Close the breaker.
Measure the dimensions indicated in pictures
Must be B>3,0mm
At the end get again the breaker in open position with springs discharged  

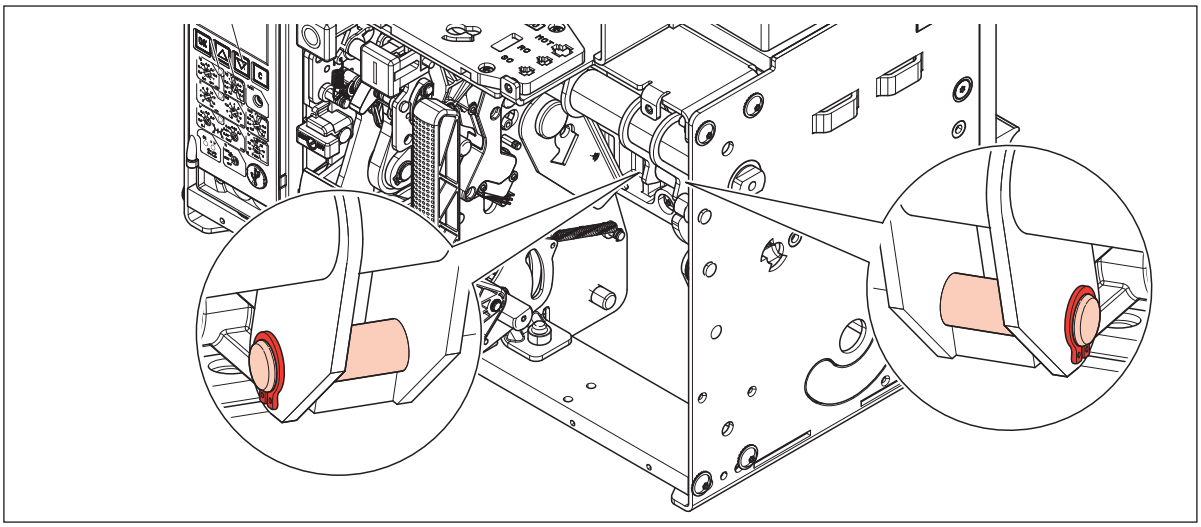
If these dimensions are out of limits ➔ it is necessary to contact Legrand.



- **Verification of the fixing seeger:**

check for the presence and integrity of all the axles' fixing seegers.

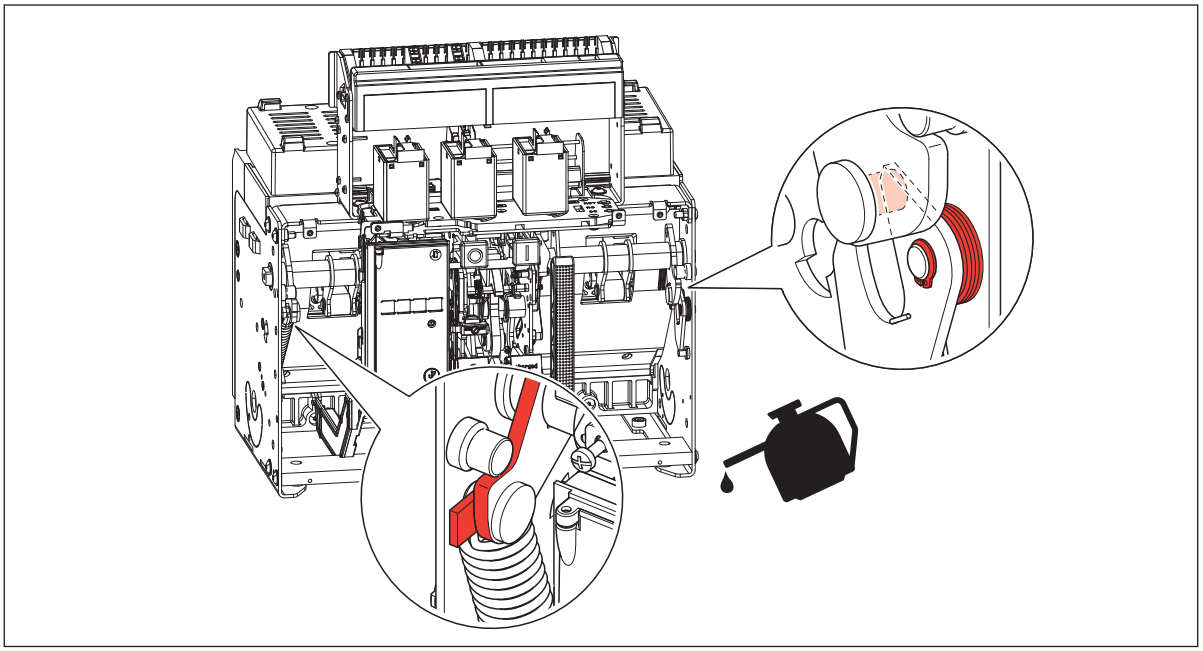
In case of damaging it is necessary to contact Legrand.



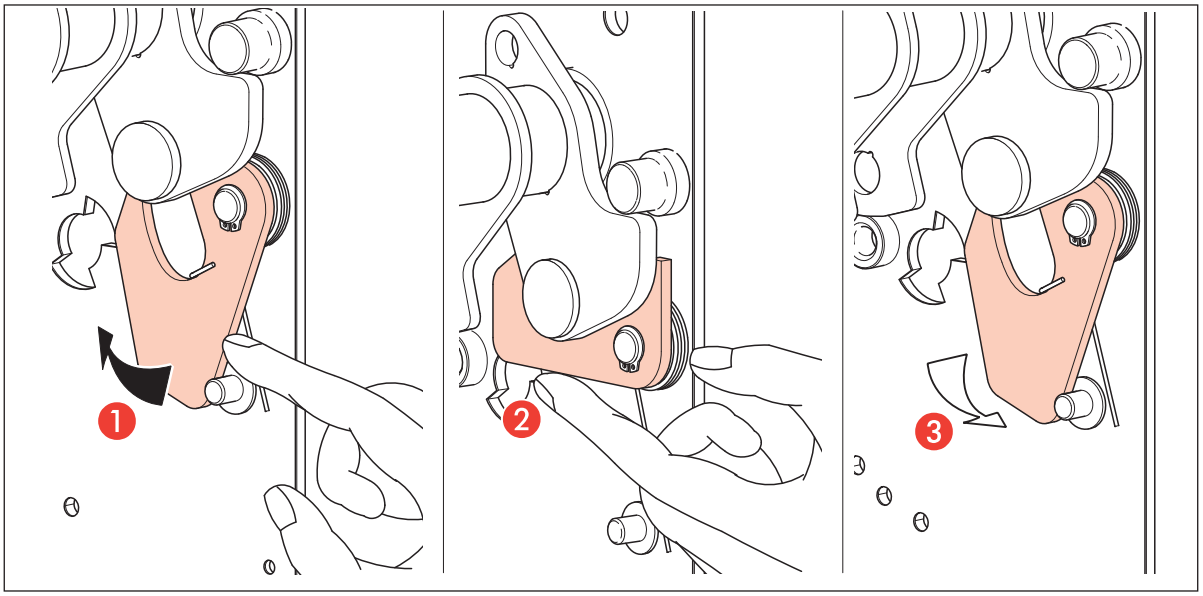
4.2 SCK - Shock-absorbing system

Tools necessary:
Lubricant

• ***Lubricating***
Lubricate (Rheolube 361F) the spring and fork concerning anti-shock opening system



• ***Test***
Test the free moviment of the lever



4.3 CTS - Arc Chutes

Tools necessary:
Allen key (hexagonal wrench) T5
Ohmmeter

• Visual and cleaning

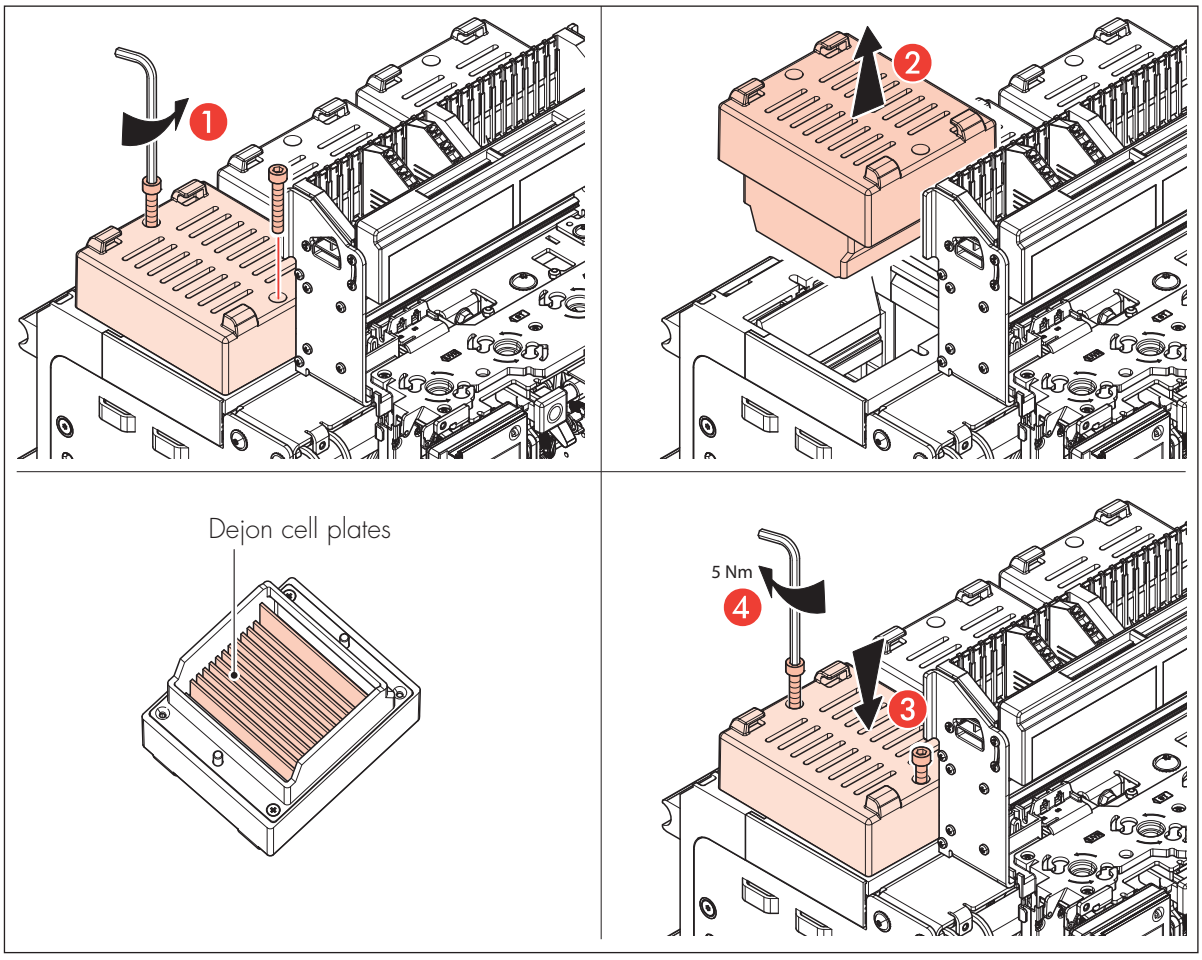
Remove the arc chutes.

Check presence of breaking or damaging.
In case of breaking parts ➔ replace the arc chute (spare part).

Check the presence of copper dust or traces of melted copper Clean with dry compressed air.
If necessary replace the arc chute (spare part).

• Check the insulating between arc chute plates

Clean with dry compressed air.
By using an ohmmeter check the insulating between arc chutes plates.
If necessary replace the arc chute (spare part).



4.4 MNC - Main contacts

Tools necessary:
Allen key (hexagonal wrench) T5
Calibre for sequence test
(maintenance kit)

4.4.1 MNC-I - Visual

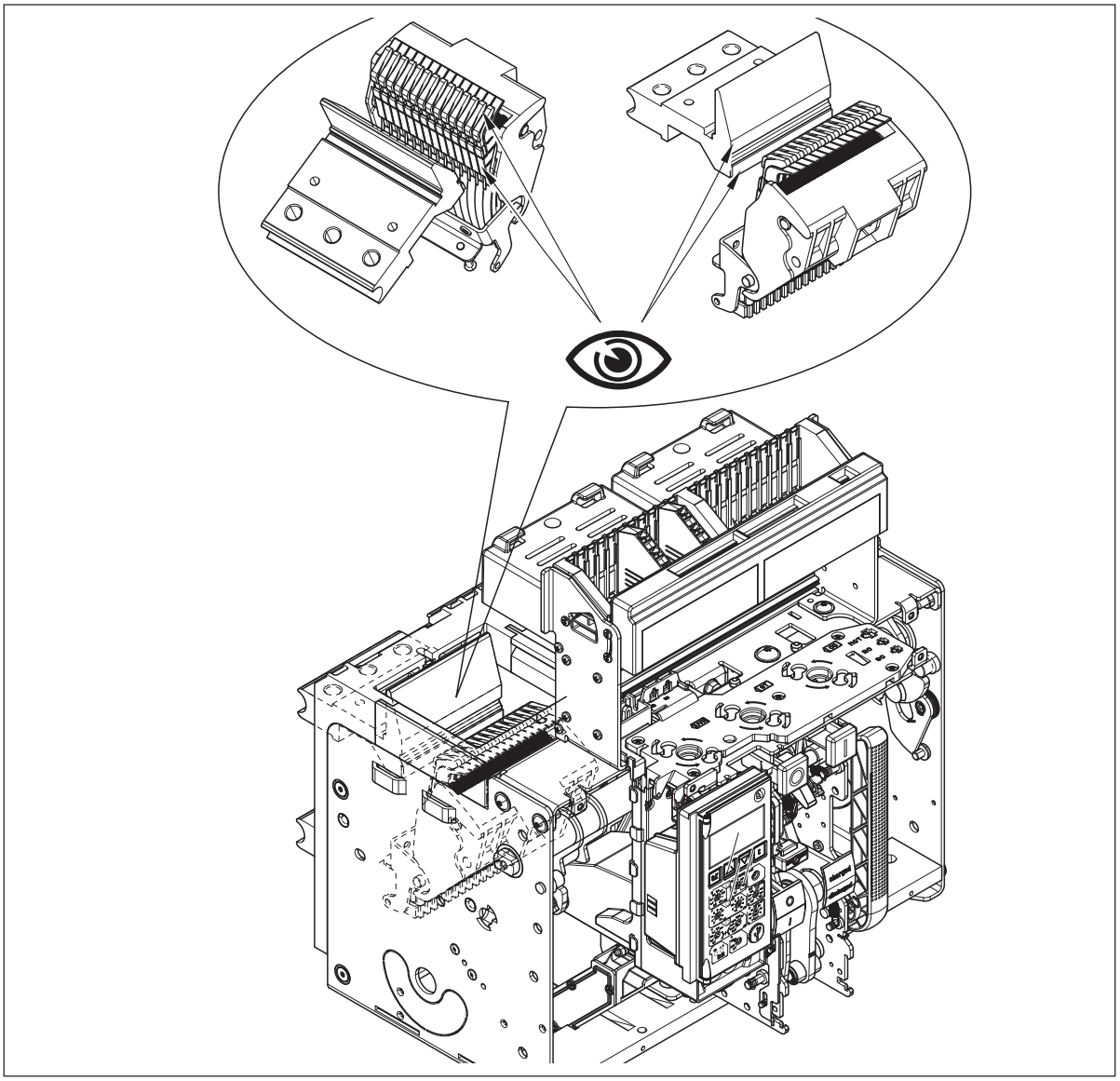
- ***Presence of dust, etc***

If necessary clean with dry cloth and alcohol

- ***Condition of main contacts surface***

In case of damaging surface treat it with glass-paper (n°320).
Clean with dry compressed air

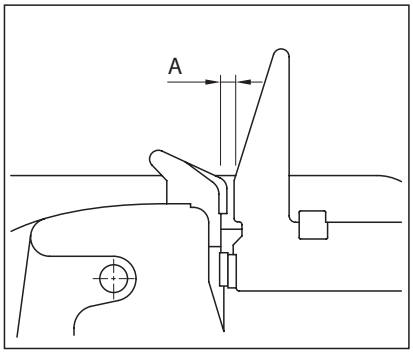
If the main contacts are too damaged or excessively worn ➔ contact LEGRAND



4.4.2 MNC-II - Sequence

• Dimension of main contact sequence

Remove the arc chutes
Close the breaker
Check the dimension "A" in picture. It must be:
1,2mm<A<2mm
Thickness gauge (present in maintenance kit) 1,2mm ➔ go
Thickness gauge (present in maintenance kit) 2mm ➔ NO go

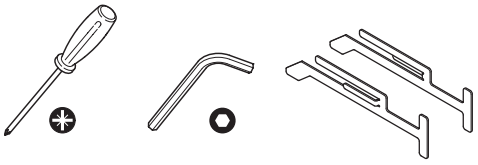


At the end get again the breaker in open position with springs discharged

If dimension "A" is out of range ➔ it is necessary to contact Legrand.

4.5 DWT - Draw-out system

Tools necessary:
Cross screw drivers
Allen key (hexagonal wrench) T4
Device for cluster contacts
Lubricant

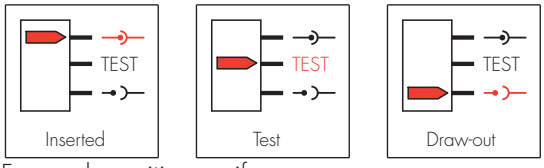


ref. 290 40

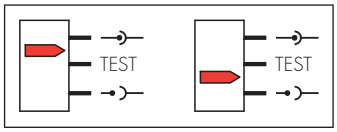
4.5.1 DWT-I - Correct working of draw-out system

- ***Check and note the presence of any accessory of the draw-out system.***
  Operate the draw-out system accordingly and refer to the appropriate checks in the following sections.
- ***Check the correct working of draw-out system***

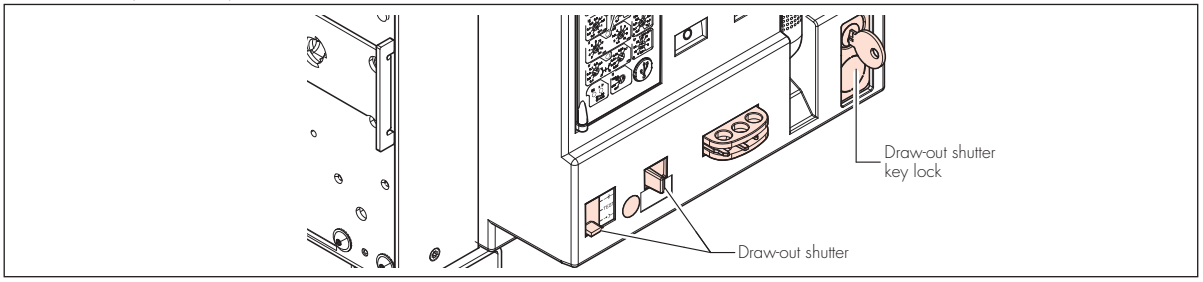
- Insert the breaker in the draw-out chassis
- Get the breaker in inserted position – test position – drawout position



- For each position verify
  it is possible to close the draw-out shutter
  it is possible to operate the breaker (close and open)
  it is possible close and lock the shutter with padlock
  close the breaker and verify it is not possible open the draw-out shutter
  Check key lock if present (see MCSR-II)
- Get the breaker in middle (not definite) position and verify

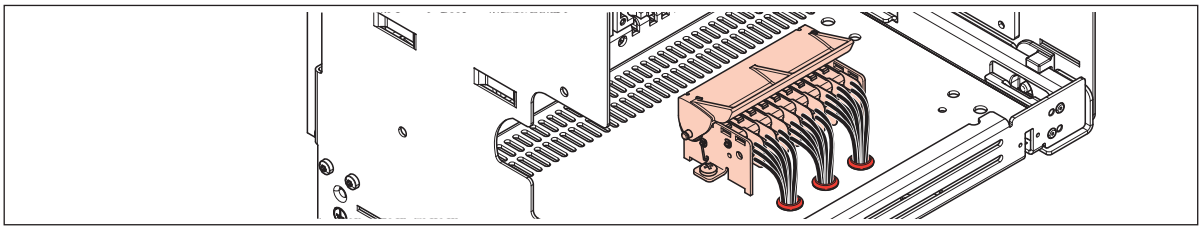


it is NOT possible close the draw-out shutter
it is NOT possible to close the breaker.
it is NOT possible close and lock the shutter with padlock
Check key lock if present (see MCSR-II)



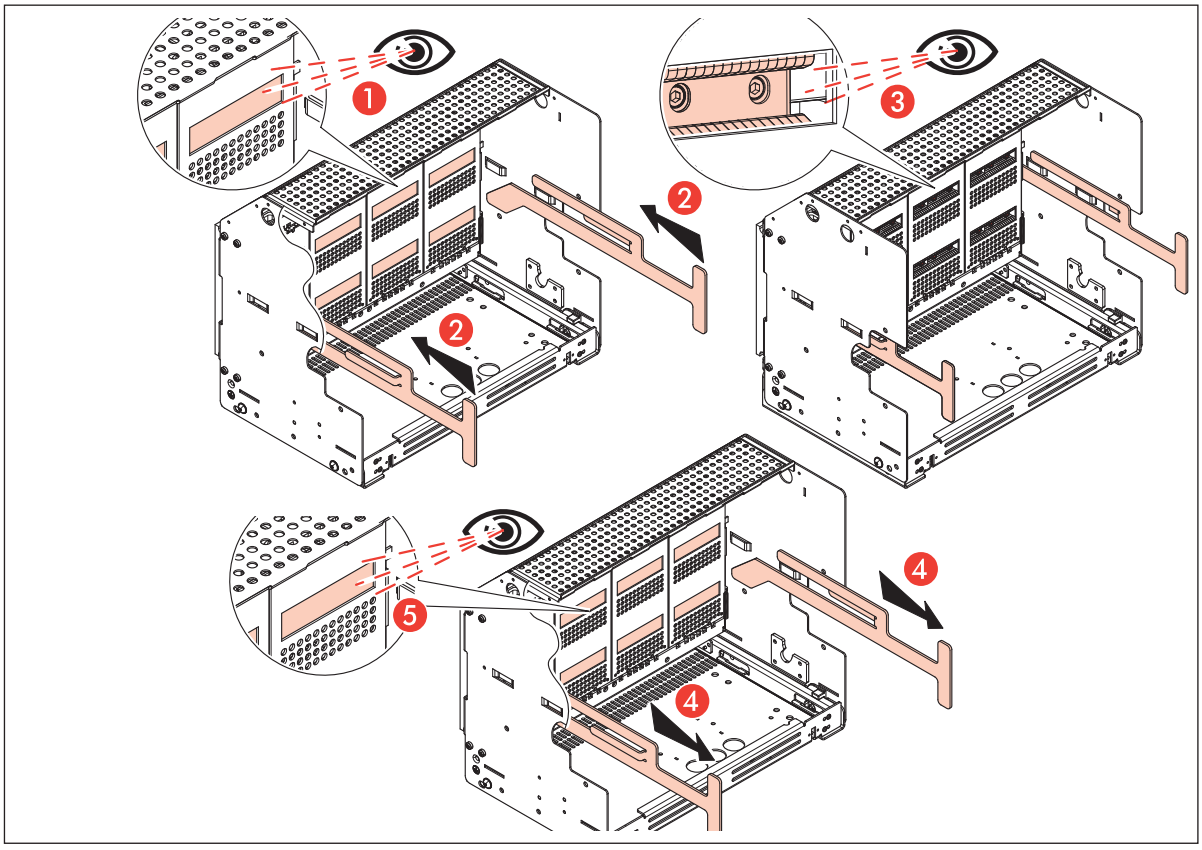
At the end get again the breaker in open position with springs discharged  

In case of Inserted/test/draw-out contacts see the procedure "AXL"

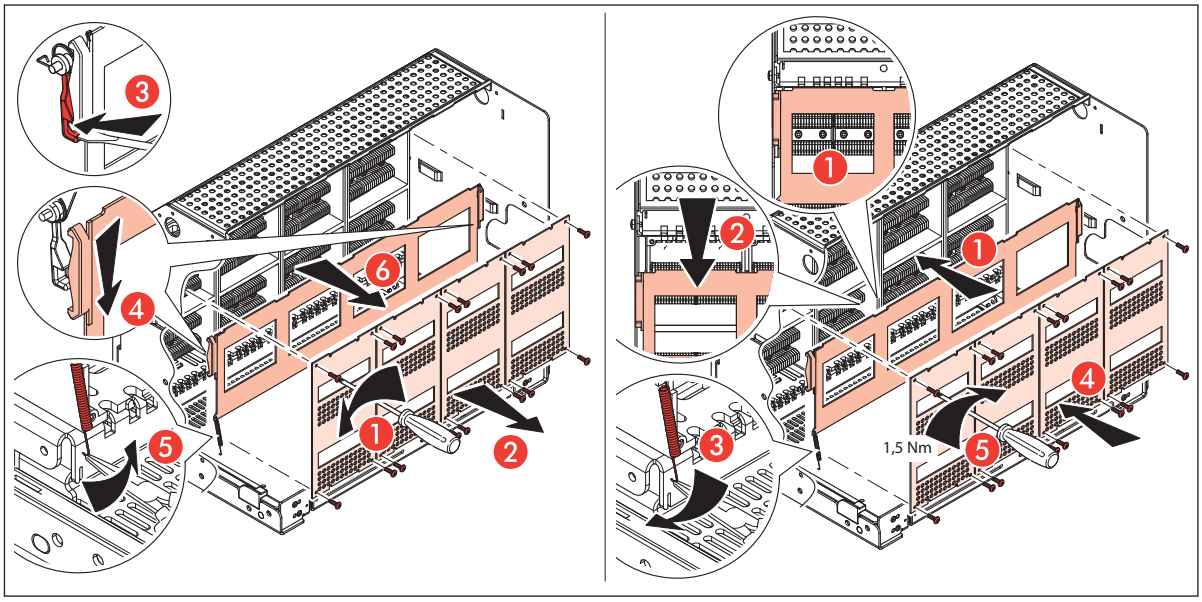


4.5.2 DWT-II - Insulation shutter

• ***Check the correct working of insulation shutter***
by using device for cluster contacts inspection (spare parts), simulate the insertion: the shutters must get up completely.



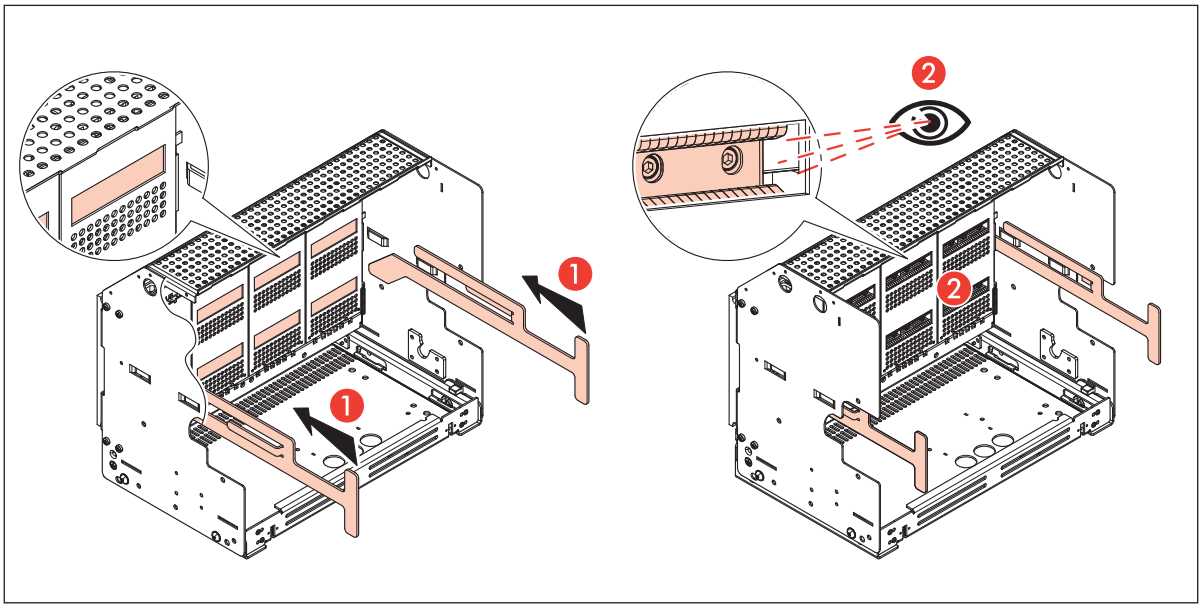
• ***Visual check of insulation shutter***
If there are some parts damaged, Replace those damaged parts (Spare parts)



4.5.3 DWT-III - Cluster contacts

• ***Visual check and cleaning***

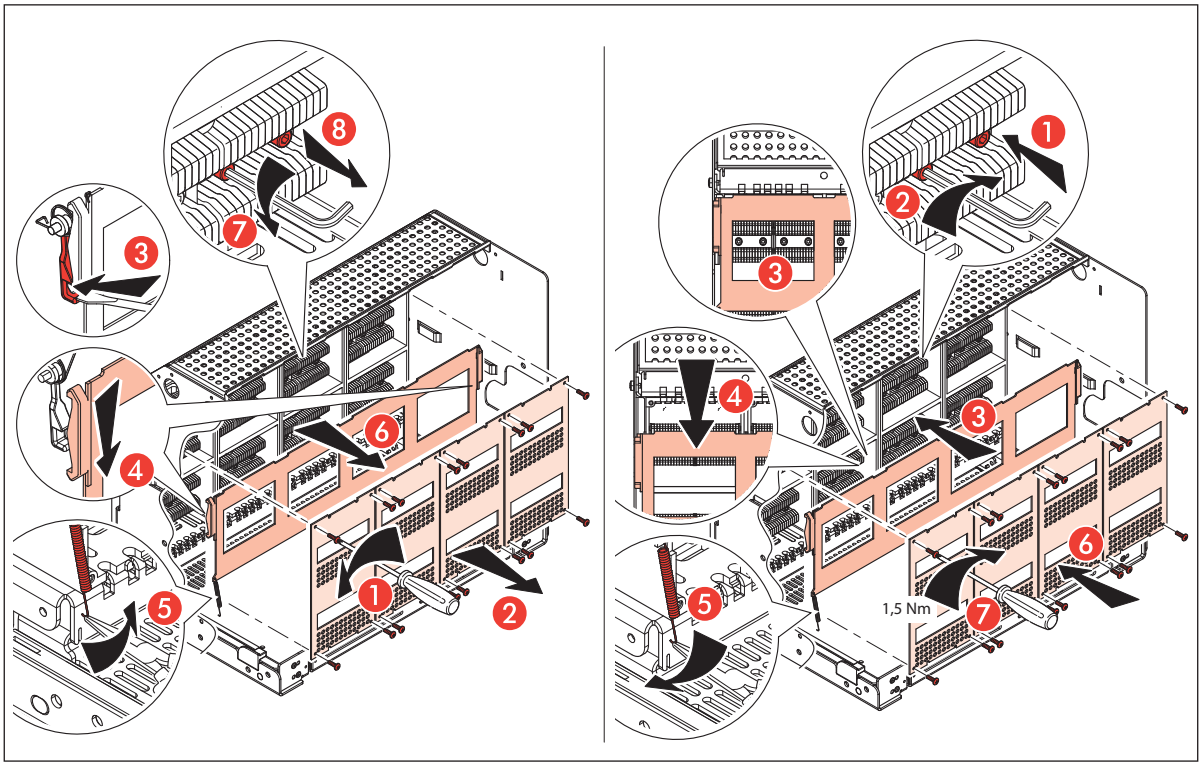
Open insulation shutter by using device for cluster contact



If necessary (dust, oxidation, blackened, etc.) clean the cluster contacts with dry clothe. If necessary remove the cluster contacts.

• ***Check the presence of damaging and replacement***

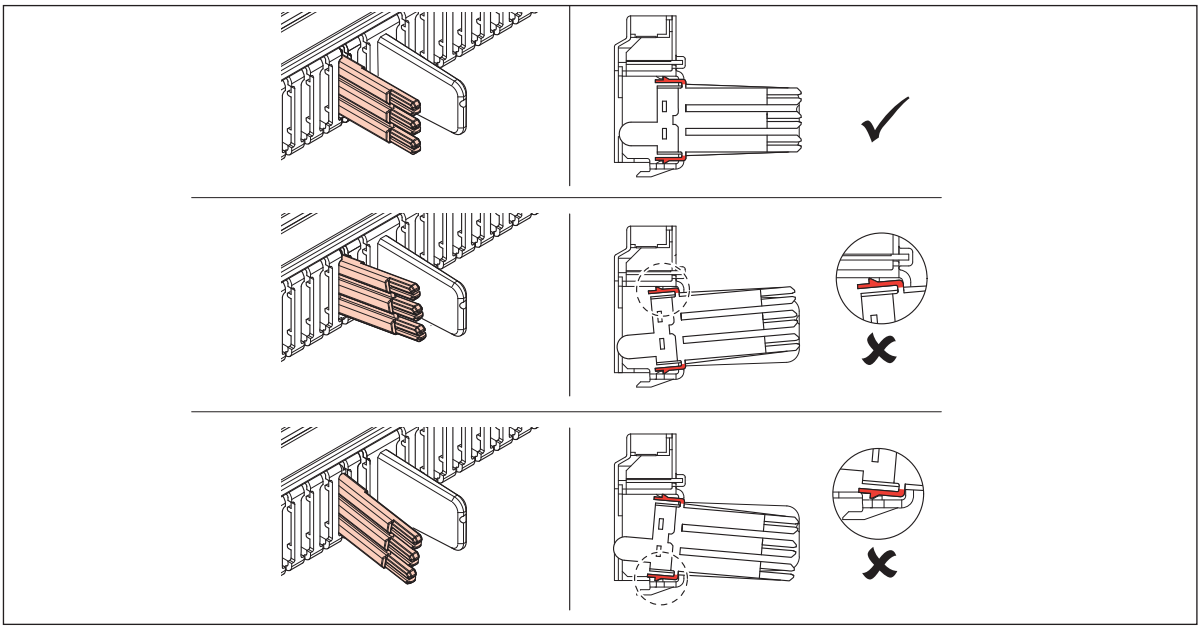
If cleaning is not enough, or there are traces of damaging, remove insulation shutters and replace the cluster contacts (spare parts):



4.5.4 DWT-IV - Sliding Aux contact

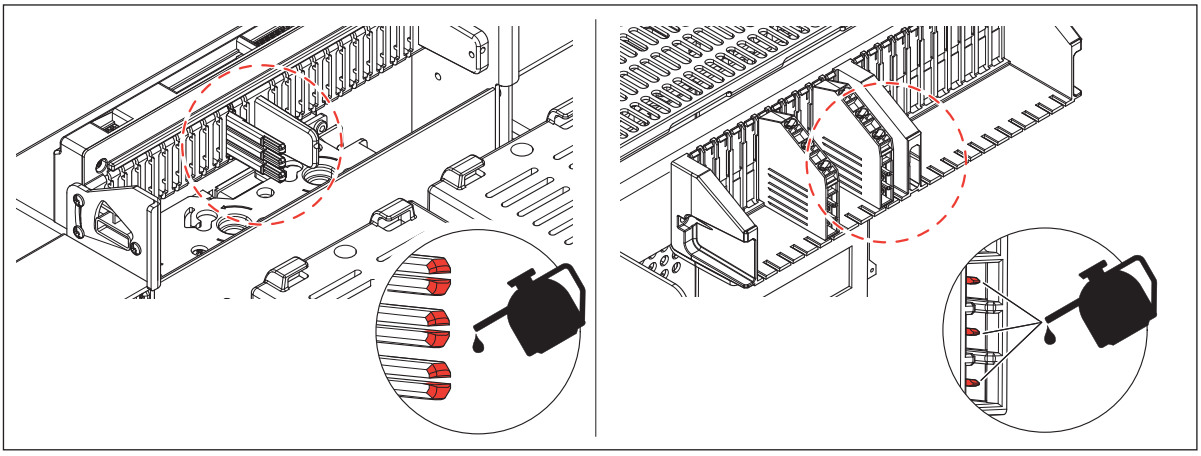
• ***Visual***

Check the right position of sliding contacts
Check damaged parts

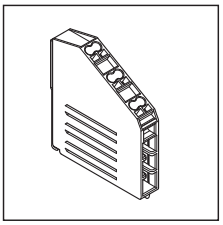


• ***Clean and lubricate***

In presence of dust clean with dry cloth the parts highlighted in pictures
Lubricate (Nyogel 760G) the parts indicated in pictures

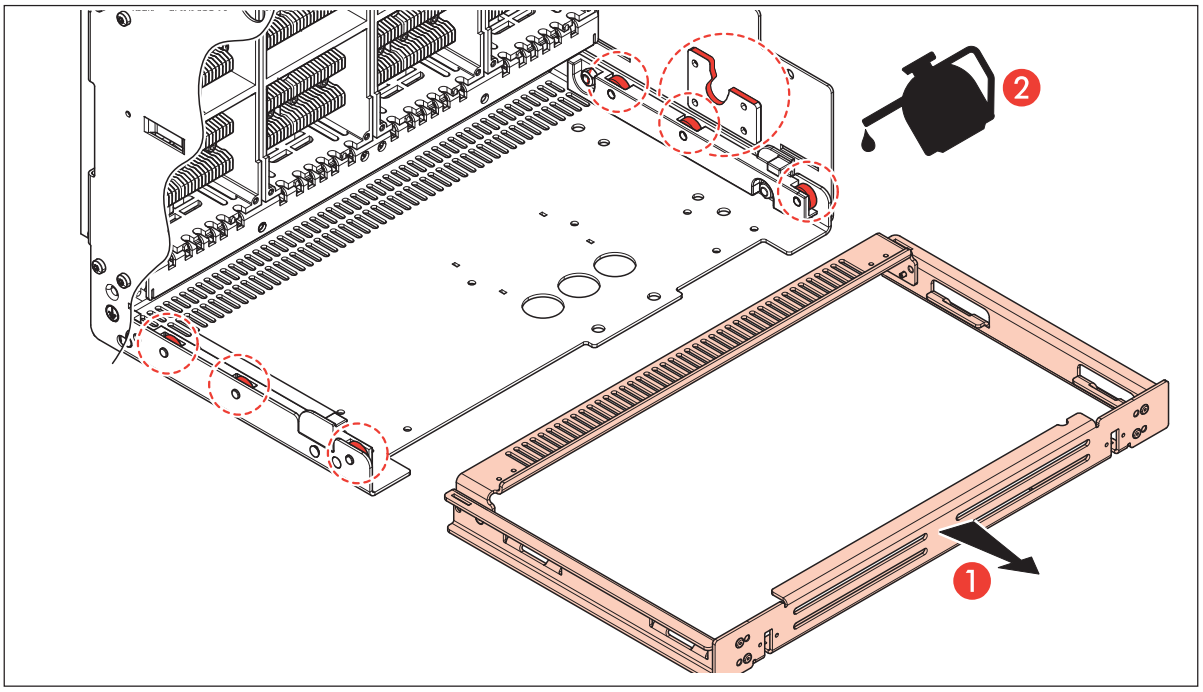


In presence of damaged aux terminals replace them (spare parts)



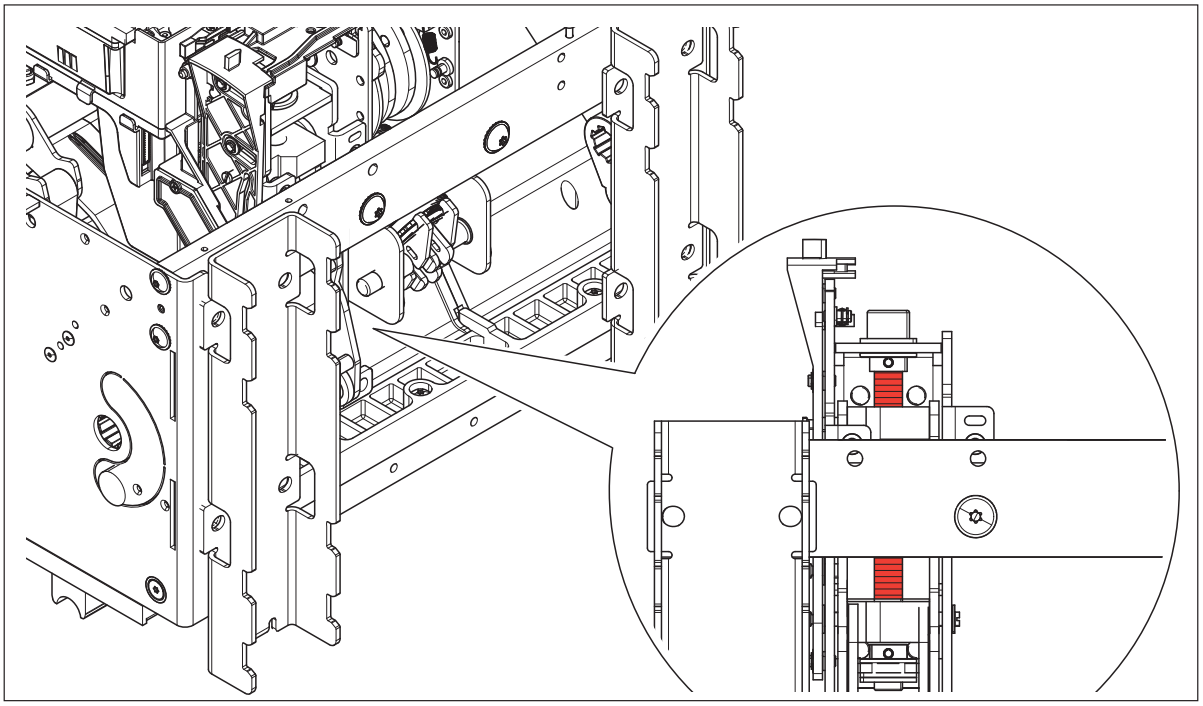
4.5.5 DWT-V - Cleaning and lubrication of draw-out chassis

Vacuum the dust on bottom of draw-out chassis
Clean the parts indicate in picture with dry cloth.
Lubricate (Rheolube 361F) the parts indicate in pictures: rollers and coupling cave.



4.5.6 DWT-VI - Draw-out mechanism

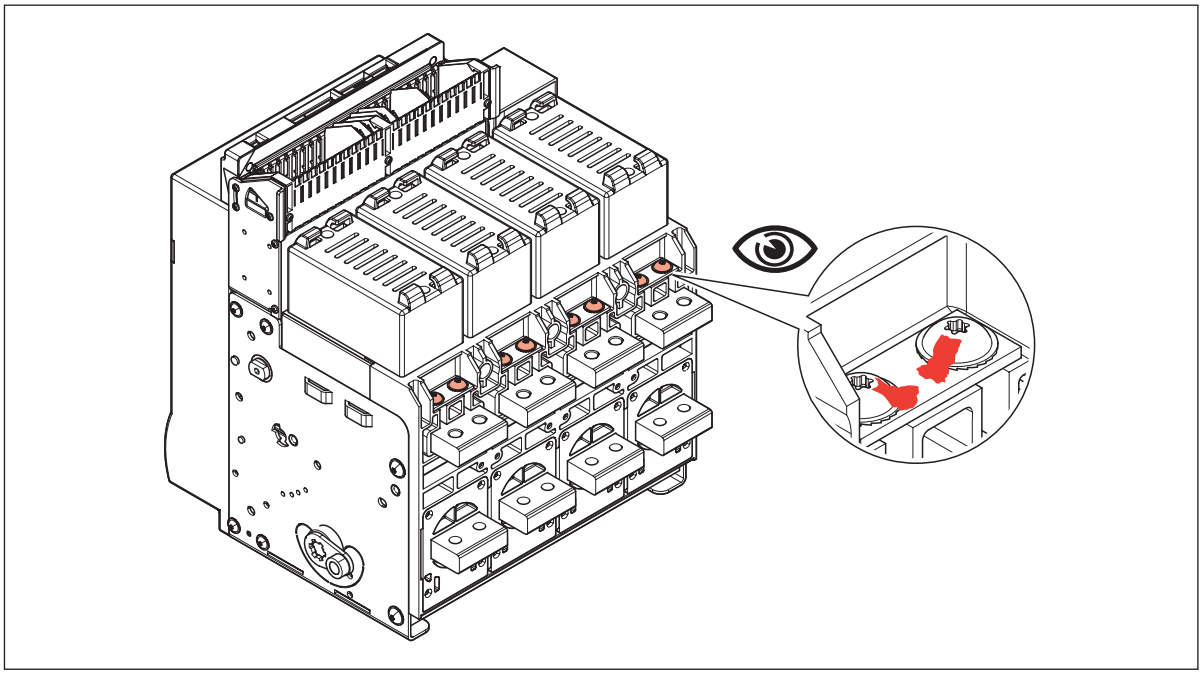
Clean with dray cloth the worm screw of mechanism.
Lubricate (Rheolube 361F) the worm screw of mechanism.



4.6 TRM - Power Terminals

Tools necessary:
Torx T40

• ***Visual / seals***
Check the seals



If seals are broken, tight the screws with 20-25 Nm
If is not possible to tight the screw ➔ contact LEGRAND

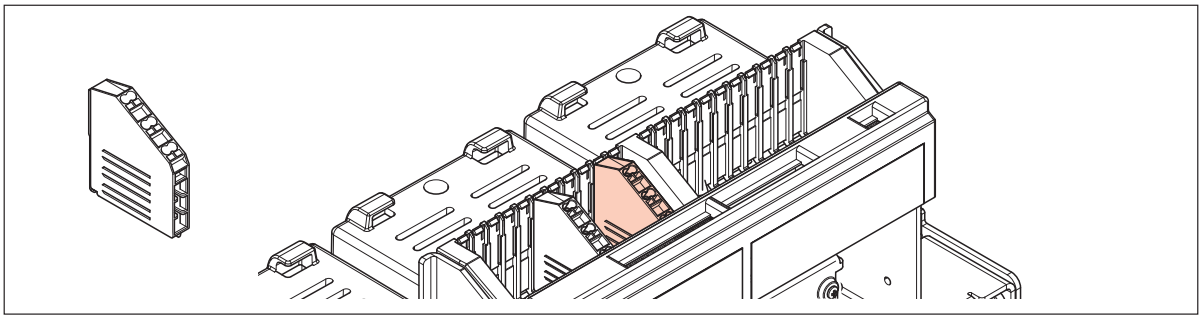
• ***Status***
Check the status and color of power terminals
If there is a change in color (which indicates an abnormal temperature rise) ➔ check the seals and tightening of power terminals (Check the connection bars tightening too)
If there is oxidation ➔ clean the power terminal (if necessary clean the connection bars too)

4.7 AXL - Auxiliary contacts

Necessary tools:
Ohmmeter

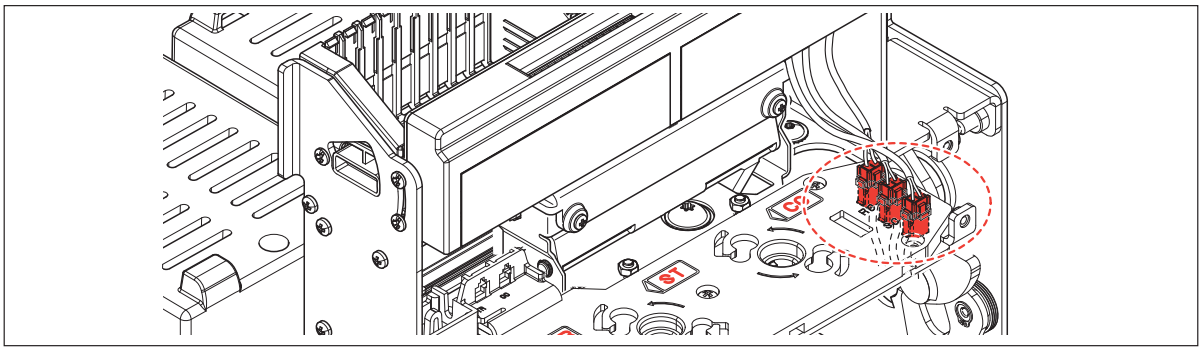
4.7.1 AXL-I - Visual and wiring check

• ***Auxiliary terminal block***
Check presence of broken parts
Check the good connection of cables in terminals
Check the presence of cables warping or sings of overheating

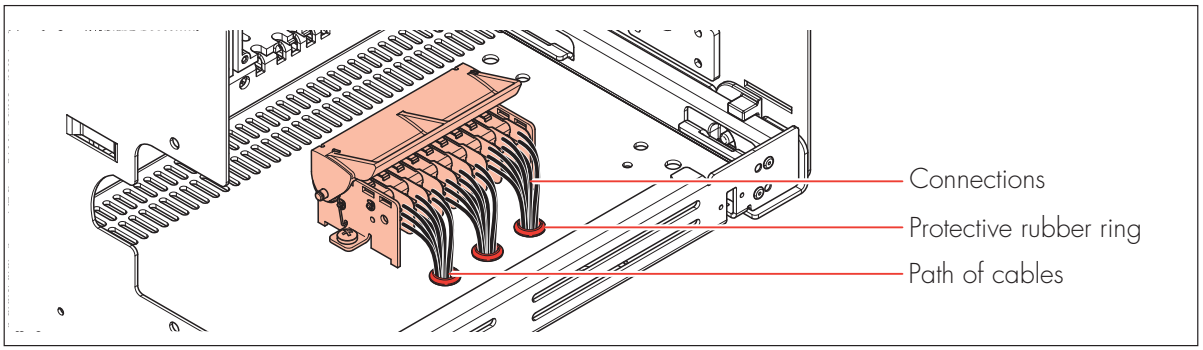


If necessary replace the Aux terminal (spare parts)

Check the plug-in connection of Motor; RC; SC;



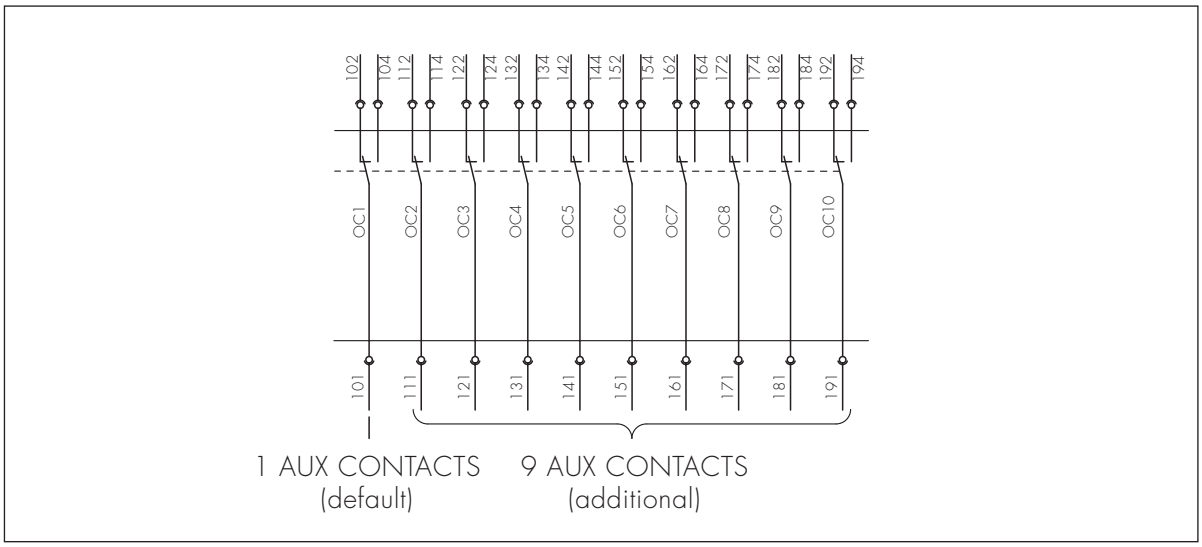
• ***Inserted/test/drawout contacts***
Check presence of broken parts
Check the good connection of cables
Check the right path of cables and the presence of protective rubber rings
Check the presence of cables warping or sings of overheating



If necessary replace the cables and inserted/test/draw-out contacts

4.7.2 AXL-II - Functional test

- ***O/C contacts***



With breaker closed:
check continuity between terminals :(101 – 104); (111-114); (121-124); (131-134)

With breaker open
check continuity between terminals :(101 – 102); (111-112); (121-122); (131-132)

If additional O/C contact are present, they must be checked as well
In case of wrong working replace O/C contacs

At the end get again the breaker in open position with springs discharged

O discharged

- ***RC-SC contacts***

Get the breaker in open
with springs charged

O charged

Check the continuity between (241-244); (231-234)

Close the breaker and charge the springs

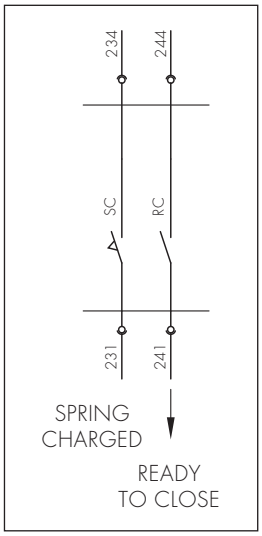
I charged

Check the continuity between (231-234)

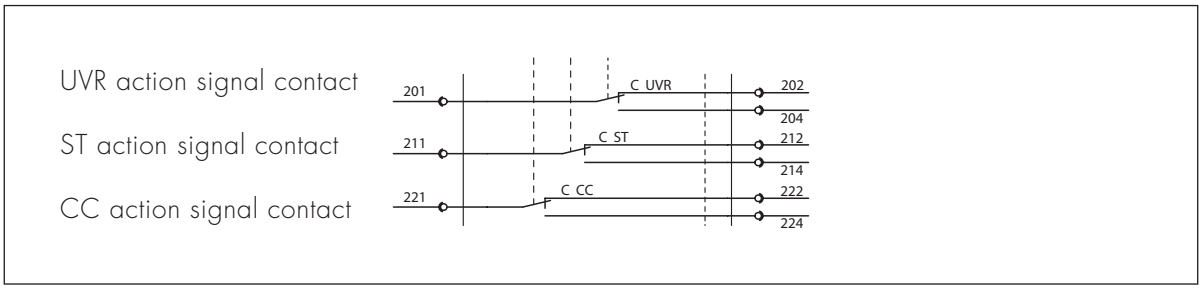
At the end get again the breaker in open position
with springs discharged

O discharged

If necessary replace RC-SC contacts

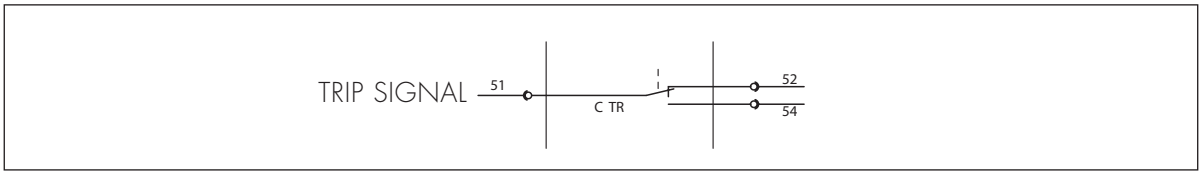


• Energized coils contacts (C-UVR, C-ST; C-CC)
Supply the UVR and check the continuity between (201-204)
Supply the ST and check the continuity between (211-214)
Supply the CC and check the continuity between (221-224)



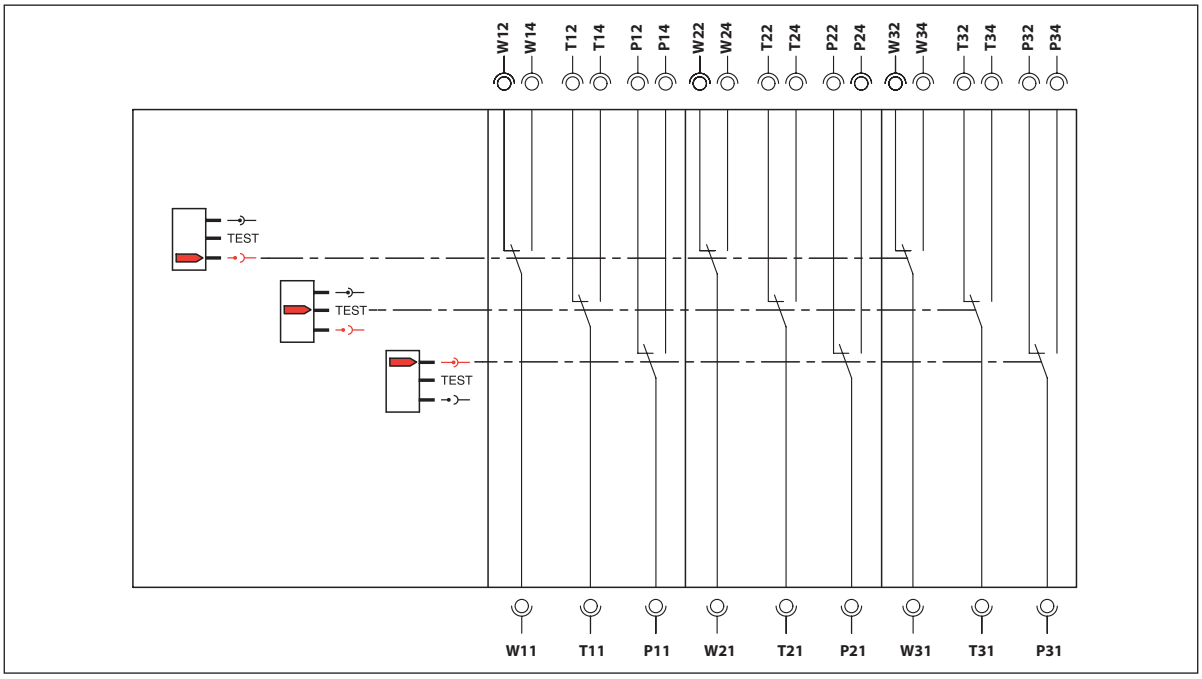
If necessary replace the contact

• ***Trip Contact***
Perform procedure PRT (trip Unit) and within trip test, check the continuity between (51-54)



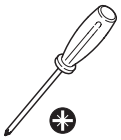
If trip contacts doesn't work contact Legrand.

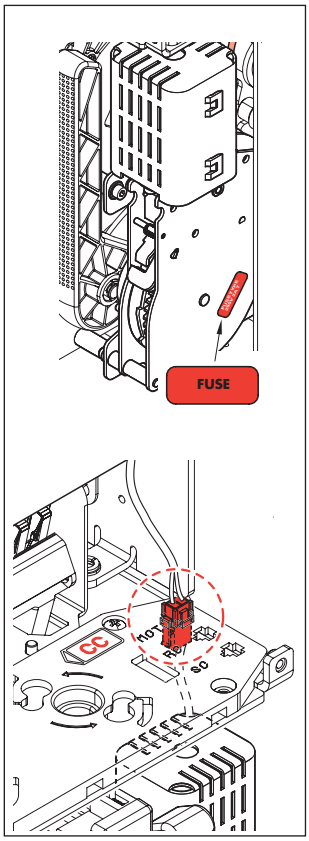
• ***Inserted/test/drawout contacts***
Check the correct working of the contacts. Check the continuity with ohmmeter:
test position: continuity between T11-T12; T21-T22; T31-T32
Inserted position: continuity between P11-P12; P21-P22; P31-P32
Draw-out position: continuity between W11-W12; w21-w22; W31-W32
If necessary replace the contacts



4.8 ECSR - Motor, UVR, CC, ST

Tools necessary:
Cross screwdriver
Lubrificant





4.8.1 ECRS-I - Functional tests

- ***Motor***

Supply the motor at Vn (terminals M1-M2)
The motor operator charge the springs and stop automatically
If motor doesn't work:
- check the connectors
- check the supply voltage
- check the fuse

If the problem is still present ➔ replace the motor drive. At the end get again the breaker in open position with springs discharged

O discharged

- ***CC***

Charge the springs

O charged

Supply the CC (C3-C4) and verify the breaker is closed. At the end get again the breaker in open position with springs discharged

O discharged

- ***ST***

Close the breaker

I discharged

Supply the ST (C1-C2) and verify the breaker is opened

- ***UVR***

Supply UVR (D1-D2): Close the breaker

I discharged

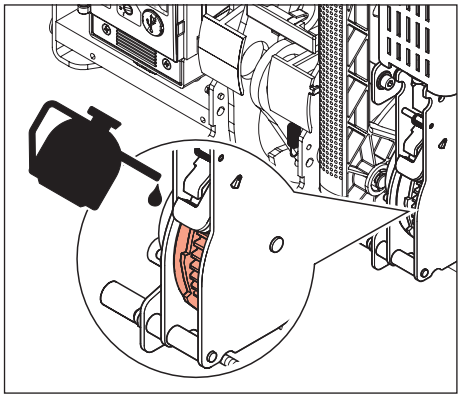
Cut off the supply of UVR and verify the breaker is opened. Let UVR without supply and verify it is not possible to close the breaker. At the end get again the breaker in open position with springs discharged

O discharged

4.8.2 ECRS-II - Lubricating of motor gear

Lubricate (Rheolube 361F) the parts highlighted in pictures.
Supply the motor and perform a cycle charge/close/open
At the end get again the breaker in open position with springs discharged

O discharged



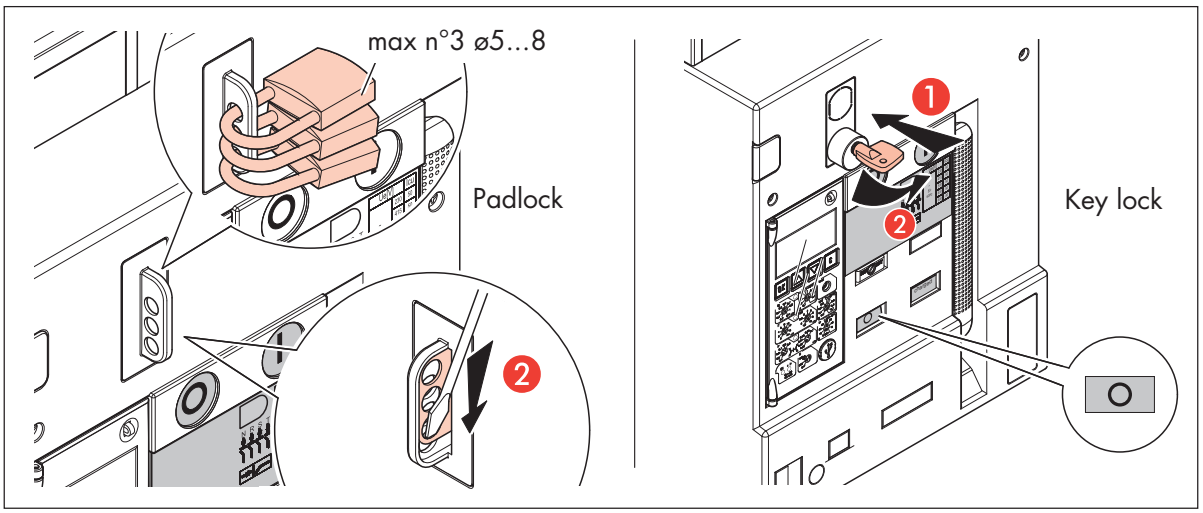
4.9 MCSR - Mechanical accessories

Tools necessary:
none

4.9.1 MCSR-I - Open position lock

- ***Functional***

- Open the breaker
- Push the open push button and activate the "open position lock"
- Verify it is not possible activate "open position lock" without open the breaker and keeping pushed the open pushbutton

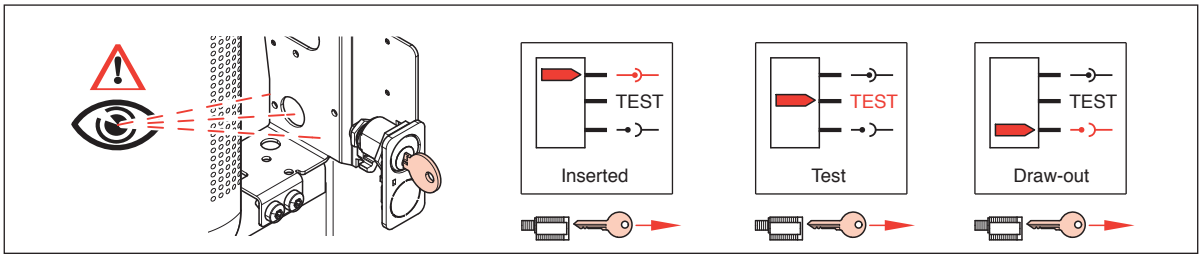


4.9.2 MCSR-II - Draw-out shutter key lock

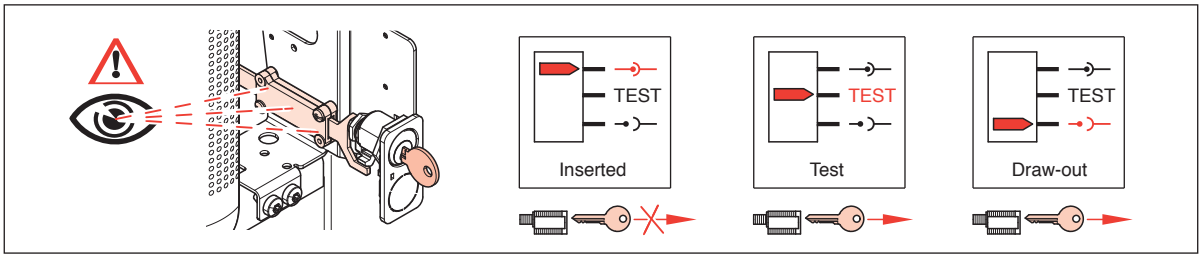
- ***Functional***

- Get the breaker in inserted position – test position – drawout position

Type A
Verify that in all position it is possible to lock the shutter and extract the key



Type B
Verify that only in TEST and Draw out position it is possible to lock the shutter and extract the key



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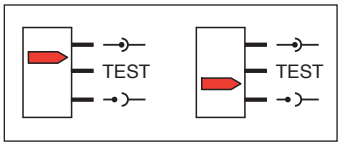
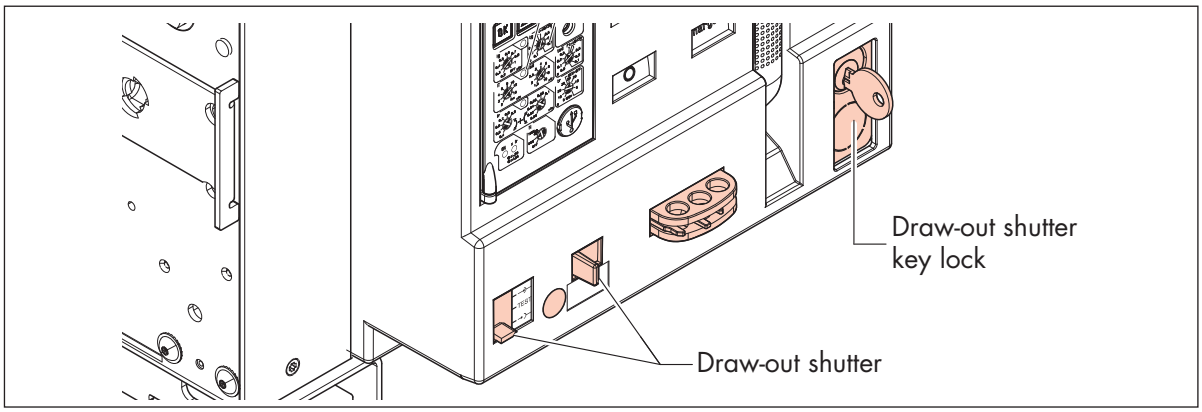
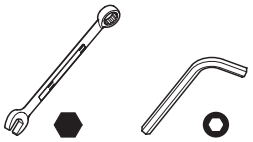
- Get the breaker in middle (not definite) position
- Verify is NOT possible close the shutter and is NOT possible close and lock the shutter and extract the key





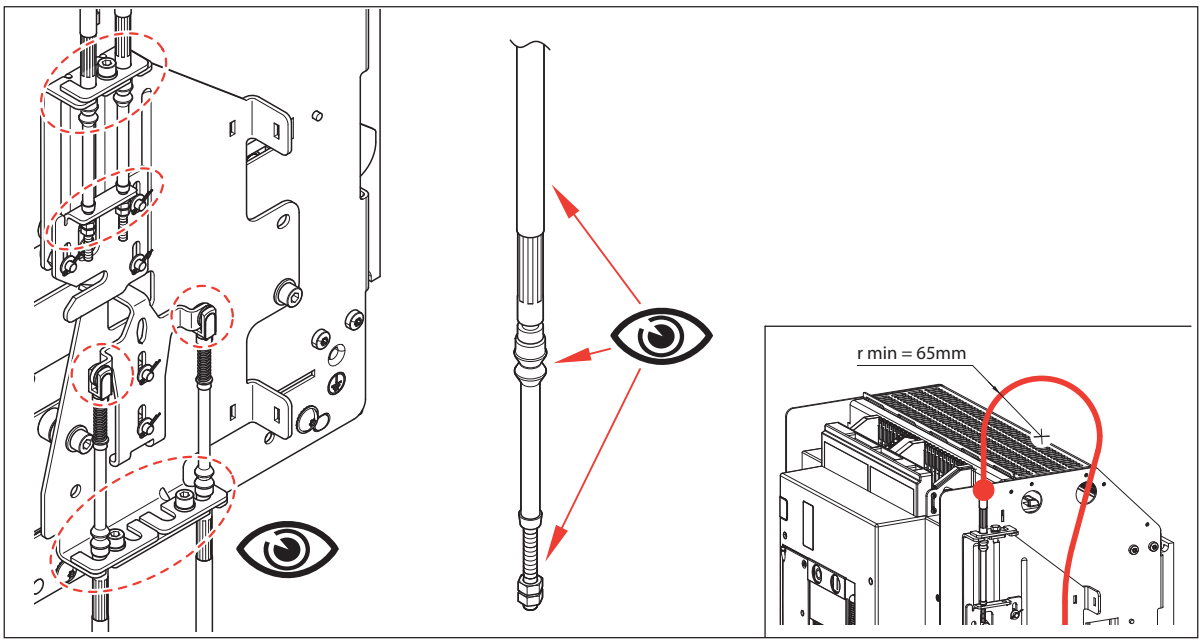
4.10 NTK - Mechanical interlock

Tools necessary:
Standard spanner n°8 - n°10
Allen key (hexagonal wrench) T5; T6
Lubricant



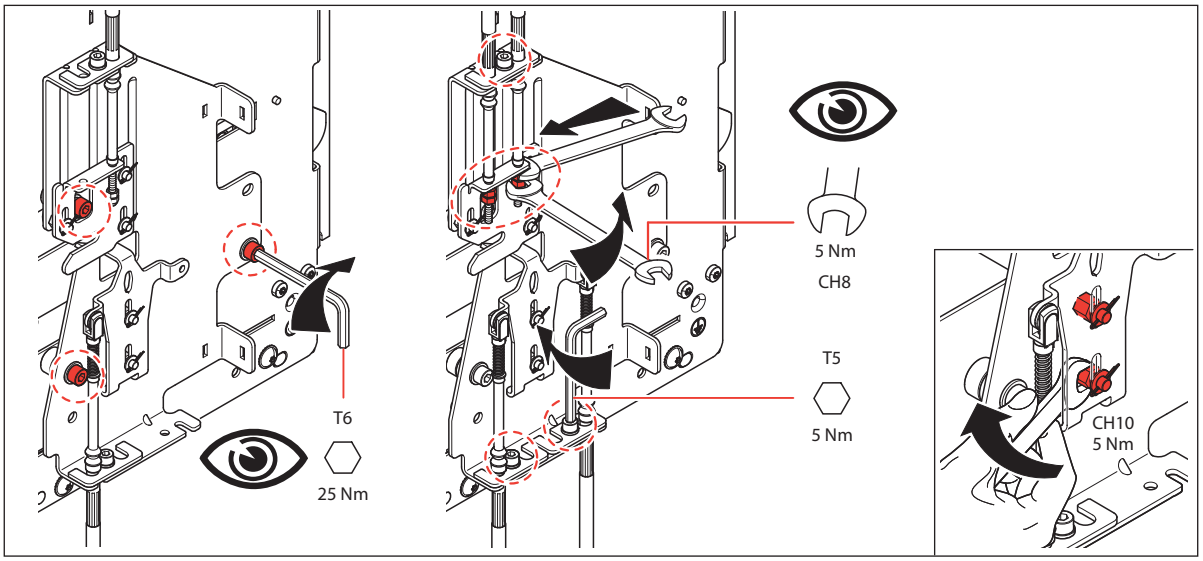
- ***Visual***

Check the right path, correct fixing and minimum radius of cables
Check the integrity of cables and their sheath



- ***Tightening check***

Check the tightening concerning fixing of mechanical interlock plate to breaker
Check the tightening of fixing of cables to mechanical interlock plate
If necessary regenerate the correct tightening torque



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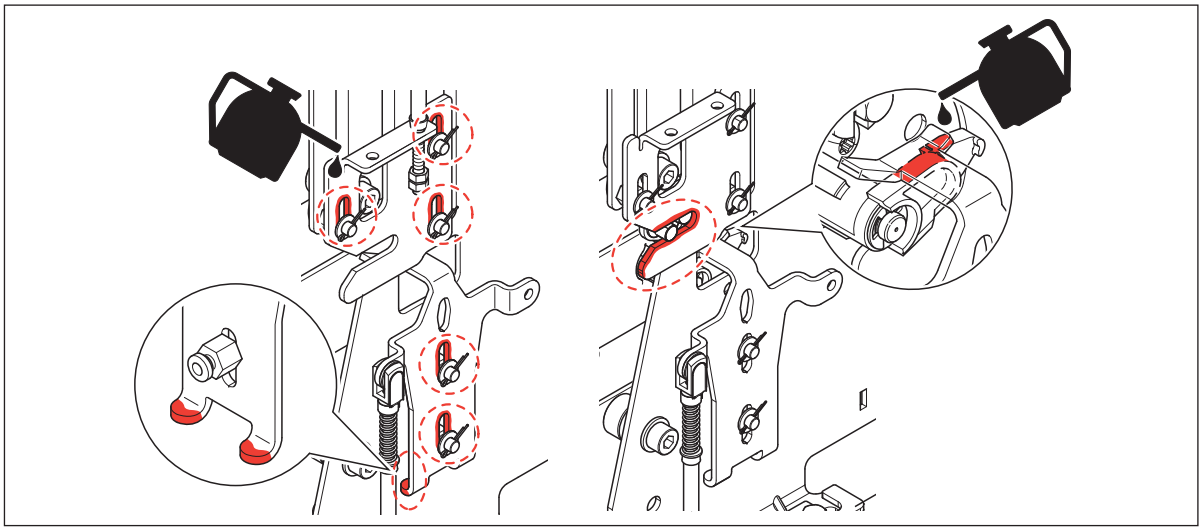
• ***Lubricating***
Clean the parts with dry cloth
Lubricate (Rheolube 361F) the parts highlighted in pictures



• ***Functional test***
Check the adjustment of mechanical interlock on the base on truth-table in pictures below.

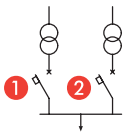
Example of interlock type A:
If one breaker is closed, the second one cannot be closed

If necessary readjust the mechanical interlock (see the mechanical interlock instruction sheet)

At the end get again the breaker in open position with springs discharged

TYPE A

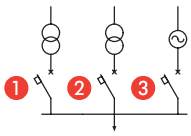
ACB 1	ACB 2
1	0
0	1



One on two.
2 supplies on the same line without parallels.

TYPE B

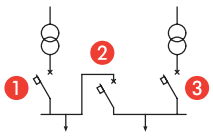
ACB 1	ACB 2	ACB 3
0	0	0
1	0	0
0	1	0
0	0	1



One on three.
3 supplies on the same line without parallels.

TYPE C

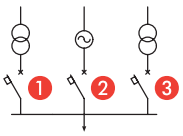
ACB 1	ACB 2	ACB 3
0	0	0
1	0	0
0	1	0
0	0	1
0	1	1
1	1	0
1	0	1



Any two on three.
2 lines can be supplied by one transformer at once or two at the same time.

TYPE D

ACB 1	ACB 2	ACB 3
0	0	0
1	0	0
0	1	0
0	0	1
1	0	1



Two on three.
2 transformers (parallel allowed) and one generator.

4.11 PRT - Trip Unit

Tools necessary:
none

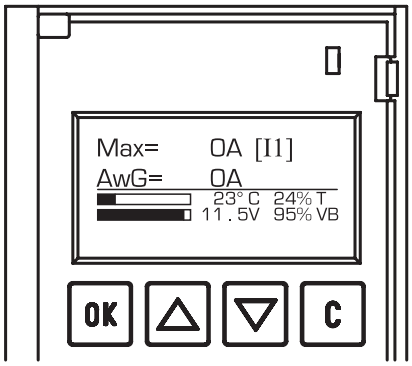
- ***Adjustments***

Check the adjustment of Protection Unit: see Protection Unit manual in order to navigate inside menu

Check that on display appear OPEN if the breaker is opened

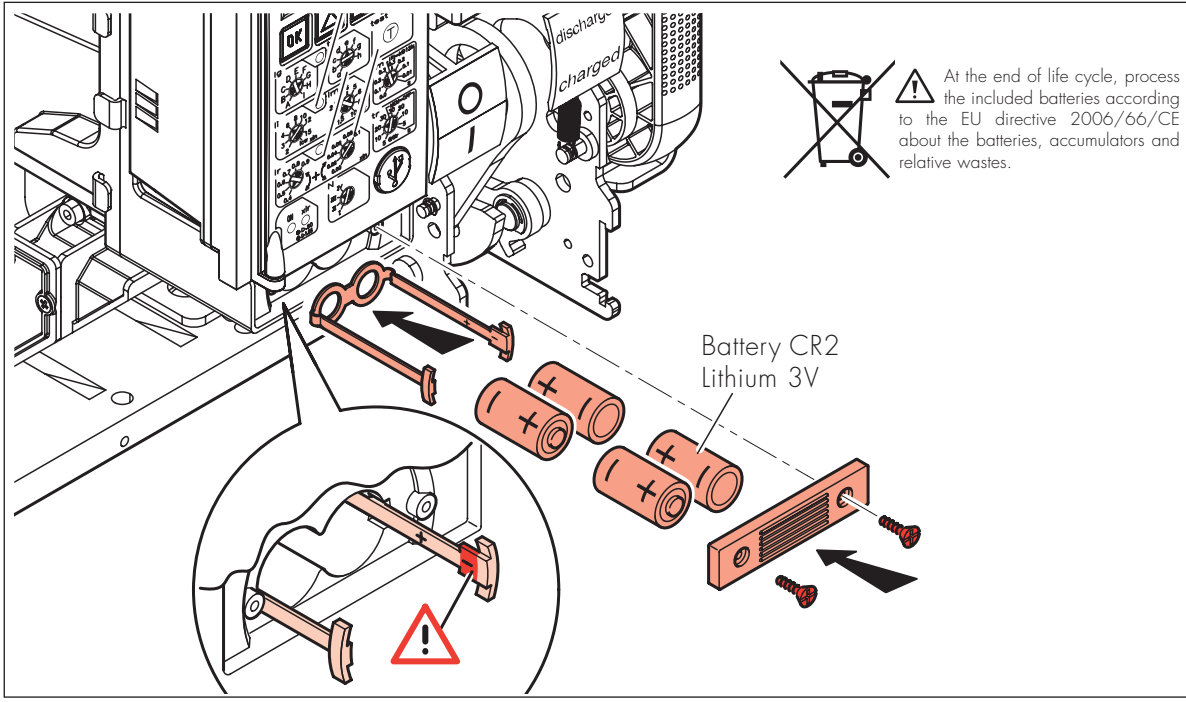
- ***Battery (if applicable)***

If on display appear "low battery" ➔ replace the battery (spare parts)



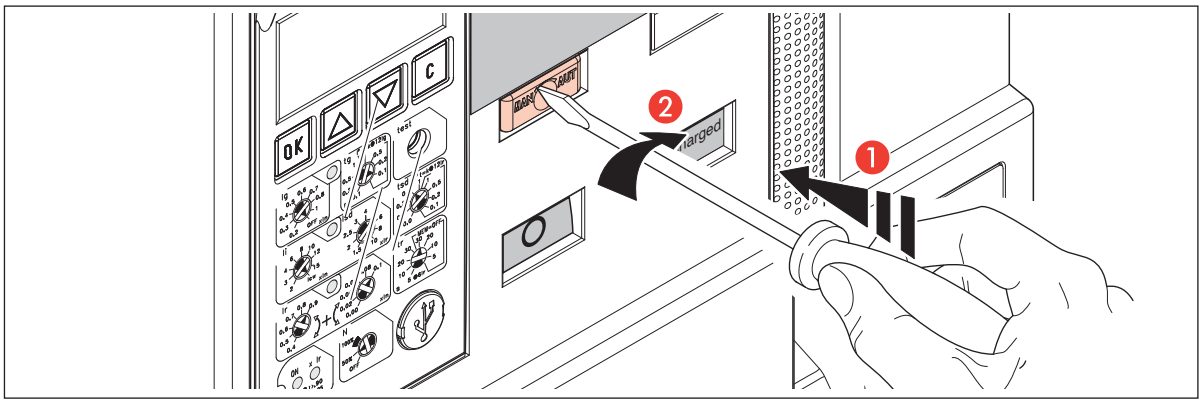
Check the level of battery
If Vb<40% ➔ get a spare battery and schedule a battery replacement

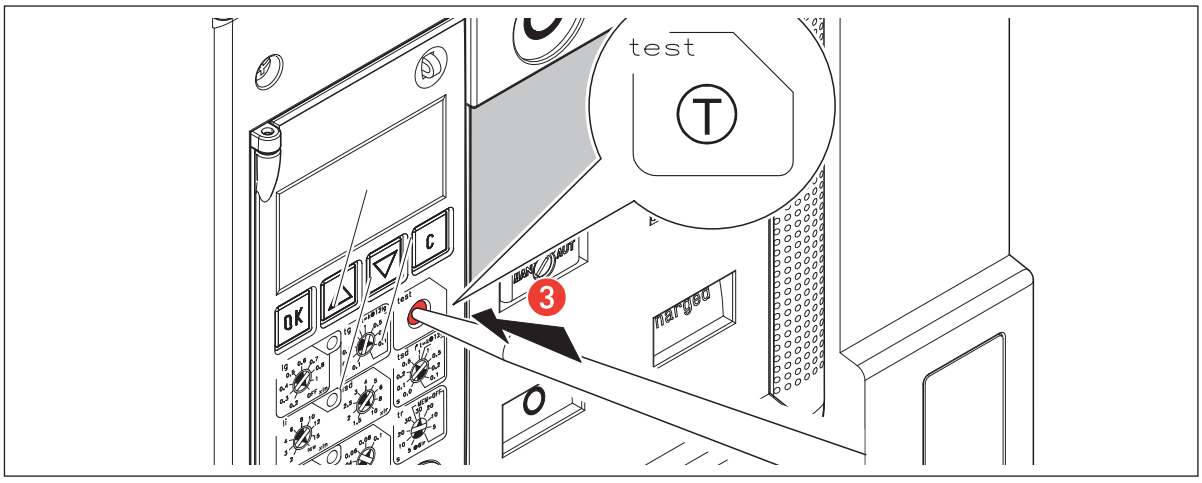
(battery replacement)



• ***Test button***

Turn on the trip Unit (push one of push buttons)
Get the reset button in position MAN
- Push the test button for more than 2 seconds
- Verify the breaker trip and appear on display "FAULT Test"
- Verify the "reset button" is came out
- Verify is not possible to switch on the breaker
- Check the trip contact: check continuity between terminals (51-54) (procedure AUX-II)
- Push the "reset button"
- Close the breaker
- Verify disappear the indication "FAULT Test"



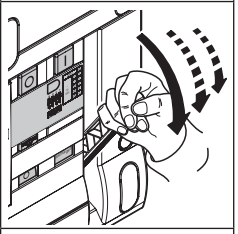
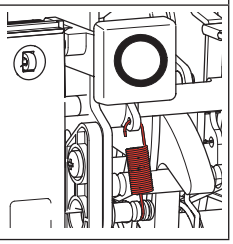


4.12 TSD - Functional test with Test device

It is possible get a more detailed check by using a specific test device:
- Complete reading of Protection Unit
- Check of trip curve
- check of mechanical efficiency of mechanism (main contacts opening and closing time)
- report concerning tests done

For further information contact LEGRAND

5. Troubleshooting

Problem	Possible causes	Checkup & resolution	Notes
It's not possible to close the breaker	Reset button is not resetted	Push the reset button	
	The mechanism is not charged	Charge the springs	
	UVR not supplied	Check its power supply circuit. If the problem persists, replace the UVR	
	Electrical interlock	Check the electrical interlock	
	Shunt trip remains energized	Check its power supply circuit	
	Closing coils remains energized	Check its power supply circuit	
	Closing coil doesn't work	Check its power supply circuit. Check the fitting on breaker seat. If the problem persists, replace the closing coil	
	Draw-out crank inserted	Extract the crank	
	Wrong fitting of contact RC-SC	Fit the accessory properly	
	The breaker is not completely inserted inside the chassis	Insert properly the breaker inside the chassis	
	OPEN position Key lock/ Padlock is enabled	Disable the key lock/Padlock	
	Mechanical interlock enabled	Check the logic of interlock	
	The spring of opening pushbutton (O) is out of seat	Get the spring on correct position	

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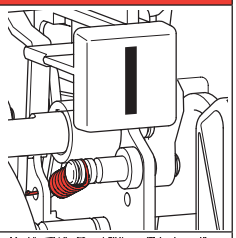
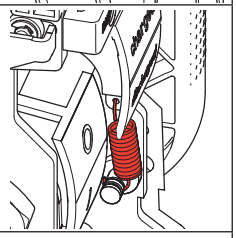
Problem	Possible causes	Checkup & resolution	Notes
It's not possible to close the breaker	The spring of closing pushbutton (I) is out of seat	Get the spring on correct position	
	The spring of "springs charging indicator" is out of seat	Get the spring in correct position	
	Mechanism jammed	Follow the mechanism maintenance procedures MCH. If the problem persists, contact LEGRAND	
It's not possible to open the breaker	Shunt trip doesn't work	Check its power supply circuit. Check the fitting on breaker seat. If the problem persists, replace the shunt trip	
	UVR doesn't work	Check its power supply circuit. Check the fitting on breaker seat. If the problem persists, replace the UVR	
	Mechanism jammed	Follow the mechanism maintenance procedures MCH. If the problem persists, contact LEGRAND	
It's not possible to electrically charge the springs	Motor operator doesn't work	Check its power supply circuit	
	The supply voltage on motor operator terminals is correct but the motor doesn't work	Check the integrity of motor operator and its protection fuse. If necessary, replace the fuse. If the problem persists, replace the motor	
It's not possible to charge manually the springs	Check the springs are not charged yet	Try to close the breaker and check the correct indication on springs charged	

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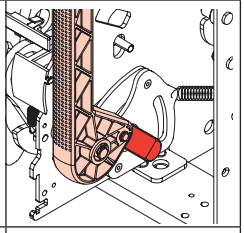
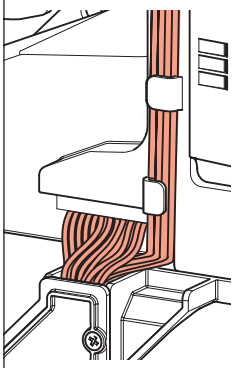
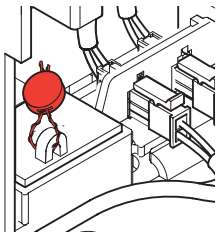
Problem	Possible causes	Checkup & resolution	Notes
It's not possible to charge manually the springs	The springs charging gear is damaged	Check the integrity of the lever and the mechanism. If necessary replace it (spare parts). If the problem persists, contact LEGRAND	
	Mechanism jammed	Follow the mechanism maintenance procedures MCH. If the problem persists, contact LEGRAND	
Unexpected trips	Trip for real overcurrent	Check the type of trip event by consulting the display of Protection Unit (if applicable)	
	Trip by UVR or Shunt Trip	Check their power supply circuit. Check UVR is supplied with V>0,85Vn	
	Wrong settings of protection unit	Set correctly the protection values of PU	
	Malfunctioning of protection unit	Contact LEGRAND	
The breaker doesn't trip in case of over-current	Disconnection between CT and trip Unit	The breaker must be able to trip by test button. Check that PU shows correct current on display. Check the connector showed in picture. If necessary connect it correctly. Check the CT integrity and if necessary replace them (spare parts)	
	Trip coil doesn't operate	The breaker must not be able to trip by test button. (if test button work, the problem is not on trip coil). Check the trip coil seal. If seal is broken or if the problem persists, contact LEGRAND	
	Defect of electronic Trip Unit	Check if PU can be turned on with correct supply. Check trip unit with test device box. If the problem persists contact LEGRAND	

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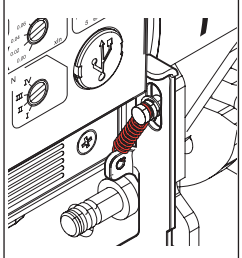
Problem	Possible causes	Checkup & resolution	Notes
It's not possible to insert the draw-out crank (shutter cannot be open)	The breaker is in closed position (I)	Open the breaker	
	Shutter lock (keylock or padlock) is enabled	Disable the shutter lock	
The draw-out crank doesn't rotate: it's not possible to extract the breaker	Draw-out mechanism faulty or damaged	Check the integrity of the draw-out mechanism following the mechanism maintenance procedure DWT-VI. If necessary, change draw-out kit.	
Keylock/ padlock in OPEN position doesn't work: it's possible to close the breaker even if the lock is enabled	In case of padlock, check the minimum cross section permitted (refer to instruction sheet)	Use a proper padlock	
	The keylock is not fitted properly	Fit the accessory properly as showed on instruction sheet	
	The keylock has some part broken or damaged	Replace the keylock	
The draw-out shutter keylock/padlock doesn't work: it's possible to open the shutter even if the lock is enabled	In case of padlock, check the minimum cross section permitted (refer to instruction sheet)	Use a proper padlock	
	The keylock is not fitted properly	Fit the accessory properly as showed on instruction sheet	
	The keylock has some part broken or damaged	Replace the keylock	
It's possible to open the draw-out shutter even if the breaker is in closed position.	Shutter damaged	If necessary change draw-out kit	
	The spring of vertical sliding plate (highlighted on picture) is out of seat	Bring the spring back in correct position	

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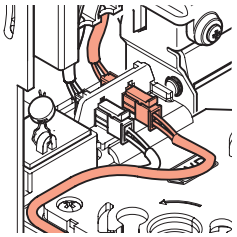
Problem	Possible causes	Checkup & resolution	Notes
The breaker doesn't trip by pushing of trip test button "T"	The breaker is already opened	Close the breaker.	
	The O/C connector for PU is disconnected	Connect the OC connector	
	Trip coil doesn't work	Check the trip coil seal. If the seal is broken or if the problem persists, contact LEGRAND	
	Defect of electronic trip unit	Check the power up of the protection unit. Check trip unit with test device box. If the problem persists contact LEGRAND	

If problem cannot be solved with indications in troubleshooting table, contact LEGRAND.

Note

Note

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