

Estates and Facilities Alert

IMMEDIATE ACTION

Ref: EFA/2011/004 (UPDATE)

Issued: 22nd December 2011

Device

High-Voltage (HV) 11KV Switchgear –
Schneider Electric (Merlin Gerin) Ringmaster
RN2c, RE2c and RN6c ring main units

UPDATE to EFA/2011/ 004



Problem

- Potential failure of the Merlin Gerin Ring Main Unit to isolate and Earth as shown on the position indicator window.
- Cable can still be **LIVE** even when switching indicator shows the switch gear in each the positions OFF and EARTH ON.

Action by

Managers and staff responsible for the procurement, supply, maintenance and asset management of the electrical HV infrastructure and the operating (switching) of electrical High-Voltage equipment.

Action

The advice given in EFA/2011.004 **is still in force** but has been supplemented by guidance information from Merlin Gerin/Schneider.

Estates staff with MG Ringmaster type RN2c, RN6c and RE2c should follow the guidance in the attached Safety Notice.

If identified as suspect it will be necessary to follow the advice in the attached Safety Notice dated 16/12/11, the guidance document titled Ringmaster Compact Ringswitch Mechanism Drive Bolt Inspection Medium Voltage Division Leeds and to confirm receipt of the Safety Notice

Contact

Schneider Electric
Neil Broadley
Phone: 01132903761

neil.broadley@schneider-electric.com
Address: 123 Jack Lane, Leeds, LS10 1BS,

Problem

1. An incident occurred on the 11th October 2011 involving a Ringmaster RN2c ring main unit on the Scottish Power distribution network which also affects the RE2c and RN6c Merlin Gerin Ringmaster ring main units.
2. Work was being carried out on an overhead cable connected to a Ringmaster RN2c main switch. The switch was operated from the Main ON position through to OFF then to the Earth ON position. [The main electrical contacts inside the switching chamber had remained in the Main ON position whilst the operating mechanism and the position indication had changed through to OFF and through to the Earth ON position]. When the line was subsequently tested before being earthed it was found to be **LIVE**.
3. A bolt had failed and fallen out of the mechanism that connects the output of the mechanism to the drive shaft that controls the movement of the electrical contacts inside the switching device.
4. EFA 2011.004 was issued on 29 November 2011 to give guidance to NHS staff on action to be taken. **This is still in force but note that the contact details have changed on this update.**

Action

5. Estates staff with MG Ringmaster type RN2c, RN6c and RE2c should check the serial numbers of their equipment against the range of suspect units identified in the Product Safety Notice PSA 111201-318 .
6. If identified as suspect it will be necessary to follow the requirements in the Safety Notice, the guidance document titled "Ringmaster Compact Ringswitch Mechanism Drive Bolt Medium Voltage Division Leeds" and to complete the confirmation of receipt of the Product Safety Notice.
7. Estates staff should ensure their Authorised Persons (HV), their HV maintainers and Merlin Gerin liaise to carry out the necessary works at the earliest opportunity. This is unlikely to be until late January 2012
8. **At each site EFA 2011.004 can only be cancelled once all actions identified in this EFA 2011.004 (UPDATE) have been completed.**

Suggested Onward Distribution

- Risk Manager
- Estates Directors,
- Facilities Directors,
- Primary Care organisations
- HV service providers
- Ambulance Stations,
- All Maintenance Estates Managers
- HV Authorised Persons (AP)
- Director of Estates and Facilities

Additional information for Northern Ireland

The above sections of this Alert were compiled by NHS Wales Shared Services Partnership – Facilities Services.

Action required by this alert should be **underway by: 6th January 2012**
Action required by this alert should be **completed by: 27th January 2012**

Enquires should quote reference number EFA/2011/004 Update and be addressed to:

Northern Ireland Adverse Incident Centre (NIAIC)
Health Estates
Estate Policy Directorate
Stoney Road
Dundonald
Belfast
BT16 1US

Tel: 02890 523868
Fax: 02890 523900
E-mail: NIAIC@dhsspsni.gov.uk
Website: <http://www.dhsspsni.gov.uk/niaic>

How to report adverse incidents

Incidents relating to medical devices, estates equipment and plant in Northern Ireland must be reported to the Northern Ireland Adverse Incident Centre (NIAIC) as soon as possible. Further information about reporting incidents can be found in DB(NI)2010-001; and downloadable report forms are available from the NIAIC's website (<http://www.dhsspsni.gov.uk/niaic>).

Alternatively, further information and printed incident report forms are available from: NIAIC at the address above.
(An answer phone service operates outside normal office hours)

Estates and Facilities Alerts are available in full text on the NIAC website
Further information about SABS can be found at <http://sabs.dhsspsni.gov.uk>

This Alert can be found on the following websites
<http://www.dhsspsni.gov.uk/niaic> and <http://sabs.dhsspsni.gov.uk>

DATE: 16/12/2011

TO: Contractors or Purchasers of Schneider Electric Ringmaster ring main unit Switchgear

FROM: Mr. Neil Broadley

SUBJECT: Ringmaster RN2c, RE2c and RN6c ring main unit, manufactured between 17 November 2006 and 31 October 2009.



DELIVER IMMEDIATELY TO THE RESPONSIBLE PERSON IN YOUR ORGANIZATION

Product Safety Notice Reference Number: PSA-111201-318

Schneider Electric UK has become aware of a potential operational issue with the Ringmaster ring main unit manufactured between 17 November 2006 and 31 November 2009.

Operational issue

The Ringmaster ring main unit is comprised of two load break switches and a tee-off circuit breaker. We have become aware of a potential issue with the operation of the load break switches where it is possible for the mechanical drive between the operating mechanism and the main contact drive shaft to become disconnected. Consequently, the operation of the mechanism and its position indication may not represent the position of the main electrical contacts inside the switching device. Should this occur and standard industry de-energization practice is not followed, the potential for **Death, Serious Personal Injury and/or Property Damage** exists.

Dates of manufacture of affected Ringmaster

Our investigation has determined that equipment manufactured between 17 November 2006 and 31 November 2009 is affected with serial numbers between 100204905 and 100811684.

Serial number of affected Ringmaster

We ask that you check your records to confirm if you have any Ringmasters in the date or serial number range given above and identify their location which will help to speed up the intervention programme when we validate the recommended corrective action.

Recommended additional action for safe operation

If you are required to operate a Ringmaster ring main unit then we recommend that you read and follow the advice below.

It is your duty to always follow Governmental, Local and Industry electrical safe workplace regulations and practices. We are urgently developing the appropriate corrective action, but until it is available we recommend the following action is followed by all persons who are required to operate any Ringmaster ring main unit in the affected period of manufacture.

1. Use a properly rated voltage and reliable sensing device to confirm the switch contacts are open.
2. Ensure that a safety earth is applied to both ends of a cable that is connected to one or more Ringmaster ring main units,
3. In situations where 2 earth connections cannot be applied, e.g. direct cable connection to a transformer or on radial circuits, a separate and additional HV Point of Isolation (POI) shall be established at another location on the network to ensure there is no safety risk following the potential failure of a single Ringmaster ring switch.

In addition, it is possible to quickly and easily check that the ring switch mechanism is operating correctly by carrying out a simple visual check of the mechanism before and after each operation.

If the Ringmaster is fitted with a motorpack that is used in a remote operation network control scheme, the remote operation facility must be disabled during this inspection and preferably the motorpack should be removed until the Ringmaster has been repaired.

Details of the visual check are explained in the attached document.

Recommended action if you have identified a suspect Ringmaster

If you suspect you have a Ringmaster where the mechanism and indication is disconnected from the main drive shaft and the internal contacts - Do Not operate the Ringmaster and contact the local Schneider office or your local contact person.

Future corrective action

We will contact you again when our recommended corrective action is available including advice on how to arrange for the corrective action to be carried out.

Details of Ringmaster products not affected

This Safety Notice **DOES NOT** apply to the following equipment,

1. Ringmaster RN2c, RN6c and RE2c **tee-off circuit breaker** manufactured between 2000 to 2011
2. Ringmaster RMR single function switch and circuit breakers type CE2, CE6, CN2 and SN6 manufactured between 1996 to 2011
3. Ringmaster type RN2 all types manufactured between 1991 and 2000.

If you are not the actual user of this equipment or have sold the equipment to a third party we request that you immediately forward this notice to the organization or persons to whom you sold this equipment for them to take immediate action.

If you forward this notification to a third party we ask that you notify us to whom you have passed this notification to enable us to contact them and follow up regarding this notification.

We regret any concern and inconvenience that this Product Safety Notice may cause you or your customers.

If you have any questions about this Product Safety Notice please contact your local Schneider Electric office.

In the meantime we ask that you confirm in writing that you have received this Product Safety Notice and are preparing to take the appropriate action to prevent the risk of personal injury or property damage.

Please sign and date the attached form and send an original copy to the writer.

Regards,

Neil Broadley
Quality Manager
Schneider Electric Ltd
123 Jack Lane,
Hunslet
Leeds
LS10 1BS

Telephone No : +4411329033761
Email : neil.broadley@schneider-electric.com

Enclosures:

1. Reply slip
2. Description of visual inspection before and after operation

Title
Ringmaster Compact Ringswitch Mechanism Drive Bolt Inspection Medium Voltage Division Leads

Introduction

The inspection procedure applies only to **Ringmaster type RN2c, RN6c and RE2c** that were manufactured from 17 November 2006 to 31 October 2009 with serial numbers between 100204905 and 100811684.

This procedure does not apply to Ringmaster type RN2c, RN6c and RE2c outside these dates of manufacture or serial number range.

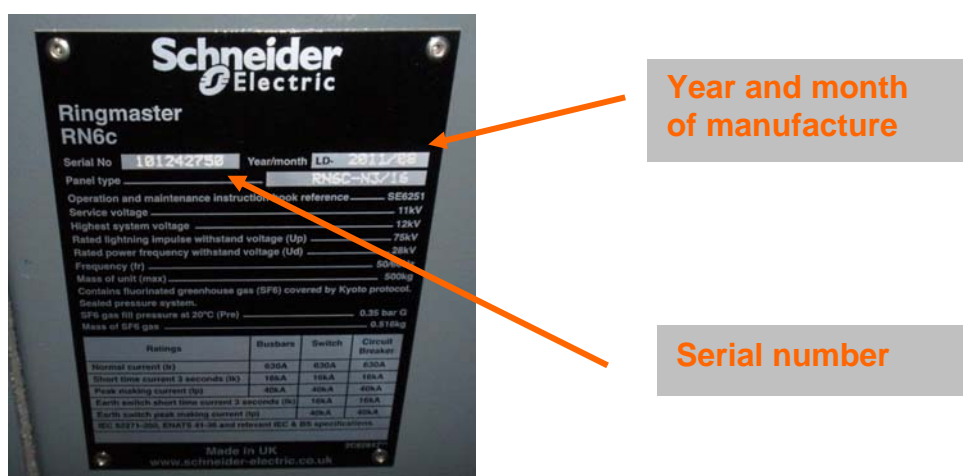
This procedure applies only to the inspection of the ring switches. We recommend this procedure is carried out BEFORE AND AFTER each operation of one or both of the ring switches.

The date of manufacture and serial number can be found on the product data plate on the front of all the Ringmaster ring main units. Refer the photo below.

IMPORTANT: If a Motorpack has been fitted it must be switched OFF in the RTU before this inspection is carried out.

We recommend that the Motorpack is left switched OFF to prevent the Motorpack from being remotely operated until the Ringmaster has been repaired.

It is recommended to check both RSW1 (left hand) and RSW2 (right hand) ring switch at the same time even if it is only required to operate one of the ring switches after the inspection.



Data plate on the LV cabinet of the Ringmaster



Title
Ringmaster Compact Ringswitch Mechanism Drive Bolt Inspection Medium Voltage Division Leads

1. Health, Safety & Environment

This inspection can be carried out whilst the equipment is still energized. None of the external covers are being removed and NO MANUAL OPERATION shall be carried out during the inspection.

We recommend that only one person carries out the inspection at any one time and wears the appropriate Personal Protective Equipment required to enter an electrical substation.

2. Tools

	
Telescopic Mirror	Torch

3. Parts to be Inspected

Ref	Part Number	Description	Qty
1	4807713**	M8X60 CAP HD Bolt	2
2	2C83144**	SPECIAL NUT M8X12 Long	2
3	2C83128**	Drive Spacer (26.5mm Long)	2

		
M8 x 60mm cap head bolt	Drive spacer	Special nut

Title
Ringmaster Compact Ringswitch Mechanism Drive Bolt Inspection Medium Voltage Division Leeds

4. Inspection of Ringmaster as described below

4.1 Ringmaster ring main Unit



4.2 Ringswitch I and 2

Do not operate the either of Ringswitch mechanisms from their current service position



4.3 Open the LV cabinet and search for loose pieces of hardware in all accessible locations



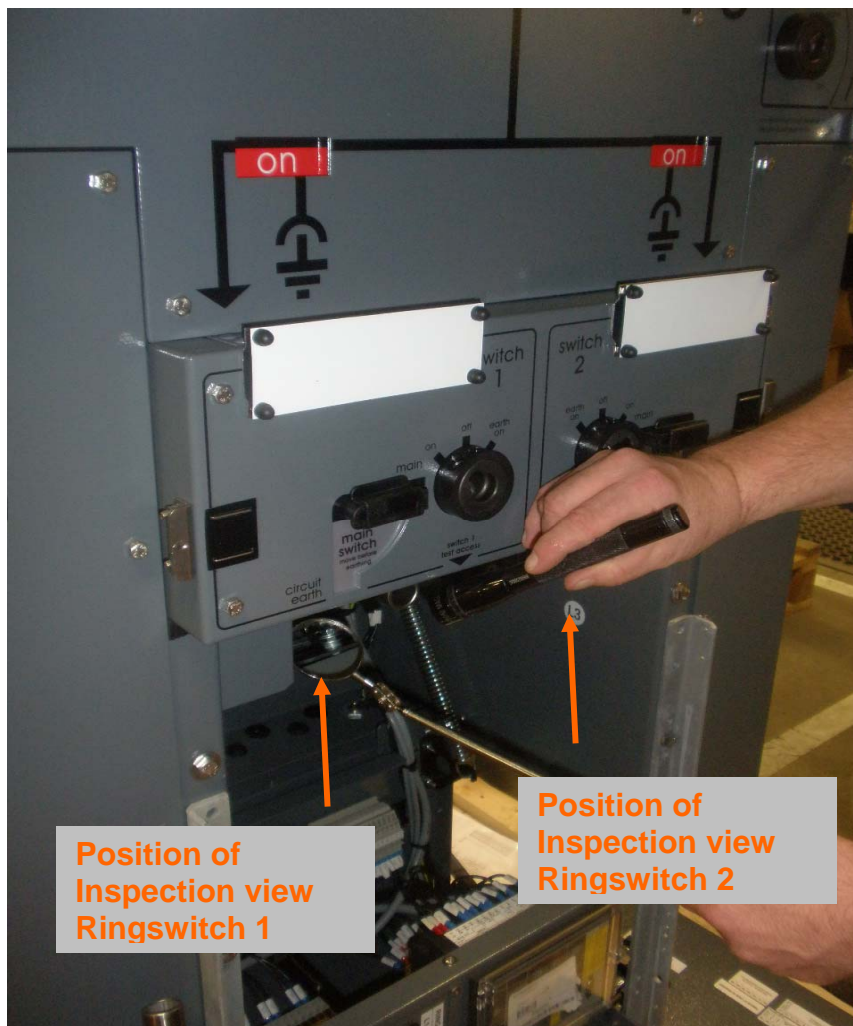
Title

Ringmaster Compact Ringswitch Mechanism Drive Bolt Inspection
Medium Voltage Division Leads

4.4 Check the parts to be inspected are still correctly located in Ring switch 1 drive shaft using a mirror and torch

4.5 Repeat the check for the correct location of hardware on Ring switch 2

If any of the parts to be inspected described below cannot be seen or is not in the positions shown in the photos STOP and DO NOT operate the Ringmaster.

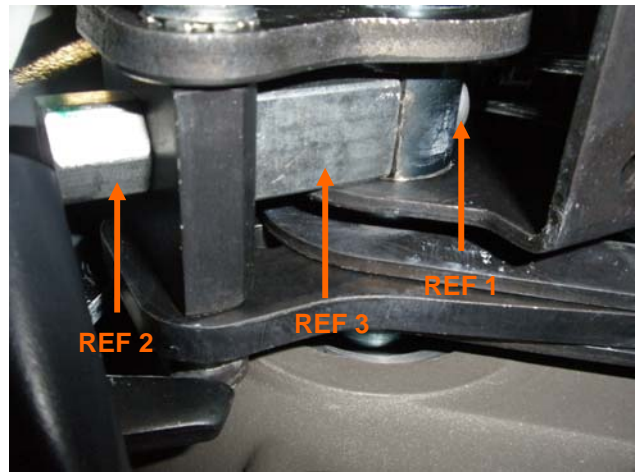


Title
Ringmaster Compact Ringswitch Mechanism Drive Bolt Inspection Medium Voltage Division Leads

4.6 RSW1 Service position **Main selected**
Main ON



4.7 Correct view of hardware **Main selected**
Main ON

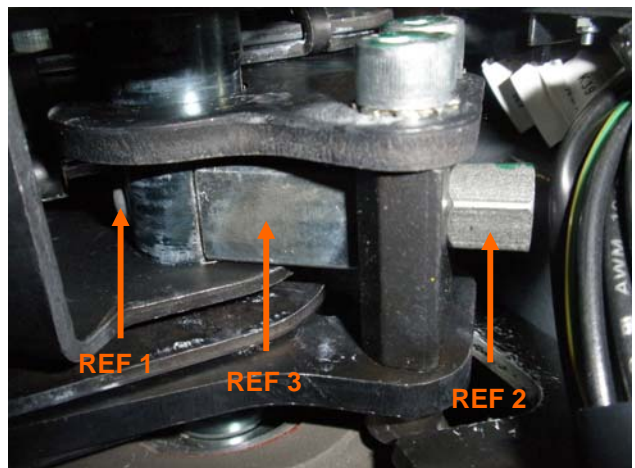


Main ON

4.8 RSW2 Service position **Main selected**
Main ON



4.9 Correct view of hardware **Main selected**
Main ON



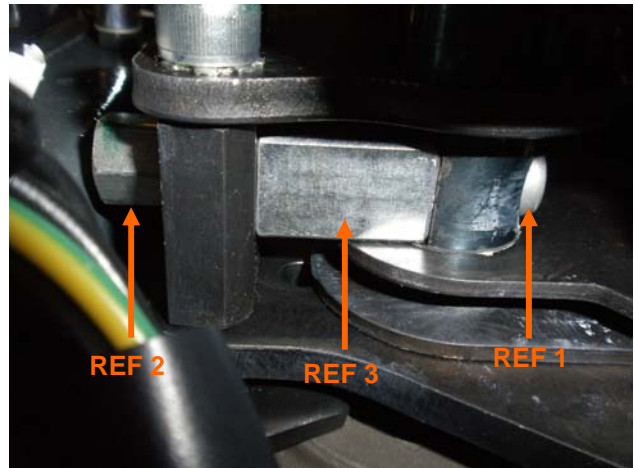
Main ON

Title
Ringmaster Compact Ringswitch Mechanism Drive Bolt Inspection Medium Voltage Division Leads

4.10 RSW1 Service position **Main selected OFF**



4.11 Correct view of hardware **Main selected OFF**

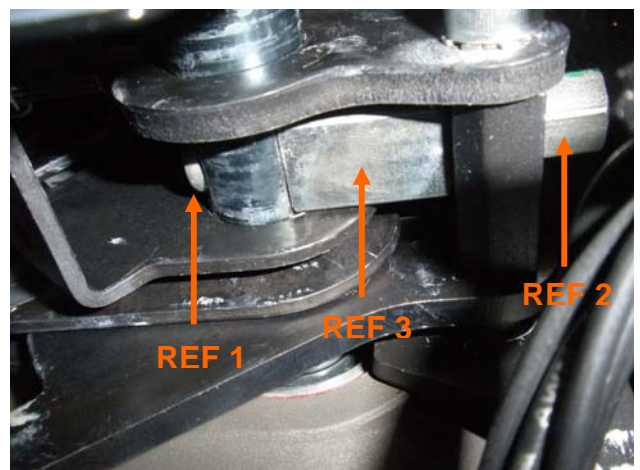


OFF

4.12 RSW2 Service position **Main selected OFF**



4.13 Correct view of hardware **Main selected OFF**



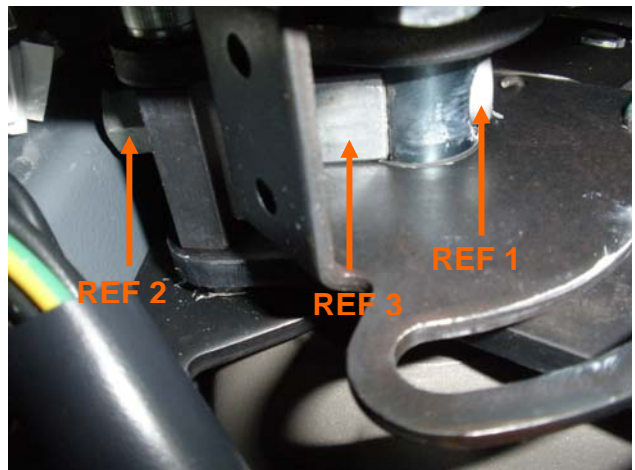
OFF

Title
Ringmaster Compact Ringswitch Mechanism Drive Bolt Inspection Medium Voltage Division Leads

4.14 RSW1 Service position **Earth selected OFF**



4.15 Correct view of hardware
Earth selected OFF

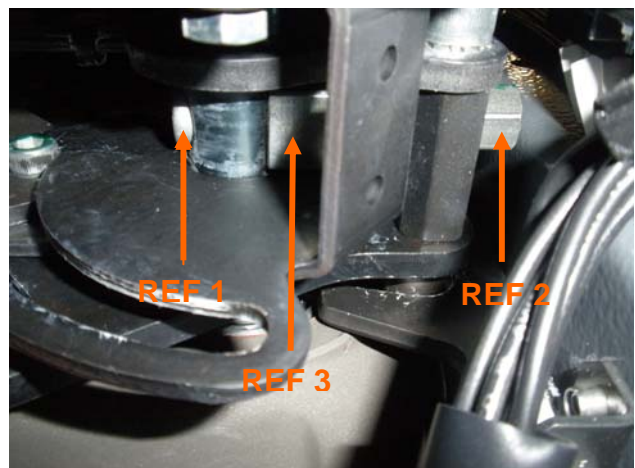


OFF

4.16 RSW2 Service position **Earth selected OFF**



4.17 Correct view of hardware
Earth selected OFF



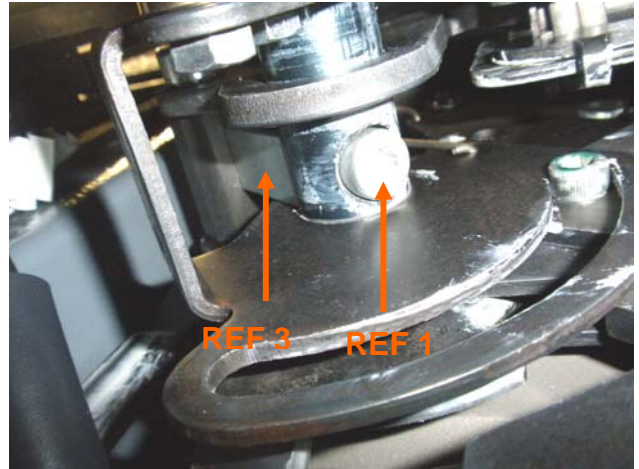
OFF

Title
Ringmaster Compact Ringswitch Mechanism Drive Bolt Inspection Medium Voltage Division Leads

4.18 RSW1 Service position **Earth selected**
Earth ON



4.19 Correct view of hardware
Earth selected Earth ON

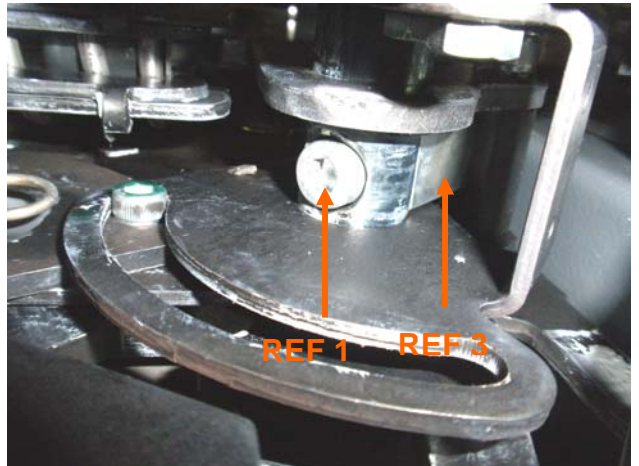


**Earth
ON**

4.20 RSW1 Service position **Earth selected**
Earth ON



4.21 Correct view of hardware
Earth selected Earth ON



**Earth
ON**

Title
Ringmaster Compact Ringswitch Mechanism Drive Bolt Inspection Medium Voltage Division Leads

5.0 After the inspection has been carried out the LV cabinet door should be closed.

WARNING - IF THE PARTS TO BE INSPECTED ARE NOT FOUND IN THE CORRECT LOCATION THE RINGMASTER MUST NOT BE OPERATED.

Please follow the instructions in the Ringmaster Product Safety Notice for further action to be taken.

Confirmation of Receipt of Product Safety Notice

Ringmaster ring main unit PSA-111201-318

Please fill in this form and:

Mail to: Schneider Electric
Neil Broadley
+441132903761
Schneider Electric Office
123 Jack Lane,
Leeds, LS10 1BS,
West Yorkshire,
United Kingdom

Fax to: **OR**
Neil Broadley
+1132903710

Email to: **OR**
neil.broadley@schneider-electric.com

Your name, company name and address: _____

Telephone or email address: _____

Please tick one or several boxes:

We have received the Notice and will follow the recommended action for all Ringmaster manufactured between 1st November 2006 and 31st November 2009

If you suspect that you have found a Ringmaster with a disconnected mechanism to drive shaft you will contact the local Schneider office and advise what you have found

If any Ringmaster was sold or installed at your customer(s) site below please confirm that you have sent a copy of this Notice to each customer.

This Product Safety Notice does NOT affect me, therefore please remove me from your mailing list

I, the undersigned, confirm that we (company which purchased the equipment) have been informed of the PSA 111201-318, referring to the Schneider Electric Ringmaster Products.

I understand that I have the responsibility to inform my company's customers who have purchased the Schneider Electric Ringmaster product, within the notification period.

Name _____ Signature _____

Schneider Electric will support you as best as practicable through this period and you are welcome to contact your local Schneider Electric office who will be happy to help you.

Confirmation of Receipt of Product Safety Notice

Ringmaster ring main unit PSA-111201-318

If you would prefer that we contact your customers, please provide their details below.
Please attach additional sheets if required.

Company Name	Company Name
Contact/Phone #	Contact/Phone #
Street	Street
City	City
Country & Postal Code	Country & Postal Code

Company Name	Company Name
Contact/Phone #	Contact/Phone #
Street	Street
City	City
Country & Postal Code	Country & Postal Code