High Voltage 11 kV electricity distribution equipment: Reyrolle Switchgear RO(ROKSS, ROS, ROK and ROSSS) and RM(RMS and RMK)
Potential problem with test plug access cover.
Safety Notice 98/06

High Voltage 11 kV electricity distribution equipment: Reyrolle Switchgear type RO(ROKSS, ROS, ROK and ROSSS) and RM(RMS and RMK)

INTRODUCTION

1. THE CONTENTS OF THIS NOTICE ARE TO SECURE COMPLIANCE WITH THE HEALTH & SAFETY AT WORK ETC ACT 1974.

2. This Notice is for the attention of Commanding Officers, Chief Executives, Heads of Establishment, Property Managers, Defence Land Agents, Establishment Works Consultants (EWCs), Works Services Managers (WSMs), Authorising Engineers, Authorised Persons and Contractors, involved in works for MOD.

3. This Notice is to be read by all persons involved with any works associated with the equipment that is the subject of this Notice.

4. No work involving expenditure on an MOD account is to be carried out without authority from the Property Manager or the appropriate MOD officer for that location or facility.

5. Any work required as a result of this Safety Notice must be carried out in accordance with MOD Safety Rules and Procedures as applicable.

6. The Co-ordinating Authorised Person, or other responsible person, is to notify the Property Manager:

   of the location of any equipment which exists on the Establishment and is the subject of this Notice as soon as it has been identified;
   
   and
   
   when the relevant modifications are completed, that the appropriate remedial action has been carried out.

7. Defects are to be immediately reported to the Property Manager and the applicable Authorising Engineer who must impose appropriate operating restrictions on the equipment that is the subject of this Notice, until remedial action is completed.

8. For MOD Establishments occupied by United States Visiting Forces (USVF), the responsibilities of Property Manager, EWC and WSM are jointly held by the USVF and DEO(USF). At base level this jointly managed organisation is to take appropriate action to implement the contents of this Notice. Where this Notice contains procedures which differ significantly from USVF practice, a DEO(USF) Code of Practice section will be issued.
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REQUIREMENT

9. ACTION ADDRESSEES ARE TO ENSURE THAT THE INFORMATION CONTAINED WITHIN THIS SAFETY NOTICE IS PASSED TO THEIR PROPERTY MANAGERS OR OTHER RESPONSIBLE OFFICERS WITHOUT DELAY.

No persons are to be permitted to undo any test spouts cover on this equipment (as detailed below) whilst any part of the switchgear is live until the manufacturer's recommended modification has been carried out, and the operational restriction has been lifted by the Authorising Engineer, or other responsible person.

RECOMMENDATION

10. A modification kit for the test spouts cover retaining bolt should be obtained direct from Reyrolle Switchgear Ltd. Full details can be found at Annex A, with prices at Annex B.

BACKGROUND

11. An Electricity Association Notice has been received advising of a suspension of operating practice due to a steel spacer from the test spouts cover securing bolt becoming displaced and dropping to the inside of the main switch tank of an item of Reyrolle Switchgear. This can occur on the following types: RO(ROKSS, ROS, ROK and ROSSS) and RM(RMS and RMK).

12. This Notice is unlikely to have any significant impact on the MOD Estate since it is MOD policy not to carry out any test procedures with the switchgear tank live unless extremely exceptional circumstances exist which makes such test procedures impracticable.

13. The offending steel spacer is a sleeve which fits over the screwed portion of the test spouts cover securing bolt. It is used to ensure that when the test spouts cover is screwed down, the sealing gasket is not over compressed. The spacer is a slide fit on the bolt and is normally retained by a fibre or spring washer.

14. Under some circumstances, the retaining washer can become displaced, allowing the spacer to slide off the end of the bolt, and then, possibly, down the test spouts into the tank. Once this happens, the spacer has to be retrieved from inside the tank before the switchgear can be powered.

15. In order to avoid this occurring in the future, Reyrolle are producing a modified spacer arrangement, which uses a threaded sleeve and circlip arrangement.
16. Full details of this are attached at Annexes A and B, but for further information, contact Mr Terry Wood (Product Manager) on direct dial tel: 0191 401 5453.
METHOD STATEMENT FOR REPLACEMENT OF TOP COVER FIXING
:- RO/RM SWITCHGEAR

The top covers above any feeder switch, fuse switch or transformer switch are interlocked to prevent being opened unless the associated switch is at the EARTH ON position. In addition to this interlock the top covers are locked in position by a padlock and a captivated screw assembly.

This captivated screw assembly comprises of a Dubo sealing ring, a standard M10 Hex. Hd. x 40mm long screw (threaded the full length), a distance piece (with a nominal clearance hole) and a fibre washer which is used to captivate the assembly in the top cover.

Because the existing screw is threaded full length, the washer could in certain circumstances, move up and down the screw. If the washer becomes detached the screw and distance piece becomes detached.

We have therefore produced an improved arrangement which eliminates this possibility, enabling the assembly to be replaced by a revised type 981A1196 during scheduled maintenance.
FITTING OF REVISED TYPE TOP COVER SCREW ASSEMBLY 981A1196.

CAUTION
Before carrying out any inspection, maintenance or retro fit work ensure the unit is completely isolated from any electrical supply and that all the cables and busbars are earthed in accordance with the supply authorities regulations.
To EARTH the cable or transformer see Section 8.4 of IOMS 929.

1) Remove top cover padlock.

2) Unscrew the M10 top cover fixing: Taking care distance piece does not become detached unintentionally.

3) Lift cover and engage stay.

4) Cover the test access orifices with a clean non fluffy cloth.

5) Remove captivating fibre washer from screw: Washer may be held with pliers and screw rotated.

6) Replace with new top cover fixing assembly as follows:
   a) Fit new DUBO sealing ring to screw 981A1194.
   b) Position screw through hole in cover and screw on distance piece 981A1195 on to plain portion of screw.
   c) Carefully screw circlip on to screw 981A1194 until circlip fits onto plain portion. As the circlip will be a tight fit on the thread, a fine screw driver may be used to assist assembly.

   NOTE. CIRCLIP MUST NOT BE OVER-STRESSED
   This can be checked by attempting to unscrew the distance piece from the screw assembly which should now be locked in place. IF IN DOUBT REPLACE CIRCLIP.

7) Check top cover gasket is sound and correctly positioned.
   Replace if necessary.

8) Remove cloth from orifices.

9) Close top cover. Screw down and padlock.

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#### Table: Part of Drawing Number 961A1196

<table>
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<tr>
<th>No.</th>
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<tr>
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</tr>
<tr>
<td>2</td>
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<td>1</td>
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<td>3</td>
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<td>4</td>
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#### Diagram:

- **TOP COVER**

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**Notice:**

- High Voltage 11 kV electricity distribution equipment: Reyrolle Switchgear type RO and RM ranges

**Date:** February 1998

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**Safety Notice 98/06**
High Voltage 11 kV electricity distribution equipment: Reyrolle Switchgear type RO and RM ranges

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Annex B: Price Schedule

Price schedule for replacement RO/RM lid fixings

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Price £</th>
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<tr>
<td>1-20</td>
<td>24.58</td>
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<tr>
<td>21-60</td>
<td>21.87</td>
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<tr>
<td>60-150</td>
<td>17.06</td>
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<tr>
<td>150+</td>
<td>14.86</td>
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The fixing comprises a screw, spacer, dubo ring and circlip. The complete fixing is article 981A1196. For ROKSS, ROSSS and ROKS four fixings are required. ROK, ROS, RMK and RMS require two fixings ie one fixing per lid.

Prices are valid till the end of 1998 and are exclusive of VAT and delivery apart from orders for 150 or more where delivery is included. General terms and conditions are as BEAMA (A) with LDs limited to 0.5% to 5% max. Delivery should be within six weeks of receipt of order. A minimum order charge of £300 applies.

END OF SAFETY NOTICE

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Safety Notice 98/06
Health and Safety Warning Notice 98/06
Distribution List

ACTION:

All TLBHs (please copy and distribute to all your Property Managers).

DEO USF FAO: Safety Manager

COPY:

D Def H&S CSO
D Def H&S (F&S)
Co-ordinating Authorising Engineers
H&S Focal Points
  QMG2/RO1
  CHS 1a, HQLC
  SSO(PE)
  DNES H/HS1
  DERA Malvern (CSO)
  SSO(PE&C)
  PSSO DRA Fort Halstead
  D MOD FS
IT(Strat)A2 DGITS
MOD Police - Wethersfield
MOD Police Sec - ESB

Internal:

DEO

D/DEO (OCS)
D/DEO (TS)
ADS
TSD Ind Gp Admin x 5
DEO HQ Property Manager
All DWAs
DEO HQ Library
DEO USF Library
All DLAs
HEALTH AND SAFETY WARNING NOTICES -
A CUMULATIVE LIST FOR 1998

If missing copies are required, please contact your TLBH distribution point in the first instance.

Alternatively, single copies may be requested from:

DEO HQ Library and Publications Unit
Blakemore Drive
Sutton Coldfield
West Midlands B75 7RL

STD 0121-311 + extn or Mil 742 + extn:

Tel: 3648/3744
Fax: 2155

A full list of DEO, MOD and PSA publications which are relevant to works activities on the Defence Estate are contained in the DEO Technical Publications Index (TPI). For MOD employees copies of the TPI are available through your TLBH works focal points. Consultants and Contractors should obtain copies from The Stationery Office.

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<tr>
<td>97/06</td>
<td>Reyrolle Switchgear RO(ROKSS, ROS, ROK and ROSSS), RM(RMS and RMK) and OKSS High Voltage Electricity Distribution Equipment: Update and extension of suspension of normal operational practice.</td>
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<td>97/09</td>
<td>Reyrolle Switchgear ROKSS, High Voltage Electricity Distribution Equipment: 2nd incident</td>
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<td>Confined Space Working - Purging and venting of confined spaces</td>
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